HASCO

Ermöglichen mit System.

K 2024

HASCO

K-Platten Programmerweiterung

Weiter entwickeltes Plattenprogramm erhöht Flexibilität im Formenbau.

Das bewährte Plattenprogramm wird um rund 800 zusätzliche Varianten gebohrter K-Platten aufgestockt.

Die konsequente bedarfsorientierte Weiterentwicklung des Programms treibt die Standardisierung weiter voran. Neben Präzision und Qualität wird besonderer Wert auf eine höchstmögliche Verfügbarkeit und kürzeste Lieferzeiten gelegt.

K-plates Extension of product range

Further developed plate portfolio increases flexibility in mouldmaking.

The well-proven plate portfolio is being topped up by around 800 additional variants of drilled K-plates.

The consistent, demand-oriented, further development of the range drives standardisation further forward. Apart from precision and quality, special importance is attached to maximum availability and the shortest possible delivery times.

www.hasco.com

HASCO

Ermöglichen mit System.

K

Kombinierbar nach dem Baukastenprinzip

Can be modularly combined

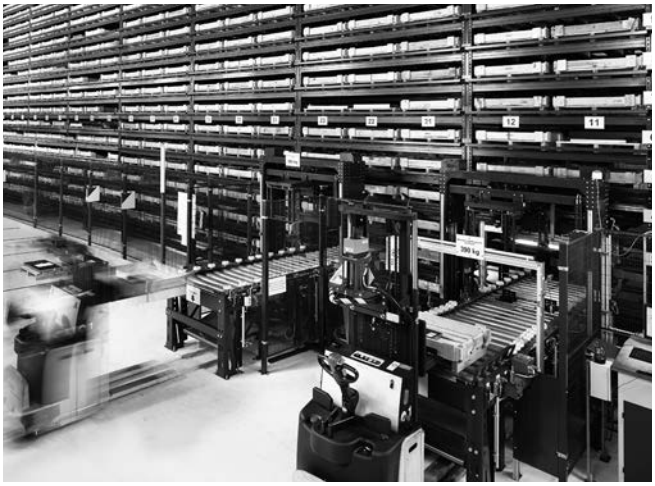
Combinable selon le principe modulaire

HASCO

www.hasco.com

Unser Versprechen

Our promise



Agilität

Wir erkennen und reagieren auf Ihre Bedürfnisse und die des Marktes.

Agility

We recognise and respond to your needs and those of the market.

Innovation

Wir arbeiten kontinuierlich an neuen Produkten und Services, um Ihr optimaler Entwicklungspartner zu sein.

Innovation

We work continuously on new products and services to be your optimum development partner.

Einfachheit

Wir ermöglichen Werkzeugbauern, Spritzgießern und Konstrukteuren den einfachsten Weg, Formen zu bauen.

Simplicity

We enable mouldmakers, injection moulders and designers the easiest way to build moulds.

Leistung

Unser gesamtes Handeln und Engagement gilt dem Erfolg unserer Kunden.

Performance

All our effort and commitment is focused to your success.

Formenbau beginnt mit HASCO.

Ermöglichen ist unsere Kernkompetenz.
Mit der Erfindung der Normalie haben wir internationale Standards definiert und den Formenbau revolutioniert.

Mouldmaking starts with HASCO.

Enabling is our main area of expertise.
We define international standards and revolutionised mouldmaking with the invention of our standard mould base.

K-Normalien, gebohrte, allseitig bearbeitete Platten mit hochpräzisen Führungssystemen, kombinierbar nach dem Baukastenprinzip.

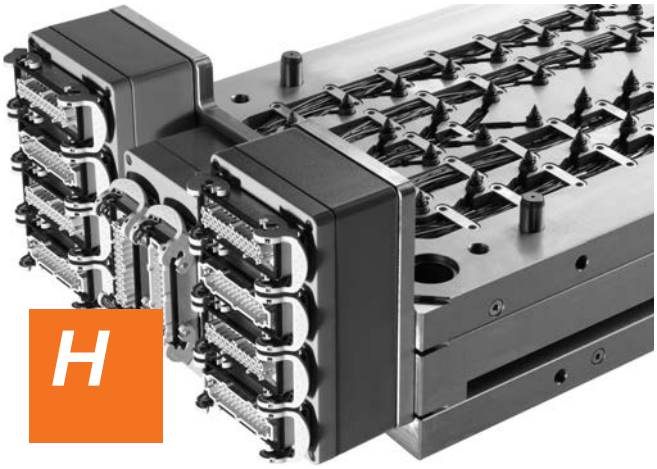
K-Standards, plates with high-precision guiding systems for injection moulds can be modularly combined.

P-Normalien, ungebohrte, allseitig bearbeitete Platten für Formen und Werkzeuge.

P-Standards, precision machined plates for moulds, tools, jigs and fixtures.

Z-Normalien, einbaufertige Systemkomponenten für den Formenbau.

Z-Standards, ready-to-install system components for mouldmaking.



Heißkanalsysteme, Düsen- und Nadelventiltechnik, Regelgeräte.

Hot runner systems, nozzle and needle valve technology, control units.

Was können wir für Sie ermöglichen?

What can we enable for you?

K-Normalien
K-Standards
Standards K

PEFC™
PEFC/04-31-0810

PEFC zertifiziert
Papier stammt aus
nachhaltig bewirtschafteten Wäldern
und kontrollierten Quellen
www,pefc.de

PEFC certified
This product is from
sustainably managed forests
and controlled sources
www.pefc.co.uk

Certifié PEFC
Ce produit est issu de
forêts gérées durablement
et de sources contrôlées
www,pefc-france.org

Mit dieser Ausgabe verlieren alle vorherigen Ausgaben ihre Gültigkeit.
This edition replaces all previous editions, which are now invalid.
Cette nouvelle édition annule et remplace les éditions précédentes.

Stand
Version
Révision
02 / 24

Inhaltsverzeichnis
Contents
Sommaire

Werkstoff-Spezifikationen / Material specifications / Spécifications des matériaux

Werkstoffnr. Material no. Nº de matériau Kurzname Abbreviated name Désignation	Richtanalyse Chemical composition Composition (%)	Festigkeit Strength Résistance	Eigenschaften Properties Propriétés	Farbcode Colour code Code couleur	Programm Product range Gamme de produits					
					P	P1	PR	P 8000	F	K
1.1730 C 45 U	C 0,45 Si 0,3 Mn 0,7	~ 190 HB (~ 650 N/mm²)	Unlegierter Werkzeugstahl Non-alloy mould steel Acier à outils au carbone	weiß white blanc **P 8000** grün / gelb green / yellow vert / jaune	X	X		X	X	X
1.2083 X 40 Cr 14	C 0,4 Cr 14,0	max. 241 HB (~ 810 N/mm²)	Korrosionsbeständiger Werkzeugstahl Corrosion-resistant mould steel Acier à outils résistant à la corrosion	gelb / weiß yellow / white jaune / blanc	X	X				X
1.2083ESU X 40 Cr 14	C 0,4 Cr 14,0	max. 241 HB (~ 810 N/mm²)	Hochreiner, korrosionsbeständiger Werkzeugstahl High-purity, corrosion-resistant mould steel Acier à outils de haute pureté et résistant à la corrosion	gelb / weiß yellow / white jaune / blanc				X		
1.2085 X 33 CrS 16	C 0,3 Si 0,5 Mn 1,0 Cr 16,0 S 0,1	280 - 325 HB (950 - 1100 N/mm²)	Korrosionsbeständiger, vorvergüteter Werkzeugstahl Corrosion-resistant, pre-hardened mould steel Acier à outils pré-trempé résistant à la corrosion	schwarz / grün / grün black / green / green noir / vert / vert	X	X				X
1.2099 **HASCO.M**	C 0,04 Mn 1,2 S 0,12 Cr 13,0	280 - 325 HB (950 - 1100 N/mm²)	Korrosionsbeständiger, vorvergüteter Werkzeugstahl Corrosion-resistant, pre-hardened mould steel Acier à outils pré-trempé résistant à la corrosion	orange / blau orange / blue orange / bleu		X			X	
1.2162 21 MnCr 5	C 0,21 Mn 1,3 Cr 1,2	max. 210 HB (~ 710 N/mm²)	Standard Einsatzstahl Standard case-hardened steel Acier pour travail standard	gelb yellow jaune **F** grau grey gris	X	X			X	X
1.2210 115 Cr V3	C 1,18 Si 0,25 Mn 0,3 Cr 0,7 V 0,1	max. 220 HB (~ 750 N/mm²)	Universell einsetzbarer Kaltarbeitsstahl (Silberstahl) Universally applicable cold-work steel (silver steel) Acier pour travail à froid d'utilisation universel (acier argenté)	blau / rot / grün blue / red / green bleu / rouge / vert				X		

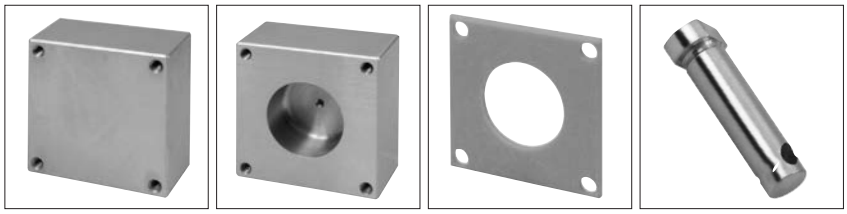
Werkstoff-Spezifikationen / Material specifications / Spécifications des matériaux

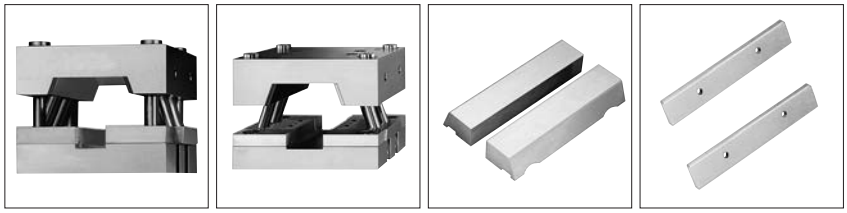
Werkstoffnr. Material no. Nº de matériau Kurzname Abbreviated name Désignation	Richtanalyse Chemical composition Composition (%)	Festigkeit Strength Résistance	Eigenschaften Properties Propriétés	Farbcode Colour code Code couleur	Programm Product range Gamme de produits					
					P	P1	PR	P 8000	F	K
1.2311 40 CrMnMo 7	C 0,4 Mn 1,5 Cr 1,9 Mo 0,2	280 - 325 HB (950 - 1100 N/mm²)	Vorvergüteter Werkzeugstahl Pre-hardened tool steel Acier à outils pré-trempé	blau / weiß / weiß blue / white / white bleu / blanc / blanc	X	X		X		X
1.2312 40 CrMnMoS 8-6	C 0,4 Mn 1,5 S 0,07 Cr 1,9 Mo 0,2	280 - 325 HB (950 - 1100 N/mm²)	Vorvergüteter Werkzeugstahl Pre-hardened tool steel Acier à outils pré-trempé	braun brown brun **F** gelb yellow jaune	X	X		X	X	X
1.2343 X 37 CrMoV 5-1	C 0,37 Si 1,0 Cr 5,3 Mo 1,3 V 0,4	max. 229 HB (~ 770 N/mm²)	Hochlegierter Warmarbeitsstahl High-alloy, hot-work steel Acier pour travail à chaud fortement allié	rot red rouge	X	X		X	X	X
1.2343ESU X 37 CrMoV 5-1	C 0,37 Si 1,0 Cr 5,3 Mo 1,3 V 0,4	max. 229 HB (~ 770 N/mm²)	Hochreiner, hochlegierter Warmarbeitsstahl High-purity, high-alloy, hot-work steel Acier pour travail à chaud fortement allié de haute pureté	rot red rouge	X	X		X	X	X
1.2363 X 100 CrMoV 5	C 1,0 Cr 5,2 Mo 1,2 V 0,3	max. 241 HB (~ 810 N/mm²)	Maßstabiler Kaltarbeitsstahl Dimensionally stable cold-work steel Acier pour travail à froid avec stabilité dimensionnelle	gelb / blau yellow / blue jaune / bleu **F** braun brown brun					X	
1.2379 X 155 CrVMo 12-1	C 1,53 Cr 12,0 Mo 0,7 V 1,0	max. 255 HB (~ 860 N/mm²)	Hoch chromlegierter Kaltarbeitsstahl High chrome-alloyed cold-work steel Acier pour travail à froid fortement chromé	schwarz / rot black / red noir / rouge **F** schwarz black noir				X	X	
1.2436 X 210 CrW 12	C 2,1 Cr 12,0 W 0,7	max. 255 HB (~ 855 N/mm²)	Maßstabiler Chromstahl Dimensionally stable chrome steel Acier chromé avec stabilité dimensionnelle	schwarz / gelb black / yellow noir / jaune **F** grün green vert					X	

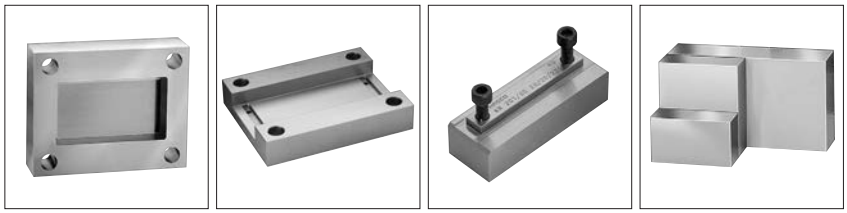
Werkstoff-Spezifikationen / Material specifications / Spécifications des matériaux

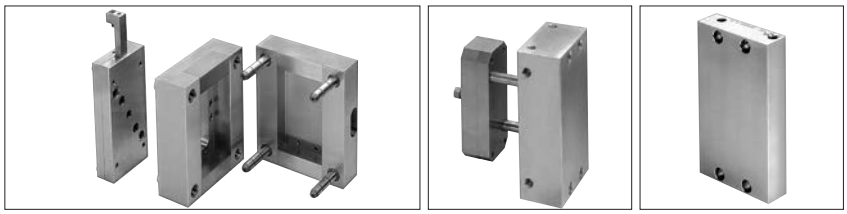
Werkstoffnr. Material no. Nº de matériau Kurzname Abbreviated name Désignation	Richtanalyse Chemical composition Composition (%)	Festigkeit Strength Résistance	Eigenschaften Properties Propriétés	Farbcode Colour code Code couleur	Programm Product range Gamme de produits					
					P	P1	PR	P 8000	F	K
1.2714HH 55 NiCrMoV 7	C 0,55 Cr 1,1 Mo 0,5 Ni 1,7 V 0,1	max. 400 HB (~ 1350 N/mm²)	Durchhärterstahl, vergütet Pre-hardened steel Acier à outils prétraité			X				
1.2767 45 NiCrMo 16	C 0,45 Cr 1,4 Mo 0,3 Ni 4,0	max. 285 HB (~ 965 N/mm²)	Durchhärtender, maßbeständiger Werkzeugstahl Hardened, dimensionally stable steel Acier à outils prétraité avec stabilité dimensionnelle	grün / weiß green / white vert / blanc **F** violett violet violet	X	X	X	X	X	X
1.2842 **(1.2510*)** 90 MnCrV 8	C 0,9 Mn 2,0 Cr 0,4 V 0,1 W 0,6 *	max. 229 HB (~ 770 N/mm²)	Kaltarbeitsstahl mit sehr guter Zerspanbarkeit Cold-work steel with high toughness Acier pour travail à froid avec une bonne stabilité dimensionnelle	schwarz / blau black / blue noir / bleu **F** blau blue bleu					X	
3.4365 AlZnMgCu 1.5	Si 0,4 Fe 0,5 Cu 1,6 Mn 0,3 Mg 2,4 Cr 0,23 Zn 5,6 Ti 0,2	max. 150 HB (~ 500 N/mm²)	Hochfeste, ausgehärtete Aluminium-Zink-Legierung High-strength, aluminium- zinc alloy, hardened Alliage aluminium-zinc à haute résistance et durci		X		X			
Toolox33	C 0,23 Si 0,75 Mn 0,8 Cr 1,2 V 0,1 Ni ≤1,0 Mo 0,3	max. 300 HB (~ 1000 N/mm²)	Vergüteter Werkzeugstahl Hardened tool steel Acier à outils trempé	orange / weiß orange / white orange / blanc	X	X				X
Toolox44	C 0,32 Si 0,75 Mn 0,8 Cr 1,35 V 0,14 Ni ≤1,0 Mo 0,8	max. 450 HB (~ 1530 N/mm²)	Vergüteter Werkzeugstahl Hardened tool steel Acier à outils trempé	orange / grün orange / green orange / vert	Auf Anfrage lieferbar Available on request Disponible sur demande					

K-Normalien / K-Standards / Standards K

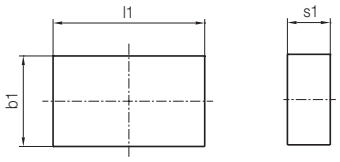








Größenübersicht
Size range
Aperçu de Tailles



■ Neu / New / Nouveau

b1 \ l1	095	130	156	196	246	296	346	396	446	496	546	596	646	696	796	896	996
095	■																
100		■															
156			■ ◆	■	■	■	■										
190					■ ◆												
196				■	■	■	■	■	■	■							
218					■	■											
246					■	■ ◆	■	■	■	■	■	■					
296						■	■	■ ◆	■	■	■	■	■	■			
346							■	■	■	■	■	■	■	■	■		
396								■	■	■	■	■	■	■	■	■	
446									■	■	■	■	■	■	■	■	
496										■	■	■	■	■	■	■	■
546											■	■	■	■	■	■	■
596												■	■	■	■	■	■
646													■	■	■	■	■
696														■	■	■	■
746															■	■	■
796															■	■	■

s1
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196

= ***K2500 / K2501***
Backenwerkzeug
Split mould kits
Carcasse à tiroir

= ***K3500***
Wechselwerkzeug-System
Quick-change mould system
Carcasse à changement rapide

◆ = ***K3600***
Kleinserienwerkzeug
Small series mould
Carcasse pour petites séries

Werkstoffe:
1.1730, 1.2162, 1.2764, 1.2767, 1.2083, 1.2085, 1.2311, 1.2312, 1.2343, Toolox33
weitere Abmessungen sind in den verfügbaren Stahlqualitäten als Sonderanfertigung erhältlich

available in:
1.1730, 1.2162, 1.2764, 1.2767, 1.2083, 1.2085, 1.2311, 1.2312, 1.2343, Toolox33
other sizes in all available steel grades as customized production

Disponible en aciers:
1.1730, 1.2162, 1.2764, 1.2767, 1.2083, 1.2085, 1.2311, 1.2312, 1.2343, Toolox33
Autres dimensions et aciers disponibles à la demande sur chiffrage hors-standard

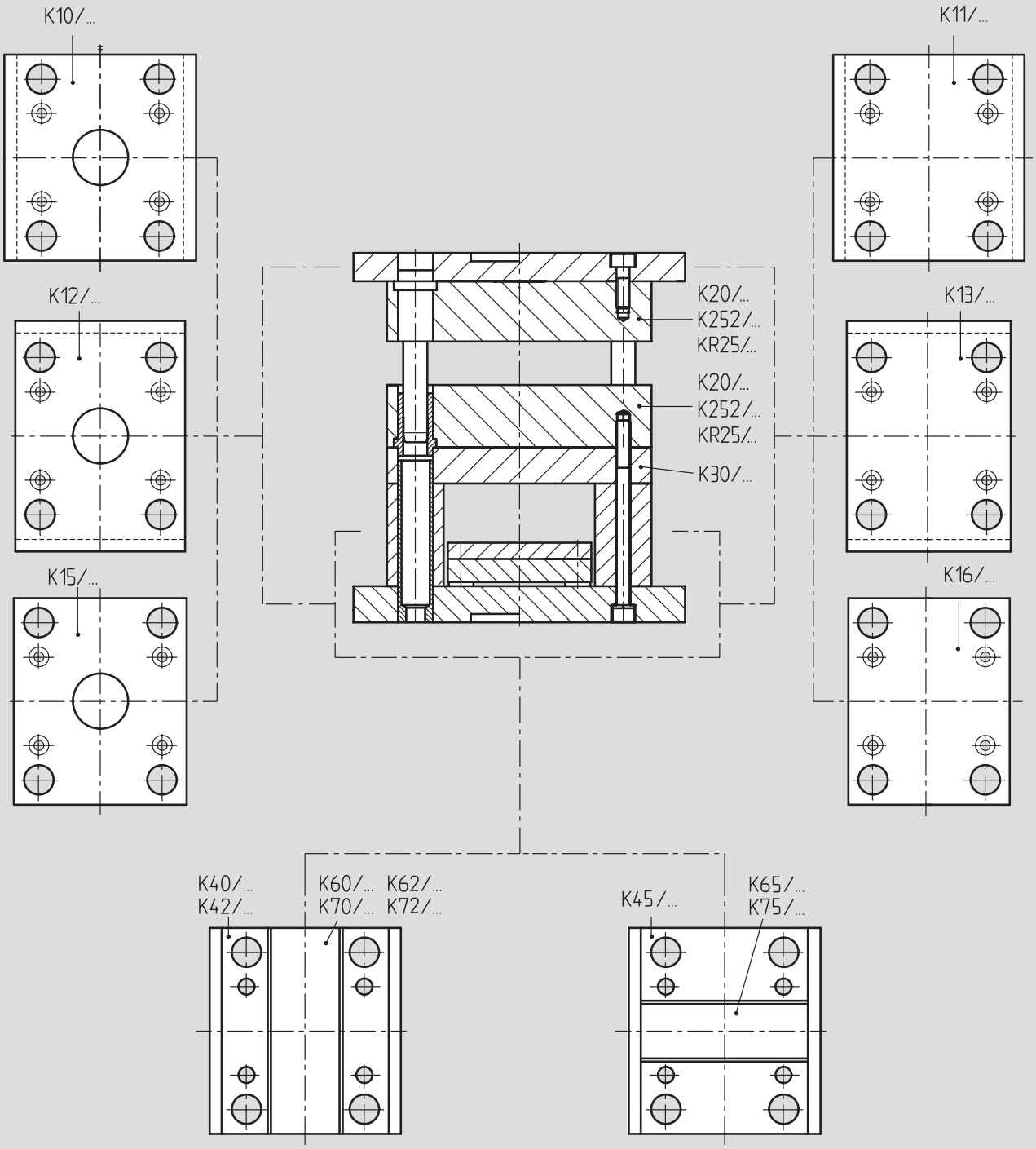
Bestellbeispiel
Ordering example
Exemple de commande

Formplatte
Mould plate
Plaque porte-empreinte

K 20 / 396 x 546 x 136 / 1.2312

Produkt-Nr.	Product No	No. de produit
Abmessung	Dimensions	Dimensions
Plattendicke	Plate thickness	Epaisseur de plaque
Werkstoff-Nr.	Material No	No. Matériau

Standard-Werkzeugaufbau mit Varianten von Aufspannplatten und Leisten
Standard mould base assembly with variations of clamping plates and risers
Carcasses de moules standards avec différentes variantes de semelles et de tasseaux



Breite Leisten

Um die Gefahr der Durchbiegung zu minimieren, beachten Sie bitte auch die Breiten Leisten K 42/... mit den dazugehörigen Auswerferplatten K 62/..., K 72/...

Wide risers

To minimise the danger of deflection, please note the wide risers K 42/... with the associated ejector plates K 62/... and K 72/...

Tasseaux larges

Pour minimiser le risque de torsion, veuillez prendre connaissance des tasseaux larges K 42/... et les batteries d'éjection correspondantes K 62/..., K 72/...

Beschriftung / marking / référence

Produkt product produit	Verpackung package emballage
K 40/...	
K 40/196 x 296 x ...	K 40/196 x 296 x ..
	K 40/218 x 296 x ...
	K 40/246 x 296 x .
	K 40/296 x 296 x ...
K 40/196 x 446 x ...	K 40/196 x 446 x ...
	K 40/246 x 446 x ...
	K 40/296 x 446 x ...
K 40/196 x 496 x ...	K 40/196 x 496 x ...
	K 40/246 x 496 x ...
	K 40/296 x 496 x ...
K 40/246 x 346 x ...	K 40/246 x 346 x ...
	K 40/296 x 346 x ...
	K 40/346 x 346 x ...
K 40/246 x 396 x ...	K 40/246 x 396 x ...
	K 40/296 x 396 x ...
K 40/246 x 546 x ...	K 40/246 x 546 x ...
	K 40/296 x 546 x ...
K 40/246 x 596 x ...	K 40/246 x 596 x ...
	K 40/296 x 596 x ...
K 40/296 x 646 x ...	K 40/296 x 646 x ...
	K 40/346 x 646 x ...
	K 40/396 x 646 x ...
	K 40/446 x 646 x ...
	K 40/496 x 646 x ...
	K 40/546 x 646 x ...
K 40/296 x 696 x ...	K 40/296 x 696 x ...
	K 40/346 x 696 x ...
	K 40/396 x 696 x ...
	K 40/446 x 696 x .
	K 40/496 x 696 x ...
	K 40/546 x 696 x ...
K 40/346 x 446 x ...	K 40/346 x 446 x ...
	K 40/396 x 446 x ...
	K 40/446 x 446 x ...
K 40/346 x 546 x ...	K 40/346 x 546 x ...
	K 40/446 x 546 x ...
	K 40/496 x 546 x ...
	K 40/546 x 546 x ...
K 40/346 x 596 x ...	K 40/346 x 596 x ...
	K 40/396 x 596 x ...
	K 40/446 x 596 x ...
	K 40/496 x 596 x ...
	K 40/546 x 596 x ...
	K 40/596 x 596 x ...
K 40/346 x 796 x ...	K 40/346 x 796 x ...
	K 40/396 x 796 x ...
	K 40/446 x 796 x ...
K 40/496 x 796 x ...	K 40/496 x 796 x ...
	K 40/546 x 796 x ...
	K 40/596 x 796 x ...
	K 40/646 x 796 x ...
	K 40/696 x 796 x ...
	K 40/746 x 796 x ...
	K 40/796 x 796 x ...

Produkt product produit	Verpackung package emballage
K 40/496 x 896 x ...	K 40/496 x 896 x ...
	K 40/546 x 896 x ...
	K 40/596 x 896 x ...
	K 40/646 x 896 x ...
	K 40/696 x 896 x ...
	K 40/746 x 896 x ...
	K 40/796 x 896 x ...
K 40/496 x 996 x ...	K 40/496 x 996 x ...
	K 40/546 x 996 x ...
	K 40/596 x 996 x ...
	K 40/646 x 996 x ...
	K 40/696 x 996 x ...
	K 40/746 x 996 x ...
	K 40/796 x 996 x ...
K 40/596 x 646 x ...	K 40/596 x 646 x ...
	K 40/646 x 646 x ...
K 40/596 x 696 x ...	K 40/596 x 696 x ...
	K 40/646 x 696 x ...
	K 40/696 x 696 x ...
K 42/...	
K 42/196 x 296 x ...	K 42/196 x 296 x ...
	K 42/218 x 296 x ...
	K 42/246 x 296 x ...
	K 42/296 x 296 x ...
K 42/196 x 446 x ...	K 42/196 x 446 x ...
	K 42/246 x 446 x ...
	K 42/296 x 446 x ...
K 42/196 x 496 x ...	K 42/196 x 496 x ...
	K 42/246 x 496 x ...
	K 42/296 x 496 x ...
K 42/246 x 346 x ...	K 42/246 x 346 x ...
	K 42/296 x 346 x ...
	K 42/346 x 346 x ...
K 42/246 x 396 x ...	K 42/246 x 396 x ...
	K 42/296 x 396 x ...
K 42/246 x 546 x ...	K 42/246 x 546 x ...
	K 42/296 x 546 x ...
K 42/246 x 596 x ...	K 42/246 x 596 x ...
	K 42/296 x 596 x ...

Produkt product produit	Verpackung package emballage
K 42/296 x 646 x ...	K 42/296 x 646 x ...
	K 42/346 x 646 x ...
	K 42/396 x 646 x ...
	K 42/446 x 646 x ...
	K 42/496 x 646 x ...
K 42/296 x 696 x ...	K 42/296 x 696 x ...
	K 42/346 x 696 x ...
	K 42/396 x 696 x ...
	K 42/446 x 696 x ...
	K 42/496 x 696 x ...
	K 42/546 x 696 x ...
K 42/346 x 446 x ...	K 42/346 x 446 x ...
	K 42/396 x 446 x ...
	K 42/446 x 446 x ...
K 42/346 x 546 x ...	K 42/346 x 546 x ...
	K 42/446 x 546 x ...
	K 42/496 x 546 x ...
	K 42/546 x 546 x ...
K 42/346 x 596 x ...	K 42/346 x 596 x ...
	K 42/396 x 596 x ...
	K 42/446 x 596 x ...
	K 42/496 x 596 x ...
K 42/346 x 796 x ...	K 42/346 x 796 x ...
	K 42/396 x 796 x ...
	K 42/446 x 796 x ...
K 42/396 x 496 x ...	K 42/396 x 496 x ...
	K 42/446 x 496 x ...
	K 42/496 x 796 x ...
K 42/396 x 896 x ...	K 42/396 x 896 x ...
	K 42/446 x 896 x ...
K 42/496 x 796 x ...	K 42/496 x 796 x ...
	K 42/546 x 796 x ...
	K 42/596 x 796 x ...
	K 42/646 x 796 x ...
	K 42/696 x 796 x ...
	K 42/746 x 796 x ...
	K 42/796 x 796 x ...
K 42/496 x 896 x ...	K 42/496 x 896 x ...
	K 42/546 x 896 x ...
	K 42/596 x 896 x ...
	K 42/646 x 896 x ...
	K 42/696 x 896 x ...
	K 42/746 x 896 x ...
	K 42/796 x 896 x ...
K 42/496 x 996 x ...	K 42/496 x 996 x ...
	K 42/546 x 996 x ...
	K 42/596 x 996 x ...
	K 42/646 x 996 x ...
	K 42/696 x 996 x ...
	K 42/746 x 996 x ...
	K 42/796 x 996 x ...
K 42/596 x 646 x ...	K 42/596 x 646 x ...
	K 42/646 x 646 x ...
K 42/596 x 696 x ...	K 42/596 x 696 x ...
	K 42/646 x 696 x ...
	K 42/696 x 696 x ...

Beschriftung / marking / référence

K 45 / . . .

Produkt product produit	Verpackung package emballage
K 45 / 156 x 156 x ...	K 45 / 156 x 156 x ...
	K 45 / 156 x 246 x ...
	K 45 / 156 x 296 x ...
	K 45 / 156 x 346 x ...
K 45 / 196 x 296 x ...	K 45 / 196 x 296 x ...
	K 45 / 196 x 346 x ...
K 45 / 196 x 396 x ...	K 45 / 196 x 396 x ...
	K 45 / 196 x 446 x ...
	K 45 / 196 x 496 x ...
K 45 / 246 x 346 x ...	K 45 / 246 x 346 x ...
	K 45 / 246 x 446 x ...
	K 45 / 246 x 496 x ...
	K 45 / 246 x 546 x ...
	K 45 / 246 x 596 x ...
K 45 / 296 x 346 x ...	K 45 / 296 x 346 x ...
	K 45 / 296 x 446 x ...
	K 45 / 296 x 496 x ...
	K 45 / 296 x 546 x ...
	K 45 / 296 x 596 x ...
K 45 / 296 x 646 x ...	K 45 / 296 x 646 x ...
	K 45 / 296 x 696 x ...
K 45 / 346 x 396 x ...	K 45 / 346 x 396 x ...
	K 45 / 346 x 496 x ...
K 45 / 346 x 446 x ...	K 45 / 346 x 446 x ...
	K 45 / 346 x 546 x ...
	K 45 / 346 x 596 x ...
	K 45 / 346 x 646 x ...
	K 45 / 346 x 696 x ...
	K 45 / 346 x 796 x ...

Produkt product produit	Verpackung package emballage
K 45 / 396 x 396 x ...	K 45 / 396 x 396 x ...
	K 45 / 396 x 446 x ...
	K 45 / 396 x 496 x ...
	K 45 / 396 x 596 x ...
	K 45 / 396 x 646 x ...
	K 45 / 396 x 696 x ...
	K 45 / 396 x 796 x ...
	K 45 / 396 x 896 x ...
K 45 / 446 x 446 x ...	K 45 / 446 x 446 x ...
	K 45 / 446 x 496 x ...
	K 45 / 446 x 546 x ...
	K 45 / 446 x 596 x ...
	K 45 / 446 x 646 x ...
	K 45 / 446 x 696 x ...
	K 45 / 446 x 796 x ...
	K 45 / 446 x 896 x ...
K 45 / 496 x 496 x ...	K 45 / 496 x 496 x ...
	K 45 / 496 x 546 x ...
	K 45 / 496 x 596 x ...
	K 45 / 496 x 646 x ...
	K 45 / 496 x 696 x ...
K 45 / 496 x 796 x ...	K 45 / 496 x 796 x ...
	K 45 / 496 x 896 x ...
	K 45 / 496 x 996 x ...
K 45 / 546 x 546 x ...	K 45 / 546 x 546 x ...
	K 45 / 546 x 596 x ...
	K 45 / 546 x 646 x ...
	K 45 / 546 x 696 x ...
K 45 / 546 x 796 x ...	K 45 / 546 x 796 x ...
	K 45 / 546 x 896 x ...
	K 45 / 546 x 996 x ...

Produkt product produit	Verpackung package emballage
K 45 / 596 x 646 x ...	K 45 / 596 x 646 x ...
	K 45 / 596 x 696 x ...
	K 45 / 596 x 796 x ...
	K 45 / 596 x 896 x ...
	K 45 / 596 x 996 x ...
K 45 / 646 x 646 x ...	K 45 / 646 x 646 x ...
	K 45 / 646 x 696 x ...
	K 45 / 646 x 796 x ...
	K 45 / 646 x 896 x ...
	K 45 / 646 x 996 x ...
K 45 / 696 x 696 x ...	K 45 / 696 x 696 x ...
	K 45 / 696 x 796 x ...
	K 45 / 696 x896 x ...
	K 45 / 696 x 696 x ...
K 45 / 746 x 796 x ...	K 45 / 746 x 796 x ...
	K 45 / 746 x 896 x ...
	K 45 / 746 x 996 x ...
K 45 / 796 x 796 x ...	K 45 / 796 x 796 x ...
	K 45 / 796 x 896 x ...
	K 45 / 796 x 796 x ...

K 40 / . . . , K 42 / . . . , K 45 / . . .

Identische Leisten passend zu mehreren Werkzeuggrößen
Identical risers suitable for several mould sizes
Tasseaux identiques pouvant se monter sur différentes tailles de carcasses

Beachten:

Die Produktbeschriftung verweist jeweils auf die kleinste Werkzeuggröße.

Die Verpackung von K 40 / . . . , K 42 / . . . und K 45 / . . . ist mit allen Größen beschriftet.

Caution:

The product marking each refers to the smallest mould size.

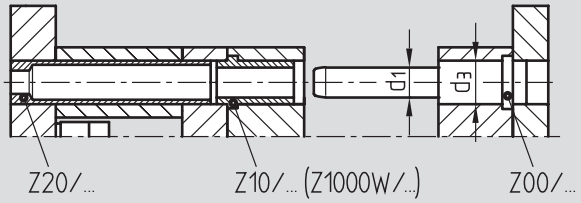
The packages of K 40 / . . . , K 42 / . . . and K 45 / . . . are marked with all sizes.

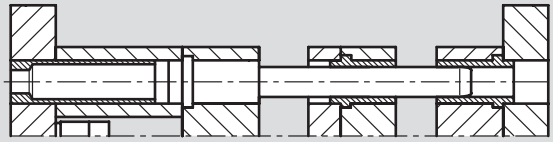
Remarque:

La référence du produit se rapporte à la taille de carcasse la plus petite.

L'emballage des K 40 / . . . , K 42 / . . . et K 45 / . . . reprend toutes les tailles de carcasses possibles.

Führungselemente
Guide elements
Eléments de guidage





Die Führungs- und Zentrierelemente haben innerhalb einer Werkzeuggröße gleiche Aufnahmedurchmesser (d3).

Die Führungsdurchmesser (d1) sind unterschiedlich und vermeiden Fehler beim Zusammenfügen der Werkzeughälften.

Die Platten sind beliebig kombinier- und austauschbar.

The guiding and locating components have the same diameter (d3) within one mould size.

The guide diameters (d1) are variable and avoid errors when assembling the mould halfs.

The plates can be combined and interchanged as required.

Les éléments de guidage et de centrage possèdent le diamètre (d_3) identique dans une même carcasse de moule.

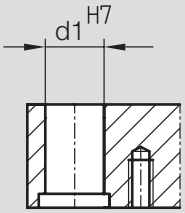
Les diamètres de guidage (d_1) sont variables et évitent ainsi des erreurs lors de l'assemblage de deux parties de moule.

Les plaques peuvent être combinés et interchangeables.

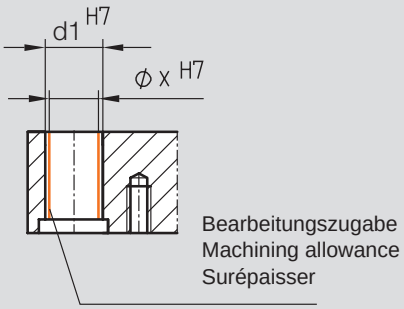
Härte und Bearbeitungsverzug kann ausgeglichen werden durch Aufschleifen der Bohrungen (ø x) bei den Formplatten K 252/...

Hardness and distortion can be compensated for by jig-grinding the holes (dia. x) of the K 252/... cavity plates.

La trempe et la distorsion peuvent être compensées par la reprise des alésages (dia. x) sur les plaques porte-empreintes à colonnage ébauché K 252/... .



K 20/..., KR 25/... Systembohrung
Guide hole
Alésage de système



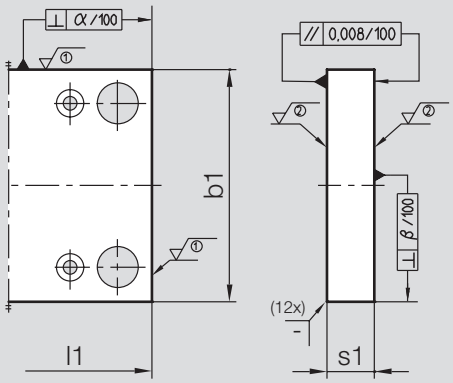
K 252/... Systembohrung mit Bearbeitungszugabe
Guide hole with machining allowance
Alésage de système avec surépaisser

System-Ø (eckige Platten)
System-diameters (angular plates)
Diamètres du systeme (plaques angulaires)

b1 \ l1	095	130	156	196	246	296	346	396	446	496	546	596	646	696	796	896	996
095	Ø 14																
100		Ø 14															
156					Ø 20												
190																	
196					Ø 26												
218																	
246							Ø 30										
296																	
346																	
396																	
446												Ø 42					
496																	
546																	
596																	
646																Ø 54	
696																	
746																	
796																	

Toleranzen für K-Normalien
Tolerances for K standards
Tolérances pour standards K

Außenmaße
Outer dimensions
Dimensions d'extérieures



	HASCO-Nennmaßbereich [mm] HASCO nominal dimension range Cote nominale HASCO	K-Normalien K-Standards Standards K
b1	≧ 95 … ≦ 996	+0,15
l1		
α/100	≧ 95 … ≦ 996	0,02
β/100	≧ 95 … ≦ 996	0,03
①	≧ 95 … ≦ 996	Rz 25
②	≧ 95 … ≦ 996	Rz 10
s1	≧ 6 … ≦ 996	+0,1/+0,25
s1 (Leisten/risers/tasseaux) K40/..., K45/... eckig	alle Größen all sizes toutes les tailles	+0,02

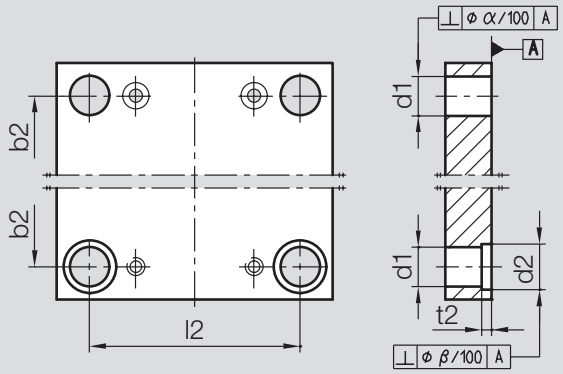
Alle Angaben sind in [mm] und beziehen sich auf eine Umgebungstemperatur von 20°C.

All the details are given in [mm] and they are based on an ambient temperature of 20°C.

Toutes les valeurs indiquées sont indiquées en [mm] et s'appliquent à une température ambiante de 20 °C.

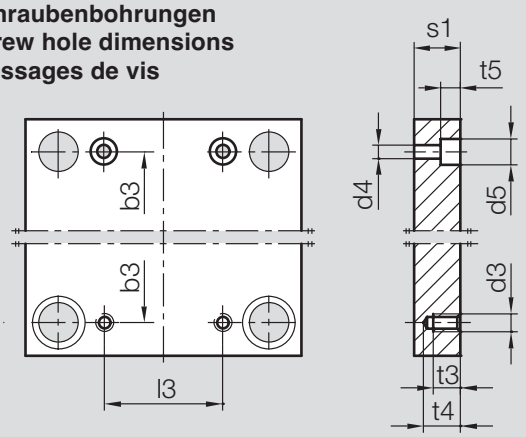
Toleranzen für K-Normalien
Tolerances for K standards
Tolérances pour standards K

Führungsbohrungen
Guide holes
Aléssages de guidage

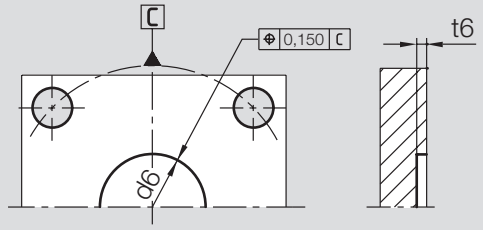


	ISO-Nennmaßbereich ISO nominal dimension range Cote nominale ISO	ISO-Toleranz ISO tolerance Tolérance ISO
b2 / l2	≧ 63 … ≦ 80	± 0,007
	> 80 … ≦ 100	± 0,009
	> 100 … ≦ 125	± 0,01
	> 125 … ≦ 160	± 0,011
	> 160 … ≦ 200	± 0,012
	> 200 … ≦ 250	± 0,013
	> 250 … ≦ 315	± 0,015
	> 315 … ≦ 400	± 0,016
	> 400 … ≦ 500	± 0,017
	> 500 … ≦ 630	± 0,019
	> 630 … ≦ 800	± 0,02
	> 800 … ≦ 1000	± 0,022
d1	≧ 10 … ≦ 80	H7
d2	≧ 10 … ≦ 80	+ 0,5
t2	≧ 3 … ≦ 18	+ 0,2
α / 100	Standard alle Größen / all sizes / toutes les tailles	0,02
	K 40/. . ., K 45/. . . alle Größen / all sizes / toutes les tailles	0,03
β / 100	alle Größen / all sizes / toutes les tailles	0,02

Schraubenbohrungen
Screw hole dimensions
Aléssages de vis



Zentrierflansch-Ausdrehung
Recess for locating ring
Dévissage de rondelle de centrage



d3 / s1	M4		M5		M6		M8		M10		M12		M16		M20	
	t3	t4	t3	t4	t3	t4	t3	t4	t3	t4	t3	t4	t3	t4	t3	t4
9	7	12														
12					7	10										
17							10	15								
22									15	20						
27											18	25				
36													24	34		
46															32	44
56																
66																
76																
86																
96																
116																
136																
156																
176																
196																
Tol.	+0,5															

Ist „s1“ für den jeweiligen Gewinde-Ø kleiner als das Maß „t4“, ist die Gewindebohrung durchgehend.

If, for the respective thread Ø, “s1” is smaller than the dimension “t4”, the threaded bore is continuous.

Si la valeur « s1 » du diamètre de filetage correspondant est inférieure à la cote « t4 », le trou taraudé est alors continu.

d3		M4	M5	M6	M8	M10	M12	M16	M20
d5		8	10	11	15	18	20	26	33
	Tol.	H13							
t5		5,5	6,6	8,4*	11	13	15,5**	21***	26
	Tol.	+0,5							
d4		4,5	5,5	6,6	9	11	14	18	22
	Tol.	H13							

* s1 = 9; t5 = 6,4 ** s1 = 17; t5 = 13 *** s1 = 22; t5 = 17,5

	ISO-Nennmaßbereich ISO nominal dimension range Cote nominale ISO	ISO-Toleranz ISO tolerance Tolérance ISO
b3 / l3	≧ 30 … ≦ 120	±0,2
	> 120 … ≦ 400	±0,25
	> 400 … ≦ 1000	±0,35

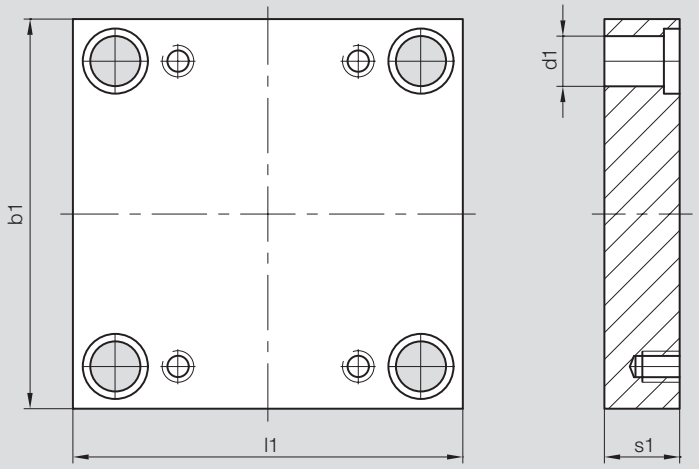
	ISO-Nennmaßbereich ISO nominal dimension range Cote nominale ISO	ISO-Toleranz ISO tolerance Tolérance ISO
d6	≧ 18 … ≦ 30	H8
	≧ 80 … ≦ 120	
t6	4	+0,25

Toleranzen für K 252/. . . /Tolerances for K 252/. . . / Tolérances pour K 252/. . .

Formplatten mit Aufmaß in der Dicke und in den Systembohrungen

Mould plates with machining allowance on the thickness and the guide holes

Plaque porte-empreintes avec surcote dans l'épaisseur et le colonnage.



Nennmaßbereich nominal dimension range Cote nominale		Toleranz tolerance tolérance			d1 H7					
b1	l1	b1/l1	s1							
≦ 296	≦ 296	+0,15	+0,2/+0,4	* +0,10/+0,25	13,75	19,6	25,5	29,4	41,3	53,2
> 296	> 296		+0,4/+0,6	* +0,10/+0,25						

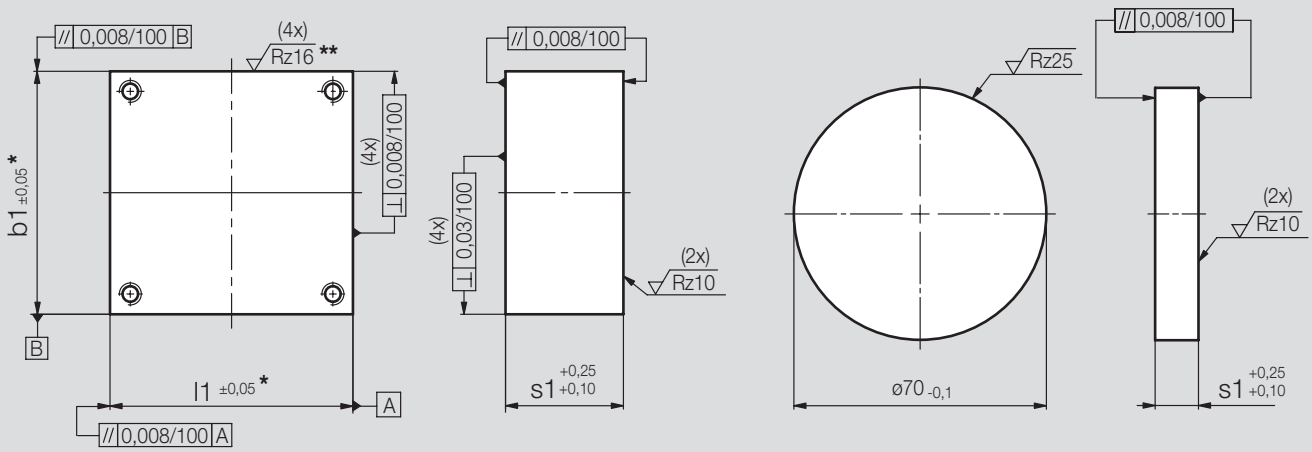
* gilt nur für Material/only for materials/seulement pour les matériaux 1.2085, 1.2311, 1.2312, Toolox33

Beachten :
Die Toleranz „s1" ist abhängig von der größten Kantenlänge.

Note :
Tolerance "s1" depends on the largest edge length.

Remarque :
La tolérance « s1 » est fonction de la plus grande longueur de plaque.

Toleranzen für K 5000/. . . /Tolerances for K 5000/. . . / Tolérances pour K 5000/. . .



** K 5100
Rz 25

* K 5100, K 5120, K 5121, K 5122
1.2083, 1.2343
Tol. l1/b1 = +0,15/+0,25

Notizen / Notes

Ermöglicher für Standards
Enabler for standards

Konstruieren, Bauen, Produzieren – für Sie konsequent standardisiert.

- Vollsortiment
- 100.000 Produkte
- Standardisiert und konfigurierbar

Designing, building, producing – consistently standardised for you.

- Interchangeable around the world
- 100,000 products
- Configurable assemblies for flexibility

HASCO

Ermöglichen mit System.

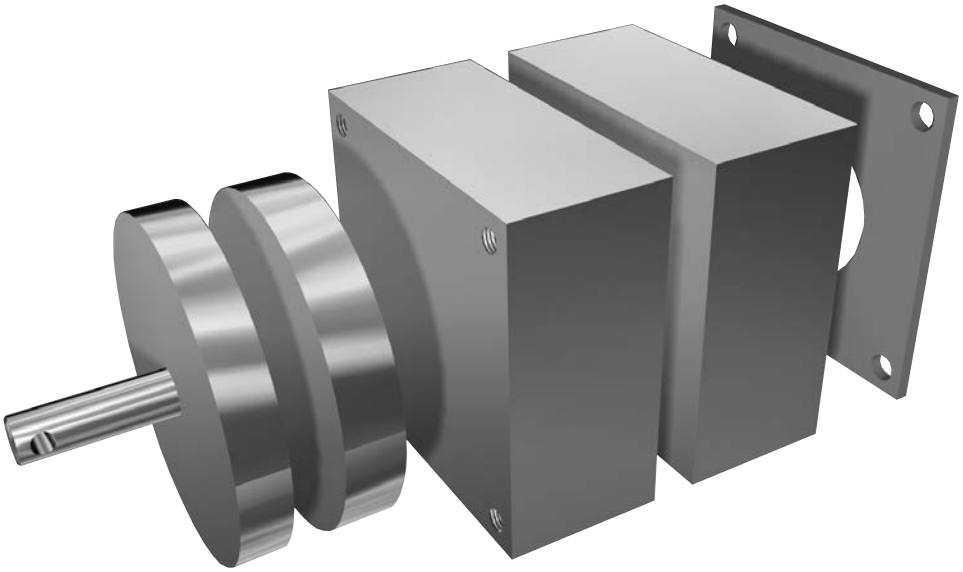
K5000/...

Werkzeugaufbau 75 x 75 mm
Moldbase 75 x 75 mm
Carcasse 75 x 75 mm

Die Größe 75 x 75 mm wurde konzipiert für die Babyplast Spritzgießmaschine, zur Produktion von Mikro-Spritzgießteilen.

The size 75 x 75 mm, has been designed for the „Babyplast"-injection moulding machine, for the production of micro-injection moulded parts.

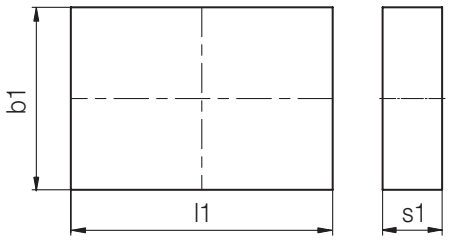
La dimension 75 x 75 mm a été conçue pour les mini-presses Babyplast pour une production de petites pièces.



K5100/...

Formplatte, ungebohrt
Cavity plate, undrilled
Plaque porte-empreinte, sans trou

Mat.: 1. 2083, 1.2085, 1.2343

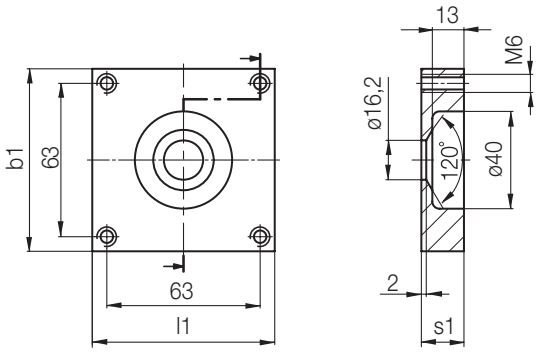


b1	l1	s1	Mat. 1.2083	1.2085	1.2343	Nr. / No.
75	**120**	**41**	■	■	■	K5100/075x120x41/Mat.
		50	■	■	■	50/Mat.
		60	■	■	■	60/Mat.

K5110/...

Aufspannplatte
Clamping plate
Plaque de fixation

Mat.: 1.2312

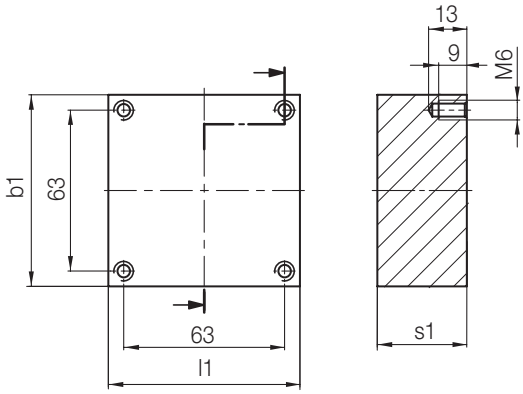


b1	l1	s1	Mat.	Nr. / No.
75	**75**	**17,5**	**1.2312**	K5110/075x075x17,5/1.2312

K5120/...

Formplatte
Cavity plate
Plaque porte-empreinte

Mat.: 1.2083, 1.2085, 1.2343

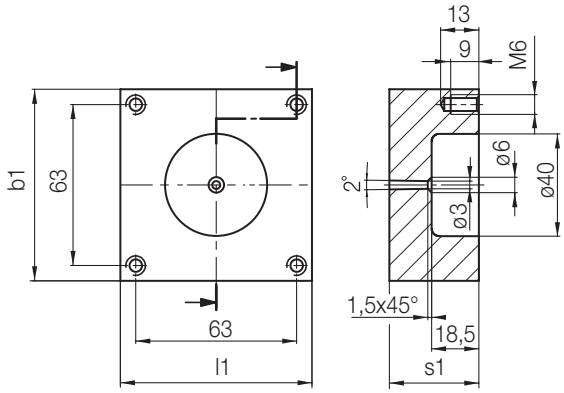


b1	l1	s1	Mat. 1.2083	1.2085	1.2343	Nr. / No.
75	75	20	■	■	■	K 5120 / 075 x 075 x 20 / Mat.
		30	■	■	■	30 / Mat.
		40	■	■	■	40 / Mat.
		50	■	■	■	50 / Mat.
		60	■	■	■	60 / Mat.

K5121/...

Formplatte zentraler Anguss mit Taschenausfräsung
Cavity plate, central sprue with pocket
Plaque porte-empreinte, carotte centrale avec bassin fraisé

Mat.: 1.2083, 1.2085, 1.2343

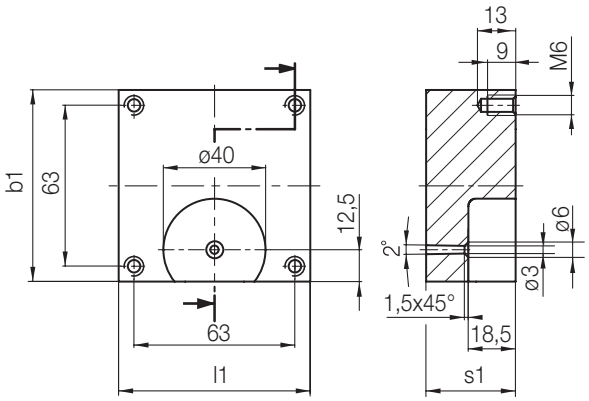


b1	l1	s1	Mat. 1.2083	1.2085	1.2343	Nr. / No.
75	75	40	■	■	■	K 5121 / 075 x 075 x 40 / Mat.
		50	■	■	■	50 / Mat.
		60	■	■	■	60 / Mat.

K5122/...

Formplatte dezentraler Anguss mit Taschenausfräsung
Cavity plate, off-center sprue with pocket
Plaque porte-empreinte, carotte décentrée avec bassin fraisé

Mat.: 1.2083, 1.2085, 1.2343

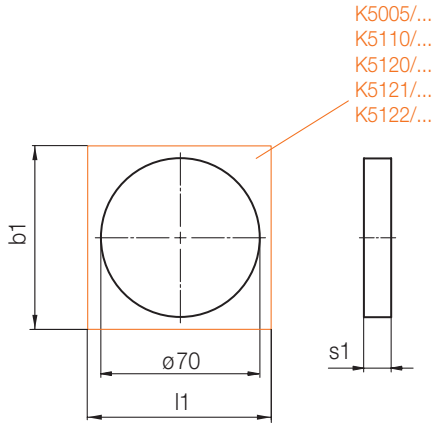


b1	l1	s1	Mat. 1.2083	1.2085	1.2343	Nr. / No.
75	75	40	■	■	■	K 5122 / 075 x 075 x 40 / Mat.
		50	■	■	■	50 / Mat.
		60	■	■	■	60 / Mat.

K5160/...

Auswerferhalteplatte
Ejector retainer plate
Plaque d'éjection

Mat.:1.2312

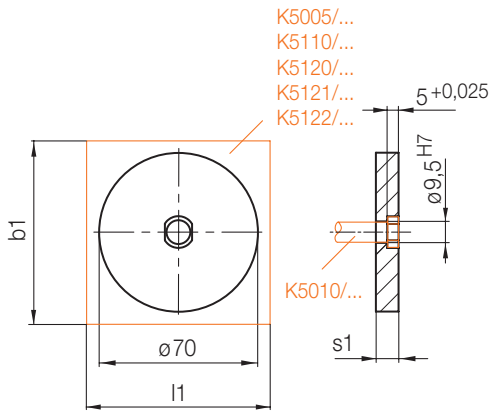


b1	l1	s1	Mat.	Nr. / No.
75	75	12	1.2312	K 5160 / 075 x 075 x 12 / 1.2312

K5170/...

Auswerfergrundplatte
Ejector base plate
Contre plaque d'éjection

Mat.: 1.2312

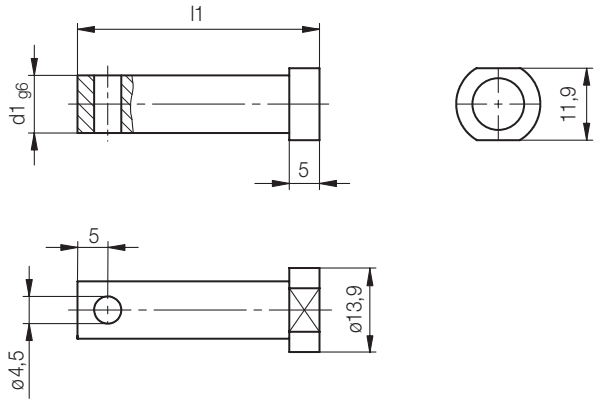


b1	l1	s1	Mat.	Nr. / No.
75	**75**	**10**	**1.2312**	K5170/075x075x10/1.2312

K5010/...

Auswerferbolzen
Ejector rod
Queure d'éjection

Mat.: 1.2312



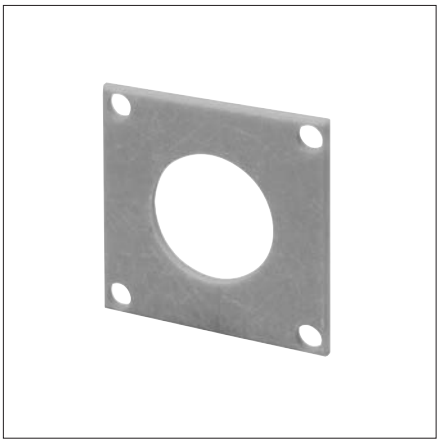
Mat.	d1	l1	Nr. / No.
1.2312	**9,5**	**40**	K5010/9,5x40

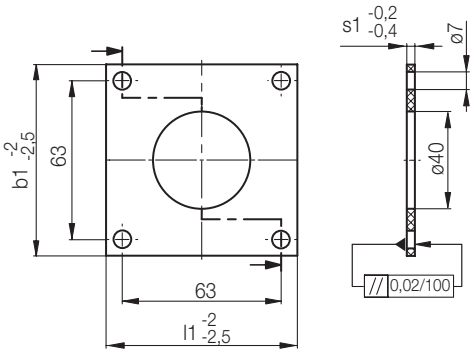
K5005/...

Wärmeisolierplatte
Thermal insulating sheet
Plaque isolante

Mat.: Hochtemperatur - Polymer / Glasfaser
Polymere / Glass fibre
Polymère / Fibres de verre

Max. 220 °C
λ = 0,18 W/mK





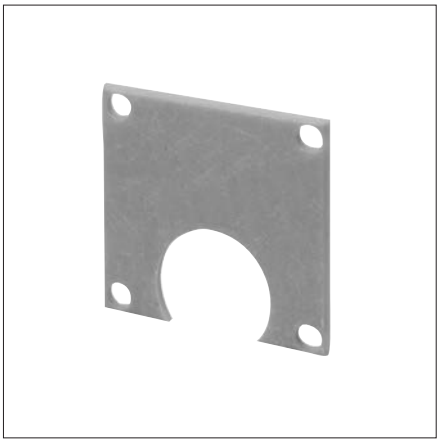
b1	l1	s1	Nr. / No.
75	75	3	K5005/075x075x3

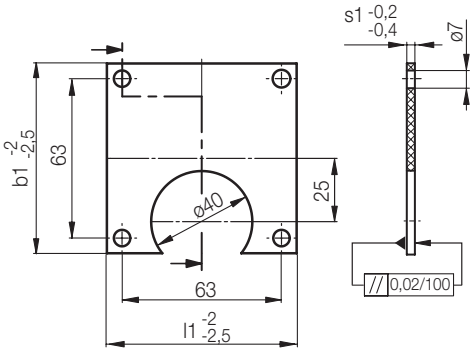
K5006/...

Wärmeisolierplatte
Thermal insulating sheet
Plaque isolante

Mat.: Hochtemperatur - Polymer / Glasfaser
Polymere / Glass fibre
Polymère / Fibres de verre

Max. 220 °C
λ = 0,18 W/mK





b1	l1	s1	Nr. / No.
75	75	3	K5006/075x075x3

Notizen / Notes

Ermöglicher für Stahl
Enabler for steel

Unser Stahl macht Sie produktiv.

- Höchste Materialqualität
- Spannungsarm geglüht
- Einfache Bearbeitung

Our steel enables your productivity.

- High-quality material
- Stress relief annealed
- Easy and stable to machine

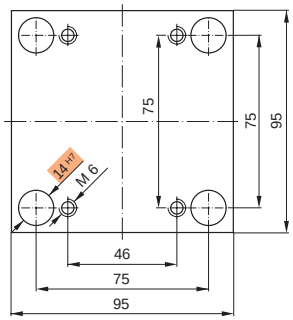
HASCO

Ermöglichen mit System.

K

K-Normalien, eckig
K-standards, angular
Standards K, angulaire

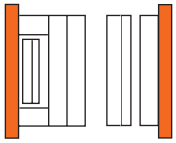
095 x 095

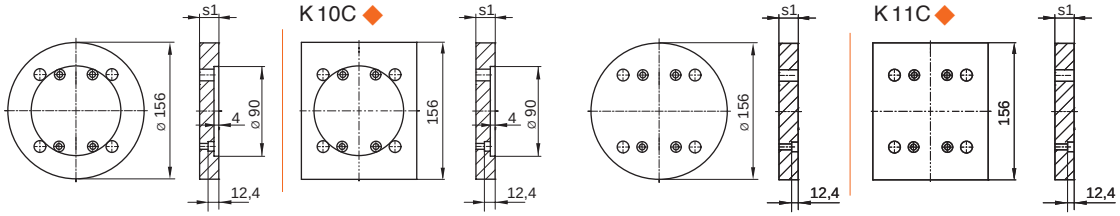


Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 095 x 095 x 36 / 1.2767

K10 / K10C
K11 / K11C

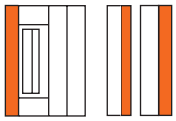




K10/095x095 x s1/	1.1730	1.2162	1.2085	1.2312
22	■ ◆		■ ◆	■ ◆

K11/095x095 x s1/	1.1730	1.2162	1.2085	1.2312
22	■ ◆		■ ◆	■ ◆

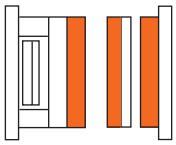
K15
K16

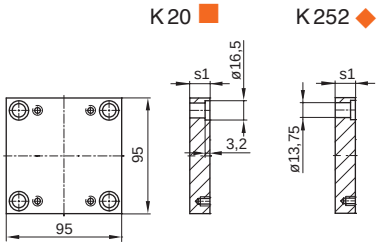


K15/095x095 x s1/	1.1730	1.2162	1.2085	1.2312
12	■		■	■
17	■		■	■

K16/095x095 x s1/	1.1730	1.2162	1.2085	1.2312
12	■		■	■
17	■		■	■

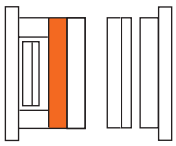
K20
K252

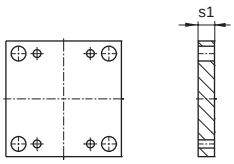




.../095x095 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
9	■	■			■ ◆					
12	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
17	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
22	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
27	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
36	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
46	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
56	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■

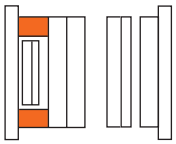
K30



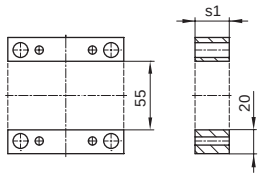


K30/095x095 x s1/	1.1730	1.2085	1.2312
6	■	■	■
12	■	■	■
17	■	■	■

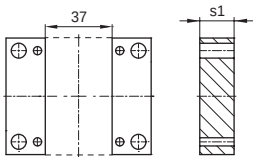
K40
K45



K 40 ■



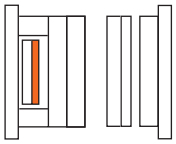
K 45 ◆



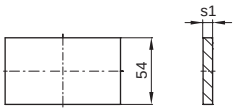
.../095x095 x s1/	1.1730	1.2085	1.2312
22	■ ◆	■ ◆	
27	■ ◆	■ ◆	
36	■ ◆	■ ◆	

.../095x095 x s1/	1.1730	1.2085	1.2312
46	■ ◆	■ ◆	
56	■	■	
66	■	■	

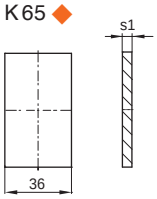
K60
K65



K 60 ■

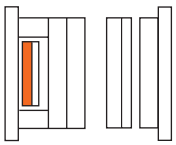


K 65 ◆

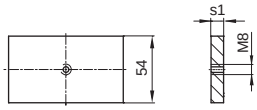


.../095x095 x s1/	1.1730	1.2085	1.2312
6	■ ◆	■ ◆	

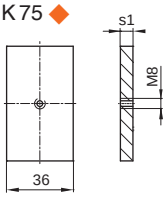
K70
K75



K 70 ■

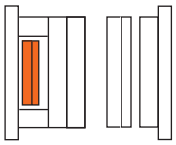


K 75 ◆



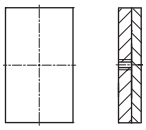
.../095x095 x s1/	1.1730	1.2085	1.2312
9	■ ◆	■ ◆	■ ◆

K60-70
K65-75



K 60-70 ■

K 65-75 ◆



.../095x095 x	1.1730	1.2085
	■ ◆	■ ◆

100 x 130

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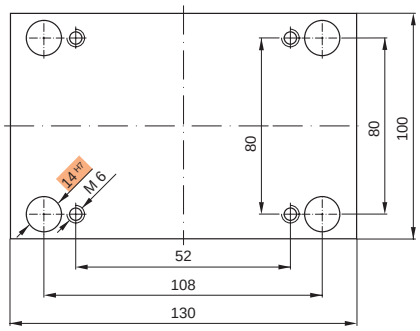
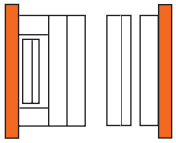
Répertoire K 2500 / …
Seite / Page 236

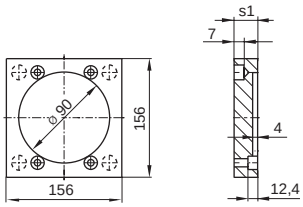


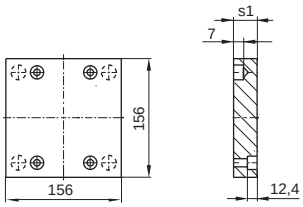
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 100 x 130 x 36 / 1.2767

K10
K11



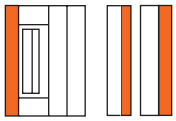


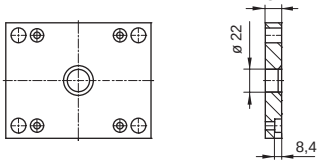


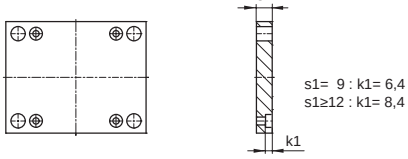
K10/100x130 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■

K11/100x130 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■

K15
K16



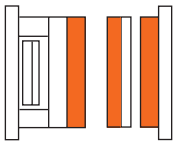


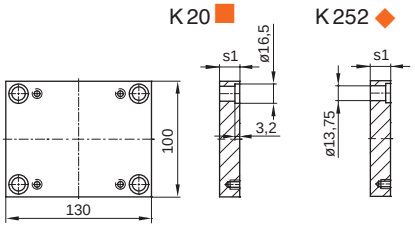


K15/100x130 x s1/	1.1730	1.2162	1.2085	1.2312
12	■		■	■
17	■		■	■

K16/100x130 x s1/	1.1730	1.2162	1.2085	1.2312
9	■	■	■	
12	■		■	■
17	■		■	■

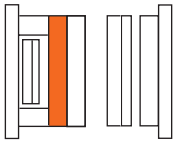
K20
K252

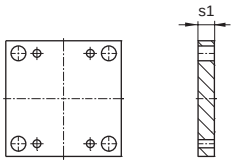




…/100x130 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
9	■	■			■ ◆					
12	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
17	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
22	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
27	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
36	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
46	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
56	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■

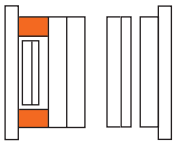
K30



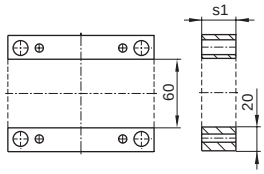


K30/100x130 x s1/	1.1730	1.2085	1.2312
6	■	■	■
12	■	■	■
17	■	■	■

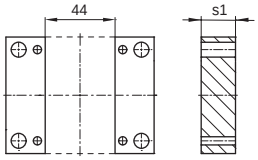
K40
K45



K 40 ■



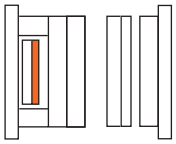
K 45 ◆



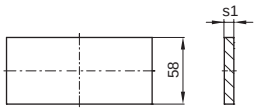
.../100x130 x s1/	1.1730	1.2085	1.2312
27	■ ◆	■ ◆	
36	■ ◆	■ ◆	
46	■ ◆	■ ◆	

.../100x130 x s1/	1.1730	1.2085	1.2312
56	■	■	
66	■	■	

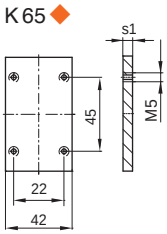
K60
K65



K 60 ■

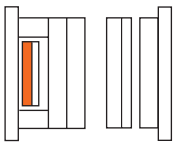


K 65 ◆

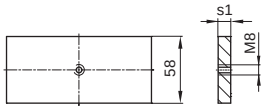


.../100x130 x s1/	1.1730	1.2085	1.2312
6	■ ◆	■ ◆	

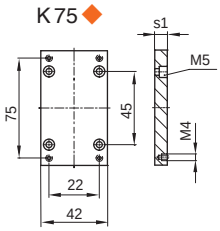
K70
K75



K 70 ■

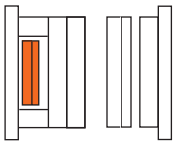


K 75 ◆

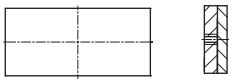


.../100x130 x s1/	1.1730	1.2085	1.2312
9	■ ◆	■ ◆	■ ◆

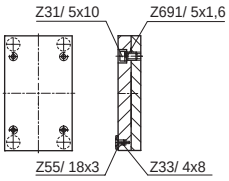
K60-70
K65-75



K 60-70 ■



K 65-75 ◆



.../100x130 x	1.1730	1.2085
	■ ◆	■ ◆

156 x 156

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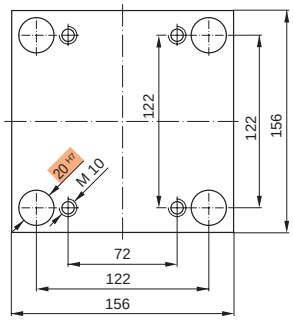
Répertoire K 2500 / …
Seite / Page 238

Register / Section
Répertoire KR
Seite / Page 285 (KR 20 / …)

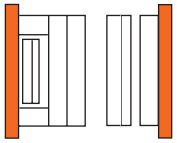


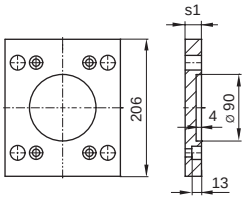
Bestellbeispiel:
Ordering example:
Exemple de commande:

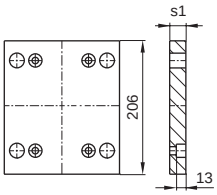
K20 / 156 x 156 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



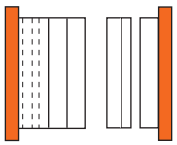


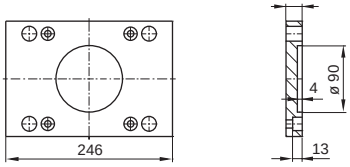


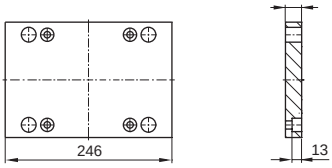
K10/156x156 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K11/156x156 x s1/	1.1730	1.2162	1.2085	1.2312
17	■			■
22	■		■	■
27	■		■	■

K12
K13



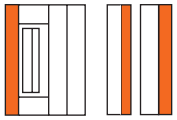


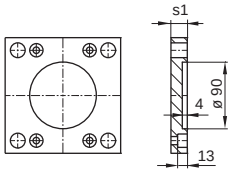


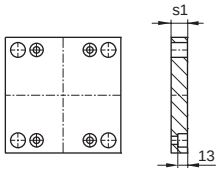
K12/156x156 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K13/156x156 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K15
K16



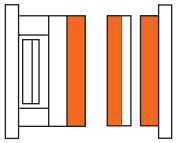




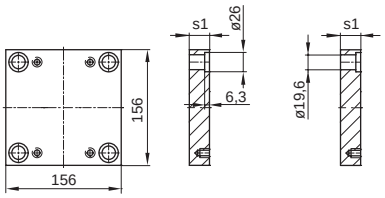
K15/156x156 x s1/	1.1730	1.2162	1.2085	1.2312
17	■		■	■
22	■		■	■

K16/156x156 x s1/	1.1730	1.2162	1.2085	1.2312
17	■	■	■	■
22	■		■	■

K20
K252

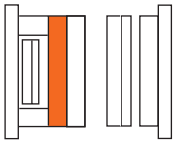


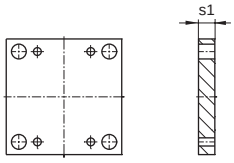
K 20 ■ K 252 ◆



…/156x156 x s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■ ◆		■ ◆	■ ◆	■ ◆	◆		■
22	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆		■
27	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
36	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■					■	■			

K30

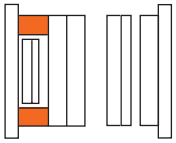




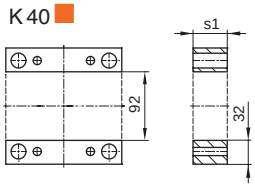
K30/156x156 x s1/	1.1730	1.2085	1.2312
17	■	■	■
22	■	■	■
27	■	■	■
36	■	■	■

K30/156x156 x s1/	1.1730	1.2085	1.2312
46	■	■	■
56	■		■
66	■		

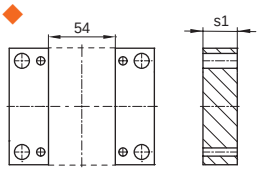
K40
K45



K40 ■



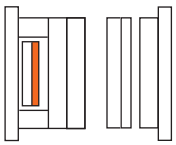
K45 ◆



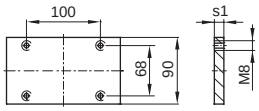
.../156x156 x s1/	1.1730	1.2085	1.2312
36	■	■	
46	■ ◆	■ ◆	
56	■ ◆	■ ◆	
66	■	■	

.../156x156 x s1/	1.1730	1.2085	1.2312
76	■ ◆	■ ◆	
86	■	■	
96	■	■	

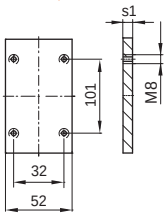
K60
K65



K60 ■

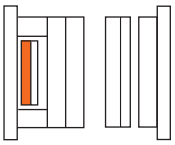


K65 ◆

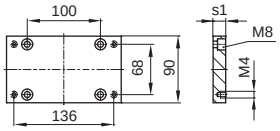


.../156x156 x s1/	1.1730	1.2085	1.2312
9	■ ◆	■ ◆	

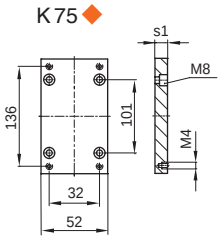
K70
K75



K70 ●

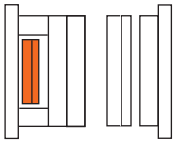


K75 ◆

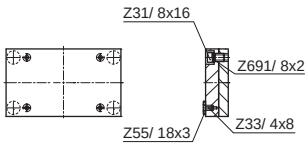


.../156x156 x s1/	1.1730	1.2085	1.2312
17	■ ◆	■ ◆	■ ◆

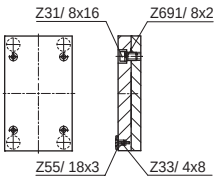
K60-70
K65-75



K60-70 ■



K65-75 ◆

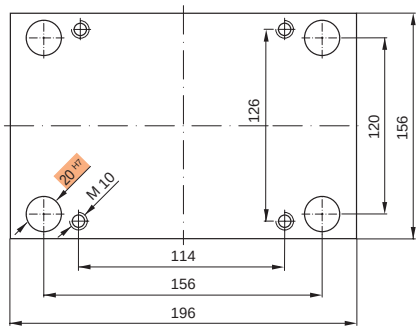


.../156x156 x	1.1730	1.2085
	■ ◆	■ ◆

156 x 196

Register / Section
Répertoire K 2500 / …
Seite / Page 240

Register / Section
Répertoire KR
Seite / Page 286 (KR 20 / …)

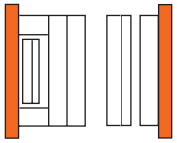


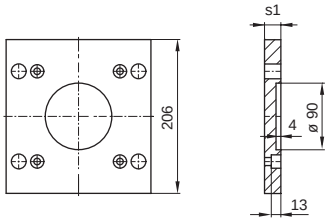
Bestellbeispiel:
Ordering example:
Exemple de commande:

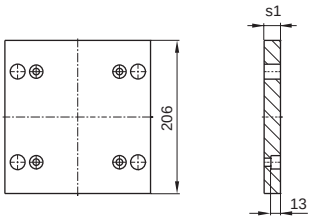
K20 / 156 x 196 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



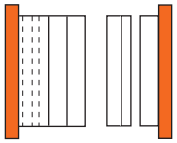


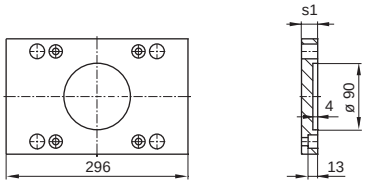


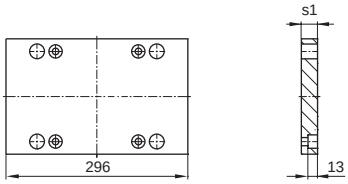
K10/156x196 x s1/	1.1730	1.2162	1.2085	1.2312
17	■			■
22	■		■	■
27	■		■	■

K11/156x196 x s1/	1.1730	1.2162	1.2085	1.2312
17	■			■
22	■		■	■
27	■		■	■

K12
K13



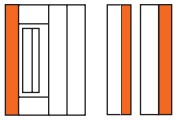


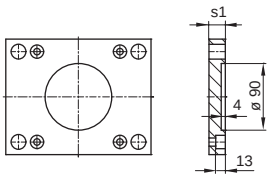


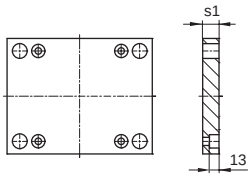
K12/156x196 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K13/156x196 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K15
K16



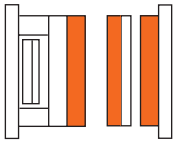




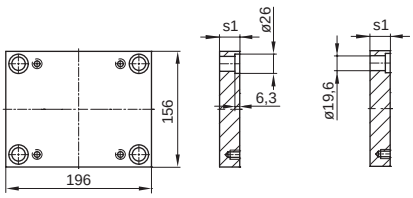
K15/156x196 x s1/	1.1730	1.2162	1.2085	1.2312
17	■		■	■
22	■		■	■

K16/156x196 x s1/	1.1730	1.2162	1.2085	1.2312
17	■	■	■	■
22	■		■	■

K20
K252

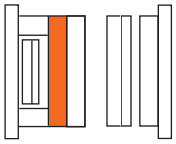


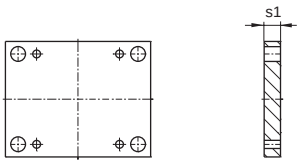
K 20 ■ K 252 ◆



…/156x196 x s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■ ◆		■ ◆	■ ◆	■ ◆	◆		■
22	■	■	■ ◆	■	■ ◆	■ ◆	■ ◆	◆		■
27	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
36	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■					■	■			

K30

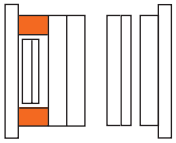




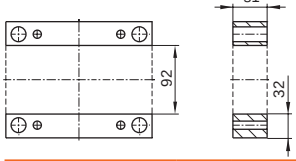
K30/156x196 x s1/	1.1730	1.2085	1.2312
17	■	■	■
22	■	■	■
27	■	■	■
36	■	■	■

K30/156x196 x s1/	1.1730	1.2085	1.2312
46	■	■	■
56	■		■
66	■		

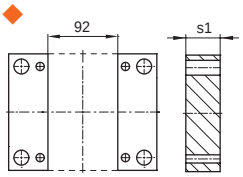
K40
K45



K40 ■



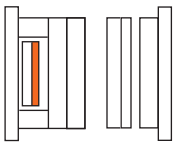
K45 ◆



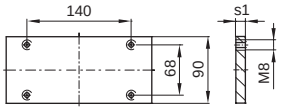
.../156x196 x s1/	1.1730	1.2085	1.2312
36	■	■	
46	■ ◆	■ ◆	
56	■ ◆	■ ◆	
66	■	■	

.../156x196 x s1/	1.1730	1.2085	1.2312
76	■ ◆	■ ◆	
86	■	■	
96	■	■	

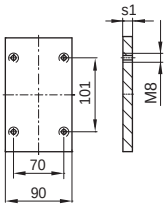
K60
K65



K60 ■

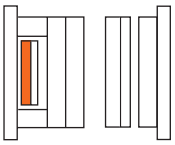


K65 ◆

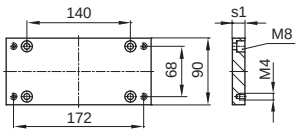


.../156x196 x s1/	1.1730	1.2085	1.2312
9	■ ◆	■ ◆	

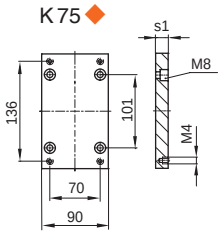
K70
K75



K70 ■

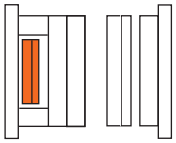


K75 ◆

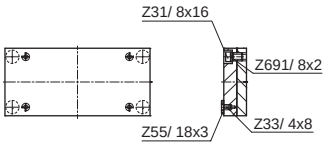


.../156x196 x s1/	1.1730	1.2085	1.2312
17	■ ◆	■ ◆	■ ◆

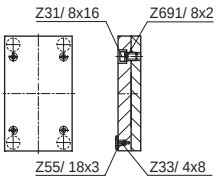
K60-70
K65-75



K60-70 ■

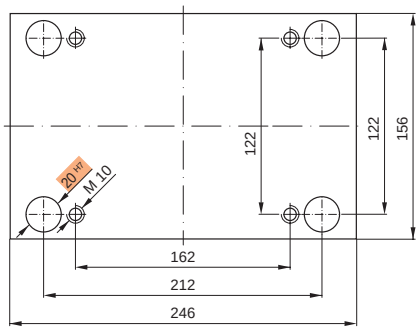


K65-75 ◆



.../156x196 x	1.1730	1.2085
	■ ◆	■ ◆

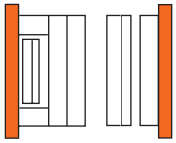
156 x 246

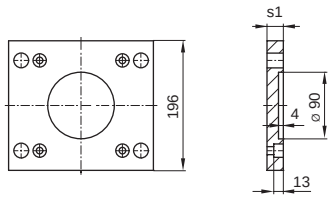


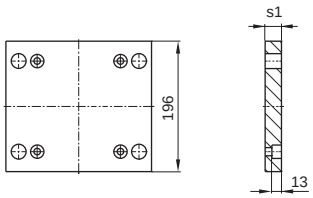
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 156 x 246 x 36 / 1.2767

K10
K11



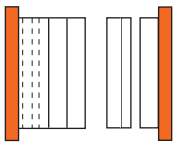


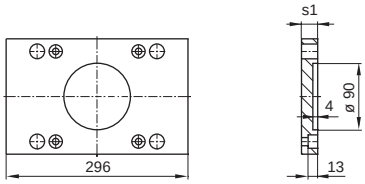


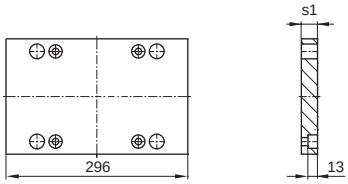
K10/156x246 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K11/156x246 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K12
K13



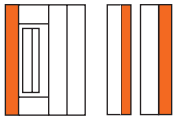


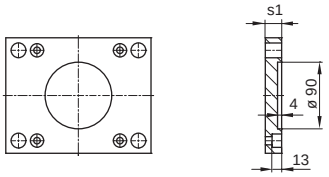


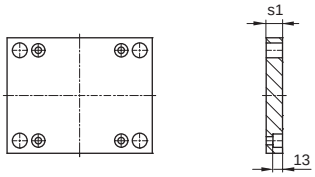
K12/156x246 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K13/156x246 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K15
K16



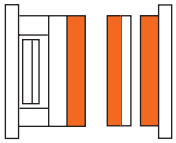




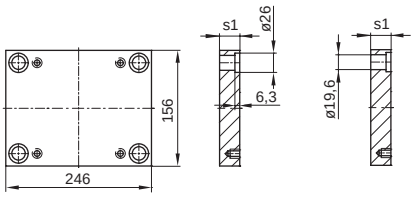
K15/156x246 x s1/	1.1730	1.2162	1.2085	1.2312
17	■		■	■
22	■		■	■

K16/156x246 x s1/	1.1730	1.2162	1.2085	1.2312
17	■	■	■	■
22	■		■	■

K20
K252

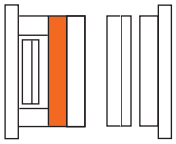


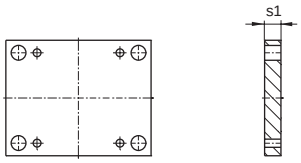
K 20 ■ K 252 ◆



.../156x246 x s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■ ◆		■ ◆	■ ◆	■ ◆	◆		■
22	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆		■
27	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
36	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■					■	■			

K30

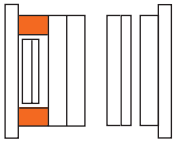




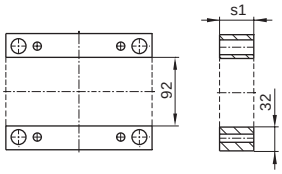
K30/156x246 x s1/	1.1730	1.2085	1.2312
22	■	■	■
27	■	■	■
36	■	■	■

K30/156x246 x s1/	1.1730	1.2085	1.2312
46	■	■	■
56	■		■

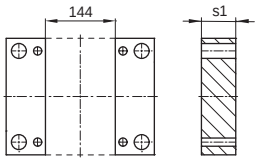
K40
K45



K40 ■



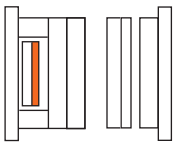
K45 ◆



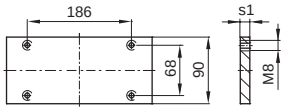
.../156x246 x s1/	1.1730	1.2085	1.2312
46	■ ◆	■ ◆	
56	■ ◆	■ ◆	
66	■	■	

.../156x246 x s1/	1.1730	1.2085	1.2312
76	■ ◆	■ ◆	
86	■	■	
96	■	■	

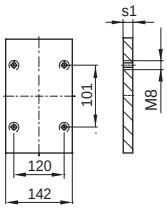
K60
K65



K60 ■

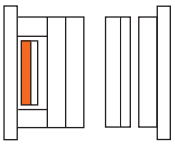


K65 ◆

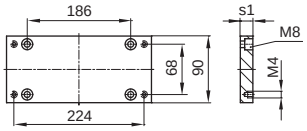


.../156x246 x s1/	1.1730	1.2085	1.2312
9	■ ◆	■ ◆	

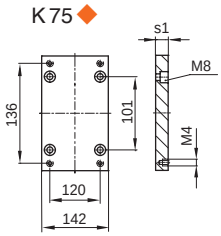
K70
K75



K70 ■

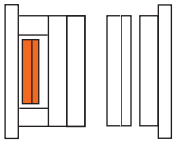


K75 ◆

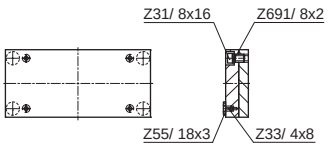


.../156x246 x s1/	1.1730	1.2085	1.2312
17	■ ◆	■ ◆	■ ◆

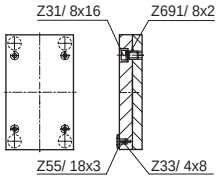
K60-70
K65-75



K60-70 ■

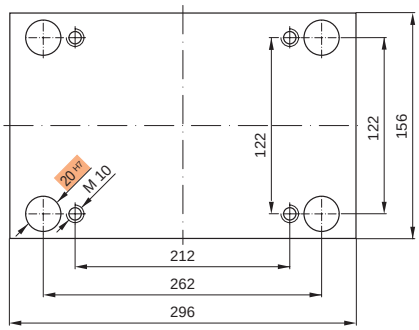


K65-75 ◆



.../156x246 x	1.1730	1.2085
	■ ◆	■ ◆

156 x 296

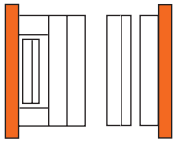


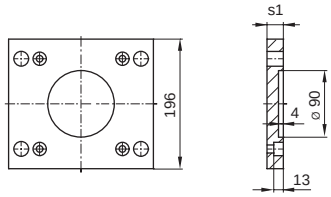
Bestellbeispiel:
Ordering example:
Exemple de commande:

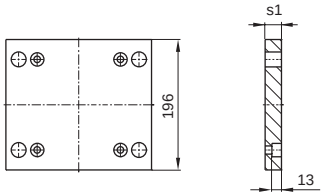
K20 / 156 x 296 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



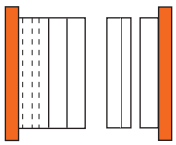


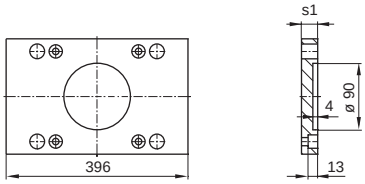


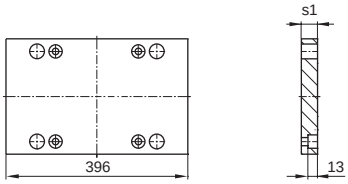
K10/156x296 x s1/	1.1730	1.2162	1.2085	1.2312
22	■			
27	■		■	■

K11/156x296 x s1/	1.1730	1.2162	1.2085	1.2312
22	■			
27	■		■	■

K12
K13



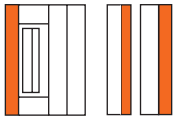


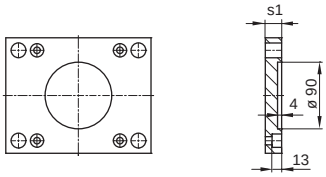


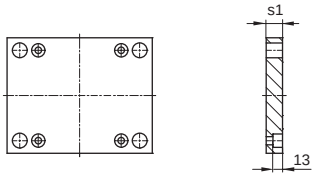
K12/156x296 x s1/	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K13/156x296 x s1/	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K15
K16



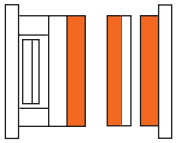




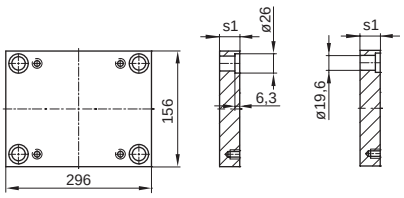
K15/156x296 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■

K16/156x296 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■

K20
K252

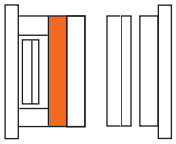


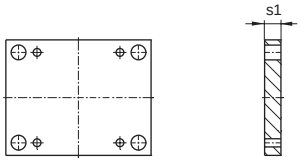
K 20 ■ K 252 ◆



.../156x296 x s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■			■◆	■◆	■◆			■
22	■	■	◆		■◆	■◆	■◆	◆		■
27	■	■	◆	■◆	■◆	■◆	■◆	◆		■
36	■	■	◆	■◆	■◆	■◆	■◆	◆		■
46	■	■	◆	■◆	■◆	■◆	■◆	◆		■
56	■	■	◆	■◆	■◆	■◆	■◆	◆		■
66	■	■	◆	■◆	■◆	■◆	■◆	◆		■
76	■	■		■	■◆	■◆	■◆			■
86	■	■		■	■◆	■◆	■◆			■

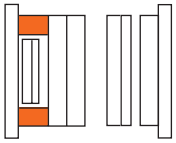
K30



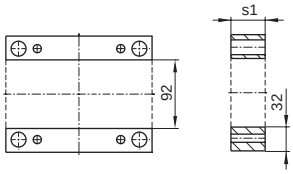


K30/156x296 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■		■

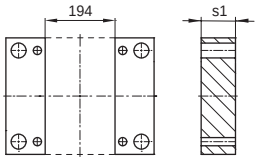
K40
K45



K40 ■



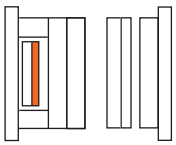
K45 ◆



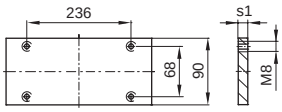
.../156x296 x s1/	1.1730	1.2085	1.2312
46	■ ◆	■ ◆	
56	■ ◆	■ ◆	
66	■	■	

.../156x296 x s1/	1.1730	1.2085	1.2312
76	■ ◆	■ ◆	
86	■	■	
96	■	■	

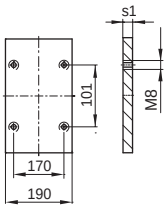
K60
K65



K60 ■

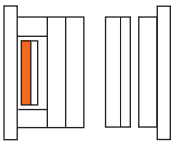


K65 ◆

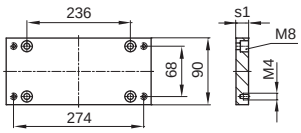


.../156x296 x s1/	1.1730	1.2085	1.2312
12	■ ◆	■ ◆	

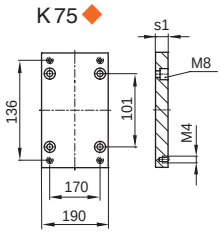
K70
K75



K70 ■

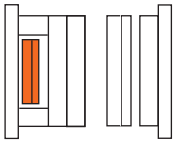


K75 ◆

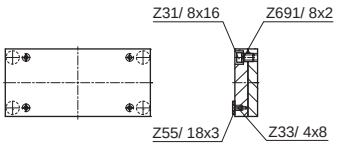


.../156x296 x s1/	1.1730	1.2085	1.2312
17	■ ◆	■ ◆	• ◆

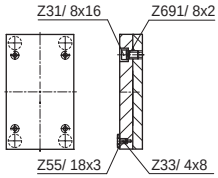
K60-70
K65-75



K60-70 ■

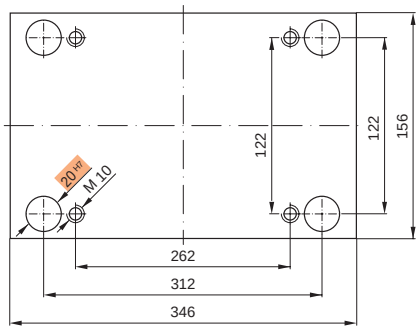


K65-75 ◆



.../156x296 x	1.1730	1.2085
	■ ◆	• ◆

156 x 346

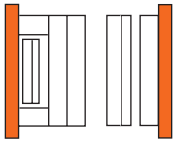


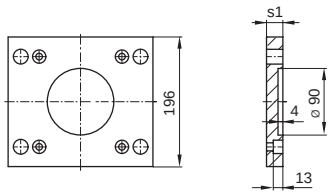
Bestellbeispiel:
Ordering example:
Exemple de commande:

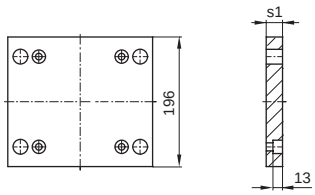
K20 / 156 x 346 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



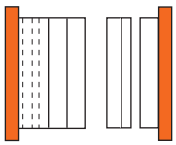


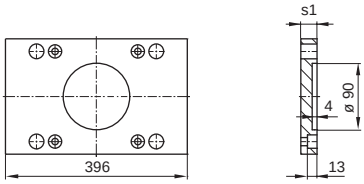


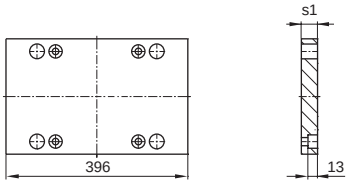
K10/156x346 x s1/	1.1730	1.2162	1.2085	1.2312
22	■			
27	■		■	■

K11/156x346 x s1/	1.1730	1.2162	1.2085	1.2312
22	■			
27	■		■	■

K12
K13



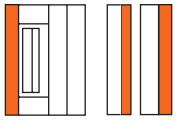


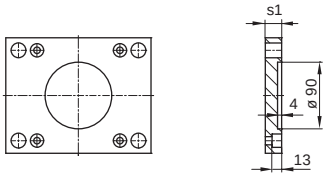


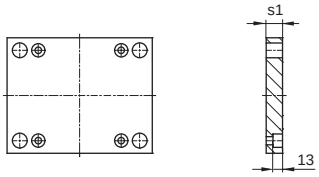
K12/156x346 x s1/	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K13/156x346 x s1/	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K15
K16



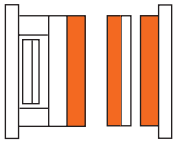




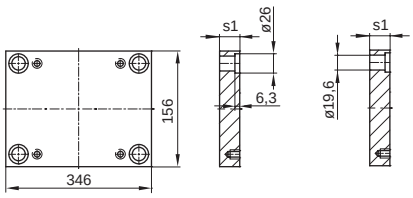
K15/156x346 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■

K16/156x346 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K20
K252

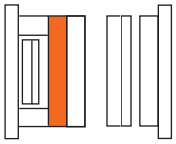


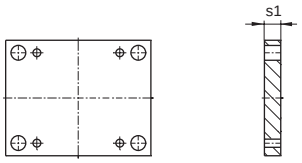
K 20 ■ K 252 ◆



.../156x346 x s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■		◆		■◆	■◆	■◆			■
22	■		◆	◆	■◆	■◆	■◆	◆		■
27	■		◆	◆	■◆	■◆	■◆	◆		■
36	■		◆	◆	■◆	■◆	■◆	◆		■
46	■		◆	◆	■◆	■◆	■◆	◆		■
56	■		◆	◆	■◆	■◆	■◆	◆		■
66	■		◆	◆	■◆	■◆	■◆	◆		■
76	■		◆	◆	■◆	■◆	■◆	◆		■
86	■		◆	◆	■◆	■◆	■◆	◆		■

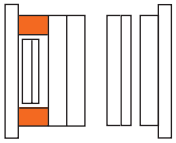
K30



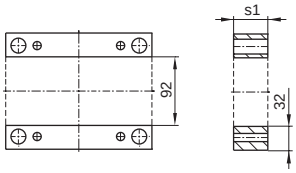


K30/156x346 x s1/	1.1730	1.2085	1.2312
27	■	■	•
36	■	■	•
46	■		•
56	■		•

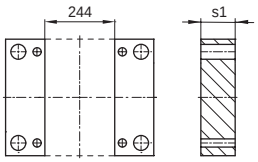
K40
K45



K 40 ■



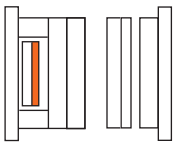
K 45 ◆



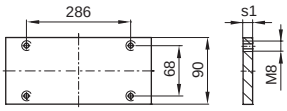
.../156x346 x s1/	1.1730	1.2085	1.2312
46	■ ◆	■ ◆	
56	■ ◆	■ ◆	
66	■		

.../156x346 x s1/	1.1730	1.2085	1.2312
76	■ ◆	■ ◆	
86	■	■	
96	■	■	

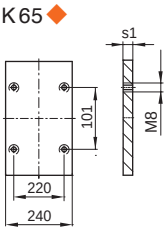
K60
K65



K 60 ■

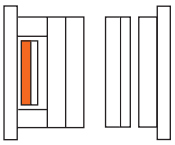


K 65 ◆

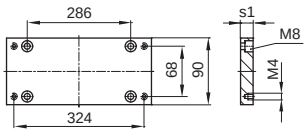


.../156x346 x s1/	1.1730	1.2085	1.2312
9	■ ◆	■ ◆	

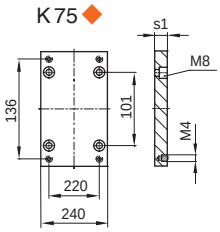
K70
K75



K 70 ■

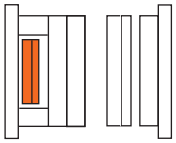


K 75 ◆

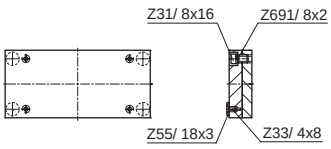


.../156x346 x s1/	1.1730	1.2085	1.2312
17	■ ◆	■ ◆	■ ◆

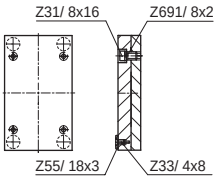
K60-70
K65-75



K 60-70 ■



K 65-75 ◆

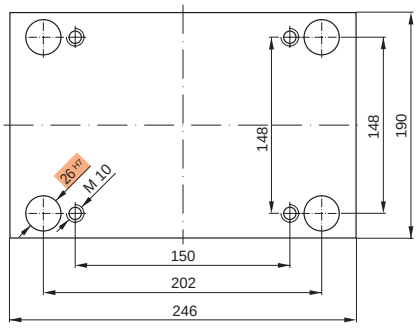


.../156x346 x	1.1730	1.2085
	■ ◆	■ ◆

190 x 246

Register / Section
Répertoire K 2500 / …
Seite / Page 242

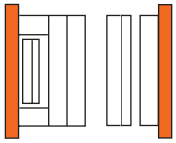
Register / Section
Répertoire KR
Seite / Page 288 (KR 20 / …)



Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 190 x 246 x 36 / 1.2767

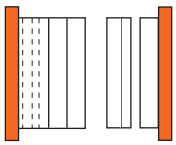
K10
K11

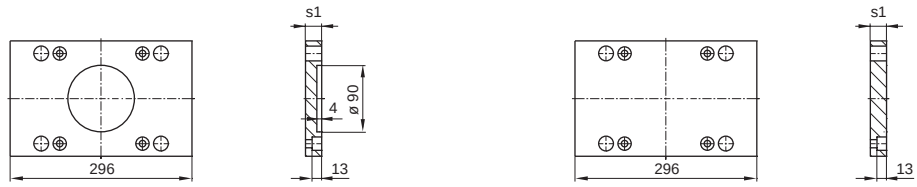


K10/190x246 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K11/190x246 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K12
K13

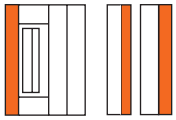




K12/190x246 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K13/190x246 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

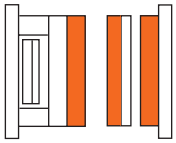
K15
K16



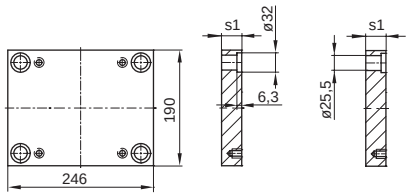
K15/190x246 x s1/	1.1730	1.2162	1.2085	1.2312
17	■		■	■
22	■		■	■

K16/190x246 x s1/	1.1730	1.2162	1.2085	1.2312
17	■	■	■	■
22	■		■	■

K20
K252

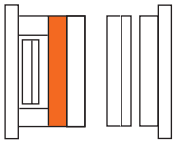


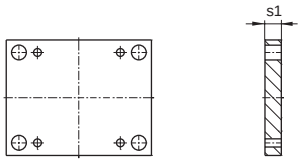
K 20 ■ K 252 ◆



…/190x246 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■◆		■◆	■◆	■◆			■
22	■	■	■◆		■◆	■◆	■◆			■
27	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
36	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
46	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
56	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
66	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
76	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
86	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
96	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■

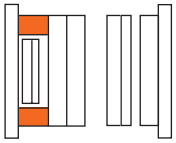
K30



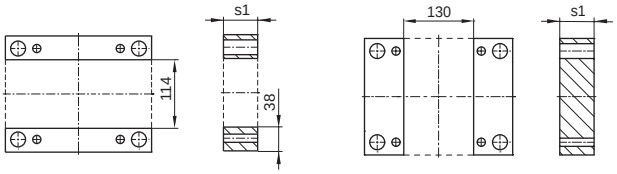


K30/190x246 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■		■
56	■		■

K40
K45

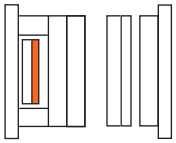


K40 ■ K45 ◆

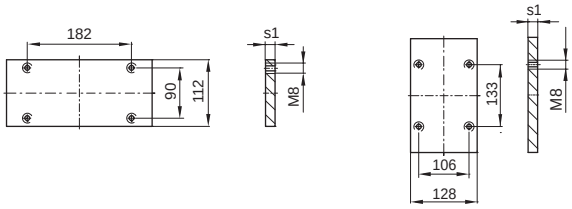


.../190x246 x s1/	1.1730	1.2085	1.2312
46	■ ◆	■ ◆	
56	■ ◆	■ ◆	
76	■ ◆	■ ◆	

K60
K65

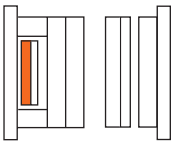


K60 ■ K65 ◆

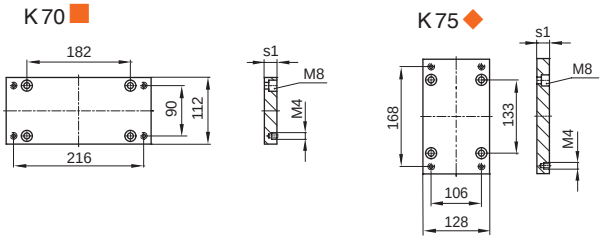


.../190x246 x s1/	1.1730	1.2085	1.2312
12	■ ◆	■ ◆	

K70
K75

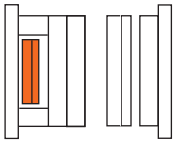


K70 ■ K75 ◆

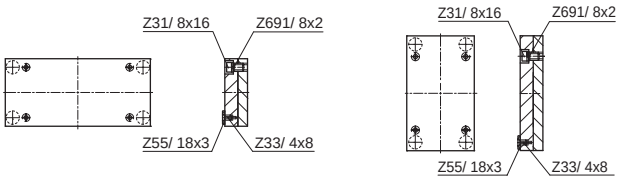


.../190x246 x s1/	1.1730	1.2085	1.2312
17	■ ◆	■ ◆	■ ◆

K60-70
K65-75



K60-70 ■ K65-75 ◆

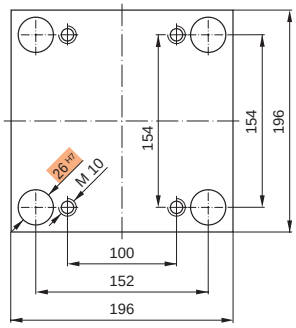


.../190x246 x	1.1730	1.2085
	■ ◆	■ ◆

196 x 196

Register / Section
Répertoire K 2500 / …
Seite / Page 244

Register / Section
Répertoire KR
Seite / Page 287 (KR 20 / …)

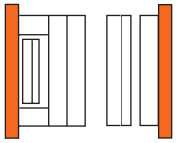


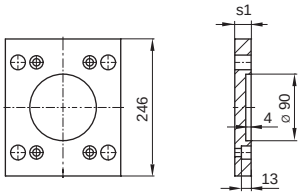
Bestellbeispiel:
Ordering example:
Exemple de commande:

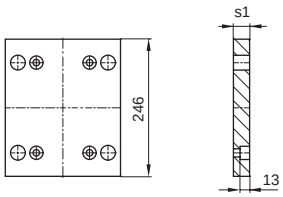
K20 / 196 x 196 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



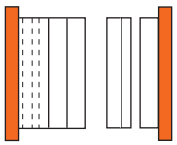


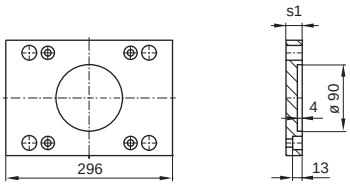


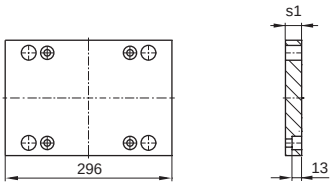
K10/196x196 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■
36	■		■	■
46	■			■

K11/196x196 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■
36	■		■	■
46	■			■

K12
K13



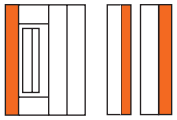


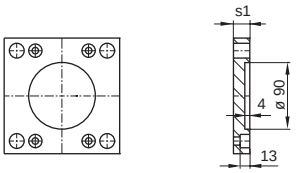


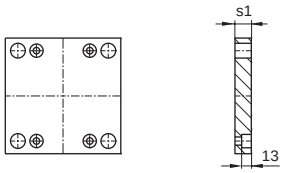
K12/196x196 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K13/196x196 x s1/	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K15
K16



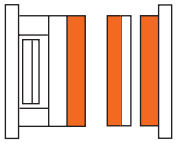




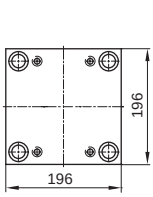
K15/196x196 x s1/	1.1730	1.2162	1.2085	1.2312
17	■		■	■
22	■		■	■

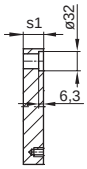
K16/196x196 x s1/	1.1730	1.2162	1.2085	1.2312
17	■	■	■	■
22	■		■	■

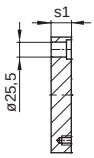
K20
K252



K 20 ■ K 252 ◆

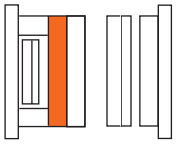


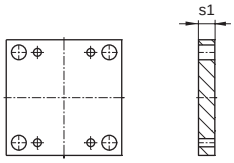




…/196x196 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■ ◆	◆	■ ◆	■ ◆	■ ◆	◆		■
22	■	■	■ ◆	◆	■ ◆	■ ◆	■ ◆	◆		■
27	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
36	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
116	■					■	■			

K30

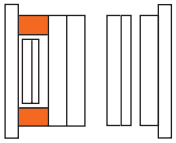




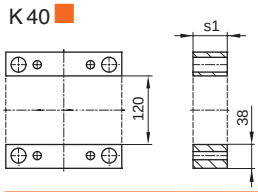
K30/196x196 x s1/	1.1730	1.2085	1.2312
17	■	■	■
22	■	■	■
27	■	■	■
36	■	■	■

K30/196x196 x s1/	1.1730	1.2085	1.2312
46	■	■	■
56	■	■	■
66	■	■	■

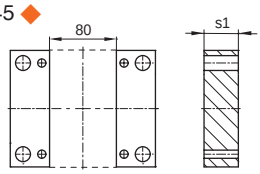
K40 K45 K42



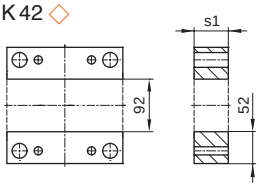
K40 ■



K45 ◆



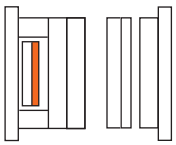
K42 ◇



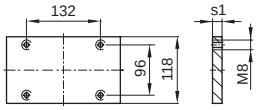
.../196x196 x s1/	1.1730	1.2085	1.2312
46	■ ◆ ◇	■ ◆	
56	■ ◆ ◇	■ ◆	
66	■	■	
76	■ ◆ ◇	■ ◆	

.../196x196 x s1/	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◇	■	
116	■ ◇	■	

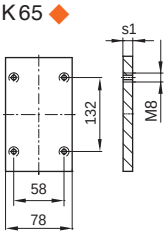
K60 K65 K62



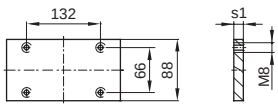
K60 ■



K65 ◆

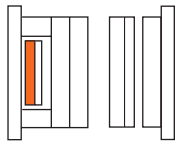


K62 ◇

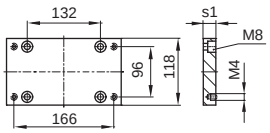


.../196x196 x s1/	1.1730	1.2085	1.2312
12	■ ◆ ◇	■ ◆	

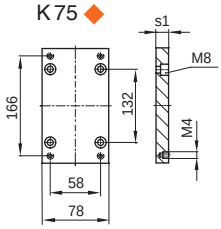
K70 K75 K72



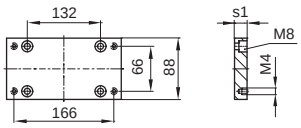
K70 ■



K75 ◆

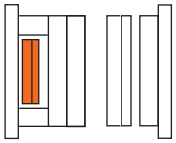


K72 ◇

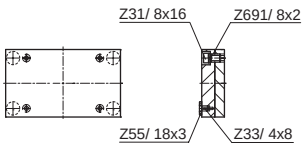


.../196x196 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	■ ◆ ◇

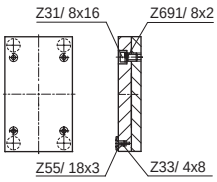
K60-70 K65-75 K62-72



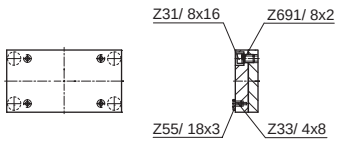
K60-70 ■



K65-75 ◆



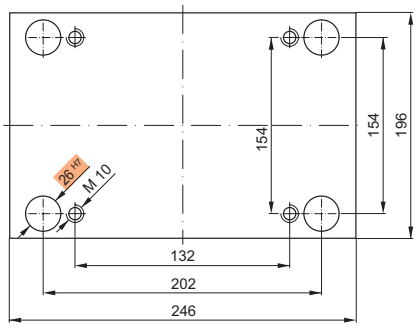
K62-72



.../196x196 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/196x196/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

196 x 246

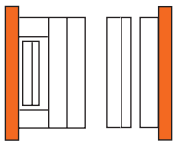


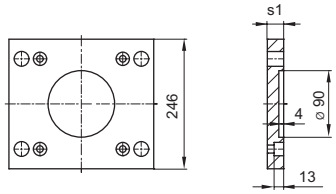
Bestellbeispiel:
Ordering example:
Exemple de commande:

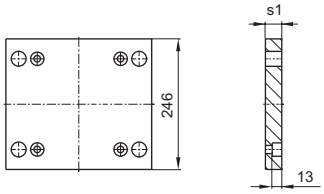
K20 / 196 x 246 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



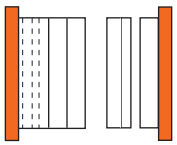


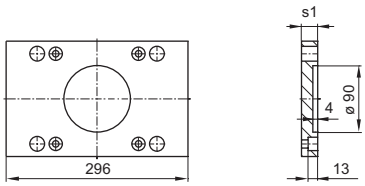


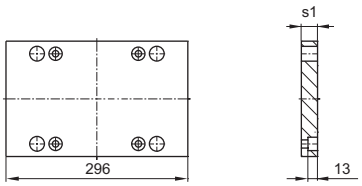
K10/196x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K11/196x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K12
K13



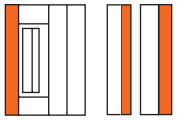


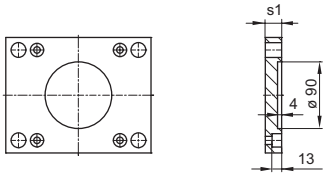


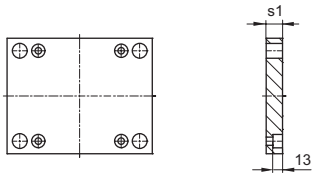
K12/196x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K13/196x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K15
K16



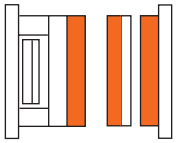


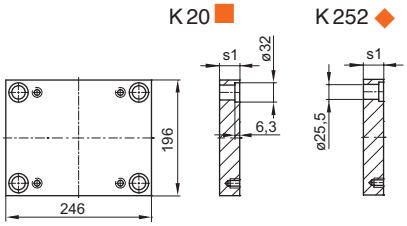


K15/196x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K16/196x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

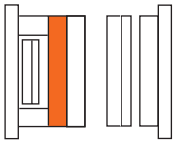
K20
K252

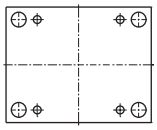




.../196x246 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■		◆		■	■	■	◆		
22	■		◆	◆	■	■	■	◆		
27	■		◆	◆	■	■	■	◆	◆	
36	■		◆	◆	■	■	■	◆	◆	
46	■		◆	◆	■	■	■	◆	◆	
56	■		◆	◆	■	■	■	◆	◆	
66	■		◆	◆	■	■	■	◆	◆	
76	■		◆	◆	■	■	■	◆	◆	
86	■		◆	◆	■	■	■	◆		
96	■		◆		■	■	■	◆		
106	■					■	■			
116	■					■	■			

K30

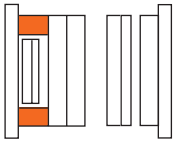




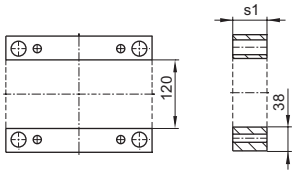
K30/196x246 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■

K30/196x246 x s1/	1.1730	1.2085	1.2312
46	■		■
56	■		■

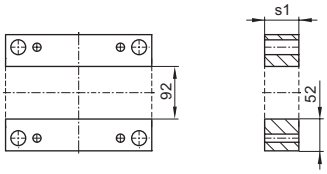
K40
K42



K40 ■

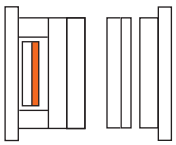


K42 ◇

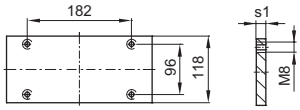


.../196x246 x s1/	1.1730	1.2085	1.2312
46	■ ◇	■	
56	■ ◇	■	
76	■ ◇	■	

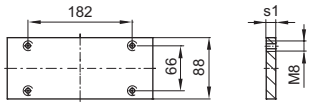
K60
K62



K60 ■

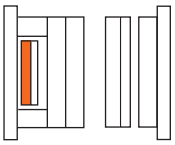


K62 ◇

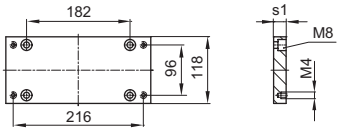


.../196x246 x s1/	1.1730	1.2085	1.2312
12	■ ◇	■ ◇	

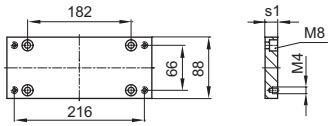
K70
K72



K70 ■

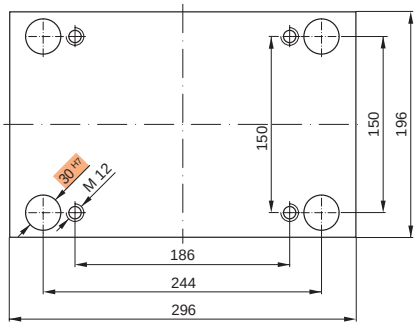


K72 ◇



.../196x246 x s1/	1.1730	1.2085	1.2312
17	■ ◇	■ ◇	■ ◇

196 x 296



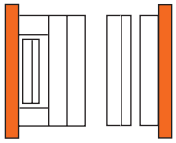
Bestellbeispiel:
Ordering example:
Exemple de commande:

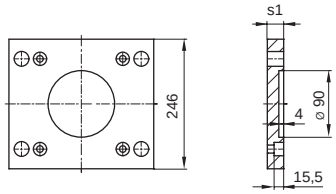
K20 / 196 x 296 x 36 / 1.2767

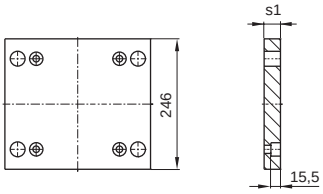
Register/Section
Répertoire KR
Seite/Page 289 (KR 20/…)

Neu / New / Nouveau

K10
K11



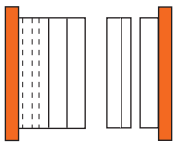


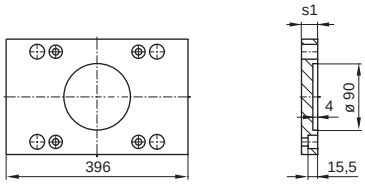


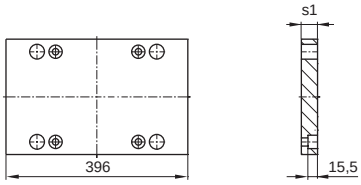
K10/196x296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K11/196x296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K12
K13



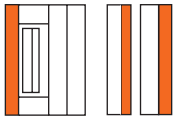


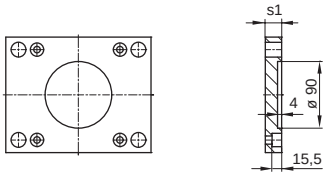


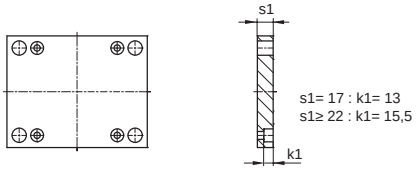
K12/196x296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K13/196x296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16



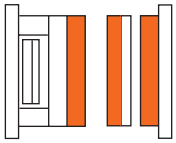


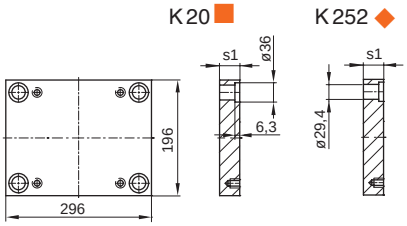


K15/196x296 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K16/196x296 / s1	1.1730	1.2162	1.2085	1.2312
17	■	■	■	
22	■		■	■
27	■		■	■

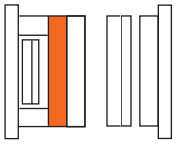
K20
K252

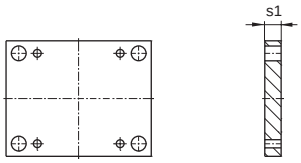




…/196x296 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■◆		■◆	■◆	■◆	◆		■
22	■	■	■◆	◆	■◆	■◆	■◆	◆		■
27	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
36	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
46	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
56	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
66	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
76	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
86	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
96	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
106	■					■	■			
116	■					■	■			

K30

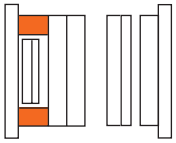




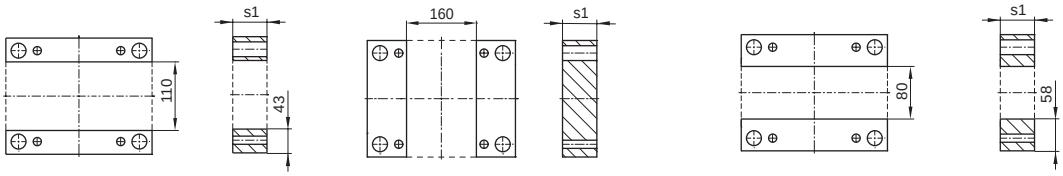
K30/196x296 x s1/	1.1730	1.2085	1.2312
22	■		■
27	■	■	■
36	■	■	■

K30/196x296 x s1/	1.1730	1.2085	1.2312
46	■	■	■
56	■		■
66	■		■

K40 K45 K42



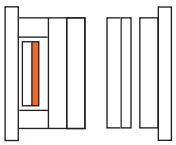
K40 ■ K45 ◆ K42 ◇



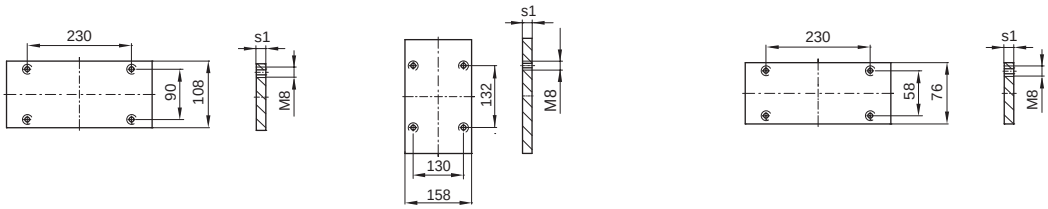
.../196x296 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../196x296 x s1/	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	

K60 K65 K62

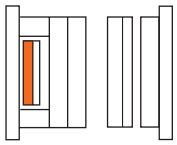


K60 ■ K65 ◆ K62 ◇

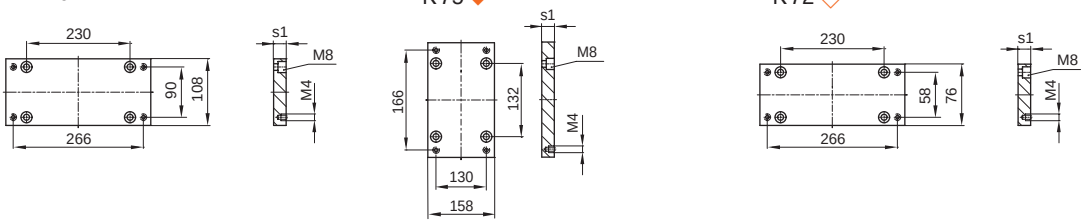


.../196x296 x s1/	1.1730	1.2085	1.2312
12	■ ◆ ◇	■ ◆	

K70 K75 K72

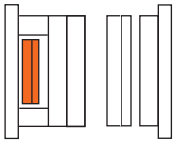


K70 ■ K75 ◆ K72 ◇

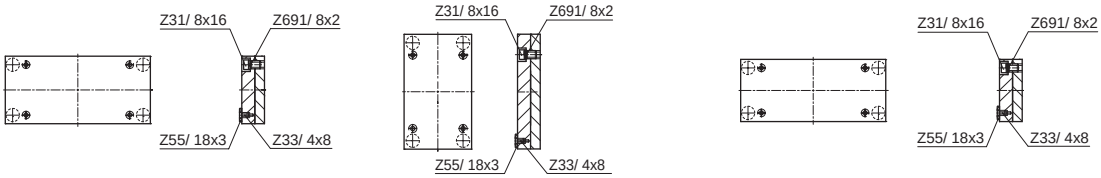


.../196x296 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	■ ◆ ◇

K60-70 K65-75 K62-72



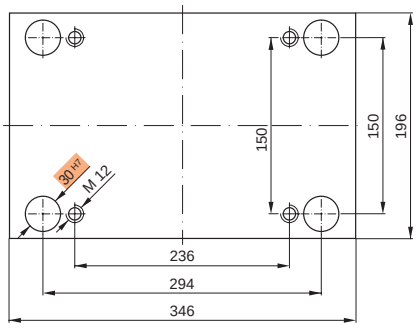
K60-70 ■ K65-75 ◆ K62-72



.../196x296 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/196x296/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

196 x 346

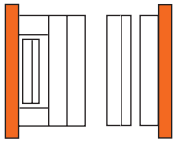


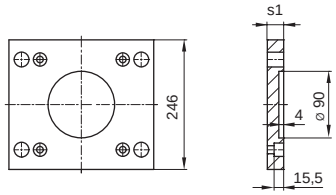
Bestellbeispiel:
Ordering example:
Exemple de commande:

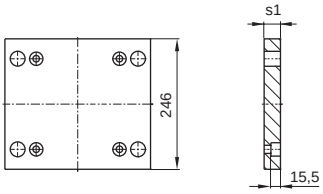
K20 / 196 x 346 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



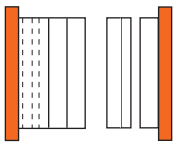


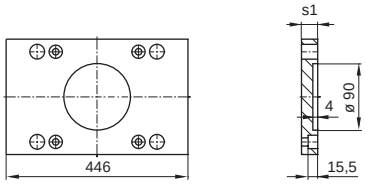


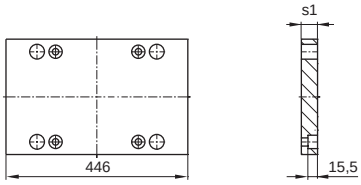
K10/196x346 / s1		1.1730	1.2162	1.2085	1.2312
	27	■		■	■
	36	■		■	■

K11/196x346 / s1		1.1730	1.2162	1.2085	1.2312
	22	■			■
	27	■		■	■
	36	■		■	■

K12
K13



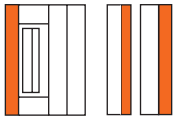


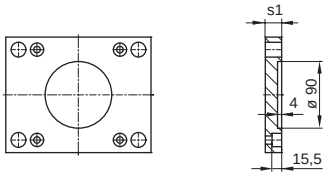


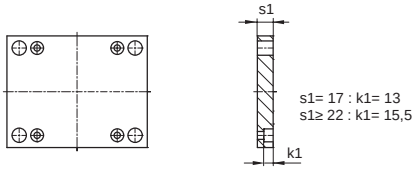
K12/196x346 / s1		1.1730	1.2162	1.2085	1.2312
	27	■		■	■
	36	■		■	■

K13/196x346 / s1		1.1730	1.2162	1.2085	1.2312
	27	■		■	■
	36	■		■	■

K15
K16



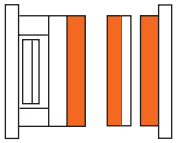


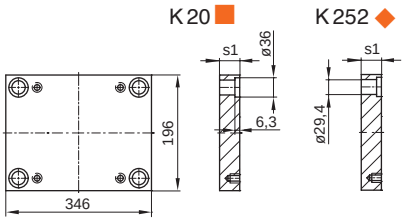


K15/196x346 / s1		1.1730	1.2162	1.2085	1.2312
	22	■		■	■
	27	■		■	■

K16/196x346 / s1		1.1730	1.2162	1.2085	1.2312
	17	■	■	■	
	22	■		■	■
	27	■		■	■

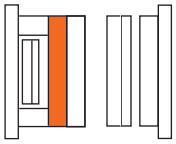
K20
K252

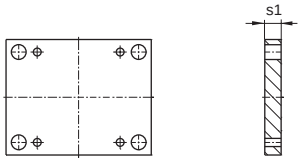




.../196x346 x s1/		1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
	17	■		◆		■ ◆	■ ◆	■ ◆			■
	22	■		◆		■ ◆	■ ◆	■ ◆	◆		■
	27	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
	36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
	46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
	56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
	66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
	76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
	86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
	96	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
	106	■					■	■			
	116	■					■	■			

K30

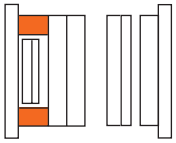




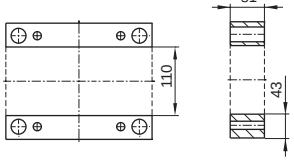
K30/196x346 x s1/	1.1730	1.2085	1.2312
22	■		■
27	■	■	■
36	■	■	■

K30/196x346 x s1/	1.1730	1.2085	1.2312
46	■	■	■
56	■	■	■

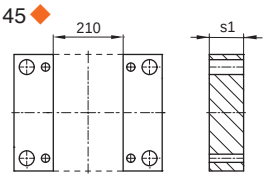
K40 K45 K42



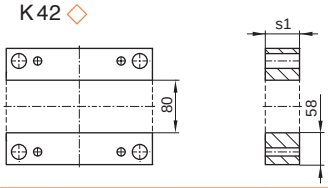
K40 ■



K45 ◆



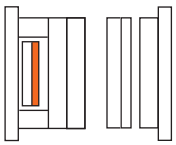
K42 ◇



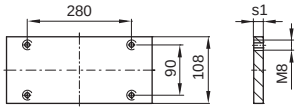
.../196x346 x s1/	1.1730	1.2085	1.2312
46	■ ◇		
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../196x346 x s1/	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	

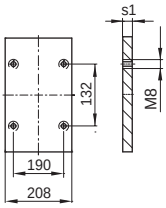
K60 K65 K62



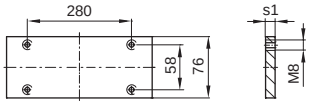
K60 ■



K65 ◆

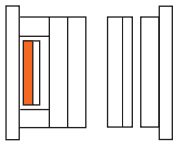


K62 ◇

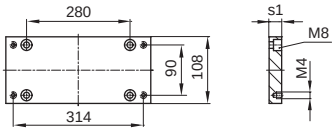


.../196x346 x s1/	1.1730	1.2085	1.2312
12	■ ◆ ◇	■ ◆	

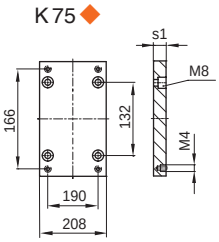
K70 K75 K72



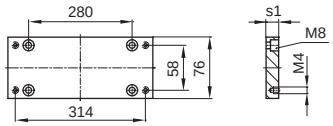
K70 ■



K75 ◆

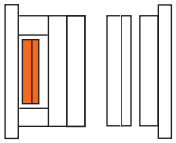


K72 ◇

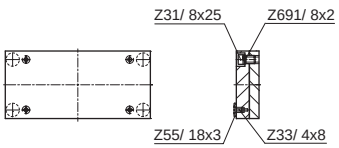


.../196x346 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	■ ◆ ◇

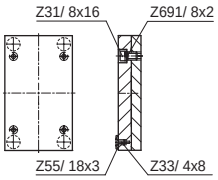
K60-70 K65-75 K62-72



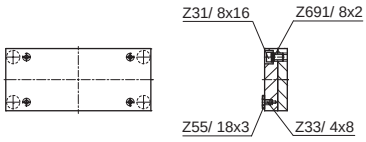
K60-70 ■



K65-75 ◆



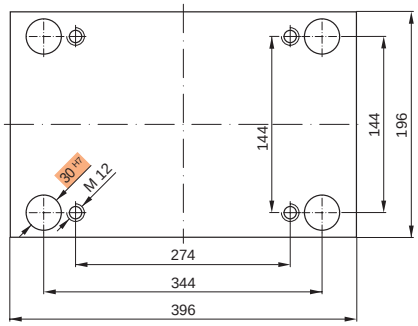
K62-72



.../196x346 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/196x346/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

196 x 396

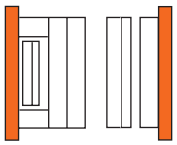


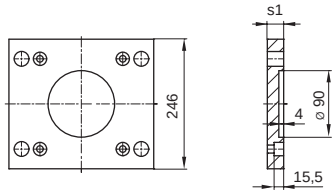
Bestellbeispiel:
Ordering example:
Exemple de commande:

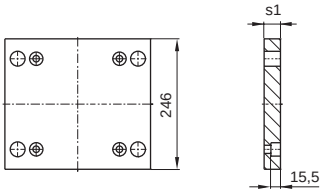
K20 / 196 x 396 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



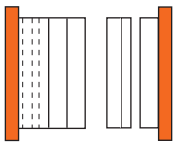


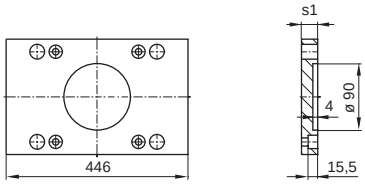


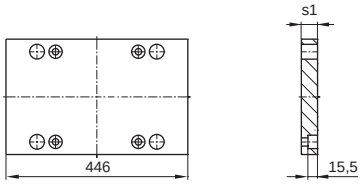
K10/196x396 / s1	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	■

K11/196x396 / s1	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	■

K12
K13



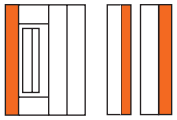


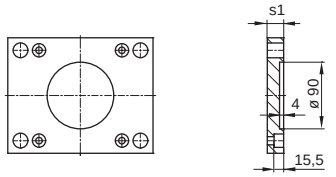


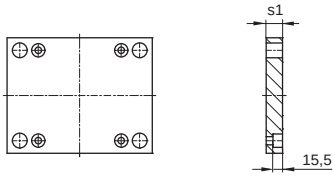
K12/196x396 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K13/196x396 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K15
K16



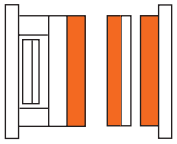


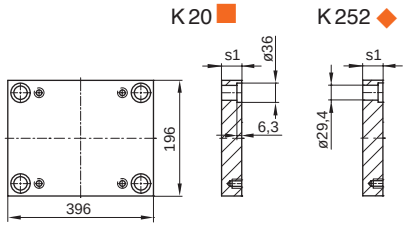


K15/196x396 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/196x396 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

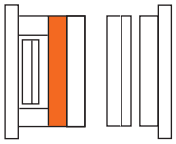
K20
K252

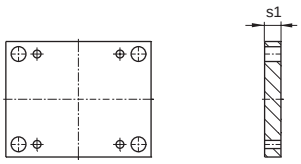




.../196x396 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■ ◆	■ ◆	■ ◆			■
27	■		◆		■ ◆	■ ◆	■ ◆	◆		■
36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆		■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆		■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■					■	■			

K30

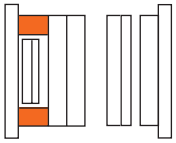




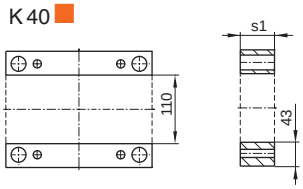
K30/196x396 x s1/	1.1730	1.2085	1.2312
22	■		■
27	■	■	■
36	■	■	■

K30/196x396 x s1/	1.1730	1.2085	1.2312
46	■	■	■
56	■		■

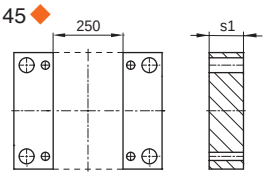
K40 K45 K42



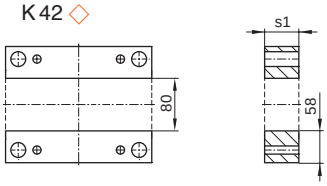
K40 ■



K45 ◆



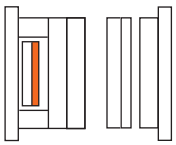
K42 ◇



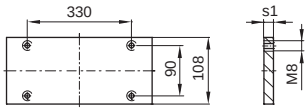
.../196x396 x s1/	1.1730	1.2085	1.2312
46	■ ◇		
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../196x396 x s1/	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	

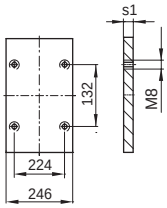
K60 K65 K62



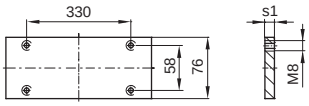
K60 ■



K65 ◆

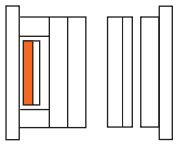


K62 ◇

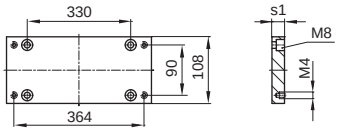


.../196x396 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

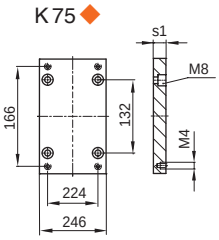
K70 K75 K72



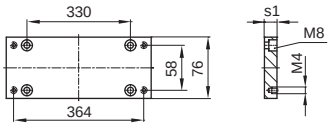
K70 ■



K75 ◆

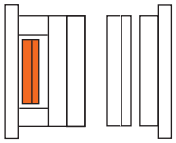


K72 ◇

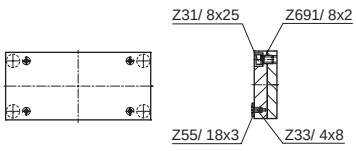


.../196x396 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

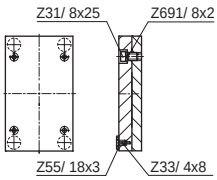
K60-70 K65-75 K62-72



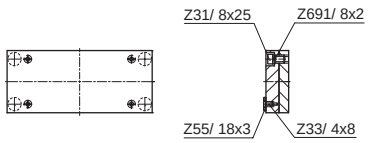
K60-70 ■



K65-75 ◆



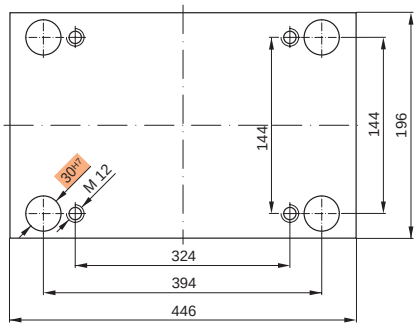
K62-72



.../196x396 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/196x396/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

196 x 446

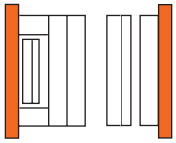


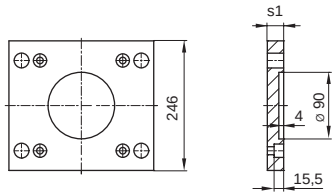
Bestellbeispiel:
Ordering example:
Exemple de commande:

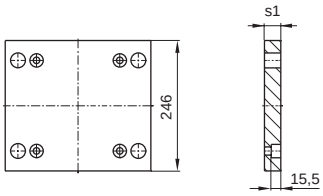
K20 / 196 x 446 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



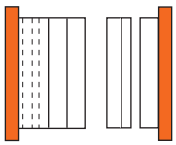


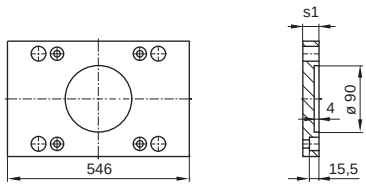


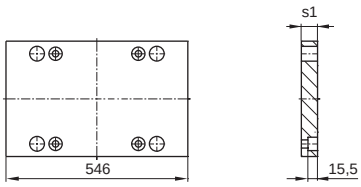
K10/196x446 / s1	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	■

K11/196x446 / s1	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	■

K12
K13



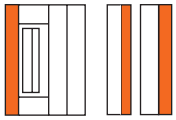


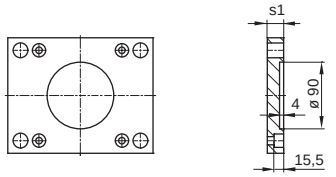


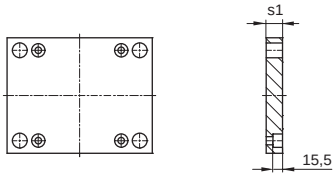
K12/196x446 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K13/196x446 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K15
K16



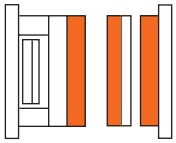


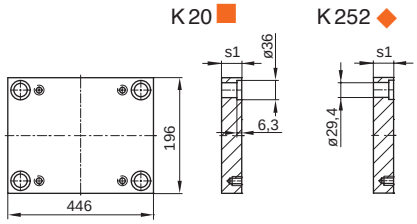


K15/196x446 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/196x446 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

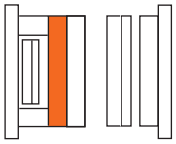
K20
K252

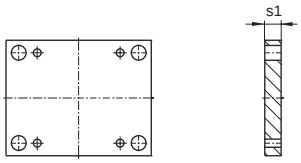




.../196x446 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■		◆		■◆	■◆	■◆			■
27	■		◆	◆	■◆	■◆	■◆	◆		■
36	■		◆	◆	■◆	■◆	■◆	◆		■
46	■		◆	◆	■◆	■◆	■◆	◆		■
56	■		◆	◆	■◆	■◆	■◆	◆		■
66	■		◆	◆	■◆	■◆	■◆	◆		■
76	■		◆	◆	■◆	■◆	■◆	◆		■
86	■		◆	◆	■◆	■◆	■◆	◆		■
96	■		◆		■◆	■◆	■◆	◆		■

K30

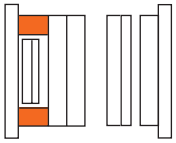




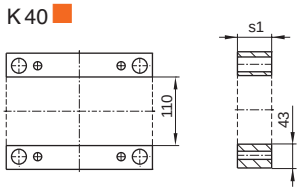
K30/196x446 x s1/	1.1730	1.2085	1.2312
27	■		■
36	■	■	■

K30/196x446 x s1/	1.1730	1.2085	1.2312
46	■		■
56	■		■

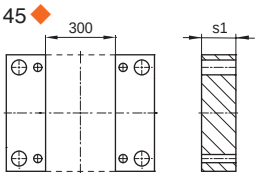
K40 K45 K42



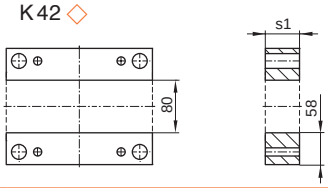
K40 ■



K45 ◆



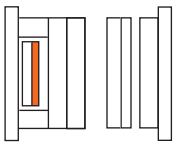
K42 ◇



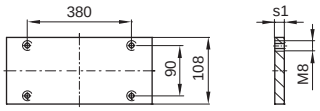
.../196x446 x s1/	1.1730	1.2085	1.2312
46	◇		
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../196x446 x s1/	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	

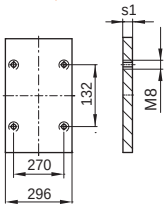
K60 K65 K62



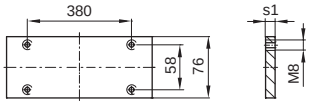
K60 ■



K65 ◆

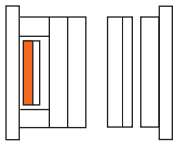


K62 ◇

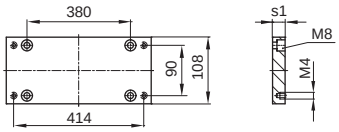


.../196x446 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

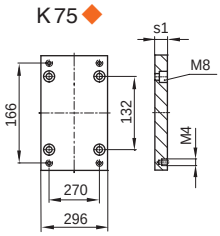
K70 K75 K72



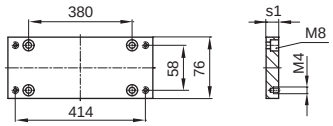
K70 ■



K75 ◆

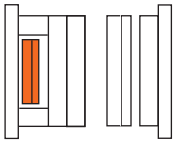


K72 ◇

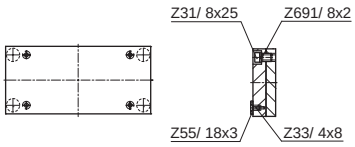


.../196x446 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

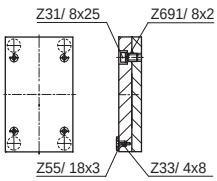
K60-70 K65-75 K62-72



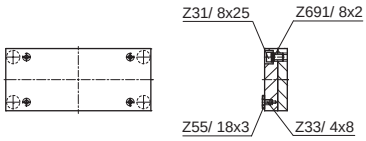
K60-70 ■



K65-75 ◆



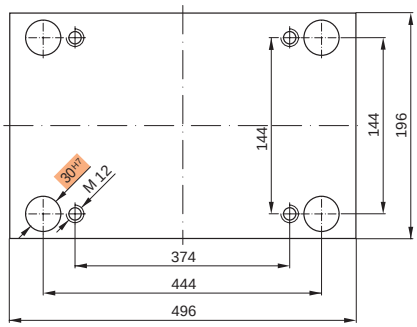
K62-72



.../196x446 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/196x446/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

196 x 496

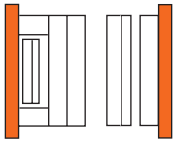


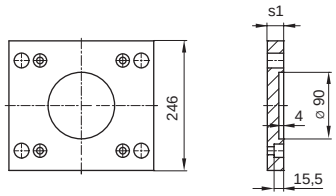
Bestellbeispiel:
Ordering example:
Exemple de commande:

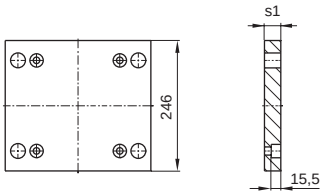
K20 / 196 x 496 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



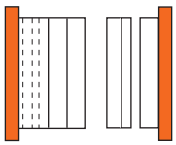


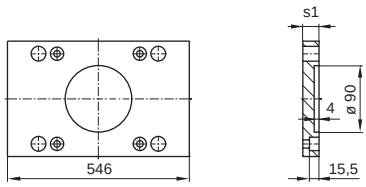


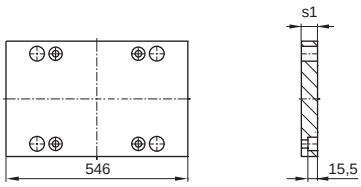
K10/196x496 / s1	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	■

K11/196x496 / s1	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	■

K12
K13



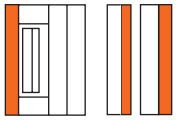


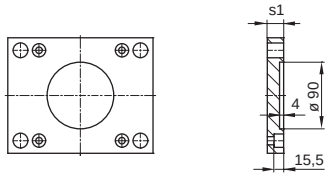


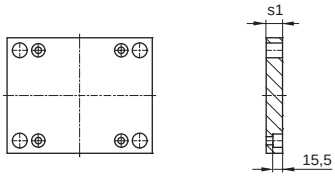
K12/196x496 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K13/196x496 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K15
K16



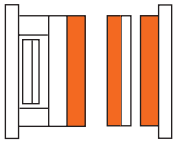


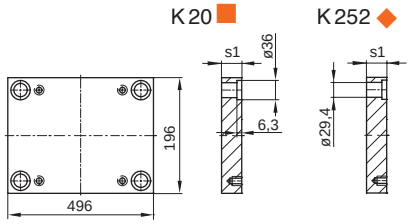


K15/196x496 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/196x496 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

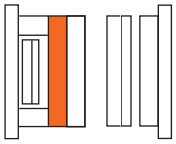
K20
K252

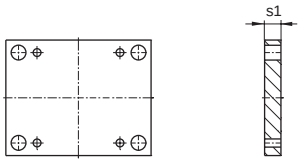




.../196x496 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■		◆		■ ◆	■ ◆	■ ◆			■
27	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆		■

K30

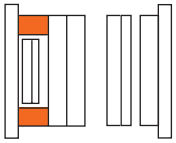




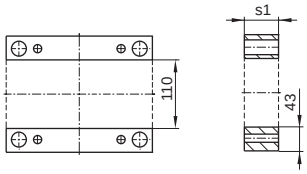
K30/196x496 x s1/	1.1730	1.2085	1.2312
27	■		■
36	■	■	■

K30/196x496 x s1/	1.1730	1.2085	1.2312
46	■		■
56	■		■

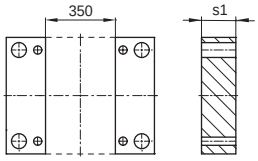
K40 K45 K42



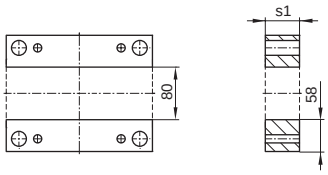
K40 ■



K45 ◆



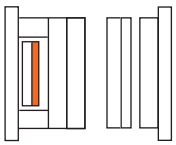
K42 ◇



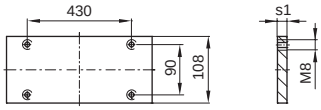
.../196x496 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../196x496 x s1/	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	

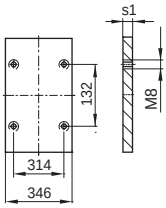
K60 K65 K62



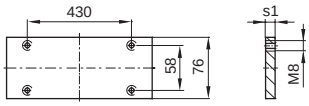
K60 ■



K65 ◆

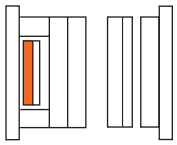


K62 ◇

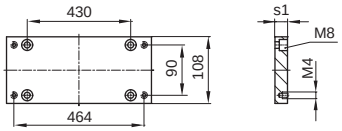


.../196x496 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

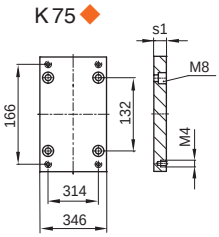
K70 K75 K72



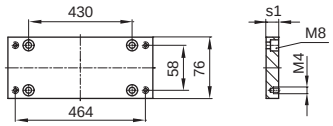
K70 ■



K75 ◆

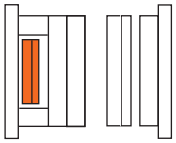


K72 ◇

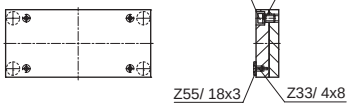


.../196x496 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

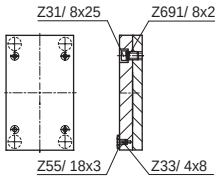
K60-70 K65-75 K62-72



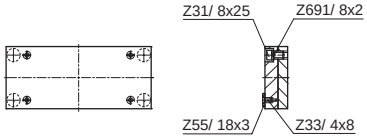
K60-70 ■



K65-75 ◆



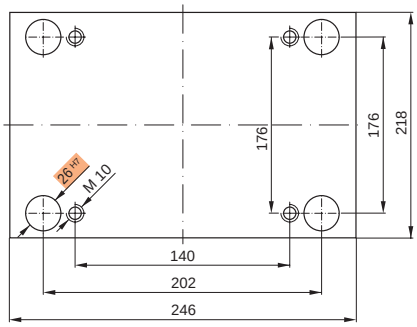
K62-72



.../196x496 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/196x496/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

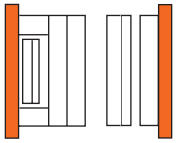
218 x 246



Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 218 x 246 x 36 / 1.2767

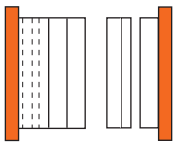
K10
K11



K10/218x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K11/218x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

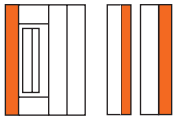
K12
K13



K12/218x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K13/218x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

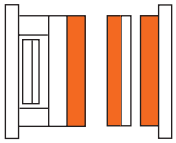
K15
K16



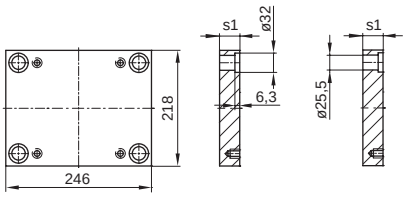
K15/218x246 / s1	1.1730	1.2162	1.2085	1.2312
17	■		■	■
22	■		■	■

K16/218x246 / s1	1.1730	1.2162	1.2085	1.2312
17	■		■	■
22	■		■	■

K20
K252

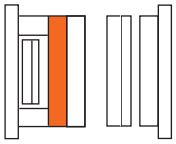


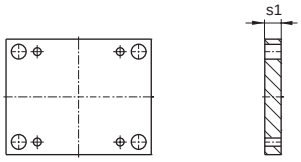
K 20 ■ K 252 ◆



.../218x246 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■◆		■◆	■◆	■◆			■
22	■	■	■◆		■◆	■◆	■◆			■
27	■	■	■◆		■◆	■◆	■◆			■
36	■	■	■◆		■◆	■◆	■◆			■
46	■	■	■◆		■◆	■◆	■◆			■
56	■	■	■◆		■◆	■◆	■◆			■
66	■	■	■◆		■◆	■◆	■◆			■
76	■	■	■◆		■◆	■◆	■◆			■
86	■	■	■◆		■◆	■◆	■◆			■
96	■	■	■◆		■◆	■◆	■◆			■

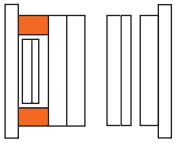
K30



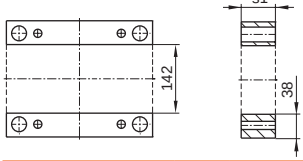


K30/218x246 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■		■
56	■		■

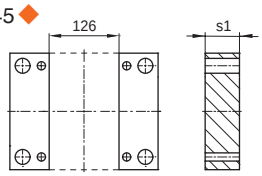
K 40
K 45
K 42



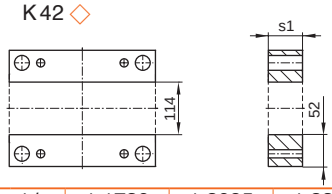
K 40 ■



K 45 ◆



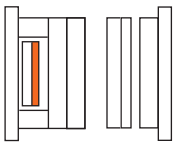
K 42 ◇



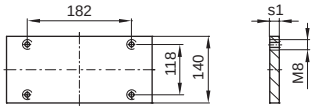
.../218x246 x s1/	1.1730	1.2085	1.2312
46	■ ◆ ◇	■ ◆	
56	■ ◆ ◇	■ ◆	
66	◇		
76	■ ◆ ◇	■ ◆	

.../218x246 x s1/	1.1730	1.2085	1.2312
86	◇		
96	◇		
116	◇		

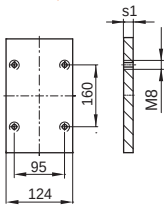
K60
K65
K62



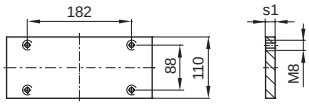
K 60 ■



K 65 ◆

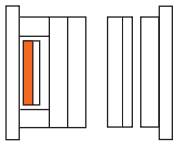


K 62 ◇

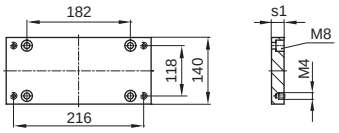


.../218x246 x s1/	1.1730	1.2085	1.2312
12	■ ◆ ◇	■ ◆	

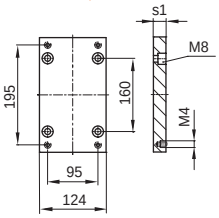
K70
K75
K72



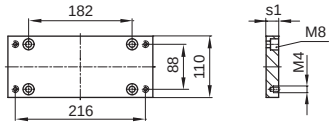
K 70 ■



K 75 ◆

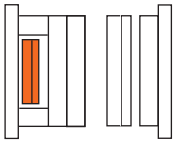


K 72 ◇

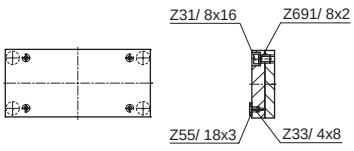


.../218x246 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	■ ◆ ◇

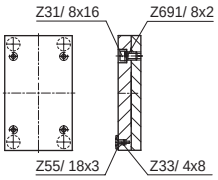
K60-70
K65-75
K62-72



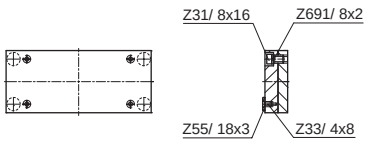
K 60-70 ■



K 65-75 ◆



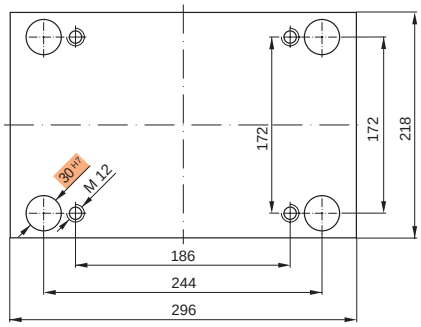
K 62-72



.../218x246 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/218x246/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

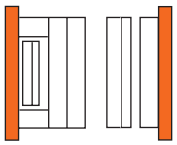
218 x 296



Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 218 x 296 x 36 / 1.2767

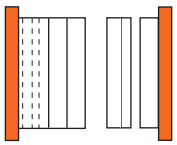
K10
K11



K10/218x296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K11/218x296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

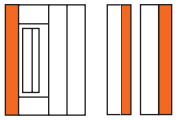
K12
K13

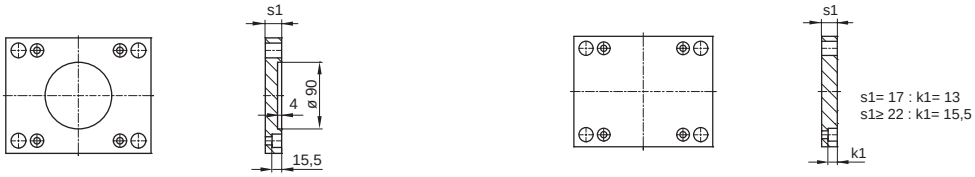


K12/218x296 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■
36	■		■	■

K13/218x296 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■
36	■		■	■

K15
K16

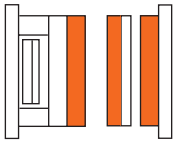




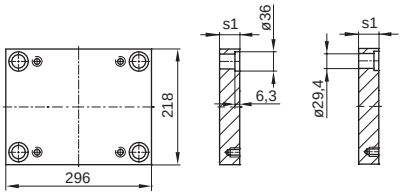
K15/218x296 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K16/218x296 / s1	1.1730	1.2162	1.2085	1.2312
17	■	■	■	
22	■		■	■
27	■		■	■

K20
K252

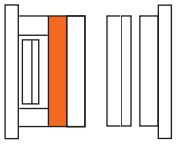


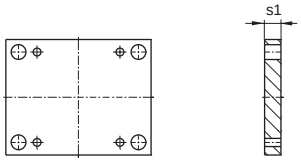
K 20 ■ K 252 ◆



.../218x296 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■◆		■◆	■◆	■◆			■
22	■	■	■◆		■◆	■◆	■◆			■
27	■	■	■◆		■◆	■◆	■◆			■
36	■	■	■◆		■◆	■◆	■◆			■
46	■	■	■◆		■◆	■◆	■◆			■
56	■	■	■◆		■◆	■◆	■◆			■
66	■	■	■◆		■◆	■◆	■◆			■
76	■	■	■◆		■◆	■◆	■◆			■
86	■	■	■◆		■◆	■◆	■◆			■
96	■	■	■◆		■◆	■◆	■◆			■

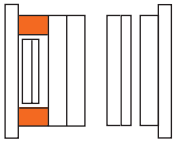
K30



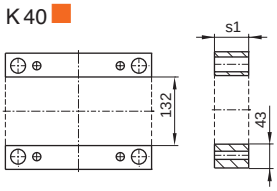


K30/218x296 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■		■
56	■		■

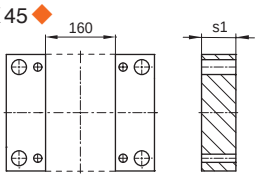
K40 K45 K42



K40 ■

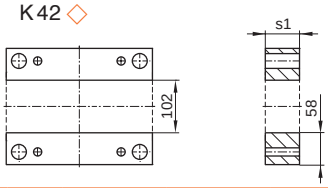


K45 ◆



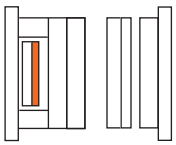
.../218x296 x s1/	1.1730	1.2085	1.2312
46	◇		
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

K42 ◇

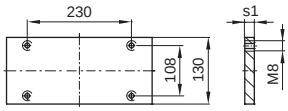


.../218x296 x s1/	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	

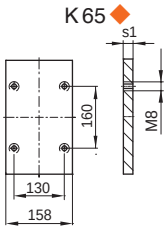
K60 K65 K62



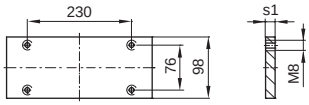
K60 ■



K65 ◆

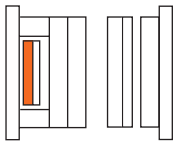


K62 ◇

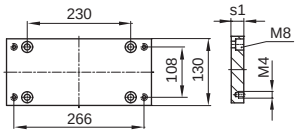


.../218x296 x s1/	1.1730	1.2085	1.2312
12	■ ◆ ◇	■ ◆	

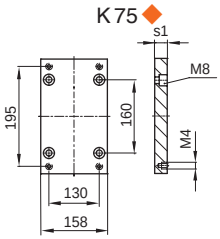
K70 K75 K72



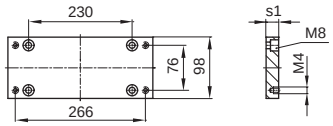
K70 ■



K75 ◆

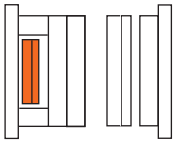


K72 ◇

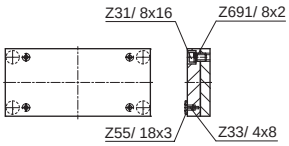


.../218x296 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	■ ◆ ◇

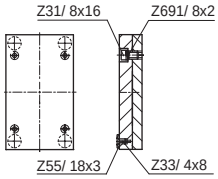
K60-70 K65-75 K62-72



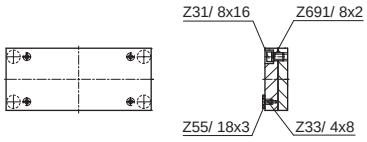
K60-70 ■



K65-75 ◆



K62-72



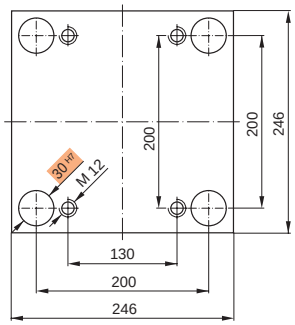
.../218x296 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/218x296/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

246 x 246

Register/Section
Répertoire K 2500/…
Seite/Page 246

Register/Section
Répertoire KR
Seite/Page 290 (KR 20/…)

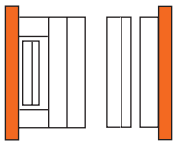


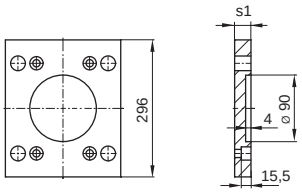
Bestellbeispiel:
Ordering example:
Exemple de commande:

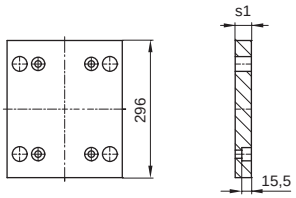
K20 / 246 x 246 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



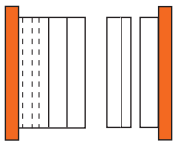


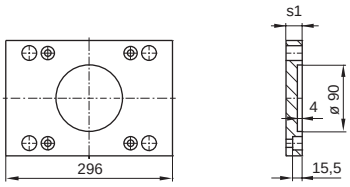


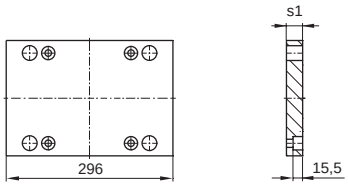
K10/246x246 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K11/246x246 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K12
K13



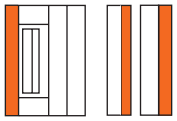


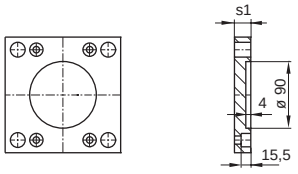


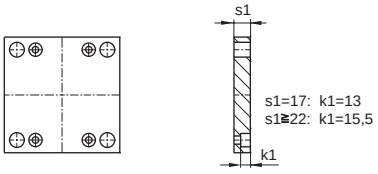
K12/246x246 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K13/246x246 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16



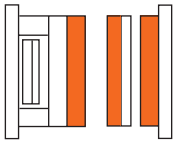




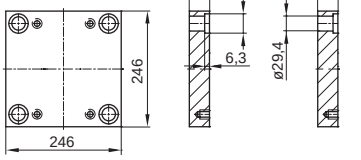
K15/246x246 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K16/246x246 / s1	1.1730	1.2162	1.2085	1.2312
17	■	■	■	
22	■		■	■
27	■		■	■

K20
K252

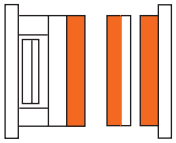


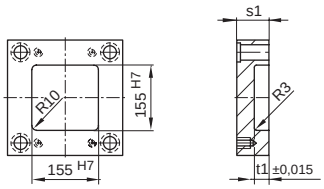
K 20 ■ K 252 ◆



.../246x246 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■◆	◆	■◆	■◆	■◆	◆		■
22	■	■	■◆	◆	■◆	■◆	■◆	◆		■
27	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
36	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
46	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
56	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
66	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
76	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
86	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
96	■	■	■◆	■◆	■◆	■◆	■◆	◆	◆	■
106	■				■	■	■			
116	■		■◆		■	■◆	■◆	◆		
126	■					■	■			
136	■				■	■	■			

KR25

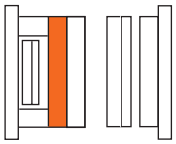


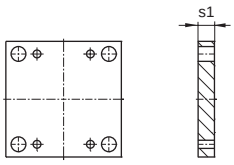


KR 25 / 246 x 246 x s1 /	1.1730	1.2085	1.2312	t1
36	■	■	■	16,8
46	■	■	■	21,8
56	■	■	■	26,8

KR 25 / 246 x 246 x s1 /	1.1730	1.2085	1.2312	t1
66	■	■	■	26,8
76	■	■	■	35,8
86	■	■	■	45,8

K30

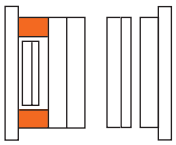




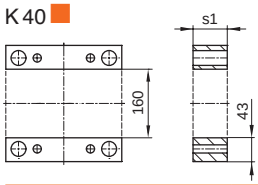
K 30 / 246 x 246 x s1 /	1.1730	1.2085	1.2312
22	■	■	■
27	■	■	■
36	■	■	■
46	■	■	■

K 30 / 246 x 246 x s1 /	1.1730	1.2085	1.2312
56	■	■	■
66	■	■	■
76	■		■

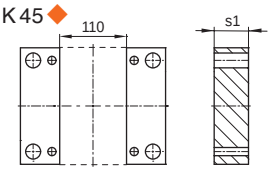
K40 K45 K42



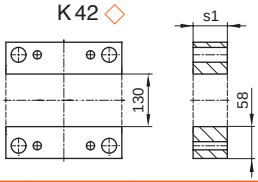
K 40 ■



K 45 ◆



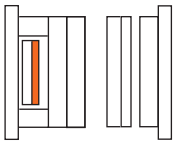
K 42 ◇



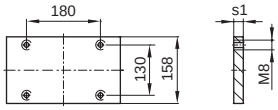
... / 246 x 246 / s1 /	1.1730	1.2085	1.2312
46	◇		
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

... / 246 x 246 / s1 /	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	

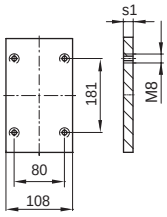
K60 K65 K62



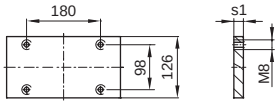
K 60 ■



K 65 ◆

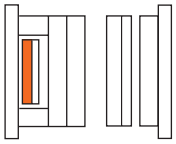


K 62 ◇

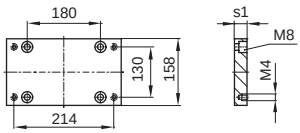


... / 246 x 246 / s1 /	1.1730	1.2085	1.2312
12	■ ◆ ◇	■ ◆	

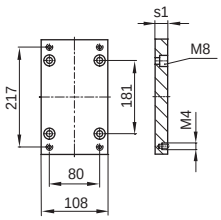
K70 K75 K72



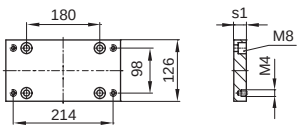
K 70 ■



K 75 ◆

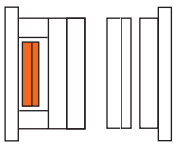


K 72 ◇

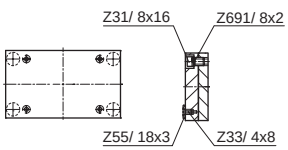


... / 246 x 246 / s1 /	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	■ ◆ ◇

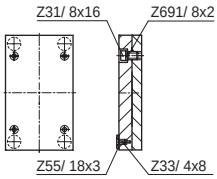
K60-70 K65-75 K62-72



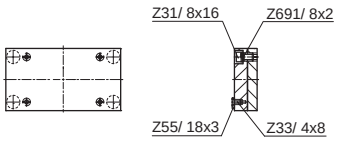
K 60-70 ■



K 65-75 ◆



K 62-72



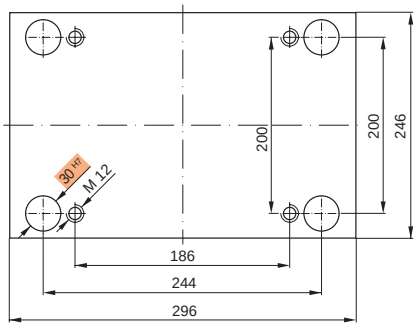
... / 246 x 246 /	1.1730	1.2085
	■ ◆	■ ◆

K 62-72 / 246 x 246 / Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

246 x 296

Register / Section
Répertoire K 2500 / …
Seite / Page 248

Register / Section
Répertoire KR
Seite / Page 291 (KR 20 / …)

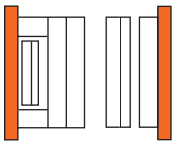


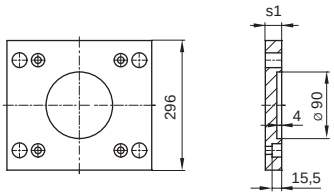
Bestellbeispiel:
Ordering example:
Exemple de commande:

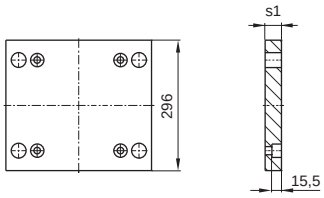
K20 / 246 x 296 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



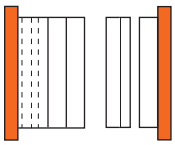


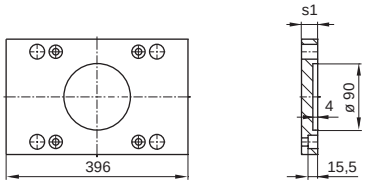


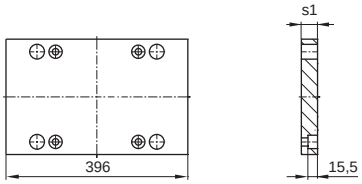
K 10 / 246 x 296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K 11 / 246 x 296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K12
K13



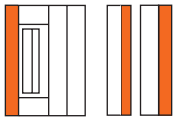


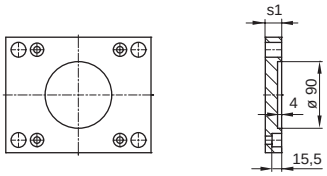


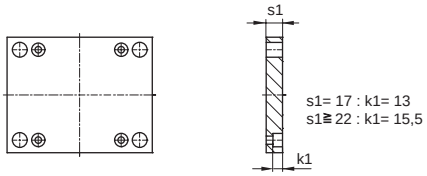
K 12 / 246 x 296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K 13 / 246 x 296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16



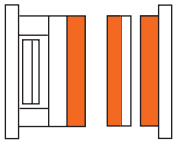




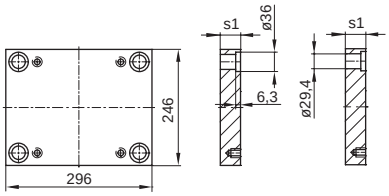
K 15 / 246 x 296 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K 16 / 246 x 296 / s1	1.1730	1.2162	1.2085	1.2312
17	■	■	■	
22	■		■	■
27	■		■	■

K20
K252

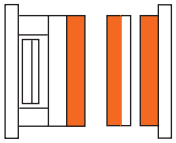


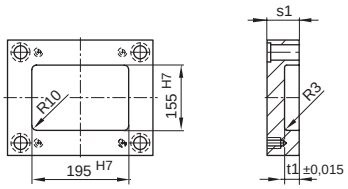
K 20 ■ K 252 ◆



…/246 x 296 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■	■	■ ◆		■ ◆	■ ◆	■ ◆			■
22	■	■	■ ◆	◆	■ ◆	■ ◆	■ ◆	◆		■
27	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
36	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■	■	■			

KR25

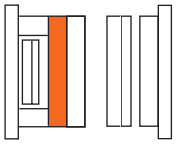


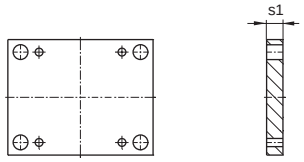


KR25/246x296 / s1 /	1.1730	1.2085	1.2312	t1
36	■	■	■	16,8
46	■	■	■	21,8
56	■	■	■	26,8

K□25/246x296 / s1	1.1730	1.2085	1.2312	t1
66	■	■	■	26,8
76	■	■	■	35,8
86	■	■	■	45,8

K30

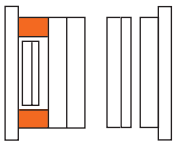




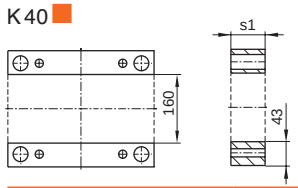
K30/246x296 x s1 /	1.1730	1.2085	1.2312
22	■	■	■
27	■	■	■
36	■	■	■
46	■	■	■

K30/246x296 x s1 /	1.1730	1.2085	1.2312
56	■	■	■
66	■	■	■
76	■		■
86	■		■

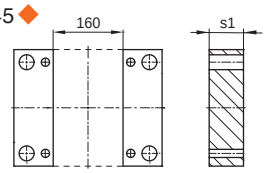
K40 K45 K42



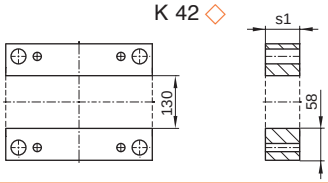
K40 ■



K45 ◆



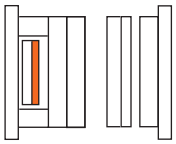
K 42 ◇



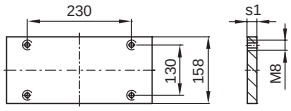
.../246x296 / s1 /	1.1730	1.2085	1.2312
46	◇		
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../246x296 / s1 /	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	

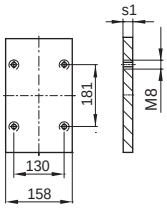
K60 K65 K62



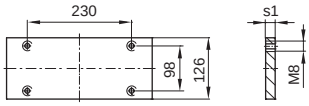
K60 ■



K65 ◆

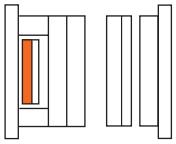


K 62 ◇

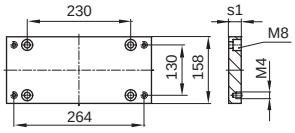


.../246x296 / s1 /	1.1730	1.2085	1.2312
12	■ ◆ ◇	■ ◆	

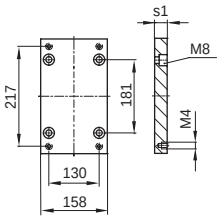
K70 K75 K72



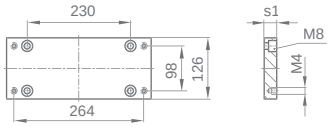
K70 ■



K75 ◆

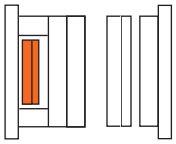


K 72 ◇

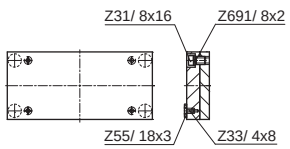


... /246x296 / s1 /	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	■ ◆ ◇

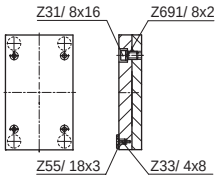
K60-70 K65-75 K62-72



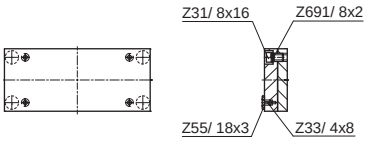
K60-70 ■



K65-75 ◆



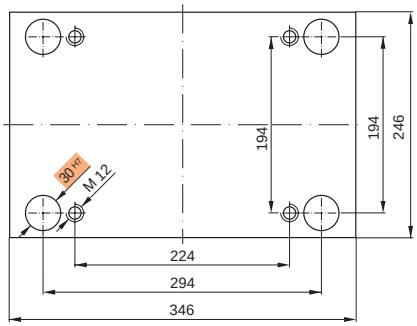
K 62-72



.../246x296 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/246x296/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

246 x 346



Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 246 x 346 x 36 / 1.2767

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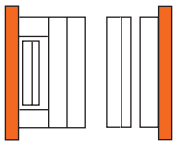
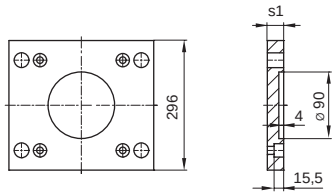
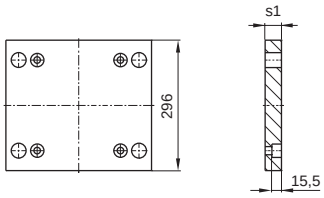
Neu / New / Nouveau

K10
K11



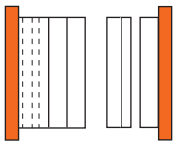


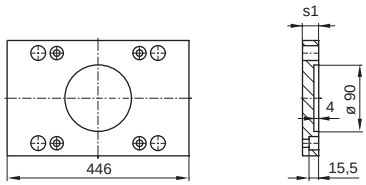


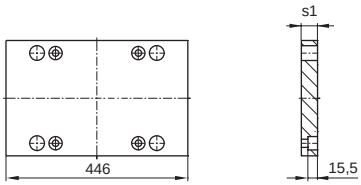
K10/246x346 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K11/246x346 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K12
K13



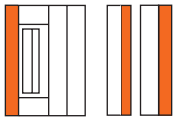


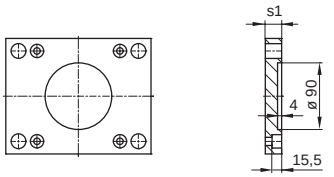


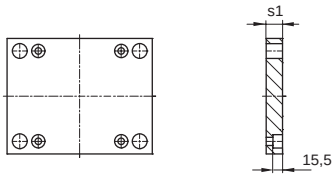
K12/246x346 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K13/246x346 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16



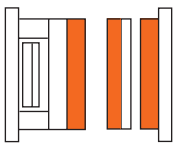




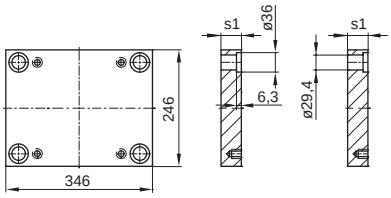
.../246x346 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K16/246x346 / s1	1.1730	1.2162	1.2085	1.2312
22	■	■	■	■
27	■		■	■

K20
K252

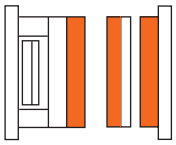


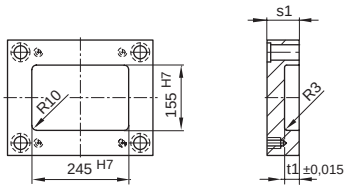
K 20 ■ K 252 ◆



K20/246x346 / s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■				■	■	■			
22	■		◆		■ ◆	■ ◆	■ ◆	◆		■
27	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■	■	■			

KR25

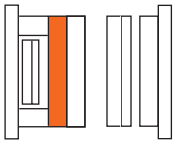


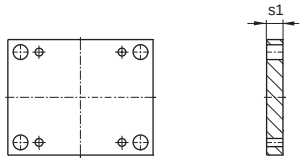


KR25/246x346 / s1 /	1.1730	1.2085	1.2312	t1
36	■	■	■	16,8
46	■	■	■	21,8
56	■	■	■	26,8

KR25/246x346 / s1	1.1730	1.2085	1.2312	t1
66	■	■	■	26,8
76	■	■	■	35,8
86	■	■	■	45,8

K30

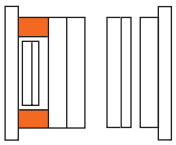




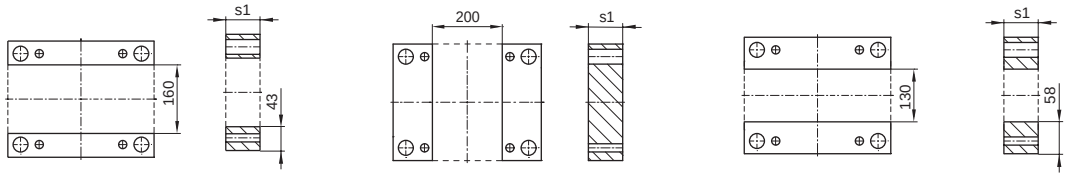
K30/246x346 x s1 /	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■

K30/246x346 x s1 /	1.1730	1.2085	1.2312
66	■	■	■
76	■		■
86	■		■

K40 K45 K42



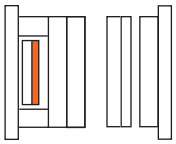
K40 ■ K45 ◆ K 42 ◇



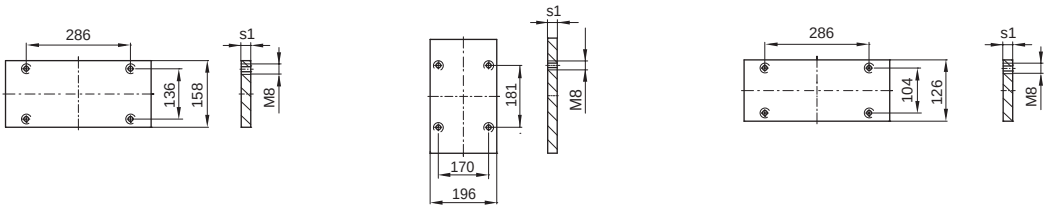
.../246x346 / s1 /	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../246x346 / s1 /	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

K60 K65 K62

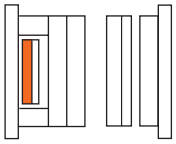


K60 ■ K65 ◆ K62 ◇

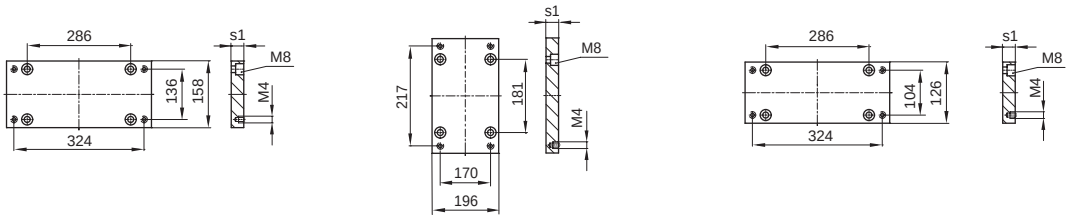


.../246x346 / s1 /	1.1730	1.2085	1.2312
17	■ ◆ ◆	■ ◆	

K70 K75 K72

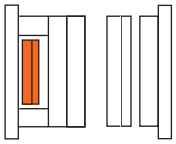


K70 ■ K75 ◆ K72 ◇

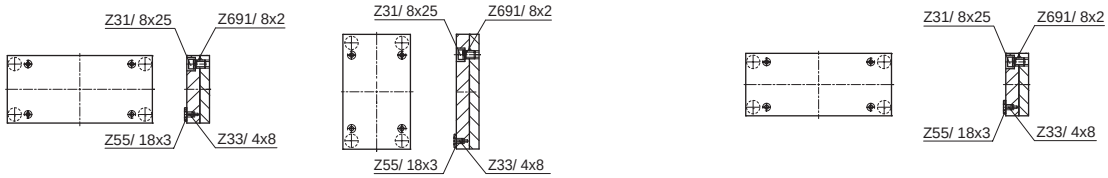


.../246x346 / s1 /	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

K60-70 K65-75 K62-72



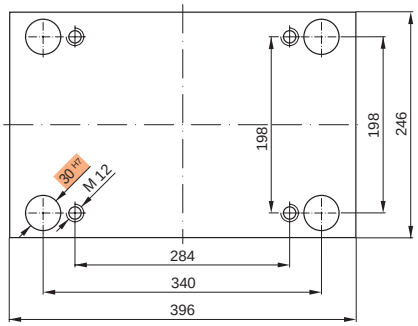
K60-70 ■ K65-75 ◆ K 62-72



.../246x346 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/246x346/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

246 x 396

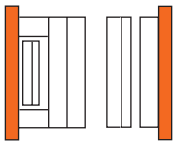


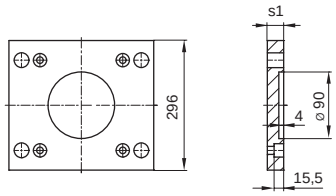
Bestellbeispiel:
Ordering example:
Exemple de commande:

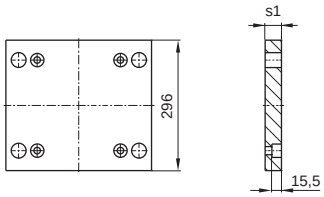
K20 / 246 x 396 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



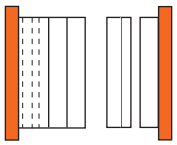


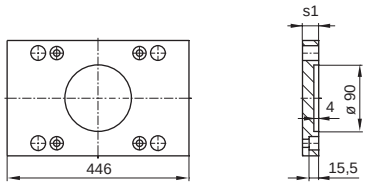


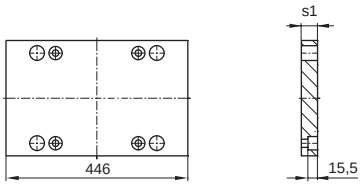
K10/246x396 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K11/246x396 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K12
K13



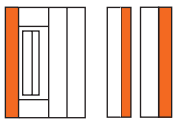


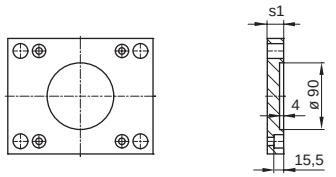


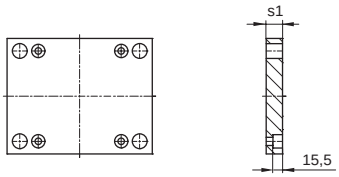
K12/246x396 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K13/246x396 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16



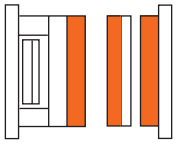




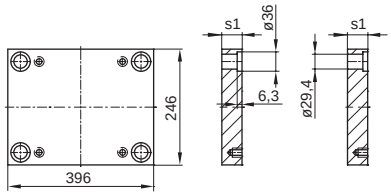
K15/246x396 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K16/246x396 / s1	1.1730	1.2162	1.2085	1.2312
22	■	■	■	■
27	■		■	■

K20
K252

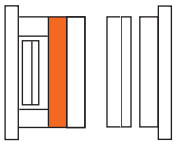


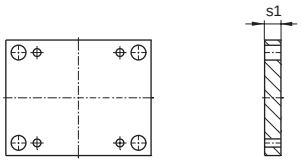
K 20 ■ K 252 ◆



.../246x396 / s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■				■	■	■			
22	■		◆		■ ◆	■ ◆	■ ◆	◆		■
27	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■	■	■			

K30

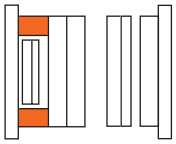




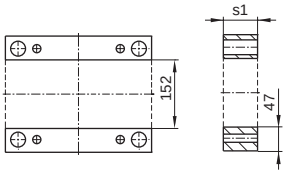
.../246x396 x s1 /	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	

.../246x396 x s1 /	1.1730	1.2085	1.2312
66	■	■	■
76	■		■
86	■		■

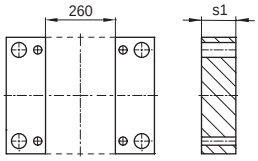
K40 K45 K42



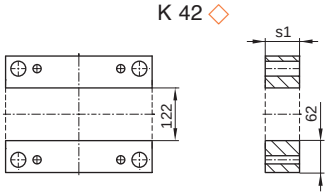
K 40 ■



K 45 ◆



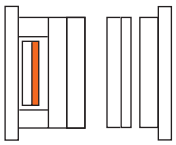
K 42 ◇



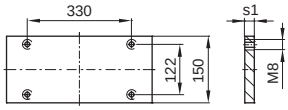
.../246x396 /s1 /	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../246x396 /s1 /	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	

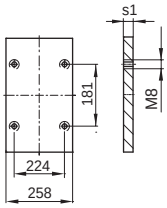
K60 K65 K62



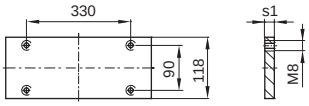
K 60 ■



K 65 ◆

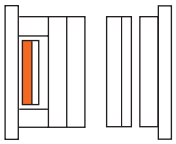


K62 ◇

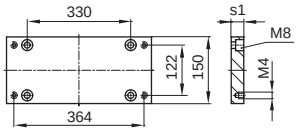


.../246x396 /s1 /	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

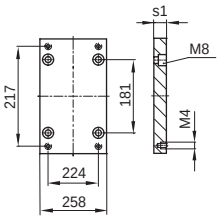
K70 K75 K72



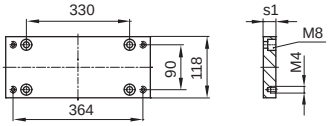
K 70 ■



K 75 ◆

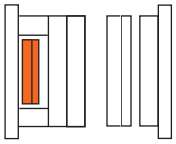


K72 ◇

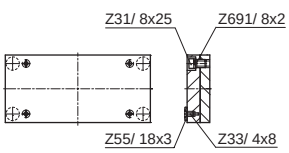


.../246x396 /s1 /	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

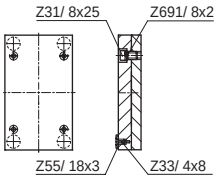
K60 / 70 K65 / 75 K62 / 72



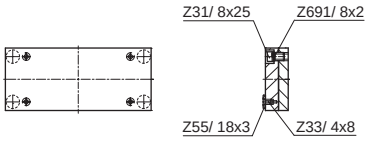
K 60-70 ■



K 65-75 ◆



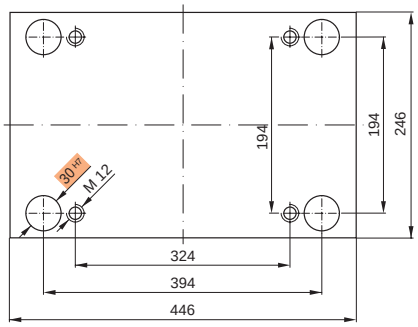
K 62-72



.../246x396 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/246x396/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

246 x 446

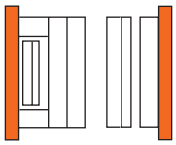


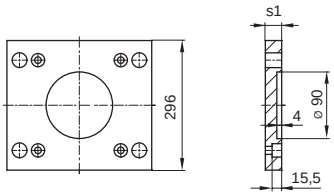
Bestellbeispiel:
Ordering example:
Exemple de commande:

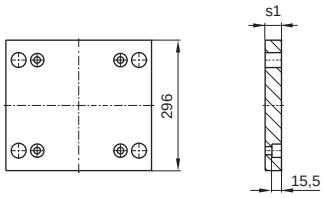
K20 / 246 x 446 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



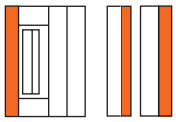


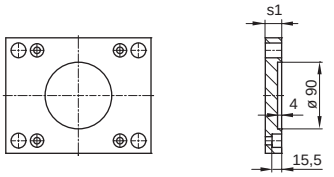


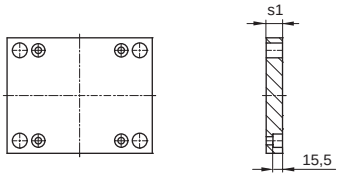
K10/246x446 / s1		1.1730	1.2162	1.2085	1.2312
	27	■		■	■
	36	■		■	■

K11/246x446 / s1		1.1730	1.2162	1.2085	1.2312
	27	■		■	■
	36	■		■	■

K15
K16





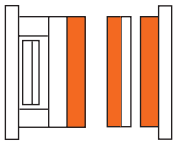


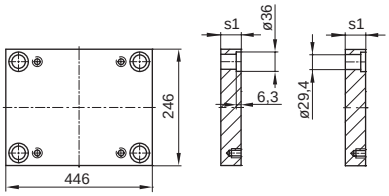
K15/246x446 / s1		1.1730	1.2162	1.2085	1.2312
	27	■		■	■

K16/246x446 / s1		1.1730	1.2162	1.2085	1.2312
	27	■		■	■

K20
K252

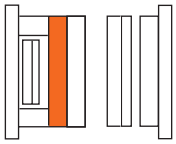
K 20 ■ K 252 ◆

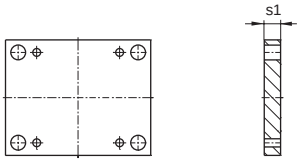




.../246x446 / s1		1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
	22	■				■		■			
	27	■		◆		■ ◆	■ ◆	■ ◆	◆		■
	36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
	46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
	56	■		◆		■ ◆	■ ◆	■ ◆	◆		■
	66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
	76	■		◆		■ ◆	■ ◆	■ ◆	◆		■
	86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
	96	■				■ ◆	■ ◆	■ ◆	◆		■
	106	■				■	■	■			
	116	■				■ ◆	■ ◆	■ ◆	◆		■
	136	■					■	■			

K30

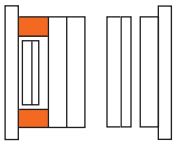




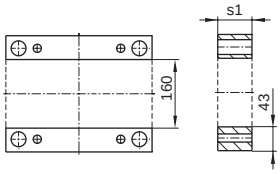
K30/246x446 x s1		1.1730	1.2162	1.2085	1.2312
	27	■		■	■
	36	■		■	■
	46	■		■	■

K30/246x446 x s1		1.1730	1.2162	1.2085	1.2312
	56	■		■	■
	66	■			■

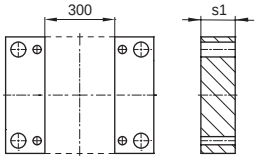
K40 K45 K42



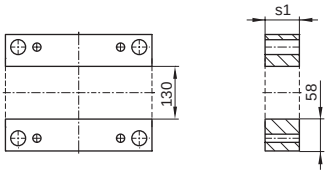
K 40 ■



K 45 ◆



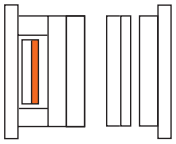
K 42 ◇



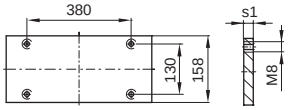
.../246x446 / s1 /	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../246x446 / s1 /	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

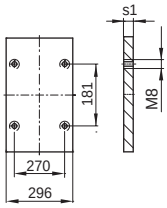
K60 K65 K62



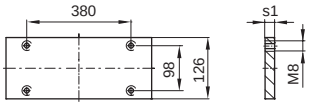
K 60 ■



K 65 ◆

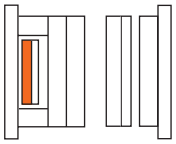


K62 ◇

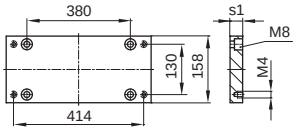


.../246x446 /s1 /	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

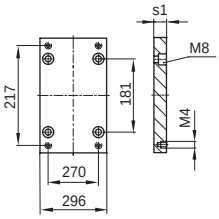
K70 K75 K72



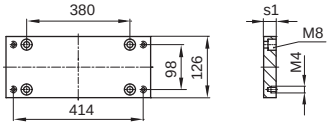
K 70 ■



K 75 ◆

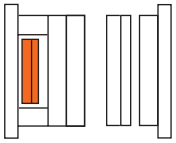


K72 ◇

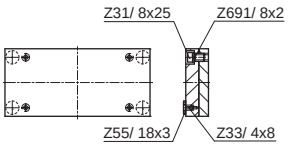


.../246x446 / s1 /	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

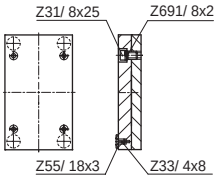
K60-70 K65-75 K62-72



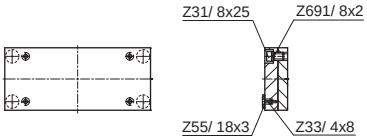
K 60-70 ■



K 65-75 ◆



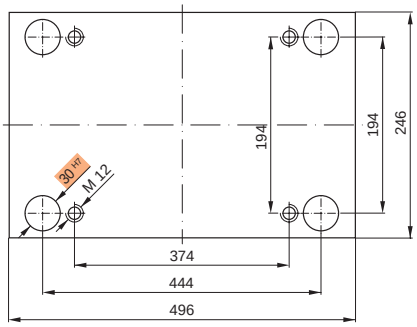
K 62-72



.../246x446 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/246x446/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

246 x 496

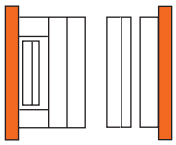


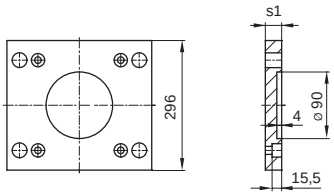
Bestellbeispiel:
Ordering example:
Exemple de commande:

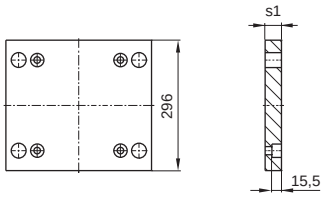
K20 / 246 x 496 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



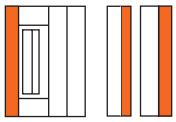


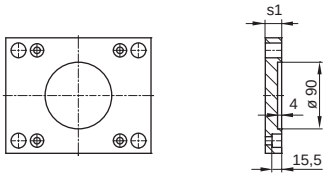


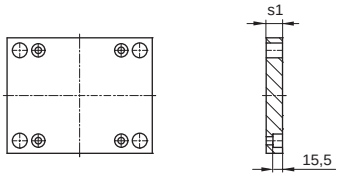
K10/246x496 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K11/246x496 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16





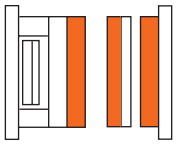


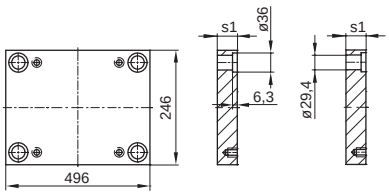
K15/246x496 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/246x496 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K20
K252

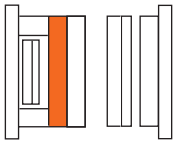
K 20 ■ K 252 ◆

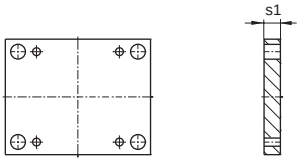




.../246x496 / s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■ ◆	■ ◆	■ ◆			■
36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆		■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆		■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆			■
106	■					■	■			
116	■		◆		■ ◆	■ ◆	■ ◆			■
136	■					■	■			

K 30

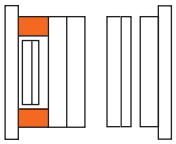




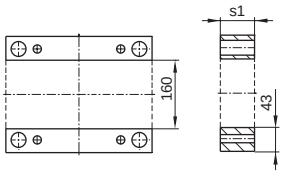
K30/246x496 x s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■

K30/246x496 x s1	1.1730	1.2162	1.2085	1.2312
56	■		■	■
66	■			■

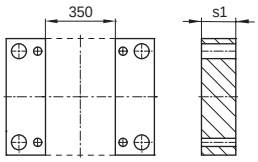
K40
K45
K42



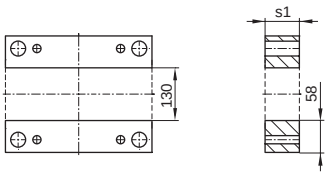
K 40 ■



K 45 ◆



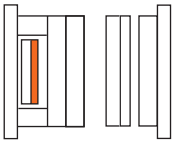
K 42 ◇



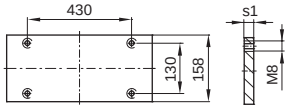
.../246 x 496 / s1 /	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	

.../246 x 496 / s1 /	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

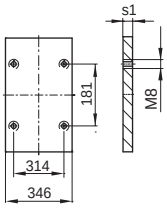
K60
K65
K62



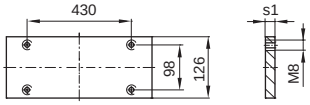
K 60 ■



K 65 ◆

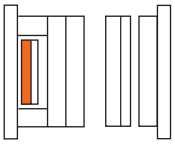


K62 ◇

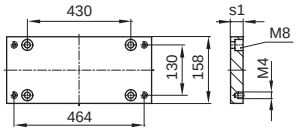


.../246 x 496 / s1 /	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

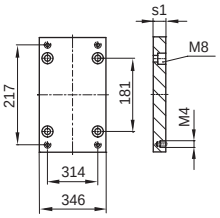
K70
K75
K72



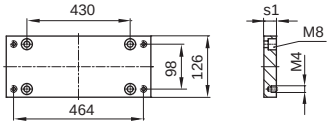
K 70 ■



K 75 ◆

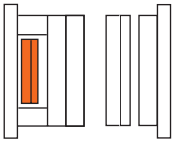


K72 ◇

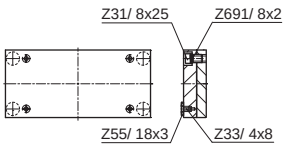


.../246 x 496 / s1 /	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

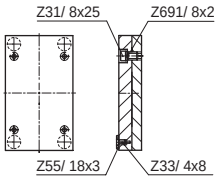
K60-70
K65-75
K62-72



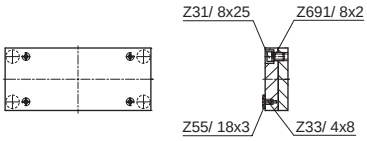
K 60-70 ■



K 65-75 ◆



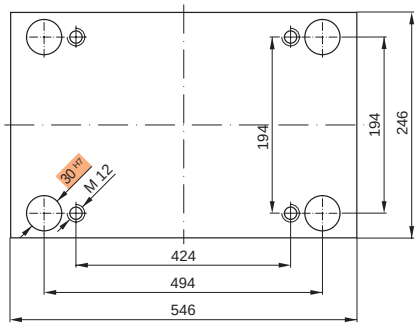
K 62-72



.../246 x 496 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/246 x 496/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

246 x 546

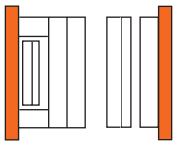


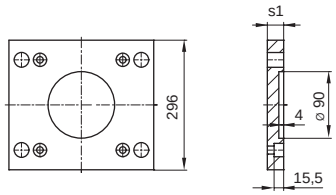
Bestellbeispiel:
Ordering example:
Exemple de commande:

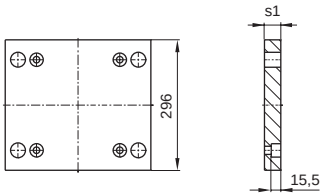
K20 / 246 x 546 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



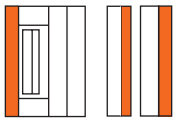


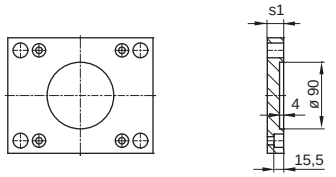


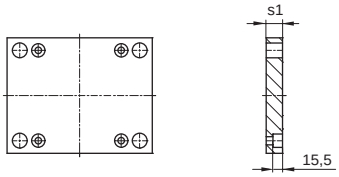
K10/246x546 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■			■

K11/246x546 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K15
K16





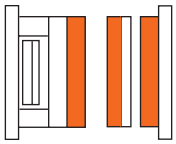


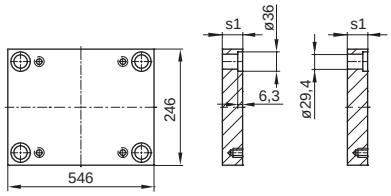
K15/246x546 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/246x546 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K20
K252

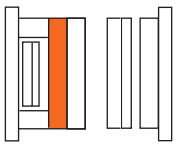
K 20 ■ K 252 ◆

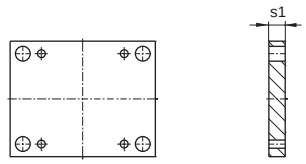




K20/246x546 / s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■ ◆	■ ◆	■ ◆	◆		■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆		■
116	■				■ ◆	■ ◆	■ ◆	◆		■

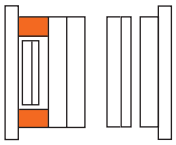
K30



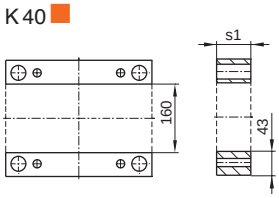


K30/246x546 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■			■

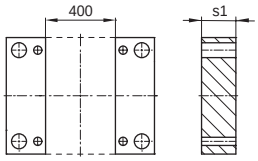
K40 K45 K42



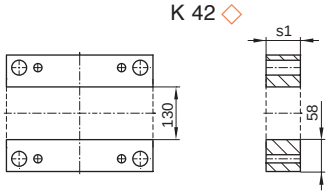
K 40 ■



K 45 ◆



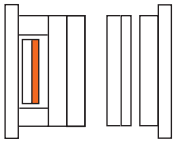
K 42 ◇



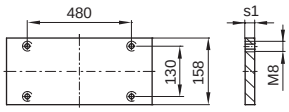
.../246x546 / s1	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	◇		
76	■ ◆ ◇	■ ◆	
86	◇		

.../246x546 / s1	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	◆ ◇	◆	
136	◇		

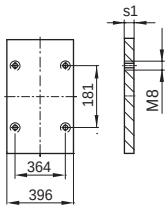
K60 K65 K62



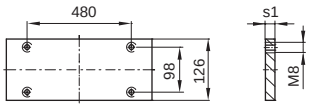
K 60 ■



K 65 ◆

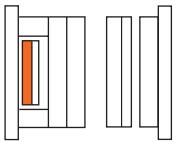


K62 ◇

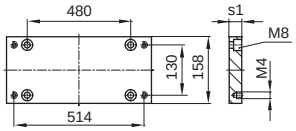


.../246x546 / s1 /	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

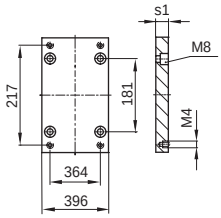
K70 K75 K72



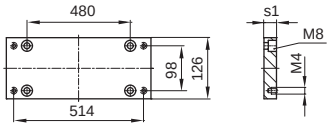
K 70 ■



K 75 ◆

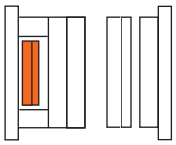


K72 ◇

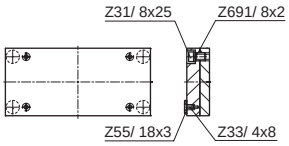


.../246x546 / s1 /	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

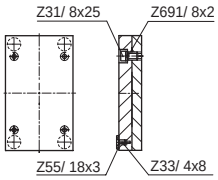
K60 / 70 K65 / 75 K62 / 72



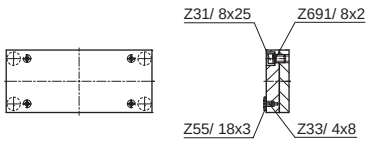
K 60-70 ■



K 65-75 ◆



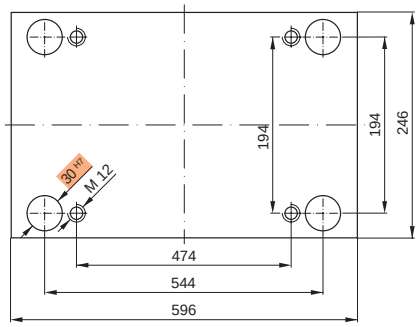
K 62-72



.../246x546 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/246x546/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

246 x 596

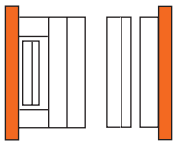


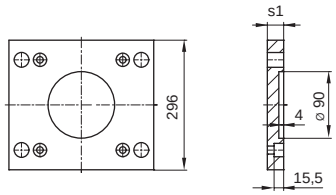
Bestellbeispiel:
Ordering example:
Exemple de commande:

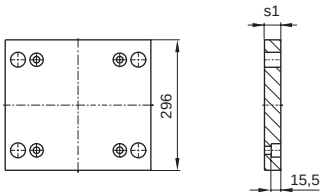
K20 / 246 x 596 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



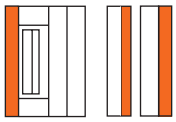


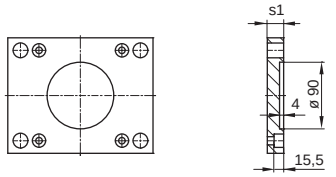


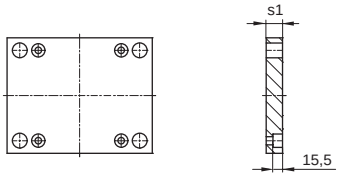
K10/246x596 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K11/246x596 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K15
K16





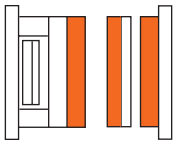


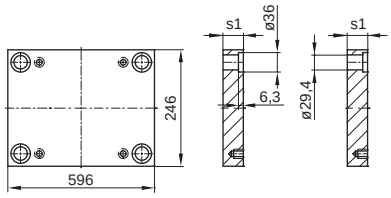
K15/246x596 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/246x596 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K20
K252

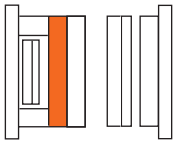
K 20 ■ K 252 ◆

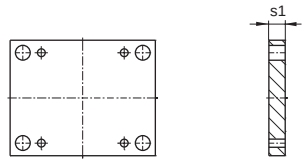




K20/246x596 / s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■ ◆	■ ◆	■ ◆	◆		■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆		■
86	■			◆	■ ◆	■ ◆	■ ◆	◆		■
96	■				■ ◆	■ ◆	■ ◆	◆		■
116	■				■ ◆	■ ◆	■ ◆	◆		■
136	■					■	■			

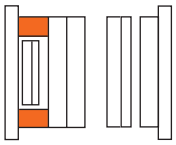
K30



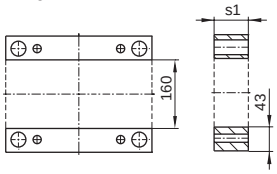


K30/246x596 / s1	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■			■

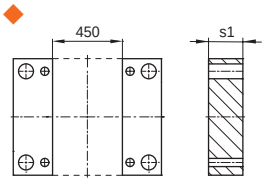
K40 K45 K42



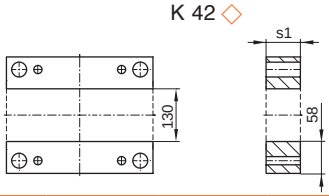
K 40 ■



K 45 ◆



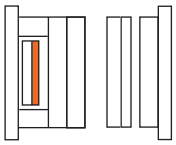
K 42 ◇



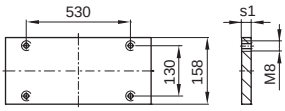
.../246 x 596 /s1 /	1.1730	1.2085	1.2312
56	◆	◆	
66	◇		
76	■ ◆ ◇	■ ◆	
86	◆		

.../246 x 596 /s1 /	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	◇		

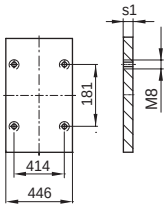
K60 K65 K62



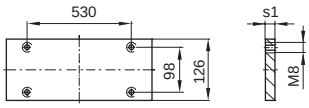
K 60 ■



K 65 ◆

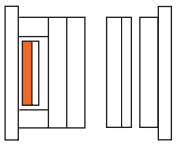


K62 ◇

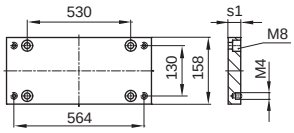


.../246 x 596 / s1 /	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

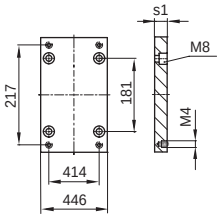
K70 K75 K72



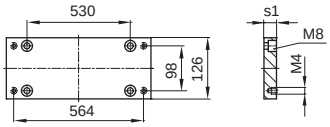
K 70 ■



K 75 ◆

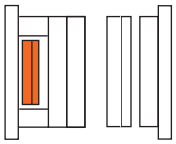


K72 ◇

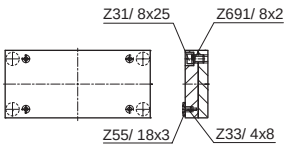


.../246 x 596 / s1 /	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

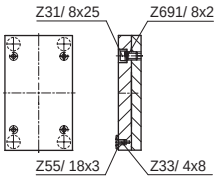
K60 / 70 K65 / 75 K62 / 72



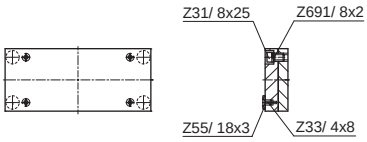
K 60-70 ■



K 65-75 ◆



K 62-72



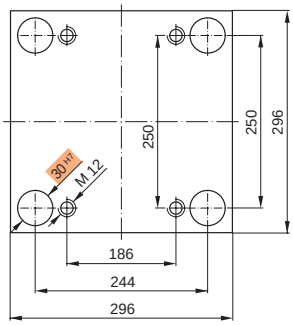
.../246 x 596 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/246 x 596/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

296 x 296

Register / Section
Répertoire K 2500 / …
Seite / Page 250

Register / Section
Répertoire KR
Seite / Page 293 (KR 20 / …)

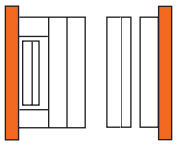


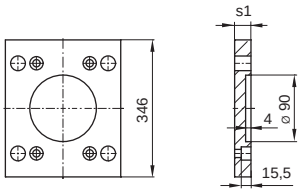
Bestellbeispiel:
Ordering example:
Exemple de commande:

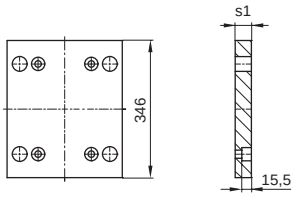
K20 / 296 x 296 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



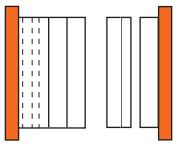


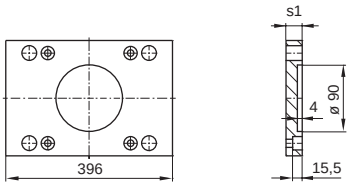


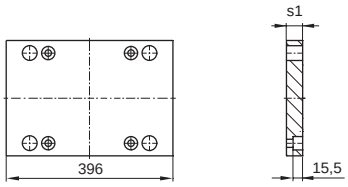
K 10 / 296 x 296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K 11 / 296 x 296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K12
K13



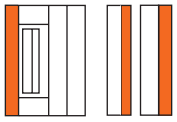


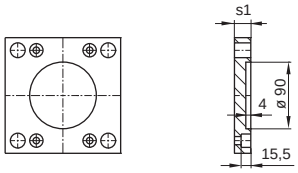


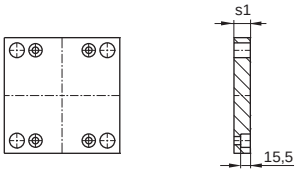
K 12 / 296 x 296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K 13 / 296 x 296 / s1	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16

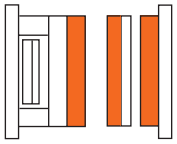


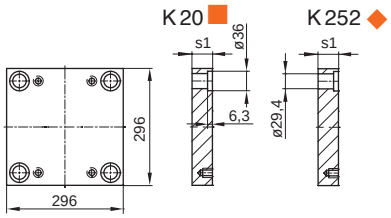




K 15 / 296 x 296 / s1	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

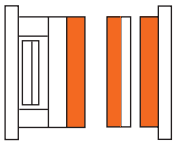
K 16 / 296 x 296 / s1	1.1730	1.2162	1.2085	1.2312
22	■	■	■	■
27	■		■	■

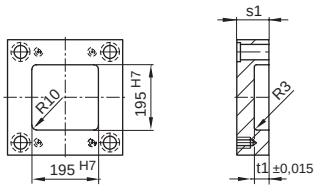




K 20 / 296 x 296 / s1	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■				■		■			
22	■	■	■ ◆	◆	■ ◆	■ ◆	■ ◆	◆		■
27	■	■	■ ◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
36	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■	■	■ ◆	■ ◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■				■	■	■			

KR25

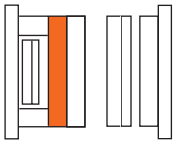


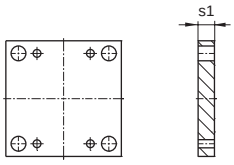


KR25/296x296 / s1 /	1.1730	1.2085	1.2312	t1
36	■	■	■	16,8
46	■	■	■	21,8
56	■	■	■	26,8

KR25/296x296 / s1	1.1730	1.2085	1.2312	t1
66	■	■	■	26,8
76	■	■	■	35,8
86	■	■	■	45,8

K30

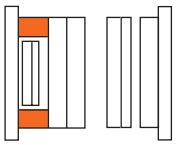




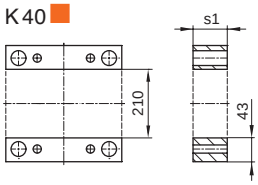
K30/296x296 / s1 /	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■

K30/296x296 / s1 /	1.1730	1.2085	1.2312
66	■	■	■
76	■	■	■
86	■	■	■

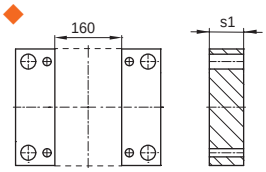
K40 K45 K42



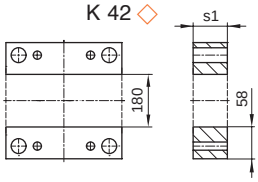
K40 ■



K45 ◆



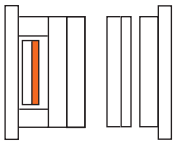
K 42 ◇



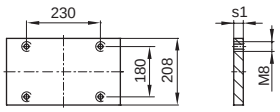
.../296x296 / s1 /	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	◇		
76	■ ◆ ◇	■ ◆	
86	◇		

.../296x296 / s1 /	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	◇		
136	◇		

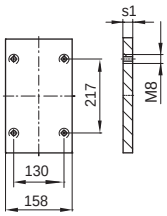
K60 K65 K62



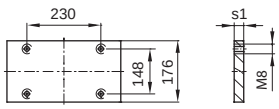
K60 ■



K65 ◆

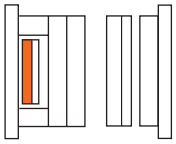


K62 ◇

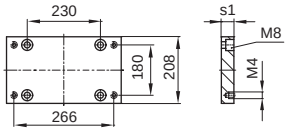


.../296x296 / s1 /	1.1730	1.2085	1.2312
12	■ ◆ ◇	■ ◆	

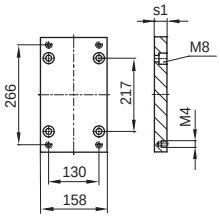
K70 K75 K72



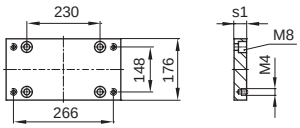
K70 ■



K75 ◆

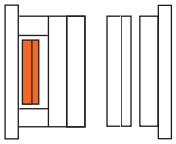


K72 ◇

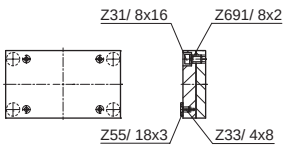


.../296x296 / s1 /	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	■ ◆ ◇

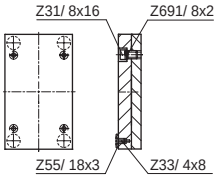
K60-70 K65-75 K62-72



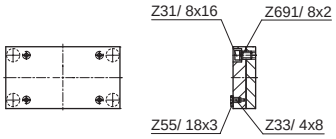
K60-70 ■



K65-75 ◆



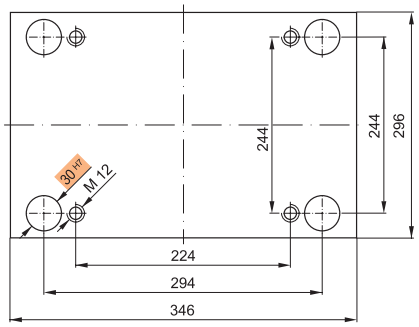
K 62-72



.../296x296 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/296x296/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

296 x 346



Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 296 x 346 x 36 / 1.2767

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Répertoire KR
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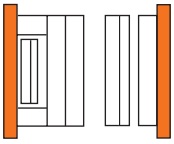
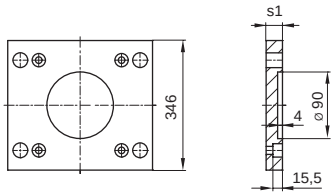
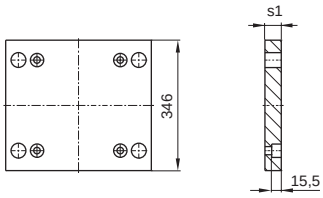
Neu / New / Nouveau

K10
K11



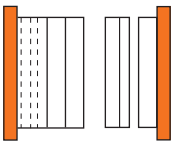


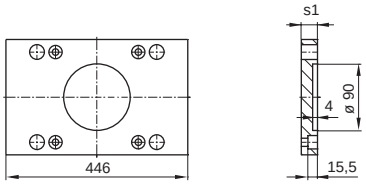


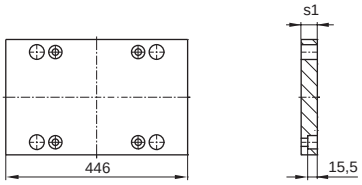
K10/296x346x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K11/296x346x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K12
K13



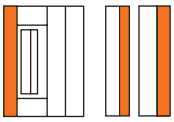


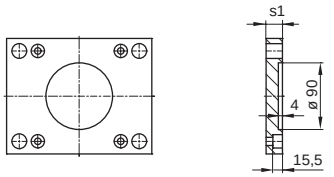


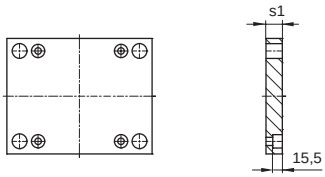
K12/296x346x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K13/296x346x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16



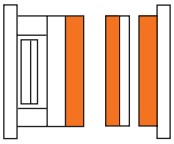


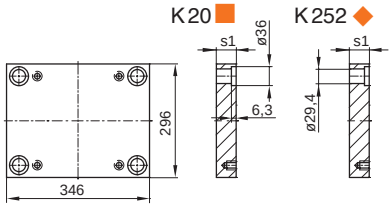


K15/296x346x s1 /	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K16/296x346x s1 /	1.1730	1.2162	1.2085	1.2312
22	■	■	■	■
27	■		■	■

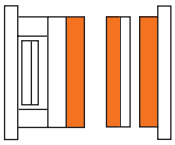
K20
K252

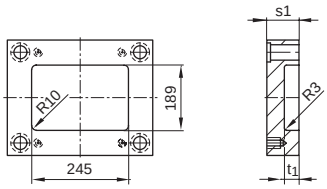




.../296x346 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■				■		■			
22	■		◆		■ ◆	■ ◆	■ ◆	◆		■
27	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■					■	■			

KR25

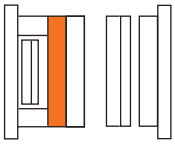


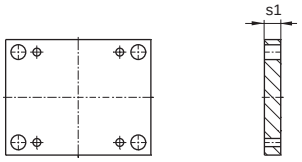


KR25/296x346 x s1/	1.1730	1.2085	1.2312	t1
36	■	■	■	16,8
46	■	■	■	21,8
56	■	■	■	26,8

KR25/296x346 x s1/	1.1730	1.2085	1.2312	t1
66	■	■	■	26,8
76	■	■	■	35,8
86	■	■	■	45,8

K30

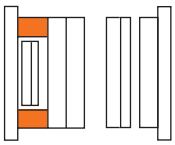




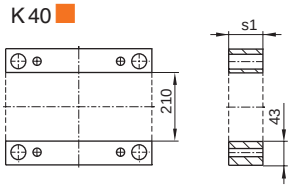
K 30/296x346 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■

K 30/296x346 x s1/	1.1730	1.2085	1.2312
66	■	■	■
76	■	■	■
86	■	■	■

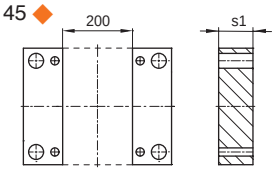
K40 K45 K42



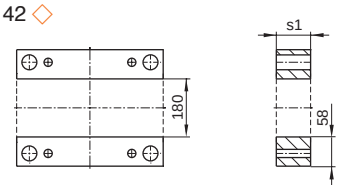
K40 ■



K45 ◆



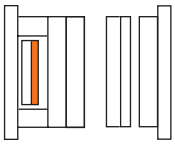
K42 ◇



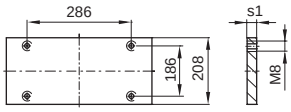
.../296x346 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◇	■	

.../296x346 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◇	■	

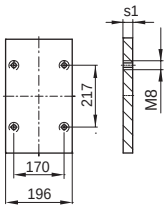
K60 K65 K62



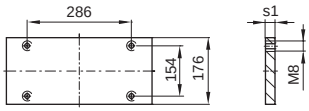
K60 ■



K 65 ◆

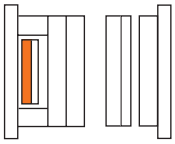


K62 ◇

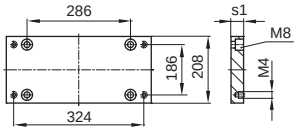


.../296x346 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

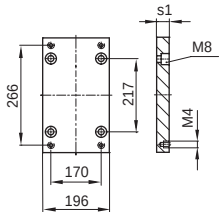
K70 K75 K72



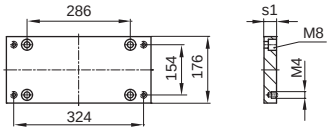
K70 ■



K 75 ◆

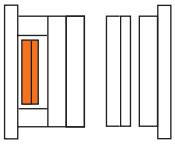


K72 ◇

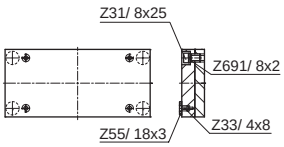


.../296x346 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆

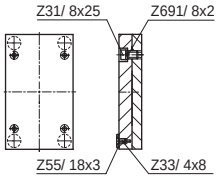
K60-70 K65-75 K62-72



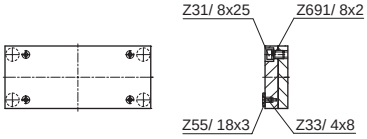
K60-70 ■



K65-75 ◆



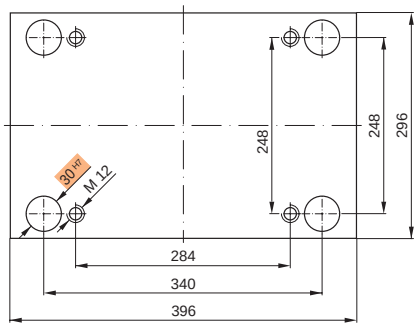
K62-72



.../296x346 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/296x346/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

296 x 396



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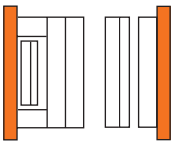
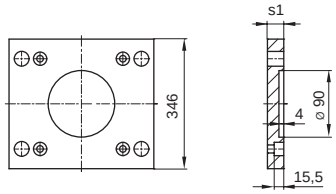
Bestellbeispiel:
Ordering example:
Exemple de commande:

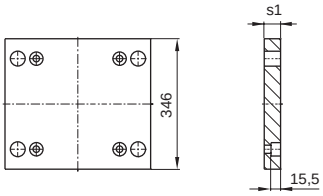
K20 / 296 x 396 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



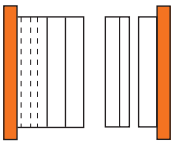


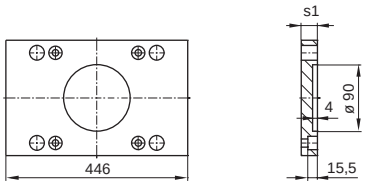


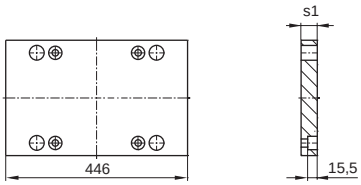
K10/296x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
35	■		■	■
46	■			■

K11/296x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K12
K13



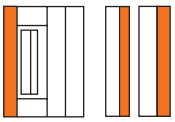


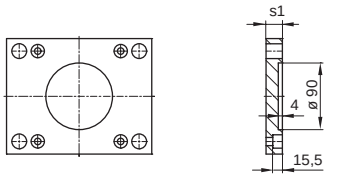


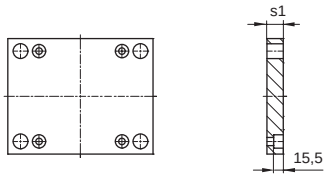
K12/296x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K13/296x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16



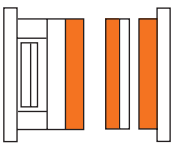


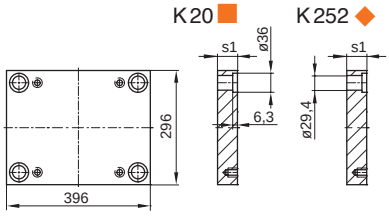


K15/296x396x s1 /	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K16/296x396x s1 /	1.1730	1.2162	1.2085	1.2312
22	■	■	■	■
27	■		■	■

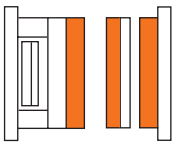
K20
K252

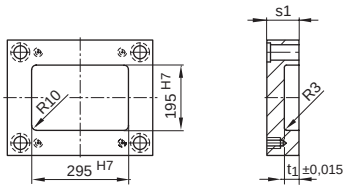




.../296x396 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17	■				■		■			
22	■		◆		■ ◆	■ ◆	■ ◆	◆		■
27	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■					■	■			

KR25

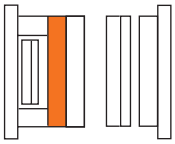


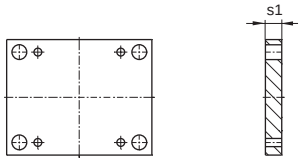


KR25/296x396 x s1/	1.1730	1.2085	1.2312	t1
36	■	■	■	16,8
46	■	■	■	21,8
56	■	■	■	26,8

KR25/296x396 x s1/	1.1730	1.2085	1.2312	t1
66	■	■	■	26,8
76	■	■	■	35,8
86	■	■	■	45,8

K30

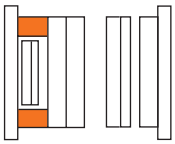




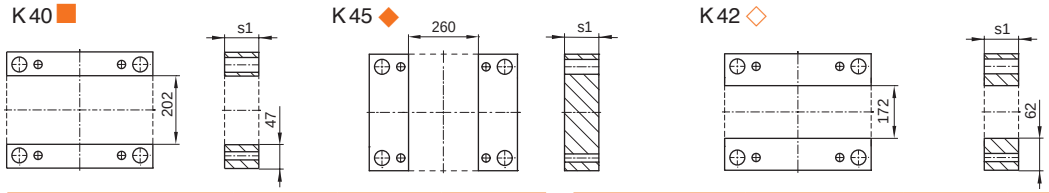
K 30/296x396 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■

K 30/296x396 x s1/	1.1730	1.2085	1.2312
66	■	■	■
76	■	■	■
86	■	■	■

K40 K45 K42



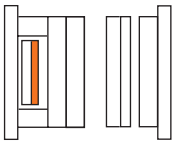
K40 ■ K45 ◆ K42 ◇



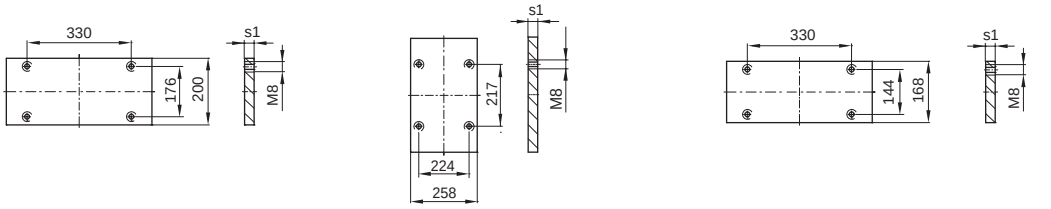
.../296x396 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◇	■	

.../296x396 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	
136	■ ◇		

K60 K65 K62

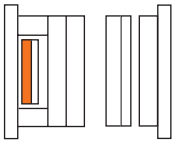


K60 ■ K 65 ◆ K62 ◇

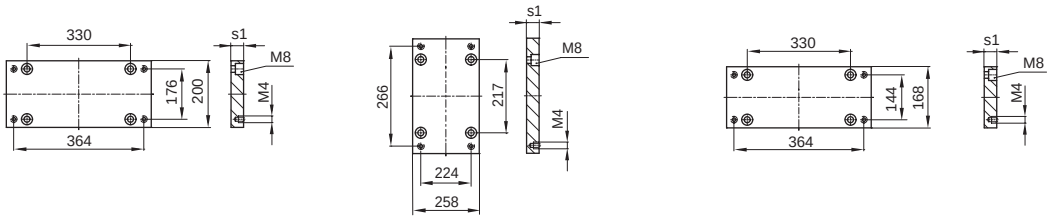


.../296x396 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

K70 K75 K72

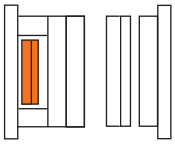


K70 ■ K 75 ◆ K72 ◇

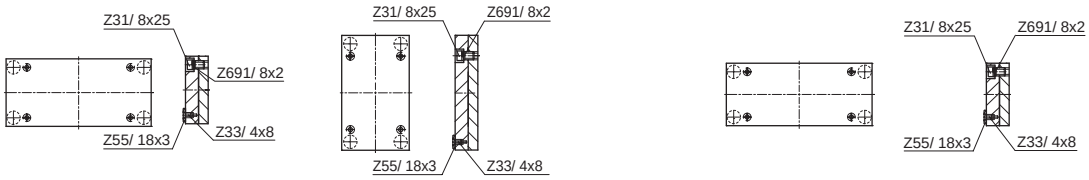


.../296x396 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

K60-70 K65-75 K62-72



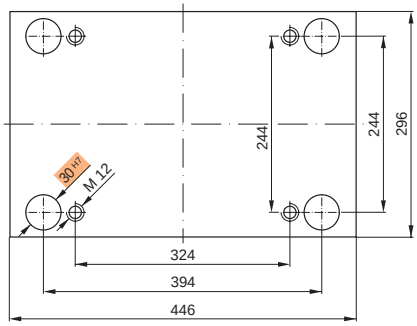
K60-70 ■ K65-75 ◆ K62-72



.../296x396 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/296x396/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

296 x 446

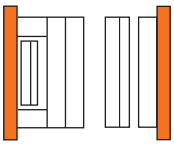


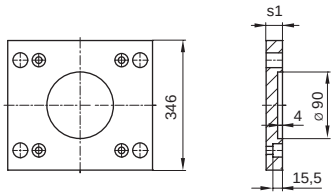
Bestellbeispiel:
Ordering example:
Exemple de commande:

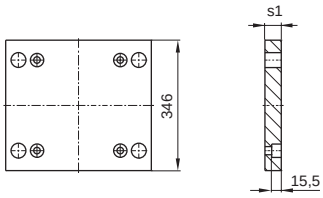
K20 / 296 x 446 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



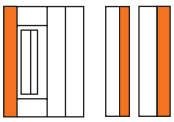


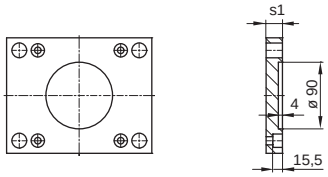


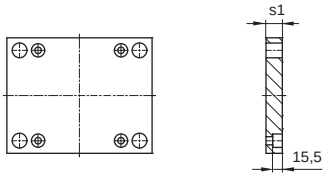
K10/296x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K11/296x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K15
K16



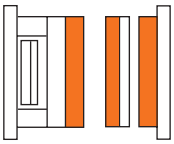




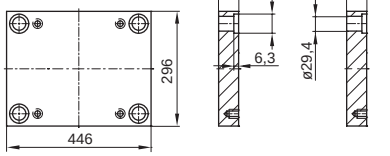
K15/296x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/296x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K20
K252

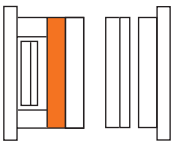


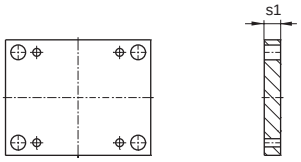
K20 ■ K252 ◆



.../296x446 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
17							■			
22	■				■		■			
27	■		◆		■ ◆	■ ◆	■ ◆	◆		■
36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆		■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆		■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆		■
106	■				■	■	■			
116	■		◆		■ ◆	■ ◆	■ ◆	◆		■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■					■	■			

K30

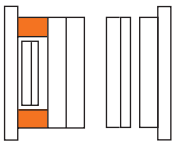




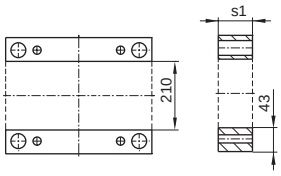
K30/296x446x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■		■	■

K30/296x446x s1 /	1.1730	1.2162	1.2085	1.2312
66	■		■	■
76	■		■	■
86	■		■	■

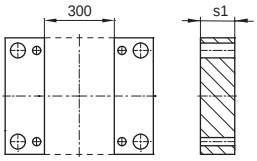
K 40
K 45
K 42



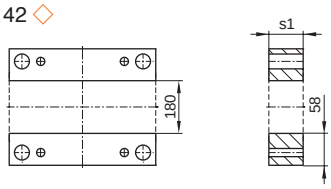
K 40 ■



K 45 ◆



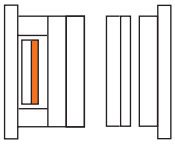
K 42 ◇



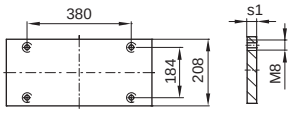
.../296x446 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◇	■	

.../296x446 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◇		

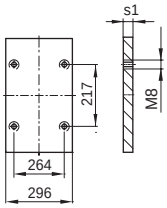
K60
K65
K62



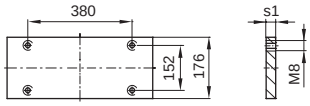
K 60 ■



K 65 ◆

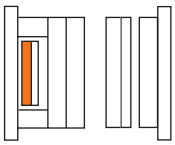


K 62 ◇

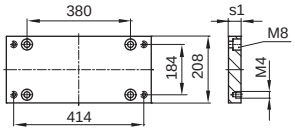


.../296x446 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

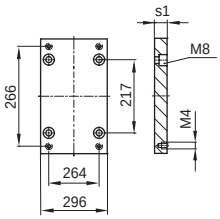
K70
K75
K72



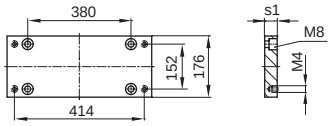
K 70 ■



K 75 ◆

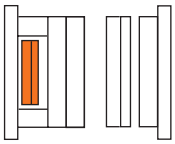


K 72 ◇

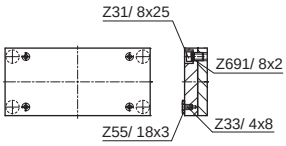


.../296x446 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

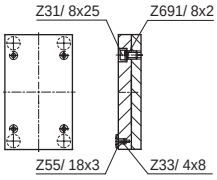
K60-70
K65-75
K62-72



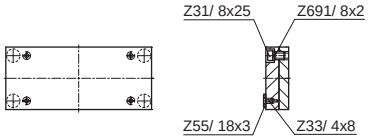
K 60-70 ■



K 65-75 ◆



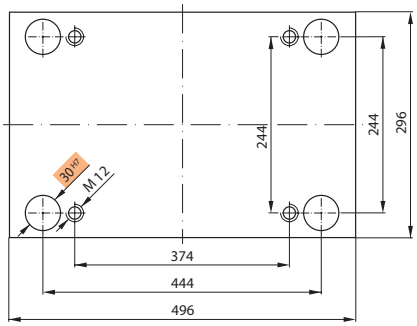
K 62-72



.../296x446 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/296x446/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

296 x 496

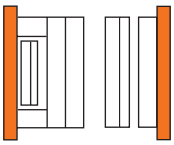


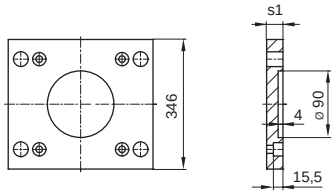
Bestellbeispiel:
Ordering example:
Exemple de commande:

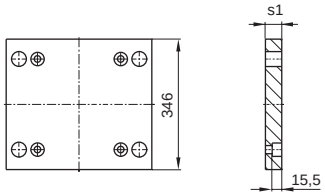
K20 / 296 x 496 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



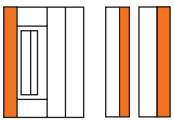


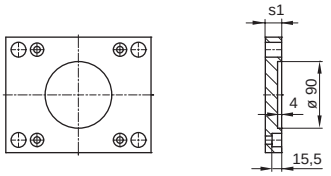


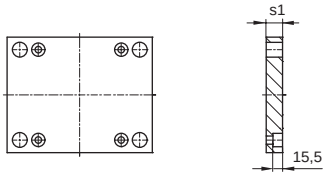
K10/296x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K11/296x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■			■

K15
K16



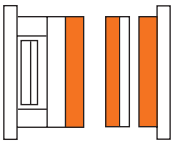




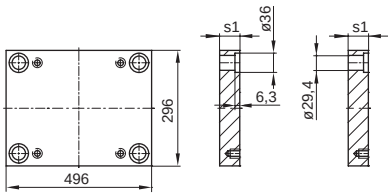
K15/296x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/296x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K20
K252

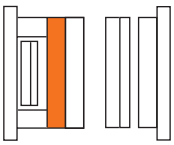


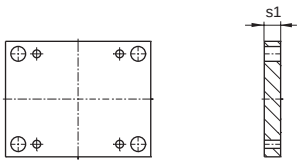
K20 ■ K252 ◆



.../296x496 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■		◆		■ ◆	■ ◆	■ ◆	◆		■
36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆		■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆		■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆		■
106	■				■	■	■			
116	■		◆		■ ◆	■ ◆	■ ◆	◆		■
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■					■	■			

K30

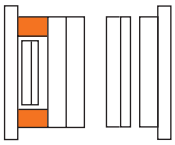




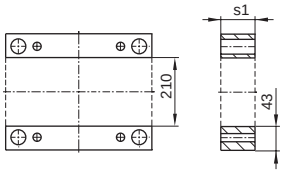
K30/296x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■		■	■

K30/296x496x s1 /	1.1730	1.2162	1.2085	1.2312
66	■		■	■
76	■			■

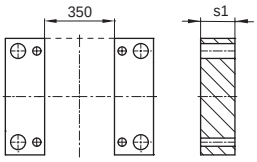
K40 K45 K42



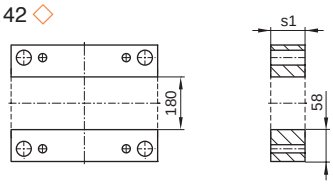
K40 ■



K45 ◆



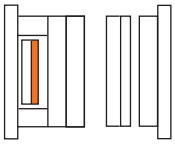
K42 ◇



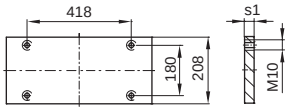
.../296x496 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◇	■	

.../296x496 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◇		

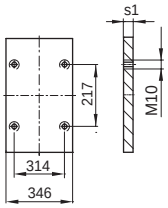
K60 K65 K62



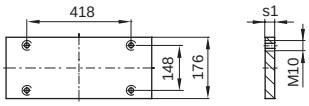
K60 ■



K65 ◆

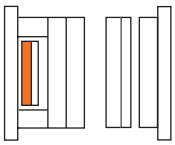


K62 ◇

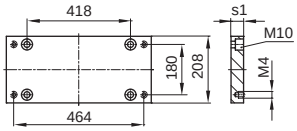


.../296x496 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

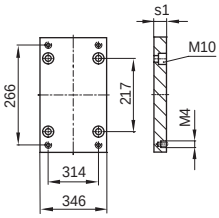
K70 K75 K72



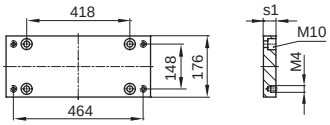
K70 ■



K75 ◆

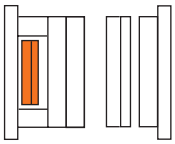


K72 ◇

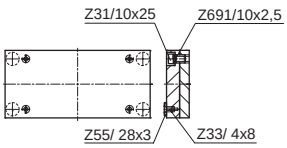


.../296x496 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

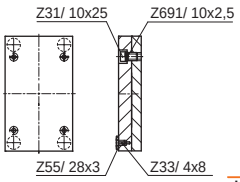
K60-70 K65-75 K62-72



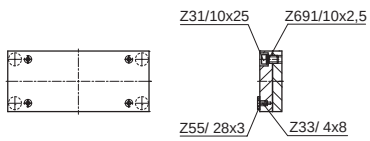
K60-70 ■



K65-75 ◆



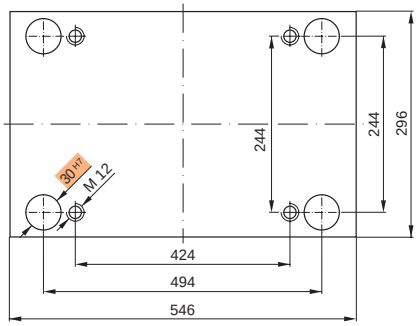
K62-72



.../296x496 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/296x496/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

296 x 546

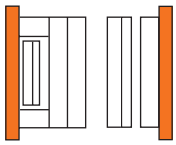


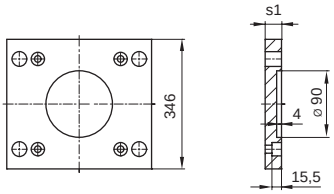
Bestellbeispiel:
Ordering example:
Exemple de commande:

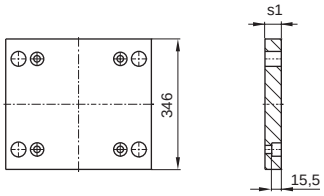
K20 / 296 x 546 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



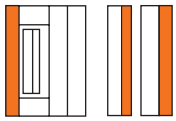


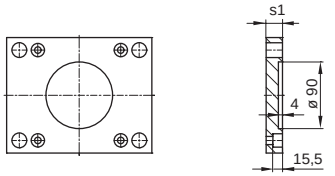


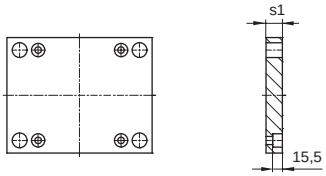
K10/296x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K11/296x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K15
K16





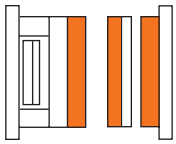


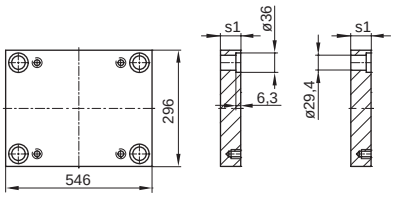
K15/296x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/296x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K20
K252

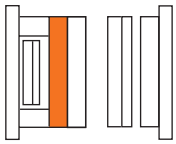
K20 ■ K252 ◆

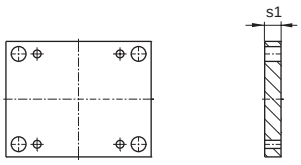




.../296x546 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■◆	■◆	■◆			■
36	■				■◆	■◆	■◆	◆		■
46	■		◆		■◆	■◆	■◆	◆		■
56	■		◆		■◆	■◆	■◆	◆		■
66	■		◆		■◆	■◆	■◆	◆		■
76	■				■◆	■◆	■◆	◆		■
86	■				■◆	■◆	■◆	◆		■
96	■				■◆	■◆	■◆	◆		■
116	■				■◆	■◆	■◆	◆		■
136	■				■	■	■			
156	■					■	■			

K30

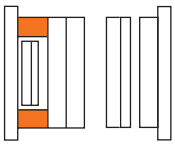




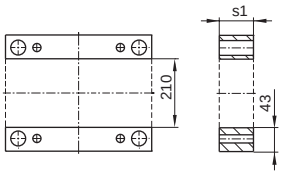
K30/296x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

K30/296x546x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■
66	■		■	■
76	■			■

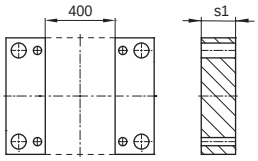
K40 K45 K42



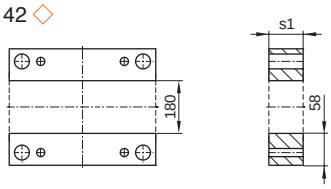
K40 ■



K45 ◆



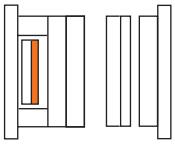
K42 ◇



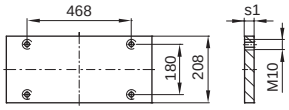
.../296x546 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◇	■	

.../296x546 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◇	■	

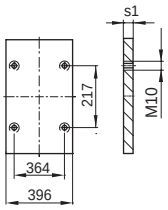
K60 K65 K62



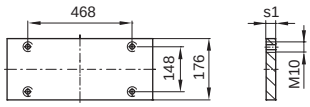
K60 ■



K65 ◆

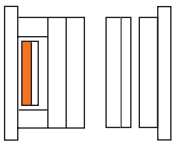


K62 ◇

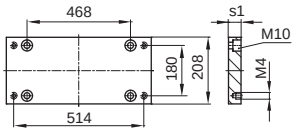


.../296x546 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

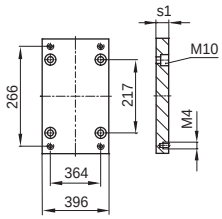
K70 K75 K72



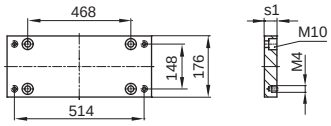
K70 ■



K75 ◆

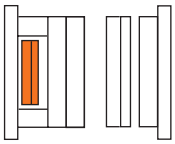


K72 ◇

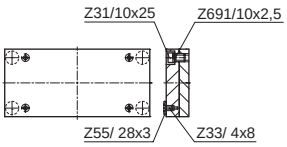


.../296x546 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

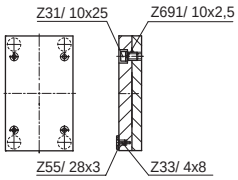
K60-70 K65-75 K62-72



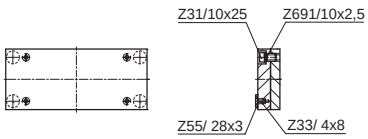
K60-70 ■



K65-75 ◆



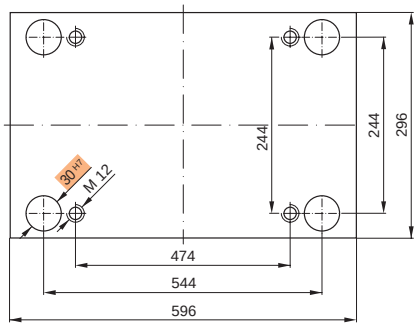
K62-72



.../296x546 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/296x546/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

296 x 596

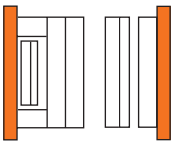


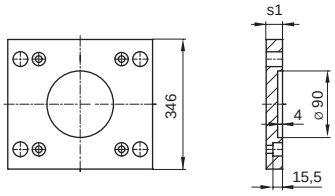
Bestellbeispiel:
Ordering example:
Exemple de commande:

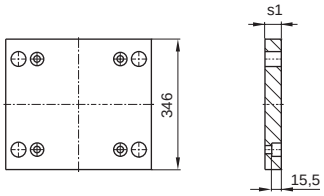
K20 / 296 x 596 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



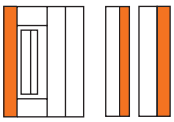


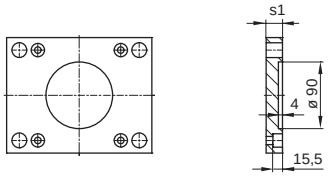


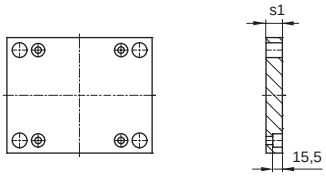
K10/296x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K11/296x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K15
K16





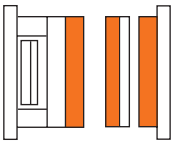


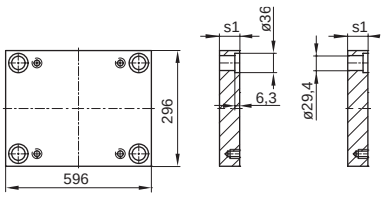
K15/296x596x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/296x596x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K20
K252

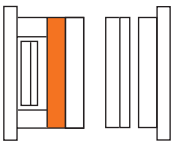
K20 ■ K252 ◆

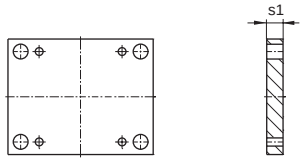




.../296x596 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■◆	■◆	■◆			■
36	■				■◆	■◆	■◆			■
46	■		◆		■◆	■◆	■◆	◆		■
56	■		◆		■◆	■◆	■◆	◆		■
66	■		◆		■◆	■◆	■◆	◆		■
76	■				■◆	■◆	■◆	◆		■
86	■				■◆	■◆	■◆	◆		■
96	■				■◆	■◆	■◆	◆		■
116	■				■◆	■◆	■◆	◆		■
136	■				■	■	■			
156	■					■	■			

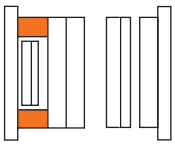
K30



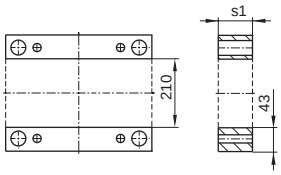


K30/296x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■			■

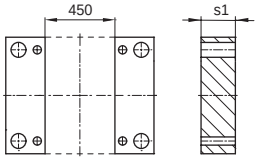
K40 K45 K42



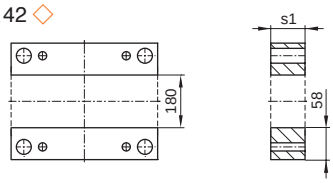
K40 ■



K45 ◆



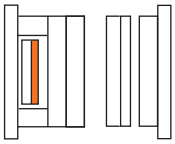
K42 ◇



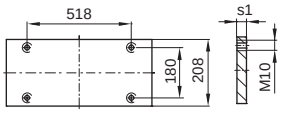
.../296x596 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◇	■	

.../296x596 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◇	■	

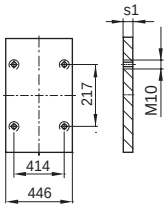
K60 K65 K62



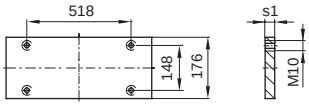
K60 ■



K65 ◆

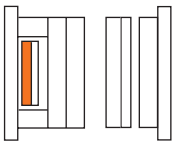


K62 ◇

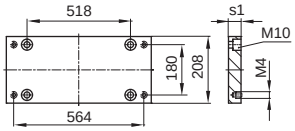


.../296x596 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

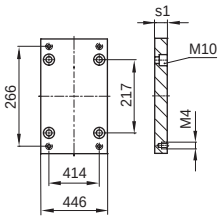
K70 K75 K72



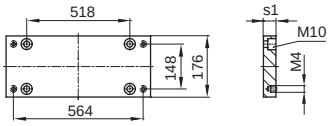
K70 ■



K75 ◆

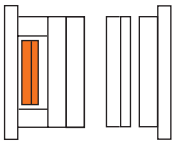


K72 ◇

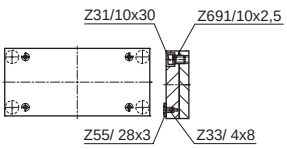


.../296x596 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

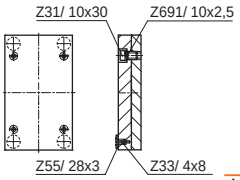
K60-70 K65-75 K62-72



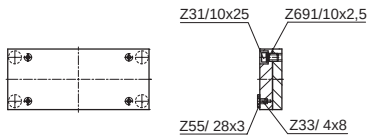
K60-70 ■



K65-75 ◆



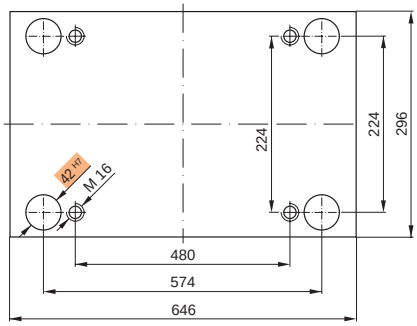
K62-72



.../296x596 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/296x596/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

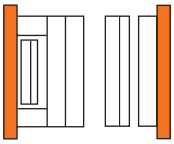
296 x 646

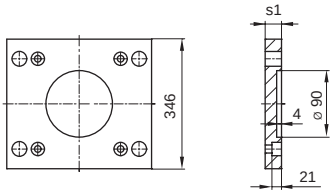


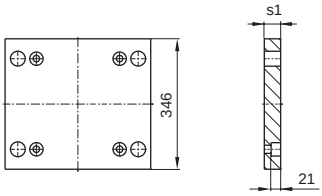
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 296 x 646 x 36 / 1.2085

K10
K11



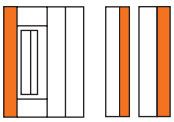


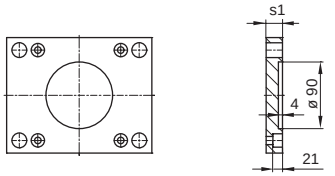


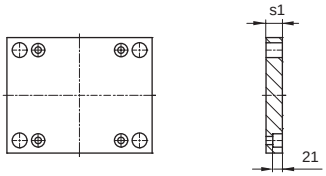
K10/296x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K11/296x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■

K15
K16





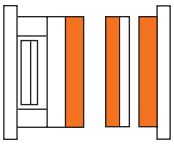


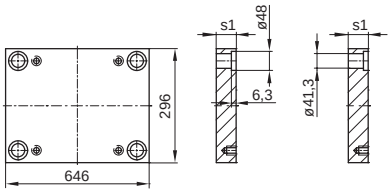
K15/296x646x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K16/296x646x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■

K20
K252

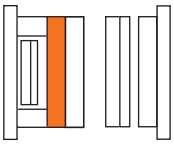
K20 ■ K252 ◆

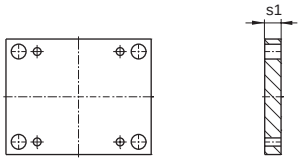




.../296x646 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■◆	■◆	■◆			■
36	■				■◆	■◆	■◆			■
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■					■	■			

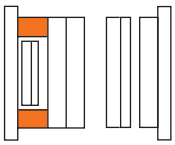
K30



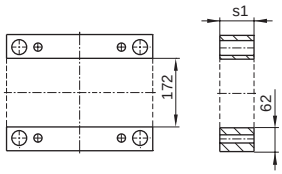


K30/296x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■			■

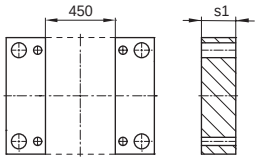
K40 K45 K42



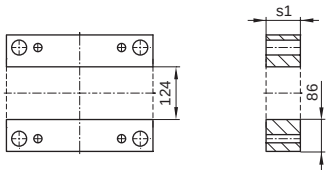
K40 ■



K45 ◆



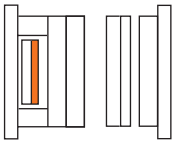
K42 ◇



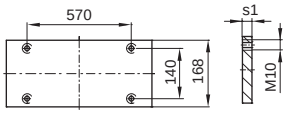
.../296x646 x s1/	1.1730	1.2085	1.2312
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../296x646 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	

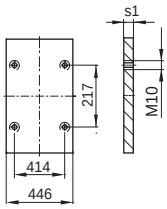
K60 K65 K62



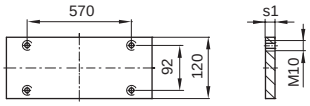
K60 ■



K65 ◆

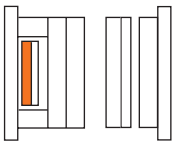


K62 ◇

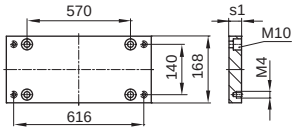


.../296x646 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

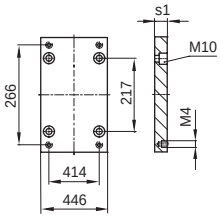
K70 K75 K72



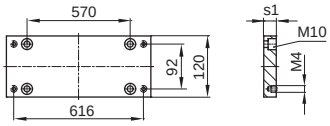
K70 ■



K75 ◆

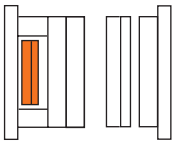


K72 ◇

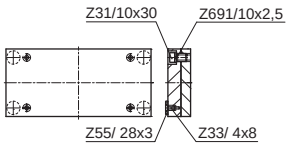


.../296x646 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

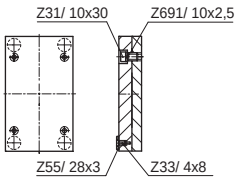
K60-70 K65-75 K62-72



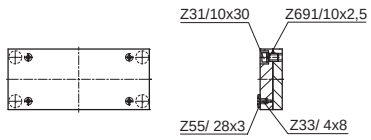
K60-70 ■



K65-75 ◆



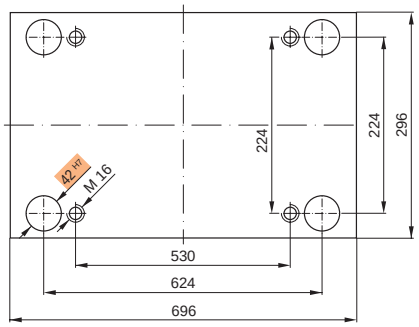
K62-72



.../296x646 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/296x646/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

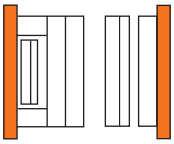
296 x 696

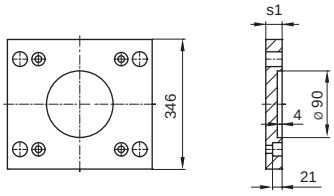


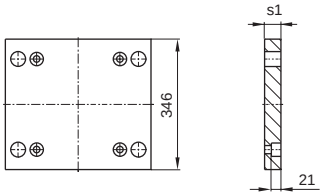
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 296 x 696 x 36 / 1.2085

K10
K11



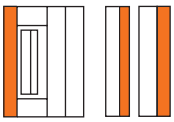


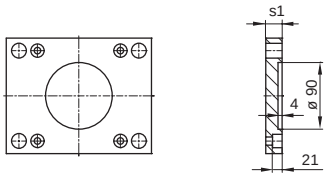


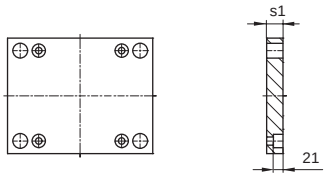
K10/296x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K11/296x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K15
K16





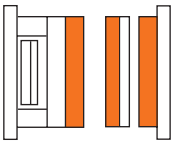


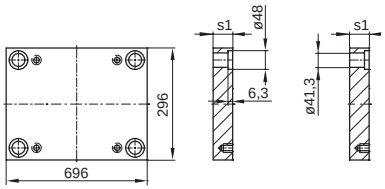
K15/296x696x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K16/296x696x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K20
K252

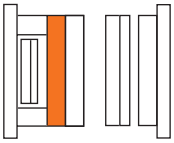
K20 ■ K252 ◆

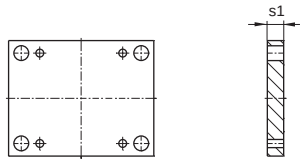




.../296x696 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■	■	■			■
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■					■	■			

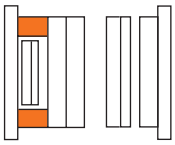
K30



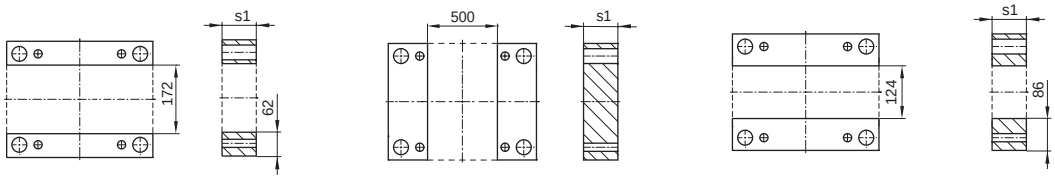


K30/296x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■
56	■			■

K40 K45 K42



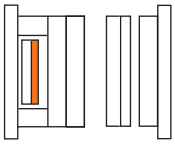
K40 ■ K45 ◆ K42 ◇



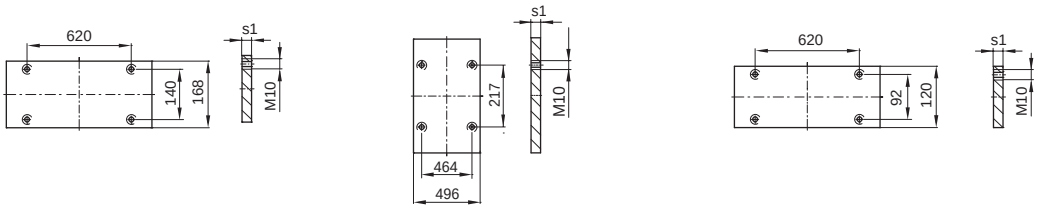
.../296x696 x s1/	1.1730	1.2085	1.2312
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../296x696 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	

K60 K65 K62

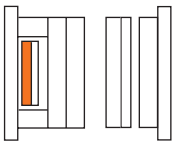


K60 ■ K65 ◆ K62 ◇

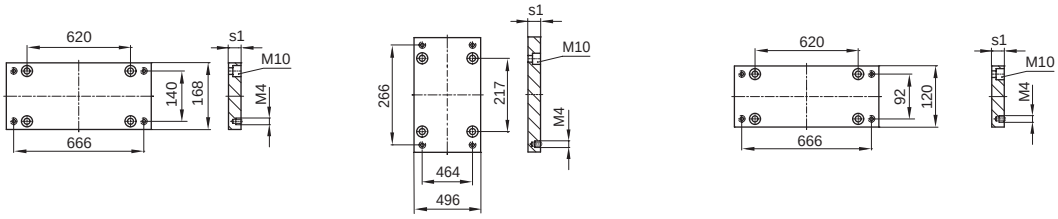


.../296x696 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

K70 K75 K72

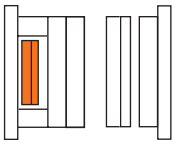


K70 ■ K75 ◆ K72 ◇

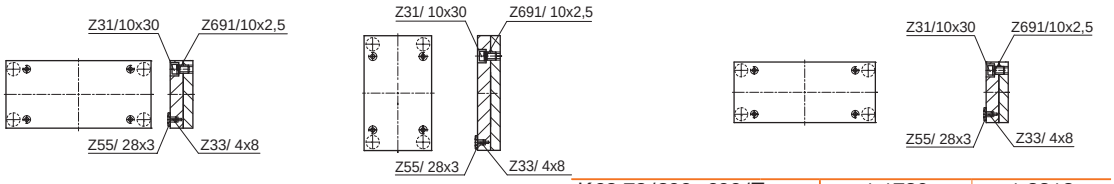


.../296x696 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◆

K60-70 K65-75 K62-72



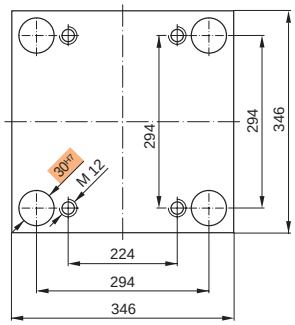
K60-70 ■ K65-75 ◆ K62-72



.../296x696 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/296x696/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

346 x 346

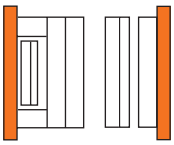


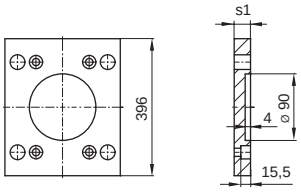
Bestellbeispiel:
Ordering example:
Exemple de commande:

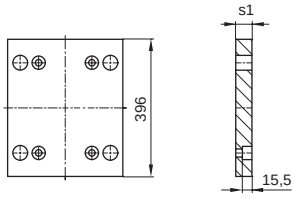
K20 / 346 x 346 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



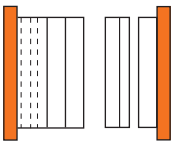


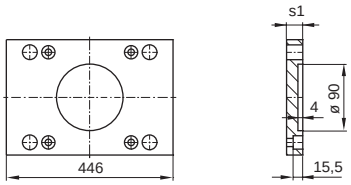


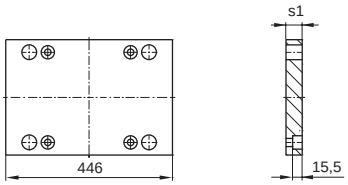
K10/346x346x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

K11/346x346x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

K12
K13



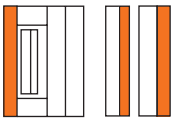


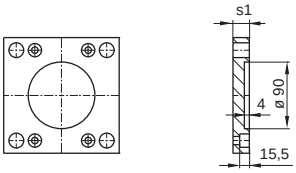


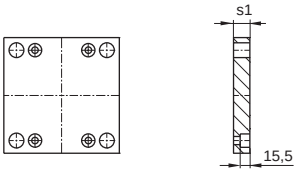
K12/346x346x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K13/346x346x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K15
K16



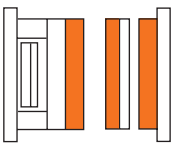


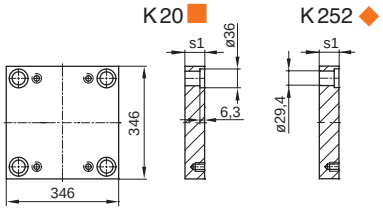


K15/346x346x s1 /	1.1730	1.2162	1.2085	1.2312
22	■		■	■
27	■		■	■

K16/346x346x s1 /	1.1730	1.2162	1.2085	1.2312
22	■	■	■	■
27	■		■	■

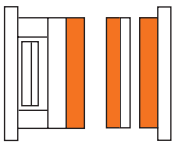
K20
K252

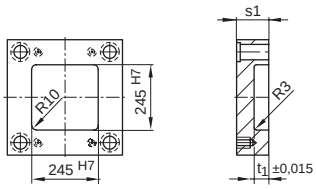




.../346x346 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■		◆		■ ◆	■ ◆	■ ◆			■
27	■		◆		■ ◆	■ ◆	■ ◆	◆		■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

KR25

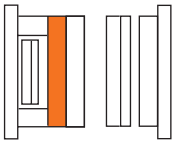


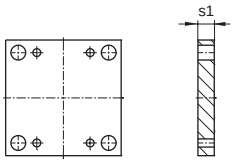


KO25/346x346 x s1/	1.1730	1.2085	1.2312	t1
46	■	■	■	21,8
56	■	■	■	26,8
66	■	■	■	26,8

KO25/346x346 x s1/	1.1730	1.2085	1.2312	t1
76	■	■	■	35,8
86	■	■	■	45,8
96	■	■	■	45,8

K30

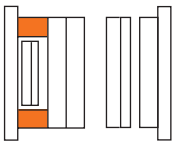




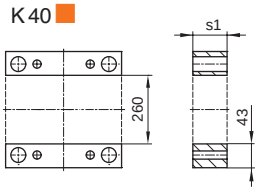
K 30/346x346 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■

K 30/346x346 x s1/	1.1730	1.2085	1.2312
66	■	■	■
76	■	■	■
86	■	■	■

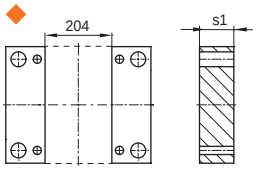
K40 K45 K42



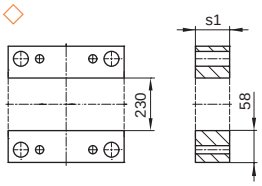
K 40 ■



K 45 ◆



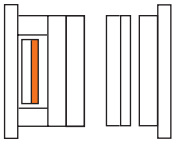
K 42 ◇



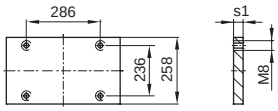
.../346x346 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◇	■	

.../346x346 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◇	■	
136	■ ◇	■	

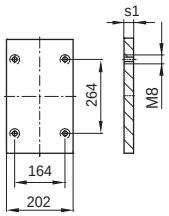
K60 K65 K62



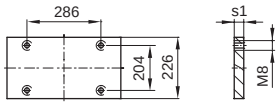
K 60 ■



K 65 ◆

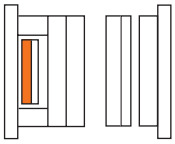


K 62 ◇

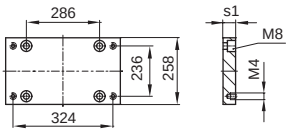


.../346x346 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

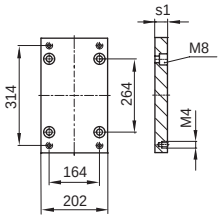
K70 K75 K72



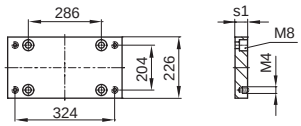
K 70 ■



K 75 ◆

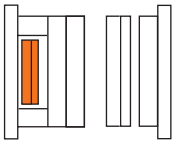


K 72 ◇

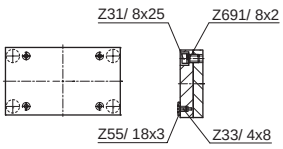


.../346x346 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

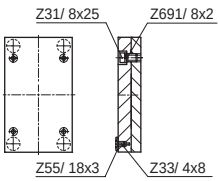
K60-70 K65-75 K62-72



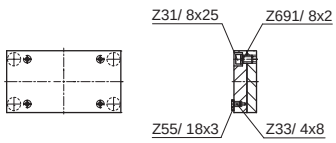
K 60-70 •



K 65-75 ◆



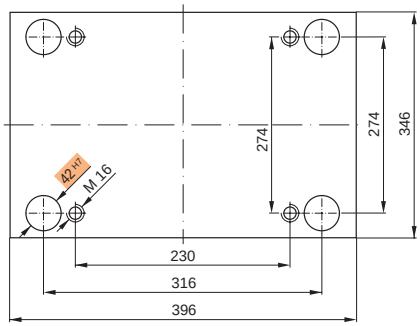
K 62-72



.../346x346 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/346x346/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

346 x 396

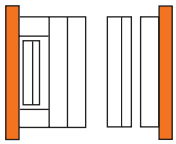


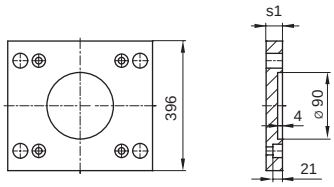
Bestellbeispiel:
Ordering example:
Exemple de commande:

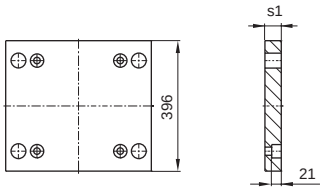
K20 / 346 x 396 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



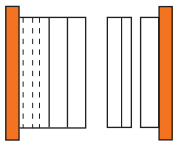


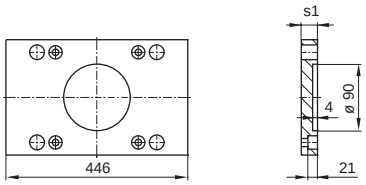


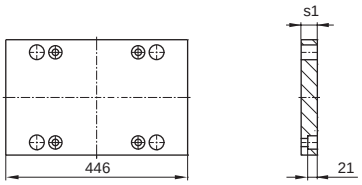
K10/346x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

K11/346x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

K12
K13



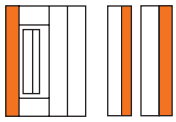


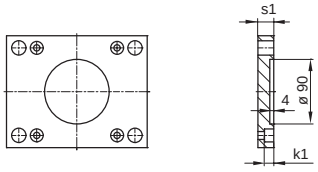


K12/346x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■
46	■		■	■

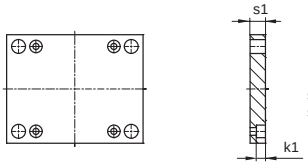
K13/346x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■
46	■		■	■

K15
K16





s1=22: k1=17,5
s1=27: k1=21

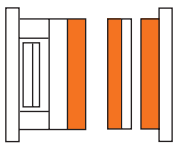


s1= 22 : k1= 17,5
s1= 27 : k1= 21

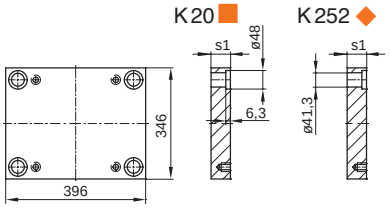
K15/346x396x s1 /	1.1730	1.2162	1.2085	1.2312
22	■		■	
27	■		■	■
36	■		■	■

K16/346x396x s1 /	1.1730	1.2162	1.2085	1.2312
22	■	■	■	
27	■		■	■
36	■		■	■

K20
K252

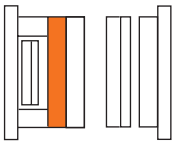


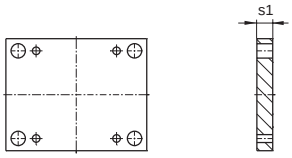
K20 ■ K252 ◆



.../346x396 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■	■	■			■
27	■		◆		■ ◆	■ ◆	■ ◆	◆		■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

K30

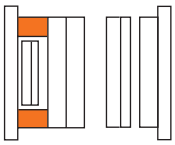




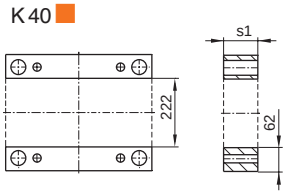
K 30/346x396 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■

K 30/346x396 x s1/	1.1730	1.2085	1.2312
66	■	■	■
76	■	■	■
86	■	■	■

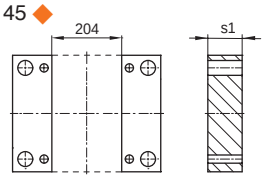
K 40
K 45
K 42



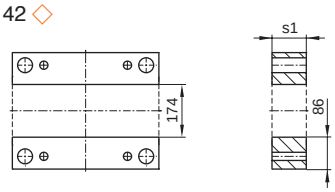
K 40 ■



K 45 ◆



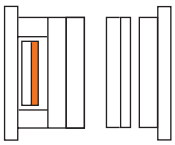
K 42 ◇



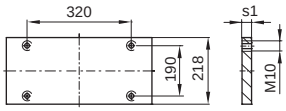
.../346x396 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../346x396 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	

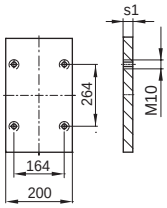
K60
K65
K62



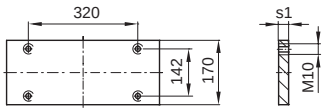
K 60 ■



K 65 ◆

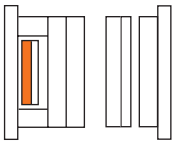


K 62 ◇

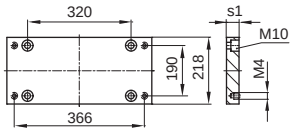


.../346x396 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

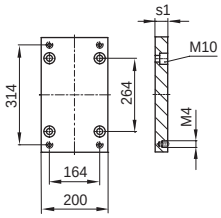
K70
K75
K72



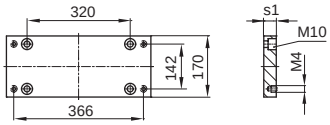
K 70 ■



K 75 ◆

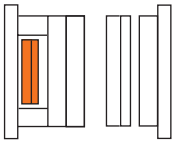


K 72 ◇

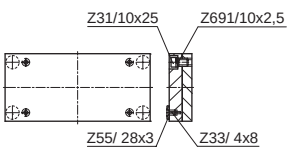


.../346x396 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

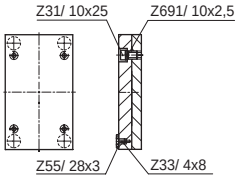
K60-70
K65-75
K62-72



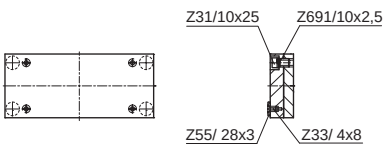
K 60-70 ■



K 65-75 ◆



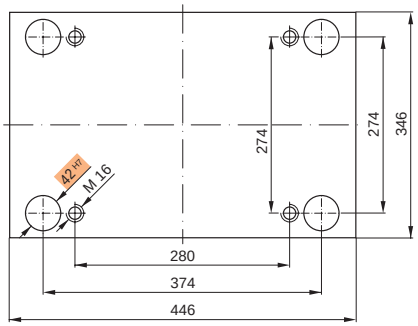
K 62-72



.../346x396 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/346x396/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

346 x 446

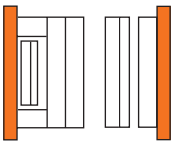


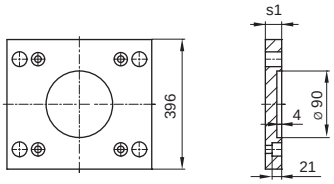
Bestellbeispiel:
Ordering example:
Exemple de commande:

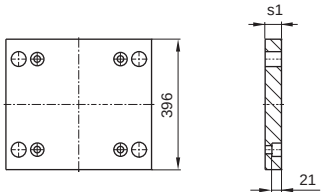
K20 / 346 x 446 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



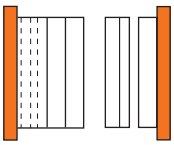


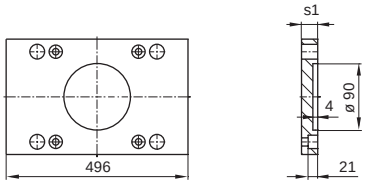


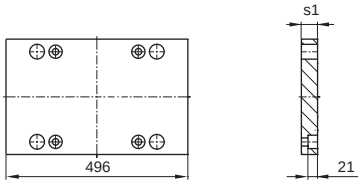
K10/346x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

K11/346x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

K12
K13



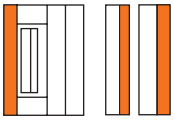


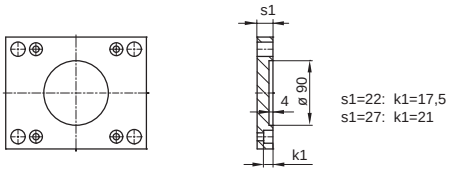


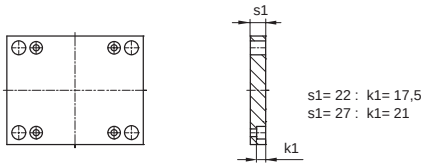
K12/346x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	
46	■		■	

K13/346x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	
46	■		■	

K15
K16



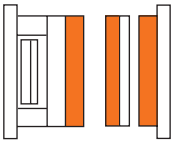


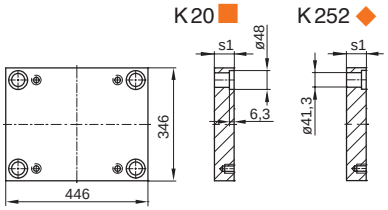


K15/346x446x s1 /	1.1730	1.2162	1.2085	1.2312
22	■		■	
27	■		■	■
36	■		■	■

K16/346x446x s1 /	1.1730	1.2162	1.2085	1.2312
22	■		■	
27	■		■	■
36	■		■	■

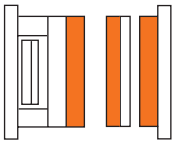
K20
K252

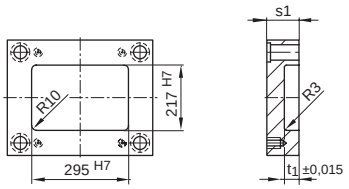




.../346x446 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■	■	■			■
27	■		◆		■ ◆	■ ◆	■ ◆			■
36	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
96	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

KR25

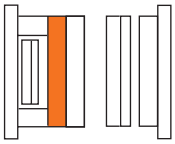


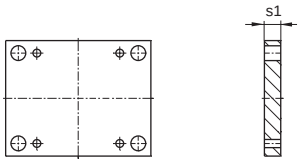


KR25/346x446 x s1/	1.1730	1.2085	1.2312	t1
46	■	■	■	21,8
56	■	■	■	26,8
66	■	■	■	26,8

KR25/346x446 x s1/	1.1730	1.2085	1.2312	t1
76	■	■	■	35,8
86	■	■	■	45,8
96	■	■	■	45,8

K30

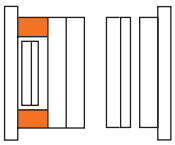




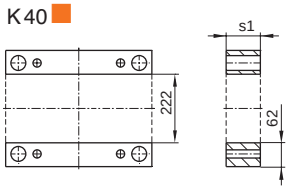
K 30/346x446 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■

K 30/346x446 x s1/	1.1730	1.2085	1.2312
66	■	■	■
76	■	■	■
86	■	■	■
96	■	■	■

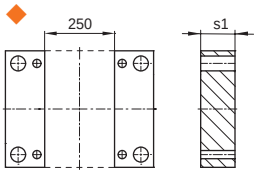
K40 K45 K42



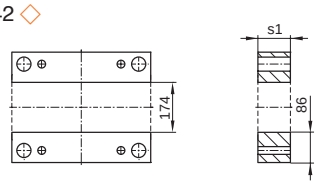
K40 ■



K45 ◆



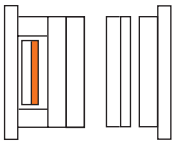
K42 ◇



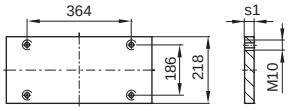
.../346x446 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../346x446 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	◆	◆	

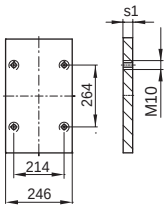
K60 K65 K62



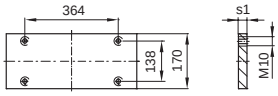
K60 ■



K65 ◆

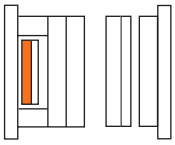


K62 ◇

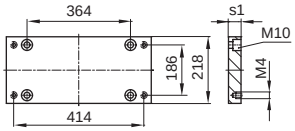


.../346x446 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

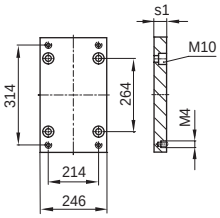
K70 K75 K72



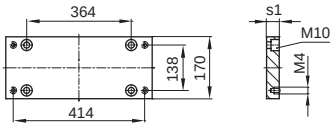
K70 ■



K75 ◆

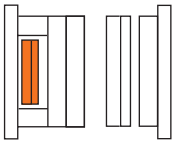


K72 ◇

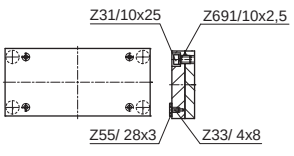


.../346x446 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

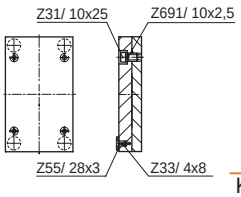
K60-70 K65-75 K62-72



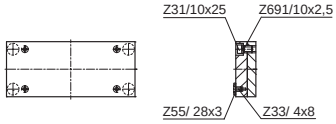
K60-70 ■



K65-75 ◆



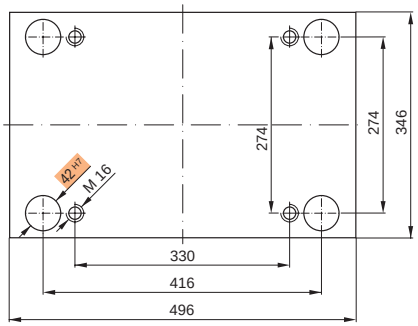
K62-72



.../346x446 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/346x446/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

346 x 496

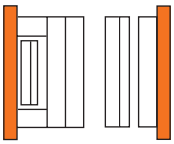


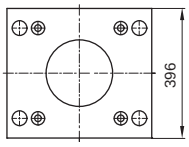
Bestellbeispiel:
Ordering example:
Exemple de commande:

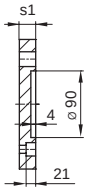
K20 / 346 x 496 x 36 / 1.2767

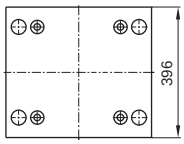
Neu / New / Nouveau

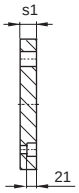
K10
K11







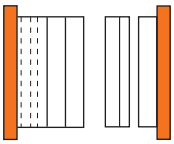


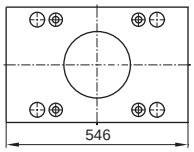


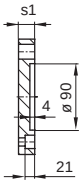
K10/346x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

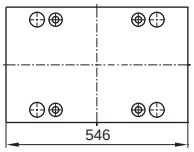
K11/346x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

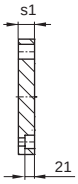
K12
K13







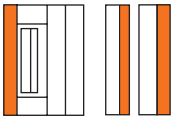


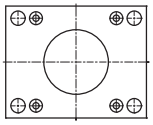


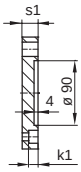
K12/346x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	
46	■		■	

K13/346x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	
46	■		■	

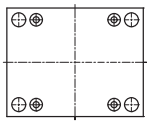
K15
K16

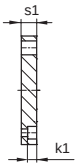






s1=22: k1=17,5
s1=27: k1=21



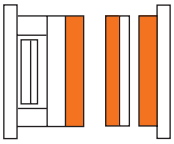


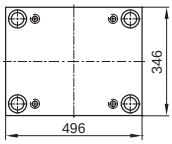
s1= 22 : k1= 17,5
s1= 27 : k1= 21

K15/346x496x s1 /	1.1730	1.2162	1.2085	1.2312
22	■		■	
27	■		■	■
36	■		■	■

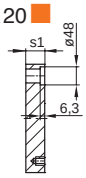
K16/346x496x s1 /	1.1730	1.2162	1.2085	1.2312
22	■		■	
27	■		■	■
36	■		■	■

K20
K252

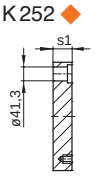




K20 ■

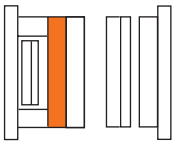


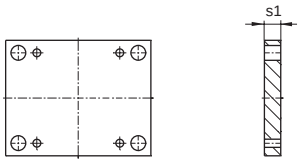
K252 ◆



.../346x496 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			■
27	■		◆		■ ◆	■ ◆	■ ◆			■
36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
46	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
56	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆	◆	■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

K30

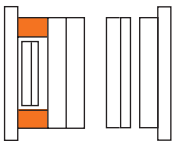




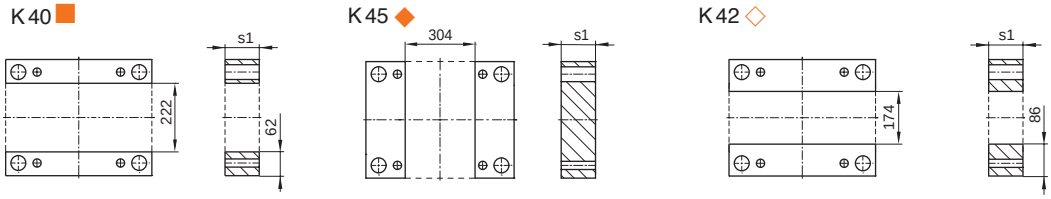
K 30/346x496 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■

K 30/346x496 x s1/	1.1730	1.2085	1.2312
66	■	■	■
76	■		■
86	■		■
96	■		■

K40 K45 K42



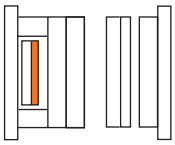
K40 ■ K45 ◆ K42 ◇



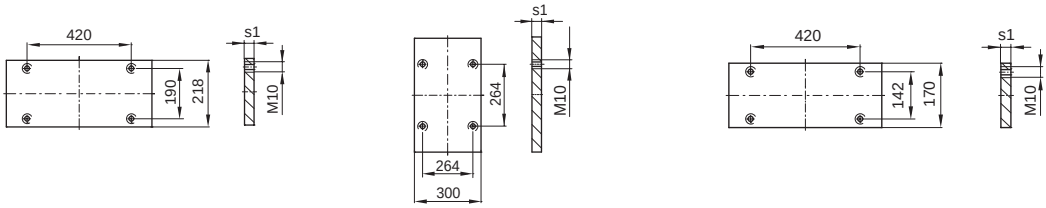
.../346x496 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../346x496 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◇	■	

K60 K65 K62

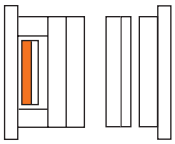


K60 ■ K 65 ◆ K62 ◇

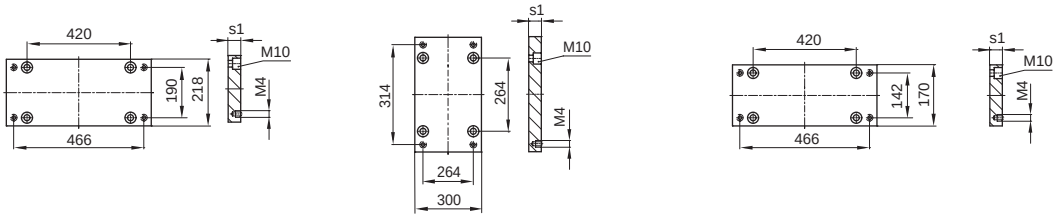


.../346x496 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

K70 K75 K72

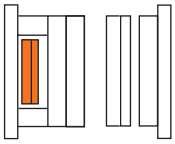


K70 ■ K 75 ◆ K72 ◇

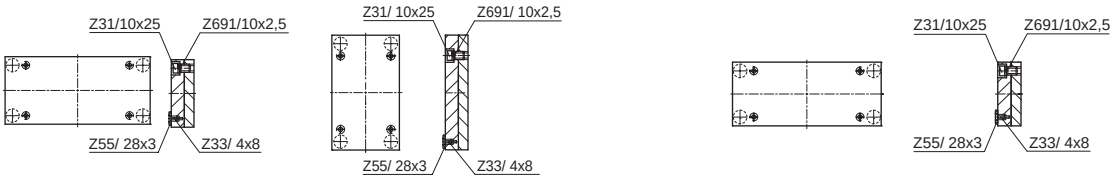


.../346x496 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

K60-70 K65-75 K62-72



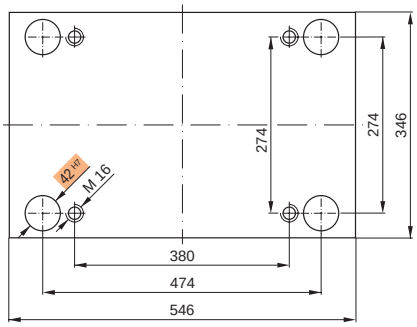
K60-70 ■ K65-75 ◆ K62-72



.../346x496 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/346x496/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

346 x 546

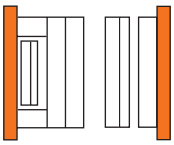


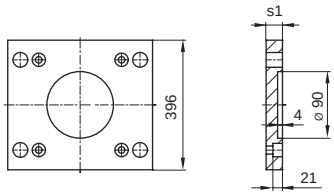
Bestellbeispiel:
Ordering example:
Exemple de commande:

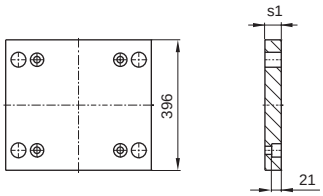
K20 / 346 x 546 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



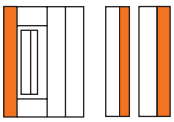


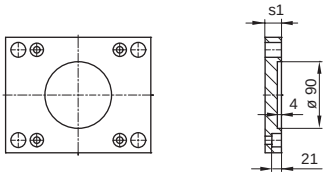


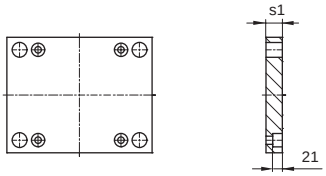
K10/346x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■

K11/346x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■

K15
K16



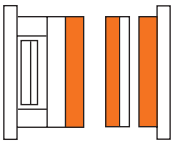




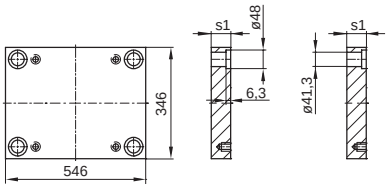
K15/346x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K16/346x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K20
K252

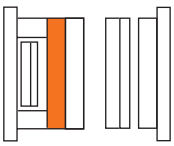


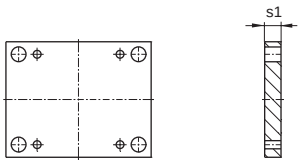
K20 ■ K252 ◆



.../346x546 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■ ◆	■	■ ◆			■
36	■				■ ◆	■ ◆	■ ◆	◆		■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
116	■				■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆			
176						■	■			

K30

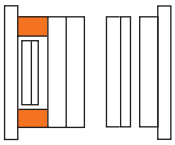




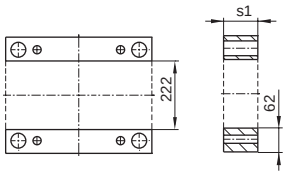
K30/346x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■		■	■

K30/346x546x s1 /	1.1730	1.2162	1.2085	1.2312
66	■		■	■
76	■			■
86	■			■

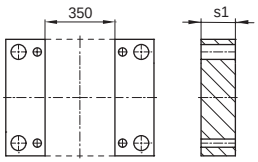
K40 K45 K42



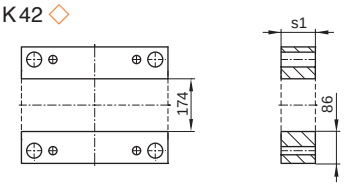
K40 ■



K45 ◆



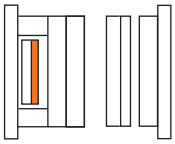
K42 ◇



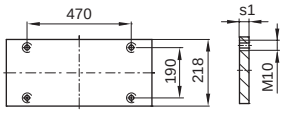
.../346x546 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../346x546 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

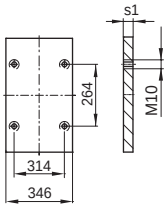
K60 K65 K62



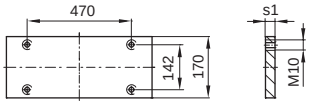
K60 ■



K65 ◆

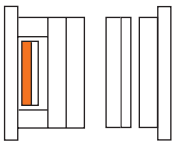


K62 ◇

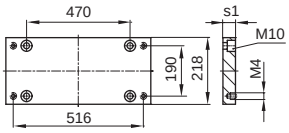


.../346x546 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

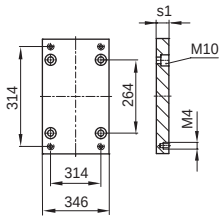
K70 K75 K72



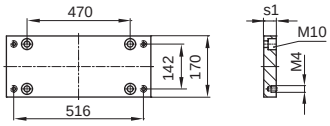
K70 ■



K75 ◆

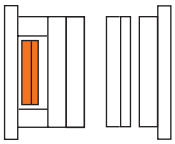


K72 ◇

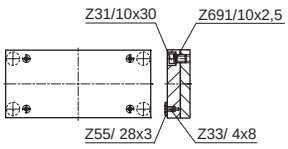


.../346x546 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

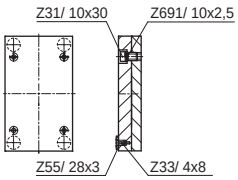
K60-70 K65-75 K62-72



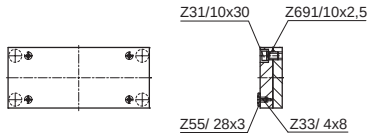
K60-70 ■



K65-75 ◆



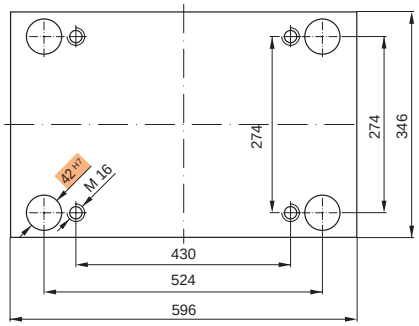
K62-72



.../346x546 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/346x546/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

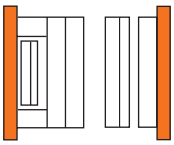
346 x 596

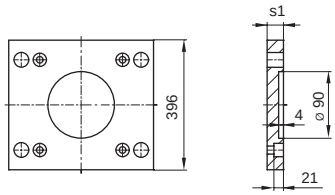


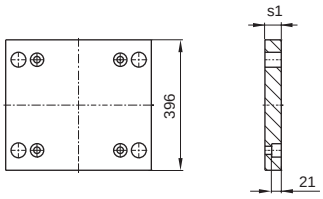
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 346 x 596 x 36 / 1.2162

K10
K11



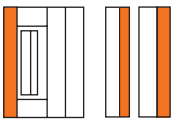


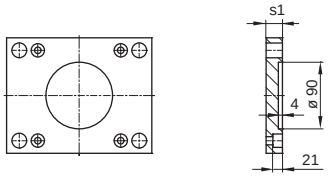


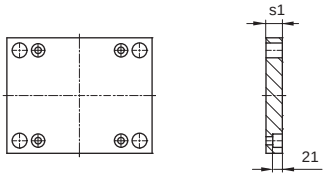
K10/346x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K11/346x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K15
K16



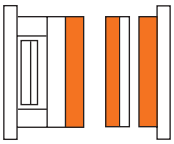




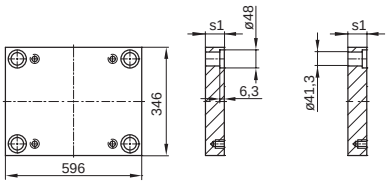
K15/346x596x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K16/346x596x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K20
K252

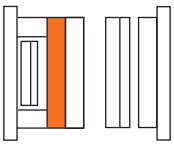


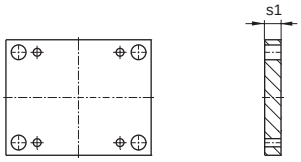
K20 ■ K252 ◆



.../346x596 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ES□	Toolox33
22	■				■		■			
27	■				■◆	■◆	■◆			■
36	■				■◆	■◆	■◆	◆		■
46	■				■◆	■◆	■◆	◆		■
56	■				■◆	■◆	■◆	◆	◆	■
66	■				■◆	■◆	■◆	◆		■
76	■				■◆	■◆	■◆	◆	◆	■
86	■				■◆	■◆	■◆	◆		■
96	■				■◆	■◆	■◆	◆	◆	■
116	■				■◆	■◆	■◆	◆	◆	■
136	■				■◆	■◆	■◆	◆	◆	
156	■				■◆	■◆	■◆			
176	■					■	■			

K30

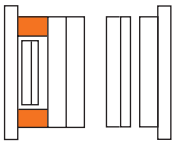




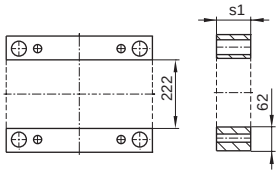
K30/346x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■		■	■

K30/346x596x s1 /	1.1730	1.2162	1.2085	1.2312
66	■		■	■
76	■			■

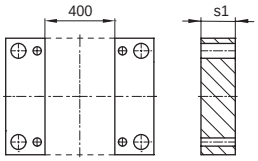
K40 K45 K42



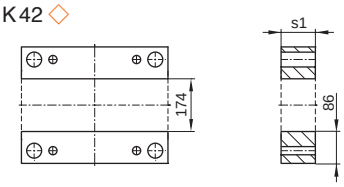
K40 ■



K45 ◆



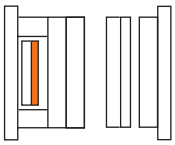
K42 ◇



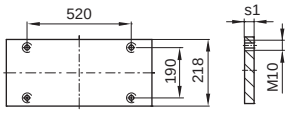
.../346x596 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../346x596 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

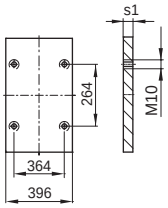
K60 K65 K62



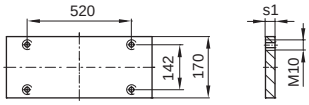
K60 ■



K65 ◆

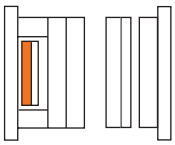


K62 ◇

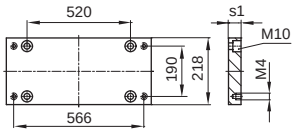


.../346x596 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

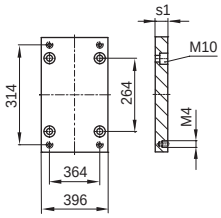
K70 K75 K72



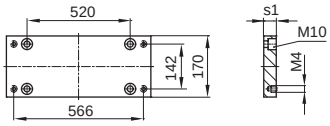
K70 ■



K75 ◆

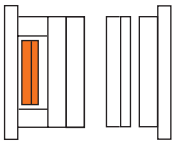


K72 ◇

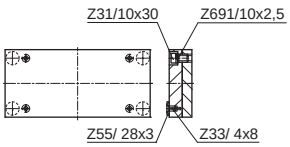


.../346x596 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

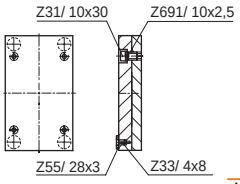
K60-70 K65-75 K62-72



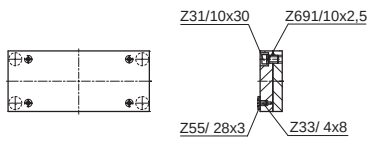
K60-70 ■



K65-75 ◆



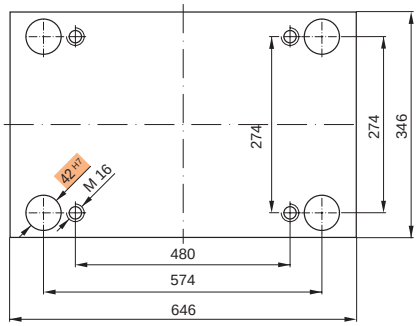
K62-72



.../346x596 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/346x596/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

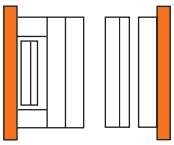
346 x 646

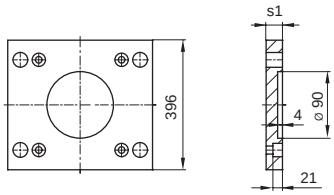


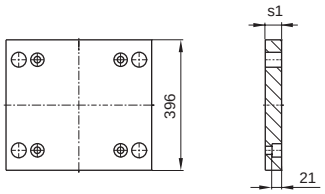
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 346 x 646 x 36 / 1.2085

K10
K11



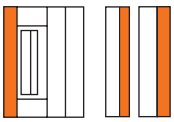


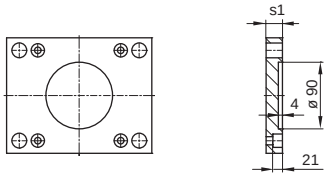


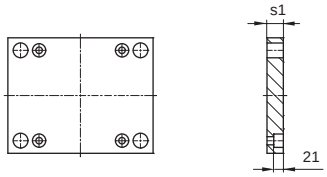
K10/346x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K11/346x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K15
K16





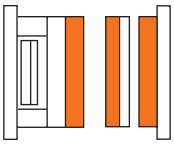


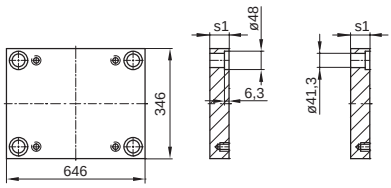
K15/346x646x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K16/346x646x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K20
K252

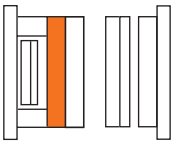
K20 ■ K252 ◆

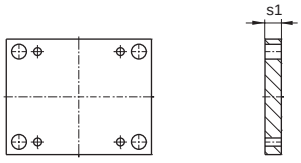




.../346x646 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■ ◆		■ ◆			■
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

K30

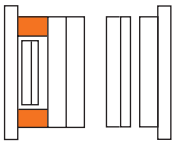




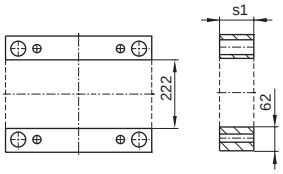
K30/346x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■
56	■		■	■

K30/346x646x s1 /	1.1730	1.2162	1.2085	1.2312
66	■			■
76	■			■

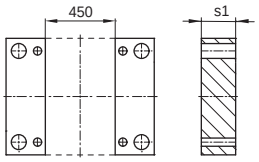
K40 K45 K42



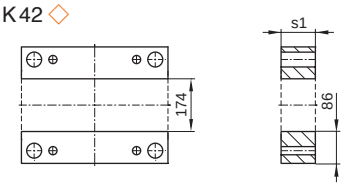
K40 ■



K45 ◆



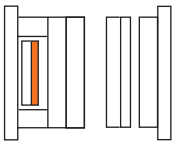
K42 ◇



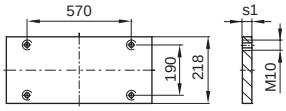
.../346x646 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../346x646 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

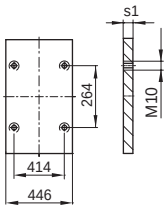
K60 K65 K62



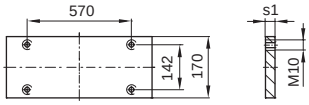
K60 ■



K65 ◆

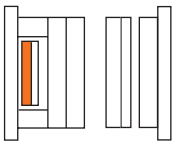


K62 ◇

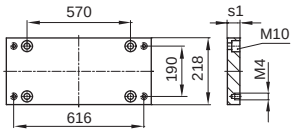


.../346x646 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

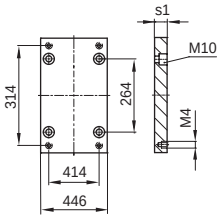
K70 K75 K72



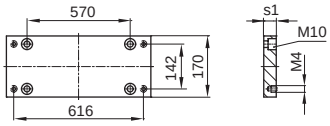
K70 ■



K75 ◆

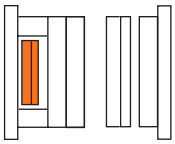


K72 ◇

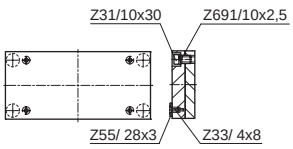


.../346x646 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

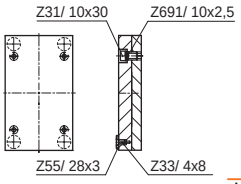
K60-70 K65-75 K62-72



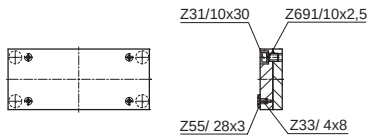
K60-70 ■



K65-75 ◆



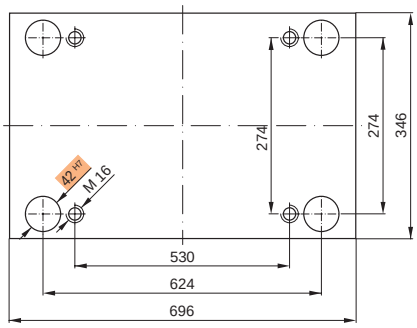
K62-72



.../346x646 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/346x646/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

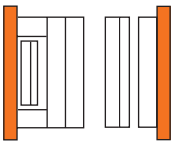
346 x 696

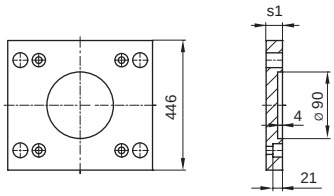


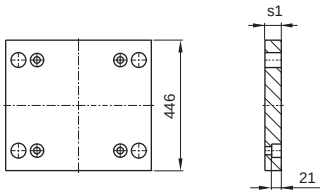
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 346 x 696 x 36 / 1.2085

K10
K11



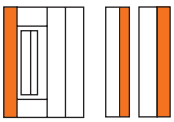


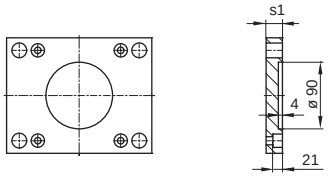


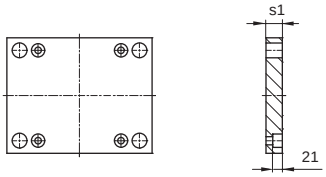
K10/346x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K11/346x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K15
K16





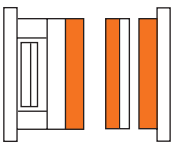


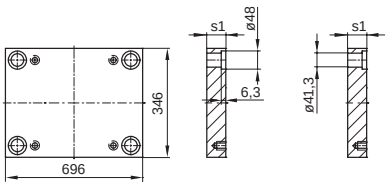
K15/346x696x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K16/346x696x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K20
K252

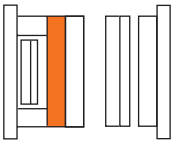
K20 ■ K252 ◆

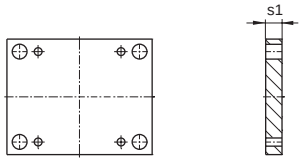




.../346x696 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■		■			■
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176						■				

K30

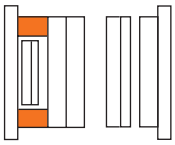




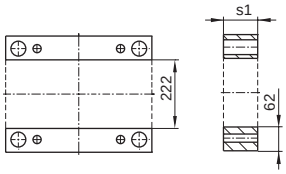
K30/346x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■
56	■		■	■

K30/346x696x s1 /	1.1730	1.2162	1.2085	1.2312
66	■			■
76	■			■

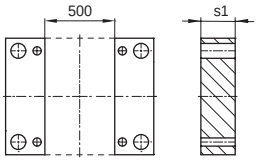
K40 K45 K42



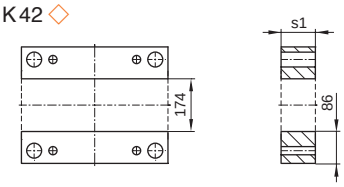
K40 ■



K45 ◆



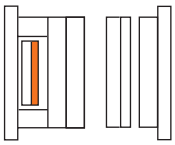
K42 ◇



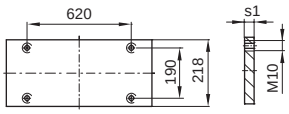
.../346x696 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	◆ ◇	◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../346x696 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

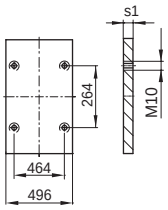
K60 K65 K62



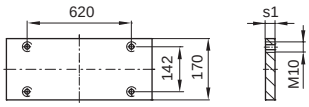
K60 ■



K65 ◆

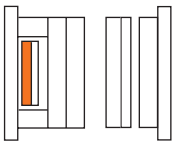


K62 ◇

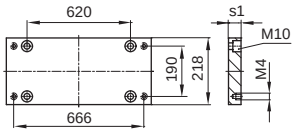


.../346x696 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◆	■ ◆	

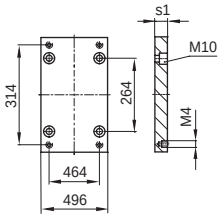
K70 K75 K72



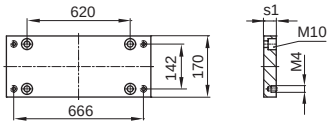
K70 ■



K75 ◆

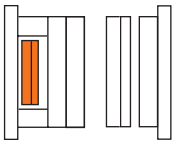


K72 ◇

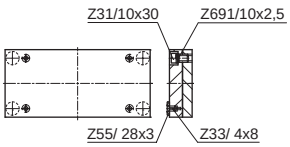


.../346x696 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

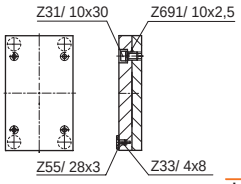
K60-70 K65-75 K62-72



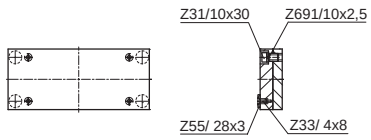
K60-70 ■



K65-75 ◆



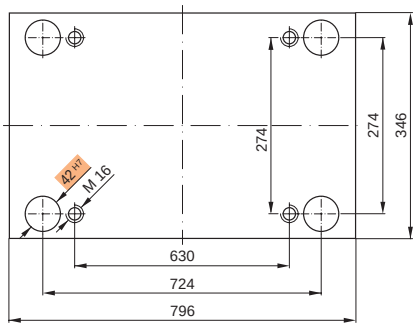
K62-72



.../346x696 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/346x696/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

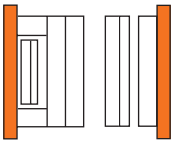
346 x 796

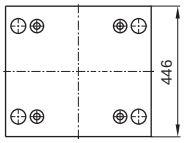


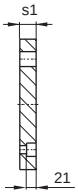
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 346 x 796 x 36 / 1.2085

K11

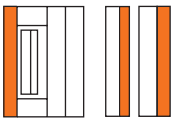


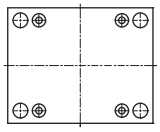


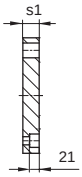


K11/346x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K16



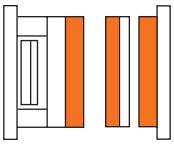


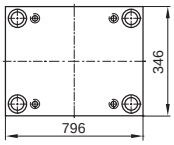


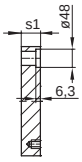
K16/346x796x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

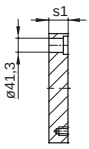
K20
K252

K20 ■ K252 ◆



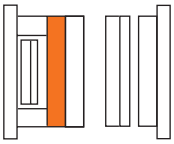


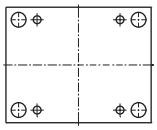


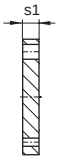


.../346x796 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■ ◆	■ ◆	■ ◆			■
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176						■	■			

K30



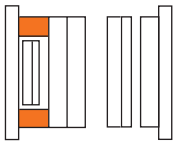




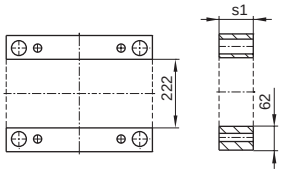
K30/346x796x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■
56	■		■	■

K30/346x796x s1 /	1.1730	1.2162	1.2085	1.2312
66	■			■
76	■			■

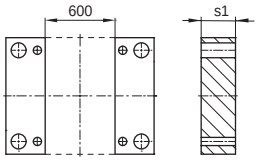
K40 K45 K42



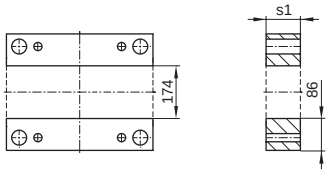
K40 ■



K45 ◆



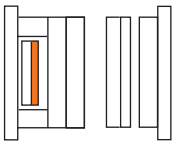
K42 ◇



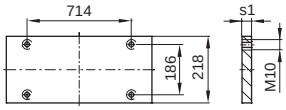
.../346x796 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	◆	◆	
76	◆ ◇	◆	
86	■ ◆ ◇	■ ◆	

.../346x796 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

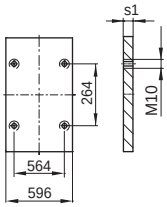
K60 K65 K62



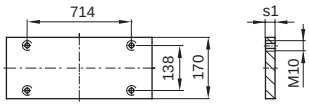
K60 ■



K65 ◆

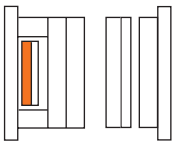


K62 ◇

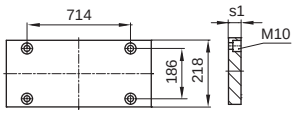


.../346x796 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

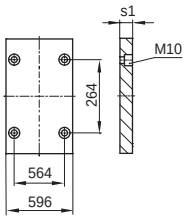
K70 K75 K72



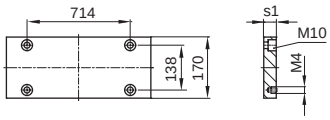
K70 ■



K75 ◆

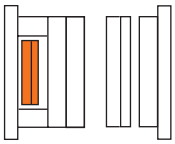


K72 ◇

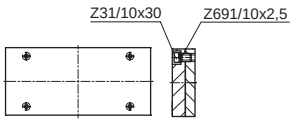


.../346x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

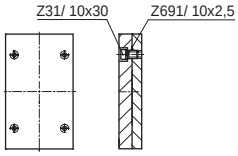
K60-70 K65-75 K62-72



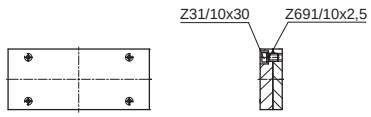
K60-70 ■



K65-75 ◆



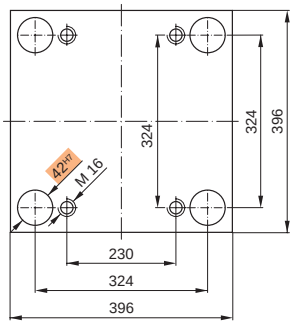
K62-72



.../346x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/346x796/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

396 x 396

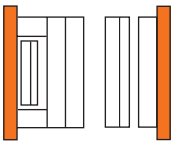


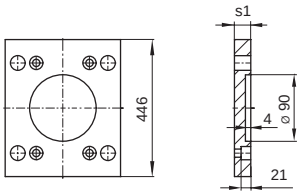
Bestellbeispiel:
Ordering example:
Exemple de commande:

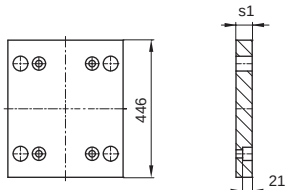
K20 / 396 x 396 x 36 / 1.2767

Neu / New / Nouveau

K10
K11



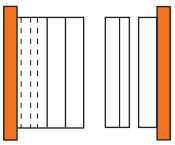


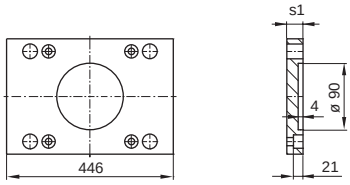


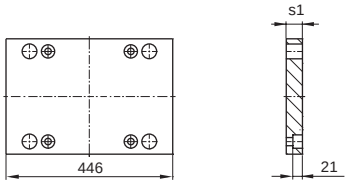
K10/396x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

K11/396x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■
46	■		■	■

K12
K13



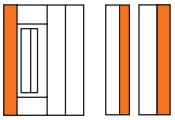


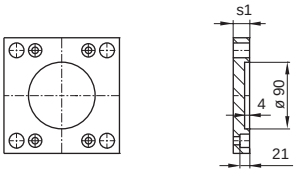


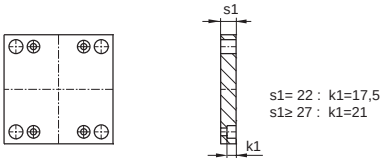
K12/396x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■
46	■		■	■

K13/396x396x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■
46	■		■	■

K15
K16



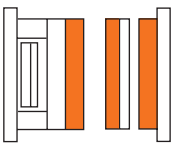




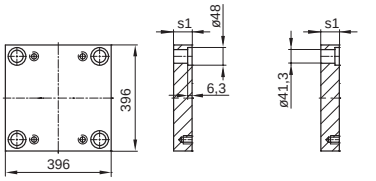
K15/396x396x s1 /	1.1730	1.2162	1.2085	1.2312
22	■		■	
27	■		■	■
36	■		■	■

K16/396x396x s1 /	1.1730	1.2162	1.2085	1.2312
22	■	■	■	
27	■		■	■
36	■		■	■

K20
K252

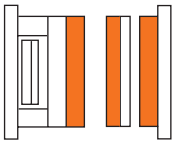


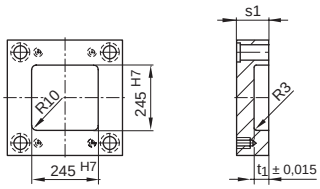
K 20 ■ K 252 ◆



.../396x396 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■	■	■			■
27	■		◆		■ ◆	■ ◆	■ ◆	◆		■
36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

KR25

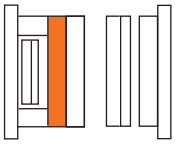


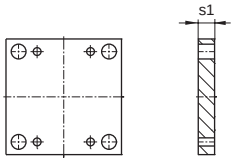


KR25/396x396 x s1/	1.1730	1.2085	1.2312	t1
56	■	■	■	26,8
66	■	■	■	26,8
76	■	■	■	35,8

KR25/396x396 x s1/	1.1730	1.2085	1.2312	t1
86	■	■	■	45,8
96	■	■	■	45,8
116	■	■	■	55,8

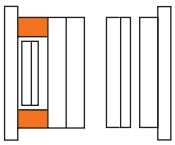
K30



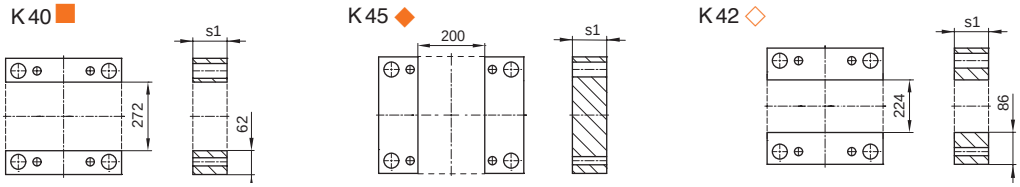


K 30/396x396 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■
66	■	■	■
76	■	■	■
86	■	■	■
96	■	■	■
116	■	■	■

K40 K45 K42



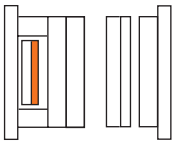
K40 ■ K45 ◆ K42 ◇



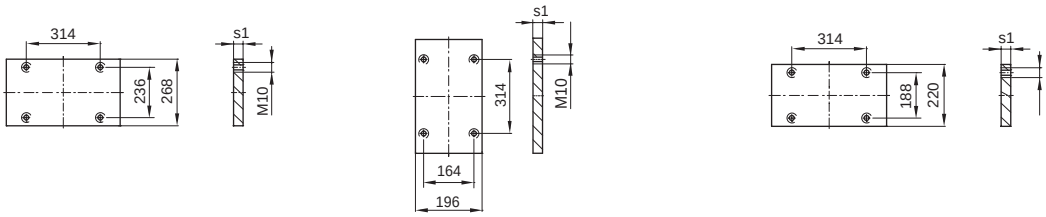
.../396x396 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../396x396 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

K60 K65 K62

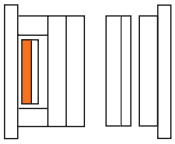


K60 ■ K 65 ◆ K62 ◇

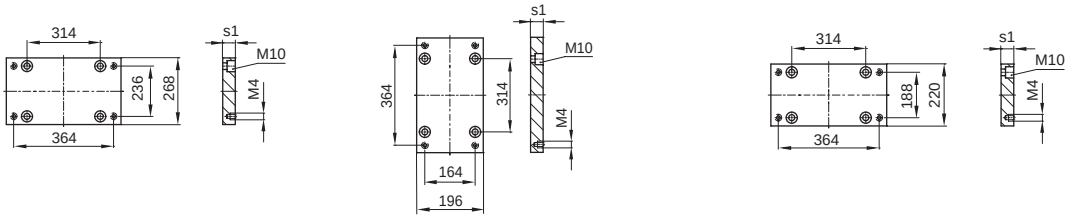


.../396x396 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

K70 K75 K72

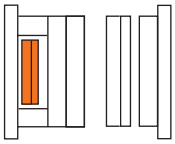


K70 ■ K 75 ◆ K72 ◇

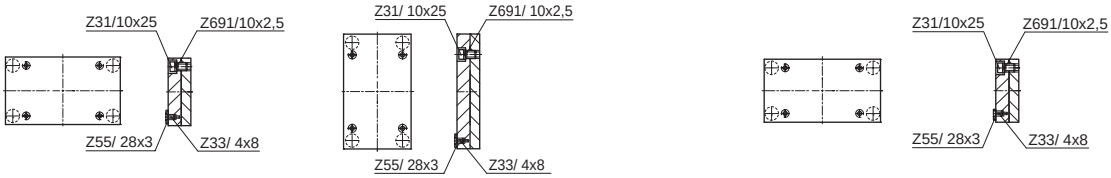


.../396x396 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

K60-70 K65-75 K62-72



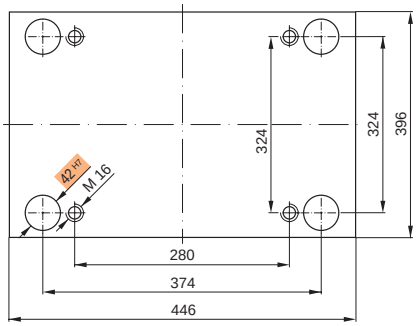
K60-70 ■ K65-75 ◆ K62-72



.../396x396 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/396x396/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

396 x 446

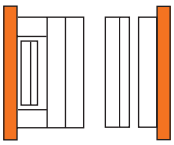


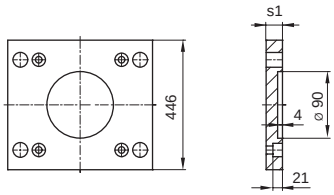
Bestellbeispiel:
Ordering example:
Exemple de commande:

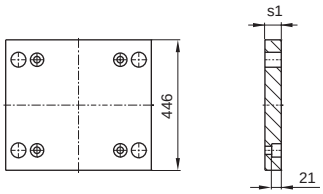
K20 / 396 x 446 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



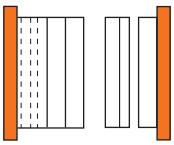


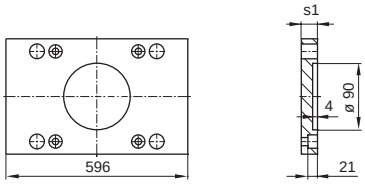


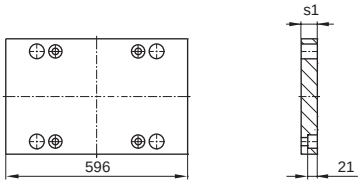
K10/396x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■
46	■		■	■

K11/396x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■
46	■		■	■

K12
K13



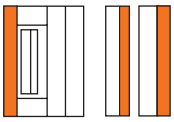


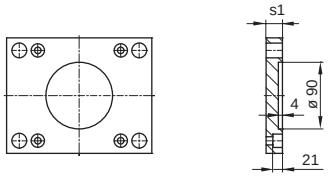


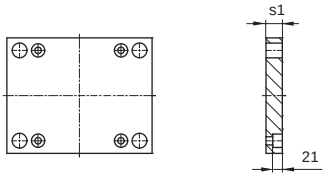
K12/396x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■
46	■		■	■

K13/396x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■
46	■		■	■

K15
K16



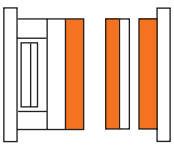




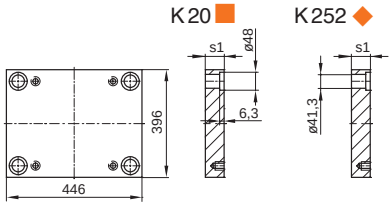
K15/396x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K16/396x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K20
K252

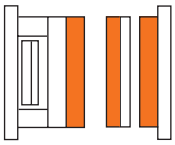


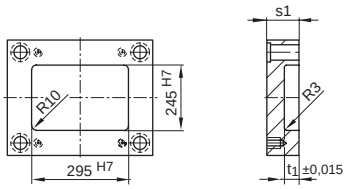
K20 ■ K252 ◆



.../396x446 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■ ◆	■ ◆	■ ◆	◆		■
36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

KR25

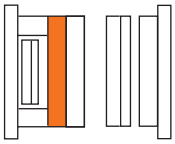


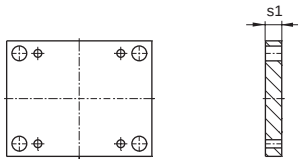


KR25/396x446 x s1/	1.1730	1.2085	1.2312	t1
56	■	■	■	26,8
66	■	■	■	26,8
76	■	■	■	35,8

KR25/396x446 x s1/	1.1730	1.2085	1.2312	t1
86	■	■	■	45,8
96	■	■	■	45,8
116	■	■	■	55,8

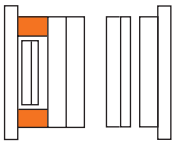
K30



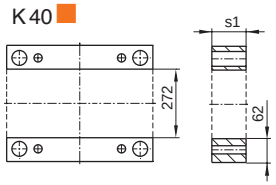


K 30/396x446 x s1/	1.1730	1.2085	1.2312
27	■	■	■
36	■	■	■
46	■	■	■
56	■	■	■
66	■	■	■
76	■		■
86	■		■
96	■		■
116	■		■

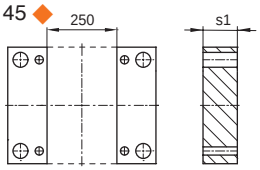
K40 K45 K42



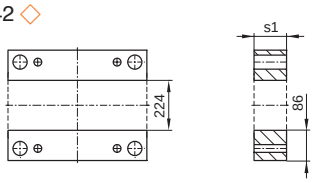
K40 ■



K45 ◆



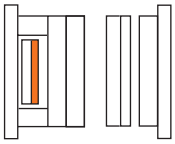
K42 ◇



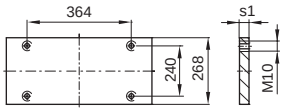
.../396x446 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../396x446 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

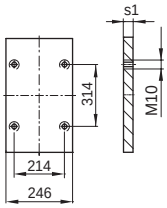
K60 K65 K62



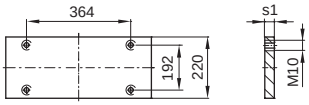
K60 ■



K65 ◆

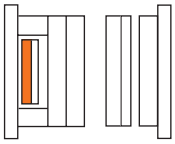


K62 ◇

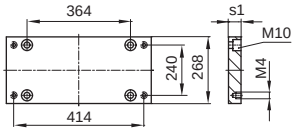


.../396x446 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

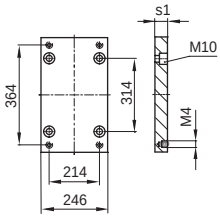
K70 K75 K72



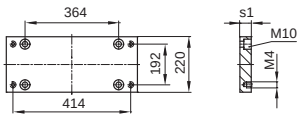
K70 ■



K75 ◆

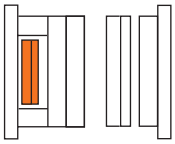


K72 ◇

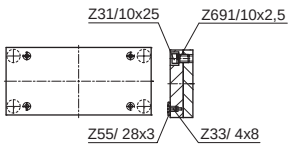


.../396x446 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	■ ◆ ◇

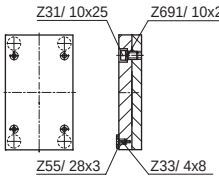
K60-70 K65-75 K62-72



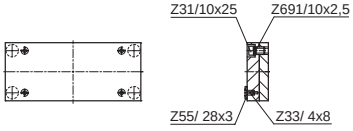
K60-70 ■



K65-75 ◆



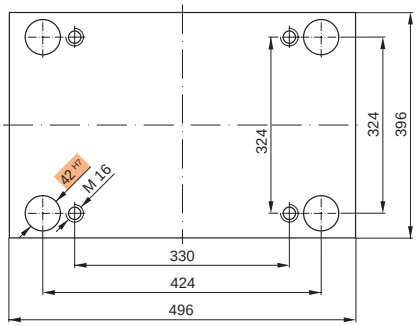
K62-72



.../396x446 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/396x446/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

396 x 496

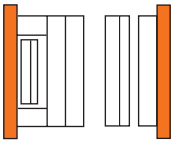


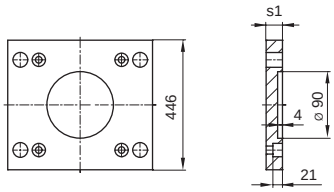
Bestellbeispiel:
Ordering example:
Exemple de commande:

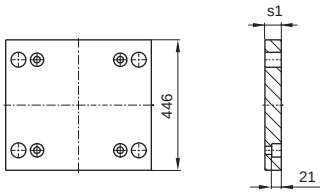
K20 / 396 x 496 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



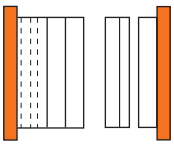


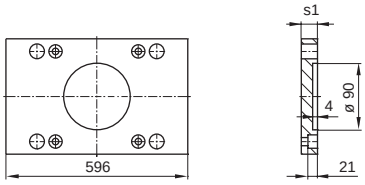


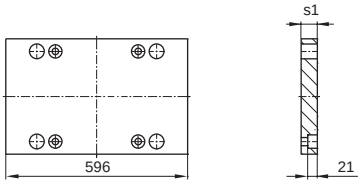
K10/396x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■

K11/396x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■

K12
K13



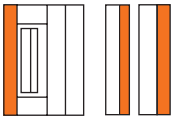


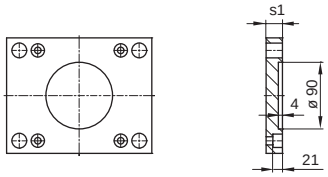


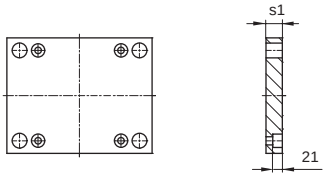
K12/396x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K13/396x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K15
K16



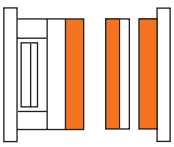


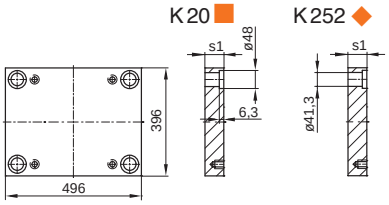


K15/396x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K16/396x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

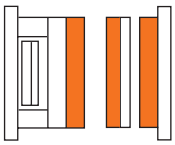
K20
K252

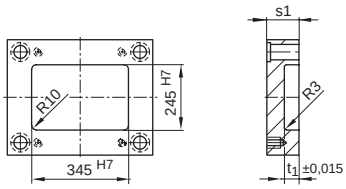




.../396x496 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■		◆		■ ◆	■ ◆	■ ◆	◆		■
36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆			
176						■	■			

KR25

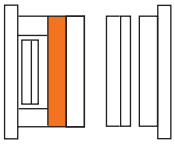


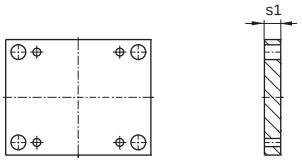


KR25/396x496 x s1/	1.1730	1.2085	1.2312	t1
56	■	■	■	26,8
66	■	■	■	26,8
76	■	■	■	35,8

KR25/396x496 x s1/	1.1730	1.2085	1.2312	t1
86	■	■	■	45,8
96	■	■	■	45,8
116	■	■	■	55,8

K30

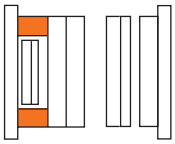




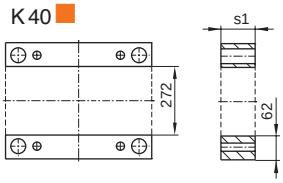
K 30/396x496 x s1/	1.1730	1.2085	1.2312
36	■	■	
46	■	■	■
56	■	■	■
66	■	■	

K 30/396x496 x s1/	1.1730	1.2085	1.2312
76	■		
86	■		
96	■		
116	■		

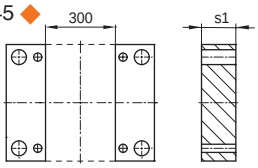
K40 K45 K42



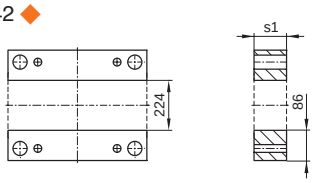
K40 ■



K45 ◆



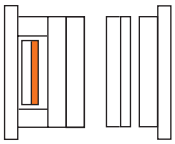
K42 ◆



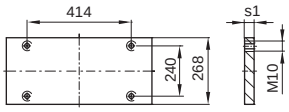
.../396x496 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../396x496 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

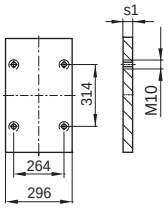
K60 K65 K62



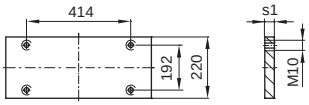
K60 ■



K65 ◆

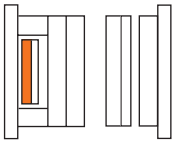


K62 ◇

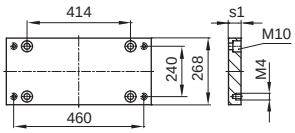


.../396x496 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

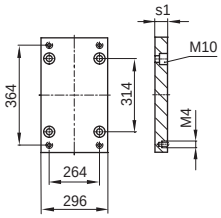
K70 K75 K72



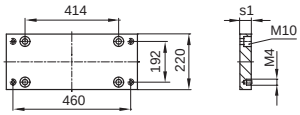
K70 ■



K75 ◆

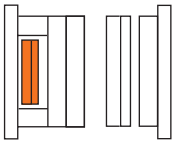


K72 ◇

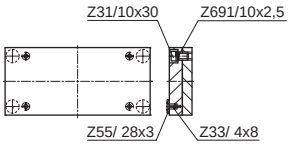


.../396x496 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

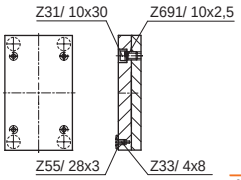
K60-70 K65-75 K62-72



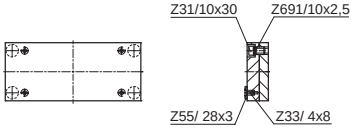
K60-70 ■



K65-75 ◆



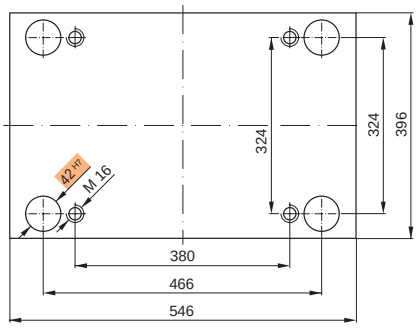
K62-72



.../396x496 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/396x496/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

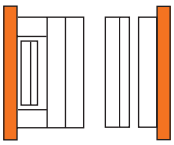
396 x 546

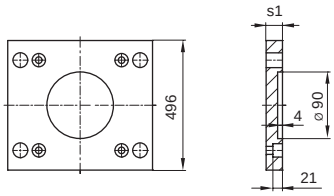


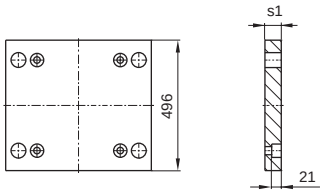
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 396 x 546 x 36 / 1.2162

K10
K11



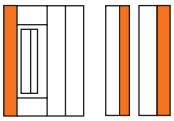


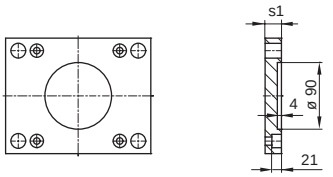


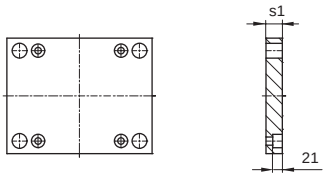
K10/396x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■

K11/396x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■

K15
K16



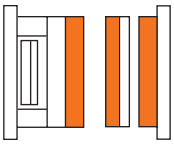




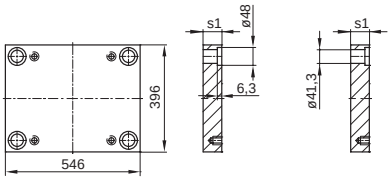
K15/396x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	■
36	■		■	■

K16/396x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■	■	■	■
36	■		■	■

K20
K252

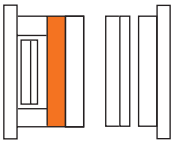


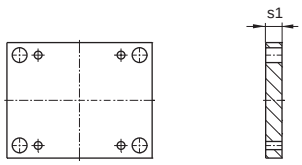
K20 ■ K252 ◆



.../396x546 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■		◆		■ ◆	■ ◆	■ ◆			■
36	■		◆		■ ◆	■ ◆	■ ◆			■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
116	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

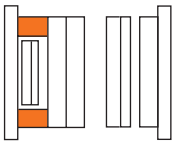
K30



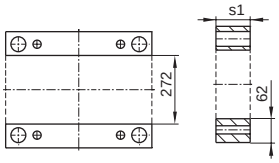


K30/396x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■		■	■
66	■		■	■
76	■			■
86	■			■
96	■			■
116	■			■

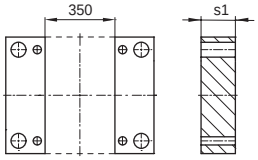
K40 K45 K42



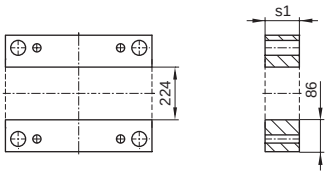
K40 ■



K45 ◆



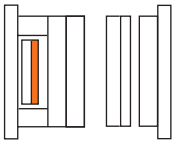
K42 ◇



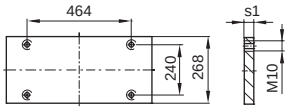
.../396x546 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../396x546 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

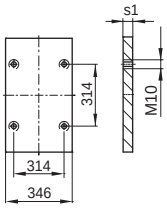
K60 K65 K62



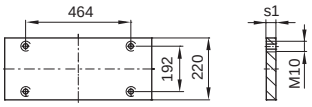
K60 ■



K 65 ◆

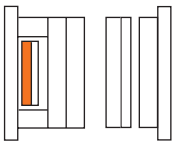


K62 ◆

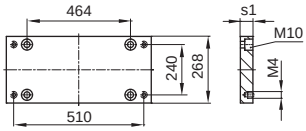


.../396x546 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

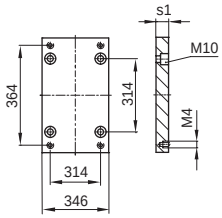
K70 K75 K72



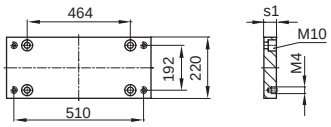
K70 ■



K 75 ◆

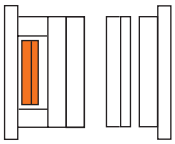


K72 ◇

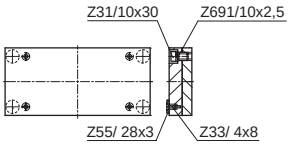


.../396x546 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

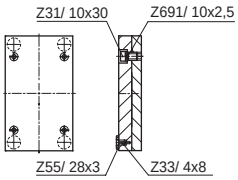
K60-70 K65-75 K62-72



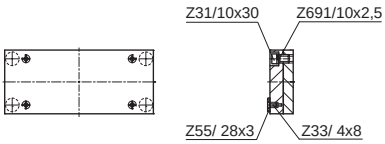
K60-70 ■



K65-75 ◆



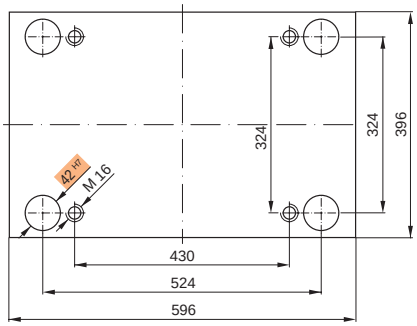
K62-72



.../396x546 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/396x546/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

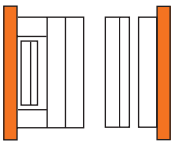
396 x 596

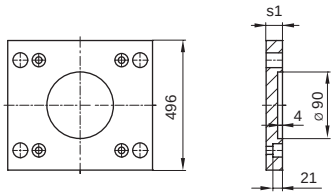


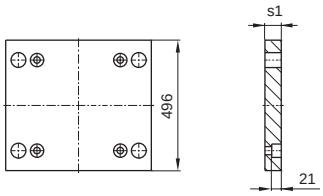
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 396 x 596 x 36 / 1.2085

K10
K11



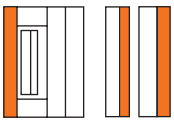


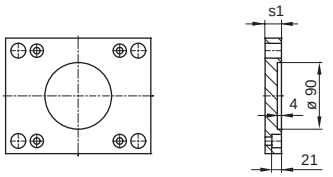


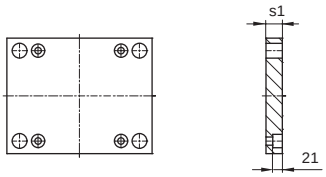
K10/396x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K11/396x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K15
K16



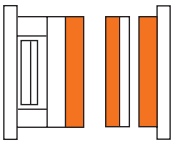




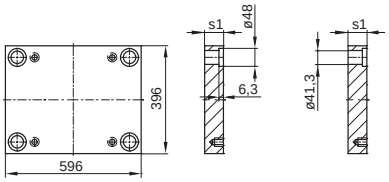
K15/396x596x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K16/396x596x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K20
K252

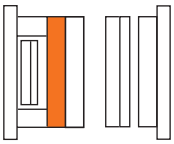


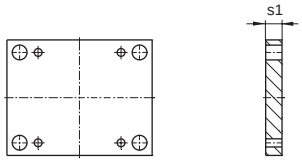
K20 ■ K252 ◆



.../396x596 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■ ◆		■ ◆			■
36	■		◆		■ ◆	■ ◆	■ ◆			■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
116	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

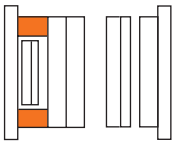
K30



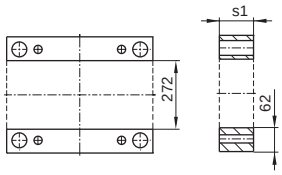


K30/396x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■		■	■
66	■		■	■
76	■			■
86	■			■
96	■			■
116	■			■

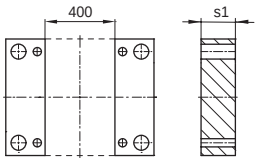
K40 K45 K42



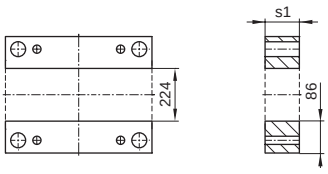
K40 ■



K45 ◆



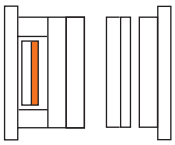
K42 ◇



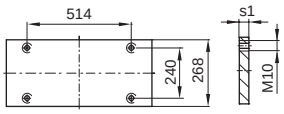
.../396x596 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../396x596 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

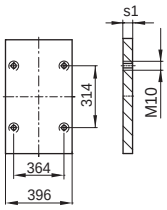
K60 K65 K62



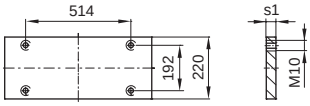
K60 ■



K65 ◆

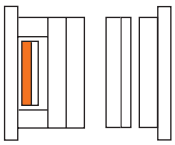


K62 ◇

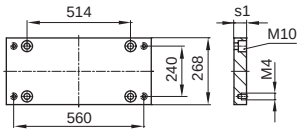


.../396x596 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

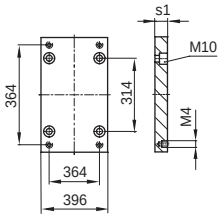
K70 K75 K72



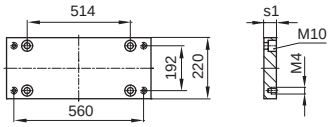
K70 ■



K75 ◆

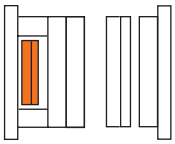


K72 ◇

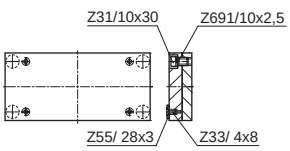


.../396x596 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

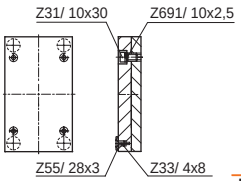
K60-70 K65-75 K62-72



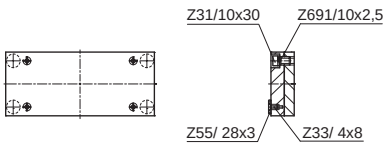
K60-70 ■



K65-75 ◆



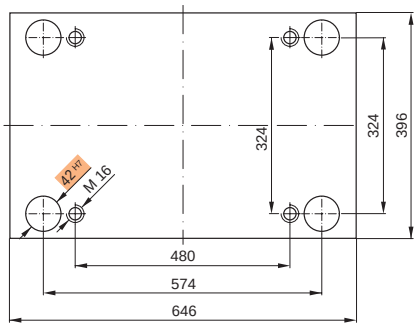
K62-72



.../396x596 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/396x596/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

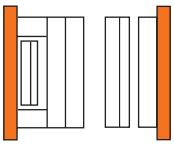
396 x 646

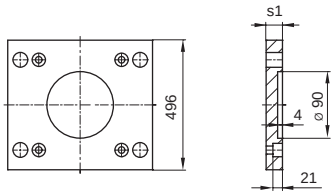


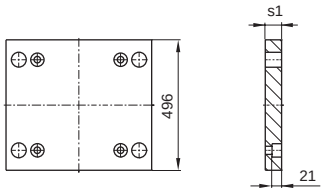
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 396 x 646 x 36 / 1.2085

K10
K11



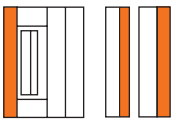


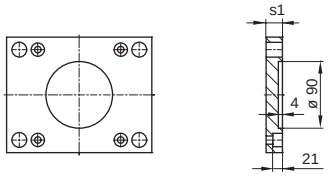


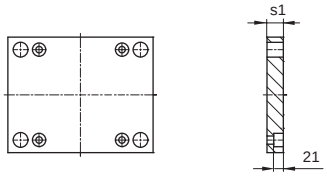
K10/396x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/396x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16



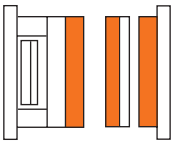




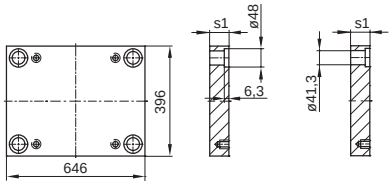
K15/396x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/396x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

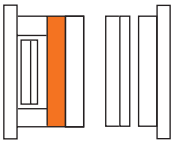


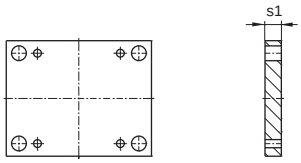
K20 ■ K252 ◆



.../396x646 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■		■			
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

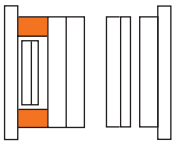
K30



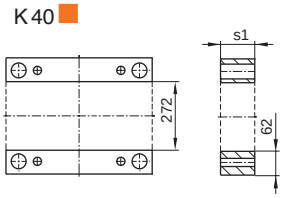


K30/396x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■			■
46	■		■	■
56	■		■	■
66	■		■	■
76	■			■
86	■			■
96	■			■
116	■			■

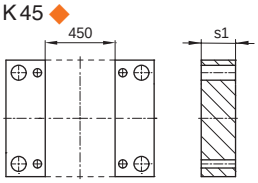
K40 K45 K42



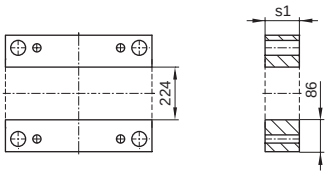
K40 ■



K45 ◆



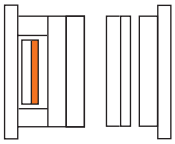
K42 ◇



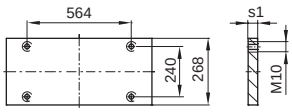
.../396x646 x s1/	1.1730	1.2085	1.2312
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../396x646 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

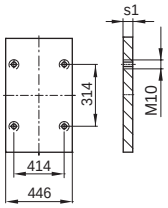
K60 K65 K62



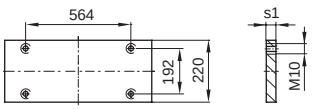
K60 ■



K65 ◆

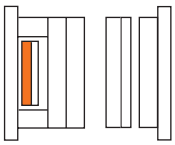


K62 ◇

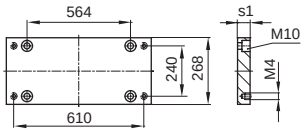


.../396x646 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

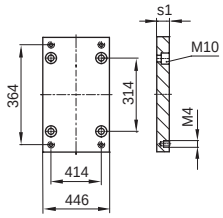
K70 K75 K72



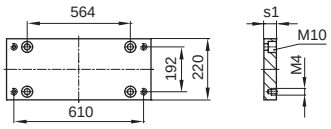
K70 ■



K75 ◆

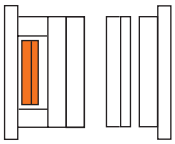


K72 ◇

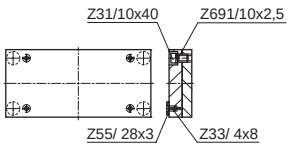


.../396x646 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

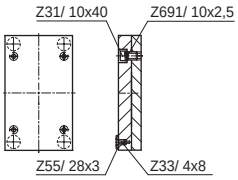
K60-70 K65-75 K62-72



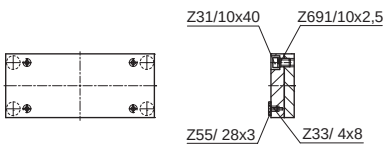
K60-70 ■



K65-75 ◆



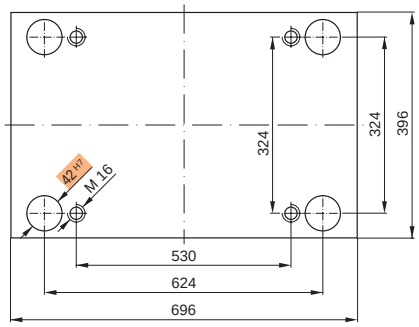
K62-72



.../396x646 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/396x646/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

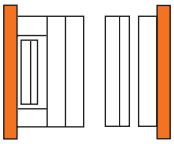
396 x 696

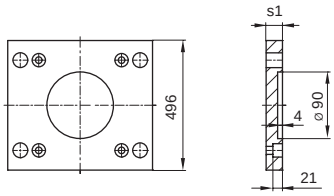


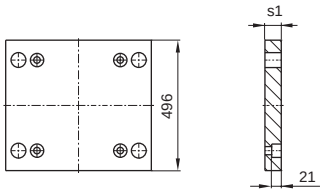
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 396 x 696 x 36 / 1.2085

K10
K11



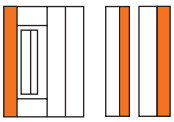


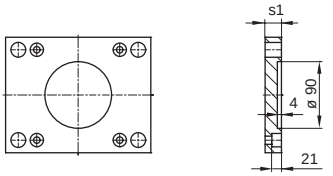


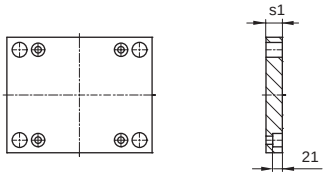
K10/396x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/396x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16





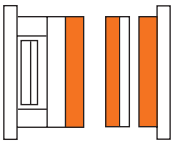


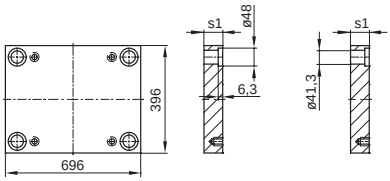
K15/396x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/396x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

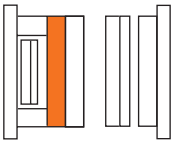
K20 ■ K252 ◆

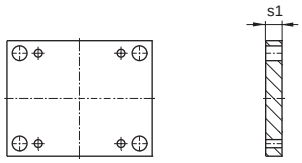




.../396x696 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■		■			
36	■				■◆	■◆	■◆			■
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			

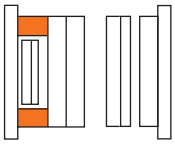
K30



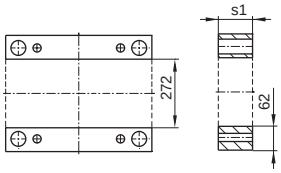


K30/396x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■			■
46	■		■	■
56	■		■	■
66	■		■	■
76	■			■
86	■			■
96	■			■
116	■			■

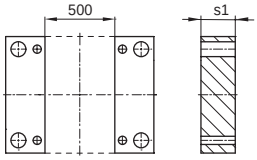
K40 K45 K42



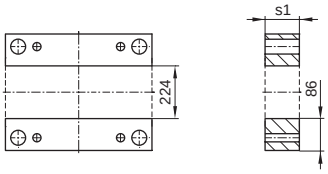
K40 ■



K45 ◆



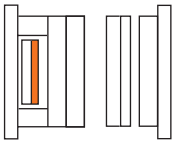
K42 ◇



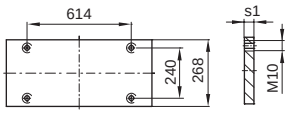
.../396x696 x s1/	1.1730	1.2085	1.2312
66	■	■	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../396x696 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

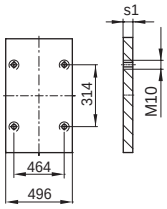
K60 K65 K62



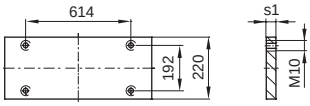
K60 ■



K65 ◆

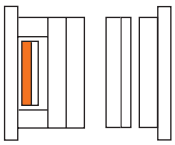


K62 ◇

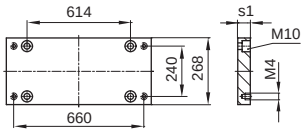


.../396x696 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

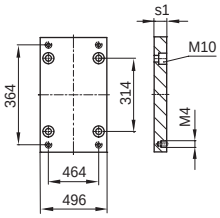
K70 K75 K72



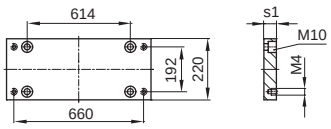
K70 ■



K75 ◆

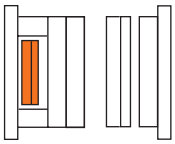


K72 ◇

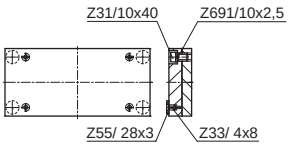


.../396x696 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

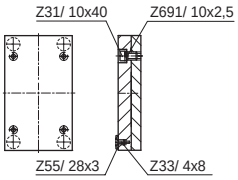
K60-70 K65-75 K62-72



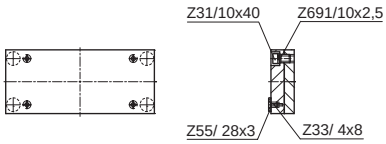
K60-70 ■



K65-75 ◆



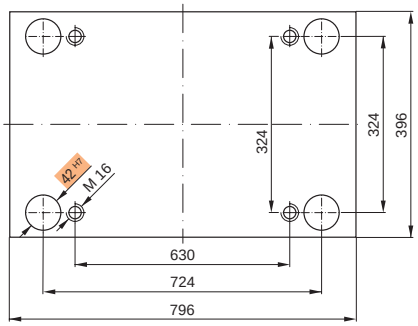
K62-72



.../396x696 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/396x696/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

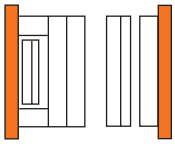
396 x 796

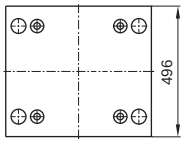


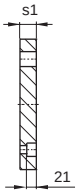
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 396 x 796 x 36 / 1.2085

K11

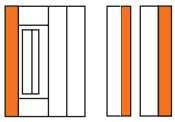


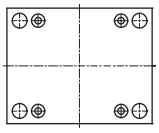


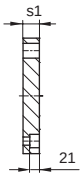


K11/396x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K16

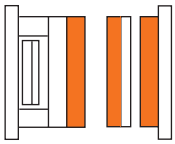




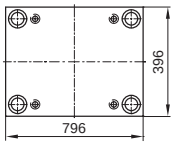


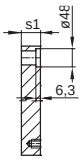
K16/396x796x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

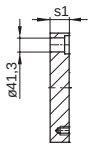
K20
K252



K 20 ■ K 252 ◆

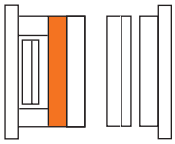


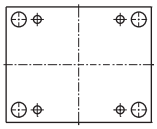


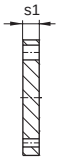


.../396x796 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
22	■				■		■			
27	■				■		■			
36	■				■ ◆	■	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

K30

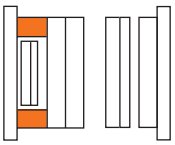




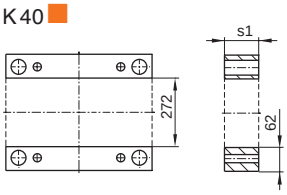


K30/396x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

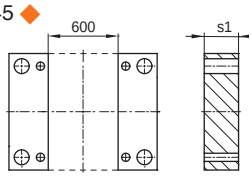
K40
K45
K42



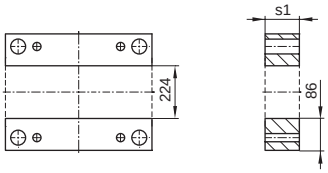
K 40 ■



K 45 ◆



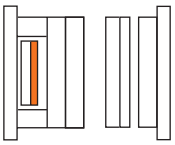
K 42 ◇



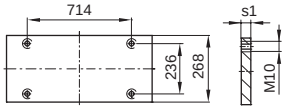
.../396x796 x s1/	1.1730	1.2085	1.2312
66	■ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../396x796 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

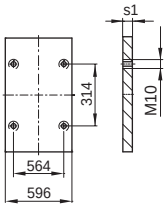
K60
K65
K62



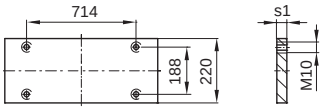
K 60 ■



K 65 ◆

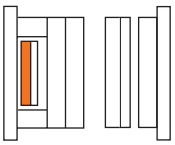


K 62 ◇

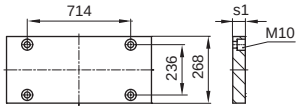


.../396x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

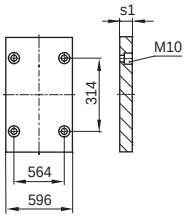
K70
K75
K72



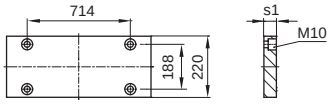
K 70 ■



K 75 ◆

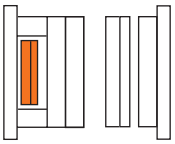


K 72 ◇

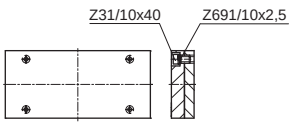


.../396x796 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

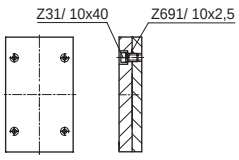
K60-70
K65-75
K62-72



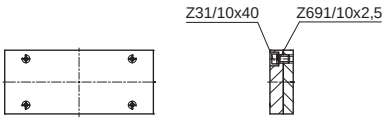
K 60-70 ■



K 65-75 ◆



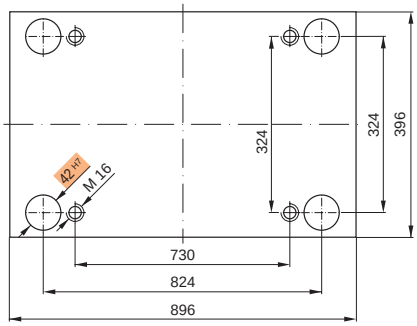
K 62-72



.../396x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/396x796/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

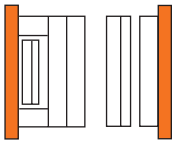
396 x 896

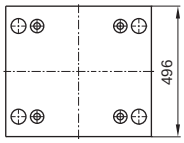


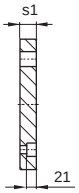
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 396 x 896 x 46 / 1.2085

K11

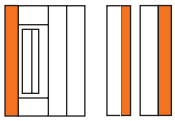


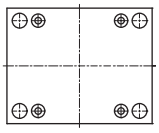


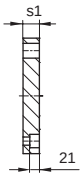


K11/396x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K16



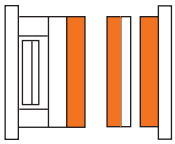


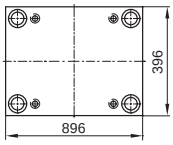


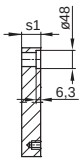
K16/396x896x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

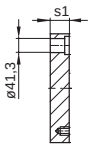
K20
K252

K 20 ■ K 252 ◆



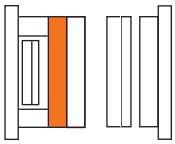


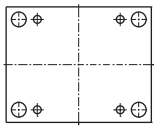


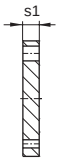


.../396x896 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■									■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

K30

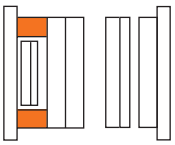




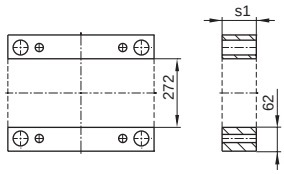


K30/396x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■

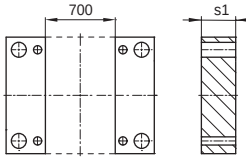
K40 K45 K42



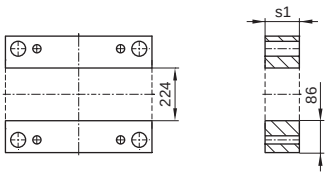
K 40 ■



K 45 ◆



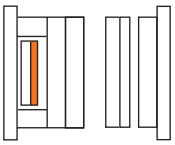
K 42 ◇



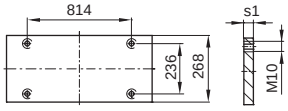
.../396x896 x s1/	1.1730	1.2085	1.2312
76	◆	◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../396x896 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	

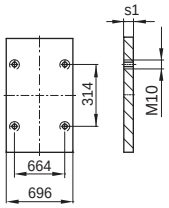
K60 K65 K62



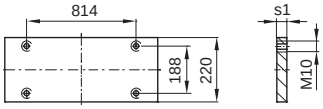
K 60 ■



K 65 ◆

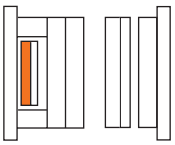


K 62 ◇

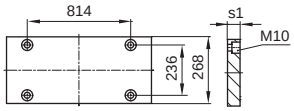


.../396x896 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

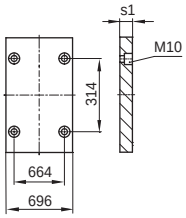
K70 K75 K72



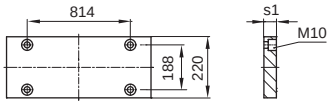
K 70 ■



K 75 ◆

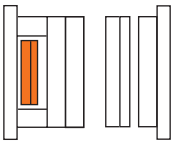


K 72 ◇

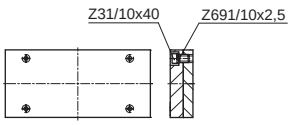


.../396x896 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

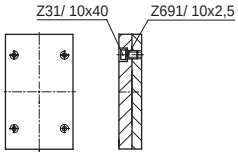
K60-70 K65-75 K62-72



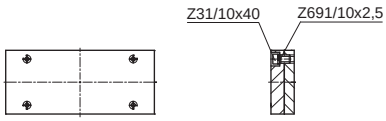
K 60-70 ■



K 65-75 ◆



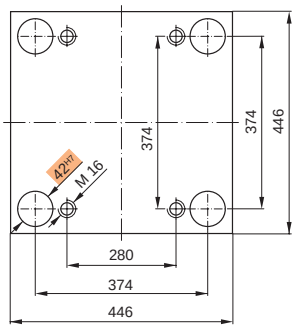
K 62-72



.../396x896 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/396x896/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

446 x 446

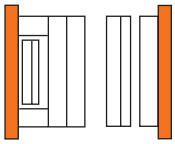


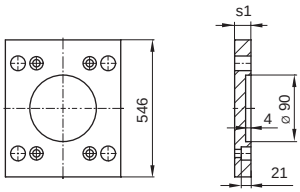
Bestellbeispiel:
Ordering example:
Exemple de commande:

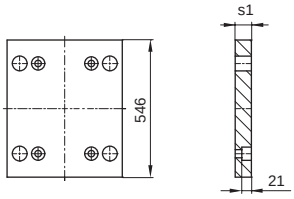
K20 / 446 x 446 x 36 / 1.2162

Neu / New / Nouveau

K10
K11



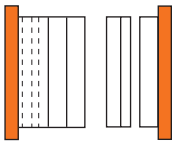


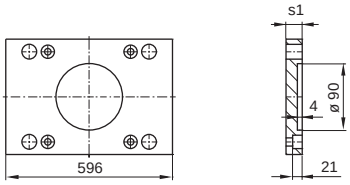


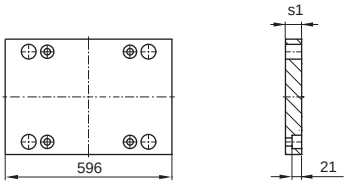
K10/446x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	■
46	■		■	■

K11/446x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	■
46	■		■	■

K12
K13



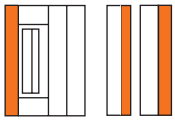


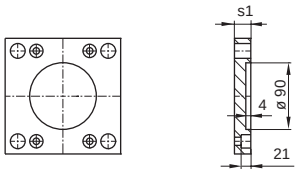


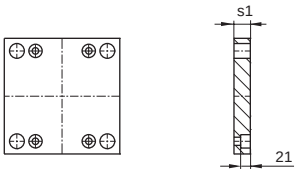
K12/446x446x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■

K13/446x446x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■

K15
K16



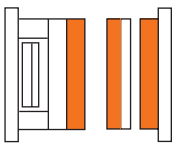




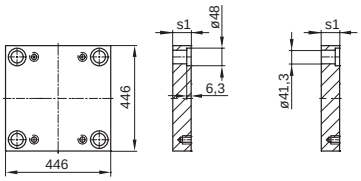
K15/446x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K16/446x446x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K20
K252

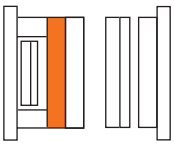


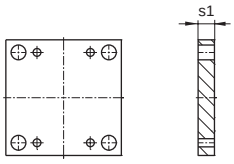
K 20 ■ K 252 ◆



.../446x446 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■ ◆		■ ◆			■
36	■		◆		■ ◆	■ ◆	■ ◆	◆		■
46	■		◆		■ ◆	■ ◆	■ ◆	◆		■
56	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
66	■		◆		■ ◆	■ ◆	■ ◆	◆		■
76	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
86	■		◆		■ ◆	■ ◆	■ ◆	◆		■
96	■		◆		■ ◆	■ ◆	■ ◆	◆	◆	■
106	■				■	■	■			
116	■				■ ◆	■ ◆	■ ◆	◆	◆	■
126	■						■			
136	■				■ ◆	■ ◆	■ ◆	◆		
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

K30

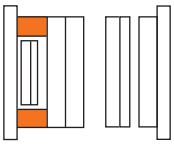




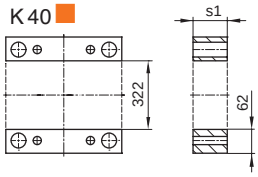
K 30 /446x446 x s1/	1.1730	1.2085	1.2312
36	■	■	■
46	■	■	■
56	■	■	■
66	■	■	■

K 30 /446x446 x s1/	1.1730	1.2085	1.2312
76	■		■
86	■		■
96	■		■
116	■		■

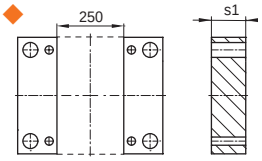
K40 K45 K42



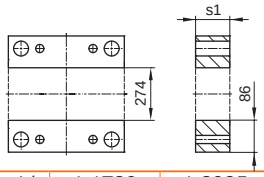
K40 ■



K45 ◆



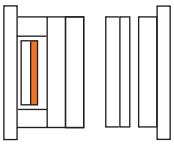
K42 ◇



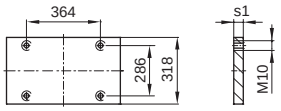
.../446x446 x s1/	1.1730	1.2085	1.2312
56	■ ◆ ◇	■ ◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	

.../446x446 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◇	■ ◆	
176	■		

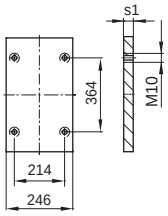
K60 K65 K62



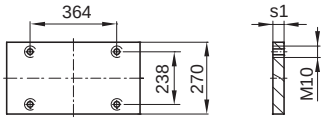
K60 ■



K 65 ◆

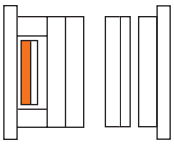


K 62 ◇

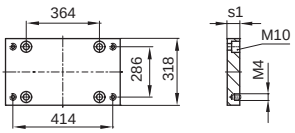


.../446x446 x s1/	1.1730	1.2085	1.2312
17	■ ◆ ◇	■ ◆	

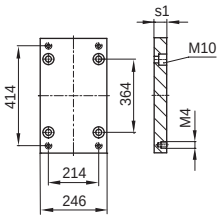
K70 K75 K72



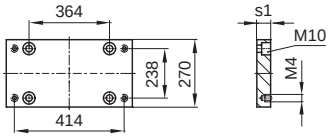
K70 ■



K 75 ◆

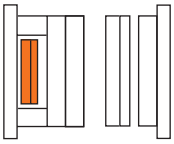


K 72 ◇

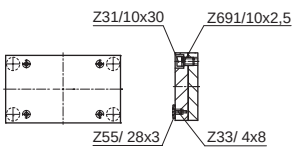


.../446x446 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

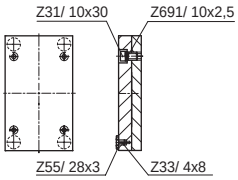
K60-70 K65-75 K62-72



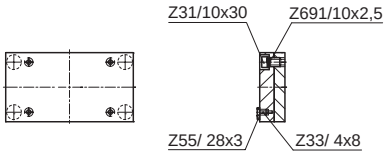
K60-70 ■



K65-75 ◆



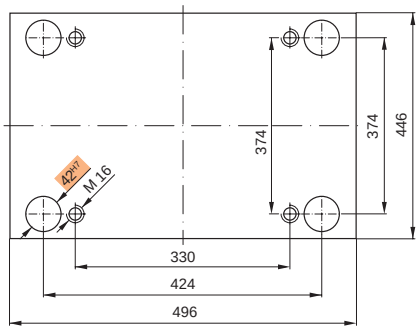
K62-72



.../446x446 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/446x446/Typ	1.1730	1.2312
1	K62	K72
3	K62 K 72	

446 x 496

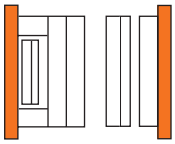


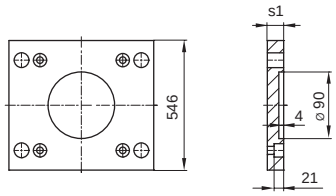
Bestellbeispiel:
Ordering example:
Exemple de commande:

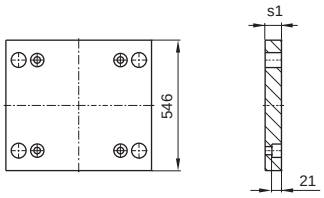
K20 / 446 x 496 x 36 / 1.2085

Neu / New / Nouveau

K10
K11



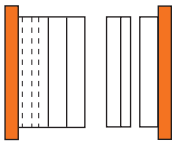


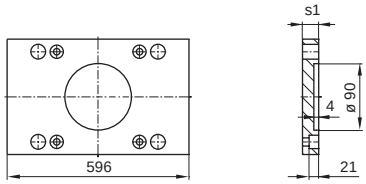


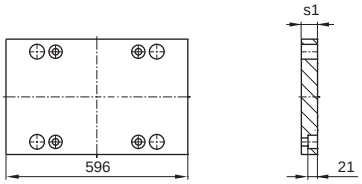
K10/446x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	
46	■		■	■

K11/446x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■			■
36	■		■	■
46	■		■	■

K12
K13



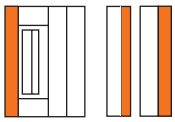


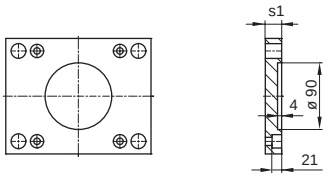


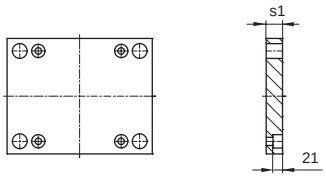
K12/446x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K13/446x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K15
K16



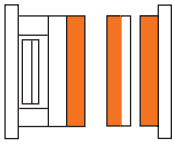




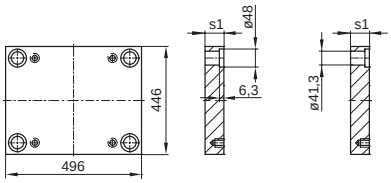
K15/446x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K16/446x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K20
K252

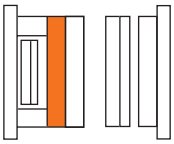


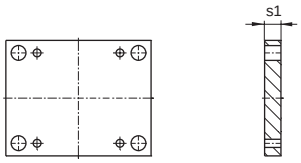
K 20 ■ K 252 ◆



.../446x496 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■◆		■◆			■
36	■				■◆	■◆	■◆			■
46	■				■◆	■◆	■◆	◆		■
56	■				■◆	■◆	■◆	◆	◆	■
66	■		◆		■◆	■◆	■◆	◆		■
76	■		◆		■◆	■◆	■◆	◆	◆	■
86	■		◆		■◆	■◆	■◆	◆		■
96	■		◆		■◆	■◆	■◆	◆	◆	■
106	■				■	■	■			
116	■				■◆	■◆	■◆	◆	◆	■
126	■						■			
136	■				■◆	■◆	■◆	◆	◆	
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			

K30

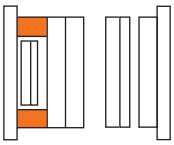




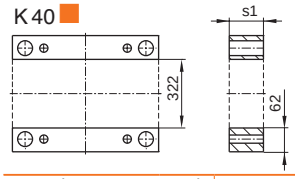
K 30 /446x496 x s1/	1.1730	1.2085	1.2312
36	■	■	■
46	■	■	■
56	■	■	■
66	■	■	■

K 30 /446x496 x s1/	1.1730	1.2085	1.2312
76	■		■
86	■		■
96	■		■
116	■		■

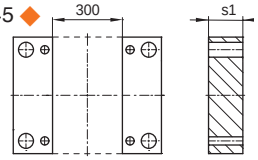
K40 K45 K42



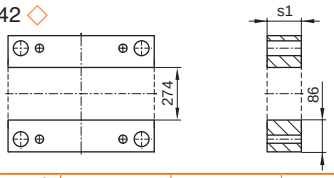
K 40 ■



K 45 ◆



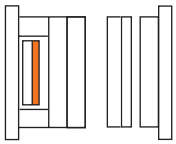
K 42 ◇



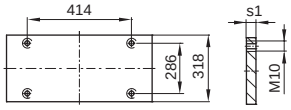
.../446x496 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../446x496 x s1/	1.1730	1.2085	1.2312
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

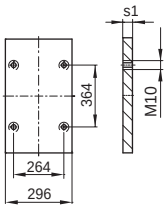
K60 K65 K62



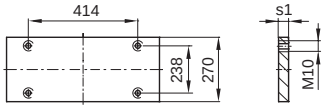
K 60 ■



K 65 ◆

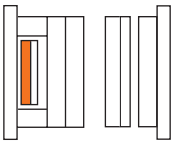


K 62 ◇

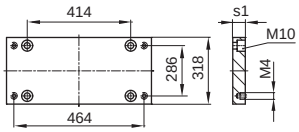


.../446x 496 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

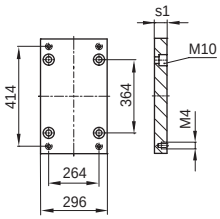
K70 K75 K72



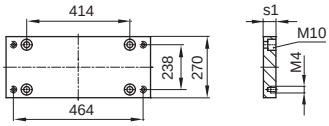
K 70 ■



K 75 ◆

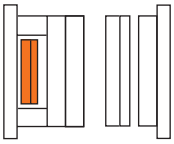


K 72 ◇

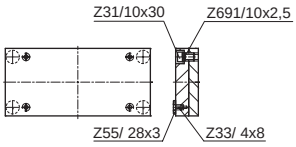


.../446x 496 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

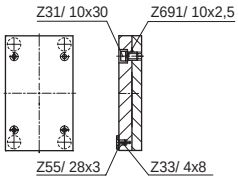
K60-70 K65-75 K62-72



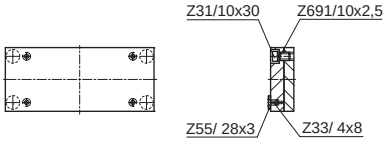
K 60-70 ■



K 65-75 ◆



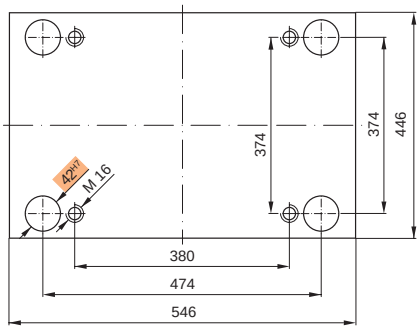
K 62-72



.../446x496 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/446x496/Typ	1.1730	1.2312
1	K62	K72
3	K62 K 72	

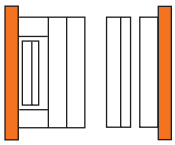
446 x 546

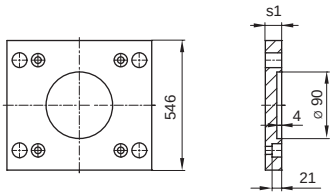


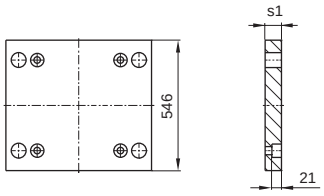
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 446 x 546 x 36 / 1.2085

K10
K11



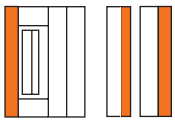


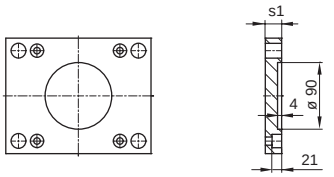


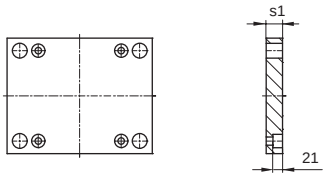
K10/446x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K11/446x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K15
K16



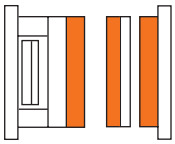




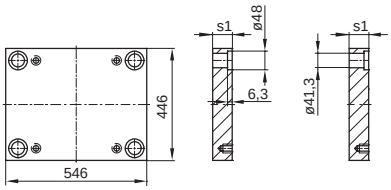
K15/446x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K16/446x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K20
K252

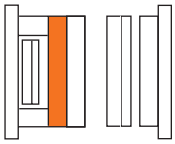


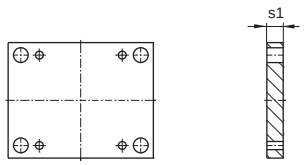
K 20 ■ K 252 ◆



.../446x546 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■ ◆		■ ◆			■
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆	◆		■
56	■				■ ◆	■ ◆	■ ◆	◆	◆	■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆	◆	◆	■
86	■				■ ◆	■ ◆	■ ◆	◆		■
96	■				■ ◆	■ ◆	■ ◆	◆	◆	■
116	■				■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

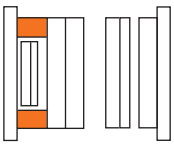
K30



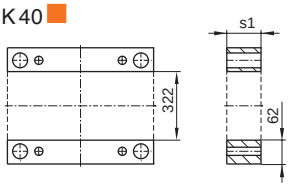


K30/446x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■			■
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

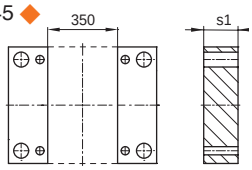
K40
K45
K42



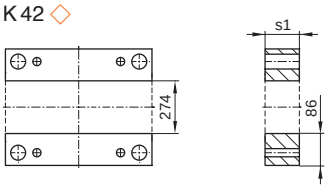
K 40 ■



K 45 ◆



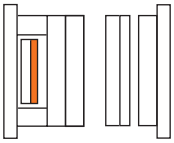
K 42 ◇



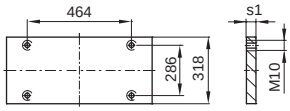
.../446x546 x s1/	1.1730	1.2085	1.2312
56	◆	◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../446x546 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇	■	

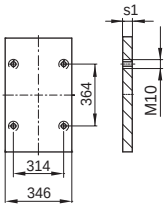
K60
K65
K62



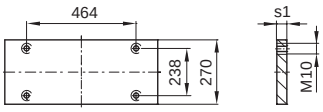
K 60 ■



K 65 ◆

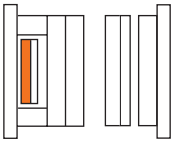


K 62 ◇

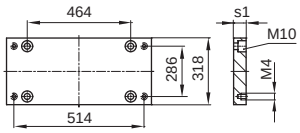


.../446x546 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

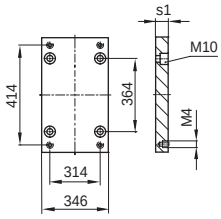
K70
K75
K72



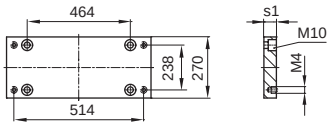
K 70 ■



K 75 ◆

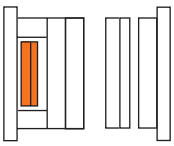


K 72 ◇

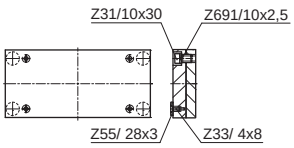


.../446x546 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

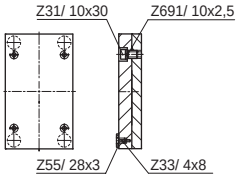
K60-70
K65-75
K62-72



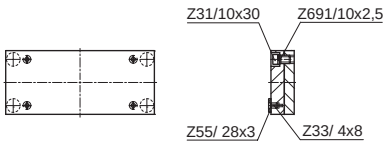
K 60-70 ■



K 65-75 ◆



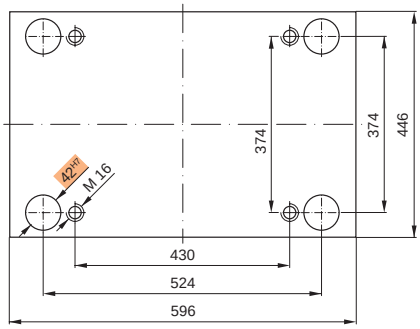
K 62-72



.../446x546 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/446x546/Typ	1.1730	1.2312
1	K62	K72
3	K62 K 72	

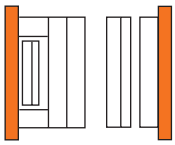
446 x 596

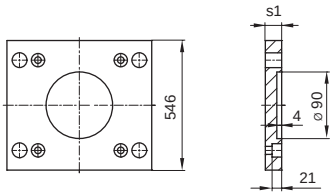


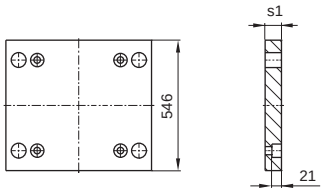
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 446 x 596 x 36 / 1.2085

K10
K11



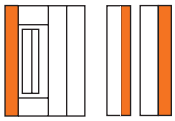


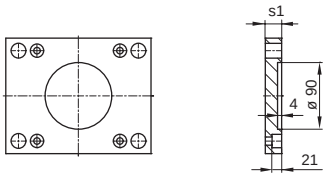


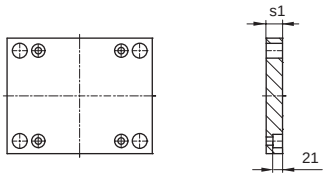
K10/446x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K11/446x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K15
K16





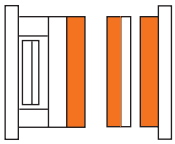


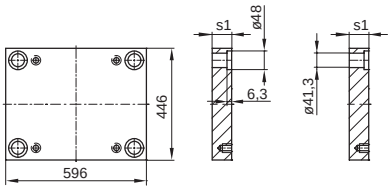
K15/446x596x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K16/446x596x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	■

K20
K252

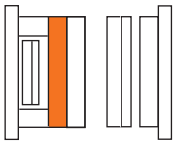
K 20 ■ K 252 ◆

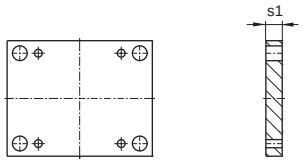




.../446x596 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■ ◆		■ ◆			■
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆	◆	◆	■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆	◆	◆	■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆	◆	◆	■
116	■				■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

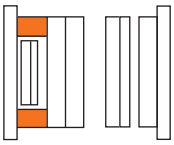
K30



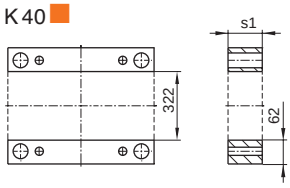


K30/446x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

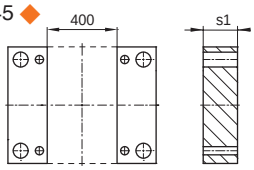
K40
K45
K42



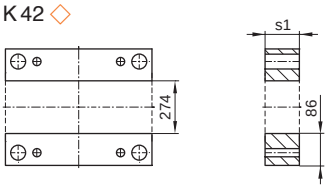
K 40 ■



K 45 ◆



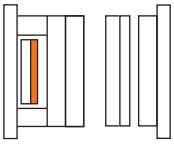
K 42 ◇



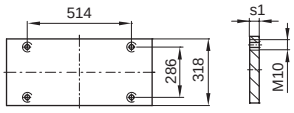
.../446x596 x s1/	1.1730	1.2085	1.2312
56	■ ◆	■ ◆	
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../446x596 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇	■	

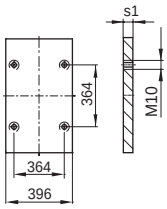
K60
K65
K62



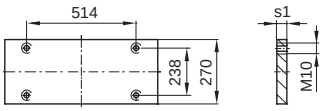
K 60 ■



K 65 ◆

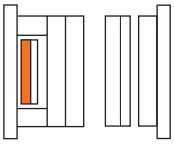


K 62 ◇

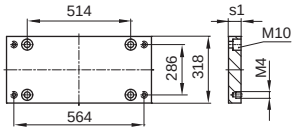


.../446x596 x s1/	1.1730	1.2085	1.2312
22	■ ◆ ◇	■ ◆	

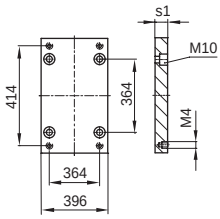
K70
K75
K72



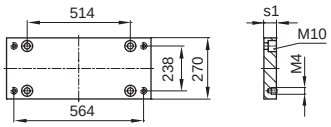
K 70 ■



K 75 ◆

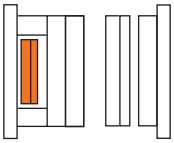


K 72 ◇

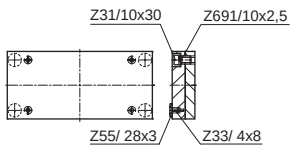


.../446x596 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	■ ◆ ◇

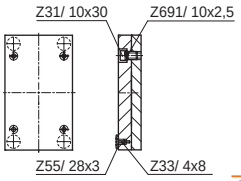
K60-70
K65-75
K62-72



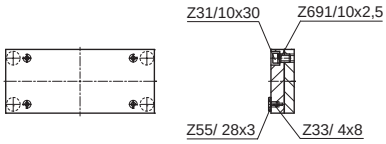
K 60-70 ■



K 65-75 ◆



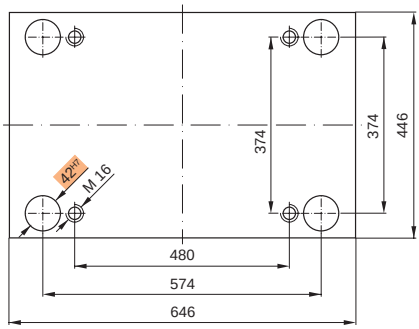
K 62-72



.../446x596 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/446x596/Typ	1.1730	1.2312
1	K62	K72
3	K62 K 72	

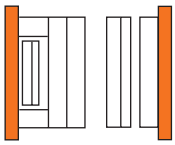
446 x 646



Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 446 x 646 x 36 / 1.2085

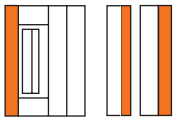
K10
K11



K10/446x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/446x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16

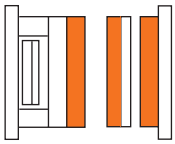


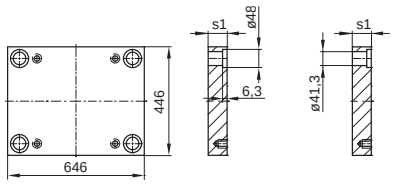
K15/446x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/446x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

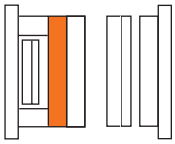
K 20 ■ K 252 ◆

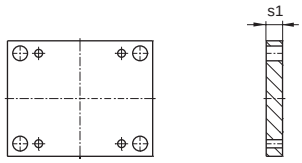




.../446x646 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■		■			
36	■				■ ◆	■	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

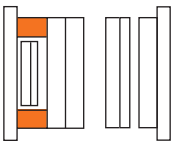
K30



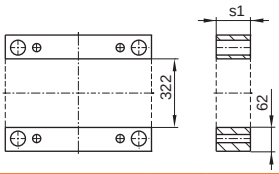


K30/446x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

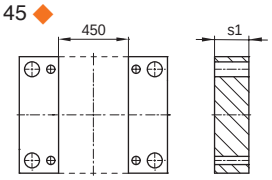
K40
K45
K42



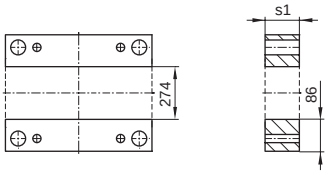
K 40 ■



K 45 ◆



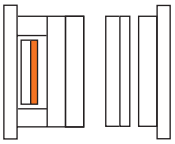
K 42 ◇



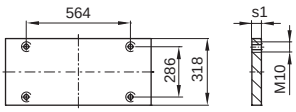
.../446x646 x s1/	1.1730	1.2085	1.2312
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../446x646 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇	■	

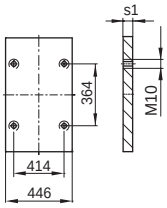
K60
K65
K62



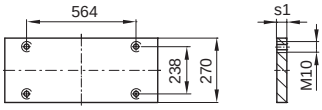
K 60 ■



K 65 ◆

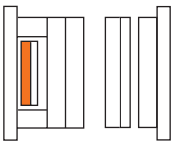


K 62 ◇

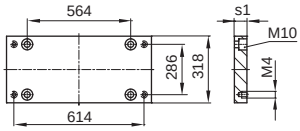


.../446x646 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

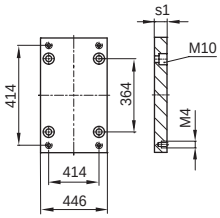
K70
K75
K72



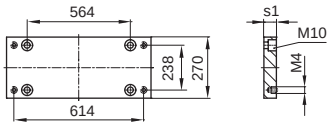
K 70 ■



K 75 ◆

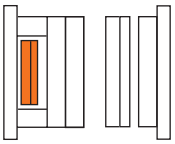


K 72 ◇

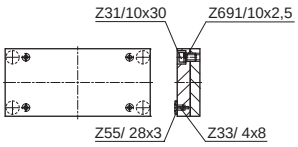


.../446x646 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

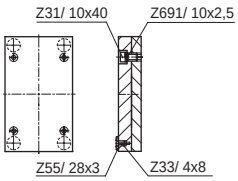
K60-70
K65-75
K62-72



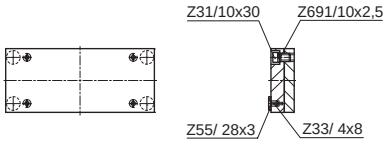
K 60-70 ■



K 65-75 ◆



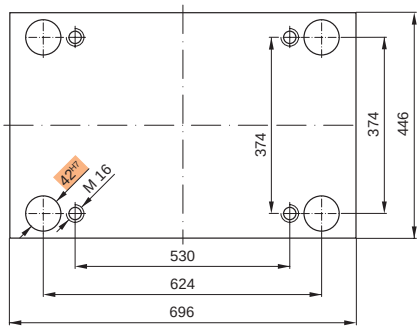
K 62-72



.../446x646 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/446x646/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

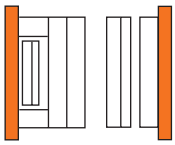
446 x 696

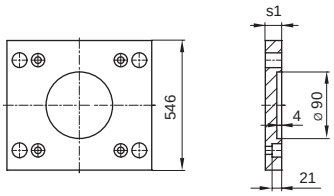


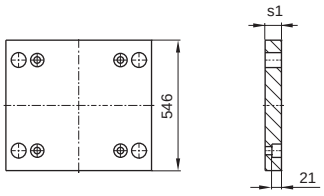
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 446 x 696 x 36 / 1.2085

K10
K11



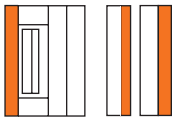


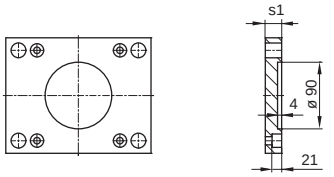


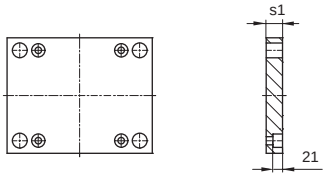
K10/446x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/446x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16





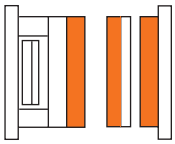


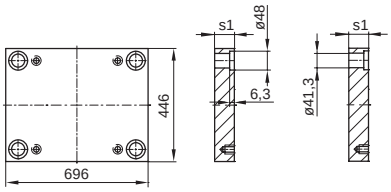
K15/446x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/446x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

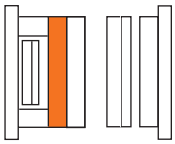
K 20 ■ K 252 ◆

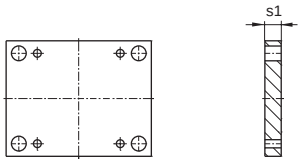




.../446x696 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■		■			
36	■				■◆		■◆			■
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			

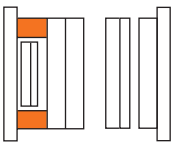
K30



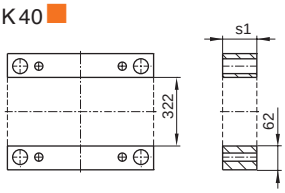


K30/446x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

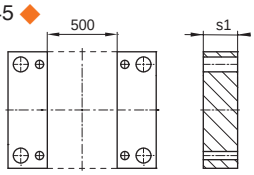
K40
K45
K42



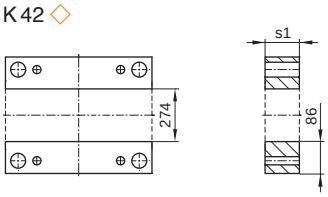
K 40 ■



K 45 ◆



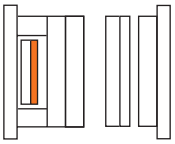
K 42 ◇



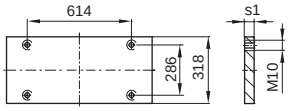
.../446x696 x s1/	1.1730	1.2085	1.2312
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../446x696 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇	■	

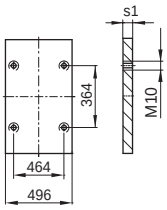
K60
K65
K62



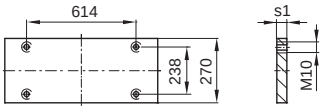
K 60 ■



K 65 ◆

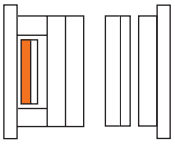


K 62 ◇

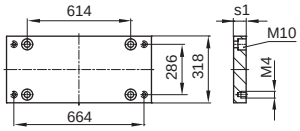


.../446x696 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

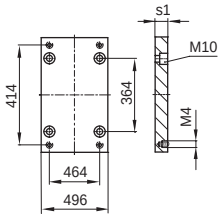
K70
K75
K72



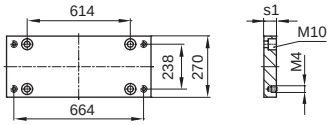
K 70 ■



K 75 ◆

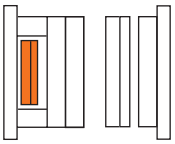


K 72 ◇

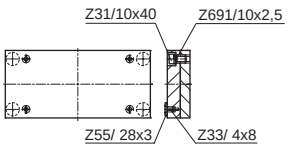


.../446x696 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

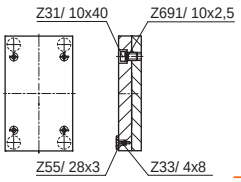
K60-70
K65-75
K62-72



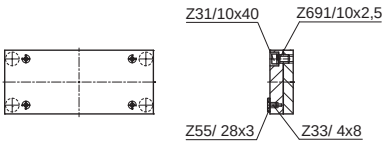
K 60-70 ■



K 65-75 ◆



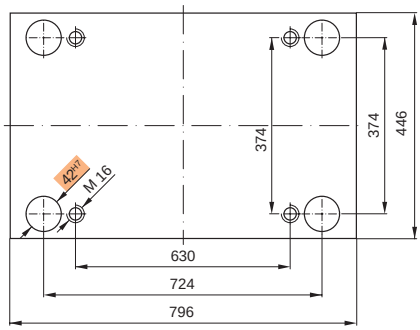
K 62-72



.../446x696 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/446x696/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

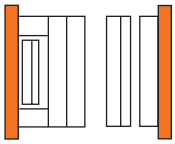
446 x 796

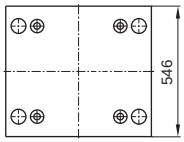


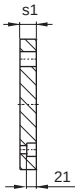
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 446 x 796 x 36 / 1.2085

K11

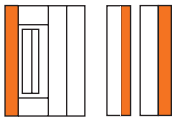


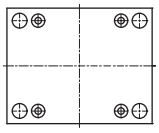


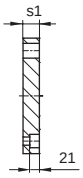


K11/446x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K16



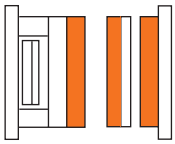


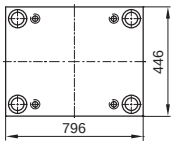


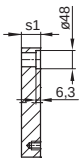
K16/446x796x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

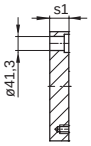
K20
K252

K 20 ■ K 252 ◆



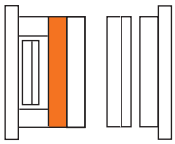


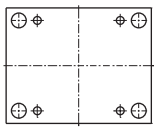


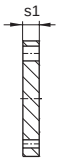


.../446x796 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■		■			
36	■				■ ◆		■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

K30

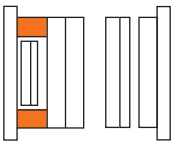




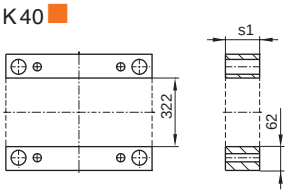


K30/446x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

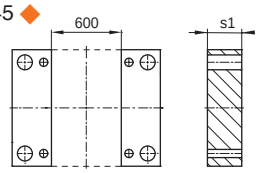
K40
K45
K42



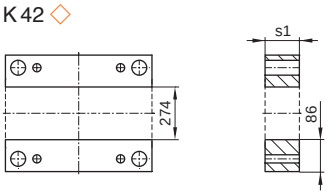
K 40 ■



K 45 ◆



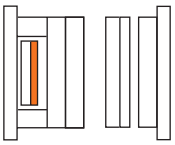
K 42 ◇



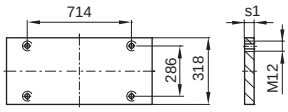
.../446x796 x s1/	1.1730	1.2085	1.2312
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../446x796 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◇	
156	■ ◆ ◇	■ ◇	
176	■ ◇	■	

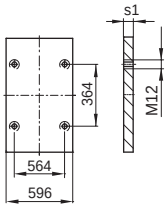
K60
K65
K62



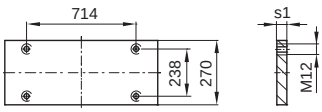
K 60 ■



K 65 ◆

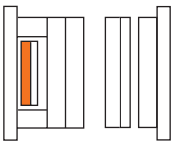


K 62 ◆

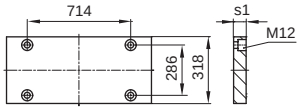


.../446x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◇	

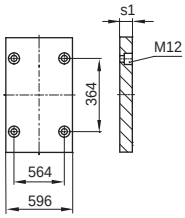
K70
K75
K72



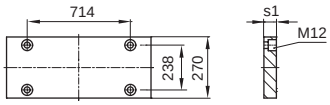
K 70 ■



K 75 ◆

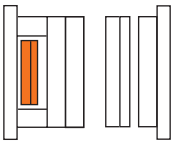


K 72 ◇

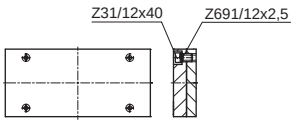


.../446x796 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

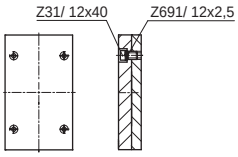
K60-70
K65-75
K62-72



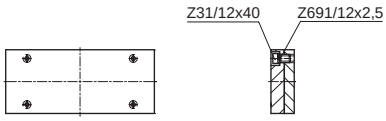
K 60-70 ■



K 65-75 ◆



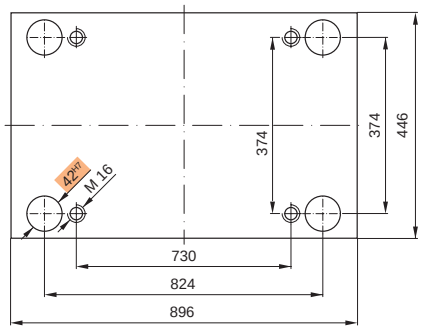
K 62-72



.../446x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/446x796/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

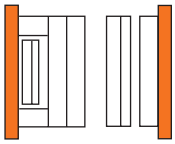
446 x 896

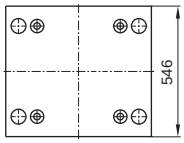


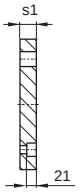
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 446 x 896 x 36 / 1.2085

K11

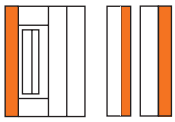


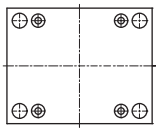


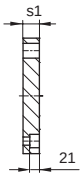


K11/446x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K16



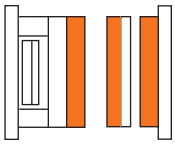


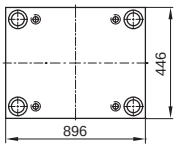


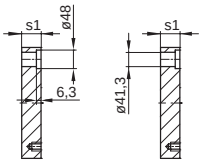
K16/446x896x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

K 20 ■ K 252 ◆

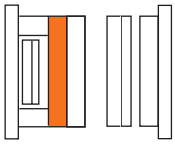


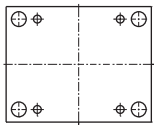


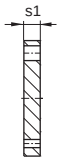


.../446x896 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■		■			
36	■				■ ◆	■	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■	■	■			
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■	■	■			
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■					■	■			

K30

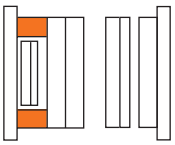




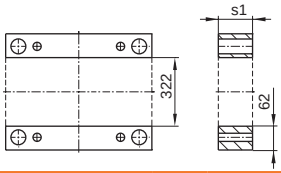


K30/446x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

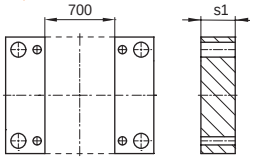
K40
K45
K42



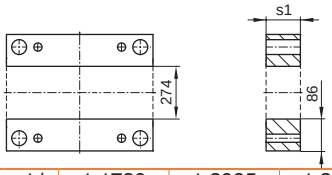
K 40 ■



K 45 ◆



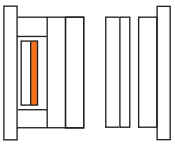
K 42 ◇



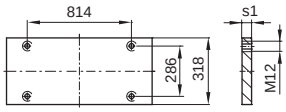
.../446x896 x s1/	1.1730	1.2085	1.2312
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../446x896 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇	■	

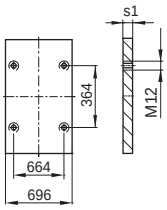
K60
K65
K62



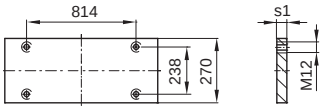
K 60 ■



K 65 ◆

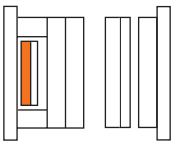


K 62 ◇

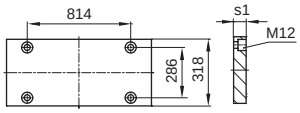


.../446x896 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

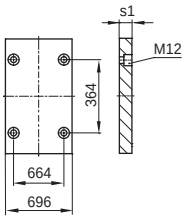
K70
K75
K72



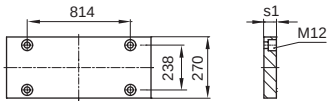
K 70 ■



K 75 ◆

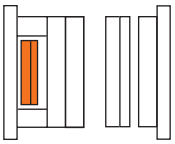


K 72 ◇

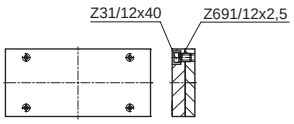


.../446x896 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

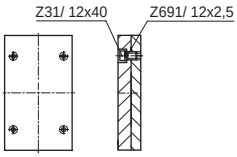
K60-70
K65-75
K62-72



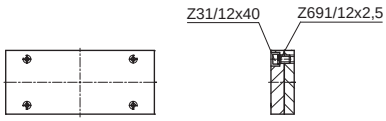
K 60-70 •



K 65-75 ◆



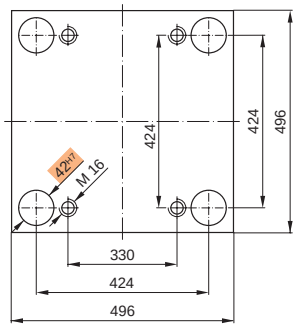
K 62-72



.../446x896 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/446x896/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

496 x 496

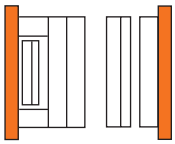


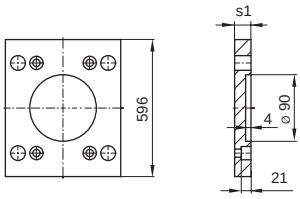
Bestellbeispiel:
Ordering example:
Exempe de commande:

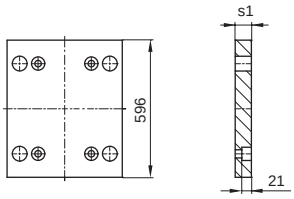
K20 / 496 x 496 x 36 / 1.2085

Neu / New / Nouveau

K10
K11



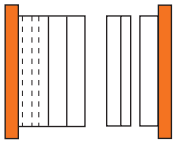


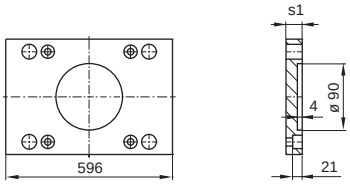


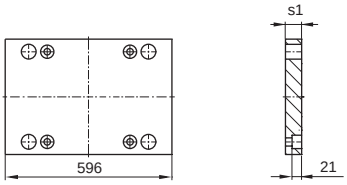
K10/496x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■		■	■

K11/496x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	■
46	■		■	■
56	■		■	■

K12
K13



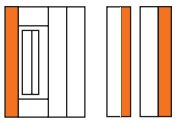


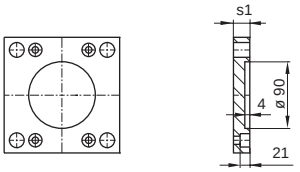


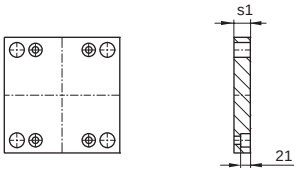
K12/496x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	
56	■		■	■

K13/496x496x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	
56	■		■	■

K15
K16



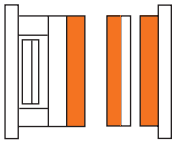




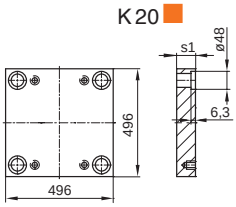
K15/496x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	
46	■		■	■

K16/496x496x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	
46	■		■	■

K20
K252

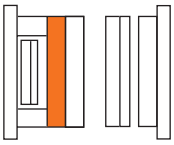


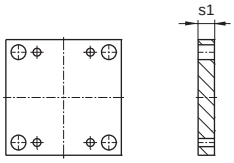
K 20 ■ K 252 ◆



.../496x496 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■◆		■◆			■
36	■				■◆	■	■◆			■
46	■				■◆	■◆	■◆	◆		■
56	■				■◆	■◆	■◆	◆		■
66	■				■◆	■◆	■◆	◆		■
76	■				■◆	■◆	■◆	◆	◆	■
86	■				■◆	■◆	■◆	◆		■
96	■				■◆	■◆	■◆	◆	◆	■
106	■				■	■	■			
116	■				■◆	■◆	■◆	◆	◆	■
126	■						■			
136	■				■◆	■◆	■◆	◆	◆	
156	■				■◆	■◆	■◆	◆	◆	
176	■				■◆	■◆	■◆			
196	■						■			

K30

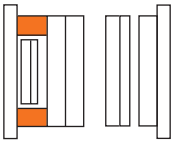




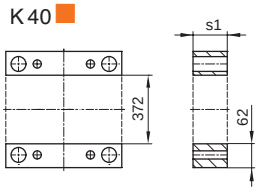
K 30/496x496 x s1/	1.1730	1.2085	1.2312
46	■	■	■
56	■	■	■
66	■		■
76	■		■

K 30/496x496 x s1/	1.1730	1.2085	1.2312
86	■		■
96	■		■
116	■		■

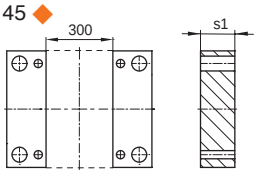
K40 K45 K42



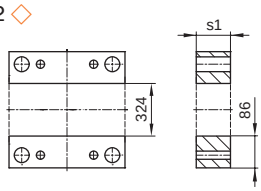
K 40 ■



K 45 ◆



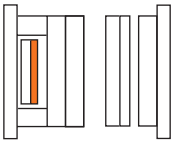
K 42 ◇



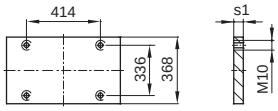
.../496x496 x s1/	1.1730	1.2085	1.2312
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../496x496 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◇	■	
176	■ ◇	■	

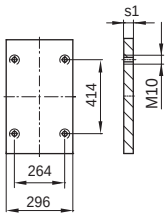
K60 K65 K62



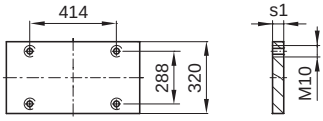
K 60 ■



K 65 ◆

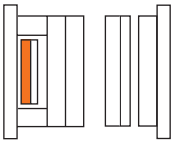


K 62 ◇

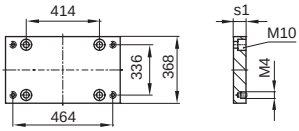


.../496x496 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

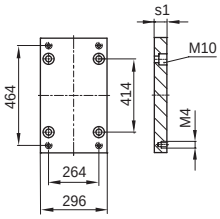
K70 K75 K72



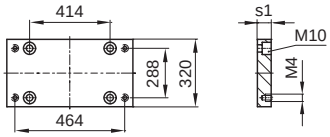
K 70 ■



K 75 ◆

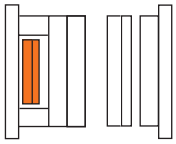


K 72 ◇

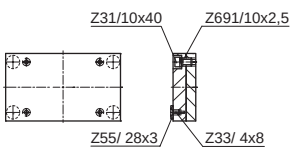


.../496x496 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

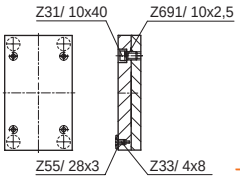
K60-70 K65-75 K62-72



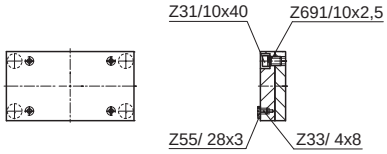
K 60-70 ■



K 65-75 ◆



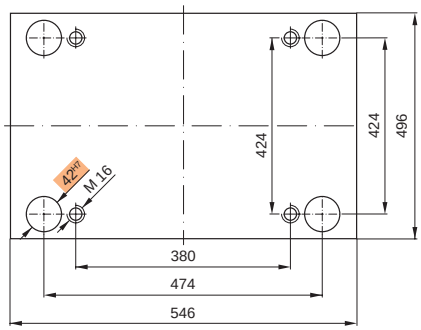
K 62-72



.../496x496 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/496x496/Typ	1.1730	1.2312
1	K62	K72
3	K62 K 72	

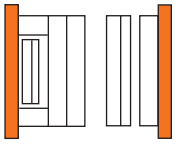
496 x 546

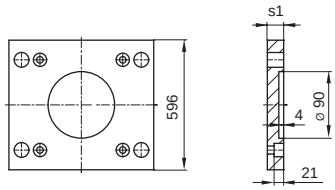


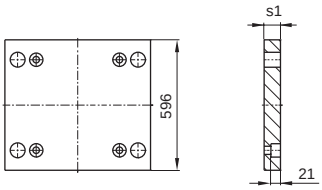
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 496 x 546 x 36 / 1.2085

K10
K11



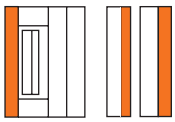


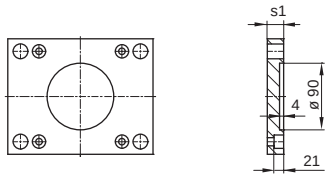


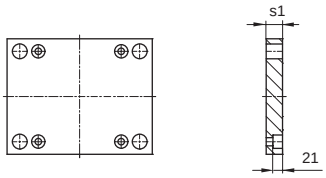
K10/496x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	
56	■		■	■

K11/496x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	
56	■		■	■

K15
K16





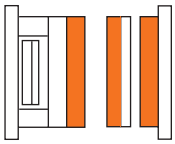


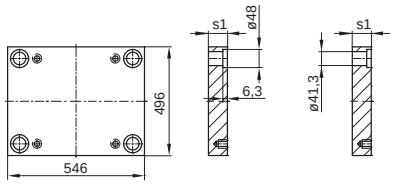
K15/496x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	
46	■		■	■

K16/496x546x s1 /	1.1730	1.2162	1.2085	1.2312
27	■		■	
36	■		■	
46	■		■	■

K20
K252

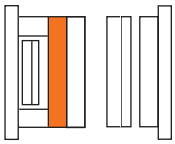
K 20 ■ K 252 ◆

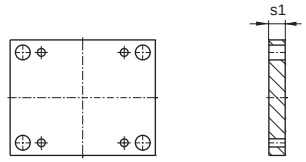




.../496x546 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■ ◆		■ ◆			■
36	■				■ ◆	■	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆	◆		■
66	■				■ ◆	■ ◆	■ ◆	◆		■
76	■				■ ◆	■ ◆	■ ◆	◆	◆	■
86	■				■ ◆	■ ◆	■ ◆	◆		■
96	■				■ ◆	■ ◆	■ ◆	◆	◆	■
116	■				■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆	◆	◆	
176	■				■ ◆	■ ◆	■ ◆			

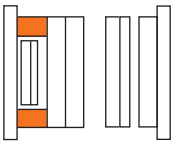
K30



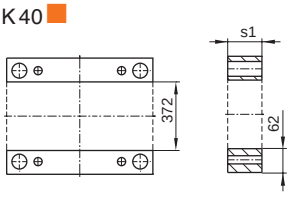


K30/496x546x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

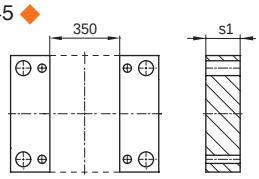
K40 K45 K42



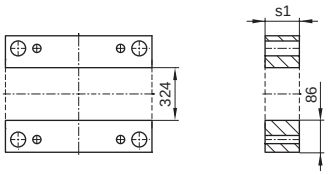
K 40 ■



K 45 ◆



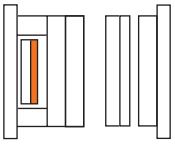
K 42 ◇



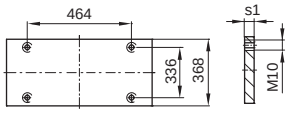
.../496x546 x s1/	1.1730	1.2085	1.2312
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../496x546 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◇	■	
176	■ ◇	■	

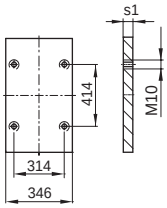
K60 K65 K62



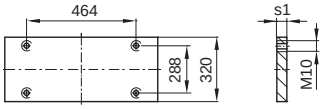
K 60 ■



K 65 ◆

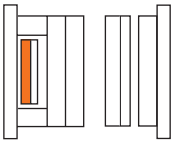


K 62 ◇

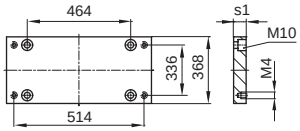


.../496x546 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

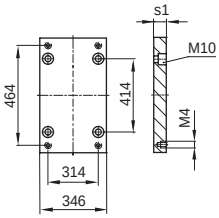
K70 K75 K72



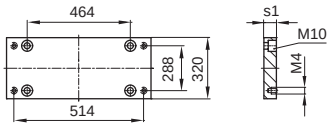
K 70 ■



K 75 ◆

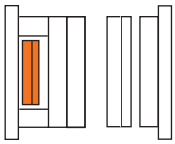


K 72 ◇

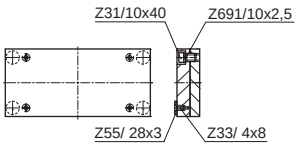


.../496x546 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

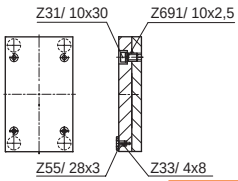
K60-70 K65-75 K62-72



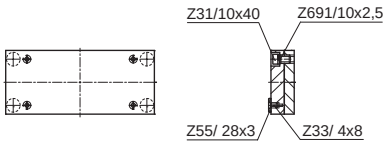
K 60-70 ■



K 65-75 ◆



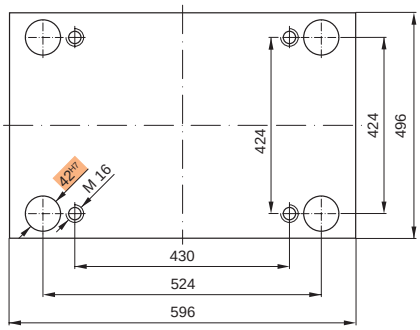
K 62-72



.../496x546 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/496x546/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

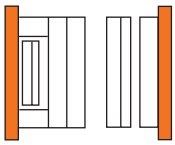
496 x 596

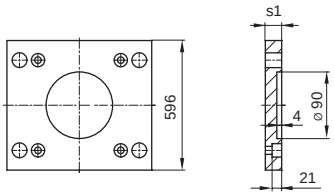


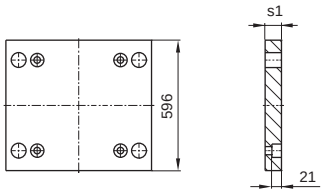
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 496 x 596 x 36 / 1.2085

K10
K11



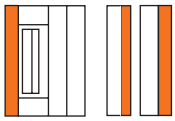


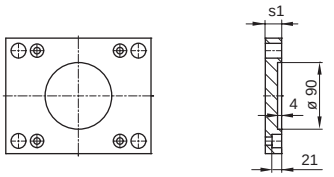


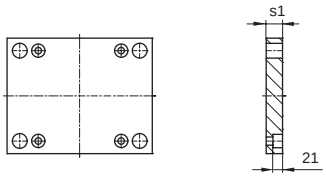
K10/496x596x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/496x596x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16





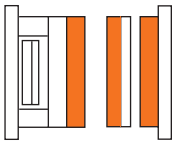


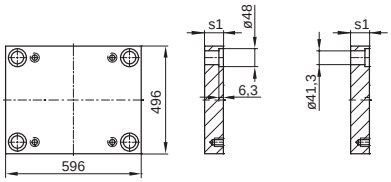
K15/496x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/496x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

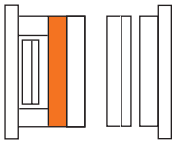
K 20 ■ K 252 ◆

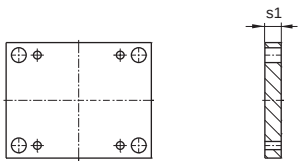




.../496x596 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■		■			
36	■				■ ◆		■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆	◆		■
66	■				■ ◆	■ ◆	■ ◆	◆		■
76	■				■ ◆	■ ◆	■ ◆	◆	◆	■
86	■				■ ◆	■ ◆	■ ◆	◆		■
96	■				■ ◆	■ ◆	■ ◆	◆	◆	■
116	■				■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆	◆	◆	
176	■				■ ◆	■ ◆	■ ◆			

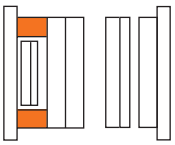
K30



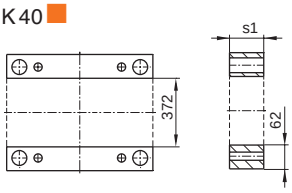


K30/496x596x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

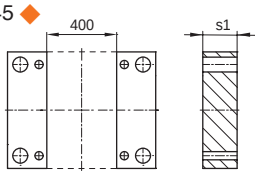
K40 K45 K42



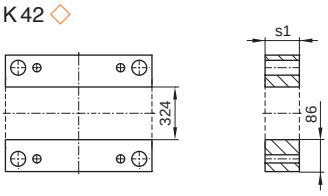
K 40 ■



K 45 ◆



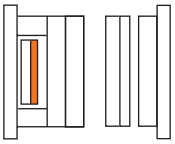
K 42 ◇



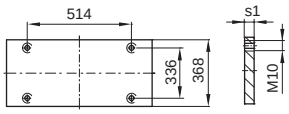
.../496x596 x s1/	1.1730	1.2085	1.2312
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../496x596 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◇	
136	■ ◆ ◇	■ ◇	
156	■ ◇	■	
176	■ ◇	■	

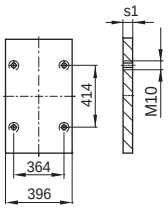
K60 K65 K62



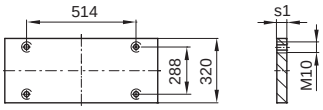
K 60 ■



K 65 ◆

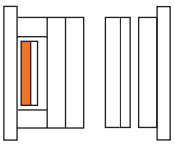


K 62 ◇

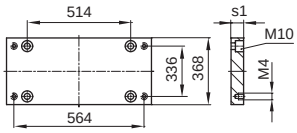


.../496x596 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

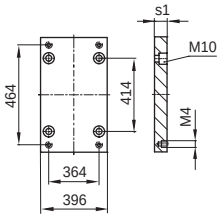
K70 K75 K72



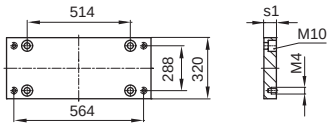
K 70 ■



K 75 ◆

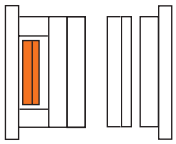


K 72 ◇

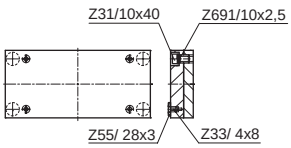


.../496x596 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

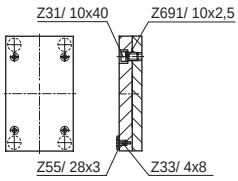
K60-70 K65-75 K62-72



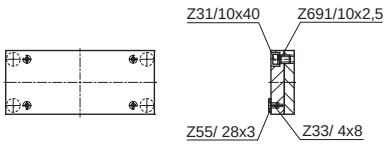
K 60-70 ■



K 65-75 ◆



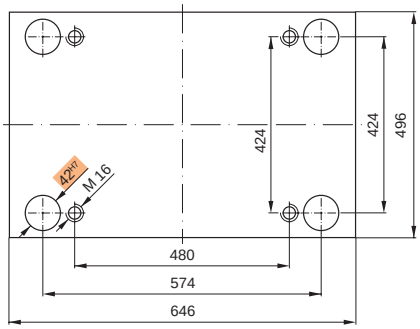
K 62-72



.../496x596 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/496x596/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

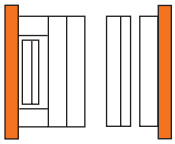
496 x 646



Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 496 x 646 x 36 / 1.2085

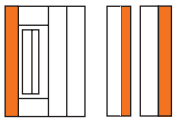
K 10
K 11



K10/496x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/496x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K 15
K 16

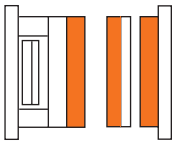


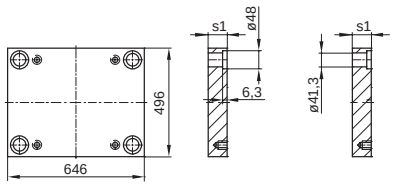
K15/496x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/496x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

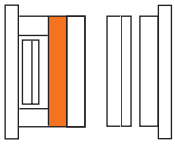
K 20 ■ K 252 ◆

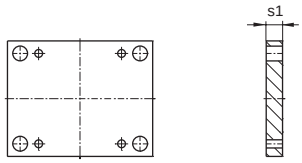




.../496x646 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■		■			
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

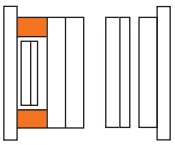
K30



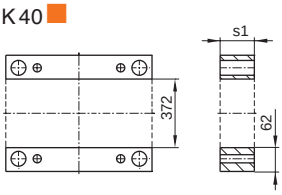


K30/496x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

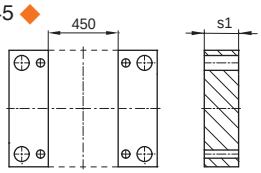
K40 K45 K42



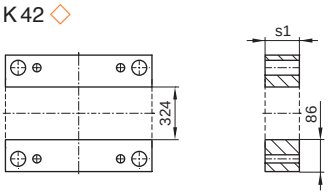
K 40 ■



K 45 ◆



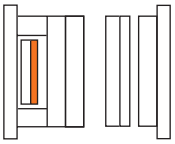
K 42 ◇



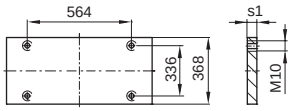
.../496x646 x s1/	1.1730	1.2085	1.2312
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../496x646 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◇	■	
176	■ ◇	■	

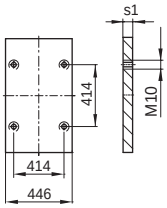
K60 K65 K62



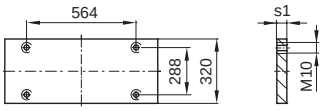
K 60 ■



K 65 ◆

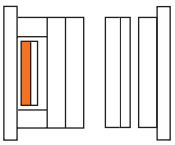


K 62 ◇

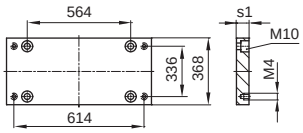


.../496x646 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

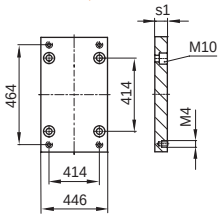
K70 K75 K72



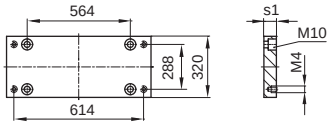
K 70 ■



K 75 ◆

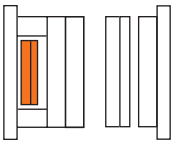


K 72 ◇

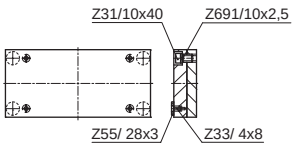


.../496x646 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

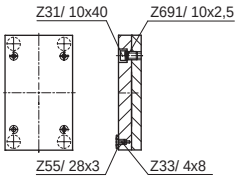
K60-70 K65-75 K62-72



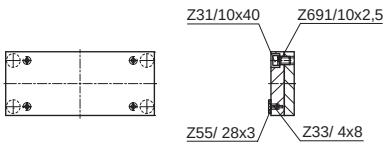
K 60-70 ■



K 65-75 ◆



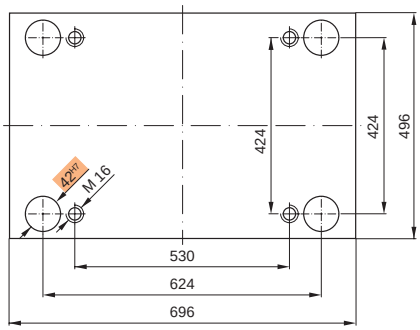
K 62-72



.../496x646 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/496x646/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

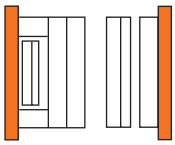
496 x 696



Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 496 x 696 x 36 / 1.2085

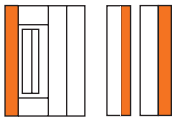
K10
K11



K10/496x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/496x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16

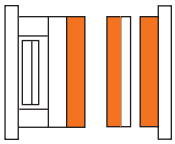


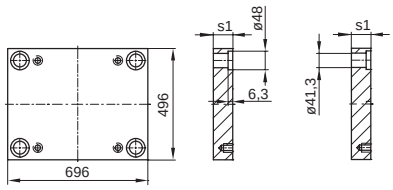
K15/496x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/496x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

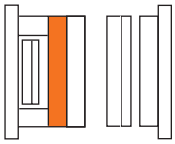
K 20 ■ K 252 ◆

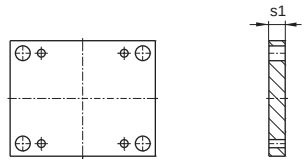




.../496x696 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■				■		■			
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			

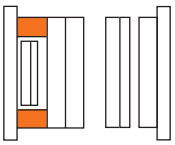
K30



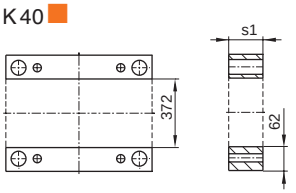


K30/496x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

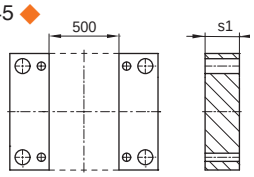
K40 K45 K42



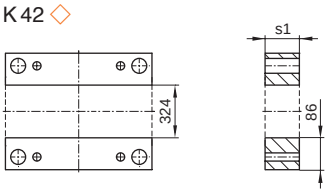
K 40 ■



K 45 ◆



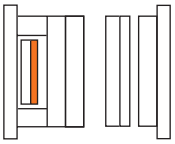
K 42 ◇



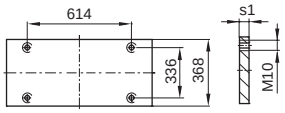
.../496x696 x s1/	1.1730	1.2085	1.2312
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../496x696 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◇	■	
176	■ ◇	■	

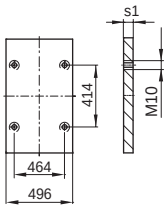
K60 K65 K62



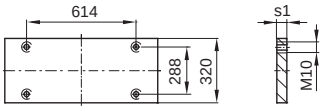
K 60 ■



K 65 ◆

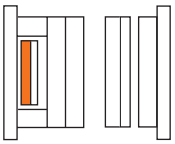


K 62 ◇

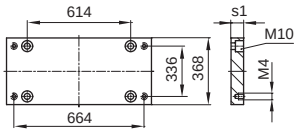


.../496x696 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

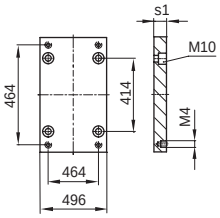
K70 K75 K72



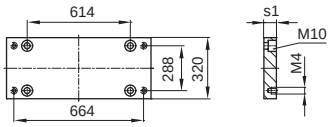
K 70 ■



K 75 ◆

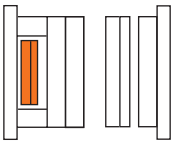


K 72 ◇

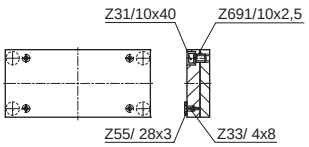


.../496x696 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

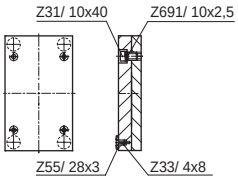
K60-70 K65-75 K62-72



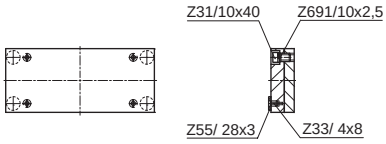
K 60-70 ■



K 65-75 ◆



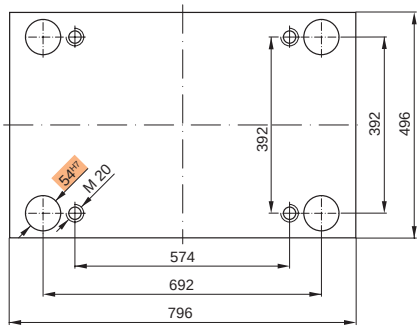
K 62-72



.../496x696 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/496x696/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

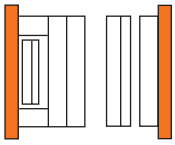
496 x 796

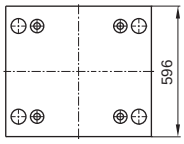


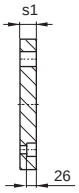
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 496 x 796 x 56 / 1.2085

K11

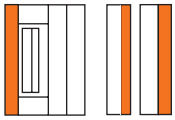


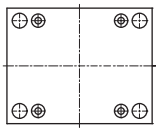


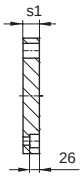


K11/496x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16



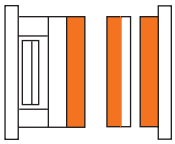


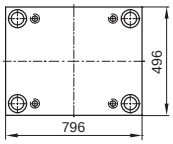


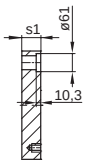
K16/496x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■

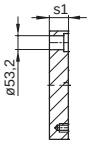
K20
K252

K 20 ■ K 252 ◆



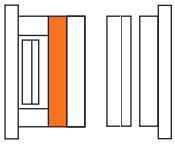


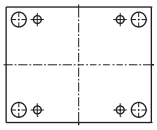


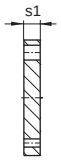


.../496x796 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

K30

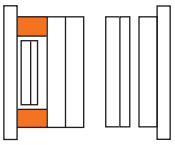




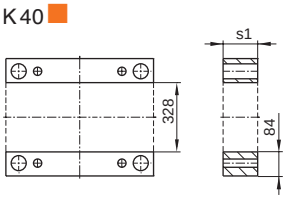


K30/496x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■
116	■			■

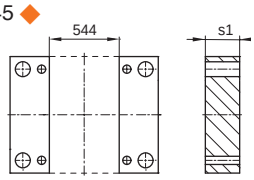
K40
K45
K42



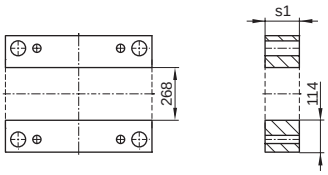
K 40 ■



K 45 ◆



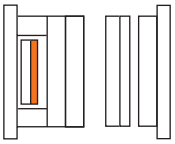
K 42 ◇



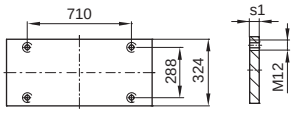
... /496x796 x s1/	1.1730	1.2085	1.2312
86	■ ◇	■	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

... /496x796 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	◇		

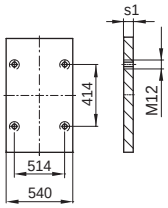
K60
K65
K62



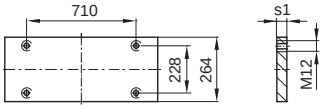
K 60 ■



K 65 ◆

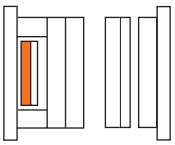


K 62 ◇

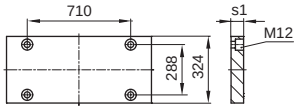


.../496x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

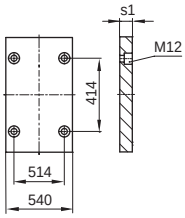
K70
K75
K72



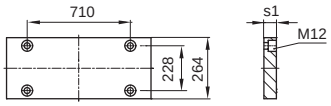
K 70 ■



K 75 ◆

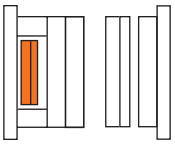


K 72 ◇

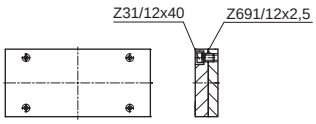


.../496x796 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

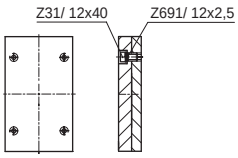
K60-70
K65-75
K62-72



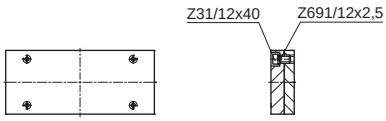
K 60-70 ■



K 65-75 ◆



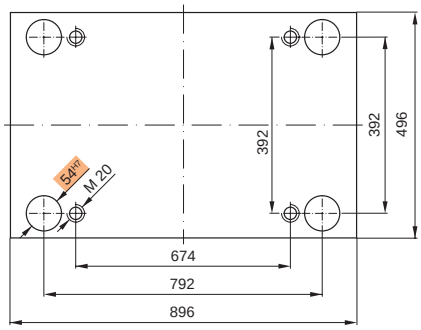
K 62-72



.../496x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/496x796/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

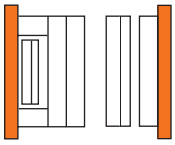
496 x 896

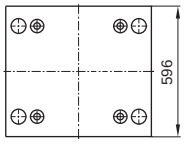


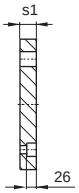
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 496 x 896 x 56 / 1.2085

K11

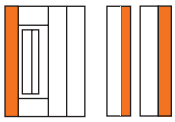


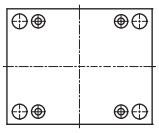


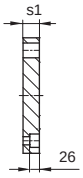


K11/496x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	• ■

K16



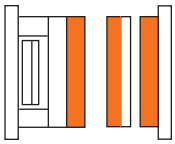


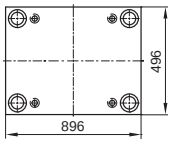


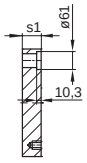
K16/496x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■

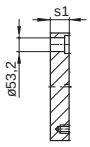
K20
K252

K 20 ■ K 252 ◆



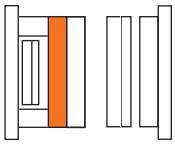


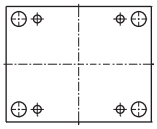


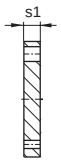


.../496x896 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■				■		■			
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

K30

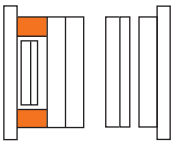




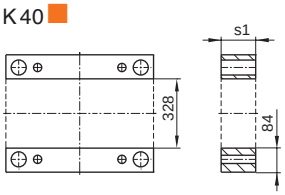


K30/496x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■
116	■			

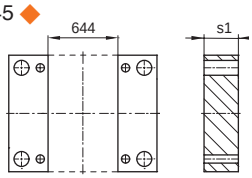
K40 K45 K42



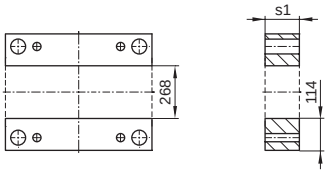
K 40 ■



K 45 ◆



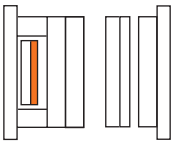
K 42 ◇



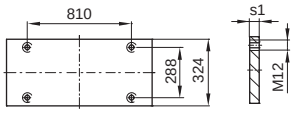
... /496x896 x s1/	1.1730	1.2085	1.2312
86	◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

... /496x896 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

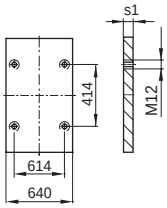
K60 K65 K62



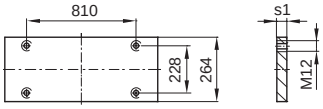
K 60 ■



K 65 ◆

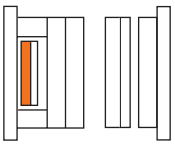


K 62 ◇

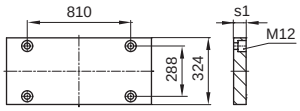


.../496x896 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

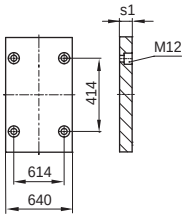
K70 K75 K72



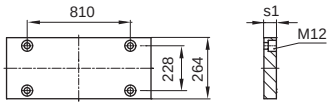
K 70 ■



K 75 ◆

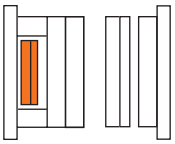


K 72 ◇

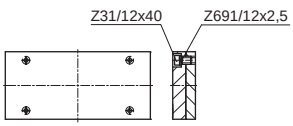


.../496x896 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ■ ◇	■ ◆ ◇

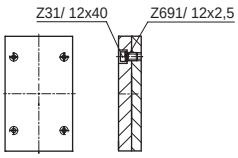
K60-70 K65-75 K62-72



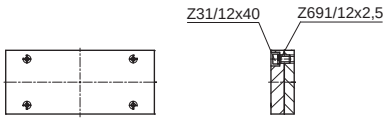
K 60-70 ■



K 65-75 ◆



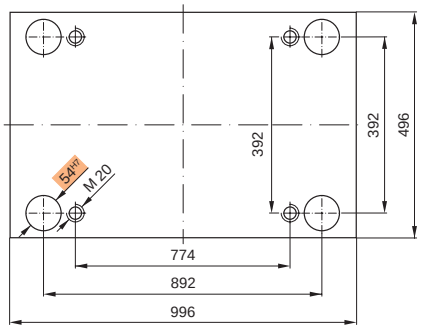
K 62-72



.../496x896 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/496x896/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

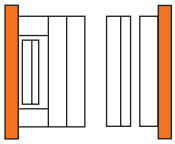
496 x 996

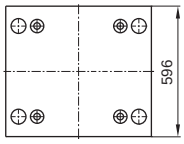


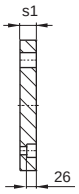
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 496 x 996 x 56 / 1.2085

K11

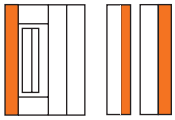


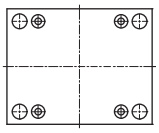


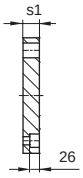


K11/496x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16



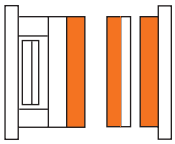


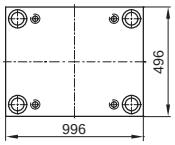


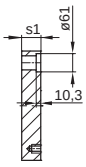
K16/496x996x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■

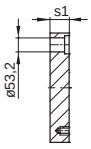
K20
K252

K 20 ■ K 252 ◆



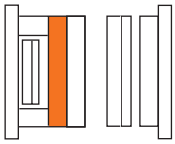


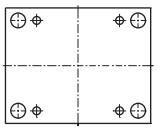


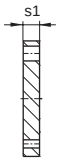


.../496x996 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■				■		■			
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

K30

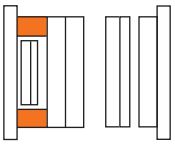




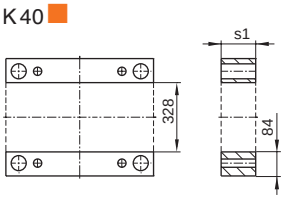


K30/496x996x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■
116	■			

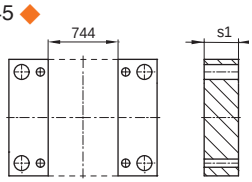
K40
K45
K42



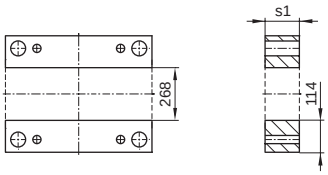
K 40 ■



K 45 ◆



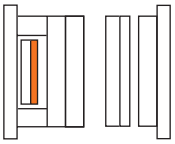
K 42 ◇



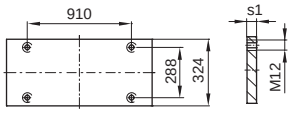
... /496x996 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

... /496x996 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

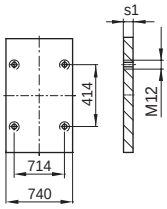
K60
K65
K62



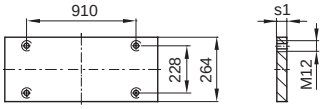
K 60 ■



K 65 ◆

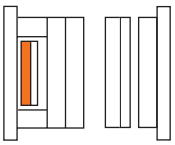


K 62 ◇

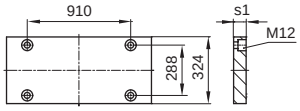


.../496x996 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

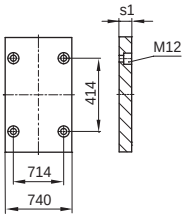
K70
K75
K72



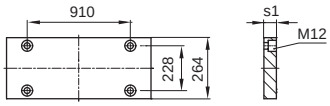
K 70 ■



K 75 ◆

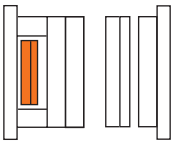


K 72 ◇

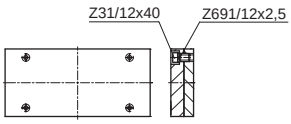


.../496x996 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

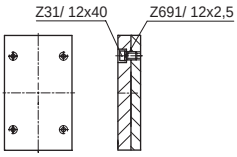
K60-70
K65-75
K62-72



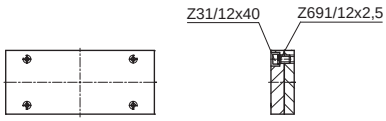
K 60-70 ■



K 65-75 ◆



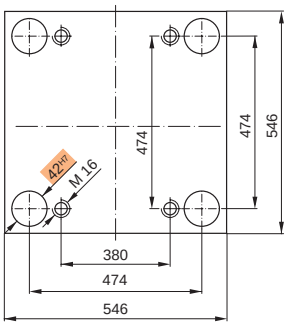
K 62-72



.../496x996 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/496x996/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

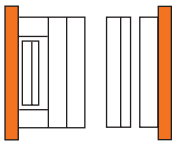
546 x 546

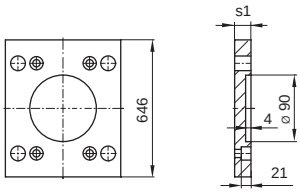


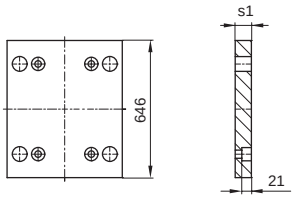
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 546 x 546 x 36 / 1.2085

K10
K11



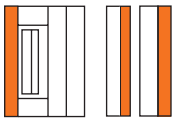


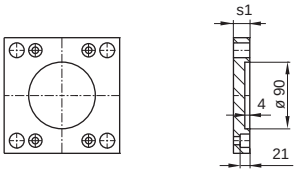


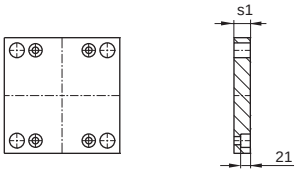
K10/546x546x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/546x546x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16





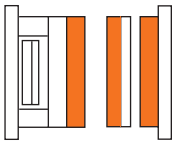


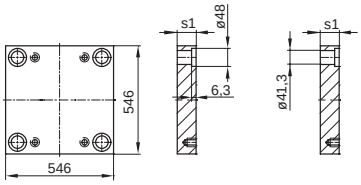
K15/546x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/546x546x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

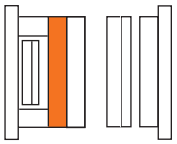
K 20 ■ K 252 ◆

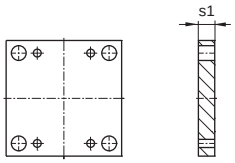




.../546x546 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■						■			
36	■				■ ◆		■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆	◆	◆	■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆	◆	◆	■
116	■				■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆	◆	◆	
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

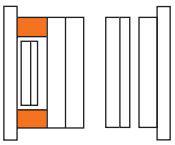
K30



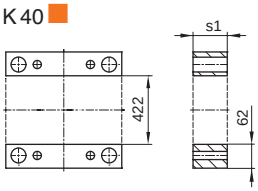


K30/546x546x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			■

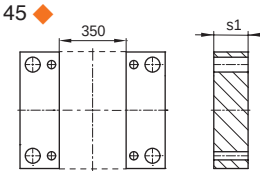
K40 K45 K42



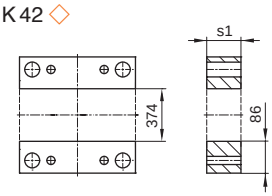
K 40 ■



K 45 ◆



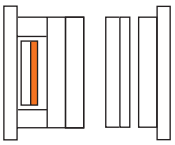
K 42 ◇



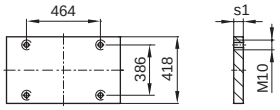
.../546x546 x s1/	1.1730	1.2085	1.2312
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../546x546 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◇	■	
176	■ ◇		

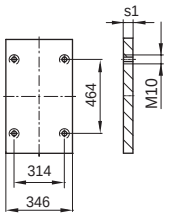
K60 K65 K62



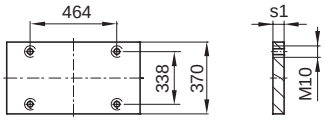
K 60 ■



K 65 ◆

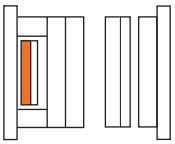


K 62 ◇

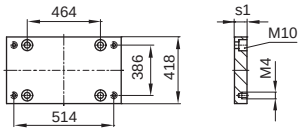


.../546x546 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

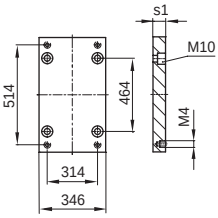
K70 K75 K72



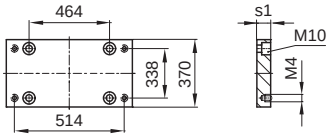
K 70 ■



K 75 ◆

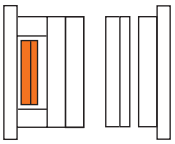


K 72 ◇

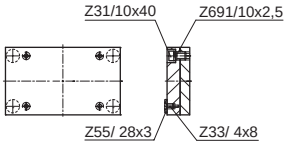


.../546x546 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

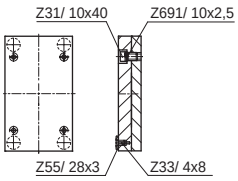
K60-70 K65-75 K62-72



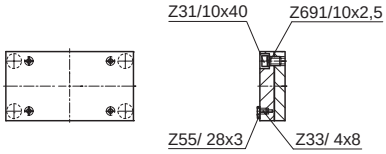
K 60-70 ■



K 65-75 ◆



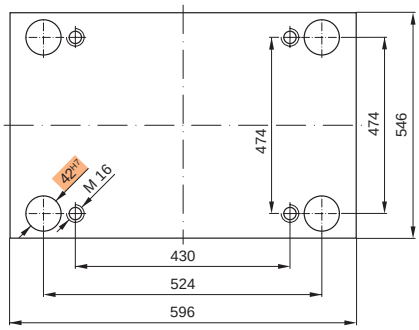
K 62-72



.../546x546 /	1.1730	1.2085
	• ◆	• ◆

K62-72/546x546/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

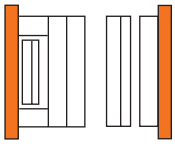
546 x 596

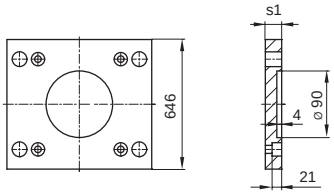


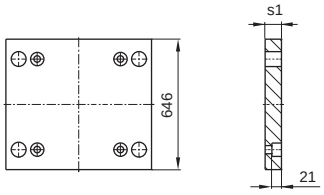
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 546 x 596 x 36 / 1.2085

K10
K11



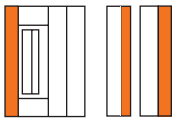


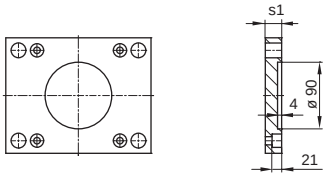


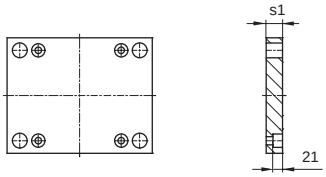
K10/546x596x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/546x596x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16



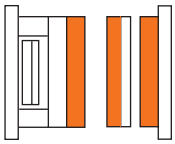




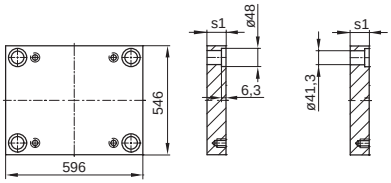
K15/546x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/546x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

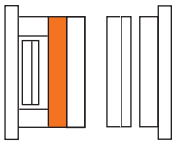


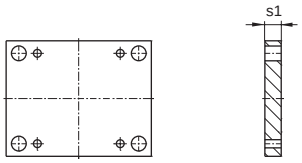
K 20 ■ K 252 ◆



.../546x596 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■						■			
36	■				■ ◆		■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆	◆	◆	■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆	◆	◆	■
116	■				■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆	◆	◆	
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

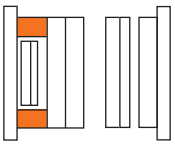
K30



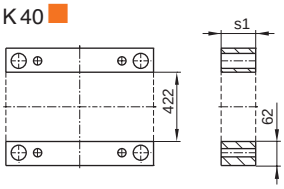


K30/546x596x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	■
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			

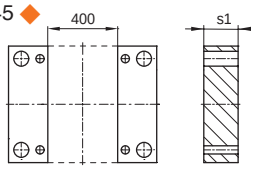
K40 K45 K42



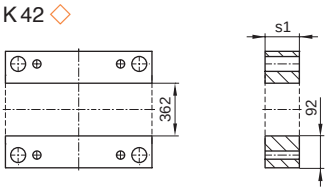
K 40 ■



K 45 ◆



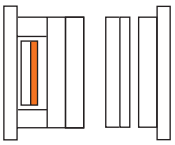
K 42 ◇



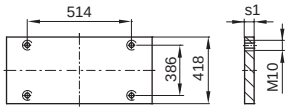
.../546x596 x s1/	1.1730	1.2085	1.2312
66	■ ◆ ◇	■ ◆	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../546x596 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◇		
176	■ ◇		

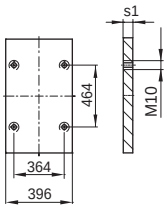
K60 K65 K62



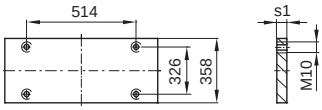
K 60 ■



K 65 ◆

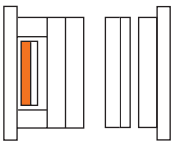


K 62 ◇

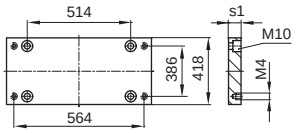


.../546x596 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

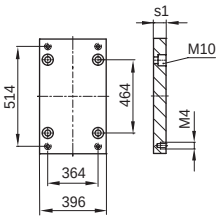
K70 K75 K72



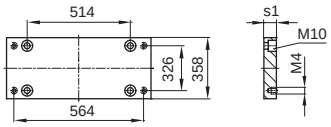
K 70 ■



K 75 ◆

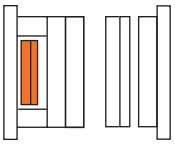


K 72 ◇

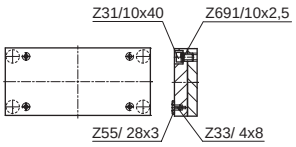


.../546x596 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

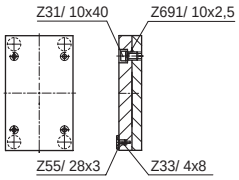
K60-70 K65-75 K62-72



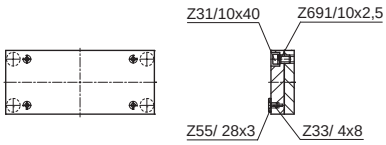
K 60-70 ■



K 65-75 ◆



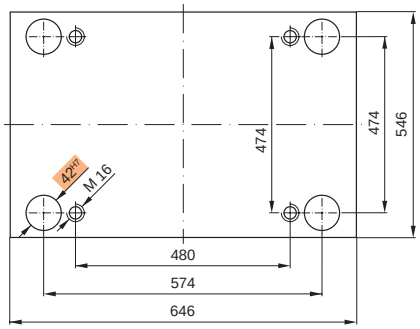
K 62-72



.../546x596 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/546x596/Typ	1.1730	1.2312
1	K62	K72
3	K62 K 72	

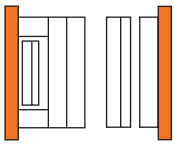
546 x 646

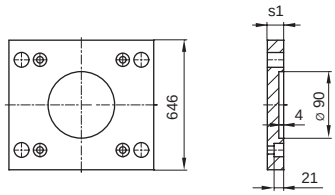


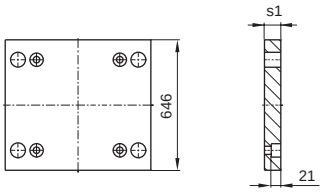
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 546 x 646 x 36 / 1.2085

K10
K11



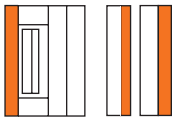


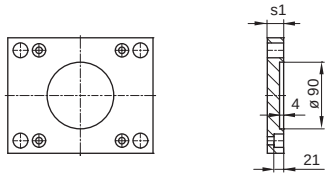


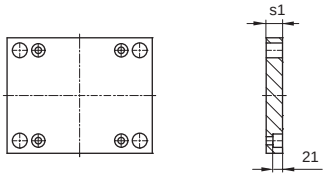
K10/546x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/546x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16



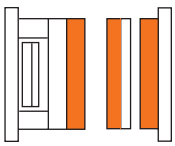




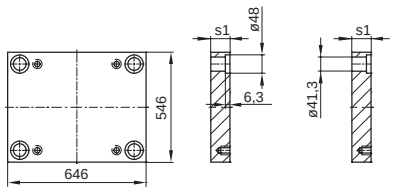
K15/546x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/546x646x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

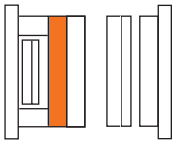


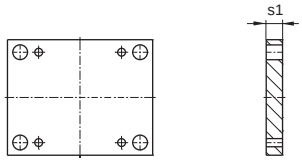
K 20 ■ K 252 ◆



.../546x646 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■						■			
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

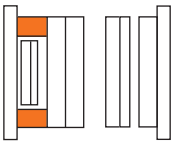
K30



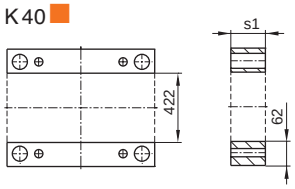


K30/546x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■
66	■			■
76	■			■
86	■			■
96	■			■
116	■			

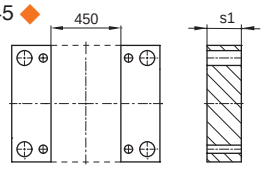
K40
K45
K42



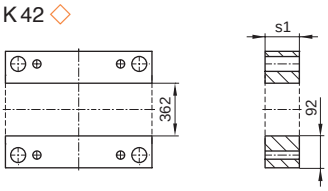
K 40 ■



K 45 ◆



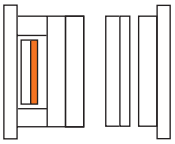
K 42 ◇



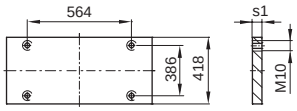
.../546x646 x s1/	1.1730	1.2085	1.2312
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../546x646 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◇		
176	■ ◇		

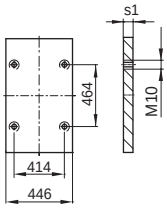
K60
K65
K62



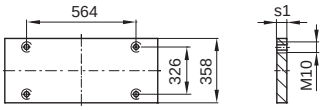
K 60 ■



K 65 ◆

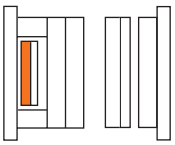


K 62 ◇

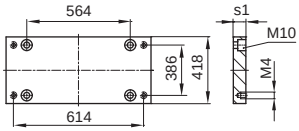


.../546x646 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

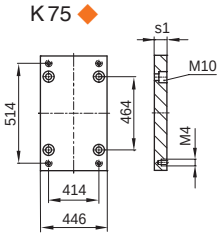
K70
K75
K72



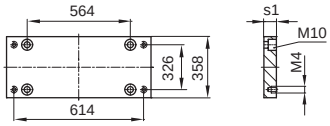
K 70 ■



K 75 ◆

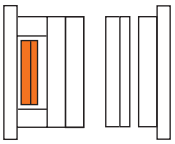


K 72 ◇

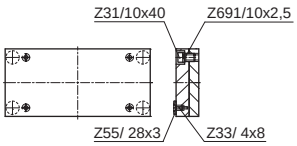


.../546x646 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

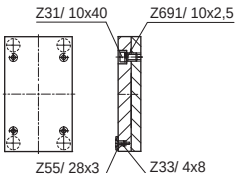
K60-70
K65-75
K62-72



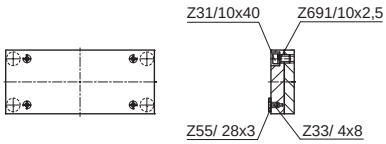
K 60-70 ■



K 65-75 ◆



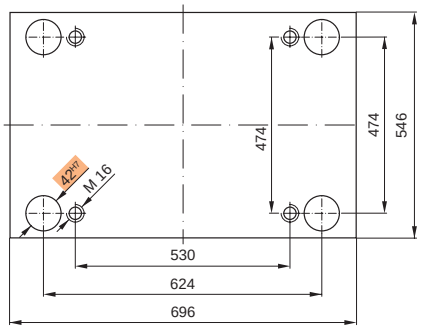
K 62-72



.../546x646 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/546x646/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

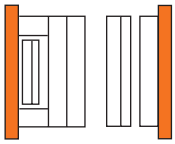
546 x 696

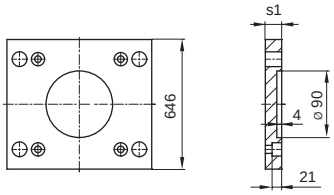


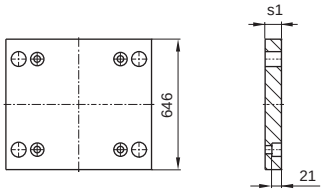
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 546 x 696 x 36 / 1.2085

K10
K11



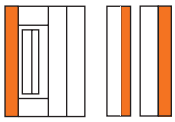


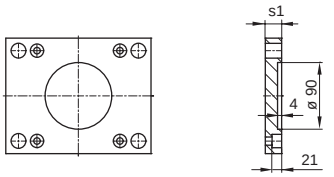


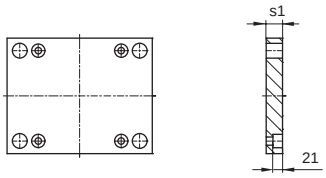
K10/546x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/546x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16



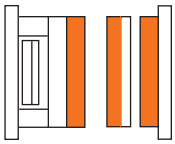




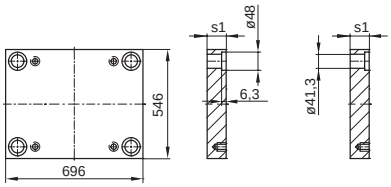
K15/546x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/546x696x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

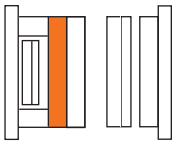


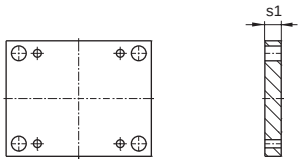
K 20 ■ K 252 ◆



.../546x696 x s1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■						■			
36	■				■ ◆		■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

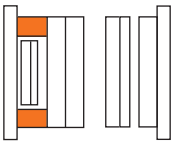
K30



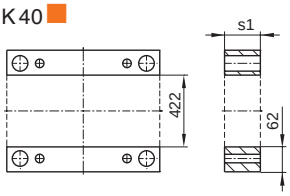


K30/546x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■
76	■			■
86	■			■
96	■			■
116	■			

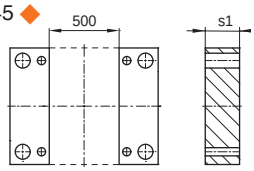
K40 K45 K42



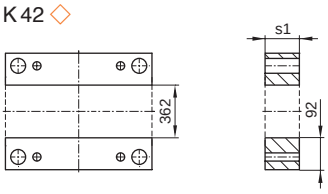
K 40 ■



K 45 ◆



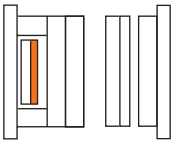
K 42 ◇



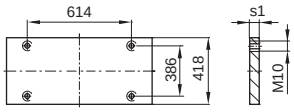
.../546x696 x s1/	1.1730	1.2085	1.2312
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../546x696 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◇		
176	■ ◇		

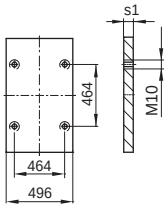
K60 K65 K62



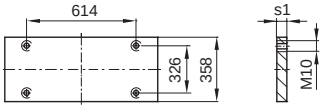
K 60 ■



K 65 ◆

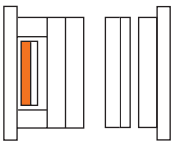


K 62 ◇

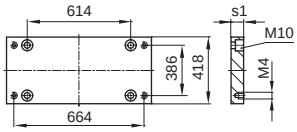


.../546x696 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

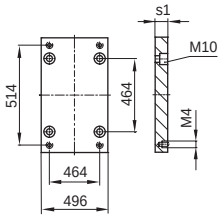
K70 K75 K72



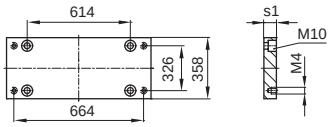
K 70 ■



K 75 ◆

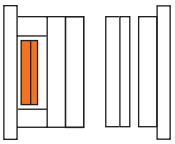


K 72 ◇

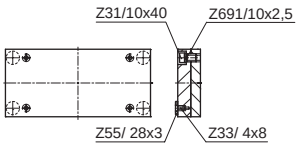


.../546x696 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

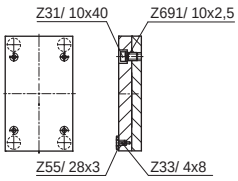
K60-70 K65-75 K62-72



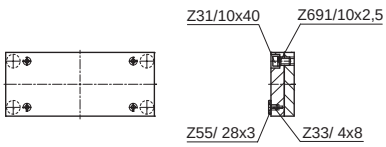
K 60-70 ■



K 65-75 ◆



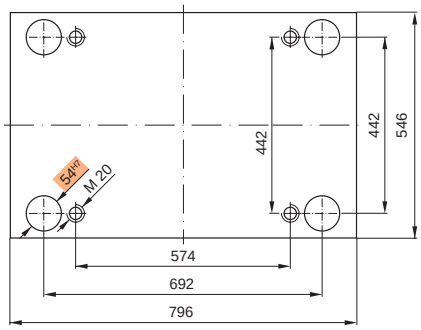
K 62-72



.../546x696 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/546x696/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

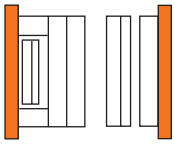
546 x 796

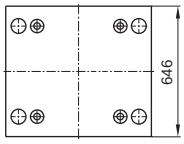


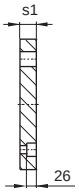
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 546 x 796 x 56 / 1.2085

K11

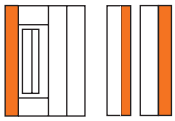


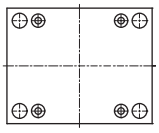


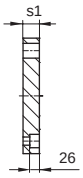


K11/546x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16

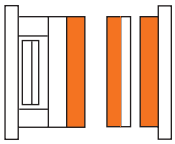




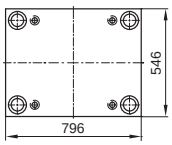


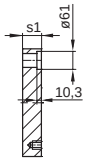
K16/546x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

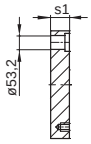
K20
K252



K 20 ■ K 252 ◆

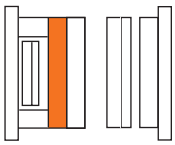


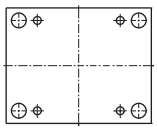


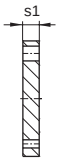


.../546x796 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
27	■						■			
36	■						■			
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

K30

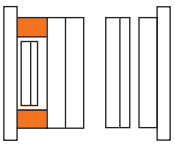




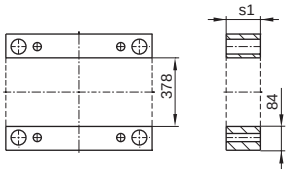


K30/546x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■
116	■			

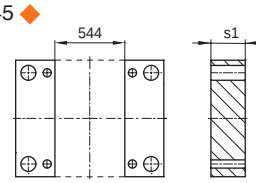
K40
K45
K42



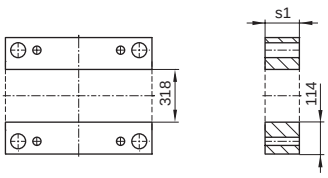
K 40 ■



K 45 ◆



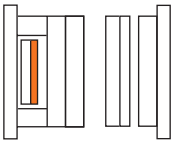
K 42 ◇



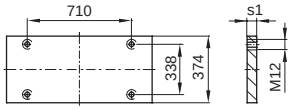
... /546x796 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

... /546x796 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

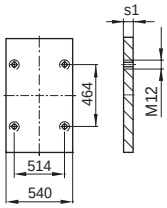
K60
K65
K62



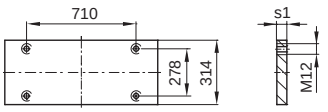
K 60 ■



K 65 ◆

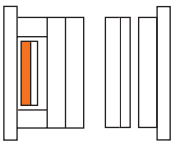


K 62 ◇

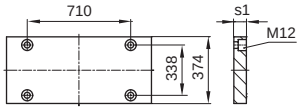


.../546x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

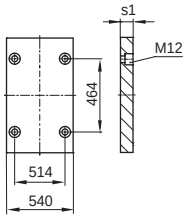
K70
K75
K72



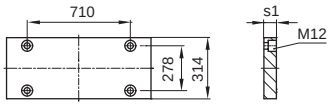
K 70 ■



K 75 ◆

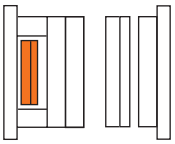


K 72 ◇

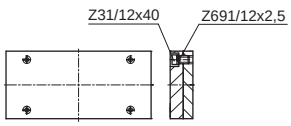


.../546x796 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

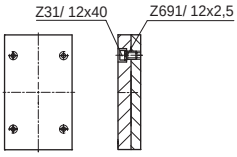
K60-70
K65-75
K62-72



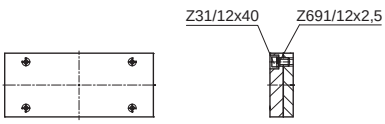
K 60-70 ■



K 65-75 ◆



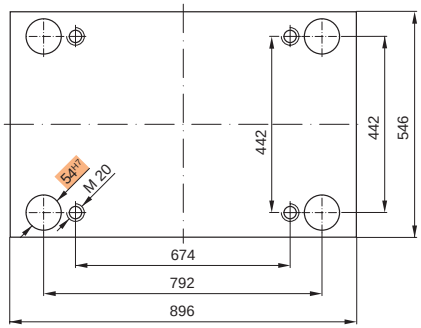
K 62-72



.../546x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/546x796/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

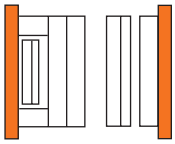
546 x 896

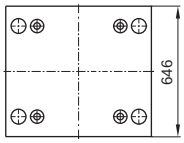


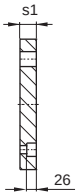
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 546 x 896 x 56 / 1.2085

K11

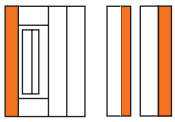


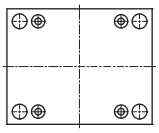


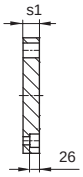


K11/546x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16



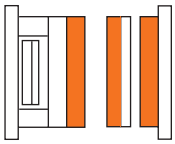


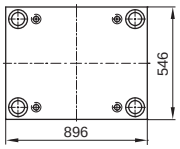


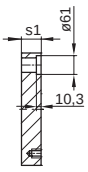
K16/546x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

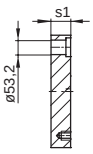
K20
K252

K 20 ■ K 252 ◆



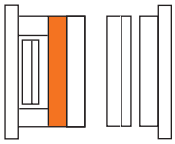


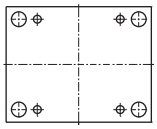


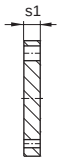


.../546x896 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■									
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

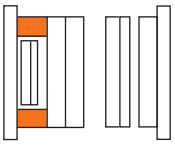




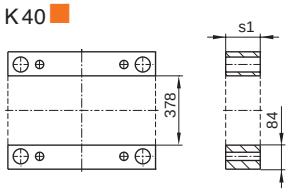


K30/546x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

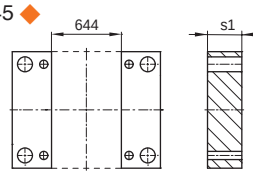
K40 K45 K42



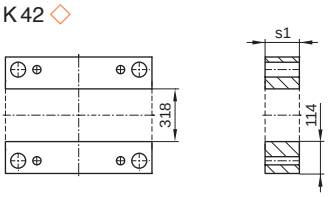
K 40 ■



K 45 ◆



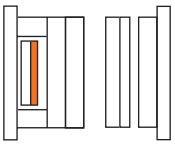
K 42 ◇



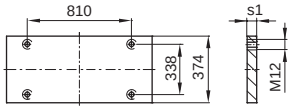
... /546x896 x s1/	1.1730	1.2085	1.2312
86	■		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

... /546x896 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

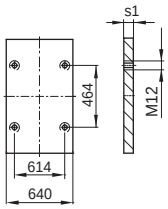
K60 K65 K62



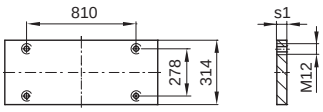
K 60 ■



K 65 ◆

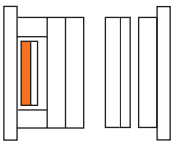


K 62 ◇

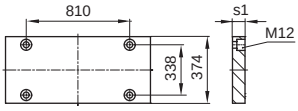


.../546x896 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

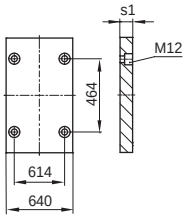
K70 K75 K72



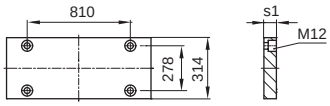
K 70 ■



K 75 ◆

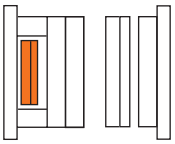


K 72 ◇

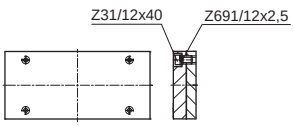


.../546x896 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

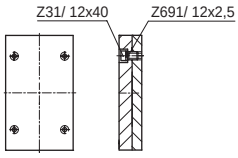
K60-70 K65-75 K62-72



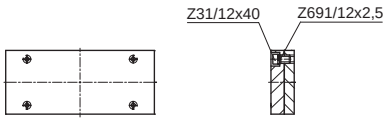
K 60-70 ■



K 65-75 ◆



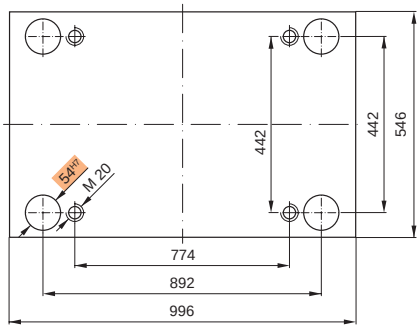
K 62-72



.../546x896 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/546x896/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

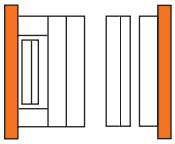
546 x 996

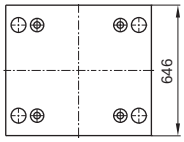


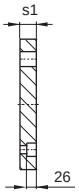
Bestellbeispiel:
Ordering example:
Exempe de commande:

K20 / 546 x 996 x 56 / 1.2085

K11

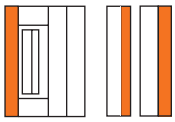


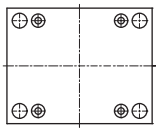


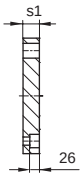


K11/546x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16



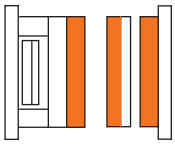


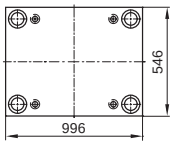


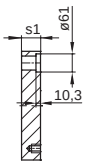
K16/546x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

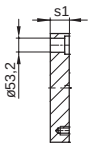
K20
K252

K 20 ■ K 252 ◆



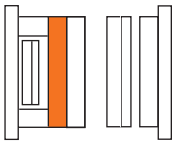


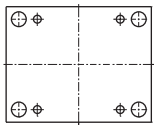


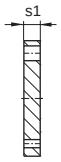


.../546x996 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■									
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

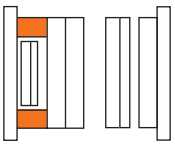




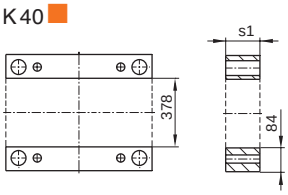


K30/546x996x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

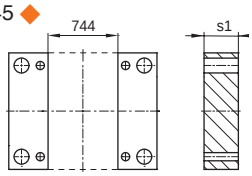
K40
K45
K42



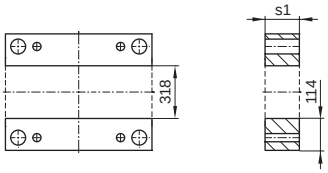
K 40 ■



K 45 ◆



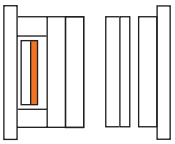
K 42 ◇



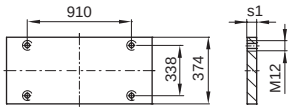
... /546x996 x s1 /	1.1730	1.2085	1.2312
76	■		
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

... /546x996 x s1 /	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

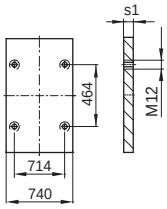
K60
K65
K62



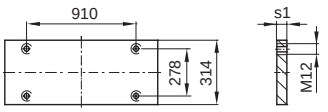
K 60 ■



K 65 ◆

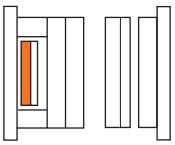


K 62 ◇

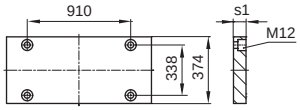


.../546x996 x s1 /	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

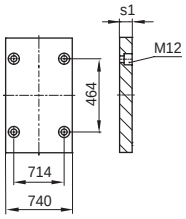
K70
K75
K72



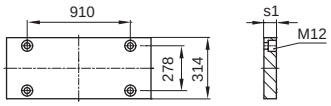
K 70 ■



K 75 ◆

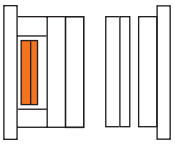


K 72 ◇

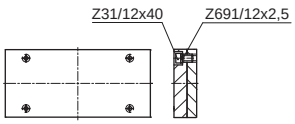


.../546x996 x s1 /	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

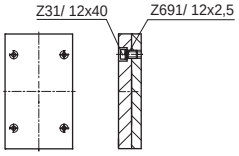
K60-70
K65-75
K62-72



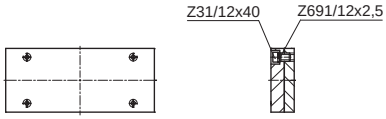
K 60-70 ■



K 65-75 ◆



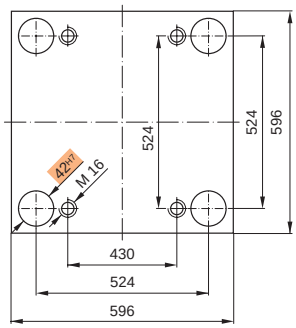
K 62-72



.../546x996 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/546x996/Typ	1.1730	1.2312
1	K 62	K 72
3	K 62 K 72	

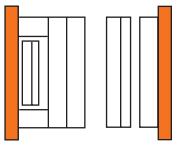
596 x 596

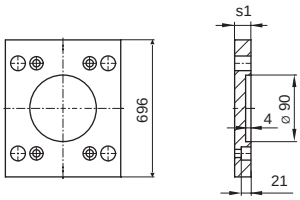


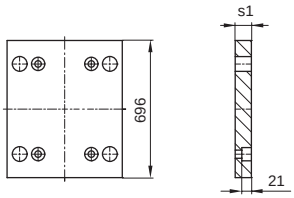
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 596 x 596 x 36 / 1.2085

K10
K11



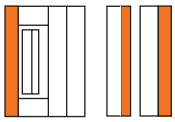


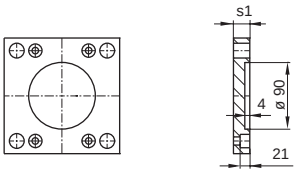


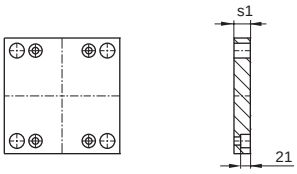
K10/596x596x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K11/596x596x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■

K15
K16



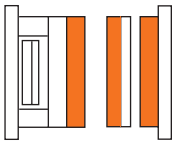




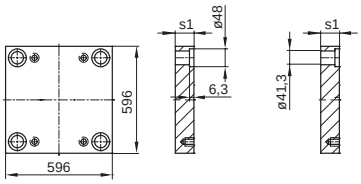
K15/596x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K16/596x596x s1 /	1.1730	1.2162	1.2085	1.2312
36	■		■	
46	■		■	■

K20
K252

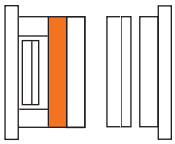


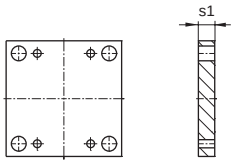
K20 ■ K252 ◆



.../596x596 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■				■ ◆		■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆	◆	◆	■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆	◆	◆	■
116	■				■ ◆	■ ◆	■ ◆	◆	◆	■
136	■				■ ◆	■ ◆	■ ◆	◆	◆	
156	■				■ ◆	■ ◆	■ ◆	◆	◆	
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

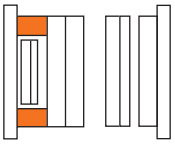
K30



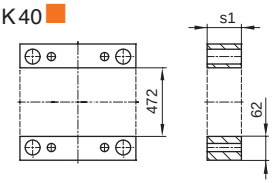


K30/596x596x s1 /	1.1730	1.2162	1.2085	1.2312
46	■		■	
56	■		■	■
76	■			■
86	■			■
96	■			■
116	■			

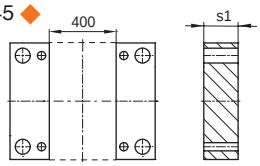
K40 K45 K42



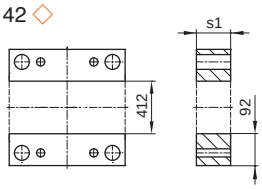
K40 ■



K45 ◆



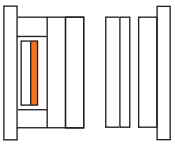
K42 ◇



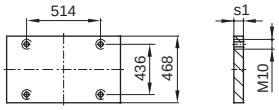
.../596x596 x s1/	1.1730	1.2085	1.2312
66	■ ◇	■	
76	■ ◆ ◇	■ ◆	
86	■ ◆ ◇	■ ◆	
96	■ ◆ ◇	■ ◆	

.../596x596 x s1/	1.1730	1.2085	1.2312
116	■ ◆ ◇	■ ◆	
136	■ ◆ ◇	■ ◆	
156	■ ◇		
176	■ ◇		

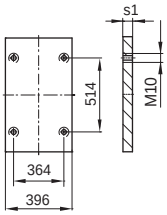
K60 K65 K62



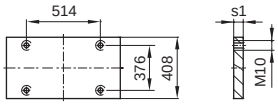
K60 ■



K65 ◆

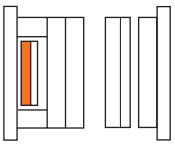


K62 ◇

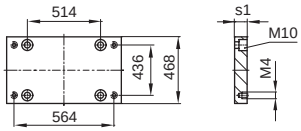


.../596x596 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

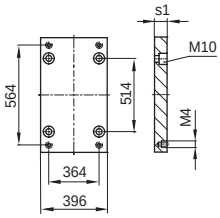
K70 K75 K72



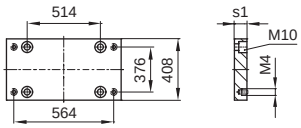
K70 ■



K75 ◆

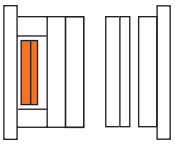


K72 ◇

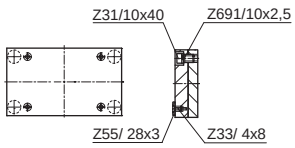


.../596x596 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

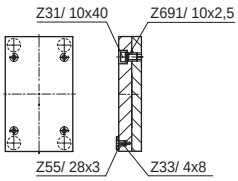
K60-70 K65-75 K62-72



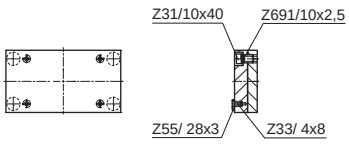
K60-70 •



K65-75 ◆



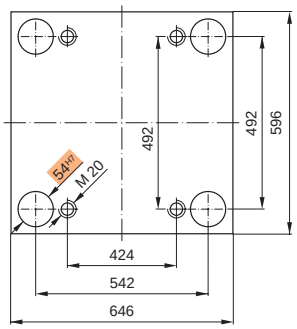
K62-72



.../596x596 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/596x596/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

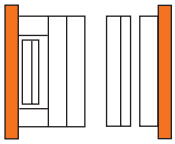
596 x 646

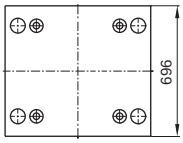


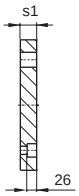
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 596 x 646 x 56 / 1.2085

K11

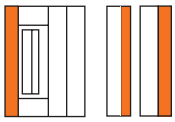


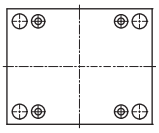


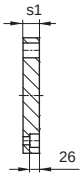


K11/596x646x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16

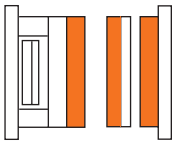




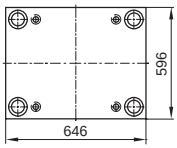


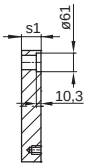
K16/596x646x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

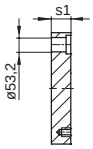
K20
K252



K20 ■ K252 ◆

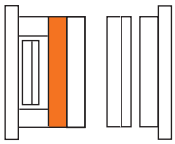


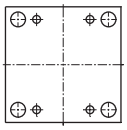


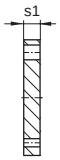


.../596x646 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■				■ ◆	■ ◆	■ ◆			■
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

K30

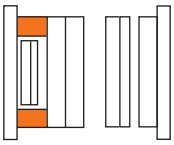




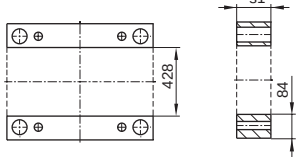


K30/596x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■
116	■			

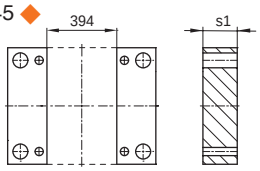
K40
K45
K42



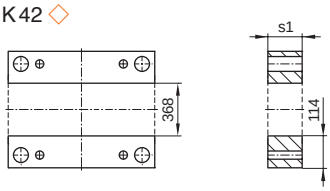
K40 ■



K45 ◆



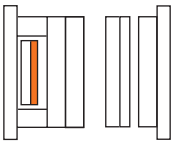
K42 ◇



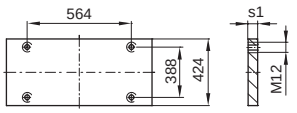
.../596x646 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../596x646 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

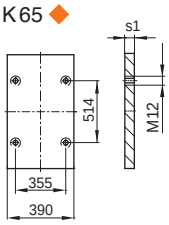
K60
K65
K62



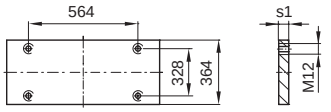
K60 ■



K65 ◆

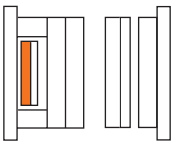


K62 ◇

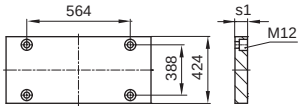


.../596x646 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

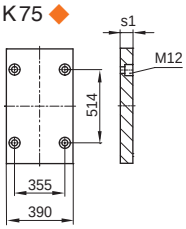
K70
K75
K72



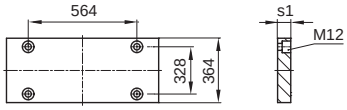
K70 ■



K75 ◆

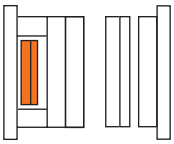


K72 ◇

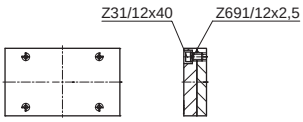


.../596x646 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

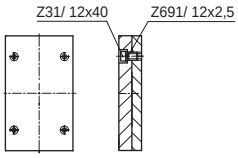
K60-70
K65-75
K62-72



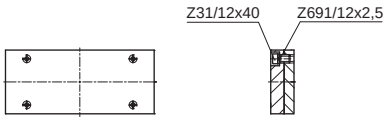
K60-70 ■



K65-75 ◆



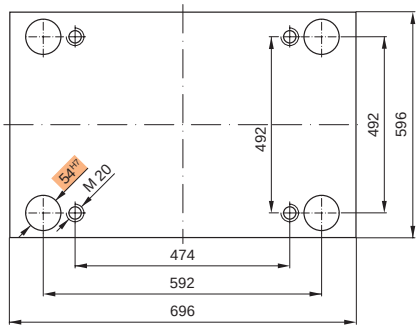
K62-72



.../596x646 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/596x646/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

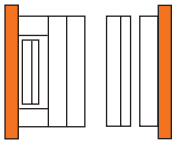
596 x 696

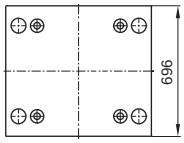


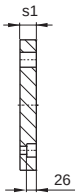
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 596 x 696 x 56 / 1.2085

K11

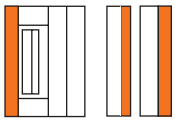


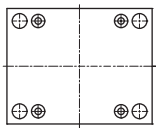


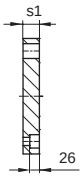


K11/596x696x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16



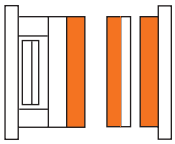


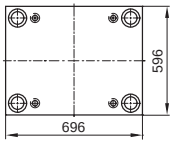


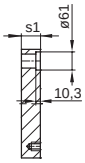
K16/596x696x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

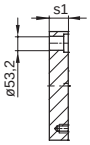
K20
K252

K20 ■ K252 ◆



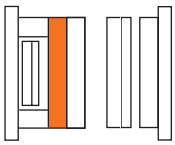


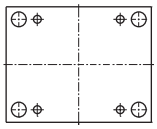


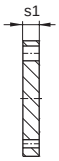


.../596x696 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■						■			
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

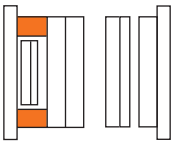




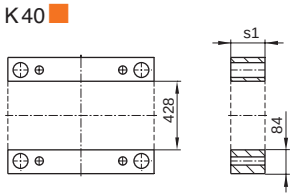


K30/596x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■
116	■			

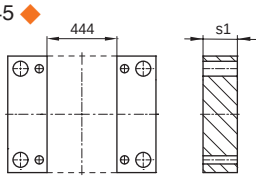
K40 K45 K42



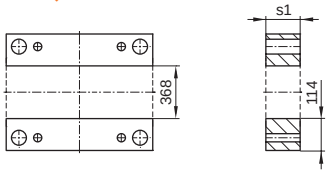
K40 ■



K45 ◆



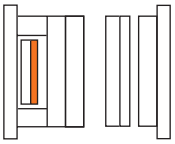
K42 ◇



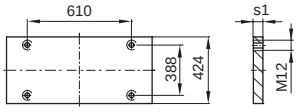
.../596x696 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../596x696 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

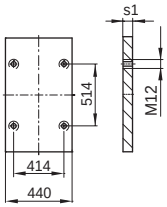
K60 K65 K62



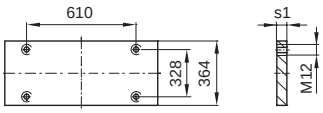
K60 ■



K65 ◆

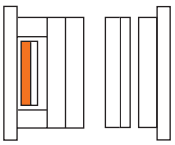


K62 ◇

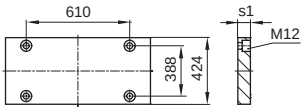


.../596x696 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

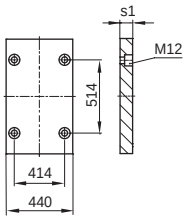
K70 K75 K72



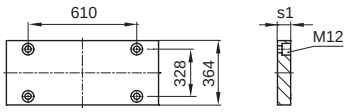
K70 ■



K75 ◆

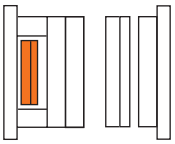


K72 ◇

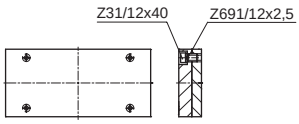


.../596x696 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

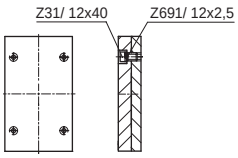
K60-70 K65-75 K62-72



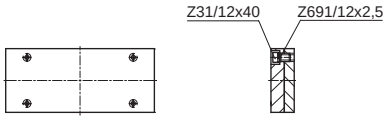
K60-70 ■



K65-75 ◆



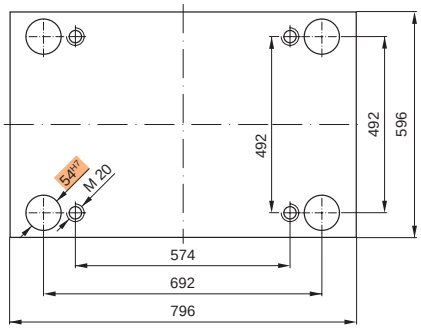
K62-72



.../596x696 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/596x696/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

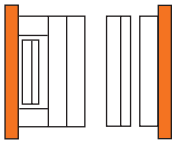
596 x 796

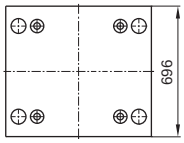


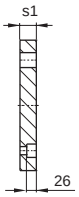
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 596 x 796 x 56 / 1.2085

K11

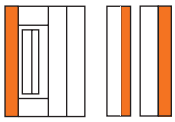


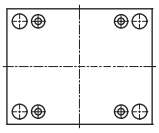


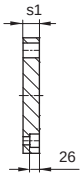


K11/596x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16



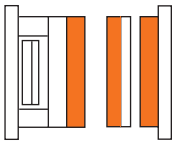


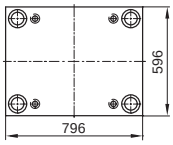


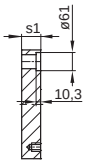
K16/596x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

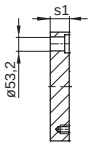
K20
K252

K20 ■ K252 ◆



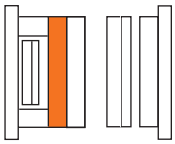


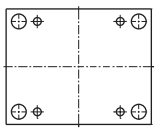


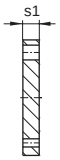


.../596x796 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■						■			
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

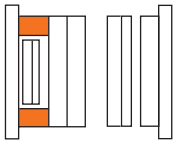




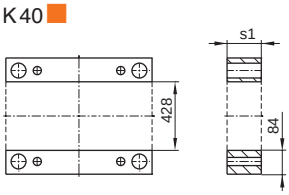


K30/596x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			
96	■			
116	■			

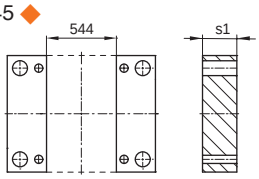
K40 K45 K42



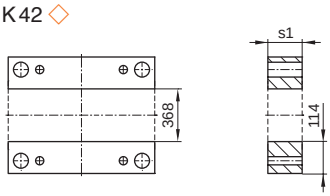
K40 ■



K45 ◆



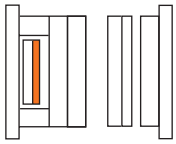
K42 ◇



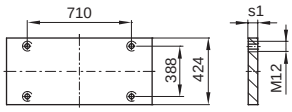
.../596x796 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../596x796 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

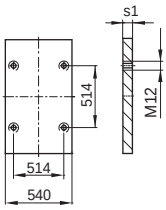
K60 K65 K62



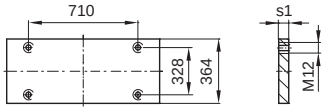
K60 ■



K65 ◆

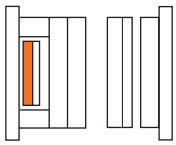


K62 ◇

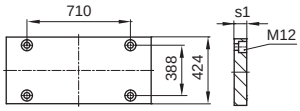


.../596x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

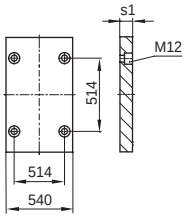
K70 K75 K72



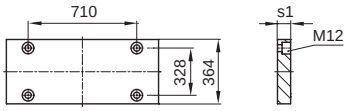
K70 ■



K75 ◆

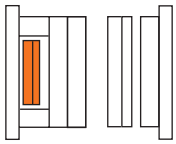


K72 ◇

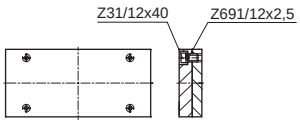


.../596x796 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

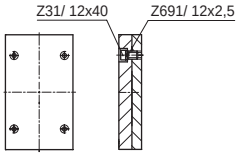
K60-70 K65-75 K62-72



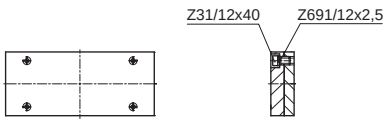
K60-70 ■



K65-75 ◆



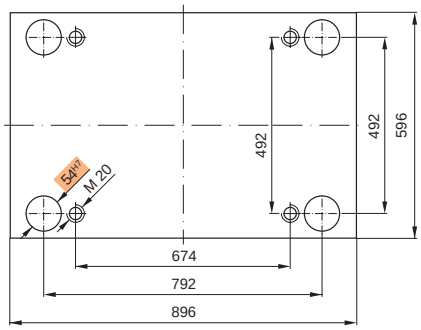
K62-72



.../596x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/596x796/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

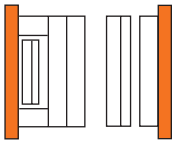
596 x 896

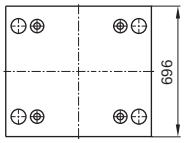


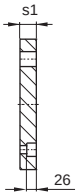
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 596 x 896 x 56 / 1.2085

K11

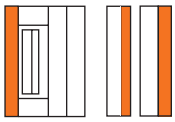


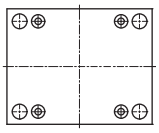


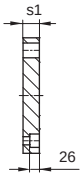


K11/596x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16

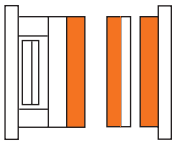




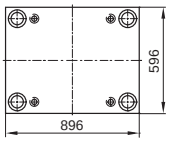


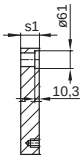
K16/596x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

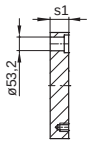
K20
K252



K20 ■ K252 ◆

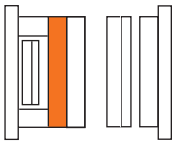


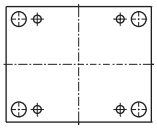


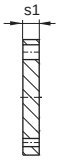


.../596x896 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■						■			
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

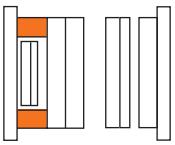




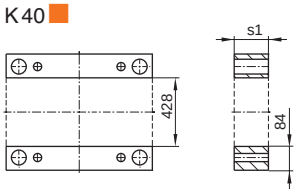


K30/596x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86				■
96				■

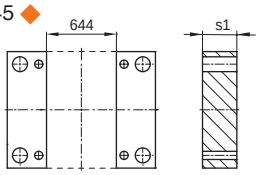
K40 K45 K42



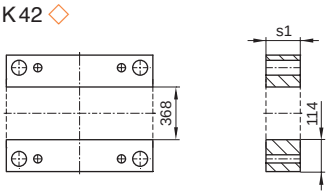
K40 ■



K45 ◆



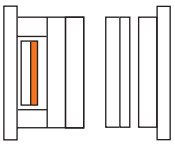
K42 ◇



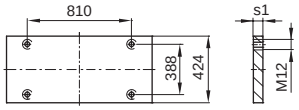
.../596x896 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../596x896 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

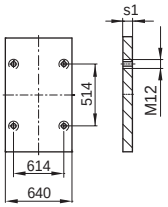
K60 K65 K62



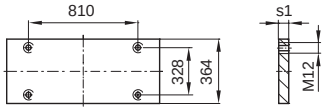
K60 ■



K65 ◆

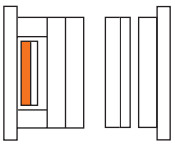


K62 ◇

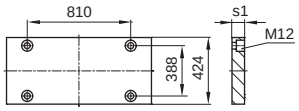


.../596x896 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

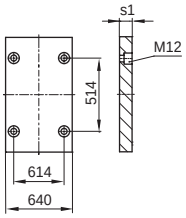
K70 K75 K72



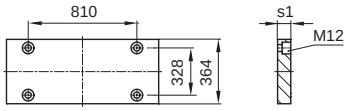
K70 ■



K75 ◆

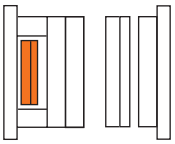


K72 ◇

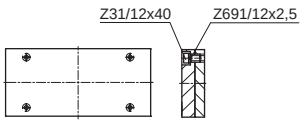


.../596x896 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

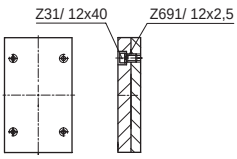
K60-70 K65-75 K62-72



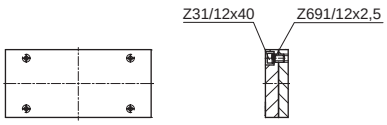
K60-70 ■



K65-75 ◆



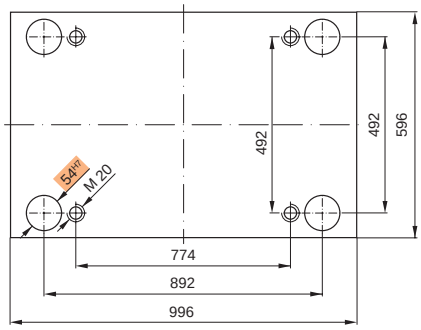
K62-72



.../596x896 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/596x896/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

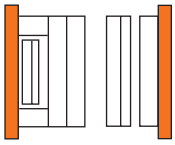
596 x 996

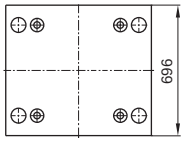


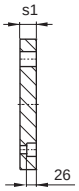
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 596 x 996 x 56 / 1.2085

K11

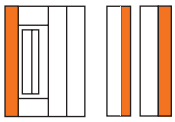


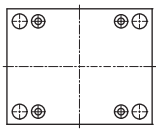


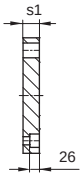


K11/596x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16

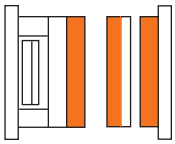




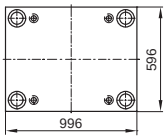


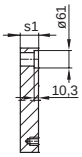
K16/596x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

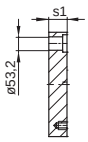
K20
K252



K20 ■ K252 ◆

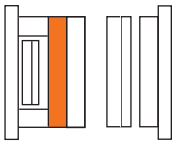


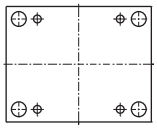


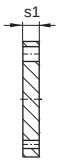


.../596x996 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■						■			
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

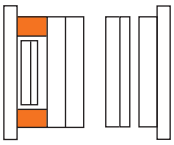




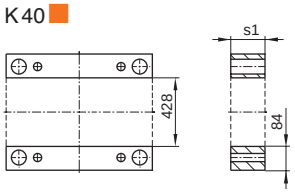


K30/596x996x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■
116	■			

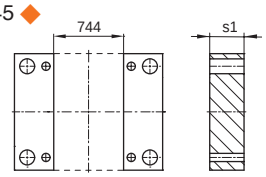
K40
K45
K42



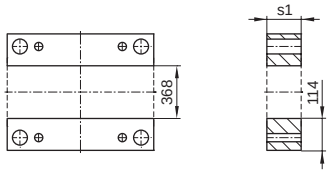
K40 ■



K45 ◆



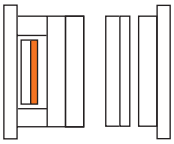
K42 ◇



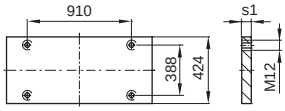
.../596x996 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../596x996 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

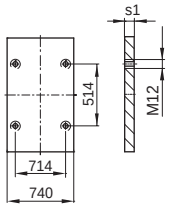
K60
K65
K62



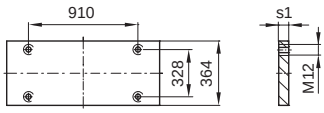
K60 ■



K65 ◆

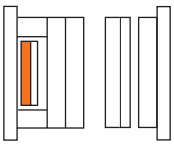


K62 ◇

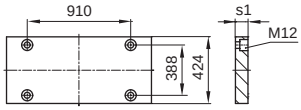


.../596x996 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

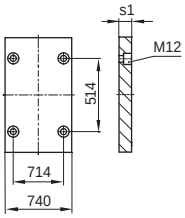
K70
K75
K72



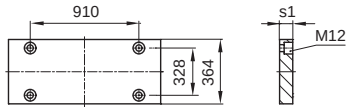
K70 ■



K75 ◆

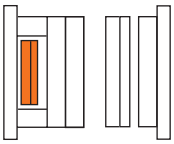


K72 ◇

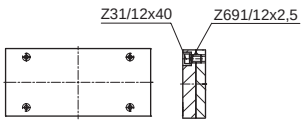


.../596x996 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

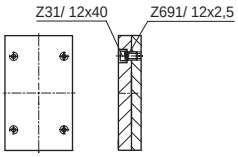
K60-70
K65-75
K62-72



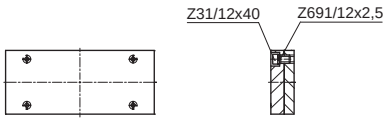
K60-70 ■



K65-75 ◆



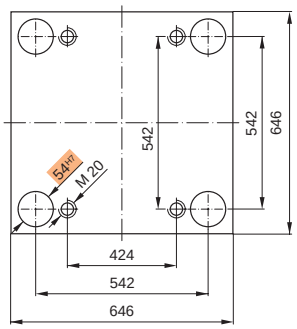
K62-72



.../596x996 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/596x996/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

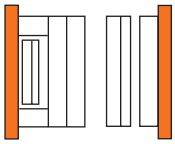
646 x 646

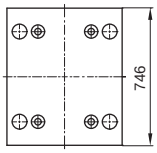


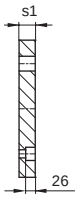
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 646 x 646 x 56 / 1.2085

K11

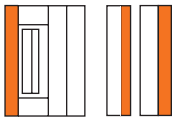


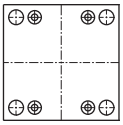


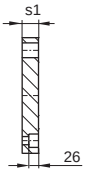


K11/646x646x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16

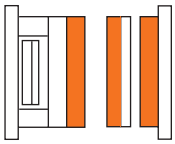




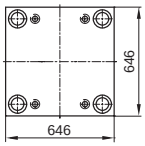


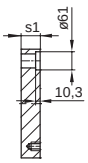
K16/646x646x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

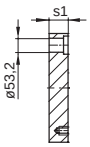
K20
K252



K20 ■ K252 ◆

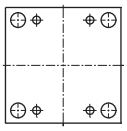


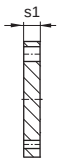




.../646x646 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■						■			
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

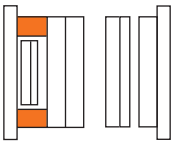
K30



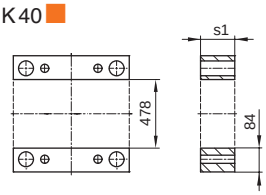


K30/646x646x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

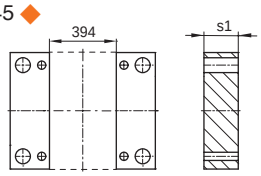
K40 K45 K42



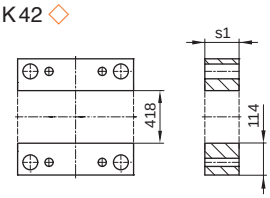
K40 ■



K45 ◆



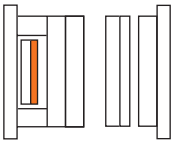
K42 ◇



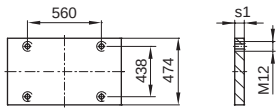
.../646x646 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../646x646 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

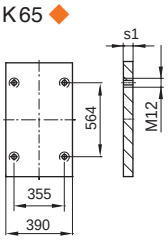
K60 K65 K62



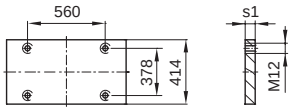
K60 ■



K65 ◆

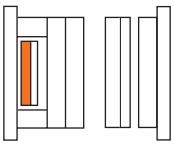


K62 ◇

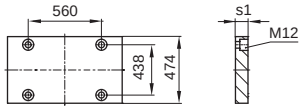


.../646x646 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

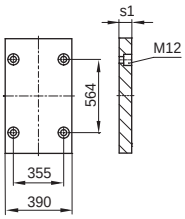
K70 K75 K72



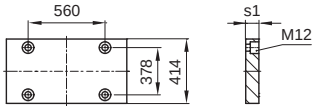
K70 ■



K75 ◆

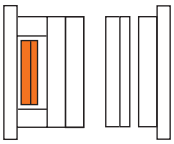


K72 ◇

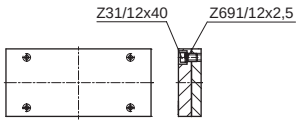


.../646x646 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

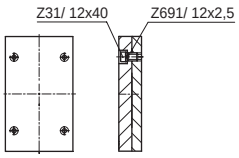
K60-70 K65-75 K62-72



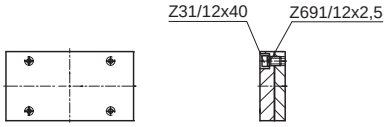
K60-70 ■



K65-75 ◆



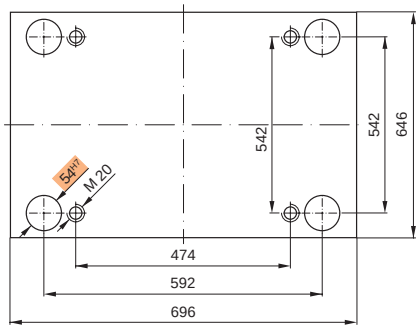
K62-72



.../646x646 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/646x646/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

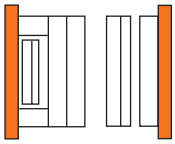
646 x 696

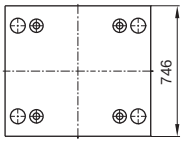


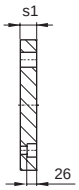
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 646 x 696 x 56 / 1.2085

K11

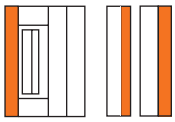


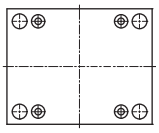


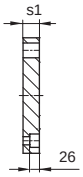


K11/646x696x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16



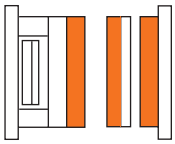


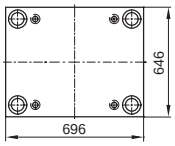


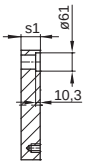
K16/646x696x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

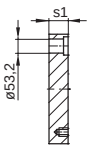
K20
K252

K20 ■ K252 ◆



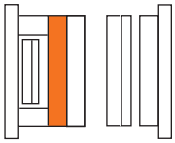


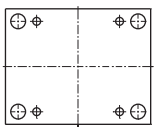


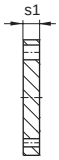


.../646x696 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■						■			
46	■				■ ◆	■ ◆	■ ◆			■
56	■				■ ◆	■ ◆	■ ◆			■
66	■				■ ◆	■ ◆	■ ◆			■
76	■				■ ◆	■ ◆	■ ◆			■
86	■				■ ◆	■ ◆	■ ◆			■
96	■				■ ◆	■ ◆	■ ◆			■
116	■				■ ◆	■ ◆	■ ◆			■
136	■				■ ◆	■ ◆	■ ◆			
156	■				■ ◆	■ ◆	■ ◆			
176	■				■ ◆	■ ◆	■ ◆			
196	■				■ ◆	■ ◆	■ ◆			

K30

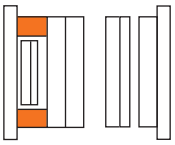




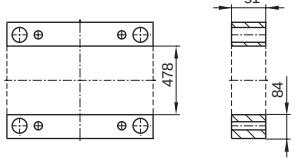


K30/646x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

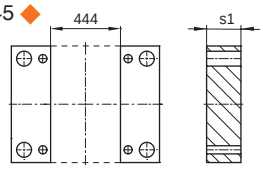
K40
K45
K42



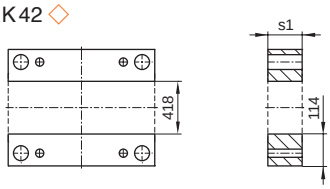
K40 ■



K45 ◆



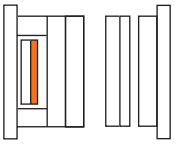
K42 ◇



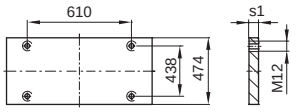
.../646x696 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../646x696 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	◇		

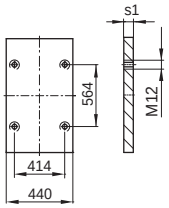
K60
K65
K62



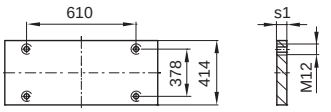
K60 ■



K65 ◆

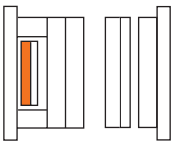


K62 ◇

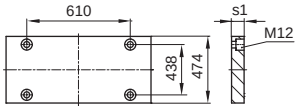


.../646x696 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

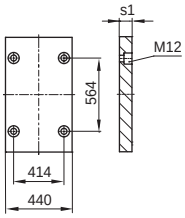
K70
K75
K72



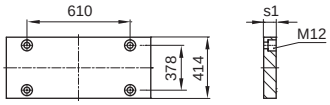
K70 ■



K75 ◆

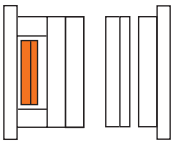


K72 ◇

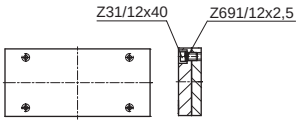


.../646x696 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

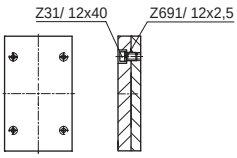
K60-70
K65-75
K62-72



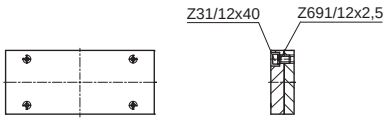
K60-70 ■



K65-75 ◆



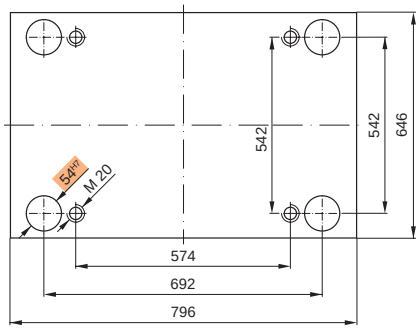
K62-72



.../646x696 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/646x796/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

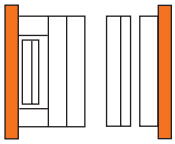
646 x 796

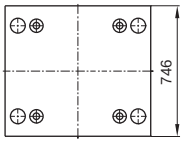


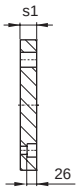
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 646 x 796 x 56 / 1.2085

K11

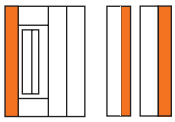


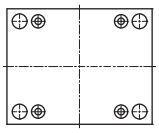


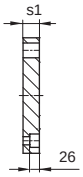


K11/646x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16



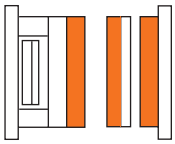


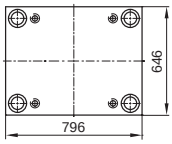


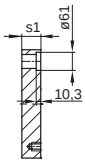
K16/646x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

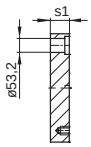
K20
K252

K20 ■ K252 ◆



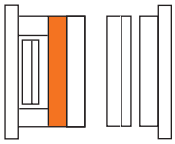


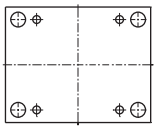


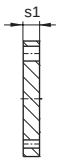


.../646x796 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■						■			
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

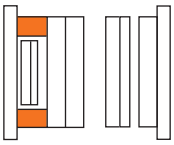




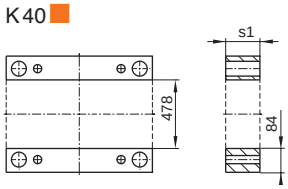


K30/646x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

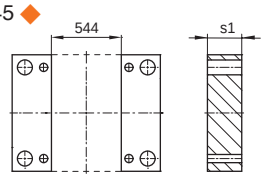
K40
K45
K42



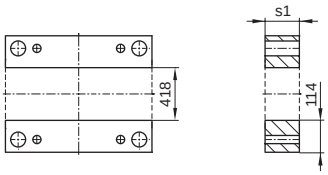
K40 ■



K45 ◆



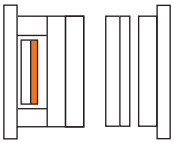
K42 ◇



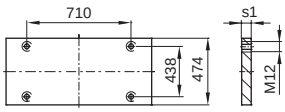
.../646x796 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../646x796 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

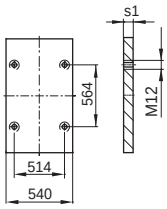
K60
K65
K62



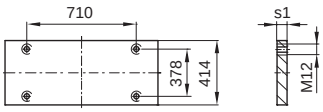
K60 ■



K65 ◆

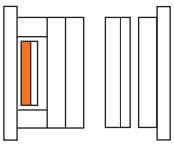


K62 ◇

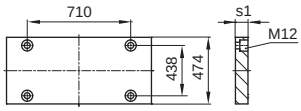


.../646x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

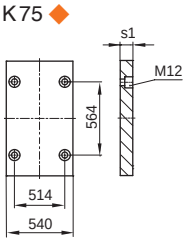
K70
K75
K72



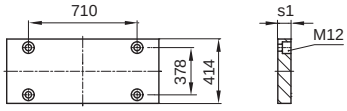
K70 ■



K75 ◆

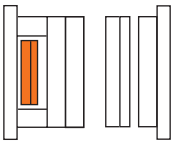


K72 ◇

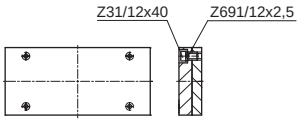


.../646x796 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

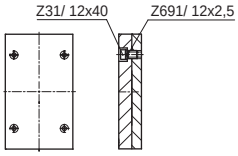
K60-70
K65-75
K62-72



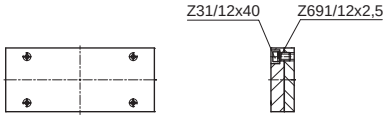
K60-70 ■



K65-75 ◆



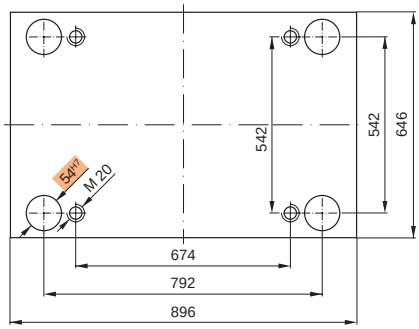
K62-72



.../646x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/646x796/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

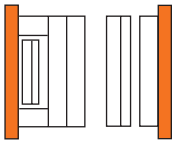
646 x 896

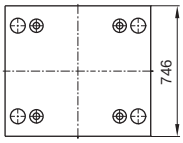


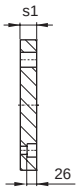
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 646 x 896 x 56 / 1.2085

K11

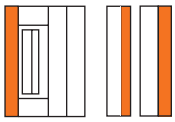


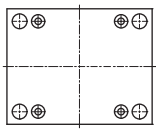


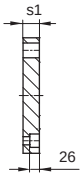


K11/646x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16

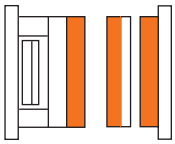




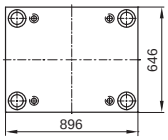


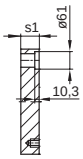
K16/646x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

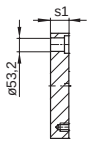
K20
K252



K20 ■ K252 ◆

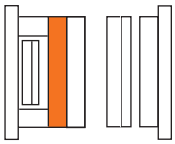


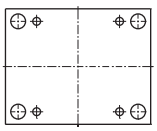


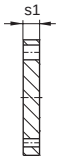


.../646x896 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■						■			
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

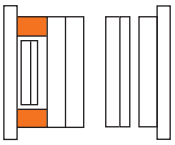




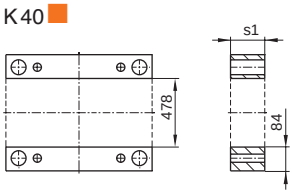


K30/646x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

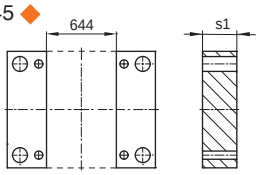
K40
K45
K42



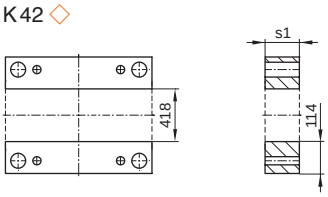
K40 ■



K45 ◆



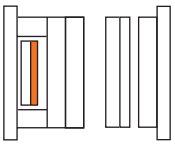
K42 ◇



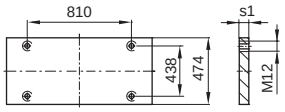
.../646x896 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../646x896 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

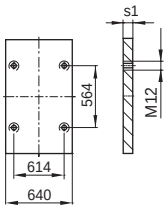
K60
K65
K62



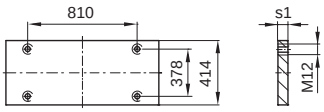
K60 ■



K65 ◆

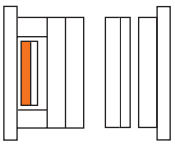


K62 ◇

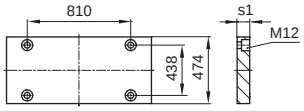


.../646x896 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

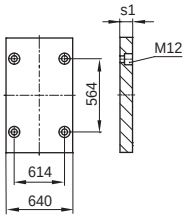
K70
K75
K72



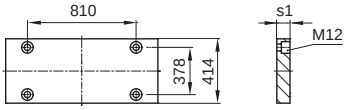
K70 ■



K75 ◆

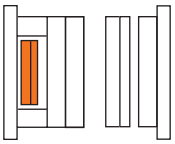


K72 ◇

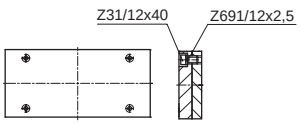


.../646x896 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

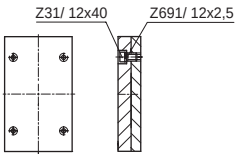
K60-70
K65-75
K62-72



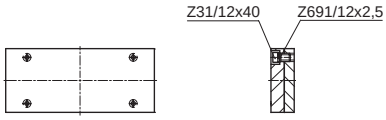
K60-70 ■



K65-75 ◆



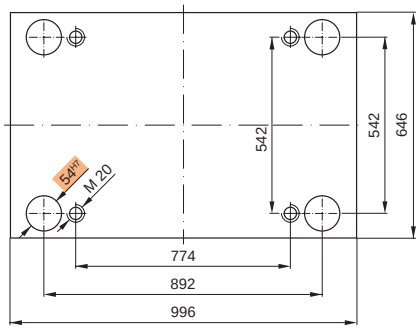
K62-72



.../646x896 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/646x896/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

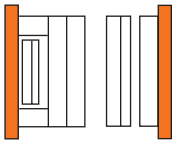
646 x 996

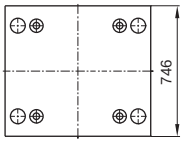


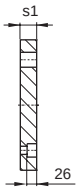
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 646 x 996 x 56 / 1.2085

K11

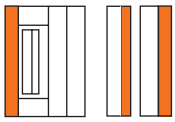


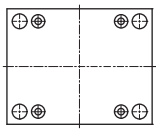


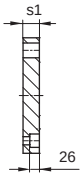


K11/646x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

K16

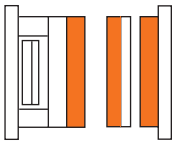




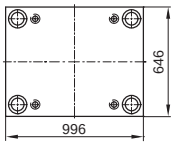


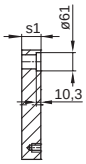
K16/646x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

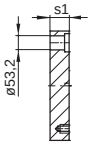
K20
K252



K20 ■ K252 ◆

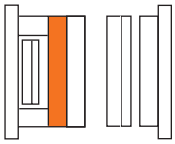


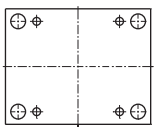


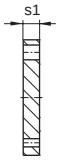


.../646x996 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■						■			
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

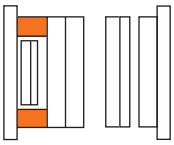




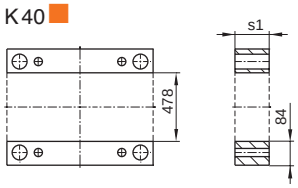


K30/646x996x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

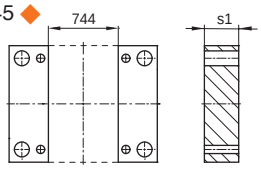
K40
K45
K42



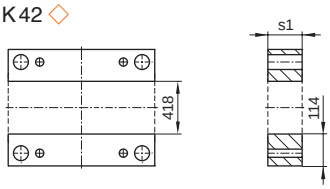
K40 ■



K45 ◆



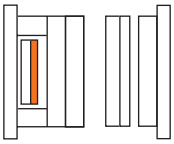
K42 ◇



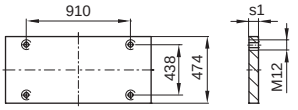
.../646x996 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../646x996 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

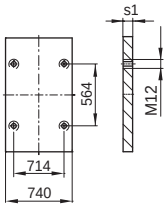
K60
K65
K62



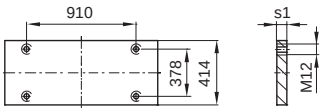
K60 ■



K65 ◆

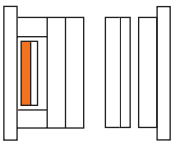


K62 ◇

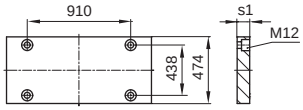


.../646x996 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

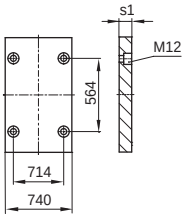
K70
K75
K72



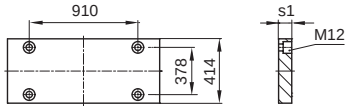
K70 ■



K75 ◆

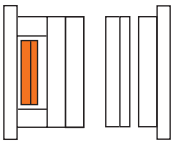


K72 ◇

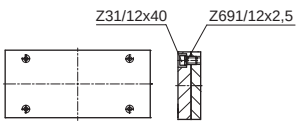


.../646x996 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

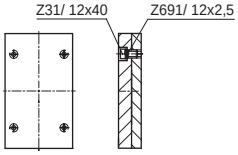
K60-70
K65-75
K62-72



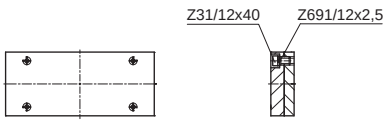
K60-70 ■



K65-75 ◆



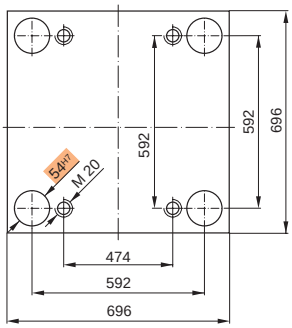
K62-72



.../646x996 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/646x996/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

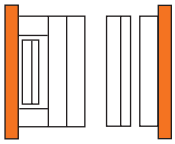
696 x 696

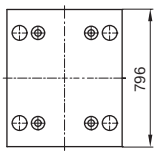


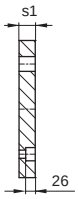
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 696 x 696 x 56 / 1.2085

K11

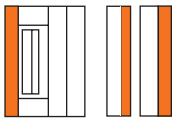


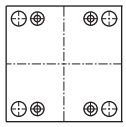


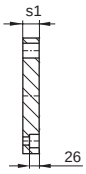


K11/696x696x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16

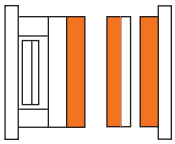




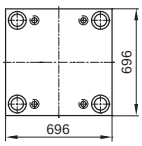


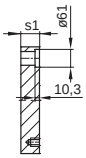
K16/696x696x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

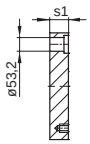
K20
K252



K20 ■ K252 ◆

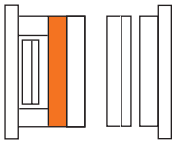


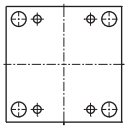


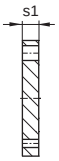


.../696x696 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■									
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

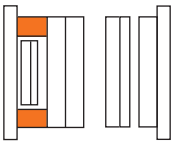




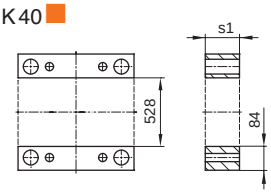


K30/696x696x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

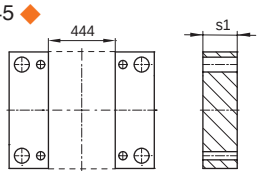
K40 K45 K42



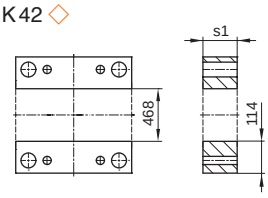
K40 ■



K45 ◆



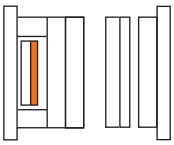
K42 ◇



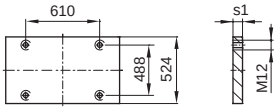
.../696x696 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../696x696 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

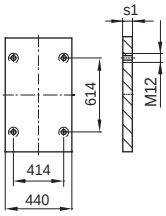
K60 K65 K62



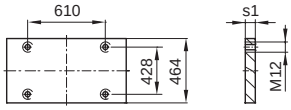
K60 ■



K65 ◆

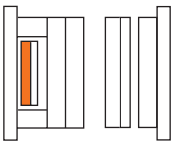


K62 ◇

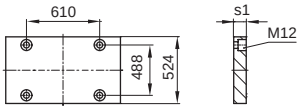


.../696x696 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

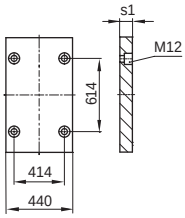
K70 K75 K72



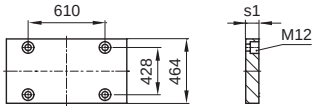
K70 ■



K75 ◆

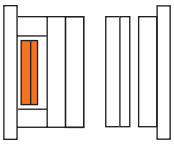


K72 ◇

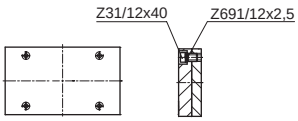


.../696x696 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

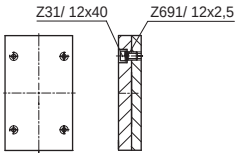
K60-70 K65-75 K62-72



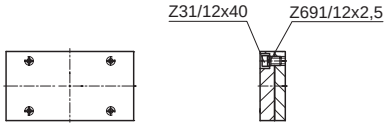
K60-70 ■



K65-75 ◆



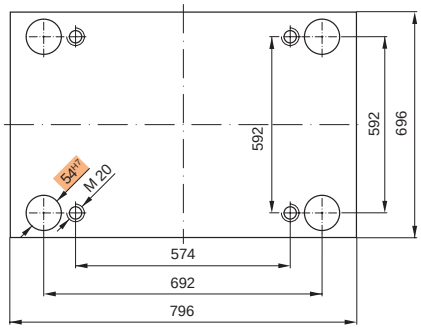
K62-72



.../696x696 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/696x696/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

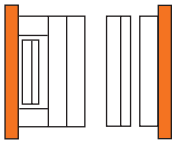
696 x 796

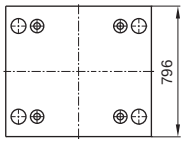


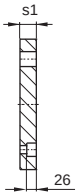
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 696 x 796 x 56 / 1.2085

K11

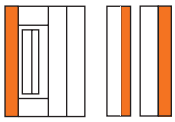


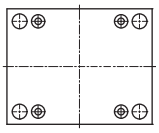


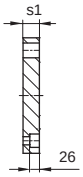


K11/696x796x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16

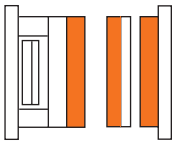




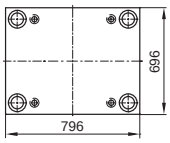


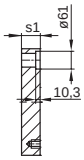
K16/696x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

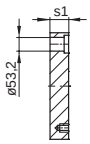
K20
K252



K20 ■ K252 ◆

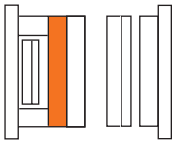


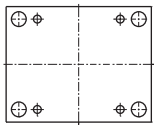


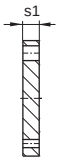


.../696x796 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■									
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

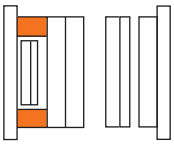




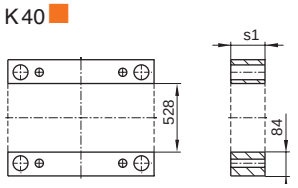


K30/696x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

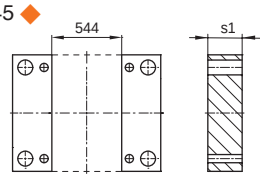
K40
K45
K42



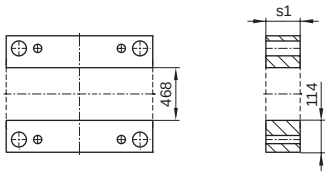
K40 ■



K45 ◆



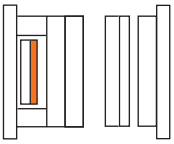
K42 ◇



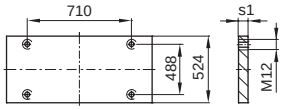
.../696x796 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../696x796 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■		

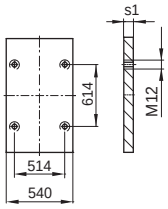
K60
K65
K62



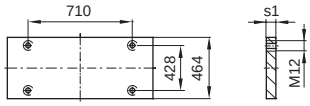
K60 ■



K65 ◆

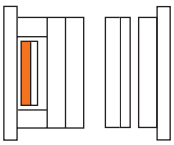


K62 ◇

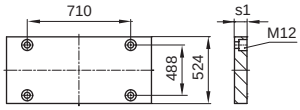


.../696x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

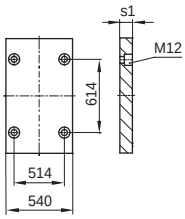
K70
K75
K72



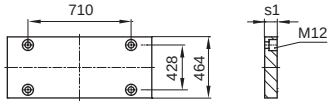
K70 ■



K75 ◆

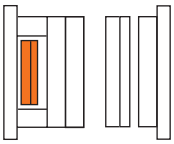


K72 ◇

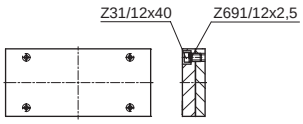


.../696x796 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

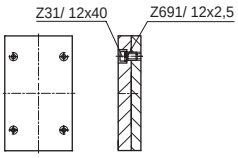
K60-70
K65-75
K62-72



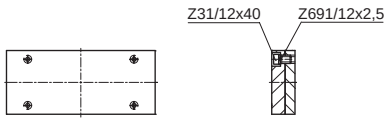
K60-70 ■



K65-75 ◆



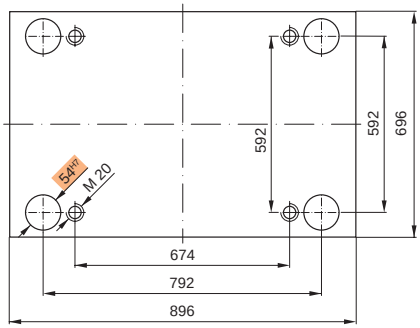
K62-72



.../696x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/696x796/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

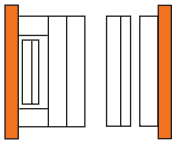
696 x 896

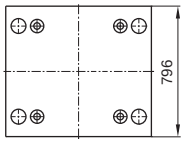


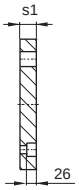
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 696 x 896 x 56 / 1.2085

K11

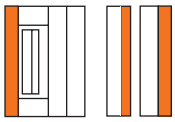


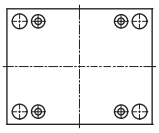


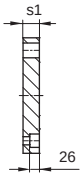


K11/696x896x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16

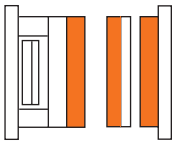




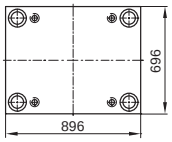


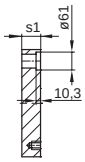
K16/696x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

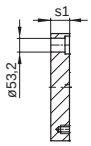
K20
K252



K20 ■ K252 ◆

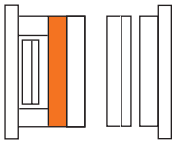


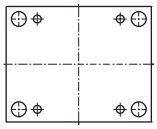


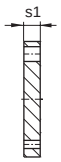


.../696x896 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■									
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

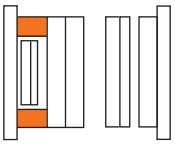




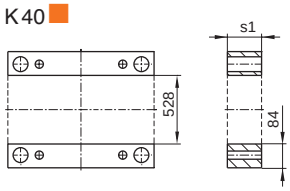


K30/696x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

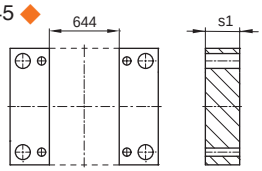
K40 K45 K42



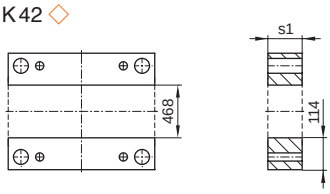
K40 ■



K45 ◆



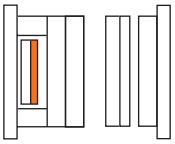
K42 ◇



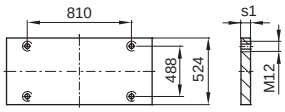
.../696x896 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../696x896 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

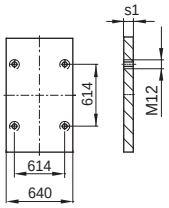
K60 K65 K62



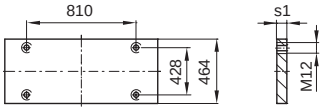
K60 ■



K65 ◆

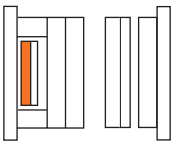


K62 ◇

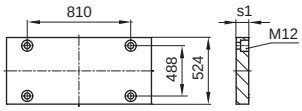


.../696x896 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

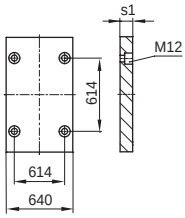
K70 K75 K72



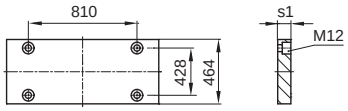
K70 ■



K75 ◆

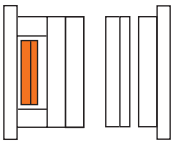


K72 ◇

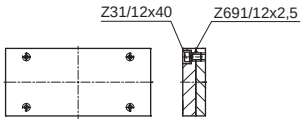


.../696x896 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◆	■ ◆	■ ◆ ◆

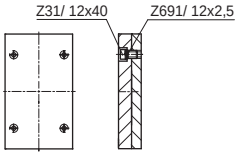
K60-70 K65-75 K62-72



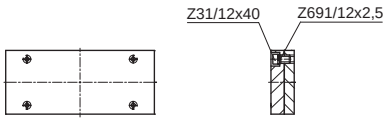
K60-70 ■



K65-75 ◆



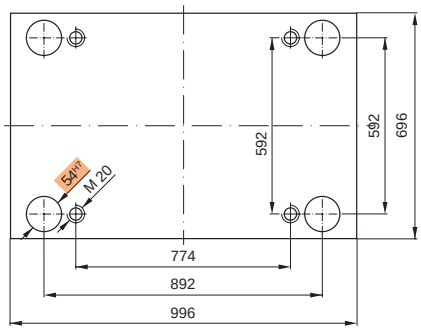
K62-72



.../696x896 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/696x896/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

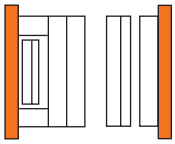
696 x 996

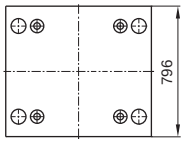


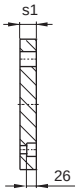
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 696 x 996 x 56 / 1.2085

K11

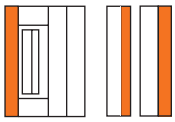


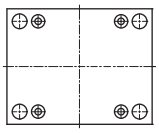


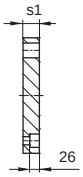


K11/696x996x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16



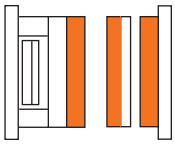


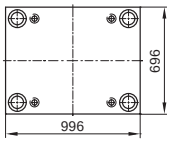


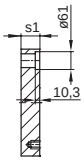
K16/696x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

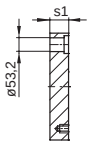
K20
K252

K20 ■ K252 ◆



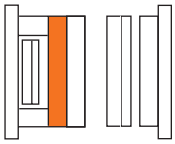


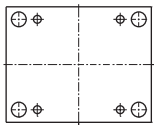


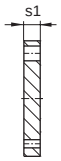


.../696x996 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36	■									
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

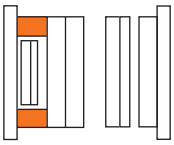




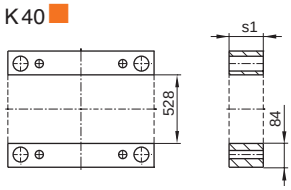


K30/696x996x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

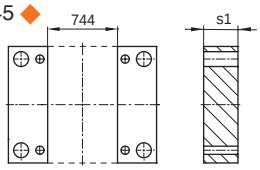
K40 K45 K42



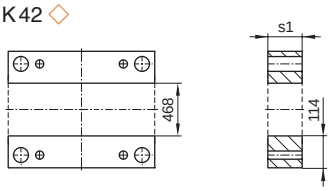
K40 ■



K45 ◆



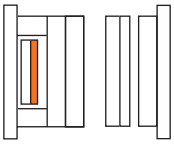
K42 ◇



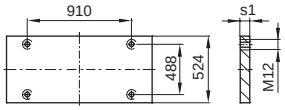
.../696x996 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../696x996 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

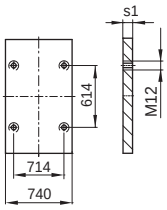
K60 K65 K62



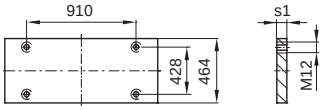
K60 ■



K65 ◆

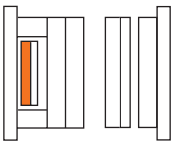


K62 ◇

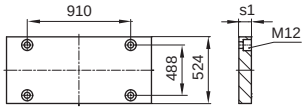


.../696x996 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

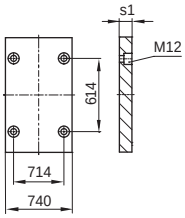
K70 K75 K72



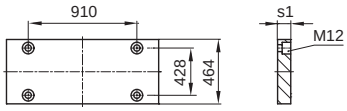
K70 ■



K75 ◆

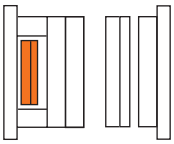


K72 ◇

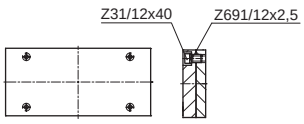


.../696x996 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

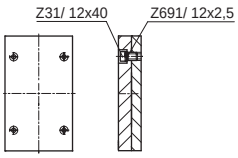
K60-70 K65-75 K62-72



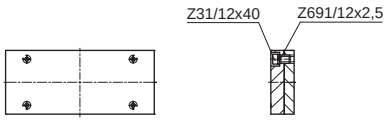
K60-70 ■



K65-75 ◆



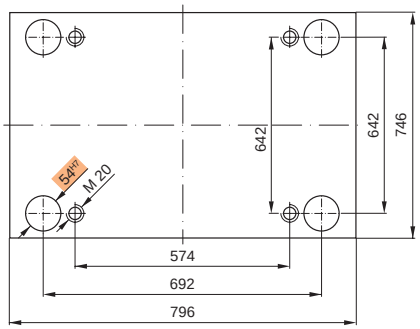
K62-72



.../696x996 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/696x996/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

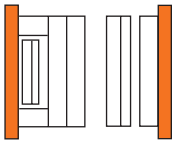
746 x 796

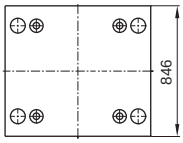


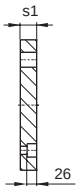
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 746 x 796 x 56 / 1.2085

K11

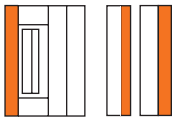


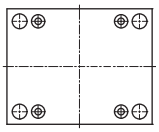


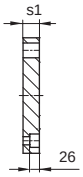


K11/746x796x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16

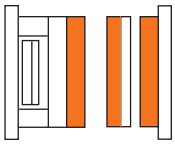




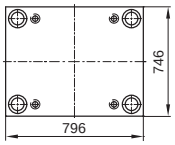


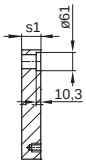
K16/746x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

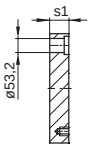
K20
K252



K20 ■ K252 ◆

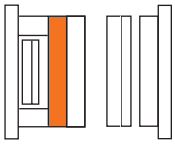


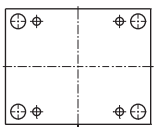


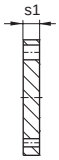


.../746x796 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

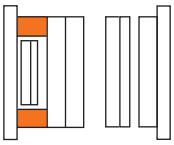




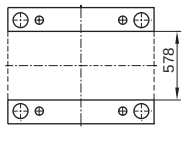


K30/746x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

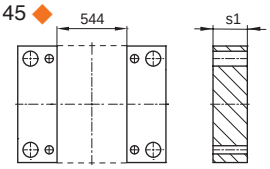
K40 K45 K42



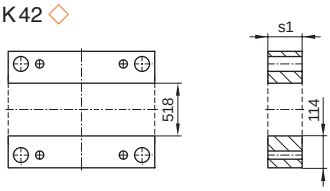
K40 ■



K45 ◆



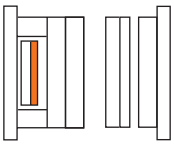
K42 ◇



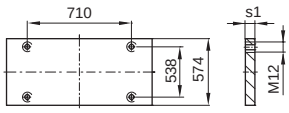
.../746x796 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../746x796 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

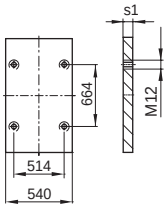
K60 K65 K62



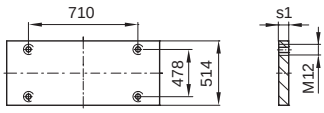
K60 ■



K65 ◆

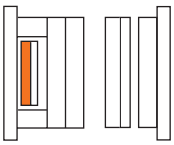


K62 ◇

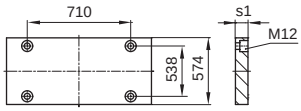


.../746x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

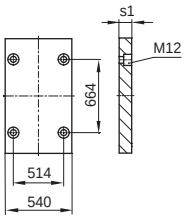
K70 K75 K72



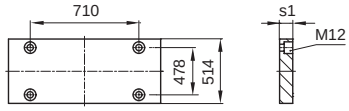
K70 ■



K75 ◆

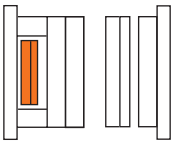


K72 ◇

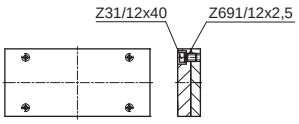


.../746x796 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

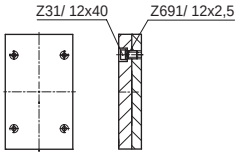
K60-70 K65-75 K62-72



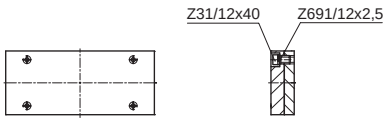
K60-70 ■



K65-75 ◆



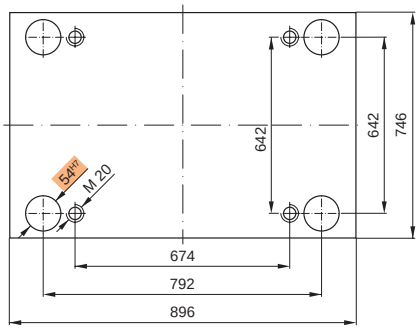
K62-72



.../746x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/746x796/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

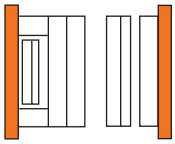
746 x 896

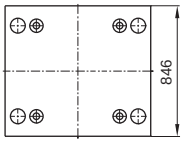


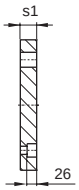
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 746 x 896 x 56 / 1.2085

K11

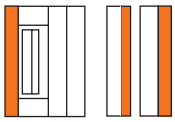


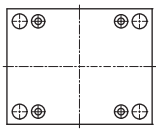


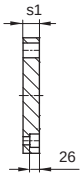


K11/746x896x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16

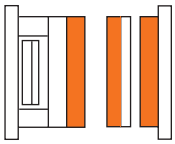




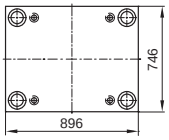


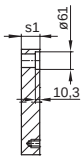
K16/746x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

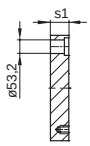
K20
K252



K20 ■ K252 ◆

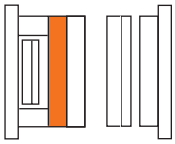


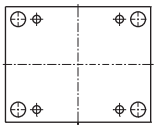


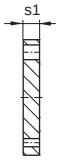


.../746x896 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

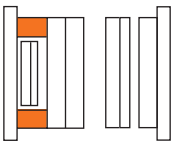




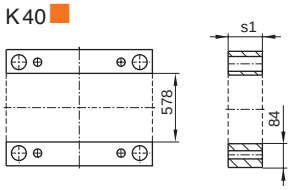


K30/746x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

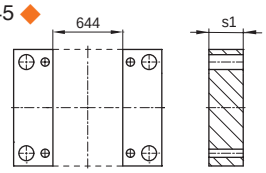
K40 K45 K42



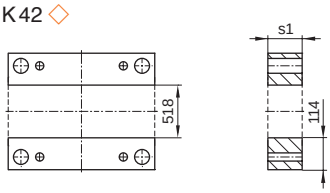
K40 ■



K45 ◆



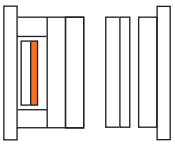
K42 ◇



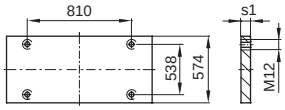
.../746x896 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../746x896 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

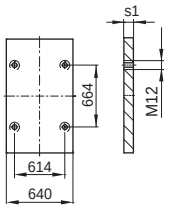
K60 K65 K62



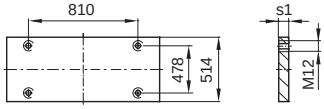
K60 ■



K65 ◆

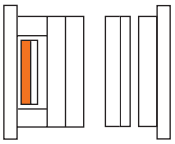


K62 ◇

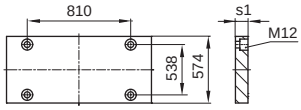


.../746x896 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

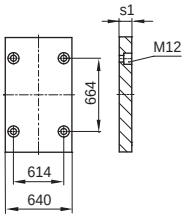
K70 K75 K72



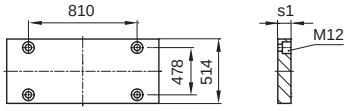
K70 ■



K75 ◆

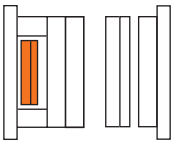


K72 ◇

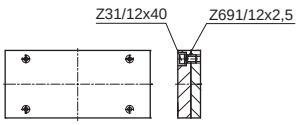


.../746x896 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

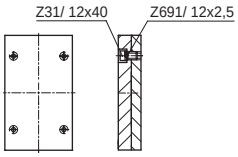
K60-70 K65-75 K62-72



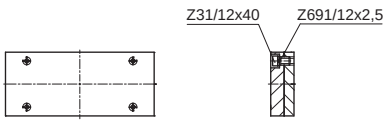
K60-70 ■



K65-75 ◆



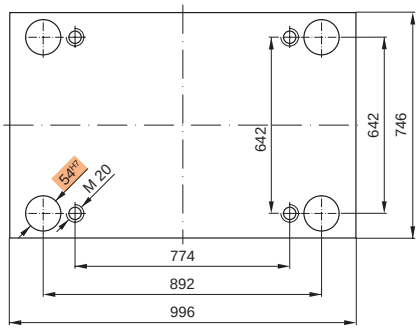
K62-72



.../746x896 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/746x896/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

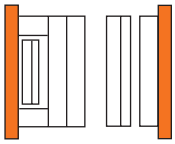
746 x 996

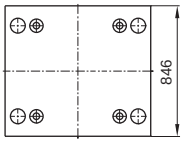


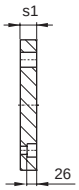
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 746 x 996 x 56 / 1.2085

K11

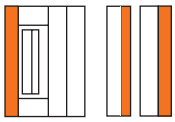


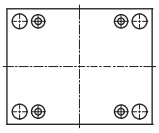


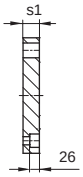


K11/746x996x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16

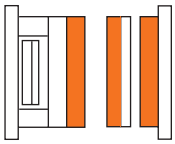




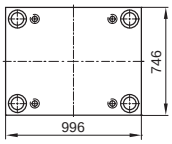


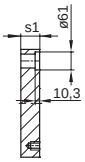
K16/746x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

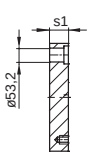
K20
K252



K20 ■ K252 ◆

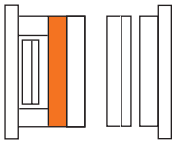


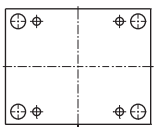


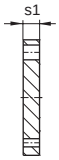


.../746x996 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

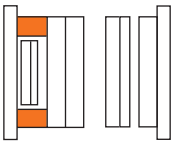




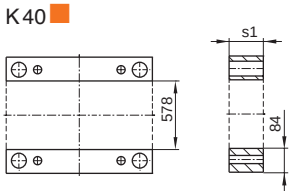


K30/746x996x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

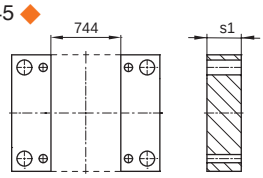
K40
K45
K42



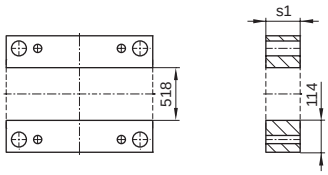
K40 ■



K45 ◆



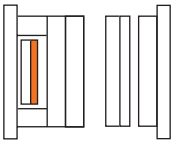
K42 ◇



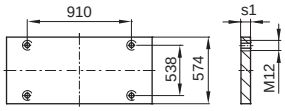
.../746x996 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../746x996 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

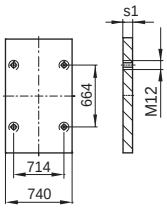
K60
K65
K62



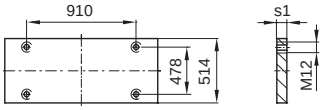
K60 ■



K65 ◆

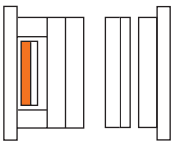


K62 ◇

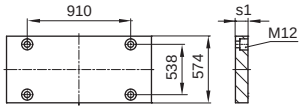


.../746x996 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

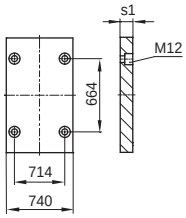
K70
K75
K72



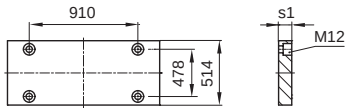
K70 ■



K75 ◆

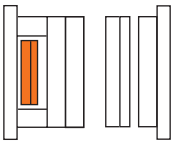


K72 ◇

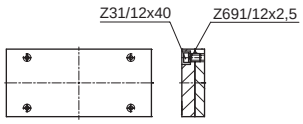


.../746x996 x s1/	1.1730	1.2085	1.2312
36	■ ◆ ◇	■ ◆	■ ◆ ◇

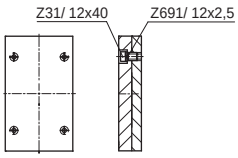
K60-70
K65-75
K62-72



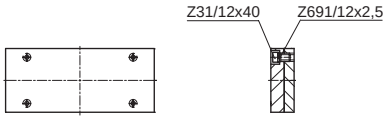
K60-70 ■



K65-75 ◆



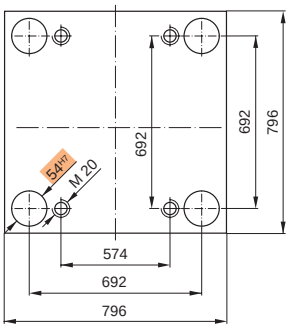
K62-72



.../746x996 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/746x996/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

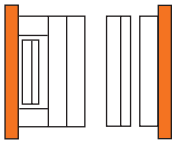
796 x 796

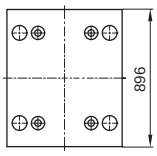


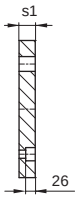
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 796 x 796 x 56 / 1.2085

K11

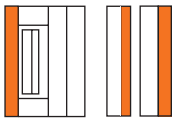


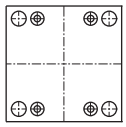


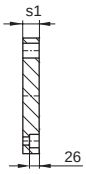


K11/796x796x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16

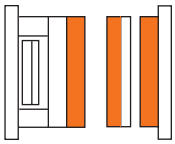




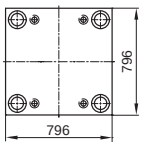


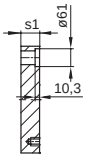
K16/796x796x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

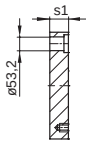
K20
K252



K20 ■ K252 ◆

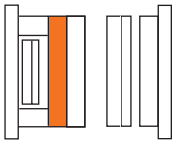


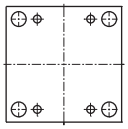


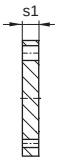


.../796x796 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
36							■			
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

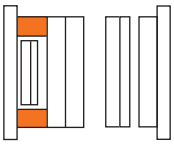




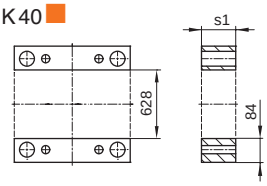


K30/796x796x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

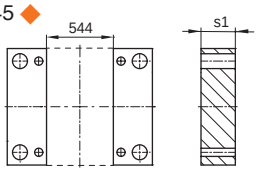
K40 K45 K42



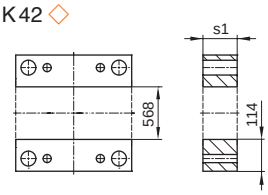
K40 ■



K45 ◆



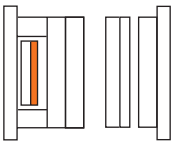
K42 ◇



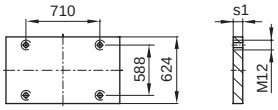
.../796x796 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../796x796 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

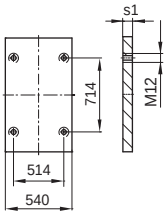
K60 K65 K62



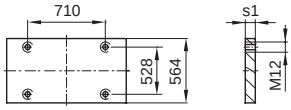
K60 ■



K65 ◆

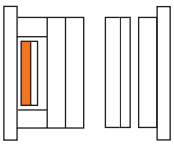


K62 ◇

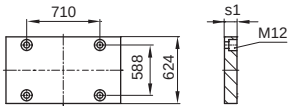


.../796x796 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

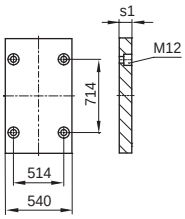
K70 K75 K72



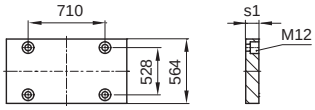
K70 ■



K75 ◆

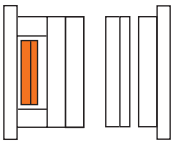


K72 ◆

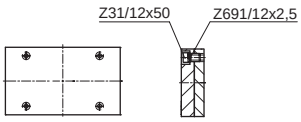


.../796x796 x s1/	1.1730	1.2085	1.2312
46	■ ◆ ◇	■ ◆	■ ◆ ◇

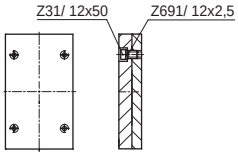
K60-70 K65-75 K62-72



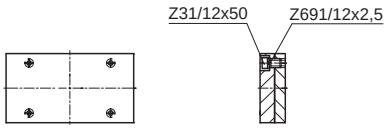
K60-70 ■



K65-75 ◆



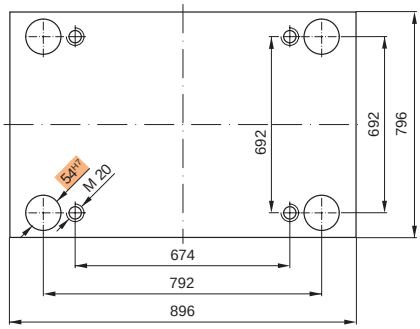
K62-72



.../796x796 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/796x796/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

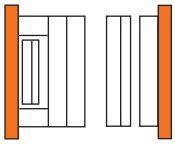
796 x 896

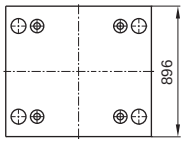


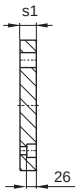
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 796 x 896 x 56 / 1.2085

K11

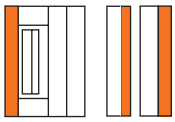


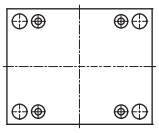


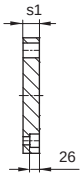


K11/796x896x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16

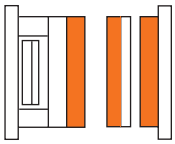




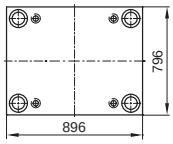


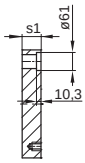
K16/796x896x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

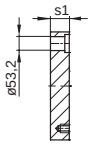
K20
K252



K20 ■ K252 ◆

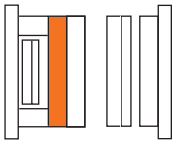


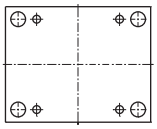


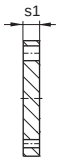


.../796x896 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

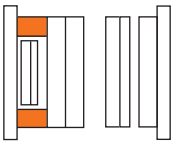




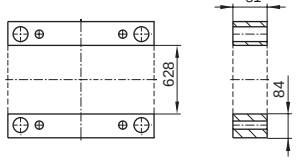


K30/796x896x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

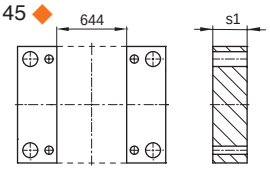
K40 K45 K42



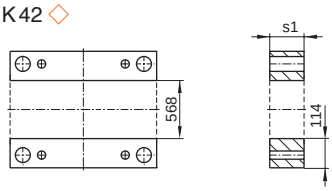
K40 ■



K45 ◆



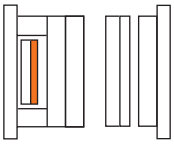
K42 ◇



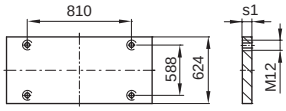
.../796x896 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../796x896 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

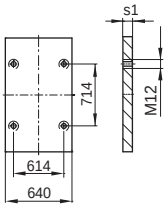
K60 K65 K62



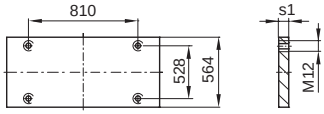
K60 ■



K65 ◆

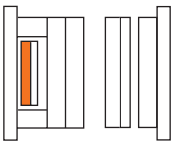


K62 ◇

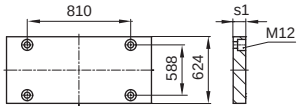


.../796x896 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

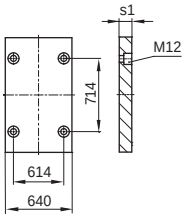
K70 K75 K72



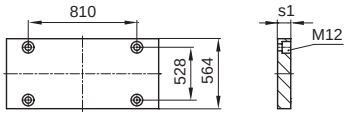
K70 ■



K75 ◆

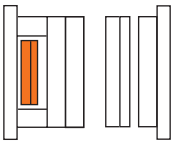


K72 ◇

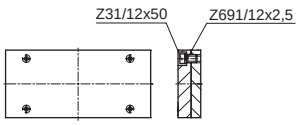


.../796x896 x s1/	1.1730	1.2085	1.2312
46	■ ◆ ◇	■ ◆	■ ◆ ◇

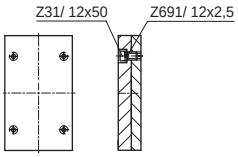
K60-70 K65-75 K62-72



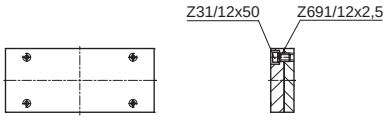
K60-70 •



K65-75 ◆



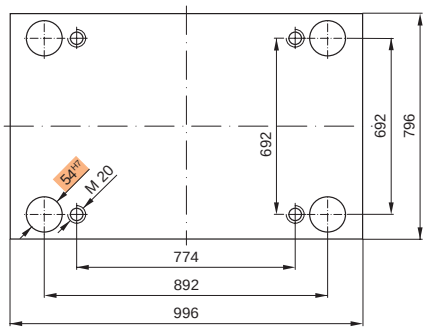
K62-72



.../796x896 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/796x896/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

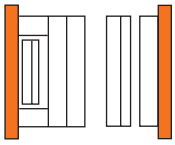
796 x 996

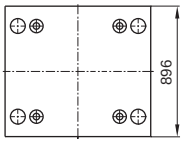


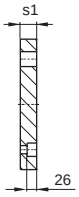
Bestellbeispiel:
Ordering example:
Exemple de commande:

K20 / 796 x 996 x 56 / 1.2085

K11

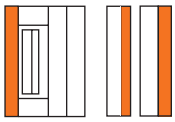


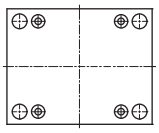


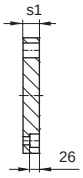


K11/796x996x s1 /	1.1730	1.2162	1.2085	1.2312
76	■		■	■

K16

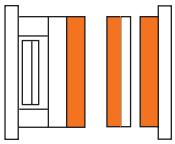




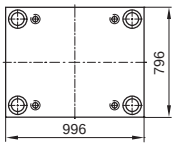


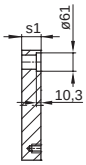
K16/796x996x s1 /	1.1730	1.2162	1.2085	1.2312
56	■		■	■

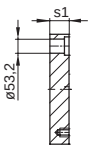
K20
K252



K20 ■ K252 ◆

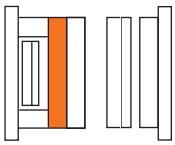


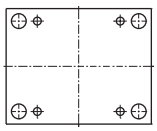


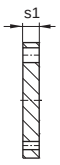


.../796x996 xs1/	1.1730	1.2162	1.2767	1.2083	1.2085	1.2311	1.2312	1.2343	1.2343 ESU/ESR	Toolox33
46	■				■◆	■◆	■◆			■
56	■				■◆	■◆	■◆			■
66	■				■◆	■◆	■◆			■
76	■				■◆	■◆	■◆			■
86	■				■◆	■◆	■◆			■
96	■				■◆	■◆	■◆			■
116	■				■◆	■◆	■◆			■
136	■				■◆	■◆	■◆			
156	■				■◆	■◆	■◆			
176	■				■◆	■◆	■◆			
196	■				■◆	■◆	■◆			

K30

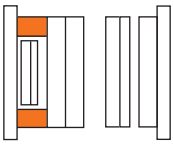




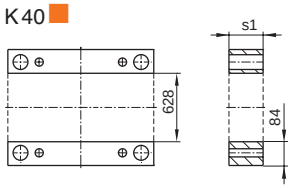


K30/796x996x s1 /	1.1730	1.2162	1.2085	1.2312
46	■			■
56	■		■	■
76	■		■	■
86	■			■
96	■			■

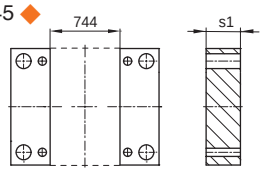
K40 K45 K42



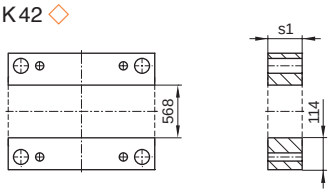
K40 ■



K45 ◆



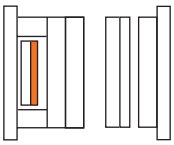
K42 ◇



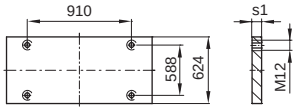
.../796x996 x s1/	1.1730	1.2085	1.2312
86	■ ◇		
96	■ ◆ ◇	■ ◆	
116	■ ◆ ◇	■ ◆	

.../796x996 x s1/	1.1730	1.2085	1.2312
136	■ ◆ ◇	■ ◆	
156	■ ◆ ◇	■ ◆	
176	■ ◇		

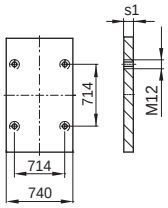
K60 K65 K62



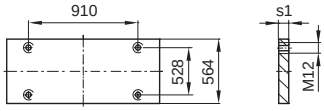
K60 ■



K65 ◆

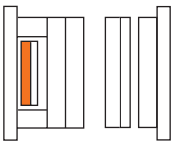


K62 ◇

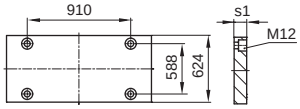


.../796x996 x s1/	1.1730	1.2085	1.2312
27	■ ◆ ◇	■ ◆	

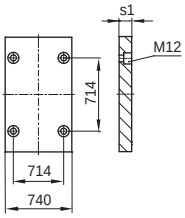
K70 K75 K72



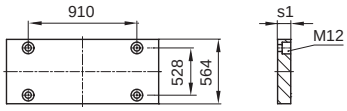
K70 ■



K75 ◆

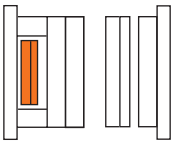


K72 ◇

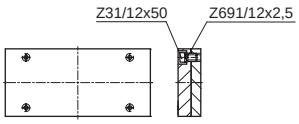


.../796x996 x s1/	1.1730	1.2085	1.2312
46	■ ◆ ◇	■ ◆	■ ◆ ◇

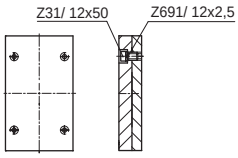
K60-70 K65-75 K62-72



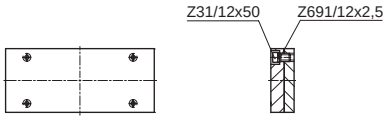
K60-70 ■



K65-75 ◆



K62-72



.../796x996 /	1.1730	1.2085
	■ ◆	■ ◆

K62-72/796x996/Typ	1.1730	1.2312
1	K62	K72
3	K62 K72	

Ermöglicherin für Verlässlichkeit
Enabler for reliability

Ich produziere Präzision.

- Umfassende Fertigungskapazitäten in Europa
- High-End Zerspanung
- Modernste Maschinentechnik
- Garantierte Präzision
- Normalien- und Sonderfertigung

I produce precision.

- Extensive production facilities across Europe
- High-end machining
- State of the art machine technology
- Guaranteed precision
- Standard and customised part production

HASCO

Ermöglichen mit System.

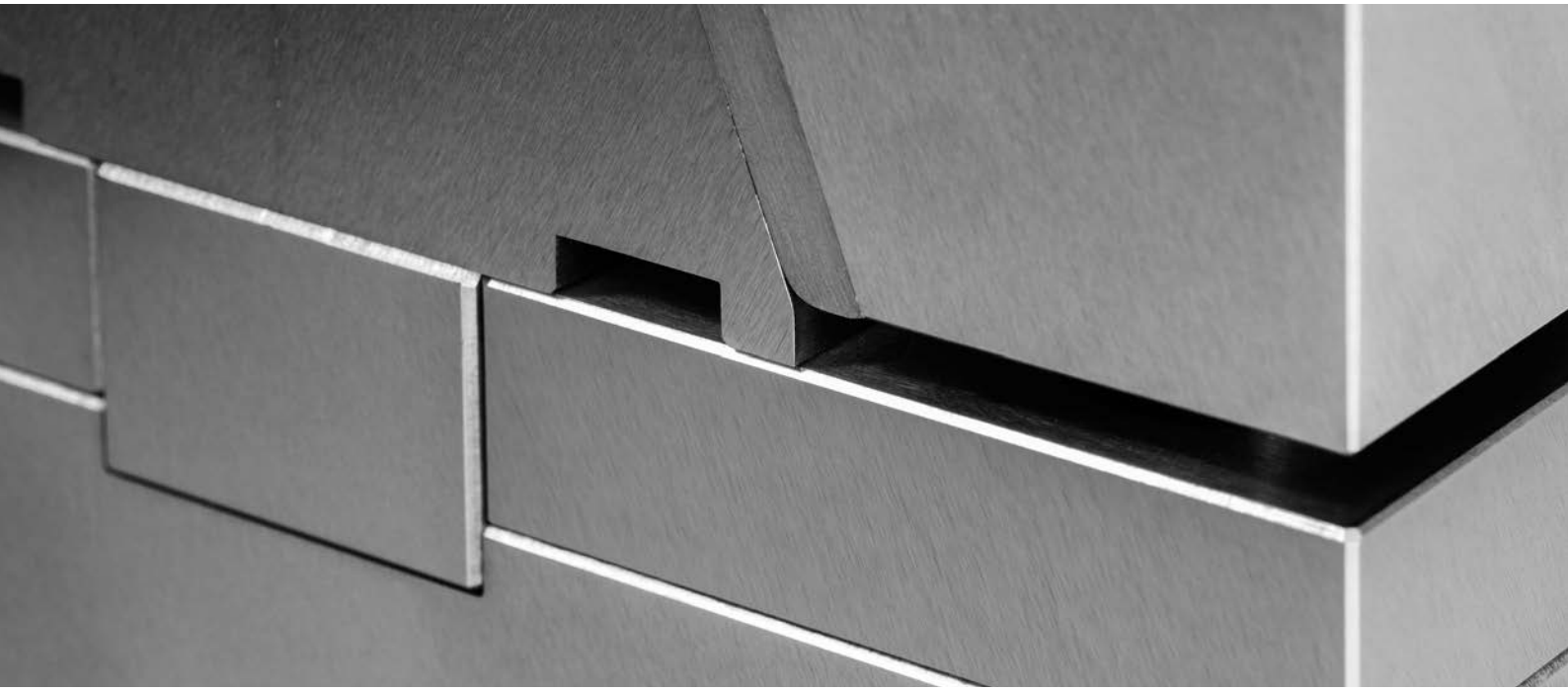
K2500/...
K2501/...

Backenwerkzeuge
Split Mould Kits
Moule à tiroirs

Auswerfer- und Abstreiferversion –
kompatibel zum K-Programm

Ejector type and Stripper type –
compatible with the K programme

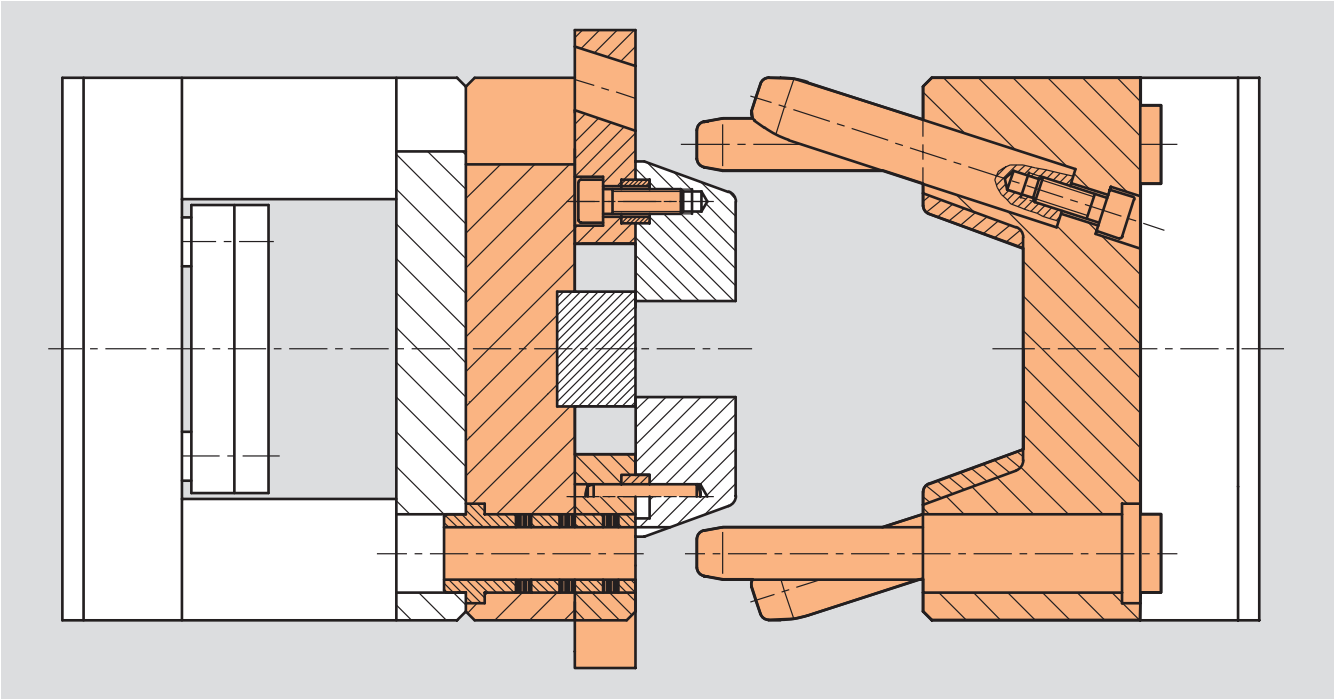
Version à éjecteur et version à démouleur –
compatible avec la gamme K



K2500/...
Backenwerkzeug
(Auswerferversion)

K2500/...
Split mould kit
(Ejector type)

K2500/...
Moule à tiroirs
(version à éjecteur)



Die Abmessungen von K 2500 /. . . sind kompatibel zum HASCO K-Programm.

The dimensions of K 2500 /... are compatible with the HASCO K programme.

Les cotes du modèles K 2500 /... sont compatibles avec la gamme K de HASCO.

Besondere Merkmale

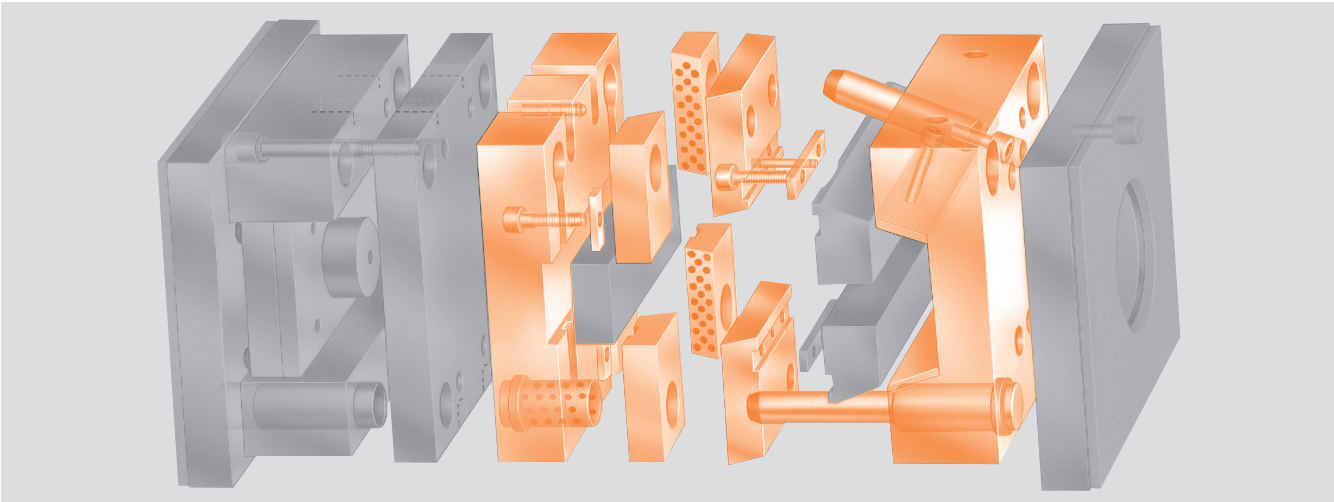
- Abhängig von der Spritzteilgeometrie kann zwischen der Auswerferversion K 2500/... und der Abstreiferversion K 2501/... gewählt werden.
- K 2500/... und K 2501/... sind jeweils in 8 Größen mit je 5 Backenhöhen verfügbar.
- Backen (K 2528/...) und Kernhalteeinsatz (K 2531/...) gehören nicht zum Lieferumfang.
- Bauteile und Backenbetätigung liegen innerhalb der Werkzeugabmessungen.
- Nachschleifbare Backenführung.
- Austauschbare Druckplatten.
- Backen (K 2528/...) voll nutzbar für Kontur und Kühlung.
- Backenlänge entspricht Werkzeugbreite.
- Passfeder-Nut in K 2528/... (Mat. 1.2767/1.2343 ESU) mit Aufmaß zum Nachschleifen nach dem Härten.
- Härteverzug der Backen ohne Einfluss auf die Führung.
- Länge des Kernhalteeinsatzes (K 2531/...) entspricht Werkzeugbreite.
- Schwalbenschwanz-Führung leicht nachstellbar.
- Kein Verkanten der Führung durch günstiges Längen-/Breitenverhältnis.
- Sicherung der Backen durch integrierte Kugelrasten.
- Freier Fall der Spritzteile.
- Selbstschmierende Backenführungsleisten und Führungsbuchsen.

Features

- To suit moulding geometry, the designer has the choice between Ejector type K 2500/... and the Stripper type K 2201/...
- K 2500/... as well as K 2501/... are available in 8 sizes with 5 split heights each.
- Splits (K 2528/...) and core retainer insert (K 2531/...) are not supplied.
- Construction elements and angle pins actuation are positioned within the mould.
- Regrindable split guides.
- Interchangeable wear plates.
- Splits (K 2528/...) can be fully utilized for cavity contour and cooling.
- Split length is equal to mould width.
- Parallel slot in K 2528/... (Mat. 1.2767/1.2343 ESU) with dimensions re-ground according to hardness.
- Distortion on hardening of splits does not affect the guiding system.
- Length of core retainer insert (K 2531/...) is equal to mould width.
- Easy readjustment of dovetailed guide strips.
- No tilting of split guide due to favourable length/width ratio.
- Splits are secured by integrated spring plungers.
- Undisturbed drop of mouldings.
- Guide strips and guide bushings are offered in selflubricating design.

Caractéristiques techniques

- Il est possible de choisir, en fonction de la géométrie des pièces à injecter, entre la version à éjecteur K 2500/... et la version à démouleur K 2501/...
- K 2500/... et K 2501/... sont disponibles chacun en 8 tailles disposant de 5 hauteurs différentes de tiroirs.
- Les plaques (K 2528/...) et le support de noyau (K 2531/...) ne sont pas compris dans la livraison.
- Les éléments de construction et d'actionnement des tiroirs sont positionnés à l'intérieur des cotes du moule.
- Le guidage de plaques peut être à nouveau poli.
- Les plaques de pression sont interchangeables.
- Tiroirs (K 2528/...) entièrement utilisables pour l'empreinte et le refroidissement.
- La longueur de tiroirs correspond à la largeur du moule.
- Gorge pour ressort d'ajustage dans K 2528/... (Mat. 1.2767/1.2343 ESU) avec surcote pour ponçage ultérieur d'ajustage après le trempage.
- Les éventuelles déformations des tiroirs (trempe), n'influent pas le système de guidage.
- La longueur du support de noyau (K 2531/...) correspond à la largeur du moule.
- Guidage en queue d'aronde facilement ajustable.
- Blocage impossible du guidage en raison d'un rapport longueur/largeur étudié.
- Blocage des tiroirs assuré par vis à billes intégrées.
- Dégagement libre des pièces injectées.
- Barres conductrices des tiroirs et bagues de guidage exemptes d'entretien.



Bestellbeispiel :

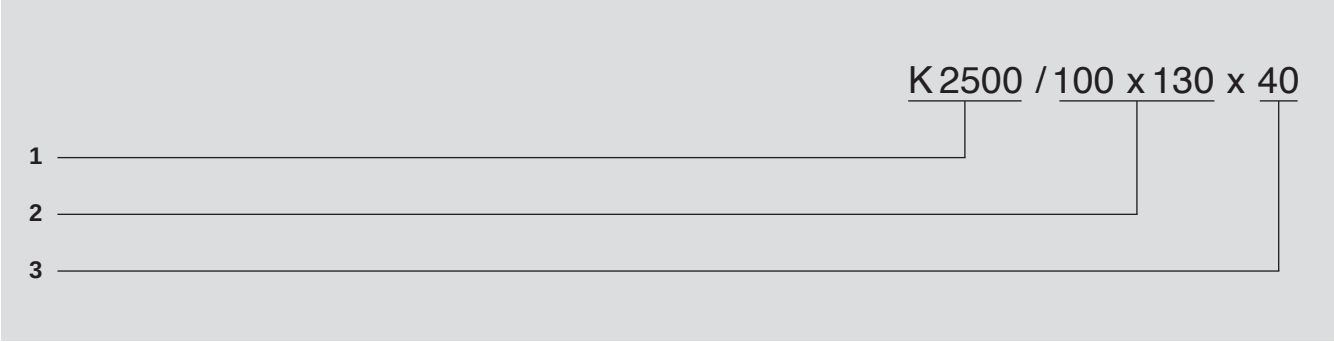
Backenwerkzeug, Größe 100 x 130
(Auswerferversion)

Ordering example :

Split mould kit, size 100 x 130
(Ejector type)

Exemple de commande :

Moule à tiroirs version 100 x 130
(version à éjecteur)



1 Produkt Nr. für Backenwerkzeug
2 Abmessung : Länge x Breite
3 Backenhöhe

1 Produkt No. of split mould kit
2 Mould size : Length x Width
3 Split height

1 N° de produit pour moule à tiroir
2 Dimensions : longueur x largeur
3 Hauteur des tiroirs

⚠ ***Beachten:***

Die Backen K 2528 / … und der Kernhalteeinsatz K 2531 / … gehören nicht zum Lieferumfang !

⚠ ***Caution:***

Splits K 2528 / … and core retainer insert K 2531/… are not supplied !

⚠ ***Remarque:***

Les plaques K 2528 / … et le support de noyau K 2531/… ne sont pas compris dans la livraison !

Inhaltsverzeichnis
Contents
Répertoire

Wichtige Werkzeugmaße
für K 2500/... und K 2501/...

– Backenlänge
– Backenhöhe
– Backenöffnungsweg
– Max. Arbeitsflächen

Important mould dimensions
for K 2500/... and K 2501/...

– Split length
– Split height
– Opening stroke of splits
– Max. working area

Importantes cotes d'outils
pour K 2500/... et KK 2501/...

– Longueur de tiroir
– Hauteur de tiroir
– Course d'ouverture des tiroirs
– Surfaces max. de travail

Größe Size Taille	Backen-Öffnungsweg Opening stroke of splits Course d'ouverture des tiroirs	Backenhöhe Split height Hauteur des tiroirs									Backenlänge Split length Longueur des tiroirs
		16	20	25	32	40	50	63	80	100	
100 x 130	16										100
156 x 156	28										156
156 x 196	45										156
190 x 246	56										190
196 x 196	40										196
246 x 246	53										246
246 x 296	68										246
296 x 296	68										296

⚠ ***Beachten :***

Die Backenhöhen und -längen für eine quadratische und die dazugehörige rechteckige Größe (z. B. 156 x 156 und 156 x 196) sind gleich. Bei den rechteckigen Größen sind die Backen entsprechend breiter, dadurch optimale Ausnutzung der Formkontur.

⚠ ***Caution:***

For each square and following rectangular mould size (e. g. 156 x 156 and 156 x 196) all split heights and -lengths are of the same. On rectangular mould sizes the splits are correspondingly wider to provide for optimal utilisation of cavity contour.

⚠ ***Remarque :***

La hauteur et la longueur des tiroirs sont identique pour des tailles carrées et rectangulaires (Ex : 156 x 156 et 156 x 196). Dans le cas de moules rectangulaires, les tiroirs sont plus larges, pour permettre une meilleure utilisation.

Toleranzen :
siehe K-Katalog, Vorschaltseite

Tolerances :
Ref. K catalogue, opening page

Tolérances :
Cf. catalogue des standards K, page des éléments de commutation

Überstand des Schrägbolzens

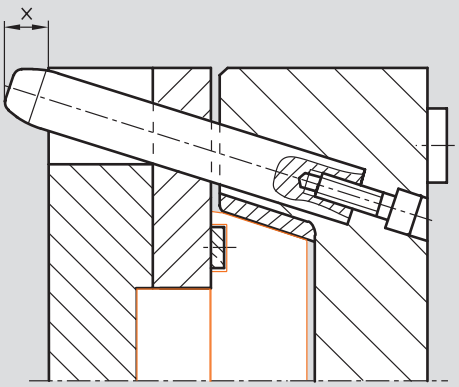
⚠ ***Beachten :***

Projection of angle pin

⚠ ***Caution:***

Dépassement du doigt incliné

⚠ ***Remarque :***



Dieser Überstand (x) kann je nach Werkzeuggröße bis zu 40 mm betragen.

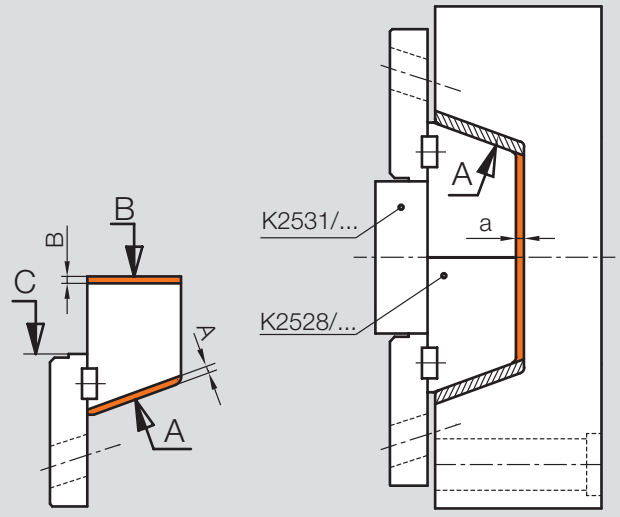
The projection (x) can measure 40 mm according to tool size.

Ce dépassement (x) peut atteindre jusqu'à 40 mm, selon les tailles d'outils.

Technische Informationen

Technical information

Information techniques



1

a	**A** = sin 20° · a	**B** = tan 20° · a
0,05	0,017	0,018
0,10	0,034	0,036
0,20	0,068	0,073
0,50	0,171	0,182
1,00	0,342	0,364

2

A = sin 20° · a

A: Abzuschleifendes Maß von der Schrägfläche

a: zu verringerndes Spiel
z. B.: a = 0,65
A = 0,342 · 0,65 = 0,222 mm

B = tan 20° · a

B: Abzuschleifendes Maß von der Gravurfläche

a: zu verringerndes Spiel
z. B.: a = 0,65
B = 0,3641 · 0,65 = 0,237 mm

A = sin 20° · a

A: Amount to be ground off from the sloped surface

a: Clearance to be reduced
e. g.: a = 0,65
A = 0,342 · 0,65 = 0,222 mm

B = tan 20° · a

B: Amount to be ground off from the parting surface

a: Clearance to be reduced
e. g.: a = 0,65
B = 0,3641 · 0,65 = 0,237 mm

A = sin 20° · a

A: Surface inclinée à rectifier

a: Jeu à réduire
par ex: a = 0,65
A = 0,342 · 0,65 = 0,222 mm

B = tan 20° · a

B: Surface plan de joint à rectifier

a: Jeu à réduire
par ex: a = 0,65
B = 0,3641 · 0,65 = 0,237 mm

Einpassen der Formbacken

Bild 2

Zum Einpassen der Backen K 2910/... in die düsenseitige Backenschließplatte ist das Spiel „a“ vorgesehen.

Bild 1

Dieses wird durch Überschleifen der Backen in Pfeilrichtung „A“ und/oder „B“ beseitigt, wahlweise durch Überschleifen der gehärteten Druckplatten.

Zur Mittenfixierung stützen sich die Backenführungen am Kernhalteeinsatz K 2531/... ab. Beim Fertigschleifen wird ein Spiel zwischen der Stirnseite der Backenführung und dem Kernhalteeinsatz von 0,05 mm empfohlen.

Beim Überschleifen der Backenstirnflächen „B“ muss auch die Backenführung im Bereich „C“ nachgesetzt werden.

Fitting of splits

Fig. 2

The clearance “a” is provided for fitting the splits into the chase bolster.

Fig. 1

By regrinding splits surface “A” and/or “B”, if required also hardened wear plate, this clearance can be eliminated.

For centre aligning the split guides rest against the core retainer insert K 2531/... When finish grinding a clearance of 0,05 mm between the front face of split guides and core retainer insert is recommended.

When regrinding parting surface of splits “B”, same amount must be ground off from the front face of split guides “C”.

Ajustage des tiroirs

Fig. 2

Le jeu «a» est prévu pour l’ajustage des tiroirs K 2910/... dans la plaque de fermeture côté buse.

Fig. 1

Le jeu est éliminé par rectification des tiroirs dans le sens de la flèche «A» et/ou «B» et en travaillant également les plaques de pression.

Pour l’alignement au centre, les guidages des tiroirs prennent appui sur le support de noyau K 2531/... Lors de l’ajustage final, un jeu de 0,05 mm entre la face du guidage des tiroirs et le support de noyau est recommandé.

Lors de la rectification des surfaces frontales des tiroirs «B», le guidage doit également être réajusté.

Positionierung der Formbacken

Bild 3
Um ein Vertauschen der Backen zu verhindern, ist ein Passstift außermittig angeordnet, der auch gleichzeitig die Backen in Längsrichtung präzise positioniert.

Die Passfeder zwischen Backe und Backenführung garantiert eine exakte Positionierung in Laufrichtung.

Positioning of mould splits

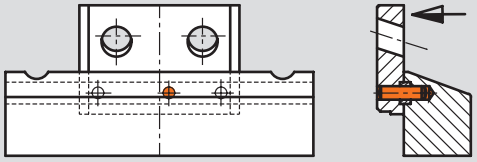
Fig. 3
To prevent mix-up of splits a dowel pin is located off-centre, it also serves the purpose of precisely fixing the splits in longitudinal direction.

The parallel key between split and split guide ensures an exact alignment in traveling direction.

Positionnement des tiroirs

Fig. 3
Afin d'éviter une inversion des tiroirs, des goupilles d'assemblage excentrées, positionnent en même temps les tiroirs dans le sens longitudinal.

La vis à bille ressort entre le tiroir et le guidage garantit un positionnement exact.



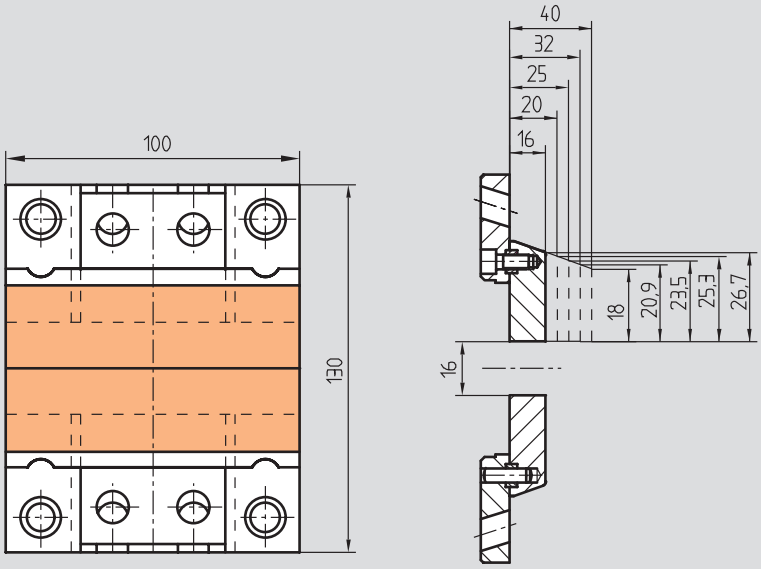
3

Eine problemlose Nachstellung ist durch Überschleifen der Backenführung in Pfeilrichtung sichergestellt.

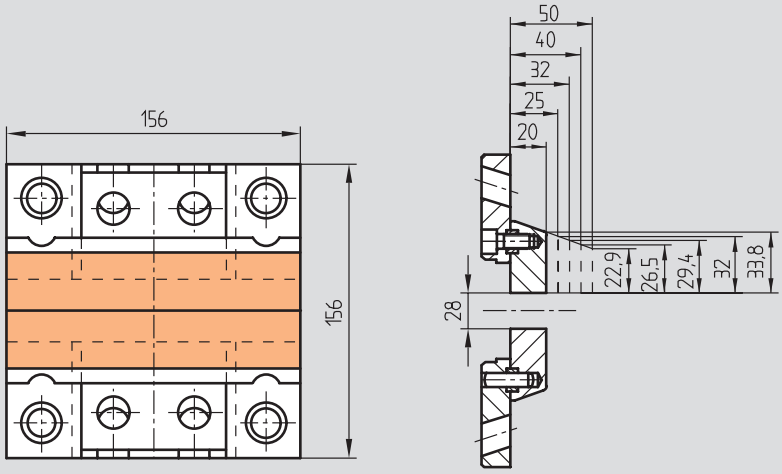
For easy readjusting of guiding system only the split guide has to be reground on surface pointed to by arrow.

Pour un réajustage facile du système de guidage, seuls les guides des tiroirs seront rectifiés en surface (dans le sens de la flèche).

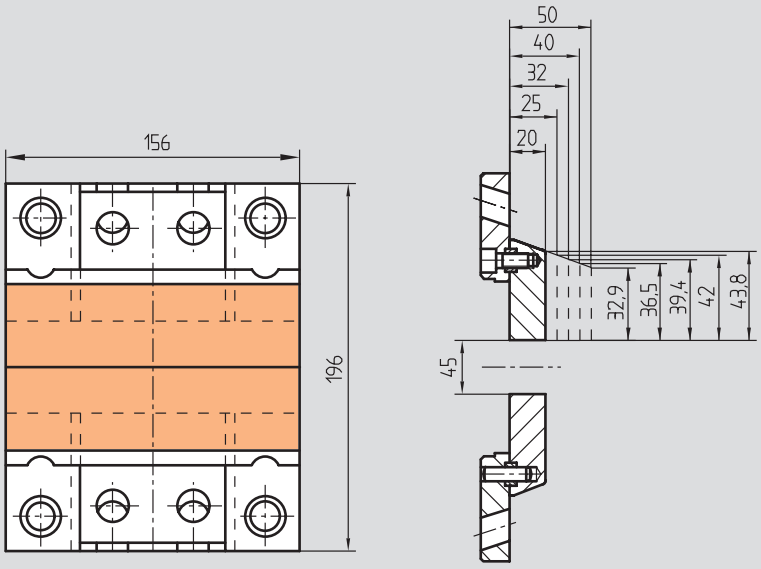
100 x 130



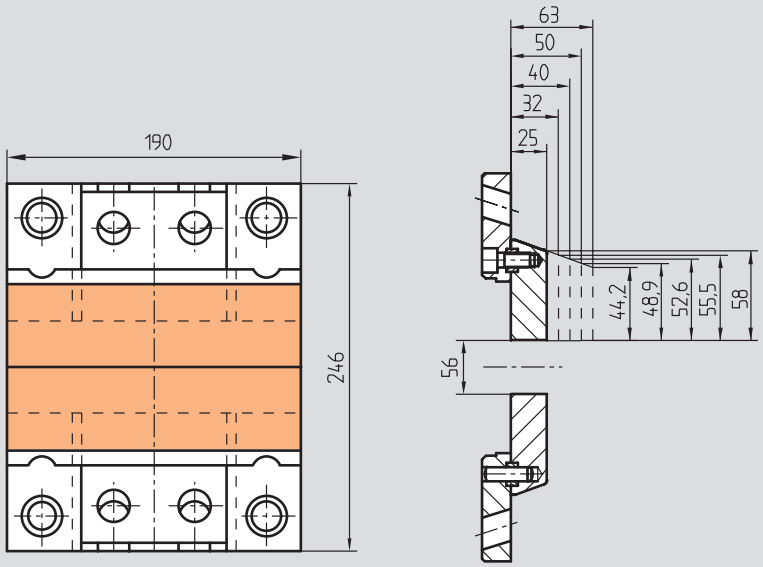
156 x 156



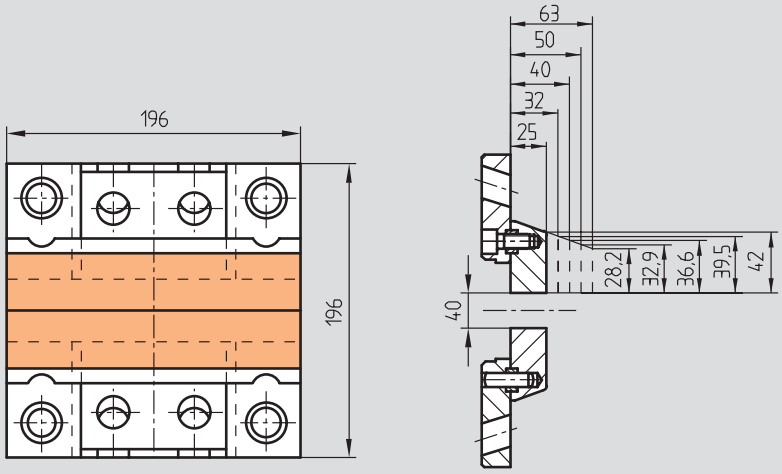
156 x 196



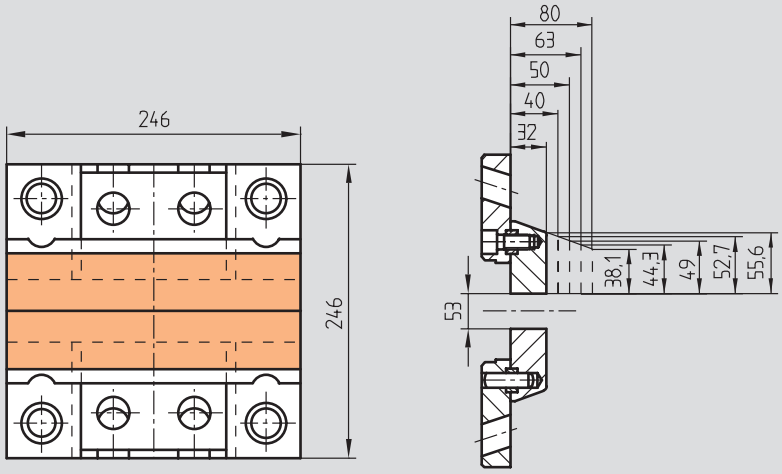
190 x 246



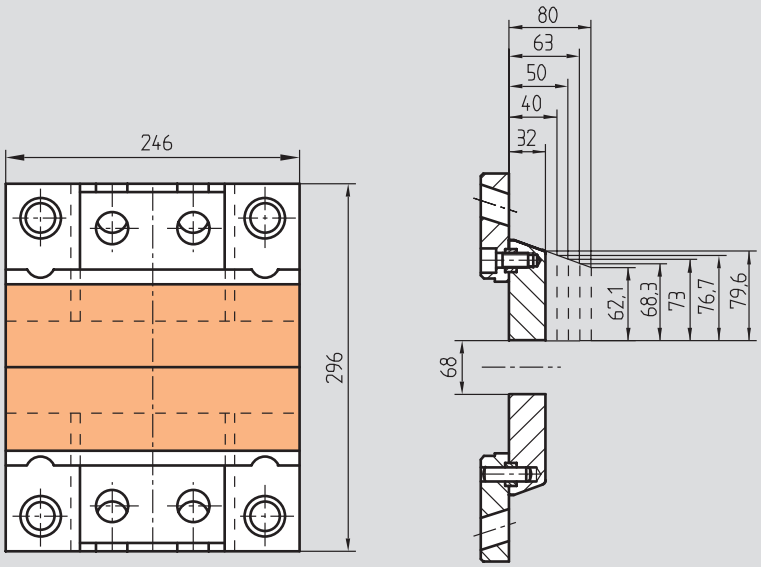
196 x 196



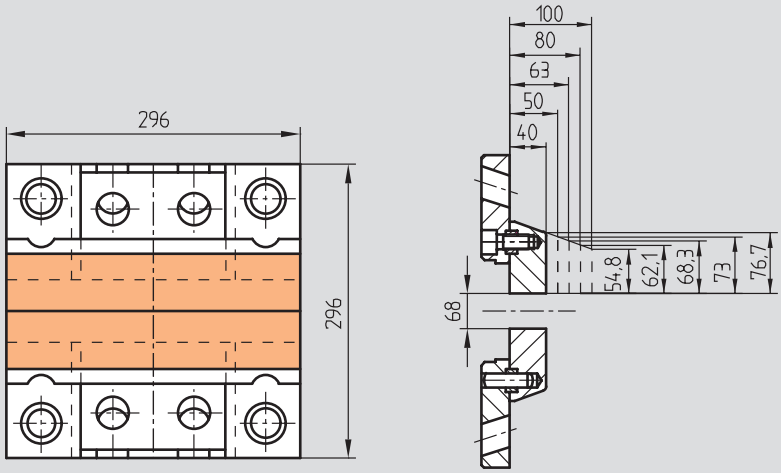
246 x 246



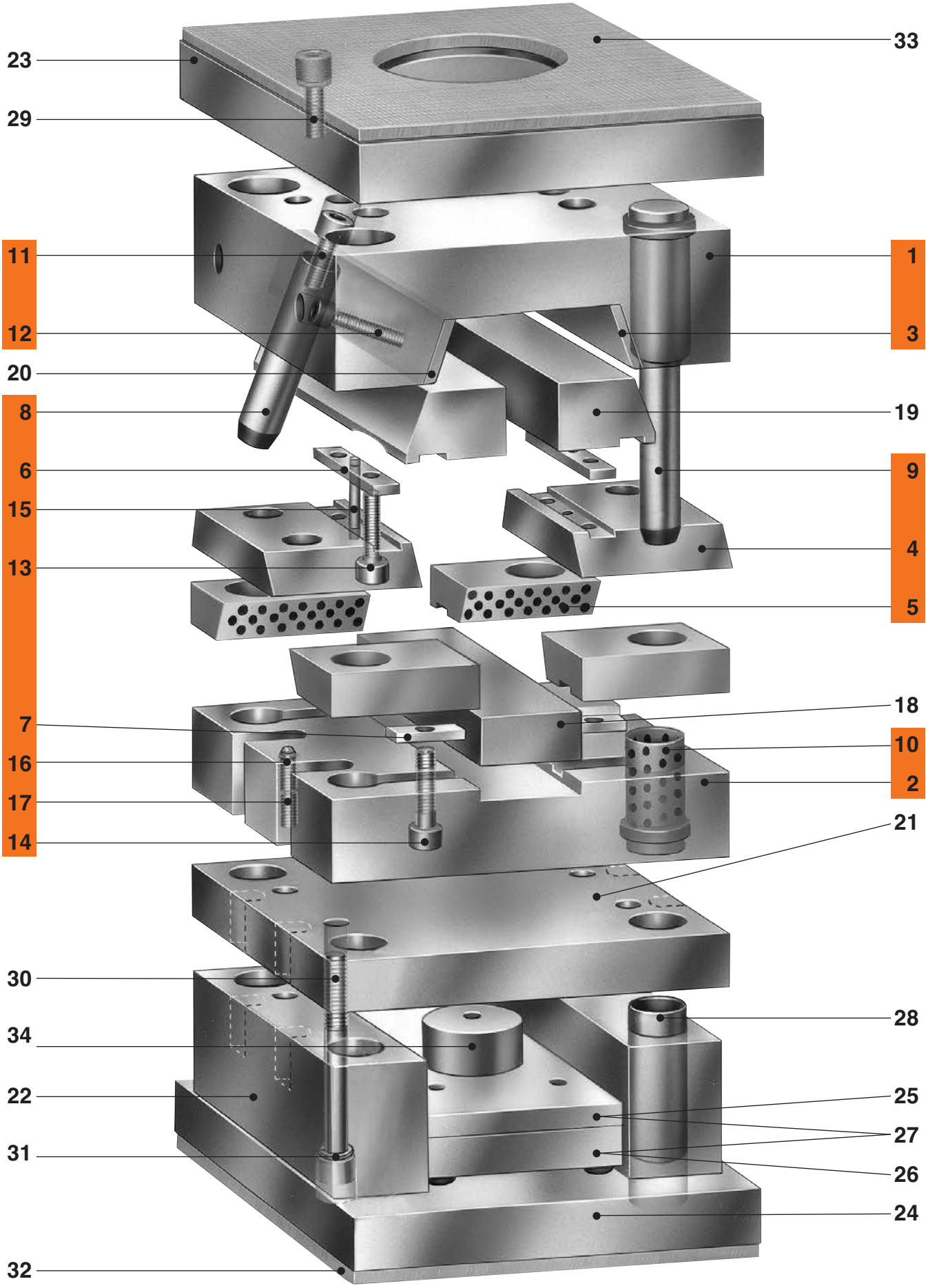
246 x 296



296 x 296



K2500/... Auswerferversion *K2500/... Ejector type* *K2500/... Version à éjecteur*



K2500/... Auswerferversion ***K2500/... Ejector type*** ***K2500/... Version à éjecteur***

Pos.	Benennung	Designation	Désignation	Stück Quant. Pièce	Nr. / Norm No. / Standard N° / Norme	Material / Härte Material / Hardness Matériau / Dureté
1	Backenschließplatte	Chase bolster	Plaque de fermeture des tiroirs	1		1.2312
2	Backengrundplatte	Splits retainer plate	Plaque de base des tiroirs	1		1.2312
3	Druckplatte	Wear plate	Plaque de pression	2		1.2842 / 53 + 2 HRC
4	Backenführung	Split guide	Guide des tiroirs	2		1.2767 / 52 ± 2 HRC
5	Backenführungsleiste	Guide strip	Barre conductrice des tiroirs	4		2.0492
6	Passfeder, lang	Parallel key, long	Ressort d'ajustage, long	2		1.2312
7	Passfeder, kurz	Parallel key, short	Ressort d'ajustage, court	4		1.2312
8	Schrägsäule	Angle pin	Doigt incliné	4	Z 010/...	1.0401
9	Führungssäule	Guide pillar	Colonne de guidage	3 + 1	Z 04/...	DIN 16761-A
10	Führungsbuchse	Guide bushing	Bague de guidage	3 + 1	Z 1000 W/...	DIN 16716-C
11	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/... DIN EN ISO 4762	
12	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/... DIN EN ISO 4762	
13	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/... DIN EN ISO 4762	
14	Zylinderschraube	SHC-screw	Vis à tête cylindrique	8	Z 31/... DIN EN ISO 4762	
15	Zylinderstift	Dowel pin	Goupille cylindrique	2	Z 26/.../DIN EN 28735	
16	Federndes Druckstück	Ball catch	Vis à bille sans tête	2	Z 371/...	1.4305
17	Gewindestift	Set screw	Tige sans tête	2	Z 35/.../DIN 913	

Sonstige Bauteile
Extra Bestellung erforderlich

Other components
Extra order required

Autres éléments
Commande spéciale nécessaire

Pos.	Benennung	Designation	Désignation	Stück Quant. Pièce	Nr. / Norm No. / Standard N° / Norme	Material / Härte Material / Hardness Matériau / Dureté
18	Kernhalteeinsatz	Core retainer insert	Support de noyau	1	K 2531/...	1.2767
19	Backe	Split	Tiroir	2	K 2528/...	1.2767 / 1.2343 ESU
20	Druckplatte (Ersatzteil)	Wear plate (spare part)	Pl. de pression (pièce de rech.)		K 2526/...	1.2842 / 53 + 2 HRC
21	Zwischenplatte	Backing plate	Plaque intermédiaire	1	K 30/...	1.1730, 1.2312
22	Leiste	Riser	Tasseau	2	K 40/...[2]; K 45/...[3]	1.1730
23	Aufspannplatte	Clamping plate	Plaque de fixation	[1]	K 10/...; K 12/...	1.1730
24	Aufspannplatte	Clamping plate	Plaque de fixation	[1]	K 11/...; K 13/...	1.1730
25	Auswerferhalteplatte	Ejector retainer plate	Plaque d'éjecteur	[1]	K 60/...[2]; K 65/...[3]	1.1730
26	Auswerfergrundplatte	Ejector base plate	Contre plaque d'ejection	[1]	K 70/...[2]; K 75/...[3]	1.2312
27	Auswerferpaket	Ejector assembly	Batterie d'ejection	1	K 60-70/...[2]; K65-75/...[3]	1.1730
28	Zentrierhülse	Centering sleeve	Douille de centrage	4	Z 20/...	DIN 16759
29	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/... DIN EN ISO 4762	10.9
30	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/... DIN EN ISO 4762	10.9
31	Sperrkantring	Locking edge washer	Rondelle à bords d'arrêt	8	Z 691/...	DIN 17221
32	Wärmeisolierplatte	Thermal insulating sheet	Plaque isolante	[1]	Z 121/...; Z 1211/...; Z 1212/...	
33	Wärmeisolierplatte	Thermal insulating sheet	Plaque isolante	[1]	Z 121/...; Z 1211/...; Z 1212/...	
34	Stützsäule	Support pillar	Plot de soutin	[1]	Z 57/...; Z 571/... DIN ISO 10073-B	

[1] Typ und Abmessung ist vom Konstrukteur festzulegen
[2] Für quadratische Größen = K 40/...; K 60/...; K70/...; K 60/70/...
[3] Für rechteckige Größen = K 45/...; K 65/...; K 75/...; K 65/75/...

[1] Type and dimension is to be fixed by the designer
[2] For square sizes = K 40/...; K 60/...; K70/...; K 60/70/...
[3] For rectangular sizes = K 45/...; K 65/...; K 75/...; K 65/75/...

[1] Le type et les cotes doivent être définis par le constructeur.
[2] Pour moules carrés = K 40/...; K 60/...; K70/...; K 60/70/...
[3] Pour moules rectangulaires = K 45/...; K 65/...; K 75/...; K 65/75/...

= Verpackungseinheit / Packing unit / Unité d'emballage

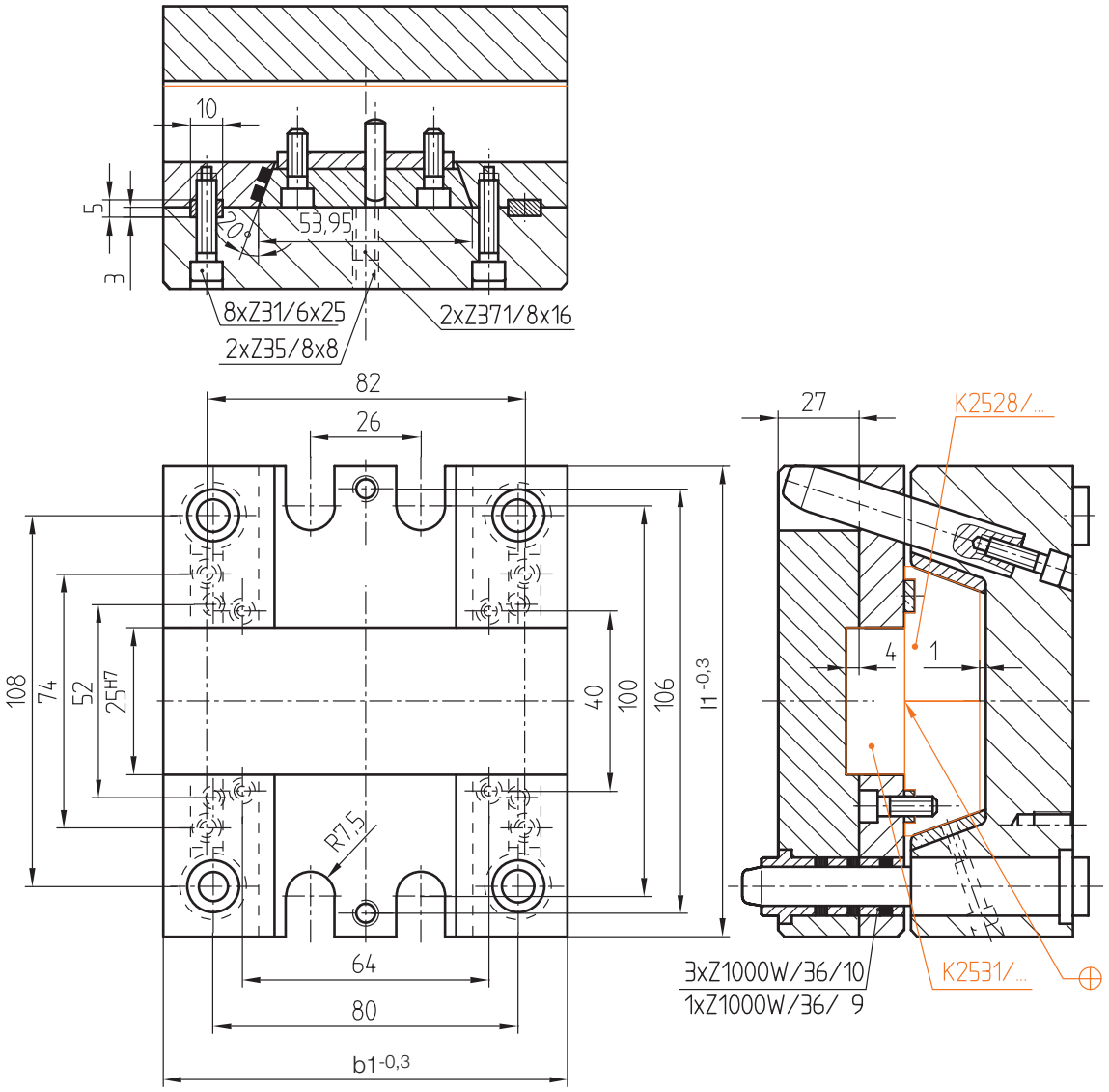
Beachten :
Die Zwischenplatte, Pos. 21 oder Leiste Pos. 22 muss je nach konstruktiver Ausführung mit Freisparungen für die Schrägsäulen Pos. 8 versehen werden.

Caution:
According to the design the backing plate, item 21, or riser, item 22, must be provided with clearance recesses for angle pins, item 8.

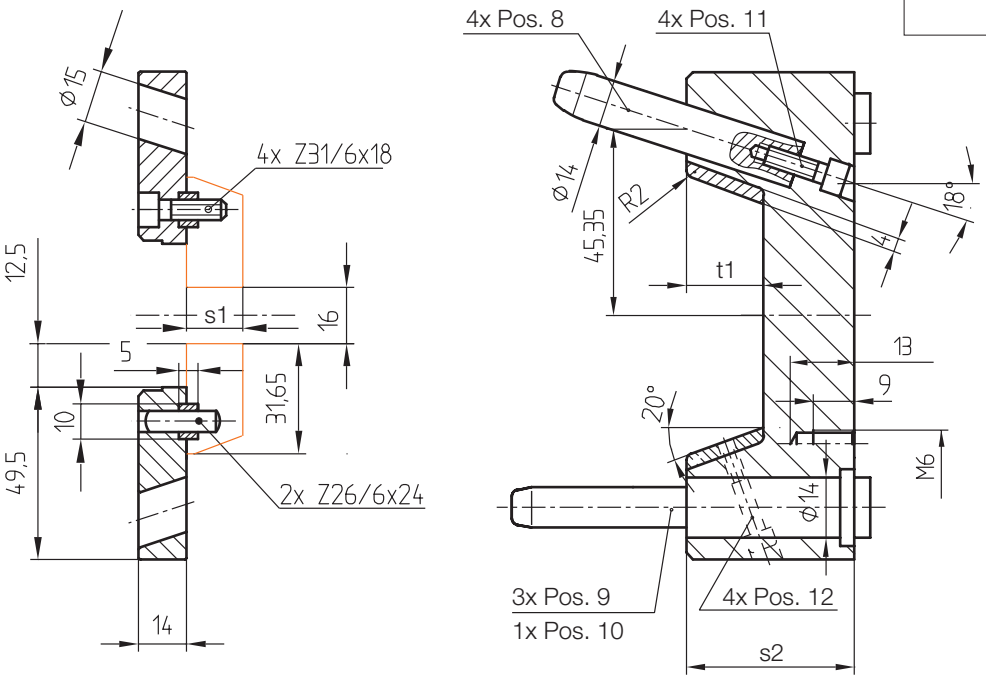
Remarque:
La plaque intermédiaire, pos. 21, ou le tasseau, pos. 22, doivent présenter, selon le modèle construit, des orifices libres pour le doigt incliné, pos. 8.

K2500/100x130

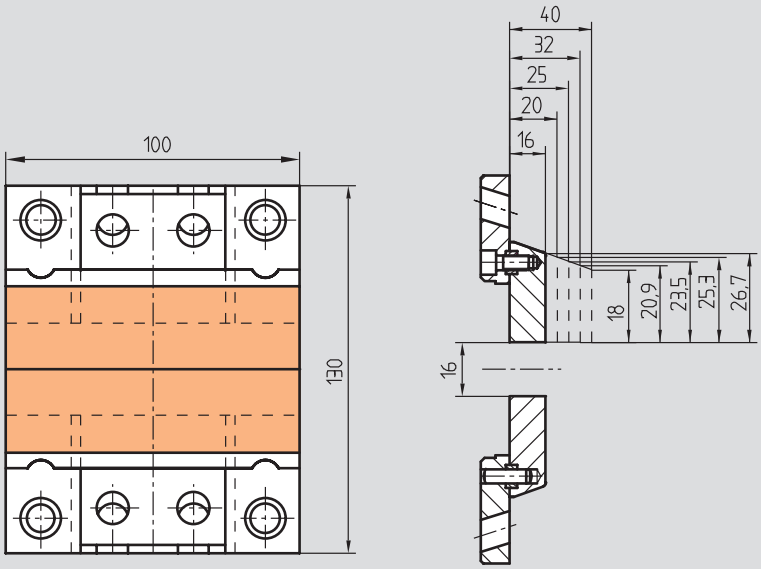
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 12 Z31/...	Pos. 11 Z31/...	Pos. 10 Z04/...	Pos. 9 Z04/...	Pos. 8 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
5x30	6x20	46x9x45	46x10x45	14x67	14	46	**100**	**130**	**16**	K2500/100x130x16
5x25					18				**20**	20
	6x25	56x9x60	56x10x60	14x75	23	56			**25**	25
5x30					30				**32**	32
	6x35	66x9x45	66x10x45	14x75	38	66			**40**	40

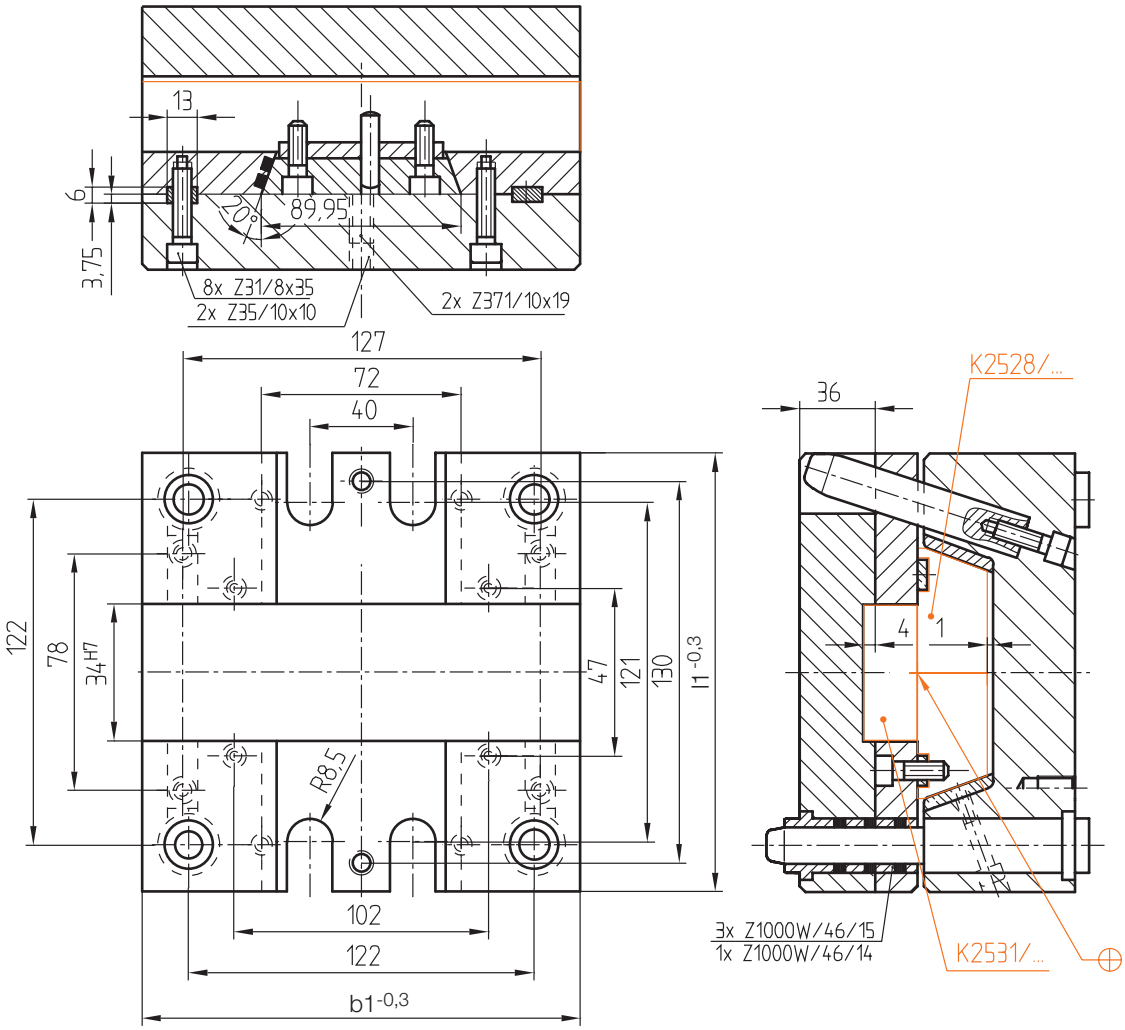


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

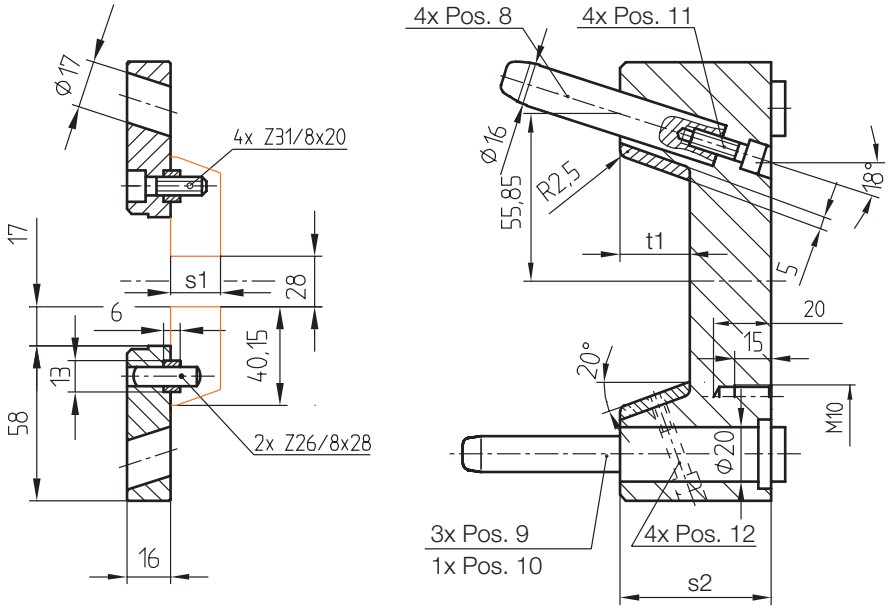


K2500/156x156

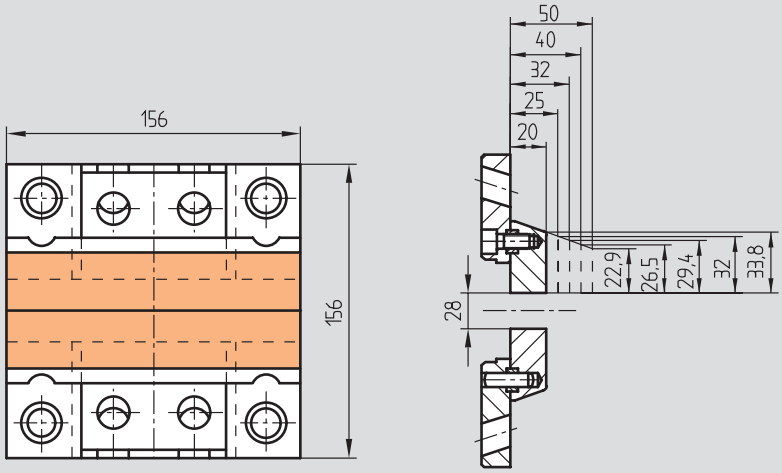
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 12 Z31/...	Pos. 11 Z31/...	Pos. 10 Z04/...	Pos. 9 Z04/...	Pos. 8 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x30	8x18	46x14x65	46x15x65	16x 90	18	46	**156**	**156**	**20**	K2500/156x156x20
	8x30	56x14x75	56x15x75		23	56			**25**	25
		66x14x65	66x15x65	16x100	30	66			**32**	32
6x35	8x40	76x14x55	76x15x55		38	76			**40**	40
	8x50	86x14x55	86x15x55		48	86			**50**	50

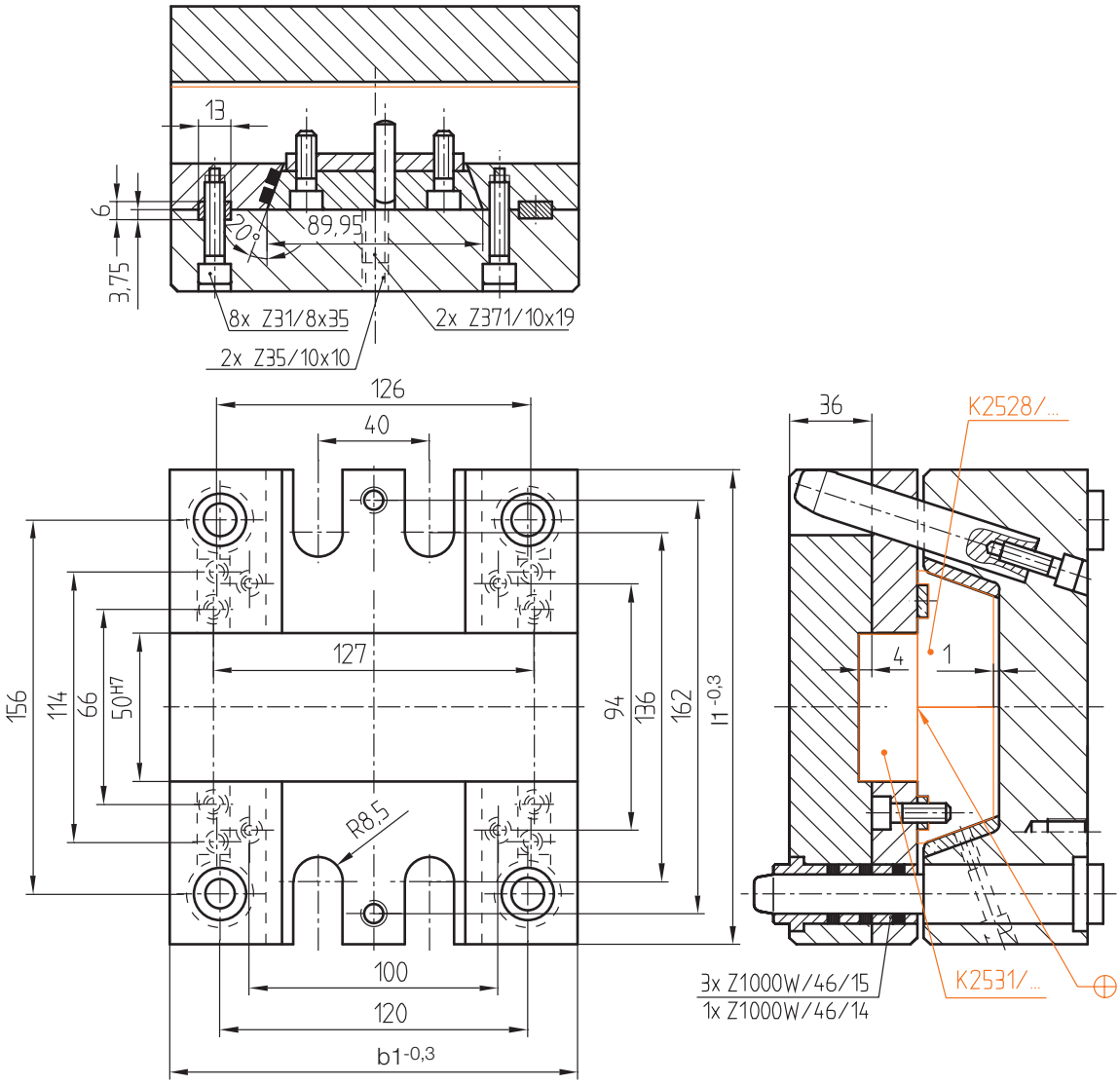


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

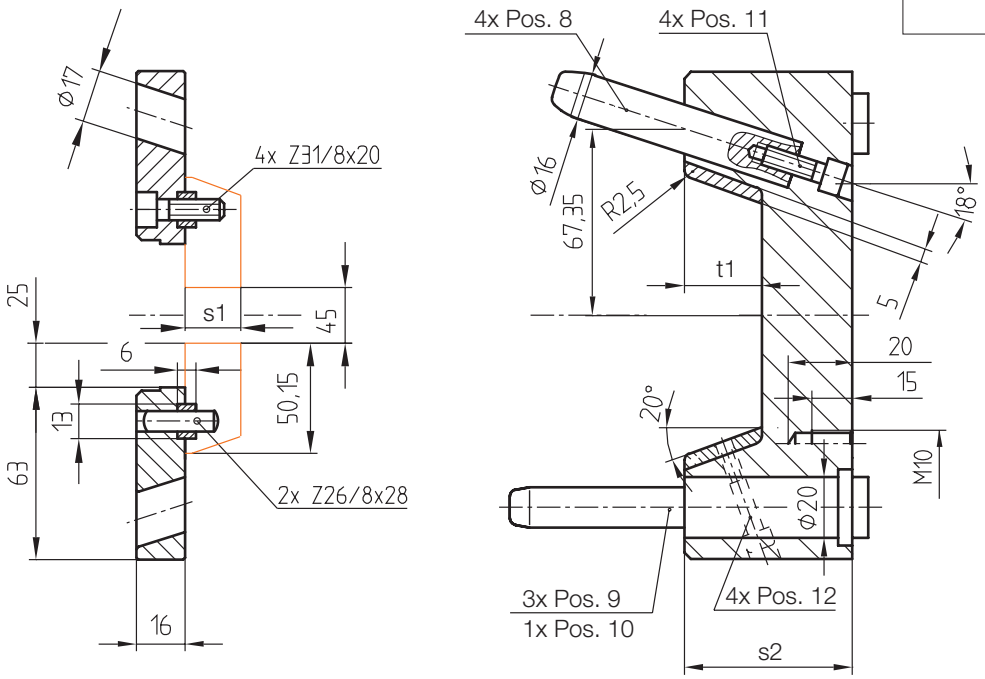


K2500/156x196

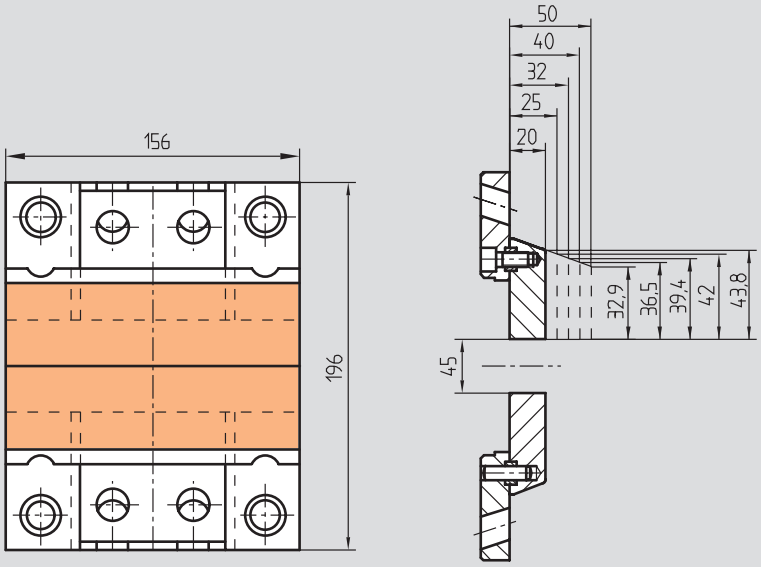
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 12 Z31/...	Pos. 11 Z31/...	Pos. 10 Z04/...	Pos. 9 Z04/...	Pos. 8 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x40	8x25	56x14x95	56x15x95	16x118	18	56	**156**	**196**	**20**	K2500/156x196x20
					23				**25**	25
		66x14x95	66x15x95	16x132	30	66			**32**	32
	8x35	76x14x95	76x15x95		38	76			**40**	40
6x45	8x45	86x14x95	86x15x95		48	86			**50**	50

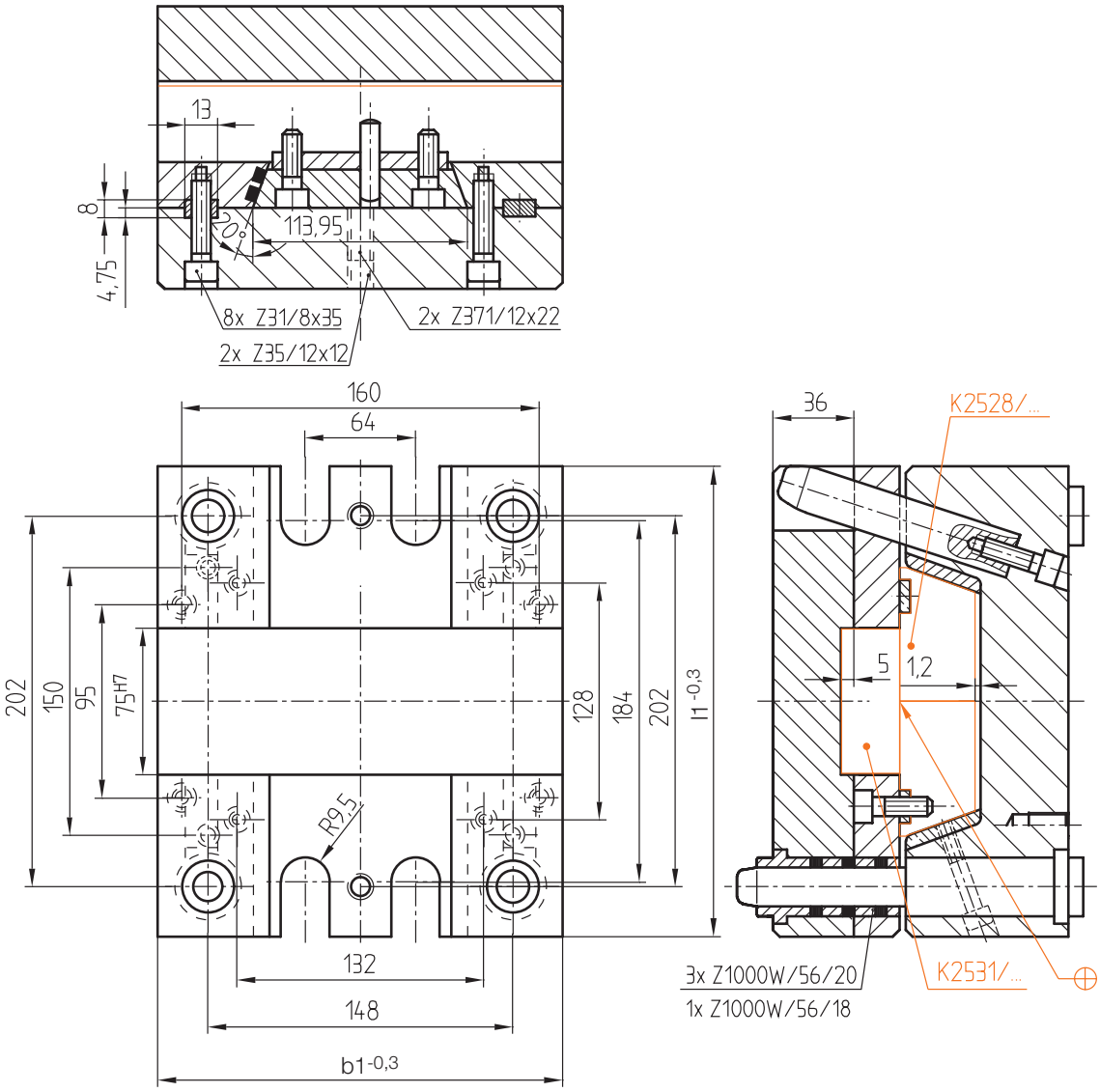


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

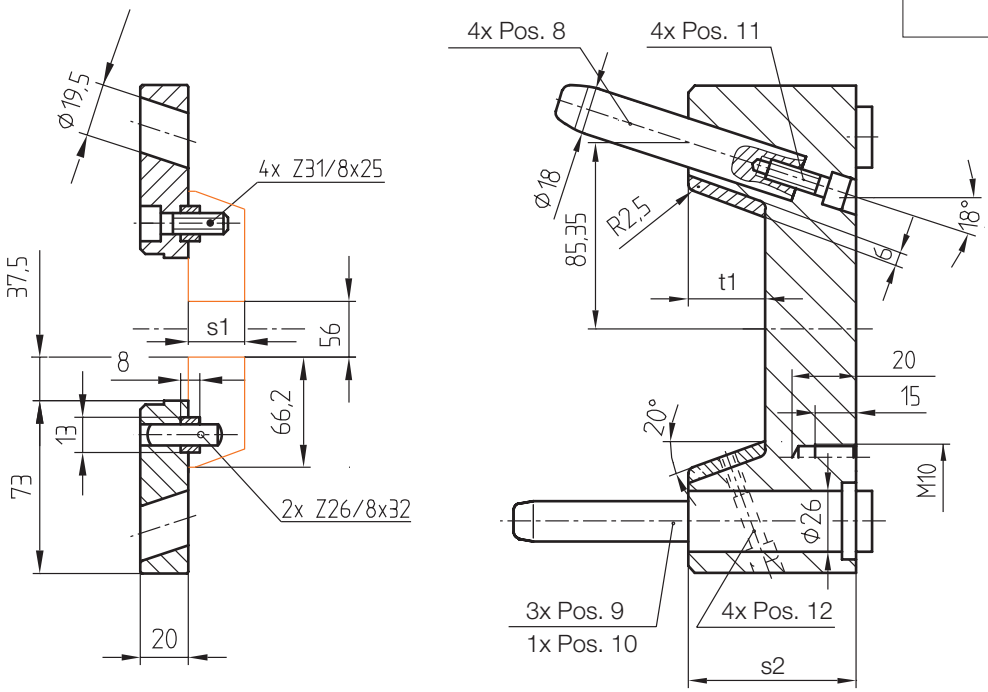


K2500/190x246

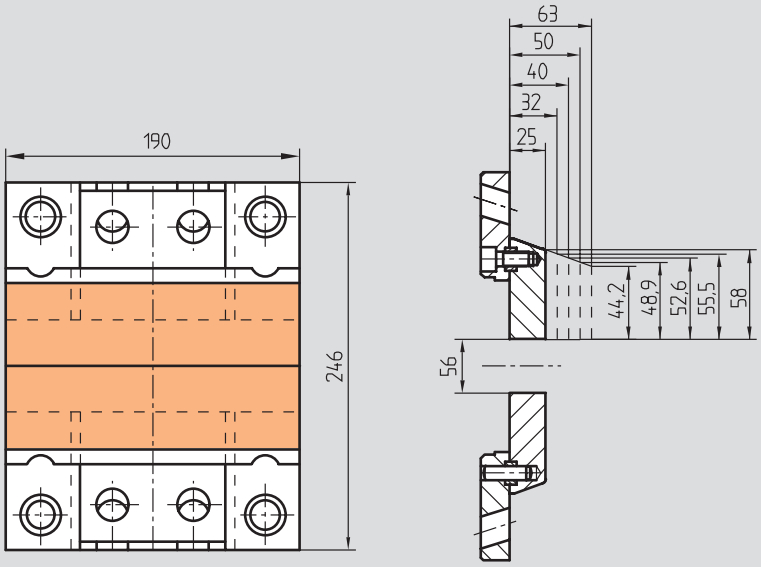
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 12 Z31/...	Pos. 11 Z31/...	Pos. 10 Z04/...	Pos. 9 Z04/...	Pos. 8 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x50	10x25	66x18x145	66x20x145	18x150	23	66	**190**	**246**	**25**	K2500/190x246x25
					30				**32**	32
	10x35	76x18x135	76x20x135		38	76			**40**	40
6x55	10x25	86x18x125	86x20x125	18x170	48	86			**50**	50
	10x35	96x18x 95	96x20x 95		61	96			**63**	63

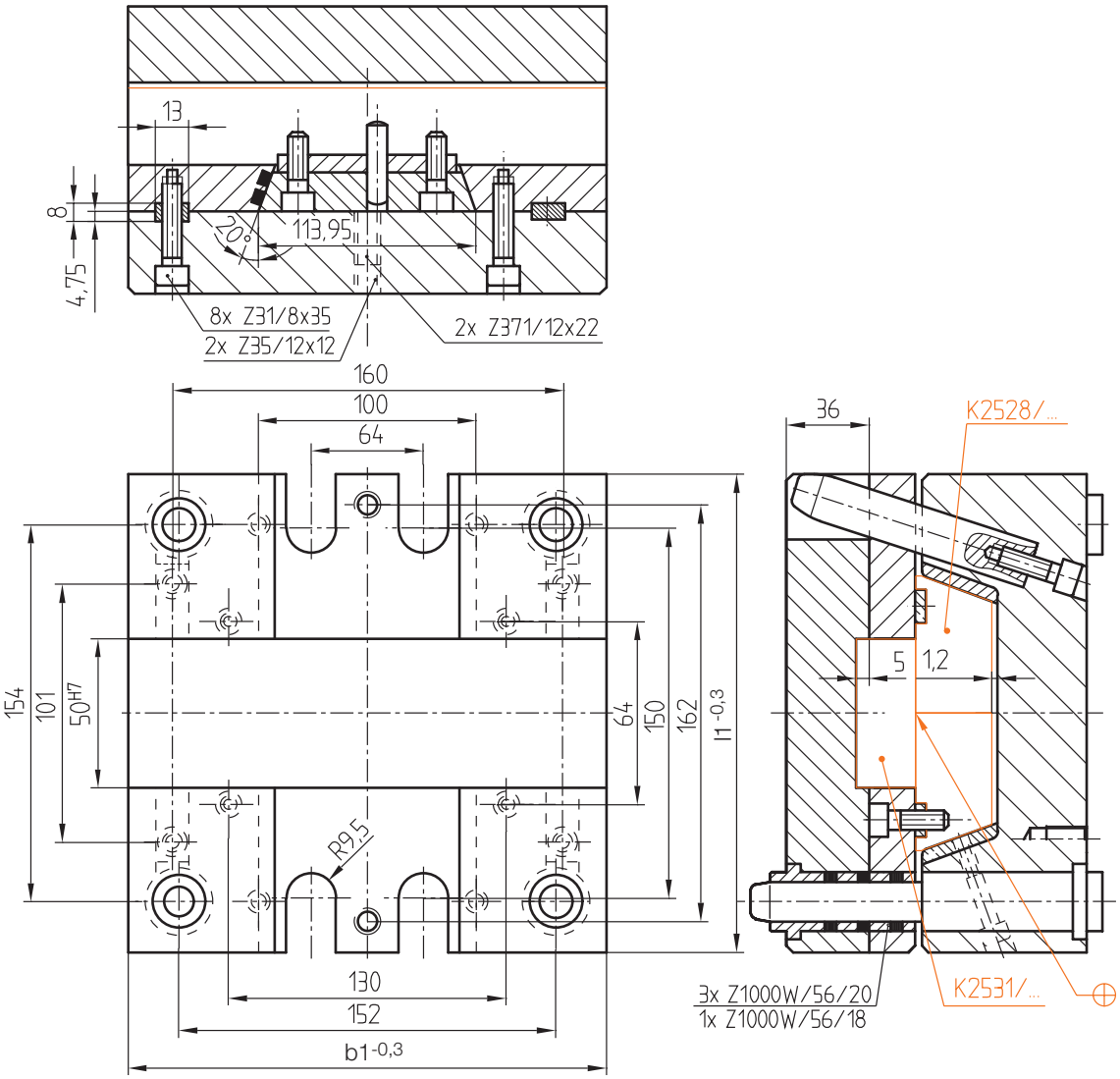


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

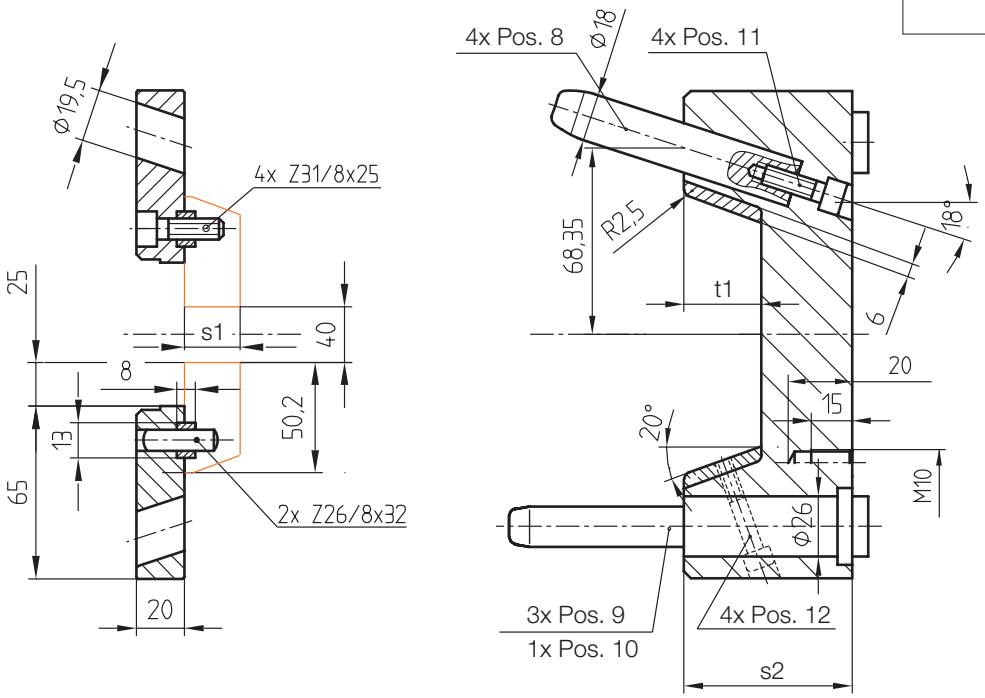


K2500/196x196

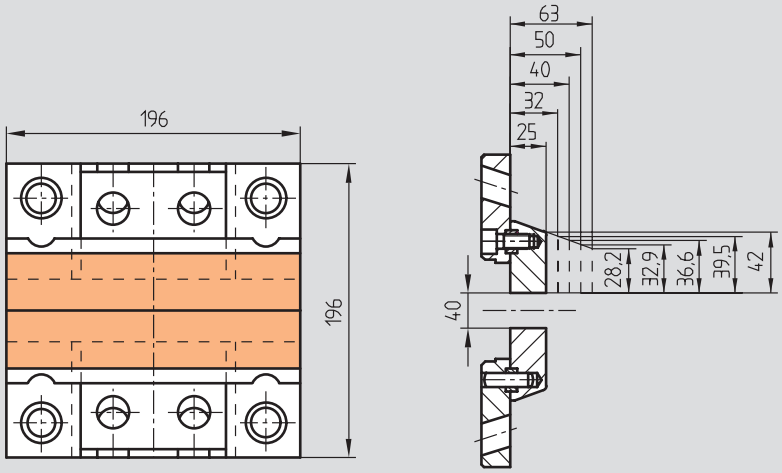
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 12 Z31/...	Pos. 11 Z31/...	Pos. 10 Z04/...	Pos. 9 Z04/...	Pos. 8 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x40	10x25	66x18x 95	66x20x 95	18x125	23	66	**196**	**196**	**25**	K2500/196x196x25
					30				**32**	32
	10x35	76x18x 95	76x20x 95		38	76			**40**	40
6x50	10x30	86x18x 95	86x20x 95	18x140	48	86			**50**	50
6x45	10x60	116x18x115	116x20x115		61	116			**63**	63

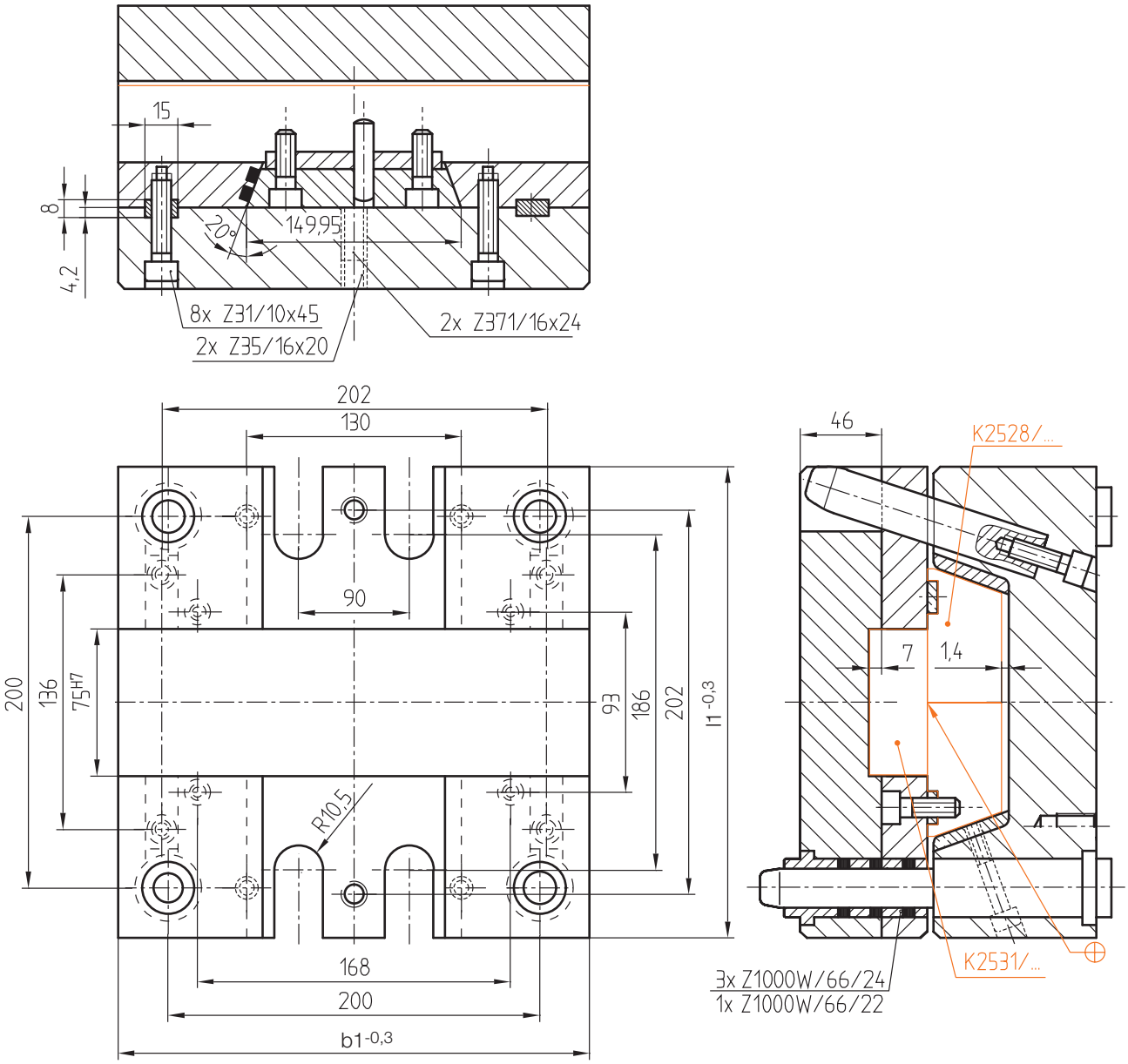


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

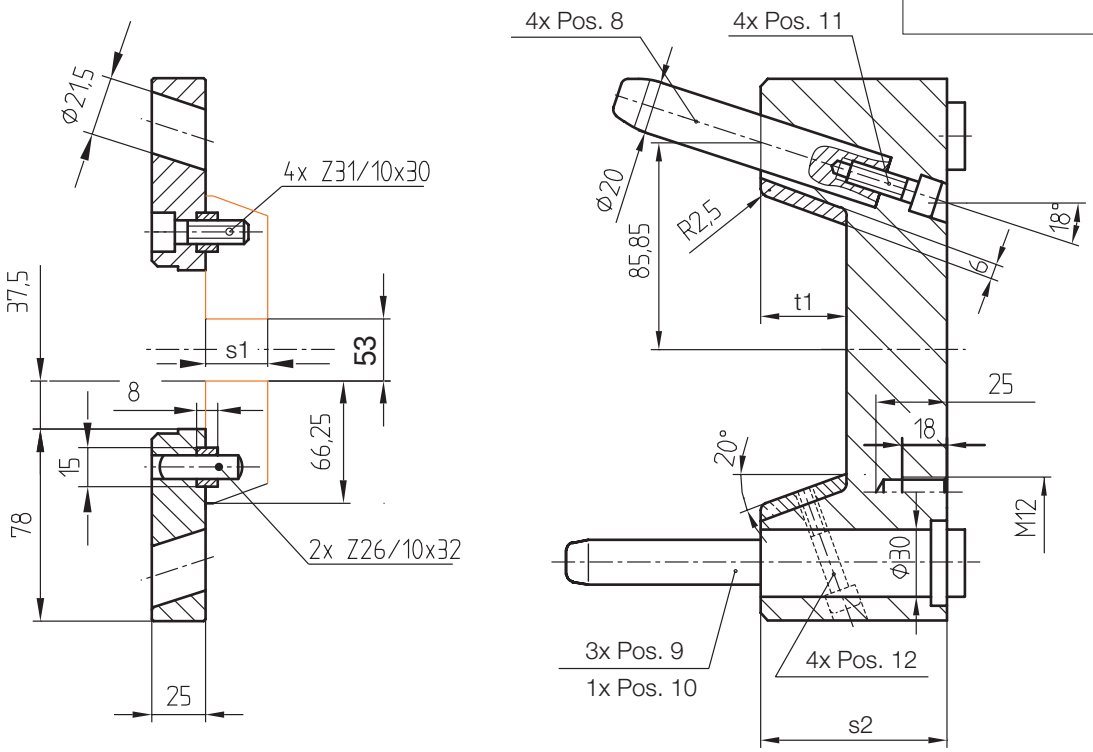


K2500/246x246

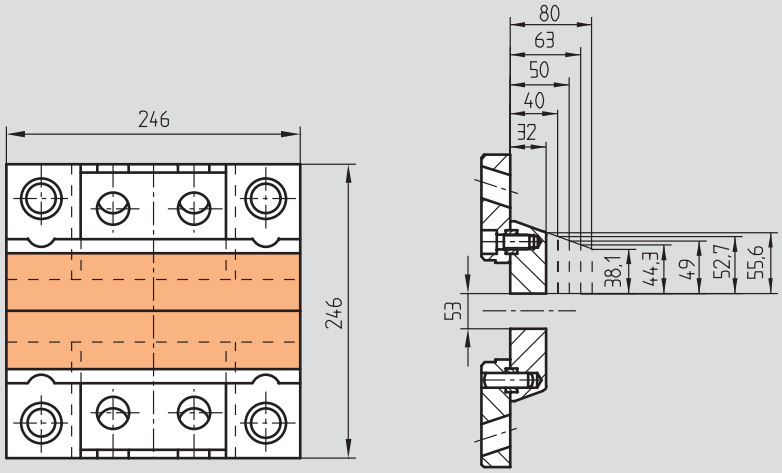
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 12 Z31/...	Pos. 11 Z31/...	Pos. 10 Z04/...	Pos. 9 Z04/...	Pos. 8 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x50	10x20	66x22x155	66x24x155	20x150	30	66	**246**	**246**	**32**	K2500/246x246x32
		76x22x115	76x24x115		38	76			**40**	40
6x55	10x20			20x160	48	76			**50**	50
6x60	10x60	116x22x115	116x24x115		61	116			**63**	63
6x60	10x80	136x22x135	136x24x135		78	136			**80**	80

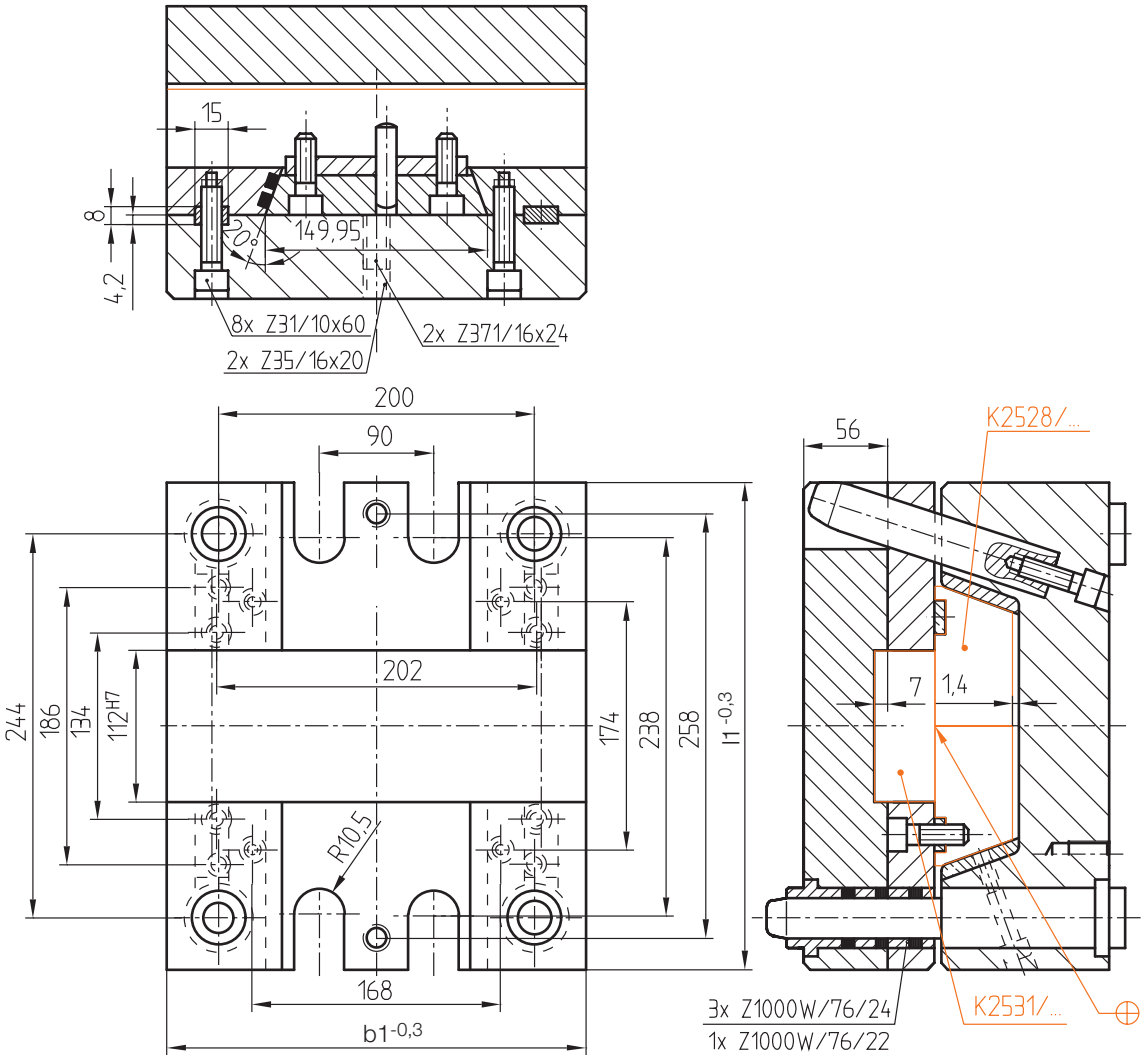


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

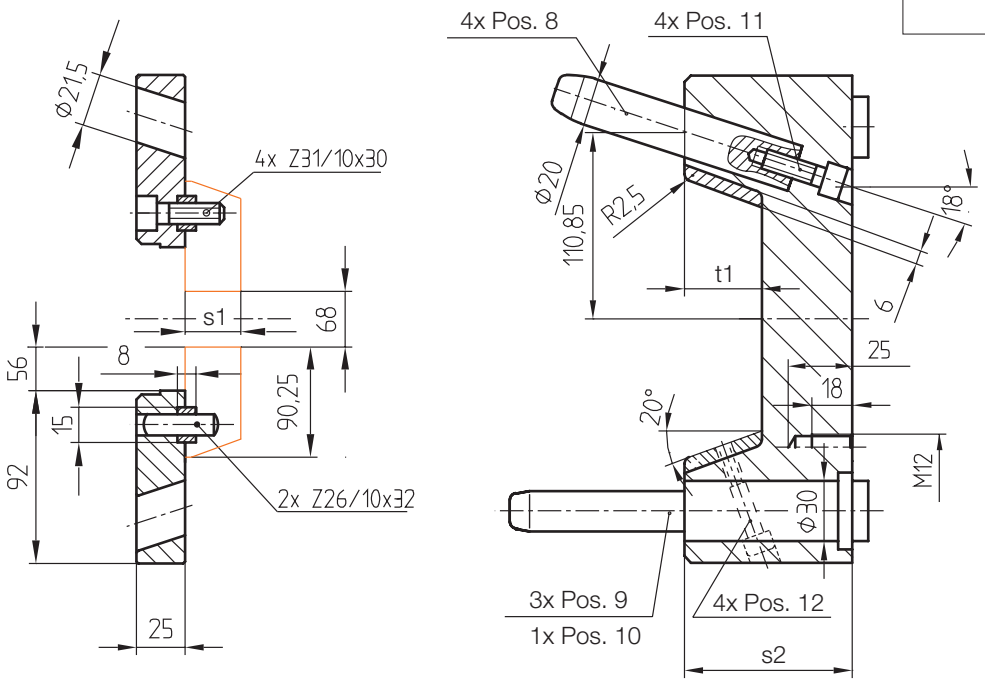


K2500/246x296

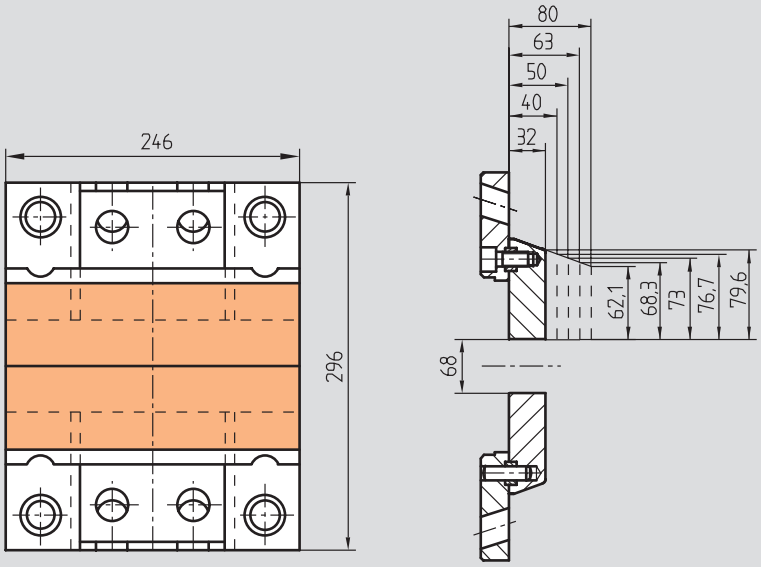
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 12 Z31/...	Pos. 11 Z31/...	Pos. 10 Z04/...	Pos. 9 Z04/...	Pos. 8 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x55	10x25	66x22x155	66x24x155	20x170	30	66	**246**	**296**	**32**	K2500/246x296x32
	10x35	76x22x145	76x24x145		38	76			**40**	40
6x60	10x45	86x22x135	86x24x135		48	86			**50**	50
6x55	10x55	116x22x155	116x24x155	20x190	61	116			**63**	63
6x65	10x75	136x22x135	136x24x135		78	136			**80**	80

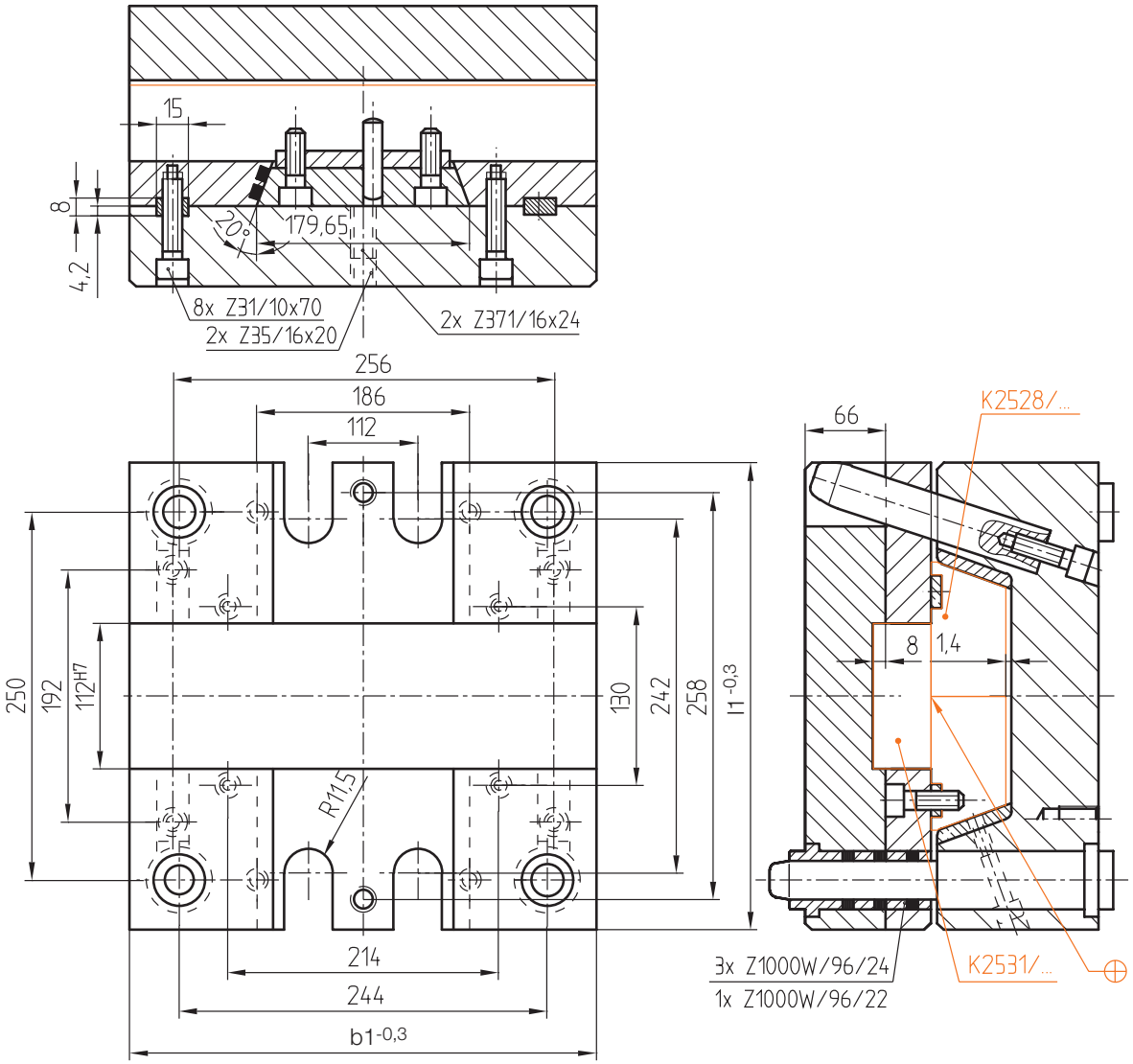


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

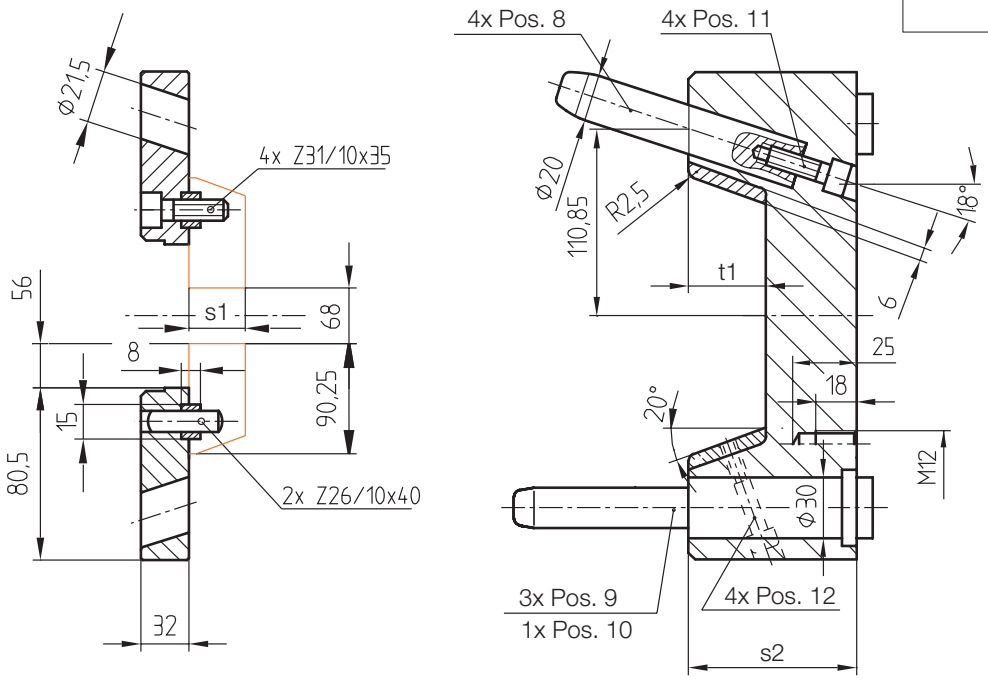


K2500/296x296

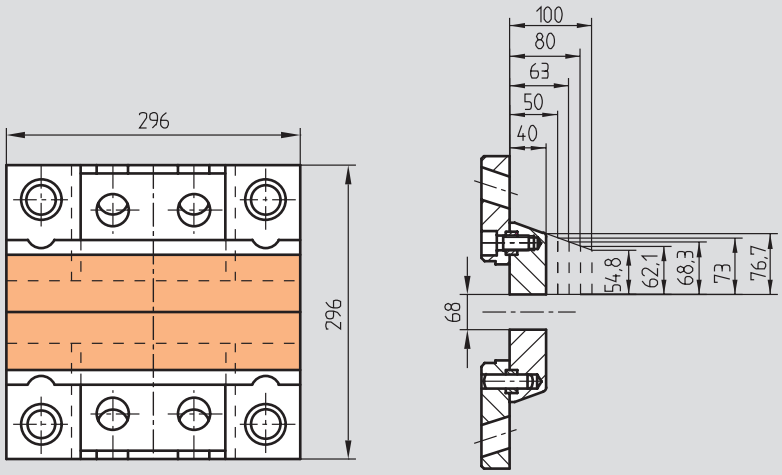
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 12 Z31/...	Pos. 11 Z31/...	Pos. 10 Z04/...	Pos. 9 Z04/...	Pos. 8 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x55	10x35	76x22x145	76x24x145	20x170	38	76	**296**	**296**	**40**	K2500/296x296x 40
6x60					48				**50**	50
6x55	10x55	116x22x115	116x24x115	20x190	61	116			**63**	63
6x60	10x75	136x22x135	136x24x135		78	136			**80**	80
6x65	10x80	156x22x155	156x24x155	20x210	98	156			**100**	100



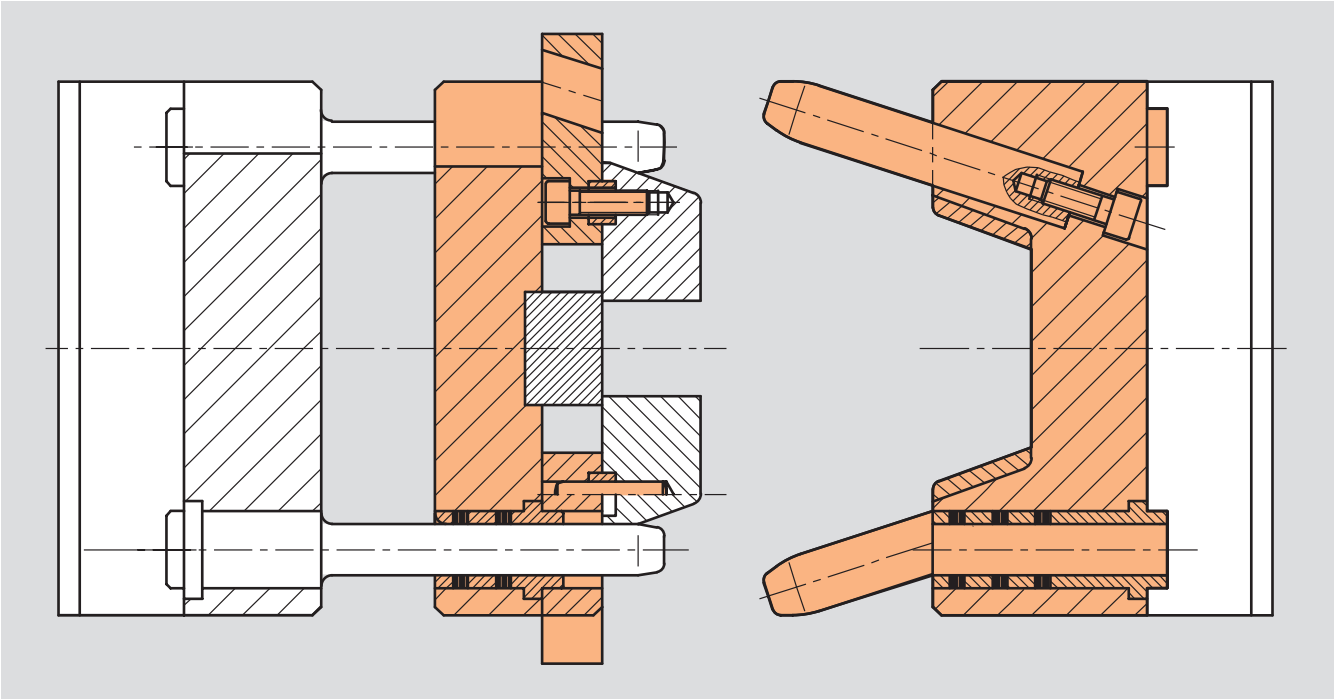
Max. Arbeitsfläche
Max. working area
Surfaces max. de travail



K2501/...
Backenwerkzeug
(Abstreiferversion)

K2501/...
Split mould kit
(Stripper type)

K2501/...
Moule à tiroirs
(version à démouleur)



Die Abmessungen von K 2501/. . . sind kompatibel zum HASCO K-Programm.

The dimensions of K 2501/... are compatible with the HASCO K programme.

Les cotes du modèles K 2501 /... sont compatibles avec la gamme K de HASCO.

Besondere Merkmale

- Abhängig von der Spritzteilgeometrie kann zwischen der Auswerferversion K 2500/... und der Abstreiferversion K 2501/... gewählt werden.
- K 2500/... und K 2501/... sind jeweils in 8 Größen mit je 5 Backenhöhen verfügbar.
- Backen (K 2528/...) und Kernhalteeinsatz (K 2531/...) gehören nicht zum Lieferumfang.
- Bauteile und Backenbetätigung liegen innerhalb der Werkzeugabmessungen.
- Nachschleifbare Backenführung.
- Austauschbare Druckplatten.
- Backen (K 2528/...) voll nutzbar für Kontur und Kühlung.
- Backenlänge entspricht Werkzeugbreite.
- Passfeder-Nut in K 2528/... (Mat. 1.2767) mit Aufmaß zum Nachschleifen nach dem Härten.
- Härteverzug der Backen ohne Einfluss auf die Führung.
- Länge des Kernhalteeinsatzes (K 2531/...) entspricht Werkzeugbreite.
- Schwalbenschwanz-Führung leicht nachstellbar.
- Kein Verkanten der Führung durch günstiges Längen-/Breitenverhältnis.
- Sicherung der Backen durch integrierte Kugelrasten.
- Freier Fall der Spritzteile.
- Selbstschmierende Backenführungsleisten und Führungsbuchsen.

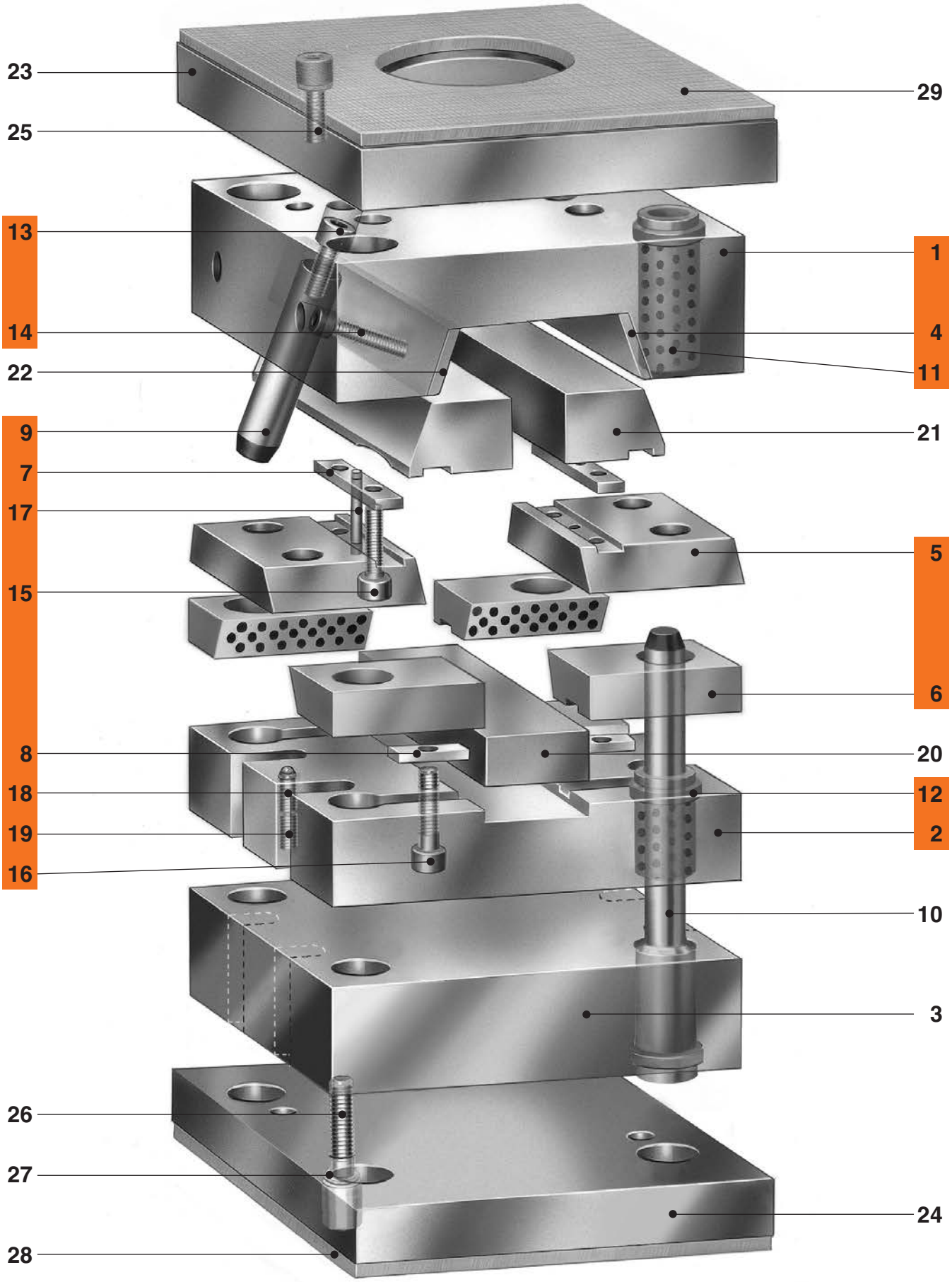
Features

- To suit moulding geometry, the designer has the choice between Ejector type K 2500/... and the Stripper type K 2201/...
- K 2500/... as well as K 2501/... are available in 8 sizes with 5 split heights each.
- Splits (K 2528/...) and core retainer insert (K 2531/...) are not supplied.
- Construction elements and angle pins actuation are positioned within the mould.
- Regrindable split guides.
- Interchangeable wear plates.
- Splits (K 2528/...) can be fully utilized for cavity contour and cooling.
- Split length is equal to mould width.
- Parallel slot in K 2528/... (Mat. 1.2767) with dimensions re-ground according to hardness.
- Distortion on hardening of splits does not affect the guiding system.
- Length of core retainer insert (K 2531/...) is equal to mould width.
- Easy readjustment of dovetailed guide strips.
- No tilting of split guide due to favourable length/width ratio.
- Splits are secured by integrated spring plungers.
- Undisturbed drop of mouldings.
- Guide strips and guide bushings are offered in selflubricating design.

Caractéristiques techniques

- Il est possible de choisir, en fonction de la géométrie des pièces à injecter, entre la version à éjecteur K 2500/... et la version à démouleur K 2501/...
- K 2500/... et K 2501/... sont disponibles chacun en 8 tailles disposant de 5 hauteurs différentes de tiroirs.
- Les plaques (K 2528/...) et le support de noyau (K 2531/...) ne sont pas compris dans la livraison.
- Les éléments de construction et d'actionnement des tiroirs sont positionnés à l'intérieur des cotes du moule.
- Le guidage de plaques peut être à nouveau poli.
- Les plaques de pression sont interchangeables.
- Tiroirs (K 2528/...) entièrement utilisables pour l'empreinte et le refroidissement.
- La longueur de tiroirs correspond à la largeur du moule.
- Gorge pour ressort d'ajustage dans K 2528/... (Mat. : 1.2767) avec surcote pour ponçage ultérieur d'ajustage après le trempage.
- Les éventuelles déformations des tiroirs (trempe), n'influent pas le système de guidage.
- La longueur du support de noyau (K 2531/...) correspond à la largeur du moule.
- Guidage en queue d'aronde facilement ajustable.
- Blocage impossible du guidage en raison d'un rapport longueur/largeur étudié.
- Blocage des tiroirs assuré par vis à billes intégrées.
- Dégagement libre des pièces injectées.
- Barres conductrices des tiroirs et bagues de guidage exemptes d'entretien.

K2501/... Abstreiferversion *K2501/... Stripper type* *K2501/... Version à démouleur*



K2501/... Abstreiferversion ***K2501/... Stripper type*** ***K2501/... Version à démouleur***

Pos.	Benennung	Designation	Désignation	Stück Quant. Pièce	Nr. / Norm No. / Standard N°/ Norme	Material / Härte Material / Hardness Matériau / Dureté
1	Backenschließplatte	Chase bolster	Plaque de fermeture des tiroirs	1		1.2312
2	Backengrundplatte	Splits retainer plate	Plaque de base des tiroirs	1		1.2312
4	Druckplatte	Wear plate	Plaque de pression	2		1.2842 / 53 + 2 HRC
5	Backenführung	Split guide	Guide des tiroirs	2		1.2767 / 52 ± 2 HRC
6	Backenführungsleiste	Guide strip	Barre conductrice des tiroirs	4		2.0492
7	Passfeder, lang	Parallel key, long	Ressort d'ajustage, long	2		1.2312
8	Passfeder, kurz	Parallel key, short	Ressort d'ajustage, court	4		1.2312
9	Schrägsäule	Angle pin	Doigt incliné	4	Z 010 / . . .	1.0401
11	Führungsbuchse	Guide bushing	Bague de guidage	3 + 1	Z 1000W/. . .	DIN 16761-C
12	Führungsbuchse	Guide bushing	Bague de guidage	3 + 1	Z 1000W/. . .	DIN 16761-C
13	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/. . . DIN EN ISO 4762	10.9
14	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/. . . DIN EN ISO 4762	10.9
15	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/. . . DIN EN ISO 4762	10.9
16	Zylinderschraube	SHC-screw	Vis à tête cylindrique	8	Z 31/. . . DIN EN ISO 4762	10.9
17	Zylinderstift	Dowel pin	Goupille cylindrique	2	Z 26/. . . DIN EN 28735	
18	Federndes Druckstück	Spring plunger	Vis à bille sans tête	2	Z 371/. . .	1.4305
19	Gewindestift	Set screw	Vis sans tête	2	Z 35 / . . . DIN 913	

Sonstige Bauteile
Extra Bestellung erforderlich

Other components
Extra order required

Autres éléments
Commande spéciale nécessaire

Pos.	Benennung	Designation	Désignation	Stück Quant. Pièce	Nr. / Norm No. / Standard N°/ Norme	Material / Härte Material / Hardness Matériau / Dureté
3	Kernhalteplatte	Core retainer plate	Plaque de noyau	1	K 20 / . . .	1.1730
10	Führungssäule	Guide Pillar	Colonne de guidage		Z 04 / . . .	DIN 16761-A
20	Kernhalteeinsatz	Core retainer insert	Support de noyau	1	K 2531/. . .	1.2767
21	Backe	Split	Tiroir	2	K 2528 / . . .	1.2767 / 1.2343 ESU
22	Druckplatte (Ersatzteil)	Wear plate (spare part)	Pl. de pression (pièce de rech.)		K 2526 / . . .	1.2842 / 53 + 2 HRC
23	Aufspannplatte	Clamping plate	Plaque de fixation	[1])	K 10/. . . ; K 12 / . . .	1.1730
24	Aufspannplatte	Clamping plate	Plaque de fixation	[1])	K 11/. . . ; K 13 / . . .	1.1730
25	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/. . . DIN EN ISO 4762	10.9
26	Zylinderschraube	SHC-screw	Vis à tête cylindrique	4	Z 31/. . . DIN EN ISO 4762	10.9
27	Sperrkantring	Locking edge washer	Rondelle à bords d'arrêt	8	Z 691/. . .	DIN 17221
28	Wärmeisolierplatte	Thermal insulating sheet	Plaque isolante	[1])	Z 121/. . . ; Z 1211/. . .; Z 1211/. . .	
29	Wärmeisolierplatte	Thermal insulating sheet	Plaque isolante	[1])	Z 121/. . . ; Z 1211/. . .	

= Verpackungseinheit / Packing unit / Unité d'emballage

[1]) Typ und Abmessung ist vom Konstrukteur festzulegen

[1]) Type and dimension is to be fixed by the designer

[1]) Le type et les cotes doivent être définis par le constructeur.

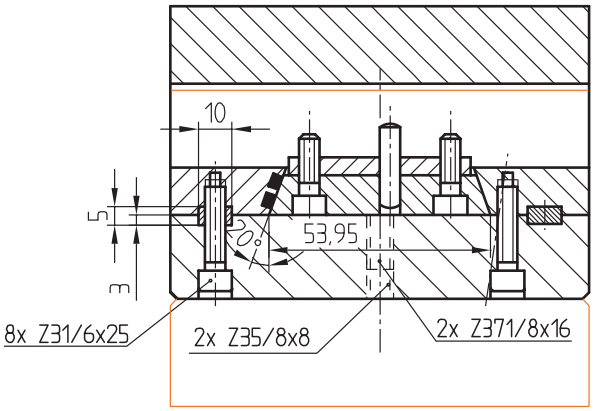
Beachten:
Die Kernhalteplatte, Pos. 3, muss je nach konstruktiver Ausführung mit Freisparungen für die Schrägsäulen Pos. 9 versehen werden.

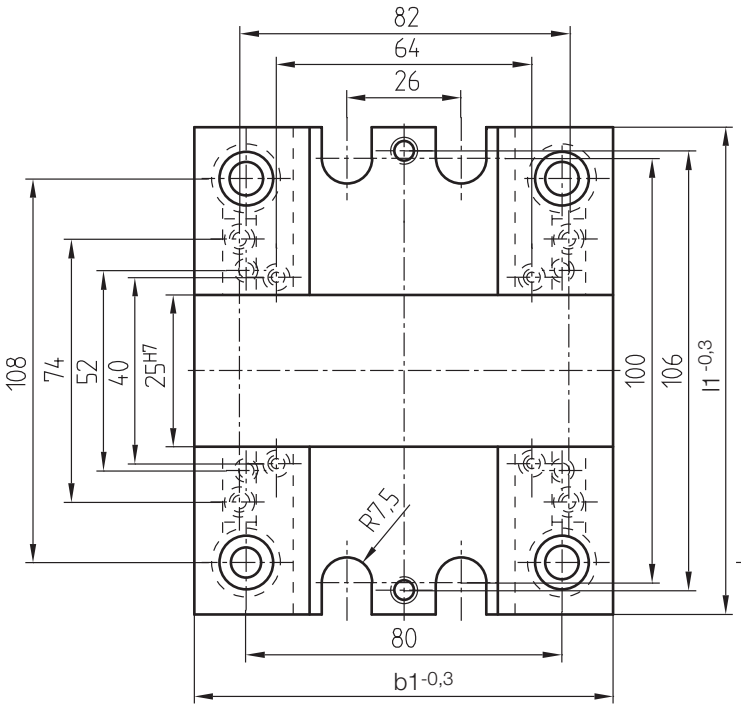
Caution:
According to the design the backing plate, item 3 must be provided with clearance recesses for angle pins, item 9.

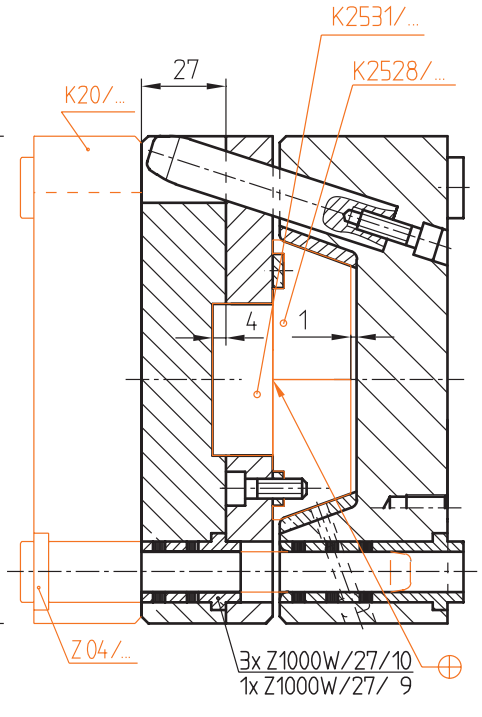
Remarque:
La plaque de noyau, pos. 3, doit présenter, selon le modèle construit, des orifices libres pour les doigts inclinés, pos. 9.

K2501/100x130

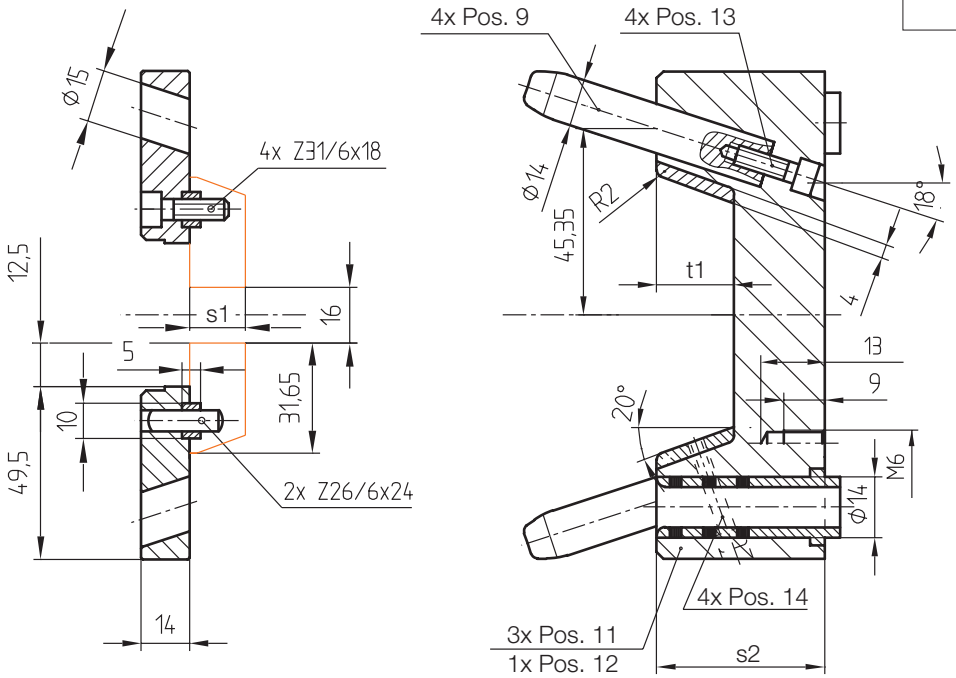
Backenwerkzeug
Split mould kit
Moule à tiroir



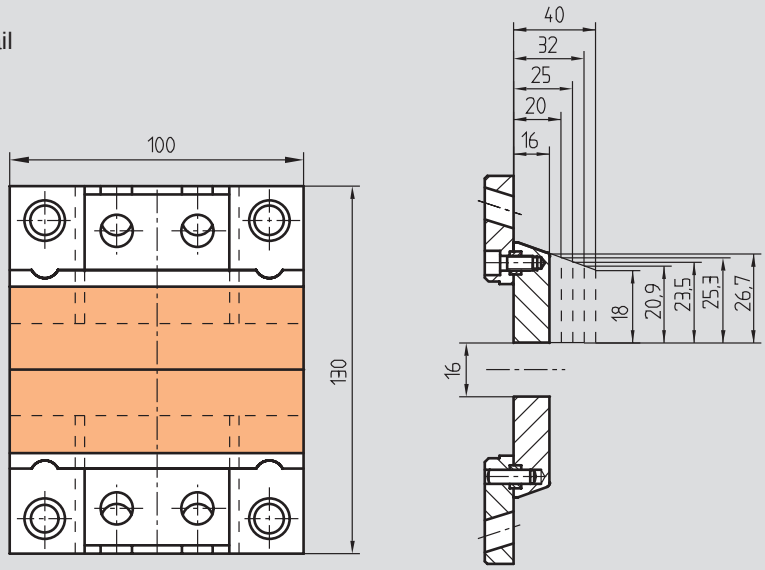




Pos. 14 Z31/...	Pos. 13 Z31/...	Pos. 12 Z1000W/...	Pos. 11 Z1000W/...	Pos. 9 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
5x30	6x20	46x9	46x10	14x67	14	46	**100**	**130**	**16**	K2501/100x130x16
5x25					18				**20**	20
	6x25	56x9	56x10	14x75	23	56			**25**	25
5x30					30				**32**	32
	6x35	66x9	66x10	14x75	38	66			**40**	40

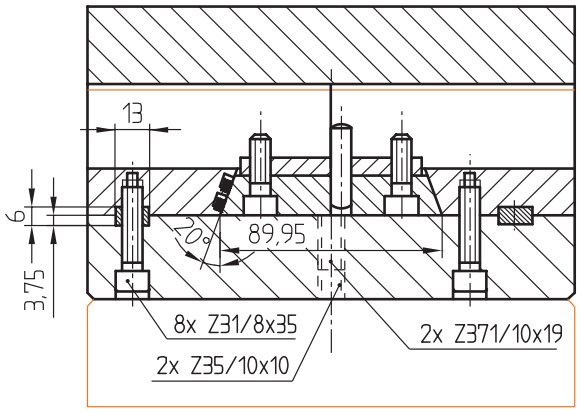


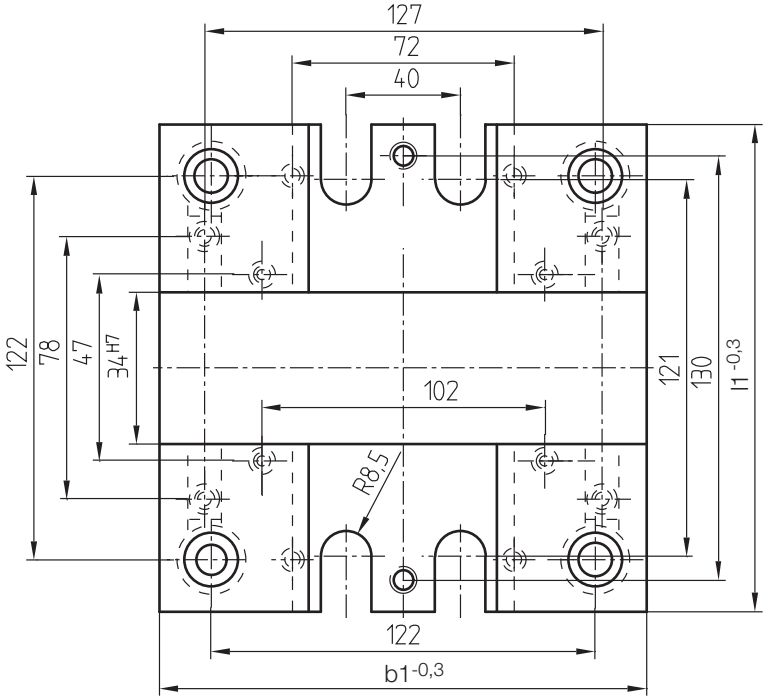
Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

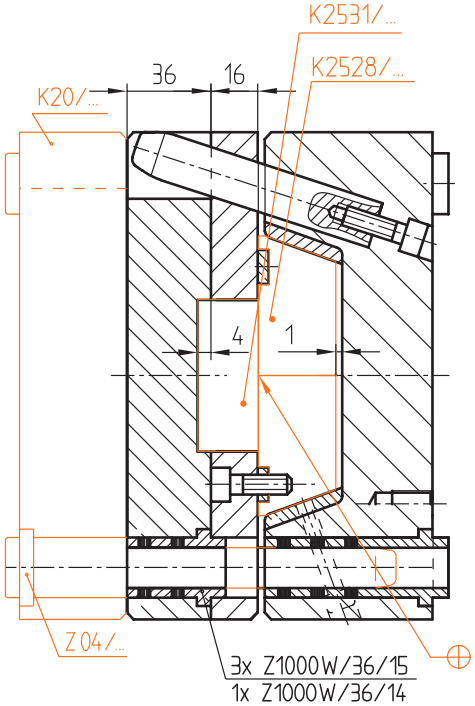


K2501/156x156

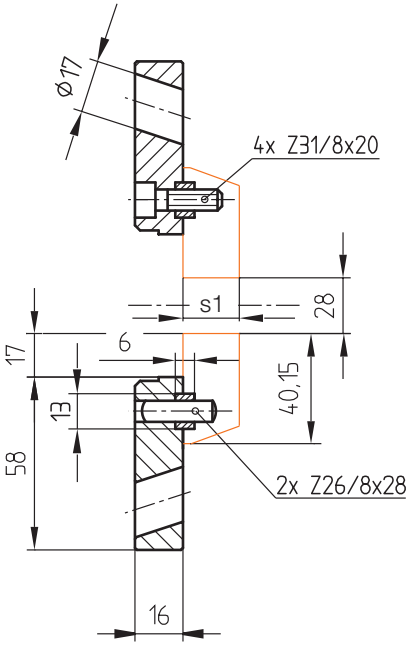
Backenwerkzeug
Split mould kit
Moule à tiroir

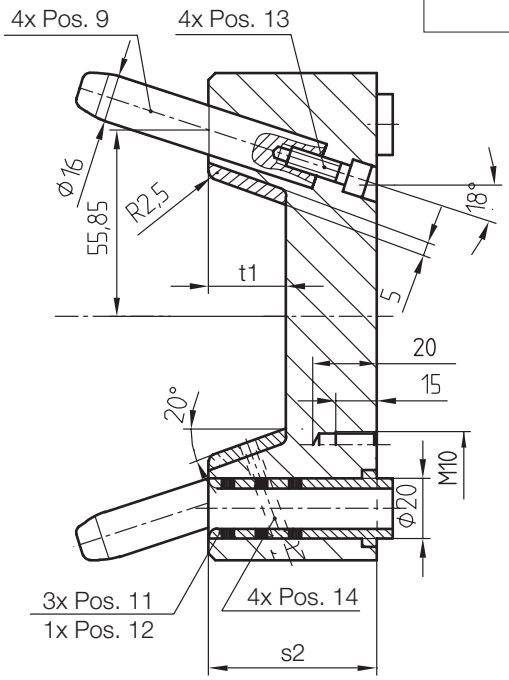




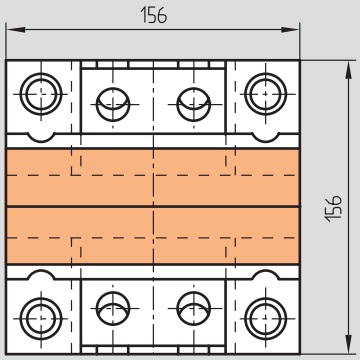


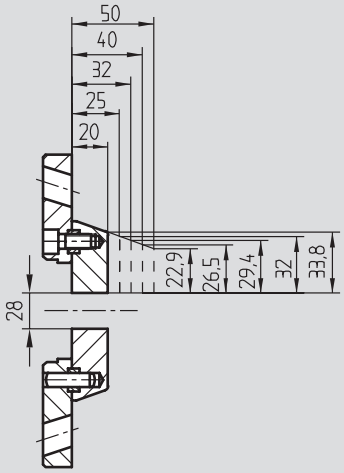
Pos. 14 Z31/...	Pos. 13 Z31/...	Pos. 12 Z1000W/...	Pos. 11 Z1000W/...	Pos. 9 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x30	8x18	46x14	46x15	16x 90	18	46	**156**	**156**	**20**	K2501/156x156x20
	8x30	56x14	56x15		23	56			**25**	25
		66x14	66x15	16x100	30	66			**32**	32
6x35	8x40	76x14	76x15		38	76			**40**	40
	8x50	86x14	86x15		48	86			**50**	50





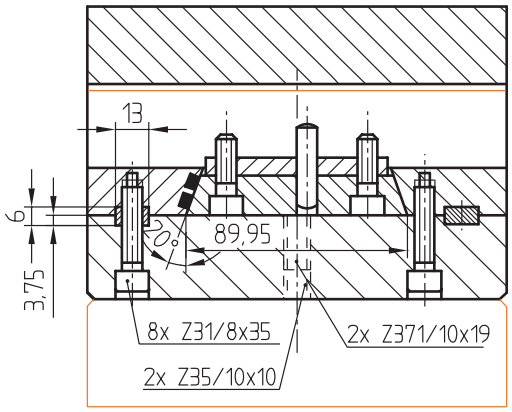
Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

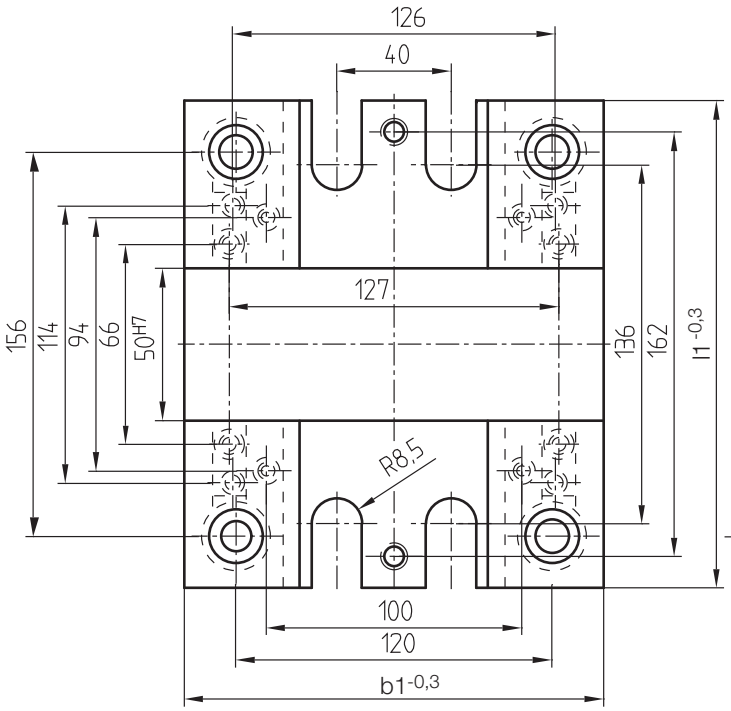


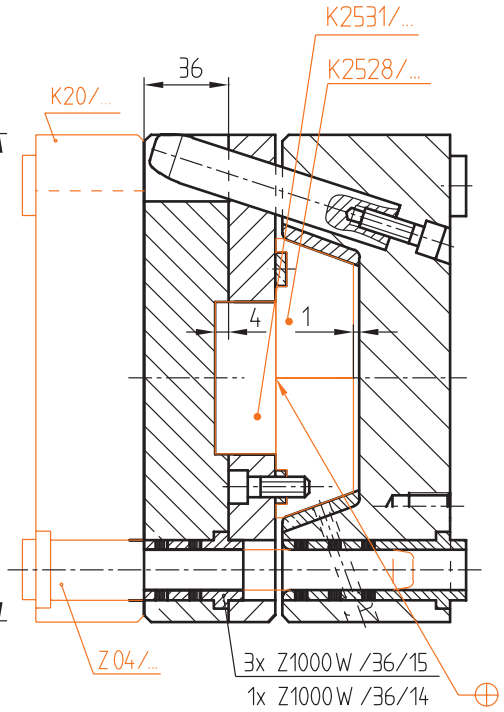


K2501/156x196

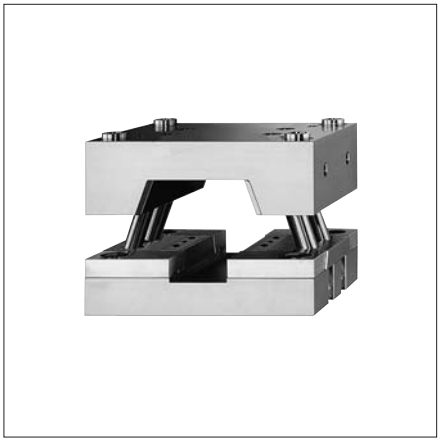
Backenwerkzeug
Split mould kit
Moule à tiroir

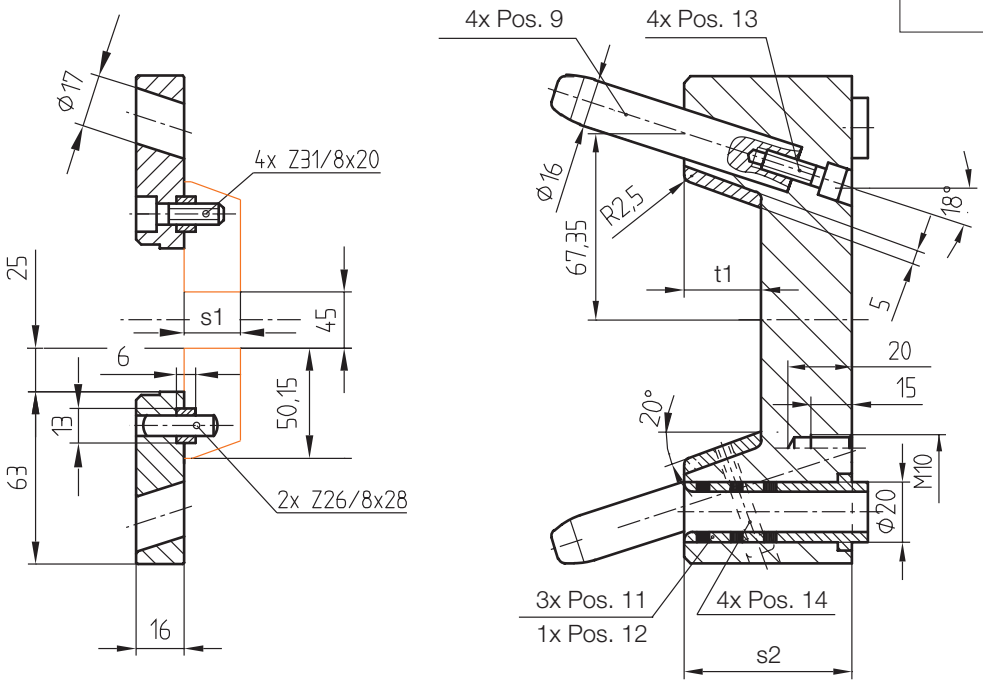




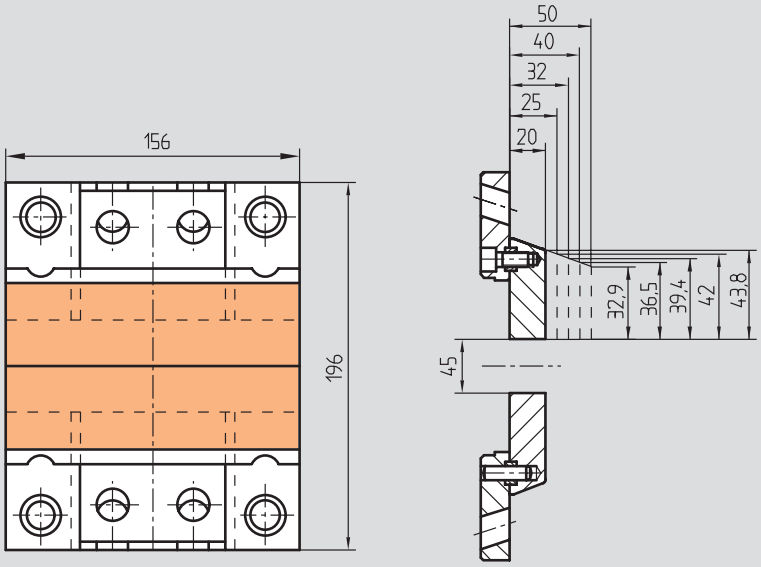


Pos. 14 Z31/...	Pos. 13 Z31/...	Pos. 12 Z1000W/...	Pos. 11 Z1000W/...	Pos. 9 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x40	8x25	56x14	56x15	16x118	18	56	**156**	**196**	**20**	K2501/156x196x20
					23				**25**	25
		66x14	66x15	16x132	30	66			**32**	32
	8x35	76x14	76x15		38	76			**40**	40
6x45	8x45	86x14	86x15		48	86			**50**	50



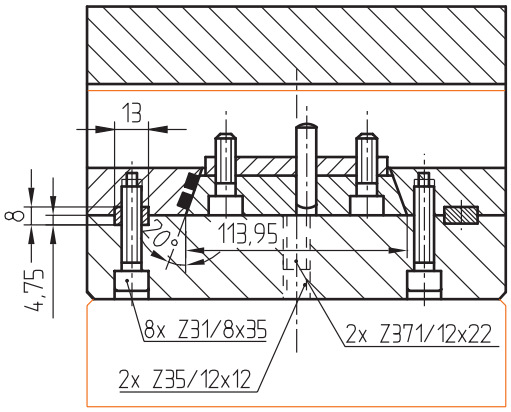


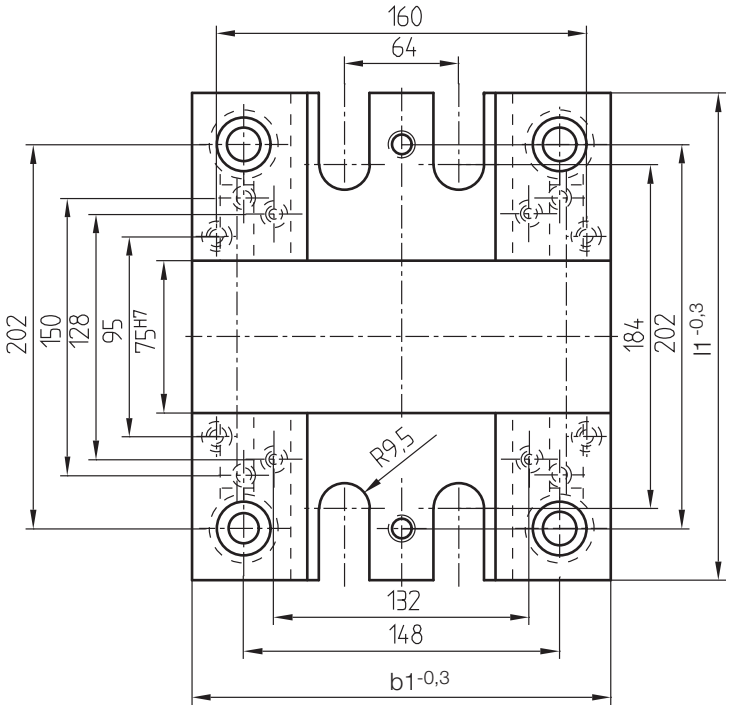
Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

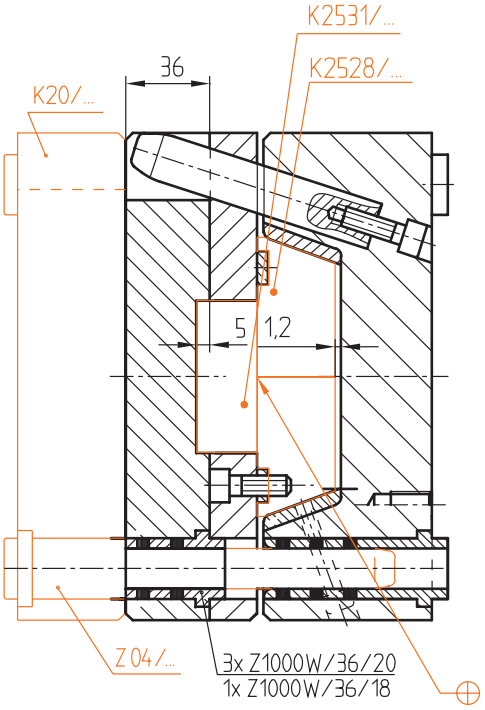


K2501/190x246

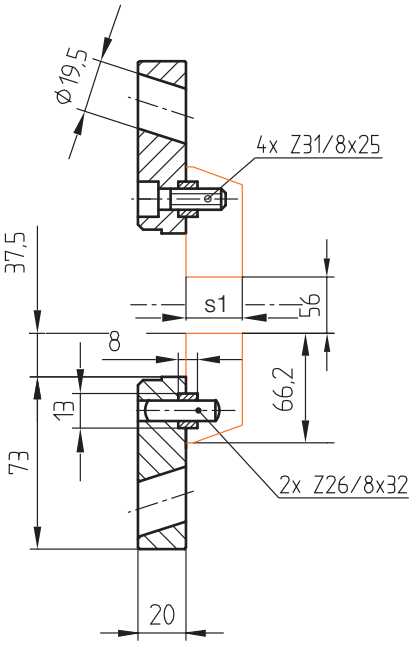
Backenwerkzeug
Split mould kit
Moule à tiroir

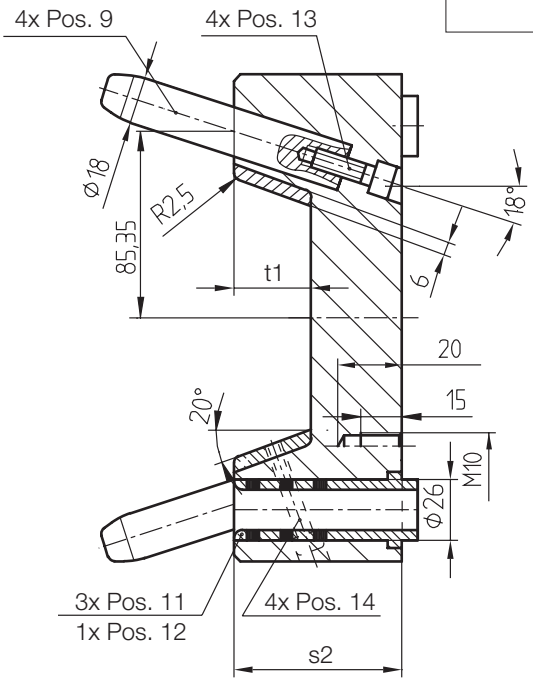




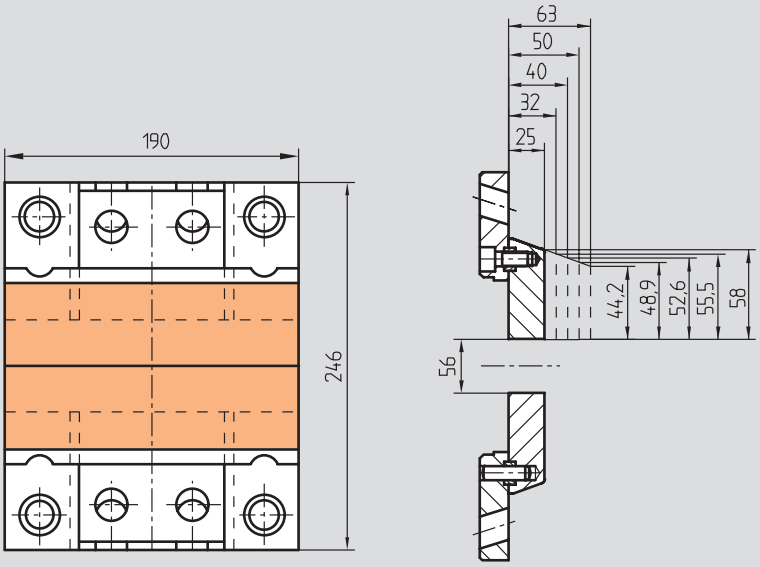


Pos. 14 Z31/...	Pos. 13 Z31/...	Pos. 12 Z1000W/...	Pos. 11 Z1000W/...	Pos. 9 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x50	10x25	66x18x145	66x20x145	18x150	23	66	**190**	**246**	**25**	K2501/190x246x25
					30				**32**	32
	10x35	76x18x135	76x20x135		38	76			**40**	40
6x55	10x25	86x18x125	86x20x125	18x170	48	86			**50**	50
	10x35	96x18x 95	96x20x 95		61	96			**63**	63



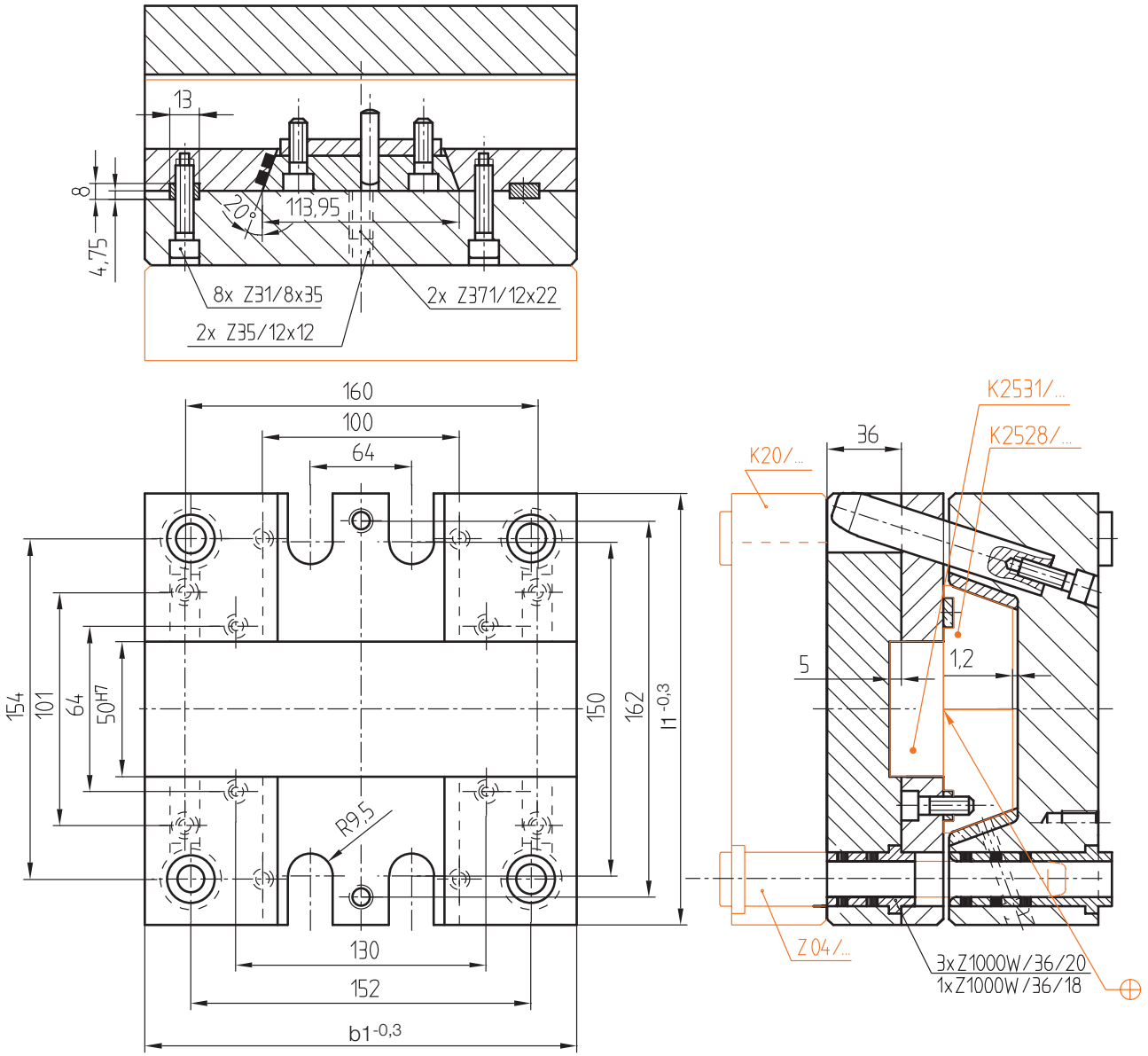


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

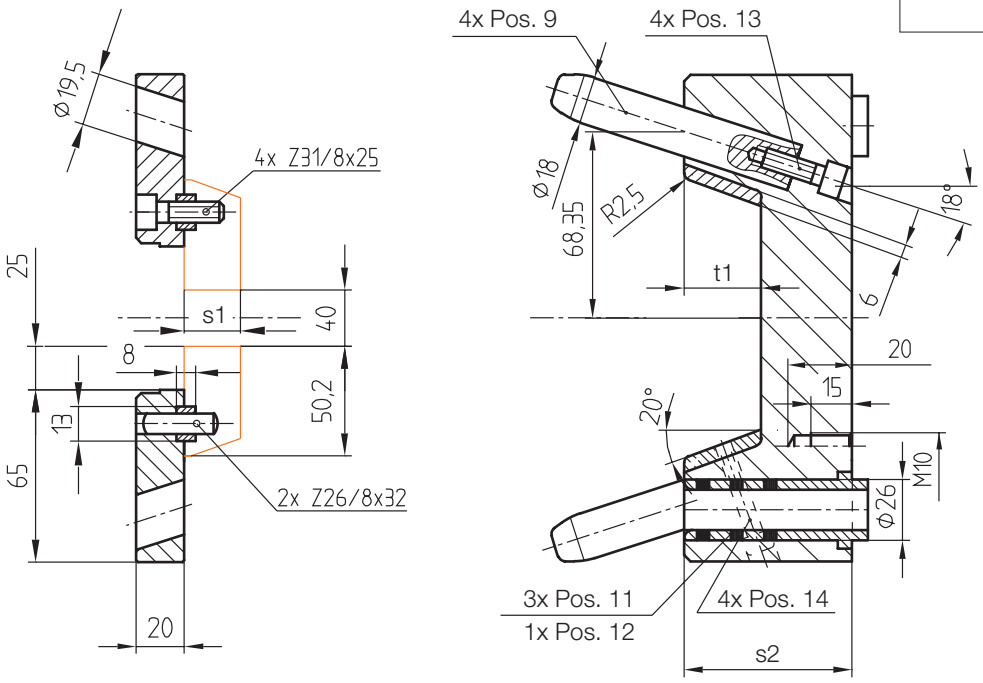


K2501/196x196

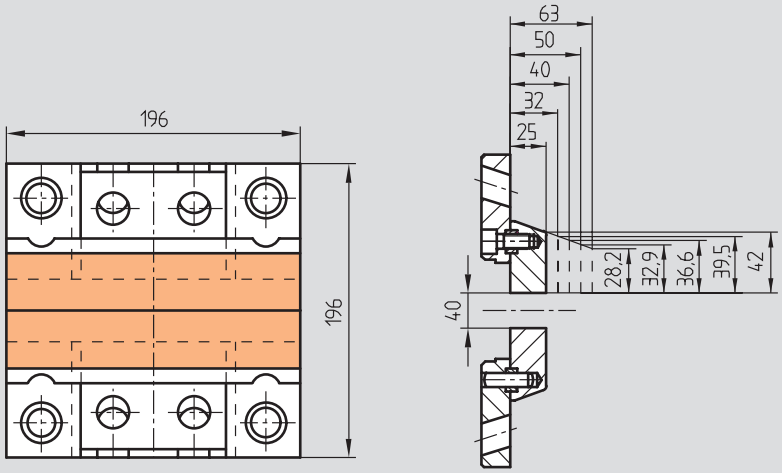
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 14 Z31/...	Pos. 13 Z31/...	Pos. 12 Z1000W/...	Pos. 11 Z1000W/...	Pos. 9 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x40	10x25	66x18	66x20	18x125	23	66	**196**	**196**	**25**	K2501/196x196x25
					30				**32**	32
	10x35	76x18	76x20		38	76			**40**	40
6x50	10x30	86x18	86x20	18x140	48	86			**50**	50
6x45	10x60	116x18	116x20		61	116			**63**	63

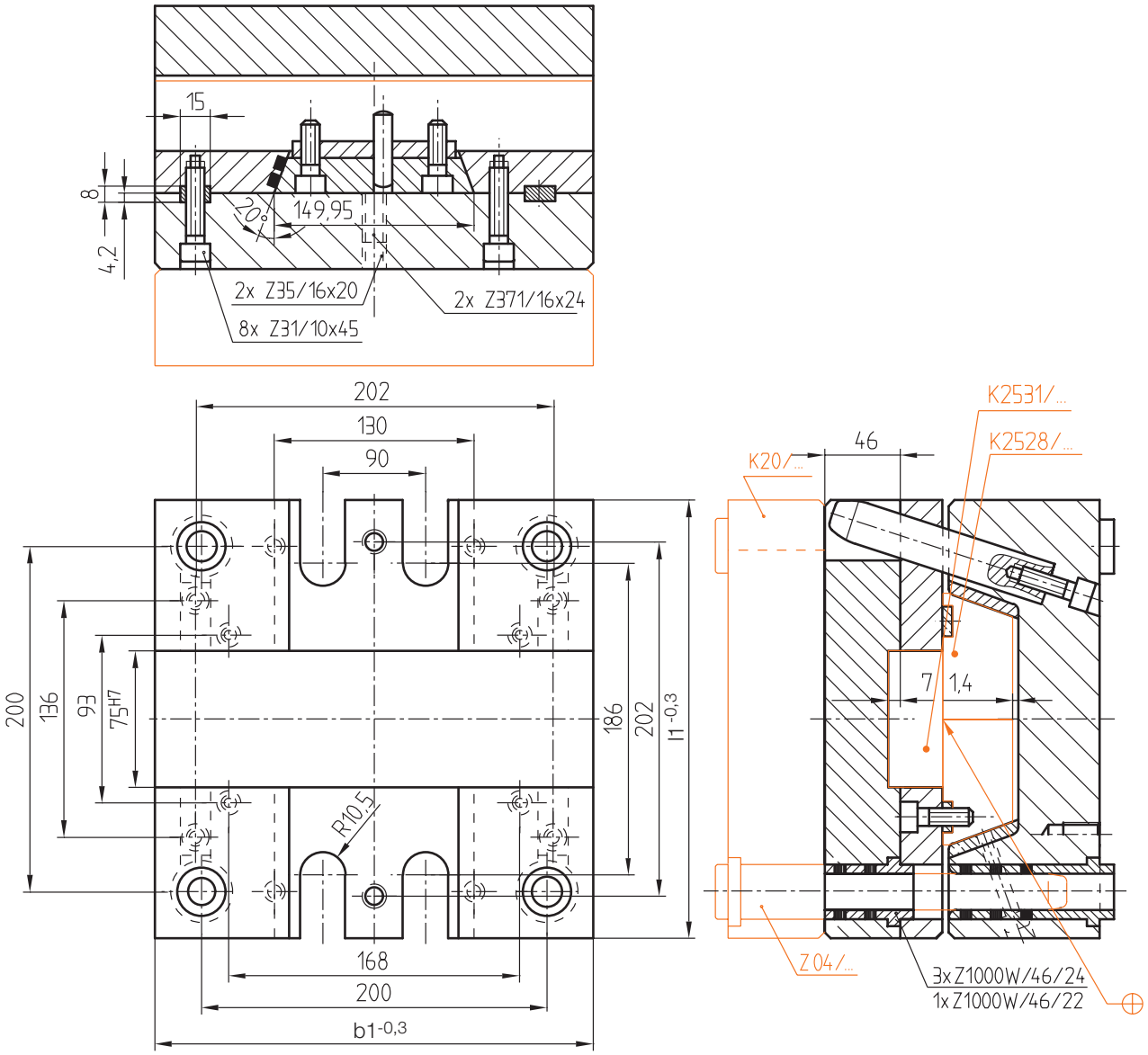


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

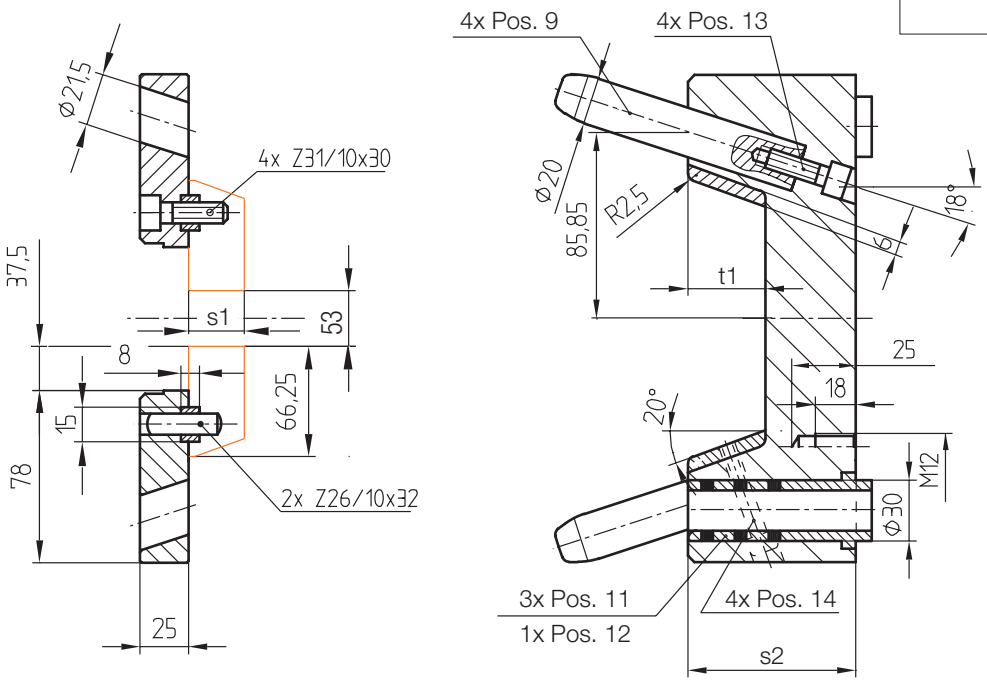


K2501/246x246

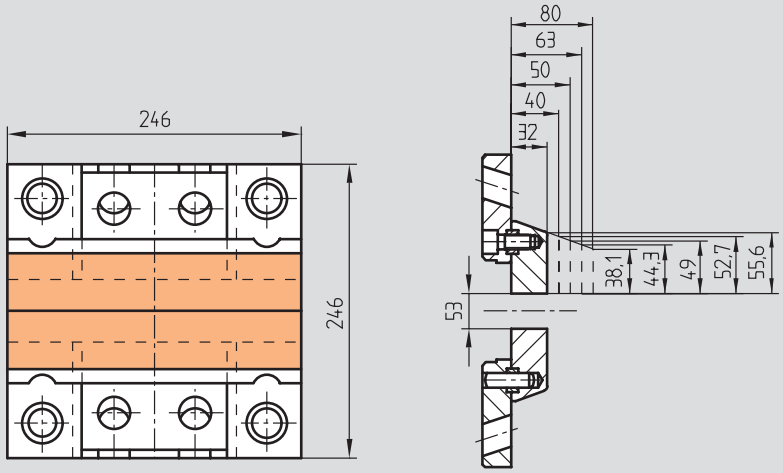
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 14 Z31/...	Pos. 13 Z31/...	Pos. 12 Z1000W/...	Pos. 11 Z1000W/...	Pos. 9 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x50	10x20	66x22	66x24	20x150	30	66	**246**	**246**	**32**	K2501/246x246x32
	10x30	76x22	76x24		38	76			**40**	40
6x55	10x20			20x160	48	76			**50**	50
6x60	10x60	116x22	116x24		61	116			**63**	63
	10x80	136x22	136x24		78	136			**80**	80

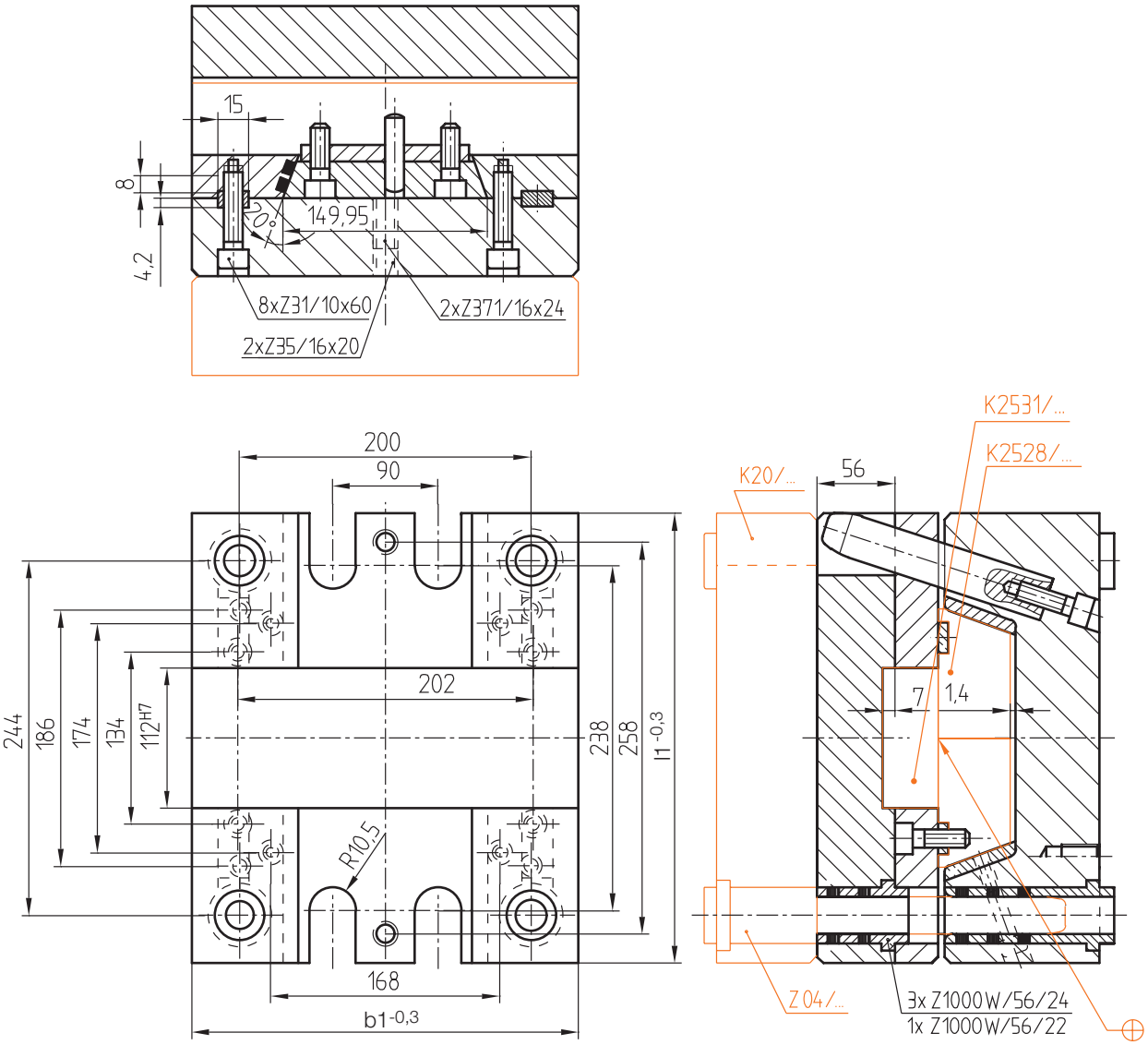


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

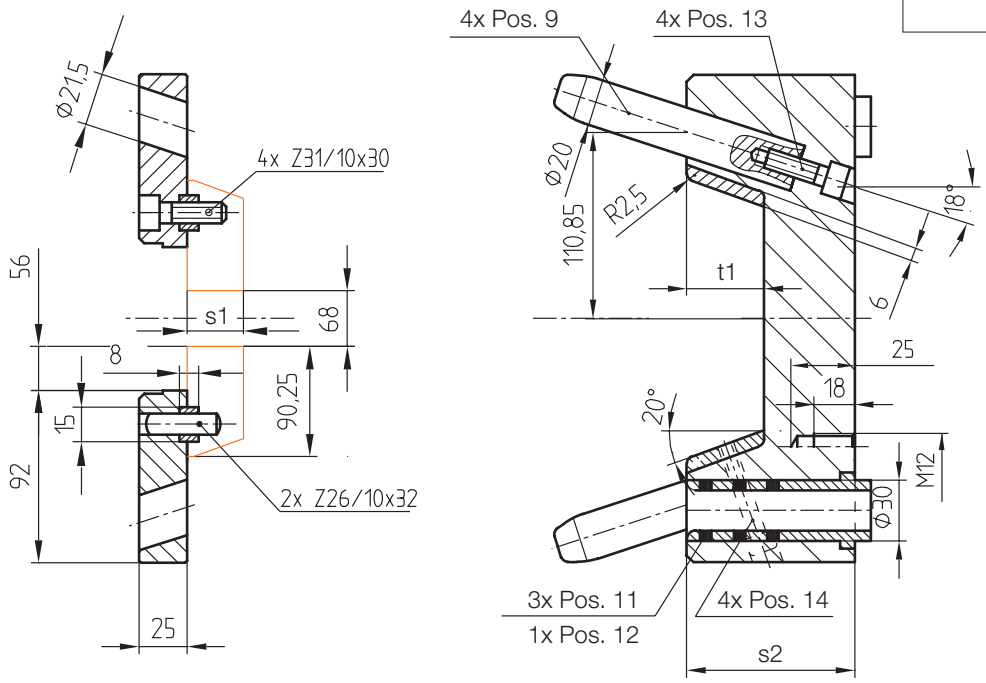


K2501/246x296

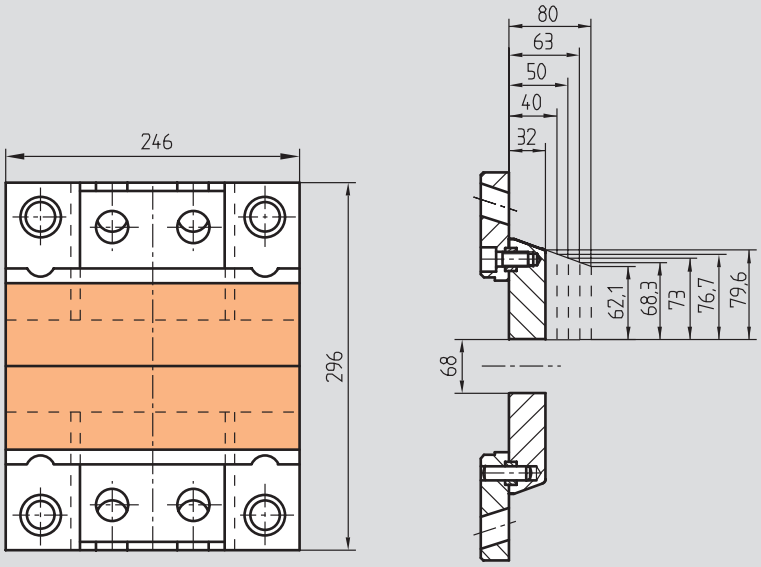
Backenwerkzeug
Split mould kit
Moule à tiroir



Pos. 14 Z31/...	Pos. 13 Z31/...	Pos. 12 Z1000W/...	Pos. 11 Z1000W/...	Pos. 9 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x55	10x25	66x22	66x24	20x170	30	66	**246**	**296**	**32**	K2501/246x296x32
	10x35	76x22	76x24		38	76			**40**	40
6x60	10x45	86x22	86x24		48	86			**50**	50
6x55	10x55	116x22	116x24	20x190	61	116			**63**	63
6x65	10x75	136x22	136x24		78	136			**80**	80

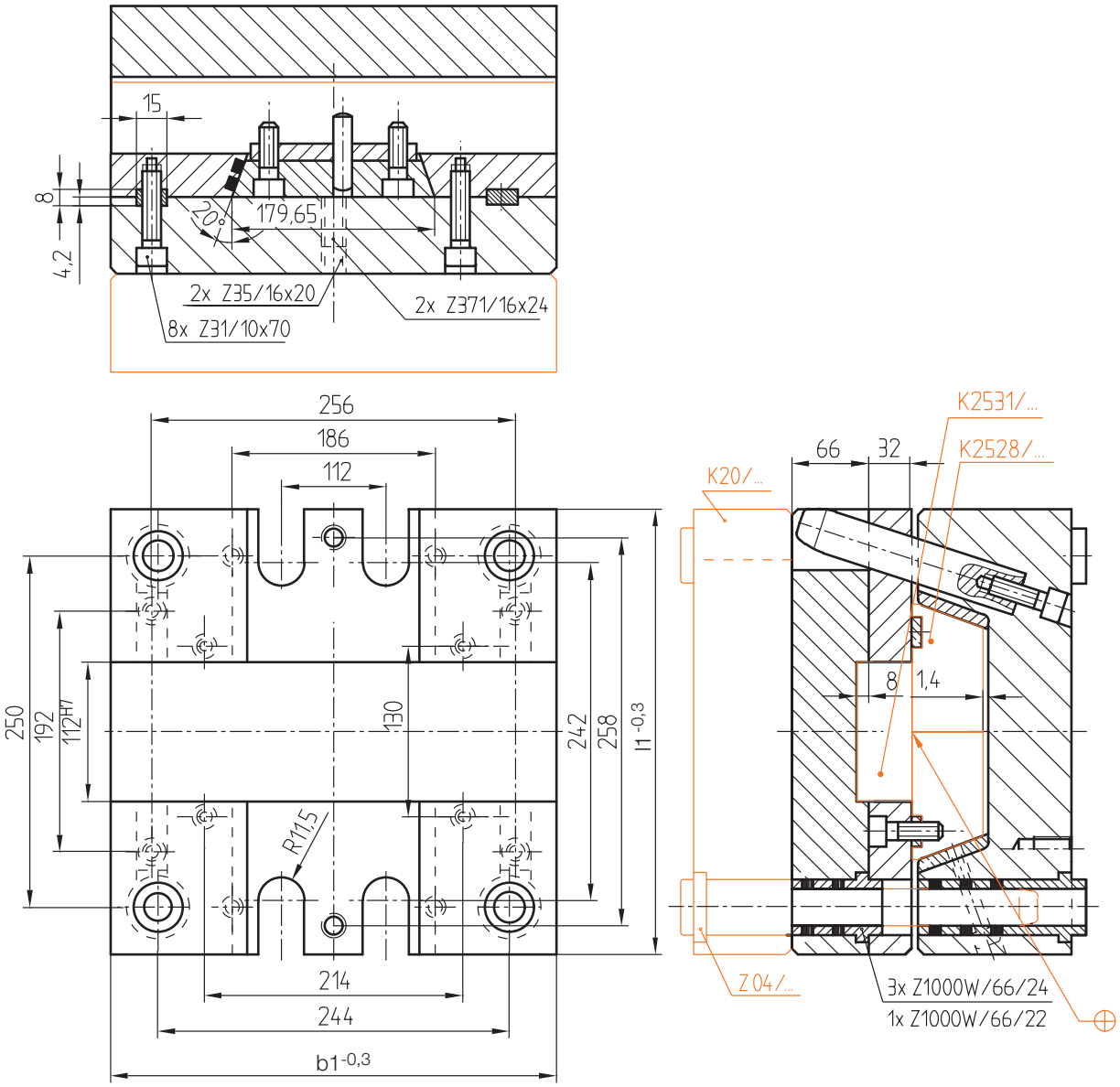


Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

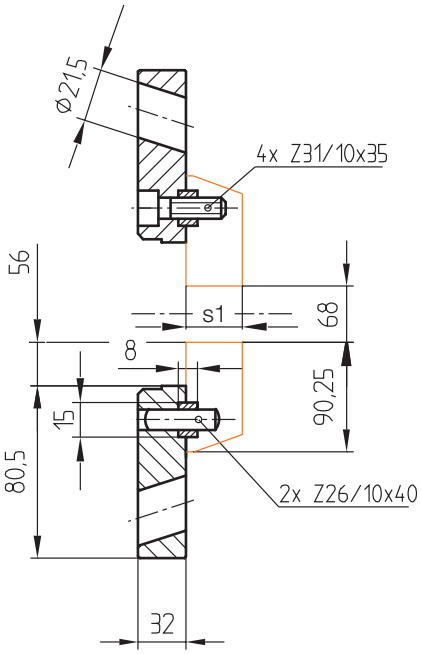


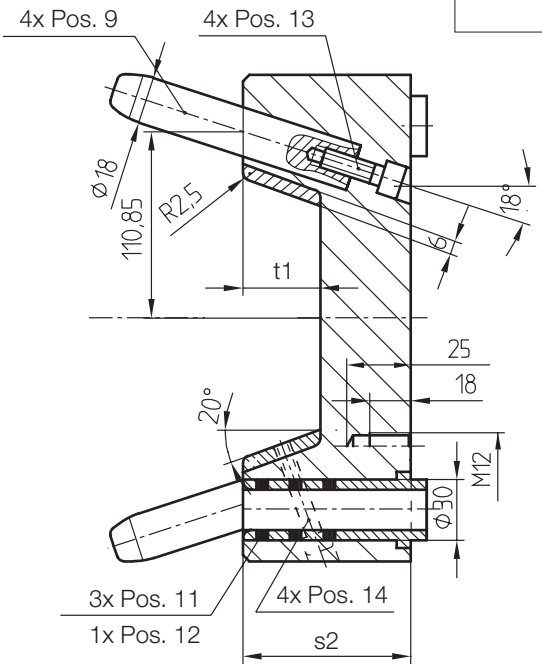
K2501/296x296

Backenwerkzeug
Split mould kit
Moule à tiroir

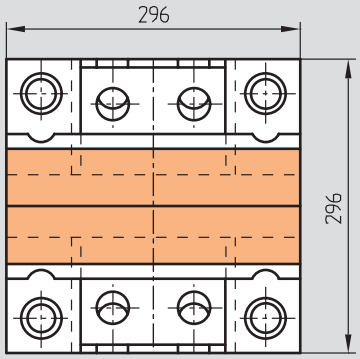


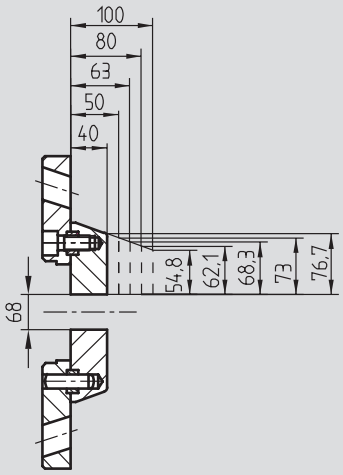
Pos. 14 Z31/...	Pos. 13 Z31/...	Pos. 12 Z1000W/...	Pos. 11 Z1000W/...	Pos. 9 Z010/...	t1	s2	**b1**	**l1**	**s1**	**Nr. / No.**
6x55	10x35	76x22	76x24	20x170	38	76	**296**	**296**	**40**	K2501/296x296x40
6x60					48				**50**	50
6x55	10x55	116x22	116x24	20x190	61	116			**63**	63
6x60	10x75	136x22	136x24		78	136			**80**	80
6x65	10x80	156x22	156x24	20x210	98	156			**100**	100





Max. Arbeitsfläche
Max. working area
Surfaces max. de travail

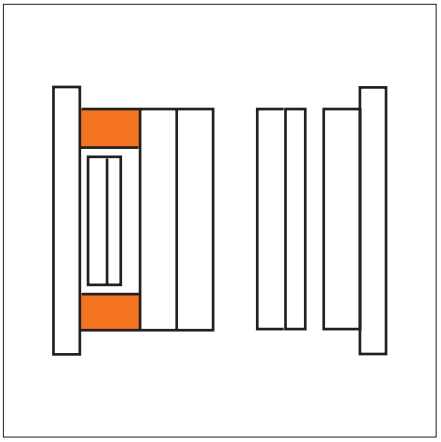


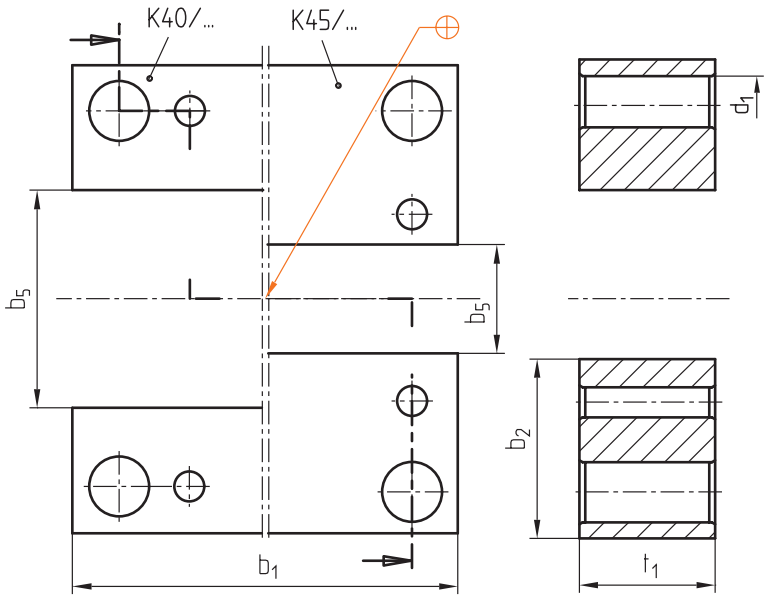


K40/...; K45/...

Leiste
Riser
Tasseaux

Mat.: 1.1730 / 640 N/mm²





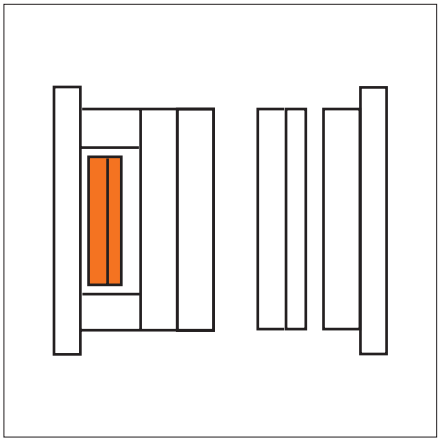
b5	b2	d1	b1	K 2500 /. . .	t1	Nr. / No.
92	32	20	156	**156 x 156**	**46**	K 40 / 156 x 156 x 46 / 1.1730
					56	56
					76	76
120	38	26	196	**196 x 196**	**46**	K 40 / 196 x 196 x 46 / 1.1730
					56	56
					76	76
160	43	30	246	**246 x 246**	**56**	K 40 / 246 x 246 x 56 / 1.1730
					76	76
					96	96
210	43	30	296	**296 x 296**	**56**	K 40 / 296 x 296 x 56 / 1.1730
					76	76
					96	96

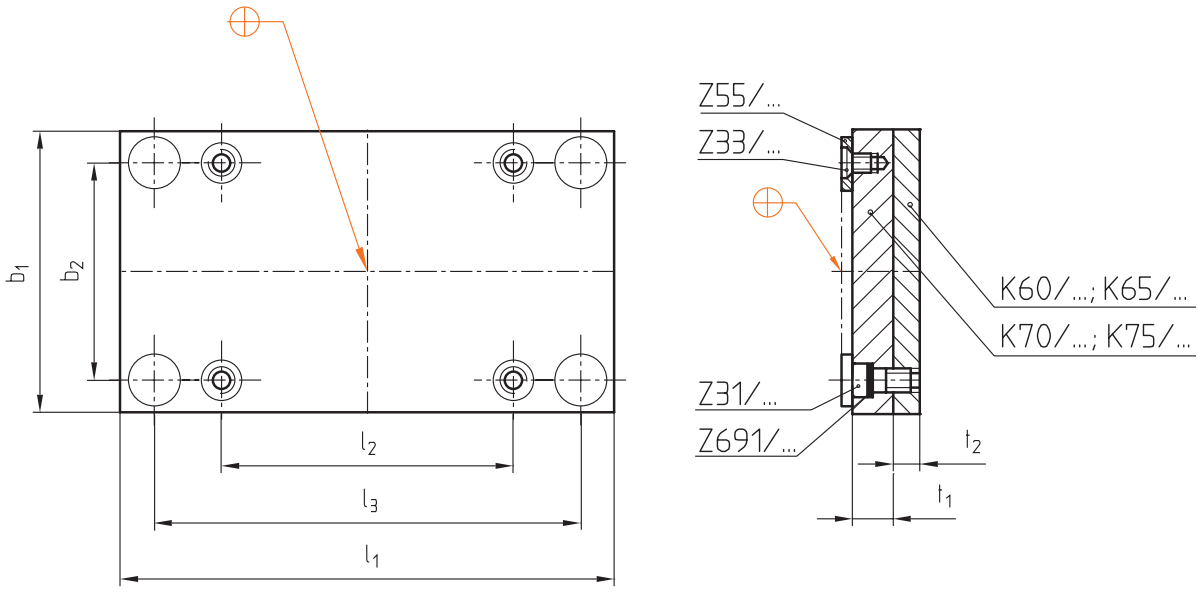
b5	b2	d1	b1	K 2500 /. . .	t1	Nr. / No.
44	43	14	100	**100 x 130**	**27**	K 45 / 100 x 130 x 27 / 1.1730
					36	36
					46	46
92	52	20	156	**156 x 196**	**46**	K 45 / 156 x 196 x 46 / 1.1730
					56	56
					76	76
130	58	26	190	**190 x 246**	**46**	K 45 / 190 x 246 x 46 / 1.1730
					56	56
					76	76
160	68	30	246	**246 x 296**	**56**	K 45 / 246 x 296 x 56 / 1.1730
					76	76
					96	96

K60-70/...; K65-75/...

Auswerferpaket
Ejector assembly
Batterie d'éjection

Mat.: 1.1730 / 640 N/mm²





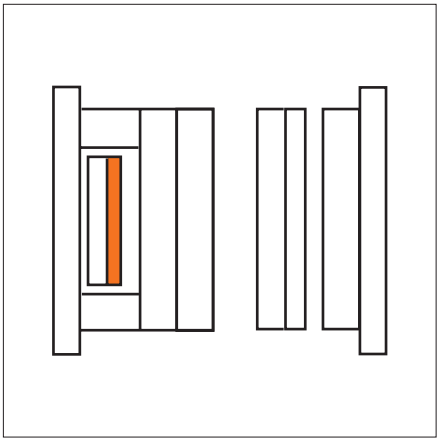
b2	b1	l3	l2	l1	t1	t2	K 2500 /. . .	Nr. / No.
68	90	136	100	156	17	9	**156 x 156**	K60-70/156x156/1.1730
96	118	166	132	196		12	**196 x 196**	196x196/1.1730
130	158	214	180	246			**246 x 246**	246x246/1.1730
180	208	266	230	296			**296 x 296**	296x296/1.1730

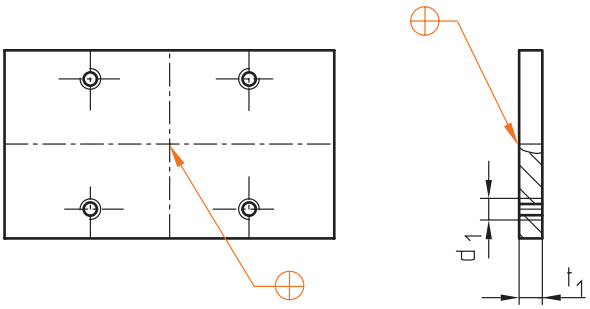
b_2	b_1	l_3	l_2	l_1	t_1	t_2	K 2500 /. . .	Nr. / No.
22	42	75	45	100	9	6	**100 x 130**	K65-75/100x130/1.1730
70	90	136	101	156	17	9	**156 x 196**	156x196/1.1730
106	128	168	133	190		12	**190 x 246**	190x246/1.1730
130	158	217	181	246			**246 x 296**	246x296/1.1730

K60/...; K65/...

Auswerferhalteplatte
Ejector retainer plate
Plaque d'éjecteur

Mat.: 1.1730 / 640 N/mm²





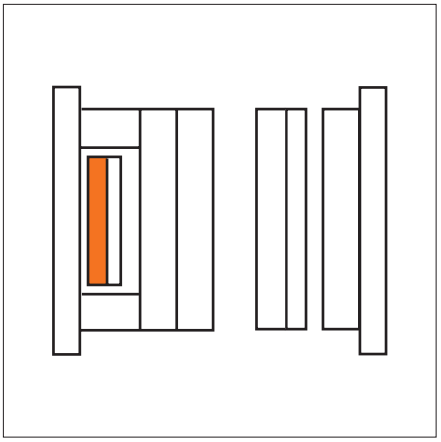
d1	K 2500 /. . .	t1	Nr. / No.
M 8	**156 x 156**	**9**	K 60 / 156 x 156 x 9 / 1.1730
	196 x 196	**12**	196 x 196 x 12 / 1.1730
	246 x 246		246 x 246 x 12 / 1.1730
	296 x 296		296 x 296 x 12 / 1.1730

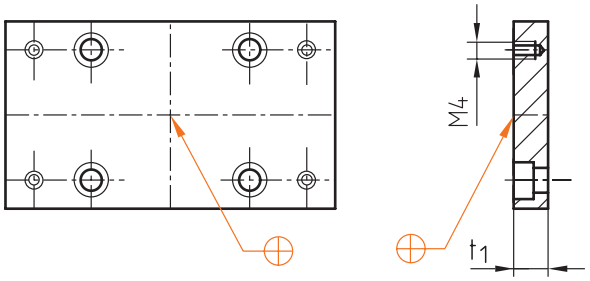
d1	K 2500 /. . .	t1	Nr. / No.
M 5	**100 x 130**	**6**	K 65 / 100 x 130 x 6 / 1.1730
M 8	**156 x 196**	**9**	156 x 196 x 9 / 1.1730
	190 x 246	**12**	190 x 246 x 12 / 1.1730
	246 x 296		246 x 296 x 12 / 1.1730

K70/...; K75/...

Auswerfergrundplatte
Ejector base plate
Contre-plaque d'éjecteur

Mat.: 1.2312 / 1080 N/mm²





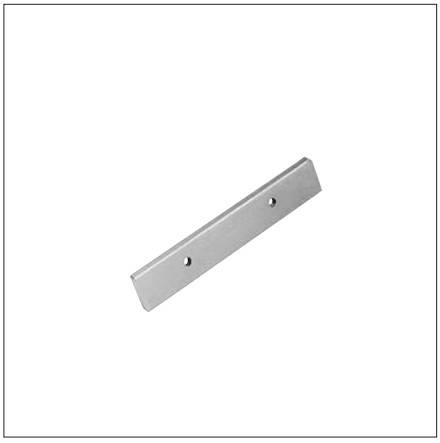
K 2500 /. . .	t1	Nr. / No.
156 x 156	**17**	K 70 / 156 x 156 x 17 / 1.2312
196 x 196		196 x 196 x 17 / 1.2312
246 x 246		246 x 246 x 17 / 1.2312
296 x 296		296 x 296 x 17 / 1.2312

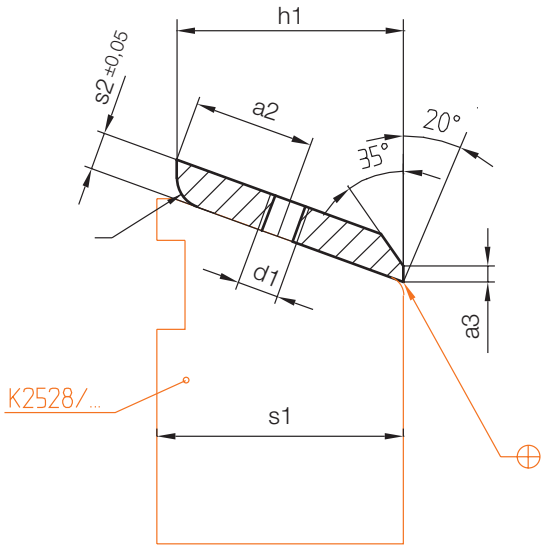
K 2500 /. . .	t1	Nr. / No.
100 x 130	**9**	K 75 / 100 x 130 x 9 / 1.2312
156 x 196	**17**	156 x 196 x 17 / 1.2312
190 x 246		190 x 246 x 17 / 1.2312
246 x 296		246 x 296 x 17 / 1.2312

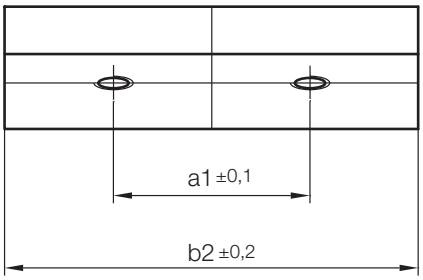
K2526/...

Druckplatte, mit Aufmaß
Wear plate, with machining allowance
Plaque de pression, avec surcote

Mat.: 1.2842 / 53 + 2 HRC





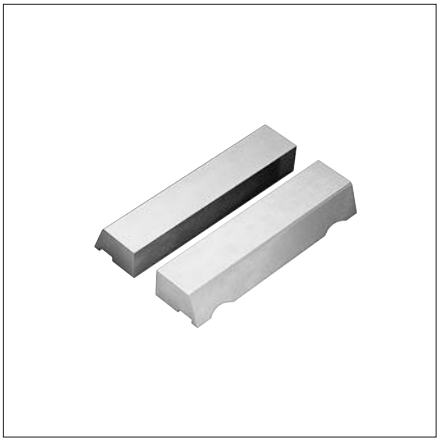


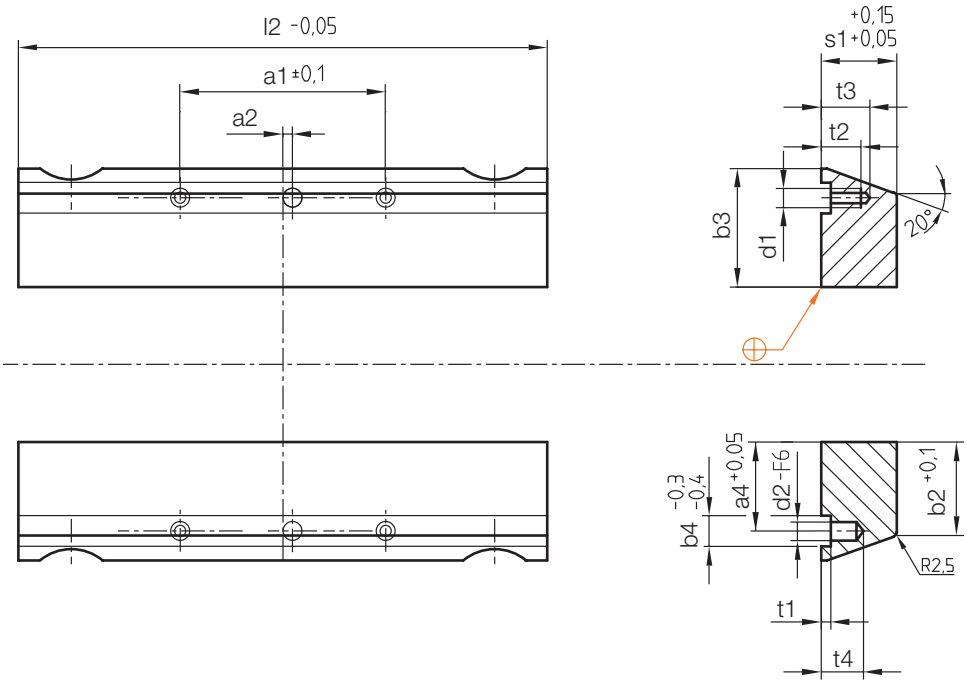
r1	h1	s2	a3	a2	a1	b2	d1	K2500/...; K2501/... b1	l1	s1	Mat.	Nr. / No.
2	14	4,2	2,3	8	52	98,5	M5	**100**	**130**	**16**	**1.2842**	K2526/100x130x 16/1.2842
	18			10						**20**		20
	23			13						**25**		25
	30			17						**32**		32
	38			21						**40**		40
2,5	18	5,2	3	10	72	154,5	M6	**156**	**156** (196)	**20**		K2526/156x156x 20/1.2842
	23			13						**25**		25
	30			17						**32**		32
	38			21						**40**		40
	48			26,5						**50**		50
	23	6,2	3,5	13	100	188,5		**190**	**246**	**25**		K2526/190x246x 25/1.2842
	30			17						**32**		32
	38			21						**40**		40
	48			26,5						**50**		50
	61			33,5						**63**		63
	23			13		194,5		**196**	**196**	**25**		K2526/196x196x 25/1.2842
	30			17						**32**		32
	38			21						**40**		40
	48			26,5						**50**		50
	61			33,5						**63**		63
	30			17	130	244,5		**246**	**246** (296)	**32**		K2526/246x246x 32/1.2842
	38			21						**40**		40
	48			26,5						**50**		50
	61			33,5						**63**		63
	78			42						**80**		80
	38			21	160	294,5		**296**	**296**	**40**		K2526/296x296x 40/1.2842
	48			26,5						**50**		50
	61			33,5						**63**		63
	78			42						**80**		80
	98			53						**100**		100

K2528/...

Backe
Split
Tiroir

Mat.: 1.2767



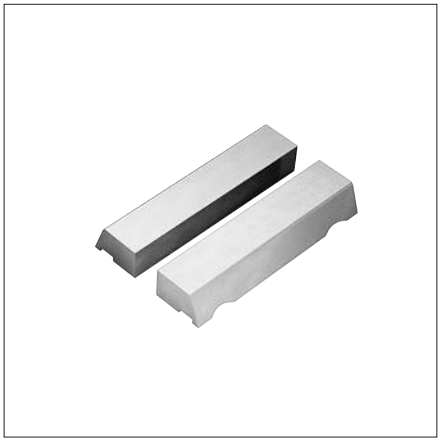


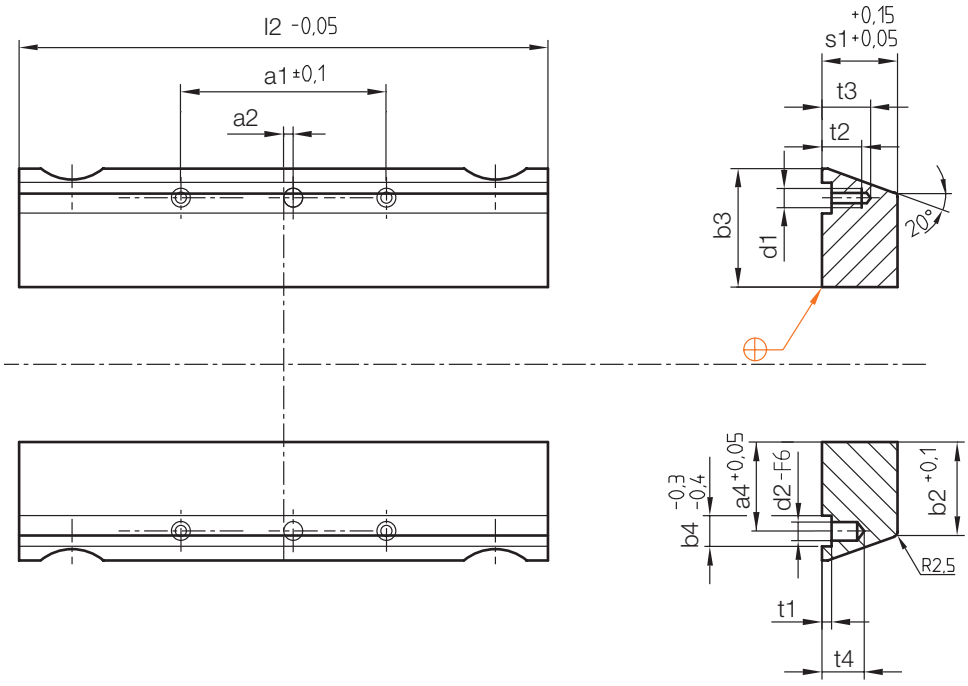
t4	t3	t2	t1	a4	a2	a1	b4	b3	b2	l2	d2	d1	K2500/...; K2501/... b1	l1	s1	Mat.	Nr. / No.
14	14,5	12	3,2	22,4	3	28	10	31,65	26,7	99,7	6	M6	**100**	**130**	**16**	**1.2767**	K2528/100x130x 16/1.2767
	18	14							25,3						**20**		20
									23,5						**25**		25
									20,9						**32**		32
									18						**40**		40
18	18,5	14	4,1	28,65	4	55	13	40,15	33,8	155,7	8	M8	**156**	**156**	**20**		K2528/156x156x 20/1.2767
	23	17							32						**25**		25
									29,4						**32**		32
									26,5						**40**		40
									22,9						**50**		50
	18,5	14		37,65				50,15	43,8				**156**	**196**	**20**		K2528/156x196x 20/1.2767
	23	17							42						**25**		25
									39,4						**32**		32
									36,5						**40**		40
									32,9						**50**		50
			4,2	52,2		80		66,2	58	189,7			**190**	**246**	**25**		K2528/190x246x 25/1.2767
									55,5						**32**		32
									52,6						**40**		40
									48,9						**50**		50
									44,2						**63**		63

K2528/...

Backe
Split
Tiroir

Mat.: 1.2767



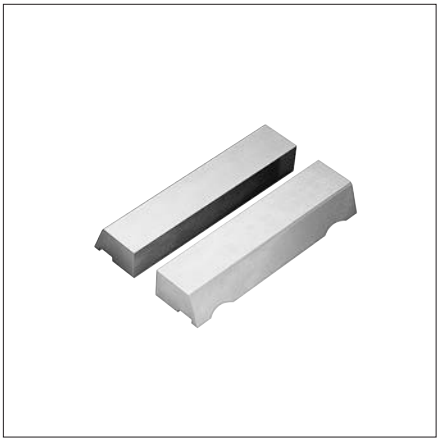


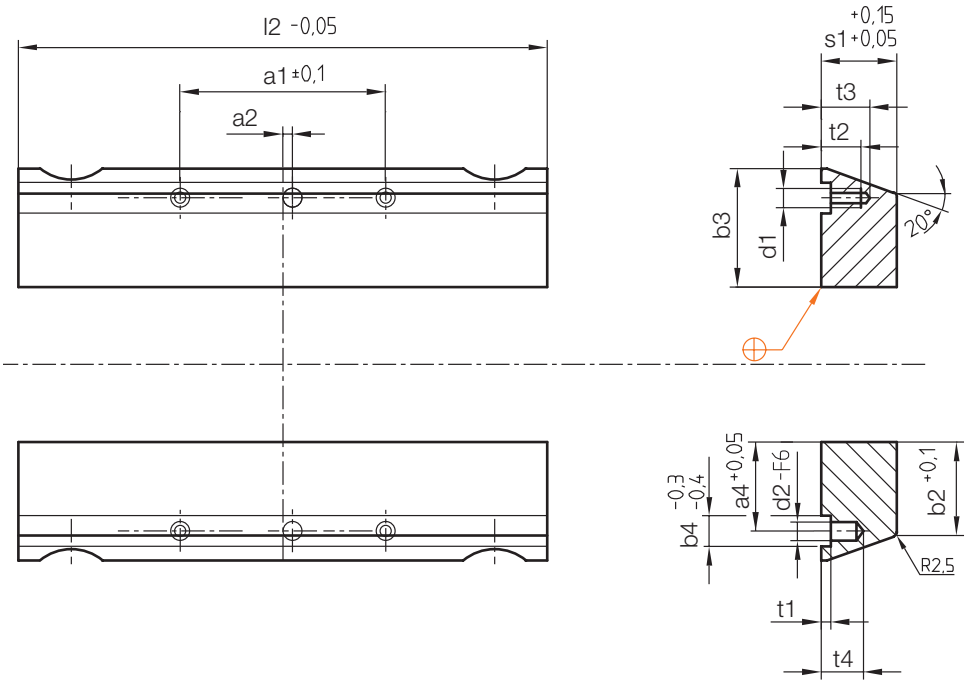
t4	t3	t2	t1	a4	a2	a1	b4	b3	b2	l2	d2	d1	K2500/...; K2501/... b1	l1	s1	Mat.	Nr. / No.
18	23	17	4,2	37,7	4	80	13	50,2	42	195,7	8	M8	**196**	**196**	**25**	**1.2767**	K2528/196x196x 25/1.2767
									39,5						**32**		32
									36,6						**40**		40
									32,9						**50**		50
									28,2						**63**		63
20	25	19		52,25	5	106	15	66,25	55,6	245,7	10	M10	**246**	**246**	**32**		K2528/246x246x 32/1.2767
									52,7						**40**		40
									49						**50**		50
									44,3						**63**		63
									38,1						**80**		80
				73,25				90,25	79,6				**246**	**296**	**32**		K2528/246x296x 32/1.2767
									76,7						**40**		40
									73						**50**		50
									68,3						**63**		63
									62,1						**80**		80
						125			76,7	295,7			**296**	**296**	**40**		K2528/296x296x 40/1.2767
									73						**50**		50
									68,3						**63**		63
									62,1						**80**		80
									54,8						**100**		100

K2528/...

Backe
Split
Tiroir

Mat.: 1.2343 ESU



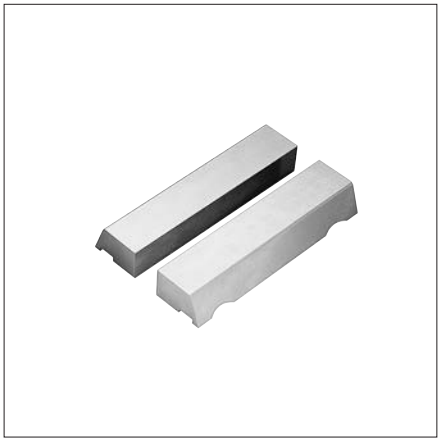


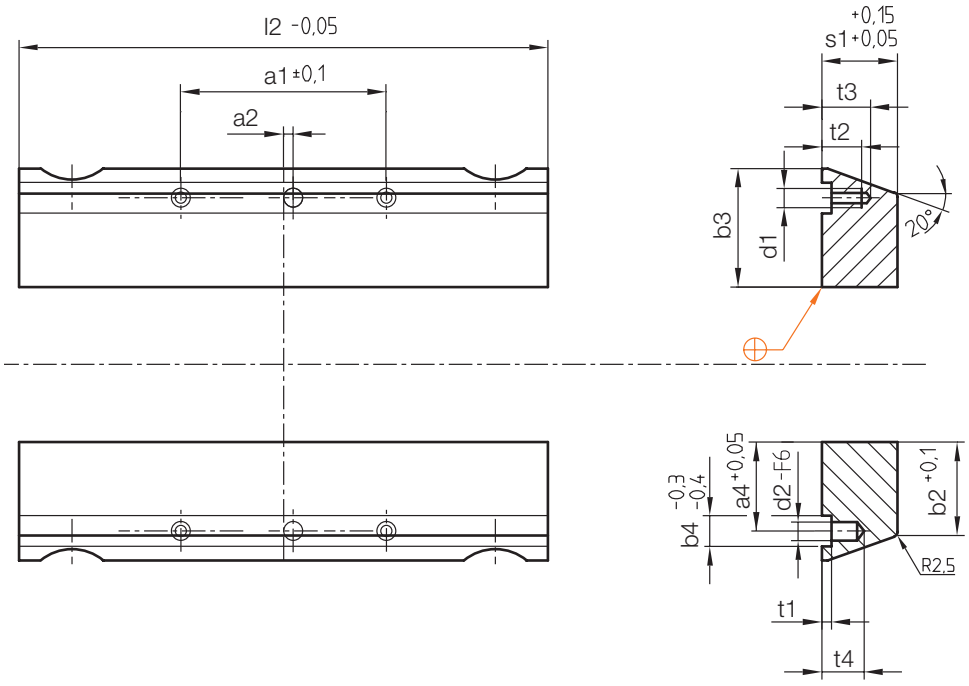
t4	t3	t2	t1	a4	a2	a1	b4	b3	b2	l2	d2	d1	K 2500/... K 2501/... b1	l1	s1	Mat.	Nr. / No.
14	14,5	12	3,2	22,4	3	28	10	31,65	26,7	99,7	6	M6	**100**	**130**	**16**	**1.2343 ESU**	K 2528/100 x 130 x 16/1.2343 ESU
	18	14							25,3						**20**		20
									23,5						**25**		25
									20,9						**32**		32
									18						**40**		40
18	18,5	14	4,1	28,65	4	55	13	40,15	33,8	155,7	8	M8	**156**	**156**	**20**		K 2528/156 x 156 x 20/1.2343 ESU
	23	17							32						**25**		25
									29,4						**32**		32
									26,5						**40**		40
									22,9						**50**		50
	18,5	14		37,65				50,15	43,8				**156**	**196**	**20**		K 2528/156 x 196 x 20/1.2343 ESU
	23	17							42						**25**		25
									39,4						**32**		32
									36,5						**40**		40
									32,9						**50**		50
			4,2	52,2		80		66,2	58	189,7			**190**	**246**	**25**		K 2528/190 x 246 x 25/1.2343 ESU
									55,5						**32**		32
									52,6						**40**		40
									48,9						**50**		50
									44,2						**63**		63

K2528/...

Backe
Split
Tiroir

Mat.: 1.2343 ESU



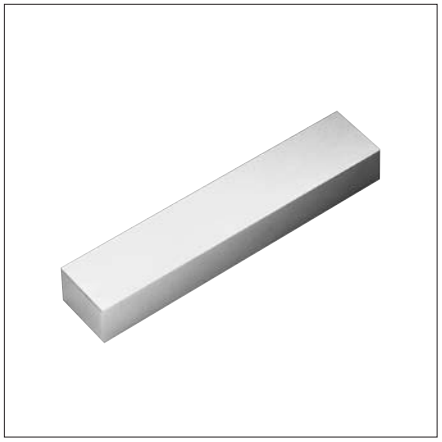


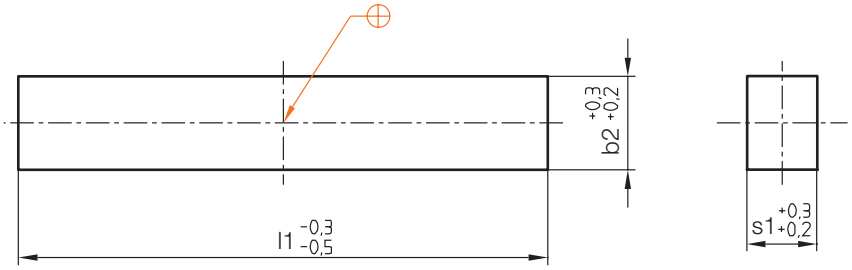
t4	t3	t2	t1	a4	a2	a1	b4	b3	b2	l2	d2	d1	K2500/... K2501/... b1	l1	s1	Mat.	Nr. / No.
18	23	17	4,2	37,7	4	80	13	50,2	42	195,7	8	M8	**196**	**196**	**25**	**1.2343 ESU**	K 2528 / 196 x 196 x 25 / 1.2343 ESU
									39,5						**32**		32
									36,6						**40**		40
									32,9						**50**		50
									28,2						**63**		63
20	25	19		52,25	5	106	15	66,25	55,6	245,7	10	M10	**246**	**246**	**32**		K 2528 / 246 x 246 x 32 / 1.2343 ESU
									52,7						**40**		40
									49						**50**		50
									44,3						**63**		63
									38,1						**80**		80
				73,25				90,25	79,6				**246**	**296**	**32**		K 2528 / 246 x 296 x 32 / 1.2343 ESU
									76,7						**40**		40
									73						**50**		50
									68,3						**63**		63
									62,1						**80**		80
						125			76,7	295,7			**296**	**296**	**40**		K 2528 / 296 x 296 x 40 / 1.2343 ESU
									73						**50**		50
									68,3						**63**		63
									62,1						**80**		80
									54,8						**100**		100

K2531/...

Kernhalteeinsatz
Core retainer insert
Support de noyau

Mat.: 1.2767/880 N/mm²



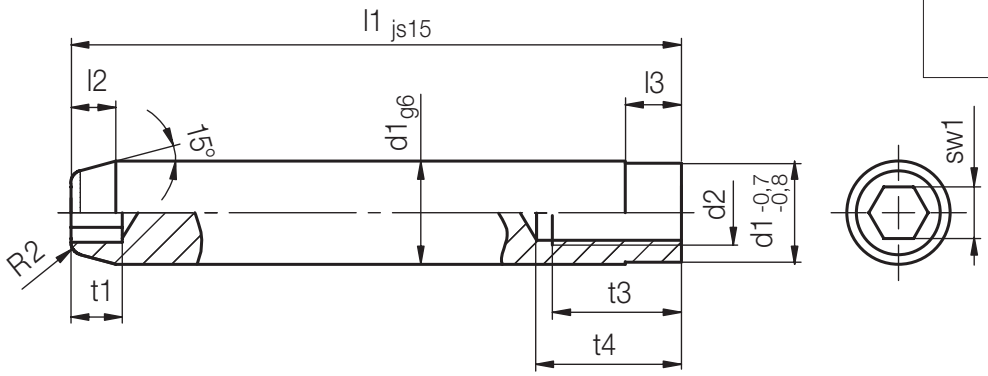


b2	K2500/...; K2501/... b1	l1	s1	Mat.	Nr. / No.
25	**100**	**130**	**18**	**1.2767**	K2531/ 100x130x18/1.2767
34	**156**	**156**	**20**		156x156x20
50	**156**	**196**			156x196x20
75	**190**	**246**	**25**		190x246x25
50	**196**	**196**	**25**		196x196x25
75	**246**	**246**	**32**		246x246x32
112	**246**	**296**			246x296x32
	296	**296**	**40**		296x296x40

Z010/...

Schrägsäule
Angle Pin
Doigt incliné

Mat.: ≈ 1.0401



sw1	t1	l5	l4	l3	l2	d2	d1	l1	Nr. / No.
5	5	5	4	15	10	M 6	**10**	**60**	Z010/10x 60
								80	80
								100	100
							12	**60**	Z010/12x 60
								80	80
								100	100
								120	120
							14	**50**	Z010/14x 50
								60	60
								67	67
								70	70
								75	75
								80	80
								90	90
								100	100
6	6		7			M 8	15	**50**	Z010/15x 50
								60	60
								70	70
								80	80
								90	90
		5,5		18	12		**16**	**80**	Z010/16x 80
								90	90
								100	100
								118	118
								120	120
								132	132
								140	140
								160	160
8	8	6		22	15	M10	**18**	**60**	Z010/18x 60
								70	70
								80	80
								90	90
								100	100
								125	125
								140	140
								150	150
								170	170

sw1	t1	l5	l4	l3	l2	d2	d1	l1	Nr. / No.
8	8	7	7	22	15	M10	**20**	**60**	Z010/20x 60
								70	70
								80	80
								90	90
								100	100
								120	120
								140	140
								150	150
								160	160
								170	170
								180	180
								190	190
								210	210
							22	**70**	Z010/22x 70
								80	80
								90	90
								100	100
								120	120
10	10			25	18	M12	**24**	**70**	Z010/24x 70
								80	80
								90	90
								100	100
								120	120
								140	140
								160	160
								180	180
								200	200
								220	220
14	14					M16	**30**	**80**	Z010/30x 80
								90	90
								100	100
								120	120
								140	140
							32	**80**	Z010/32x 80
								90	90
								100	100
								120	120
								140	140

Ermöglicher für Kompetenz
Enabler for competence

Ich lebe Formenbau – zu 100%.

- Persönliche Betreuung bei Bestellung und Abwicklung
- Ansprechpartner mit Formenbau- und Spritzgusskompetenz
- Antwortzeiten 90% innerhalb von 2 Stunden

My life is focused 100% on mouldmaking.

- Reliable processes - from order to delivery
- Personal support when you need mouldmaking and injection moulding competence
- 90% of answering response times less than 2 hours

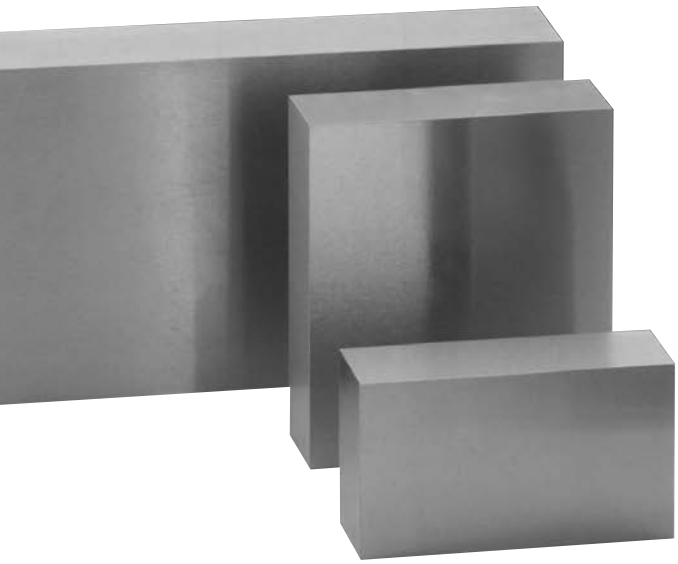
HASCO

Ermöglichen mit System.

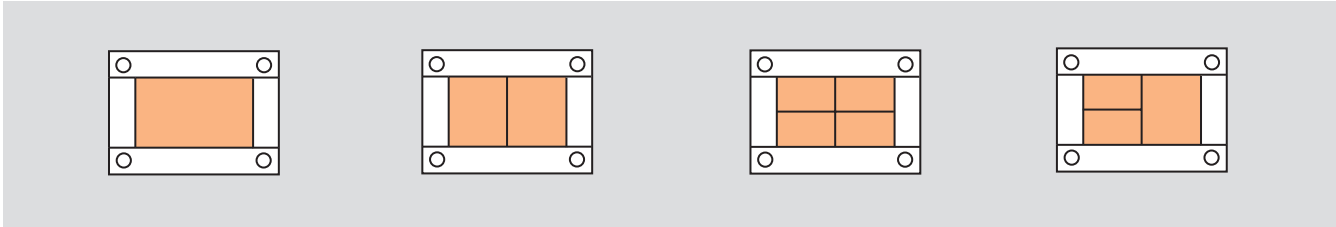
KR / PR

Einsatz-Baukastensystem
Insert-Modular System
Système modulaire d'insert

KR 25/... Rahmenformplatte finden Sie im Register Platten.
KR 25/... bolster plate, please refer to the plates-section.
Vous trouverez plaque porte-empreinte avec logement
KR 25/... à le répertoire des plaques.



KR / PR

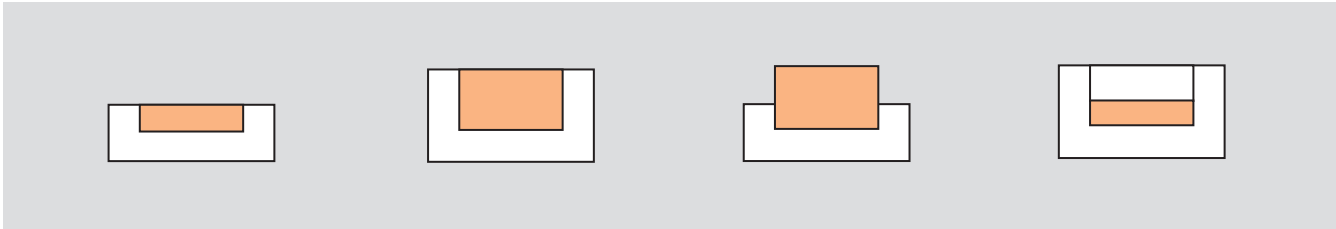


Durch die systematische maßliche Abstufung der Einsätze sind diese beliebig kombinierbar. Die Arbeitsfläche läßt sich entsprechend der fertigungstechnischen Gegebenheiten unterteilen.

Because of their systematically graded sizing, the inserts can be combined as desired. The working surface can be subdivided in accordance with manufacturing conditions.

L'échelle dimensionnelle systématique des inserts permet de les combiner à volonté. La surface de travail peut être subdivisée en fonction des besoins de la fabrication.

Die Einsatzdicken entsprechen den

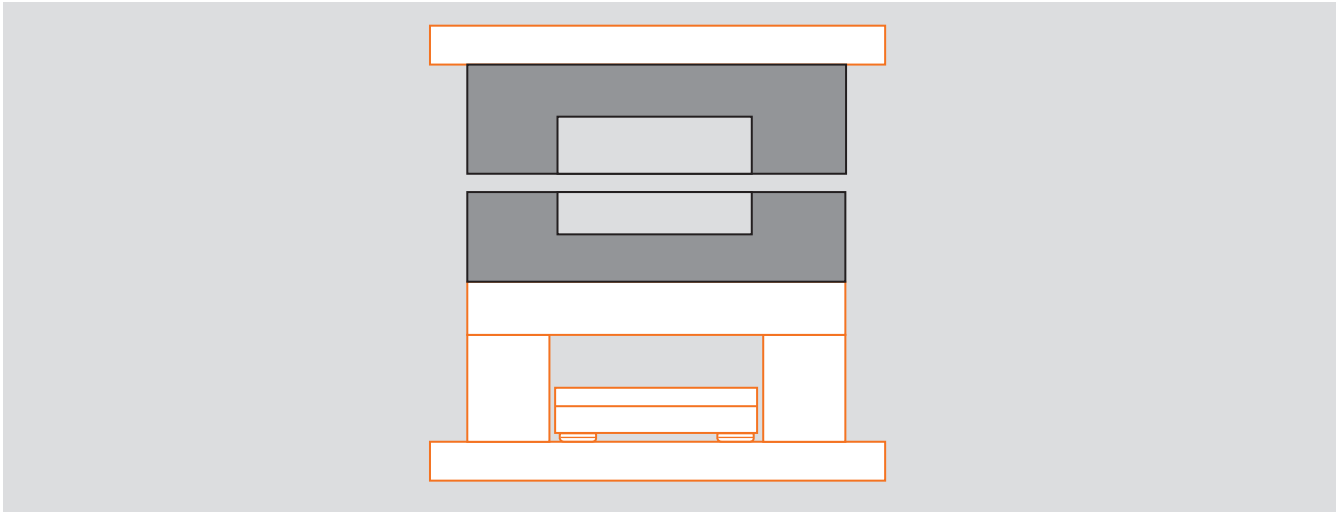


Aufnahmen der Formplatten. Sie sind ebenfalls beliebig kombinierbar, wenn z. B. Konturbereiche in die Gegenseite ragen müssen.

The thicknesses of the inserts correspond to the pockets of the cavity plates. They can also be combined as desired, e. g. if cavity contours have to project into the opposite side.

Les épaisseurs des inserts correspondent aux parties appropriées des plaques porte-empreintes. Elles peuvent également être combinées a volonté lorsque les contours doivent par ex. pénétrer dans la partie opposée.

Die zusätzlich zur Komplettierung

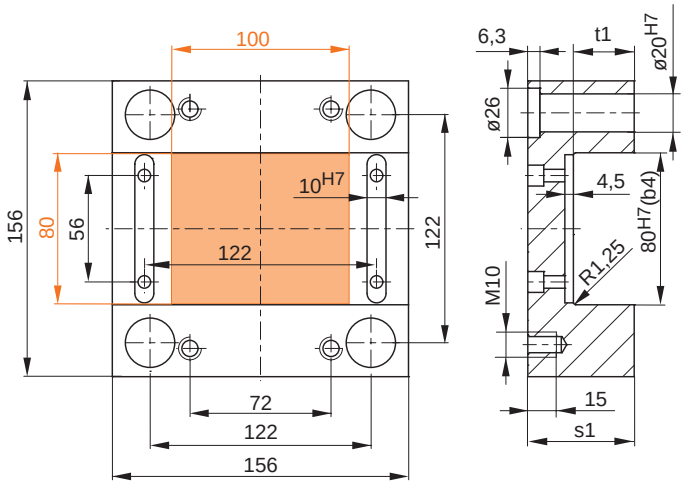


der Werkzeuge erforderlichen Bauteile sowie technische Information und Anwendungsbeispiele sind im HASCO-Gesamtkatalog aufgeführt.

The HASCO catalogue contains the additional components required to complete the mould, technical information and examples of application.

Les éléments supplémentaires nécessaires pour compléter les moules ainsi que des informations techniques et les domaines d'application sont donnés dans le catalogue général HASCO.

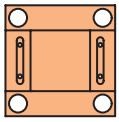
156 x 156

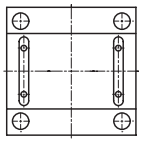


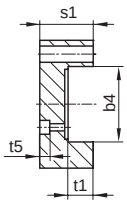
Bestellbeispiel:
Ordering example:
Exemple de commande:

KR 20 / 156 x 156 x 36 x 80 x 20 / 1.2312
PR / 40 x 50 x 20 / 1.2767

KR20



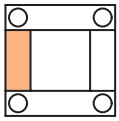


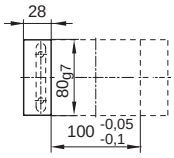


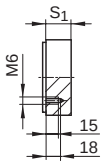
s1 = 36: t5 = 6,8
s1 ≥ 46: t5 = 8,4

KR20 / 156x156	x	s1	x	b4	x	t1	/	1.2312
		36		80		20		■
		46				25		■
		56				32		■

KR201

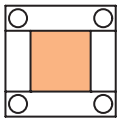


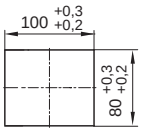


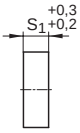


KR201 / 80x28	x	s1	/	1.2312
		20		■
		25		■
		32		■

PR

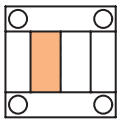


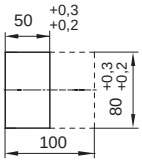


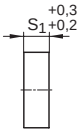


PR / 80x100	x	s1	/	1.2767	3.4365
		20		■	■
		25		■	■
		32		■	■
		40		■	■

PR

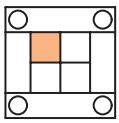


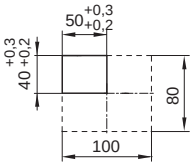


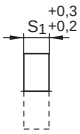


PR / 50x80	x	s1	/	1.2767	3.4365
		20		■	■
		25		■	■
		32		■	■
		40		■	■

PR

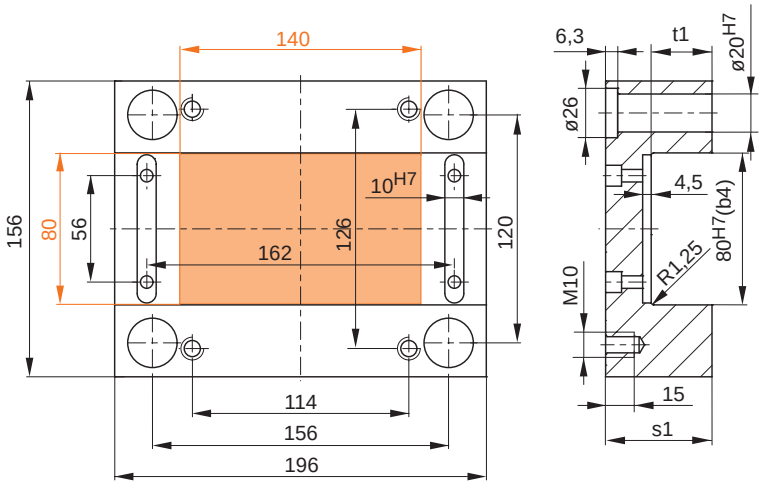






PR / 40x50	x	s1	/	1.2767	3.4365
		20		■	■
		25		■	■
		32		■	■
		40		■	■

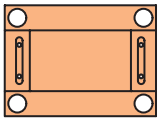
156 x 196

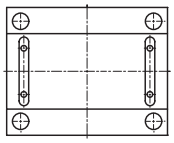


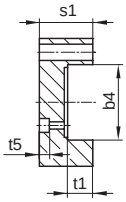
Bestellbeispiel:
Ordering example:
Exemple de commande:

KR 20 / 156 x 196 x 36 x 80 x 20 / 1.2312
PR / 40 x 70 x 20 / 1.2767

KR20



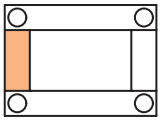


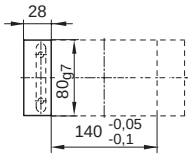


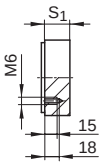
s1 = 36: t5 = 6,8
s1 ≧ 46: t5 = 8,4

KR20 / 156x196	x	s1	x	b4	x	t1	/ 1.2312
		36		80		20	■
		46				25	■
		56				32	■

KR201

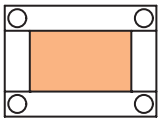


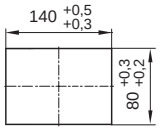


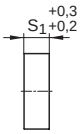


KR201 / 80x28	x	s1	/ 1.2312
		20	■
		25	■
		32	■

PR

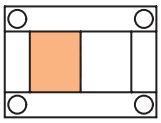


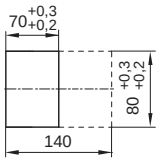


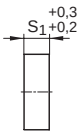


PR / 80x140	x	s1	/ 1.2767	3.4365
		20	■	■
		25	■	■
		32	■	■
		40	■	■

PR

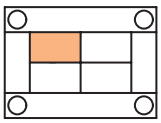


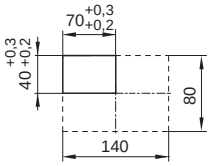


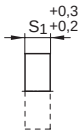


PR / 70x80	x	s1	/ 1.2767	3.4365
		20	■	■
		25	■	■
		32	■	■
		40	■	■

PR

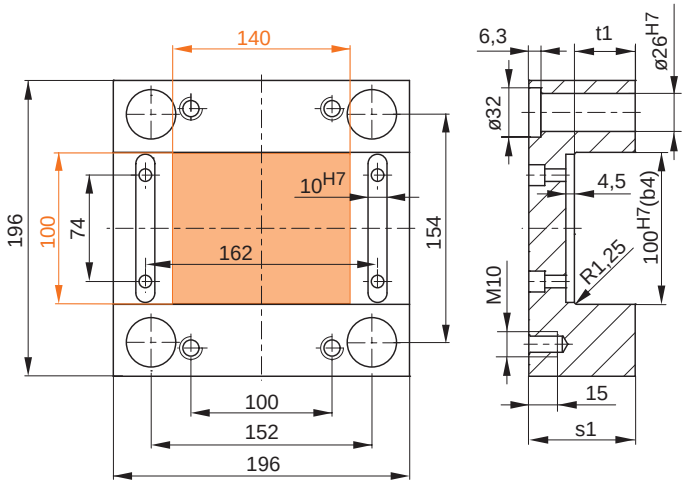






PR / 40x70	x	s1	/ 1.2767	3.4365
		20	■	■
		25	■	■
		32	■	■
		40	■	■

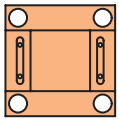
196 x 196

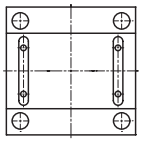


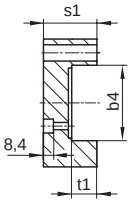
Bestellbeispiel:
Ordering example:
Exemple de commande:

KR 20 / 196 x 196 x 46 x 100 x 25 / 1.2312
PR / 50 x 70 x 25 / 1.2767

KR20

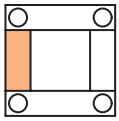


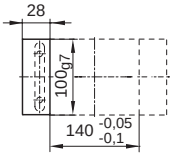


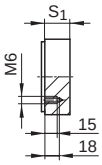


KR20 / 196x196	x	s1	x	b4	x	t1	/	1.2312
		46		100		25		■
		56				32		■
		66				40		■

KR201

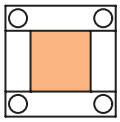


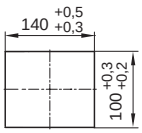


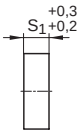


KR201 / 100x28	x	s1	/	1.2312
		25		■
		32		■
		40		■

PR

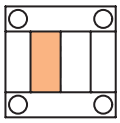


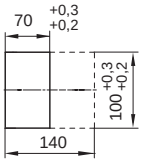


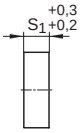


PR / 100x140	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR

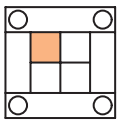


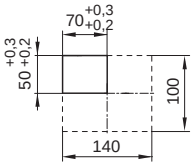


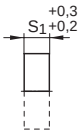


PR / 70x100	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR





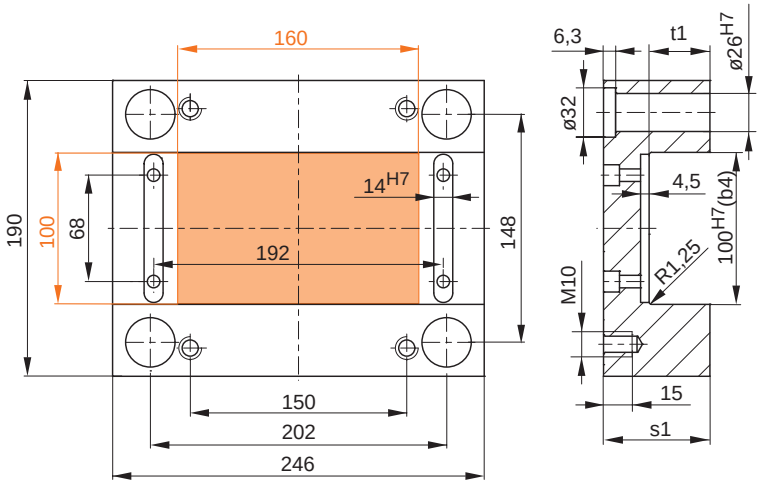


PR / 50x70	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

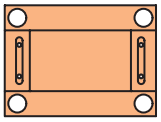
190 x 246

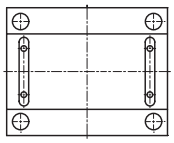
Bestellbeispiel:
Ordering example:
Exemple de commande:

KR 20 / 190 x 246 x 46 x 100 x 25 / 1.2312
PR / 50 x 80 x 25 / 1.2767

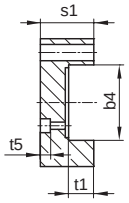


KR20



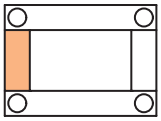


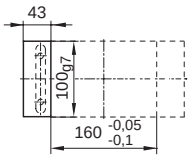
s1 = 46: t5 = 9
s1 ≥ 56: t5 = 11

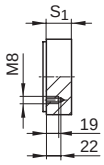


KR20 / 190x246	x	s1	x	b4	x	s1	/	1.2312
		46		100		25		■
		56				32		■
		66				40		■

KR201

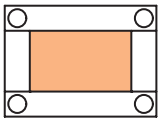


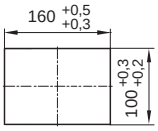


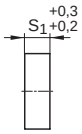


KR201 / 100x43	x	s1	/	1.2312
		25		■
		32		■
		40		■

PR

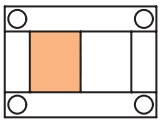


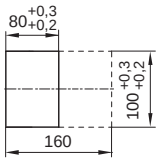


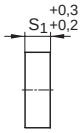


PR / 100x160	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR

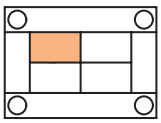


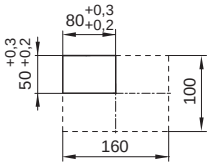


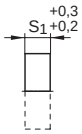


PR / 80x100	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR

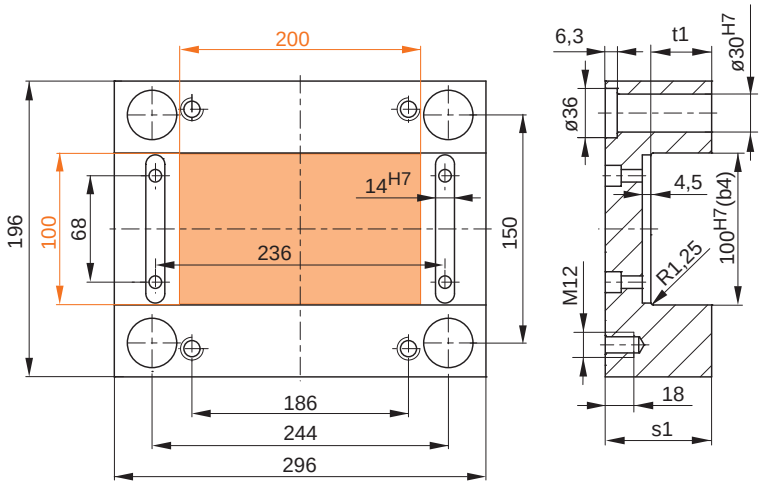






PR / 50x80	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

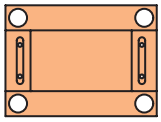
196 x 296

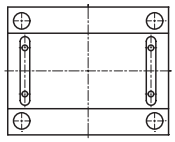


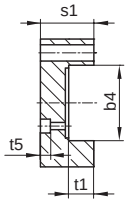
Bestellbeispiel:
Ordering example:
Exemple de commande:

KR 20 / 196 x 296 x 46 x 100 x 25 / 1.2312
PR / 50 x 100 x 25 / 1.2767

KR20



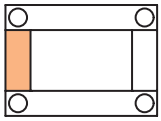


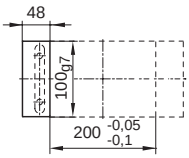


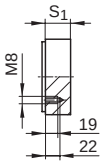
s1 = 46: t5 = 9
s1 ≥ 56: t5 = 11

KR20 / 196x296	x	s1	x	b4	x	t1	/	1.2312
		46		100		25		■
		56				32		■
		66				40		■

KR201

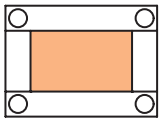


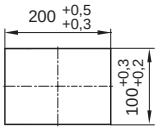


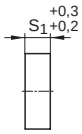


KR201 / 100x48	x	s1	/	1.2312
		25		■
		32		■
		40		■

PR

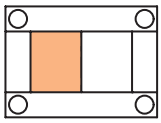


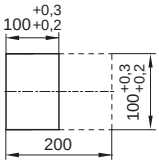


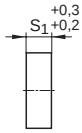


PR / 100x200	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR

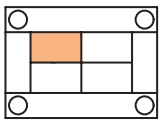


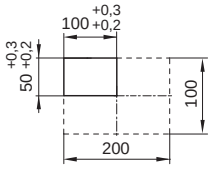


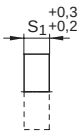


PR / 100x100	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR

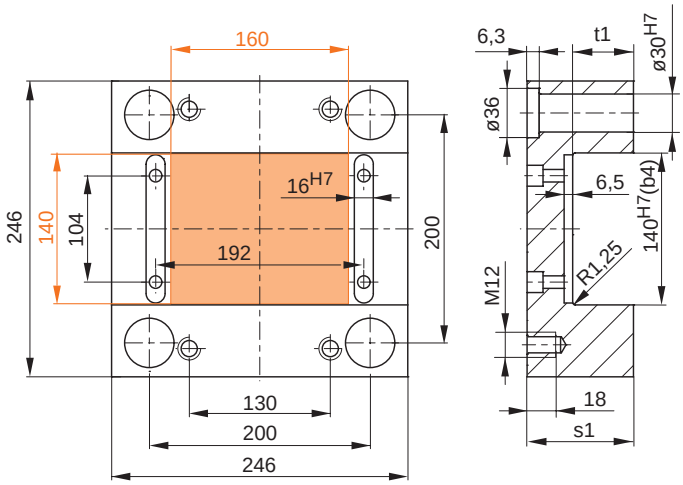






PR / 50x100	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

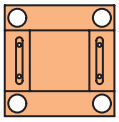
246 x 246

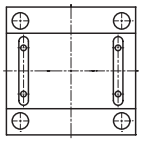


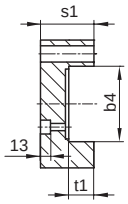
Bestellbeispiel :
Ordering example :
Exemple de commande :

KR 20 / 246 x 246 x 56 x 140 x 25 / 1.2312
PR / 70 x 80 x 25 / 1.2767

KR20

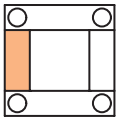


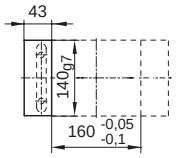


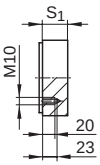


KR20 / 246x246	x	s1	x	b4	x	t1	/	1.2312
		56		140		25		■
		66				32		■
		76				40		■

KR201

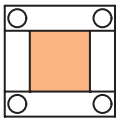


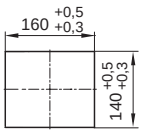


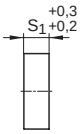


KR201 / 140x43	x	s1	/	1.2312
		25		■
		32		■
		40		■

PR

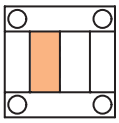


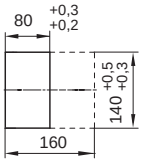


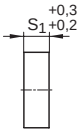


PR / 140x160	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR

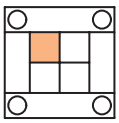


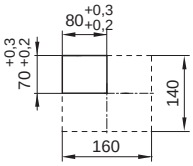


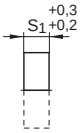


PR / 80x140	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR





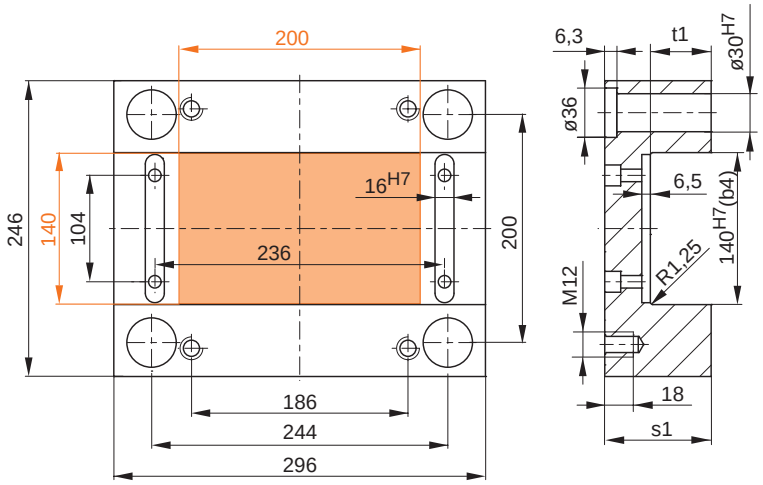


PR / 70x80	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

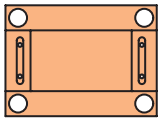
246 x 296

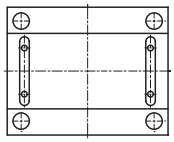
Bestellbeispiel:
Ordering example:
Exemple de commande:

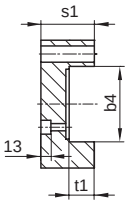
KR 20 / 246 x 296 x 56 x 140 x 25 / 1.2312
PR / 70 x 100 x 25 / 1.2767



KR20

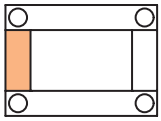


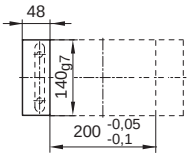


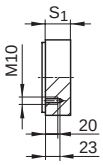


KR20 / 246x296	x	s1	x	b4	x	t1	/	1.2312
		56		140		25		■
		66				32		■
		76				40		■

KR201

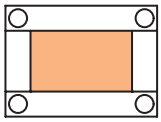


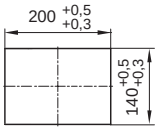


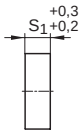


KR201 / 140x48	x	s1	/	1.2085	1.2312
		25			■
		32		■	■
		40		■	■

PR

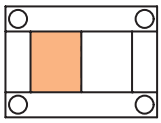


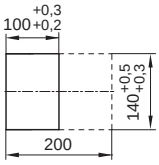


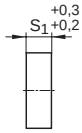


PR / 140x200	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR

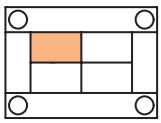


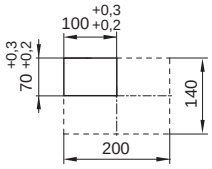


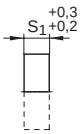


PR / 100x140	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR





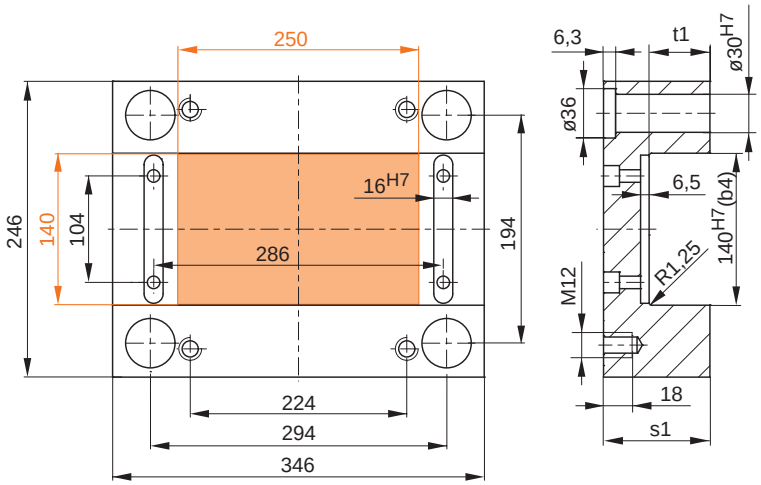


PR / 70x100	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

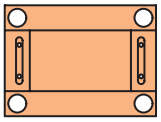
246 x 346

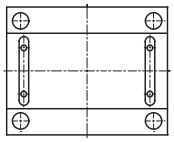
Bestellbeispiel:
Ordering example:
Exemple de commande:

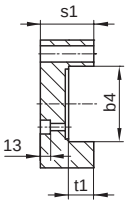
KR 20 / 246 x 346 x 56 x 140 x 25 / 1.2312
PR / 70 x 125 x 25 / 1.2767



KR20

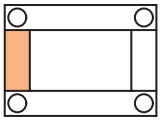


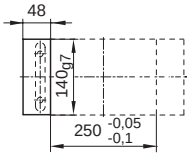


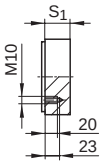


KR20 / 246x346	x	s1	x	b4	x	t1	/	1.2312
		56		140		25		■
		66				32		■
		76				40		■

KR201

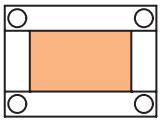


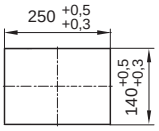


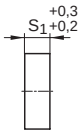


KR201 / 140x48	x	s1	/	1.2312
		25		■
		32		■
		40		■

PR

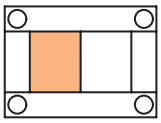


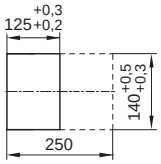


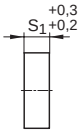


PR / 140x250	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR

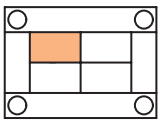


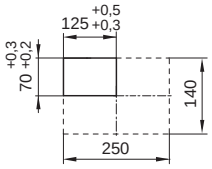


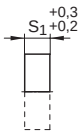


PR / 125x140	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

PR

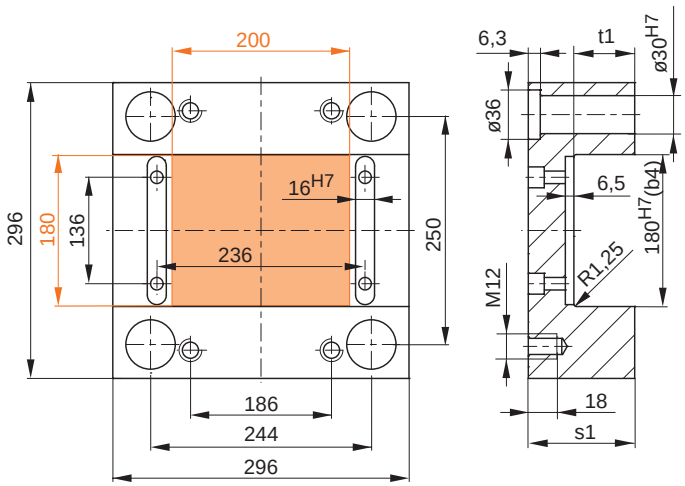






PR / 70x125	x	s1	/	1.2767	3.4365
		25		■	■
		32		■	■
		40		■	■
		50		■	■

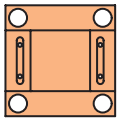
296 x 296

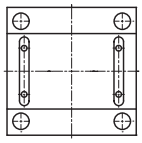


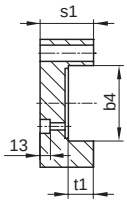
Bestellbeispiel:
Ordering example:
Exemple de commande:

KR 20 / 296 x 296 x 66 x 180 x 32 / 1.2312
PR / 90 x 100 x 32 / 1.2767

KR20

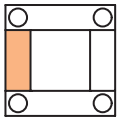


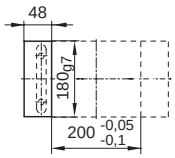


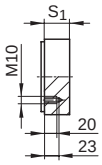


KR20 / 296x296	x	s1	x	b4	x	t1	/	1.2312
		66		180		32		■
		76				40		■
		86				50		■

KR201

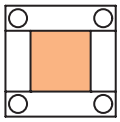


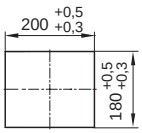


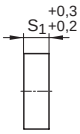


KR201 / 180x48	x	s1	/	1.2312
		32		■
		40		■
		50		■

PR

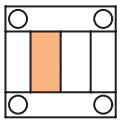


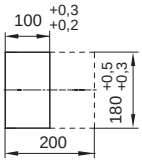


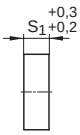


PR / 180x200	x	s1	/	1.2767	3.4365
		32		■	■
		40		■	■
		50		■	■
		63		■	■

PR

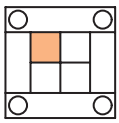


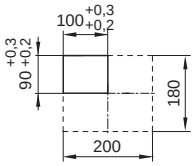


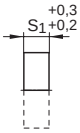


PR / 100x180	x	s1	/	1.2767	3.4365
		32		■	■
		40		■	■
		50		■	■
		63		■	■

PR





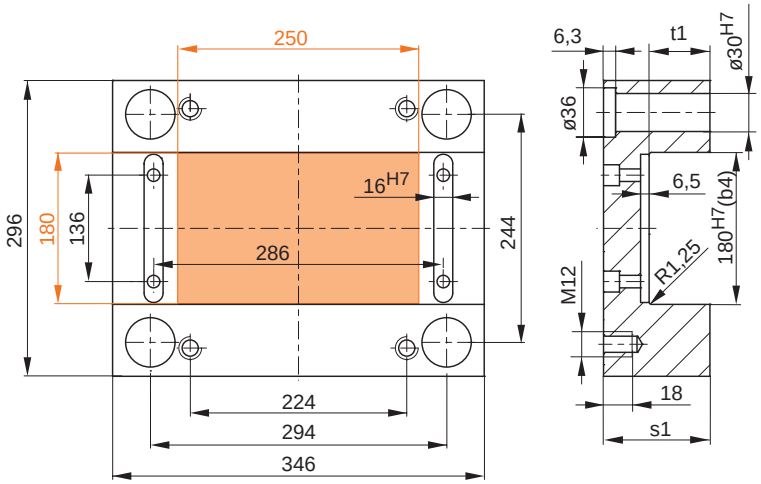


PR / 90x100	x	s1	/	1.2767	3.4365
		32		■	■
		40		■	■
		50		■	■
		63		■	■

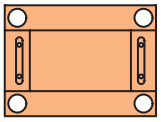
296 x 346

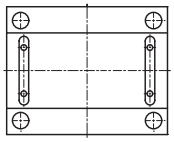
Bestellbeispiel:
Ordering example:
Exemple de commande:

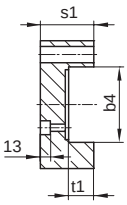
KR 20 / 296 x 346 x 66 x 180 x 32 / 1.2312
PR / 90 x 125 x 32 / 1.2767



KR20

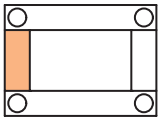


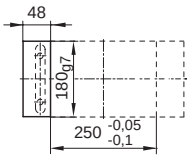


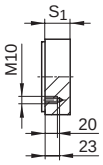


KR20 / 296x346	x	s1	x	b4	x	t1	/	1.2312
		66		180		32		■
		76				40		■
		86				50		■

KR201

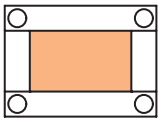


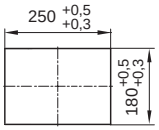


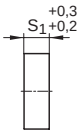


KR201 / 180x48	x	s1	/	1.2312
		32		■
		40		■
		50		■

PR

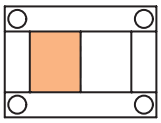


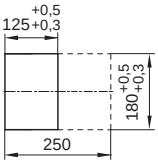


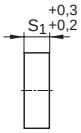


PR / 180x250	x	s1	/	1.2767	3.4365
		32		■	■
		40		■	■
		50		■	■
		63		■	■

PR

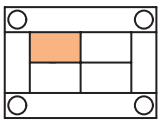


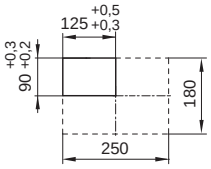


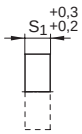


PR / 125x180	x	s1	/	1.2767	3.4365
		32		■	■
		40		■	■
		50		■	■
		63		■	■

PR

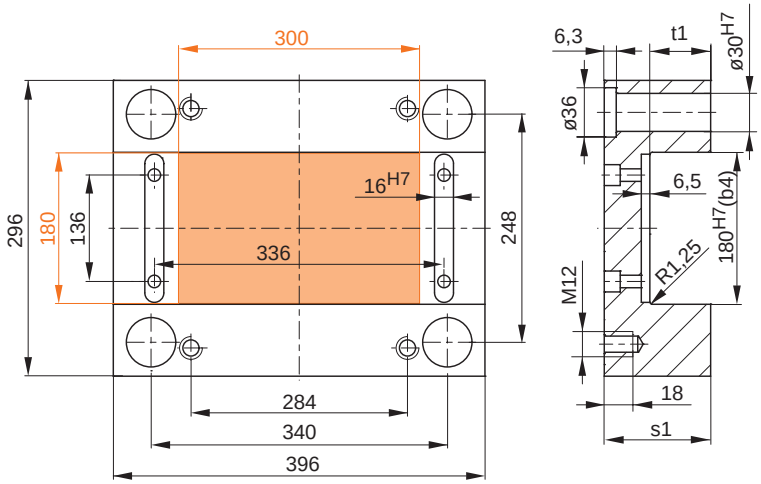






PR / 90x125	x	s1	/	1.2767	3.4365
		32		■	■
		40		■	■
		50		■	■
		63		■	■

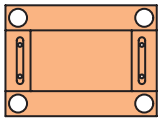
296 x 396

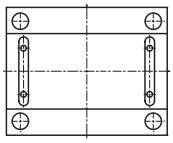


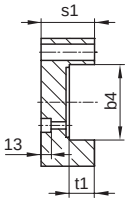
Bestellbeispiel:
Ordering example:
Exemple de commande:

KR 20 / 296 x 396 x 66 x 180 x 32 / 1.2312
PR / 90 x 150 x 32 / 1.2767

KR20

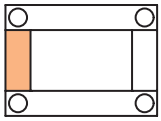


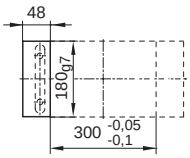


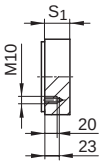


KR20 / 296x396	x	s1	x	b4	x	t1	/	1.2312
		66		180		32		■
		76				40		■
		86				50		■

KR201

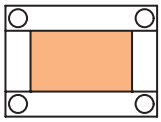


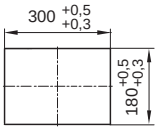


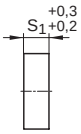


KR201 / 180x48	x	s1	/	1.2312
		32		■
		40		■
		50		■

PR

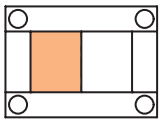


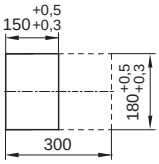


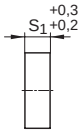


PR / 180x300	x	s1	/	1.2767	3.4365
		32		■	■
		40		■	■
		50		■	■
		63		■	■

PR

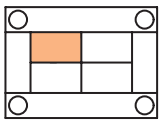


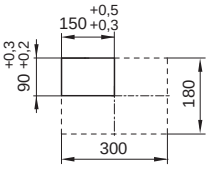


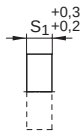


PR / 150x180	x	s1	/	1.2767	3.4365
		32		■	■
		40		■	■
		50		■	■
		63		■	■

PR







PR / 90x150	x	s1	/	1.2767	3.4365
		32		■	■
		40		■	■
		50		■	■
		63		■	■

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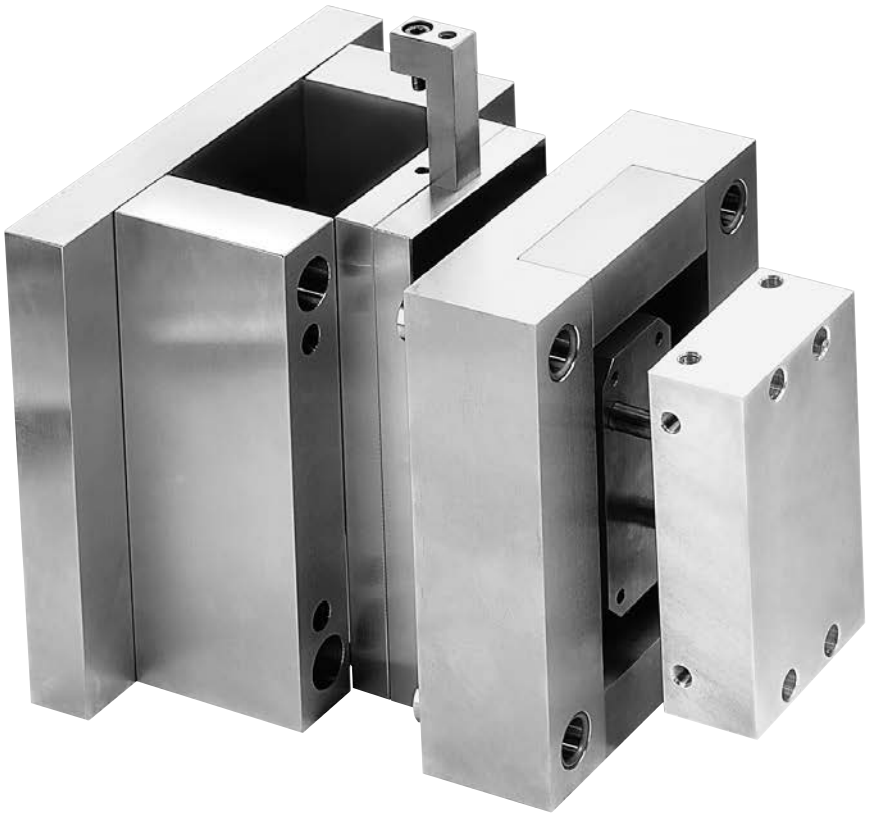
HASCO

Ermöglichen mit System.

K 3500 /. . .

Wechselwerkzeug-System
Quick-change Mould System
Système de moulde à changement rapide



Das HASCO-Wechselwerkzeug-System K 3500/… ist speziell für die kostengünstige Produktion praxisnaher Muster, Prototypen und Kleinserien entwickelt worden.

Es besteht aus dem Wechselwerkzeug K 3500/… und den dazu passenden Formeinsätzen K 3501/… und K 3520/… Gemäß dem HASCO Baukastenprinzip sind die Einsätze austauschbar.

The HASCO K 3500/… quick-change Mould System has been especially developed for the economic production of samples, prototypes and small series.

It consists of the mould changing unit K 3500/… and the matching mould inserts K 3501/… and K 3520/… . The inserts are exchangeable according to the HASCO modular system.

Le système de moule à changement rapide HASCO K 3500/… a été développé spécialement pour une production à bas prix et basée sur la pratique d'échantillons, de prototypes et de petites séries.

Il se compose du moule de changement K 3500/… et des inserts porte-empreintes K 3501/… et K3520/… correspondantes. Grâce au principe modulaire HASCO, ces inserts sont interchangeables.

Besondere Merkmale

- Die Einsätze sind von der Trennebene aus verschraubt und in der Spritzgießmaschine auswechselbar.
- Minimale Stillstandzeiten durch schnelles Wechseln der Formeinsätze.
- Formplatten sind in den Materialien 1.2312 und 1.2085 erhältlich.
- 3 Werkzeuggrößen, kompatibel zum K-Programm
  - 156 x 196
  - 246 x 296
  - 296 x 396
- Die Einsätze mit integrierter Temperierung sind in den Materialien 1.2767 und 3.4365 erhältlich.
- Verbindung zwischen Formeinsatz K 3501 und Wechselwerkzeug K 3500 mittels Verriegelung.

Special Features

- The inserts are bolted through from the parting plane and can be exchanged in the injection moulding machine.
- Minimum downtimes due to fast changing of the mould inserts.
- Mould plates can be obtained in materials 1.2312 and 1.2085.
- 3 mould sizes, compatible with the K-range
  - 156 x 196
  - 246 x 296
  - 296 x 396
- The inserts with integrated cooling lines can be obtained in materials 1.2767 and 3.4365.
- Connection between mould insert K 3501 and mould-changing unit K 3500 is by means of a locking bar.

Caractéristiques particulières

- Les inserts sont vissés du niveau de séparation et interchangeables dans la presse d'injection.
- Durées d'immobilisation minimales grâce au changement rapide des inserts porte-empreintes.
- Plaques porte-empreintes sont disponibles dans les qualités 1.2312 et 1.2085.
- 3 grandeurs de moules, compatibles avec le programme K
  - 156 x 196
  - 246 x 296
  - 296 x 396
- Les inserts avec refroidissement intégrés sont disponibles dans les qualités 1.2767 et 3.4365.
- Liaison par verrouillage entre l'insert porte-empreinte K 3501 et le moule de changement K 3500.

Technische Informationen

Die Einsätze sind separat austauschbar und wie folgt zu bestellen:

K3501/...

Formeinsatz mit Wechselauswerferei bewegliche Seite

K3520/...

Formeinsatz
feste Seite

Technical Information

The inserts can be exchanged separately and ordered as follows:

K3501/...

Mould insert with changing ejector unit moving side

K3520/...

Mould insert
fixed side

Informations techniques

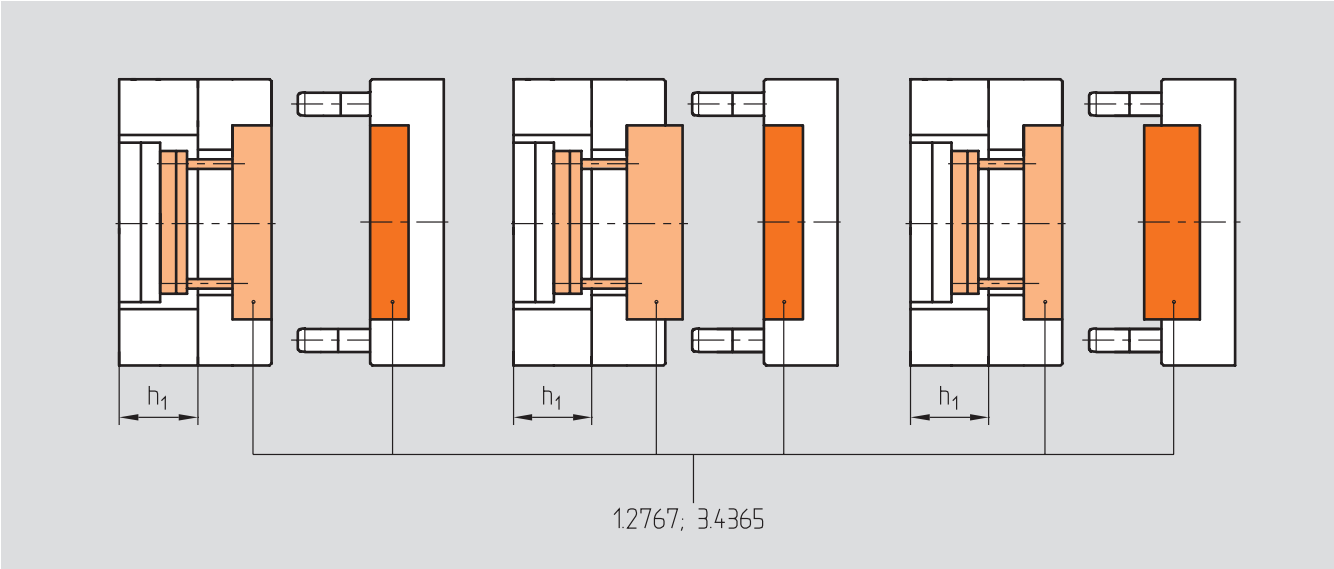
Les inserts sont interchangeables individuellement et peuvent être commandés sous les références suivantes:

K3501/...

Insert porte-empreintes avec éjection de moule côté mobile

K3520/...

Insert porte-empreintes
côté fixe



Die Einsätze sind bündig oder überstehend zu der Rahmenformplatte. Sie sind untereinander kombinierbar. Die Einsätze werden mit Aufmaß geliefert.

Folgende Leisten K 40/... werden für das Wechselwerkzeug K 3500/... benötigt:

K 40/156 x 196 x 76/...
K 40/246 x 296 x 76/...
K 40/296 x 396 x 96/...

Die Leistenhöhe h_1 muss unbedingt eingehalten werden.

The inserts are flush with or they project beyond the bolster plate. They can be combined with one another. The inserts are delivered with machining allowance.

The following risers K 40/... are required for the K 3500/... mould-changing unit:

K 40/156 x 196 x 76/...
K 40/246 x 296 x 76/...
K 40/296 x 396 x 96/...

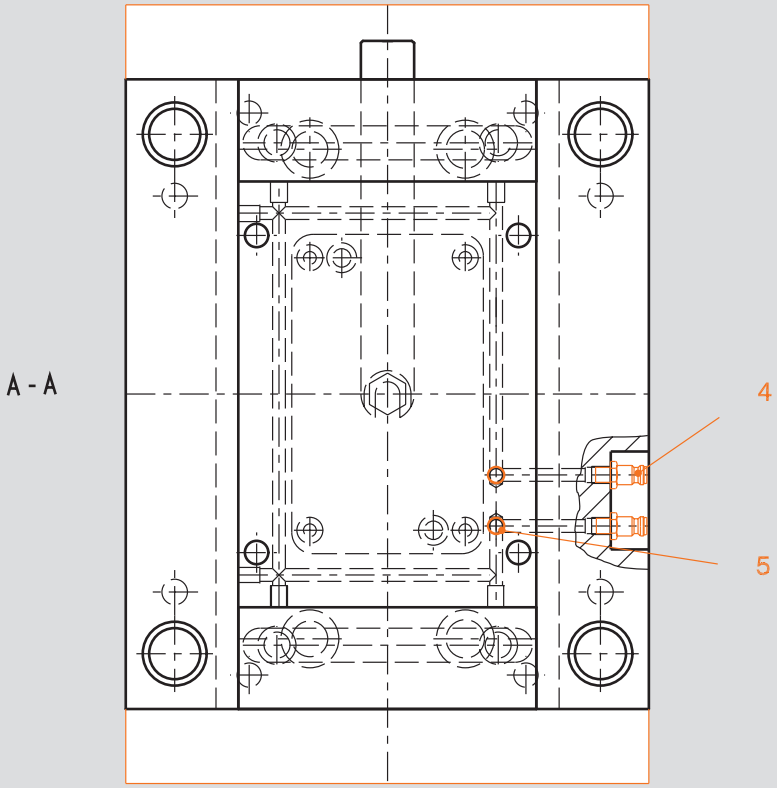
It is absolutely necessary to maintain the riser height h_1.

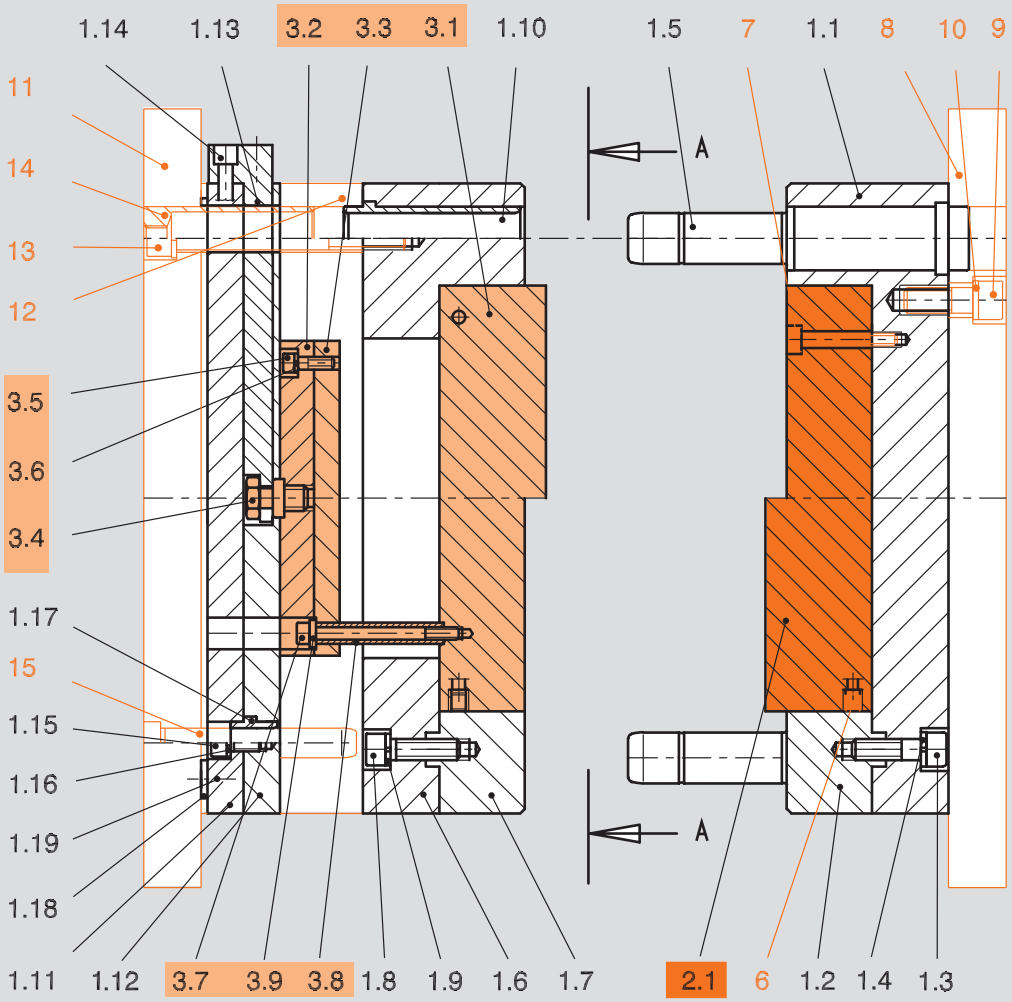
Les inserts sont placés à fleur ou en saillie par rapport à la plaque porte-empreintes du châssis. Ils peuvent être combinés et sont livrés avec surépaisseur.

Les tasseaux K 40/... suivantes sont requises pour le moule de changement K 3500/...:

K 40/156 x 196 x 76/...
K 40/246 x 296 x 76/...
K 40/296 x 396 x 96/...

L'épaisseur de tasseaux h_1 doit être impérativement respectée.


A - A
4
5


1.14
1.13
3.2
3.3
3.1
1.10
1.5
7
1.1
8
10
9
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13
12
3.5
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3.4
1.17
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1.16
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1.11
1.12
3.7
3.9
3.8
1.8
1.9
1.6
1.7
2.1
6
1.2
1.4
1.3
A
A

Wechselwerkzeug K 3500 /. . . ***Mould-changing system K 3500 /. . .*** ***Moule de changement K 3500 /. . .***

Pos.	Benennung	Designation	Désignation	St./Pc.	Nr./No.
1.1	Rahmenformplatte	Bolster plate	Plaque porte-empreinte avec logement	1	
1.2	Endstück	End piece	Verrou de fermeture	2	KR 201/...
1.3	Zylinderschraube	Hexagon socket head cap screw	Vis à tête cylindrique à 6 pans creux	4	Z 31/...
1.4	Sperrkantring	Locking edge washer	Rondelle à bords d'arrêt	4	Z 691/...
1.5	Führungssäule	Guide pillar	Colonne de guidage	4	Z 00/...
1.6	Rahmenformplatte	Bolster plate	Plaque porte-empreinte avec logement	1	
1.7	Endstück	End piece	Verrou de fermeture	2	KR 201/...
1.8	Zylinderschraube	Hexagon socket head cap screw	Vis à tête cylindrique à 6 pans creux	4	Z 31/...
1.9	Sperrkantring	Locking edge washer	Rondelle à bords d'arrêt	4	Z 691/...
1.10	Führungsbuchse	Guide bush	Bague de guidage	4	Z 10/...
1.11	Auswerfergrundplatte	Ejector base plate	Contre plaque d'éjection	1	
1.12	Auswerferhalteplatte	Ejector retainer plate	Plaque d'éjection	1	
1.13	Verriegelung	Locking bar	Verrou	1	
1.14	Zylinderschraube	Hexagon socket head cap screw	Vis à tête cylindrique à 6 pans creux	1	Z 31/...
1.15	Zylinderschraube	Hexagon socket head cap screw	Vis à tête cylindrique à 6 pans creux	4	Z 31/...
1.16	Sperrkantring	Locking edge washer	Rondelle à bords d'arrêt	4	Z 691/...
1.17	Führungsbuchse	Guide bush	Bague de guidage	2/4	Z 13 W /17/...
1.18	Auflagescheibe	Seating washer	Rondelle de butée	4	Z 55/18 x 3
1.19	Senkschraube	Countersunk screw	Vis à tête fraisée	4	Z 33/4x8

Formeinsatz (feste Seite) K3520/... ***Mould insert (fixed side) K3520/...*** ***Insert porte-empreintes (côté fixe) K3520/...***

Pos.	Benennung	Designation	Désignation	St./Pc.	Nr./No.
2.1	Formeinsatz	Cavity insert	Plaque dévêtisseuse	1	K 3520/...

Formeinsatz (bewegliche Seite) K3501/... ***Mould insert (moving side) K3501/...*** ***Insert porte-empreintes (côté mobile) K3501/...***

Pos.	Benennung	Designation	Désignation	St./Pc.	Nr./No.
3.1	Formeinsatz	Cavity insert	Plaque dévêtisseuse	1	
3.2	Auswerfergrundplatte für K 3501	Ejector base plate for K3501	Contre plaque d'éjection pour K3501	1	
3.3	Auswerferhalteplatte für K 3501	Ejector retainer plate for K3501	Plaque d'éjection pour K3501	1	
3.4	Verriegelungsschraube	Locking screw	Vis de verrouillage	1	
3.5	Zylinderschraube	Hexagon socket head cap screw	Vis à tête cylindrique à 6 pans creux	4	Z 31/...
3.6	Sperrkantring	Locking edge washer	Rondelle à bords d'arrêt	4	Z 691/...
3.7	Zylinderschraube	SHC screw	Vis à tête cylindrique	2	Z 31/...
3.8	Führungshülse	Guide sleeve	Douille de guidage	2	Z 022/10/...
3.9	Scheibe	Disc	Rondelle	2	Z 561/14 x 3

Sonstige K + Z Teile, extra Bestellung erforderlich!

Miscellaneous K + Z parts, extra ordering required!

Autres pièces K + Z, commande séparée obligatoire!

Pos.	Benennung	Designation	Désignation	St./Pc.	Nr./No.
4	Anschlussnippel	Nipple	Raccord de préférence	4	Z 81/9/10 x 1
5	Viton O-Ring	Viton O-ring	Joint torique Viton	4	Z 98/7,5/1,5
6	Verschlussschraube	Hexagon socket pipe plug	Bouchon fileté à 6 pans creux	12	Z 94/8 x 0,75
7	Zylinderschraube	Hexagon socket head cap screw	Vis à tête cylindrique à 6 pans creux	8	Z 31/...*
8	Aufspannplatte	Clamping plate	Plaque de fixation	1	K 10/...*
9	Zylinderschraube	Hexagon socket head cap screw	Vis à tête cylindrique à 6 pans creux	4	Z 31/...*
10	Sperrkantring	Locking edge washer	Rondelle à bords d'arrêt	8	Z 691/...*
11	Aufspannplatte	Clamping plate	Plaque de fixation	1	K 10/...*
12	Leiste	Riser	Tasseaux	2	K 40/...
13	Zylinderschraube	SHC screw	Vis à tête cylindrique	4	Z 31/...*
14	Zentrierhülse	Centering sleeve	Douille de centrage	4	Z 20/...*
15	Führungssäule	Guide pillar	Colonne de guidage	4	Z 01/14 x ...*

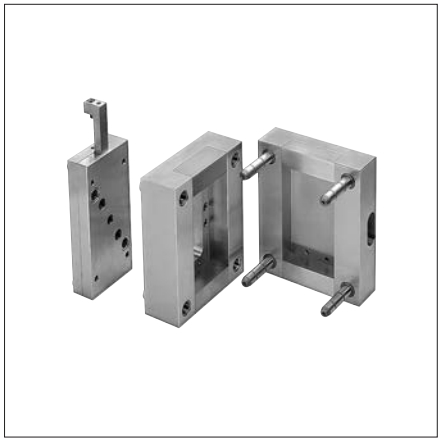
* Typ und Abmessung ist vom Konstrukteur festzulegen.

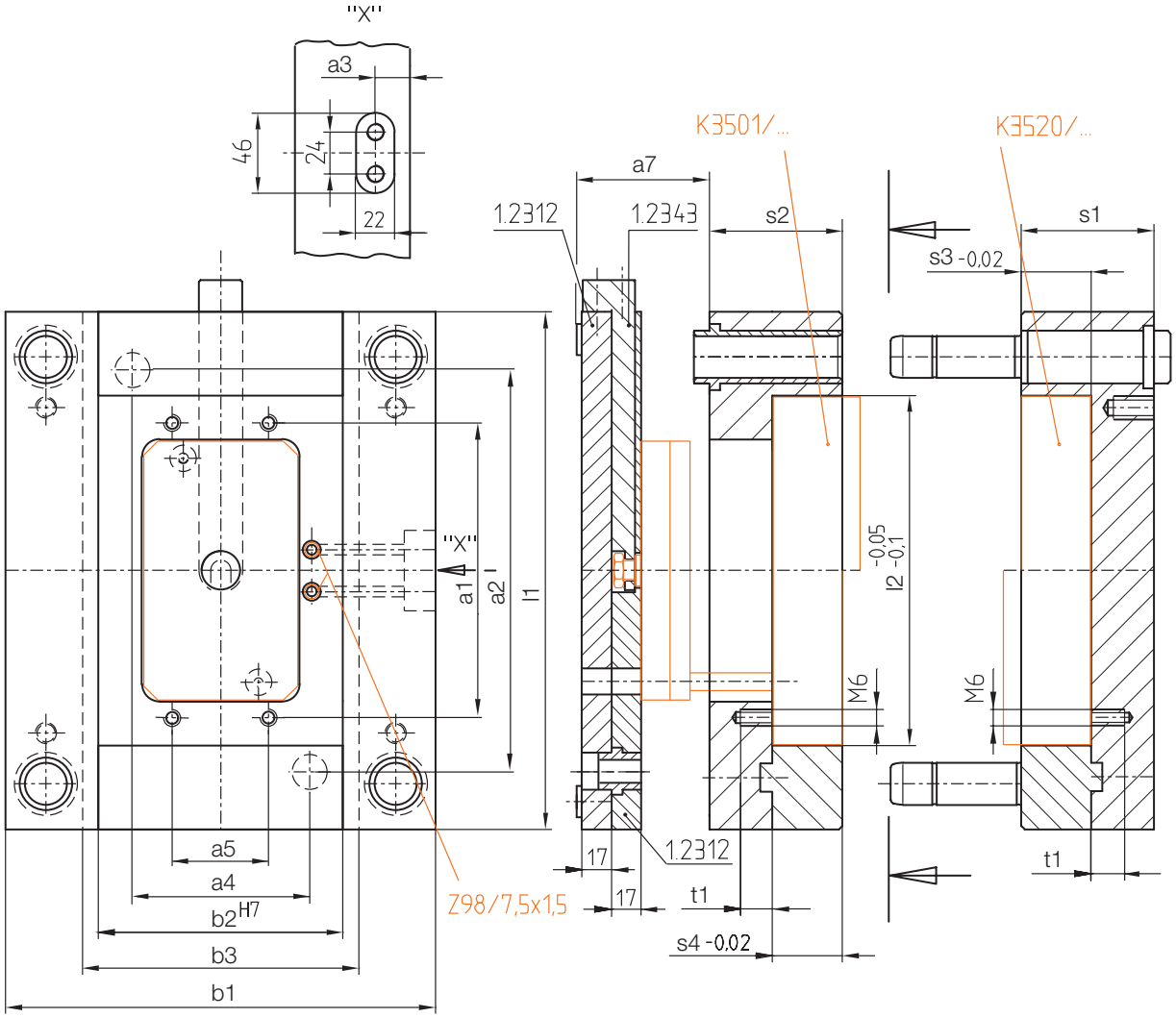
* Type and dimension is to be determined by the designer.

* Le type et les dimensions doivent être déterminés par le concepteur.

K3500/...

Wechselwerkzeug
Mould-changing system
Moule de changement

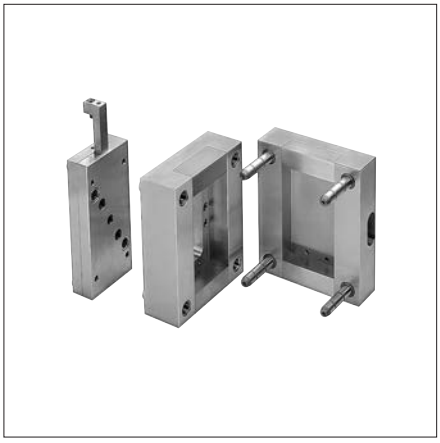


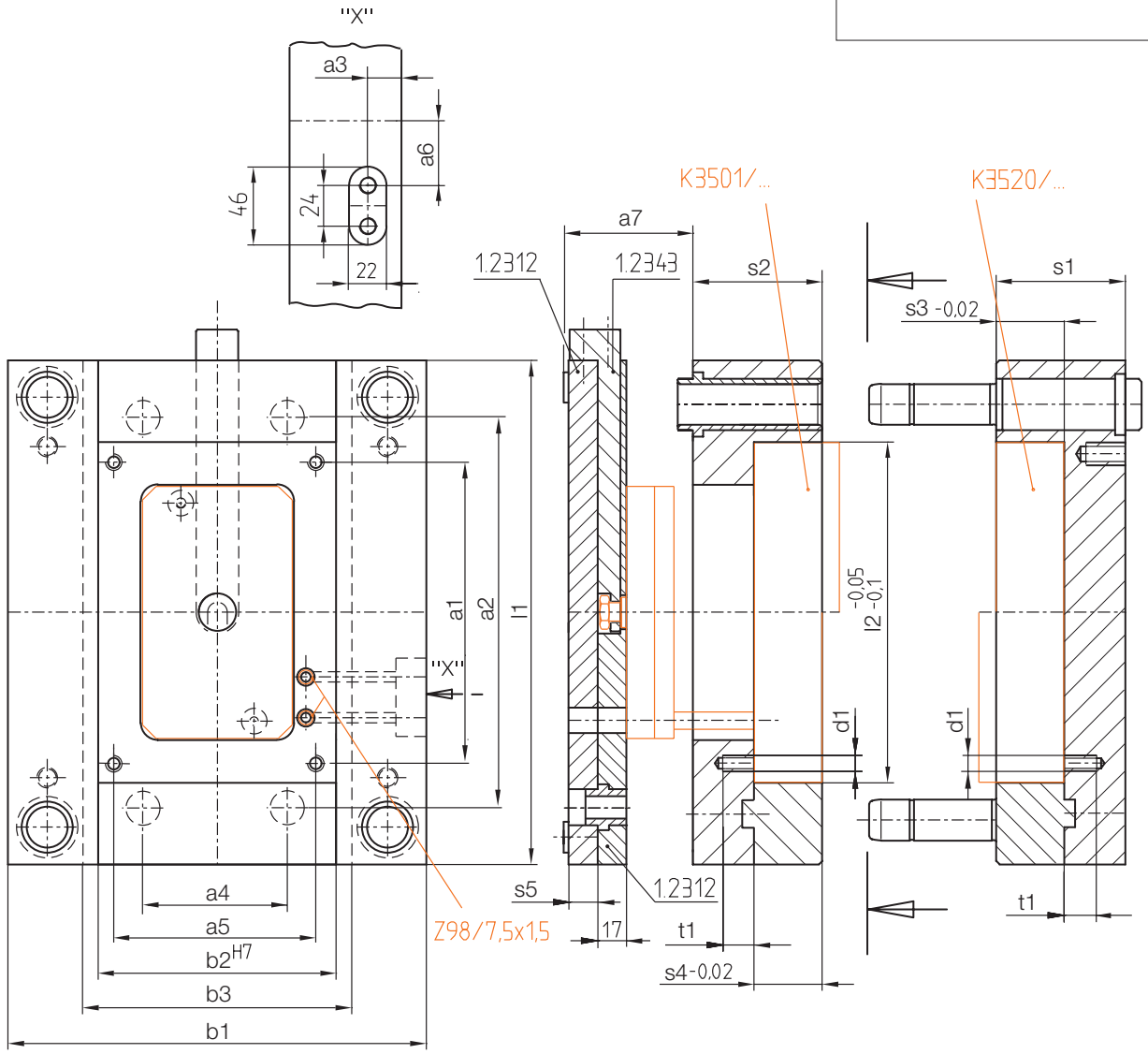


t1	s4	s3	a7	a5	a4	a3	a2	a1	b3	b2	l2	b1	l1	s1	s2	Mat.	Nr. / No.
14	25	25	76	31	61	14	124	101	90	80	140	**156**	**196**	**46**	**46**	**1.2312**	K3500/156x196x46x46/1.2312
																1.2085	1.2085
	32														**56**	**1.2312**	46x56/1.2312
																1.2085	1.2085
	25	32												**56**	**46**	**1.2312**	56x46/1.2312
																1.2085	1.2085
	32														**56**	**1.2312**	56x56/1.2312
																1.2085	1.2085

K3500/...

Wechselwerkzeug
Mould-changing system
Moule de changement

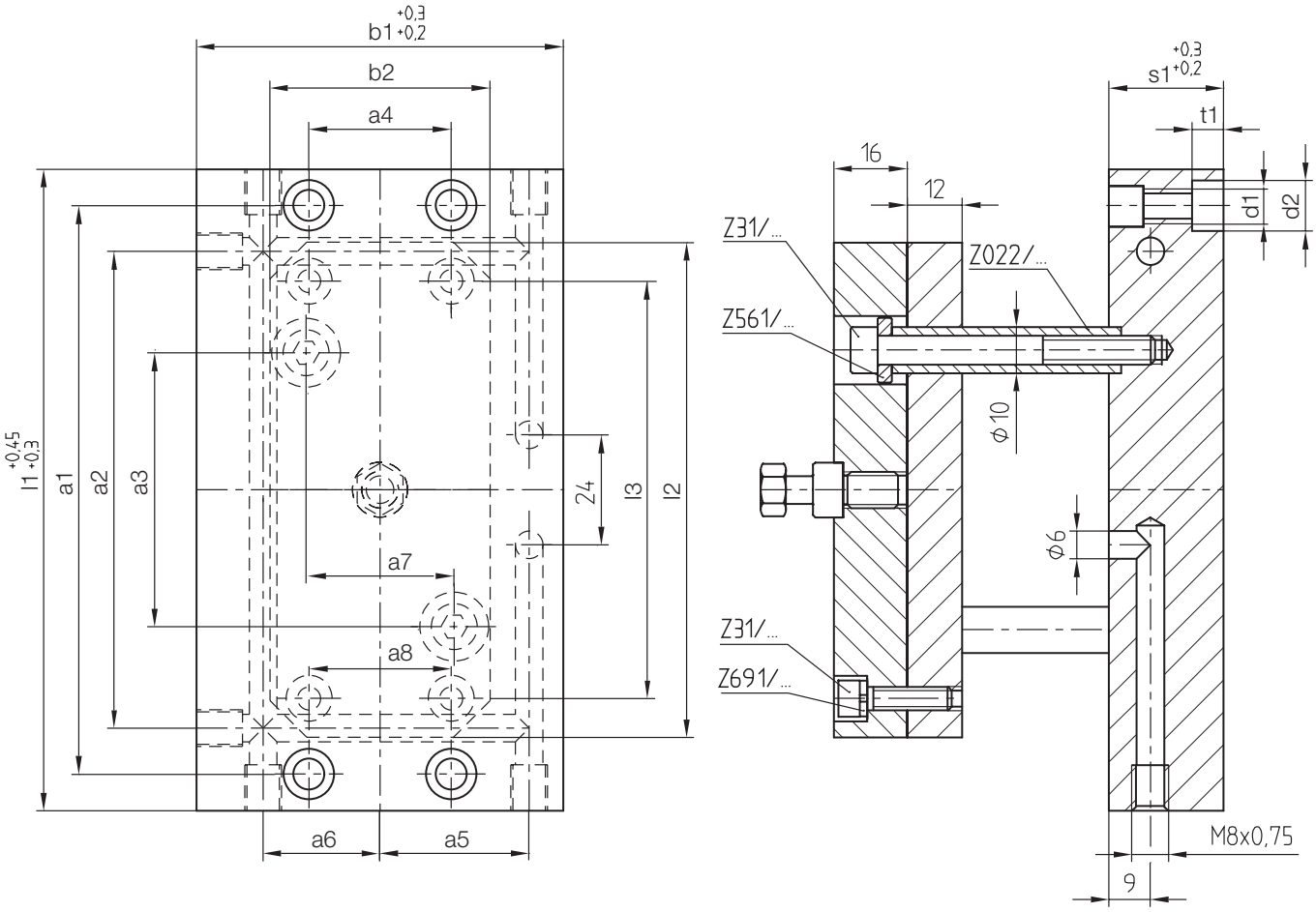




t1	s5	s4	s3	a7	a6	a5	a4	a3	a2	a1	b3	b2	l2	d1	**b1**	**l1**	**s1**	**s2**	**Mat.**	**Nr. / No.**
14	17	32	32	76	38	123	73	20	230	149	158	140	200	M6	**246**	**296**	**66**	**66**	**1.2312**	K3500/246x296x66x66/1.2312
																			1.2085	1.2085
		40																**76**	**1.2312**	66x76/1.2312
																			1.2085	1.2085
		32	40														**76**	**66**	**1.2312**	76x66/1.2312
																			1.2085	1.2085
		40																**76**	**1.2312**	76x76/1.2312
																			1.2085	1.2085
16	22	50	50	96	63	159	116	25	330	244	200	180	300	M8	**296**	**396**	**86**	**86**	**1.2312**	K3500/296x396x86x86/1.2312
																			1.2085	1.2085

K3501/...

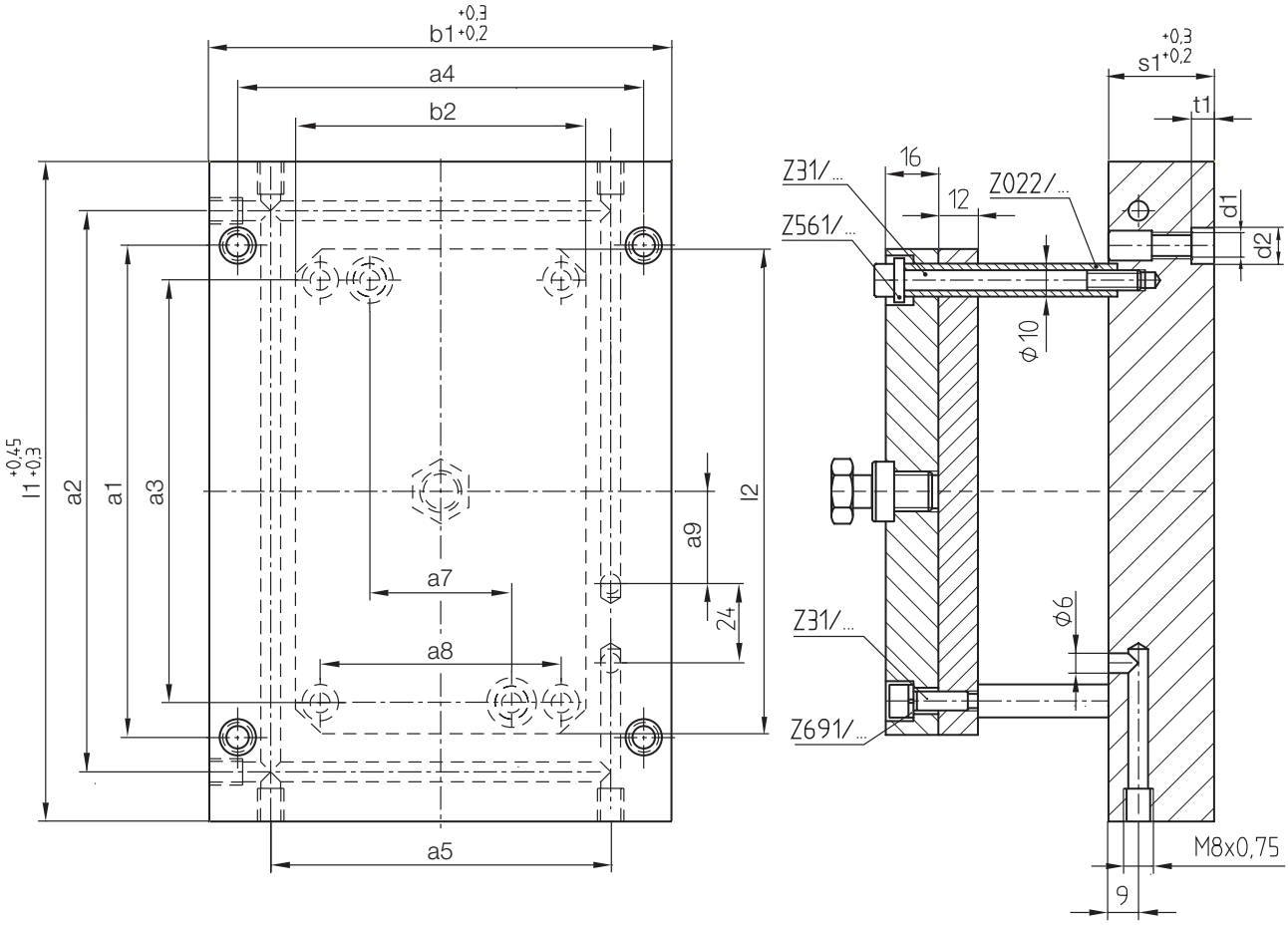
Formeinsatz mit Wechselauswerferei
Mould insert with changing ejector
Insert porte-empreintes avec éjection de moule



t1	a8	a7	a6	a5	a4	a3	a2	a1	b2	l3	l2	d2	d1	**b1**	**l1**	**s1**	**Mat.**	**Nr. / No.**
6,9	31	31,5	25,5	32,5	31	61	104	124	48	91	108	11	M8	**80**	**140**	**25**	**1.2767**	K3501/80x140x25/1.2767
																	3.4365	3.4365
13,9																**32**	**1.2767**	32/1.2767
																	3.4365	3.4365
21,9																**40**	**1.2767**	40/1.2767
																	3.4365	3.4365

K3501/...

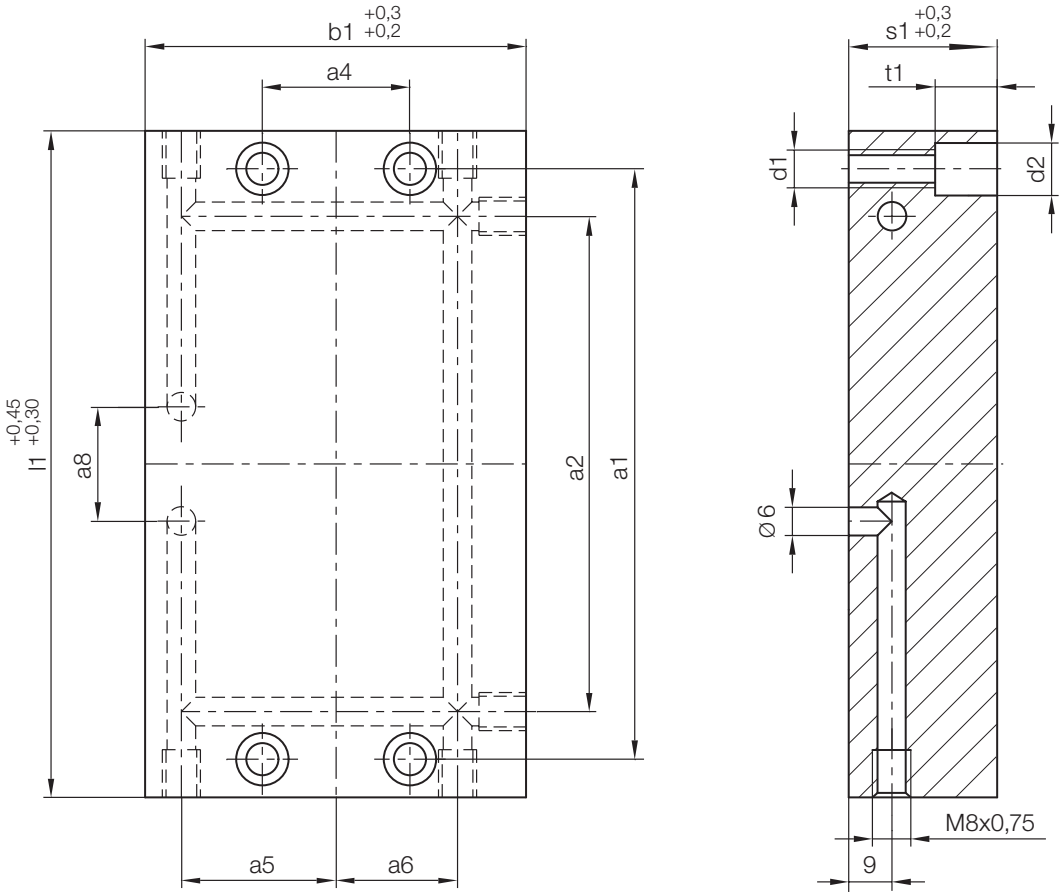
Formeinsatz mit Wechselauswerferei
Mould insert with changing ejector
Insert porte-empreintes avec éjection de moule



t1	a9	a8	a7	a5	a4	a3	a2	a1	b2	l2	d2	d1	**b1**	**l1**	**s1**	**Mat.**	**Nr. / No.**
6,9	38	73	43	103	123	128	170	149	88	148	11	M8	**140**	**200**	**32**	**1.2767**	K3501/140x200x32/1.2767
																3.4365	32/3.4365
14,9															**40**	**1.2767**	40/1.2767
																3.4365	40/3.4365
24,9															**50**	**1.2767**	50/1.2767
																3.4365	50/3.4365
9	63	94	64	135	159	216	268	244	118	238	15	M10	**180**	**300**	**50**	**1.2767**	K3501/180x300x50/1.2767
																3.4365	50/3.4365
22															**63**	**1.2767**	63/1.2767
																3.4365	63/3.4365

K3520/...

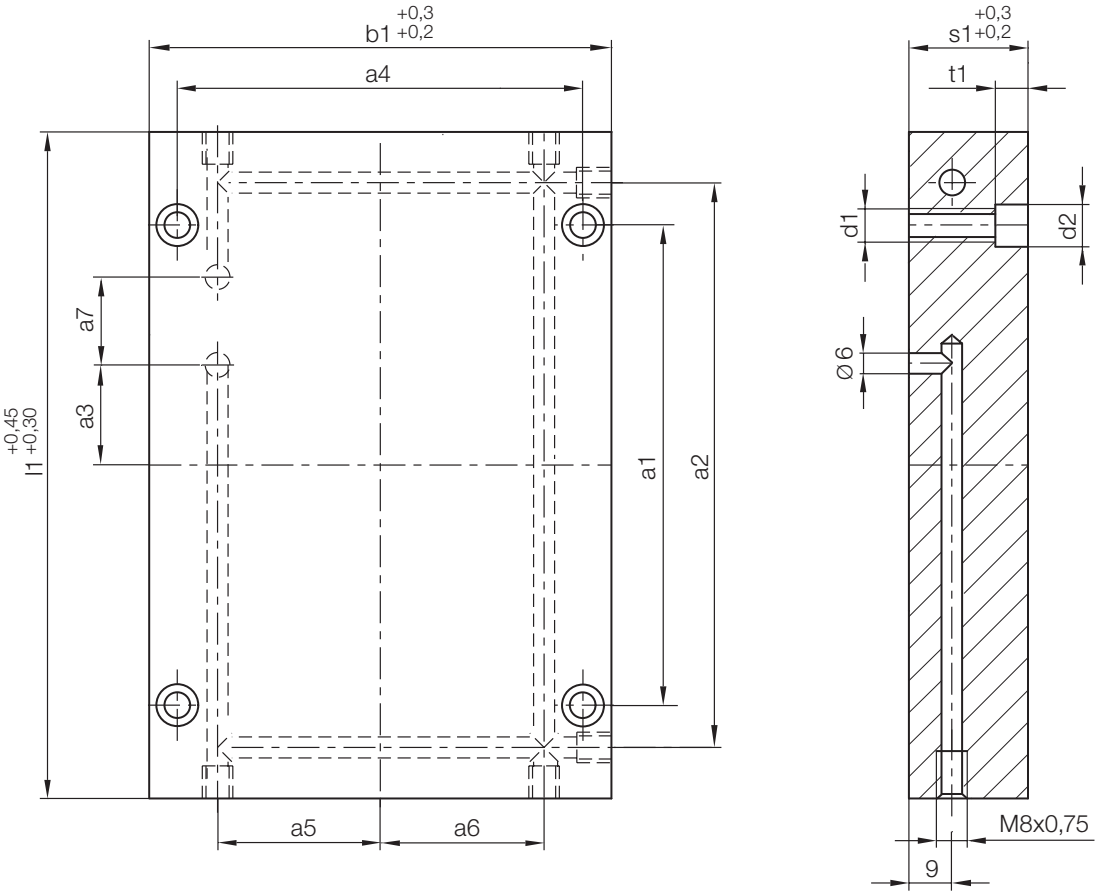
Formeinsatz
Mould insert
Insert porte-empreintes



t1	a8	a7	a6	a5	a4	a3	a2	a1	d2	d1	**b1**	**l1**	**s1**	**Mat.**	**Nr. / No.**
6,9	24	-	25,5	32,5	31	-	104	124	11	M8	**80**	**140**	**25**	**1.2767**	K3520/80x140x25/1.2767
														3.4365	3.4365
13,9													**32**	**1.2767**	32/1.2767
														3.4365	3.4365
21,9													**40**	**1.2767**	40/1.2767
														3.4365	3.4365

K3520/...

Formeinsatz
Mould insert
Insert porte-empreintes



t1	a8	a7	a6	a5	a4	a3	a2	a1	d2	d1	b1	l1	s1	Mat.	Nr. / No.
6,9	-	24	51,5	51,5	123	38	170	149	11	M8	**140**	**200**	**32**	**1.2767**	K3520/140x200x32/1.2767
														3.4365	3.4365
14,9													**40**	**1.2767**	40/1.2767
														3.4365	3.4365
24,9													**50**	**1.2767**	50/1.2767
														3.4365	3.4365
9	-	24	67,5	67,5	159	63	268	244	15	M10	**180**	**300**	**50**	**1.2767**	K3520/180x300x50/1.2767
														3.4365	3.4365
22													**63**	**1.2767**	63/1.2767
														3.4365	3.4365

Ermöglicherin für Lieferungen
Enabler for deliveries

Ich ermögliche Ihre Termine.

- 24 Stunden Lieferzeit
- 99% Verfügbarkeit ab Lager
- 95% Komplettlieferung
- Frachtfrei innerhalb der EU
- Logistikkompetenz, weltweit

I enable your deadlines.

- Delivery time of 24 hours
- 99% availability ex stock
- 95% complete delivery
- Free delivery within the EU
- Logistics competence, worldwide

HASCO

Ermöglichen mit System.

K3600/...

Kleinserienwerkzeug
Small series mould
Moule pour petites séries

Werkzeuggrößen
Mould sizes
Grandeurs de moules

156 x 156
190 x 246
246 x 296
296 x 396

Das HASCO Kleinserienwerkzeug K 3600/... ist speziell für die kostengünstige Produktion praxisnaher Kleinserien entwickelt worden.

Es handelt sich hier um ein speziell auf das HASCO Clever Mold System A 8500/... abgestimmtes Wechsel-Werkzeug, welches effizientes und schnelles Werkzeugwechseln auf allen gängigen Spritzgießmaschinen zulässt.

Das Clever Mold System in Verbindung mit dem Kleinserienwerkzeug K 3600/... reduziert sowohl die Rüstzeiten, als auch die Werkzeugkosten.

Besondere Merkmale

- Einfaches Wechseln der kompletten Baugruppe auf der Spritzgießmaschine möglich
- Keine Reduzierung der nutzbaren Plattenfläche durch Einsetzen vordefinierter Auswerferpakete (im Vergleich zu allen herkömmlichen Systemen)
- Minimale Maschinenstillstandzeiten durch schnelles Wechseln des Werkzeugs
- Formplatten sind in den Materialien 1.2767 und Toolox 33 erhältlich
- Reduzierung von Werkzeugkosten
- Praxiserprobt
- 4 Werkzeuggrößen, kompatibel zum K-Programm

The HASCO small series mould K 3600/... has been specially developed for the cost-effective production of practical small production runs.

This is an interchangeable mould specially adapted to the HASCO Clever Mold System A 8500/..., which enables the mould to be changed quickly and efficiently on all current injection moulding systems.

The Clever Mold System in conjunction with the small series tool K 3600/... reduces both the set-up times and the costs of the tool.

Special Features

- Simple changing of the complete module assembly is possible on the injection moulding system
- No reduction of the usable plate surface by using predefined ejector assemblies (compared with all conventional systems)
- Minimum machine downtimes due to fast changing of the mould
- Mould plates can be obtained in materials 1.2767 and Toolox 33
- Reduced tool costs
- Field-tested
- 4 mould sizes, compatible with the K-range

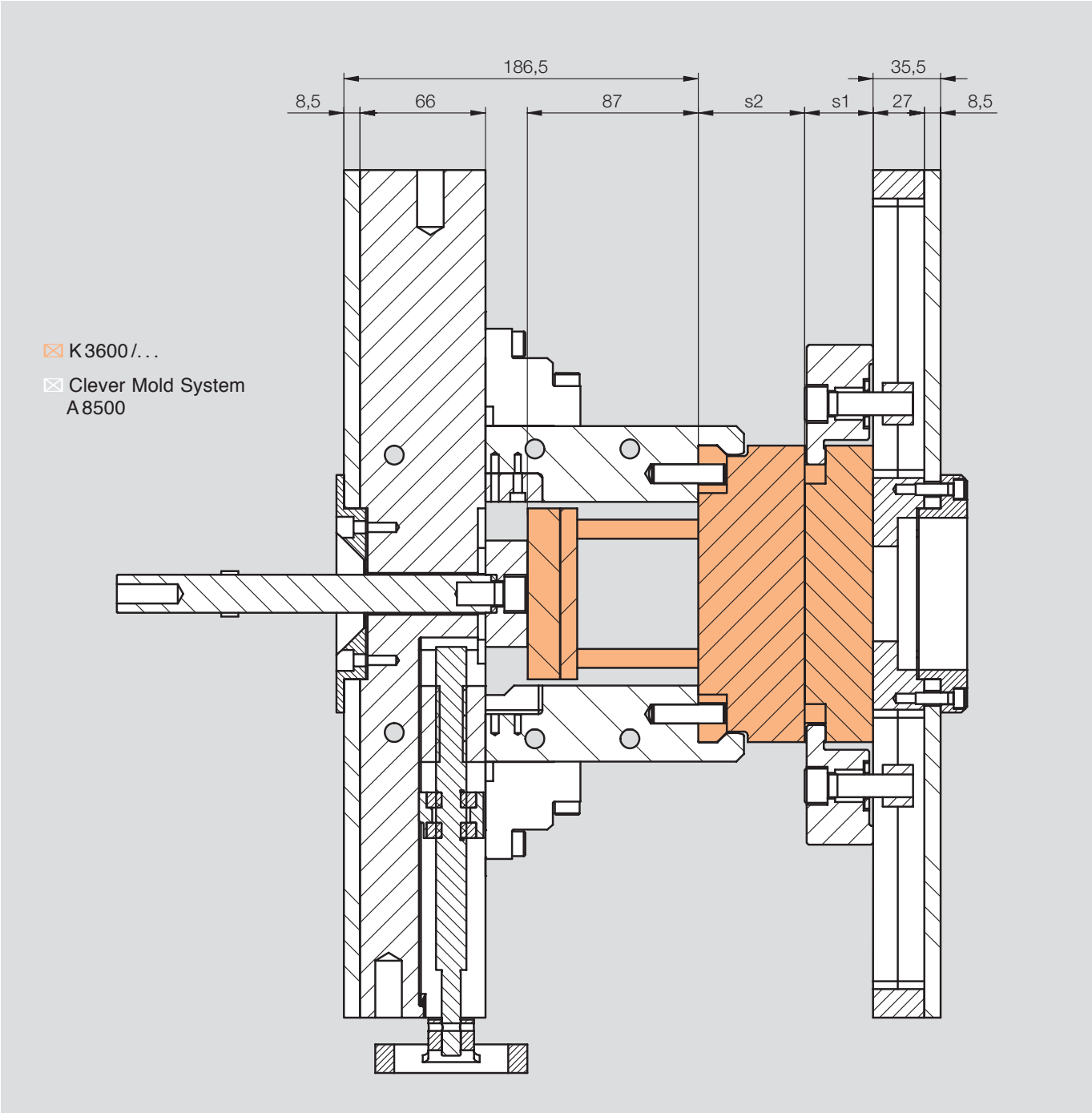
Le moule pour petites séries HASCO K 3600/... a été spécialement développé pour la production à moindre coût de petites séries proches de la pratique.

Il s'agit d'un moule interchangeable spécialement adapté au HASCO Clever Mold System A 8500/... et permettant un changement de moule efficace et rapide sur toutes les presses de moulage par injection courantes.

Le Clever Mold System, en combinaison avec le moule pour petites séries K 3600/..., réduit les temps d'installation et les frais d'outillage.

Caractéristiques particulières

- Possibilité de changer facilement le module complet sur la presse de moulage par injection
- Aucune réduction de la surface utile de plaque grâce à l'utilisation de batteries d'éjection prédéfinies (par rapport à tous les systèmes classiques)
- Durées d'immobilisation minimales grâce au changement rapide des moules
- Plaques porte-empreintes sont disponibles dans les qualités 1.2767 et Toolox 33
- Frais d'outillage réduit
- Éprouvé dans la pratique
- 4 grandeurs de moules, compatibles avec le programme K



Einbaumaße

K3600/... Einbau

Im geöffnetem Zustand wird mit Hilfe des Handrades das komplete HASCO Kleinserienwerkzeug K 3600 / . . . über die Spannbacke des Clever Mold Systems in der Auswerferseite montiert.

Das Auswerferpaket wird über zwei Spannpratzen auf der Spannleiste befestigt.

Anschließend fährt die Maschine zusammen damit die Formplatte (FS) befestigt werden kann.

Mounting dimensions

K3600/... Assembly

When open, the complete HASCO quick interchangeable mould system K 3600 / . . . is installed on the ejector side with the clamping jaw of the Clever Mold System using the hand wheel.

The ejector assembly is fastened to the clamping bar via two clamping shoes.

Then the machine starts so that the fixed mould plate can be fastened.

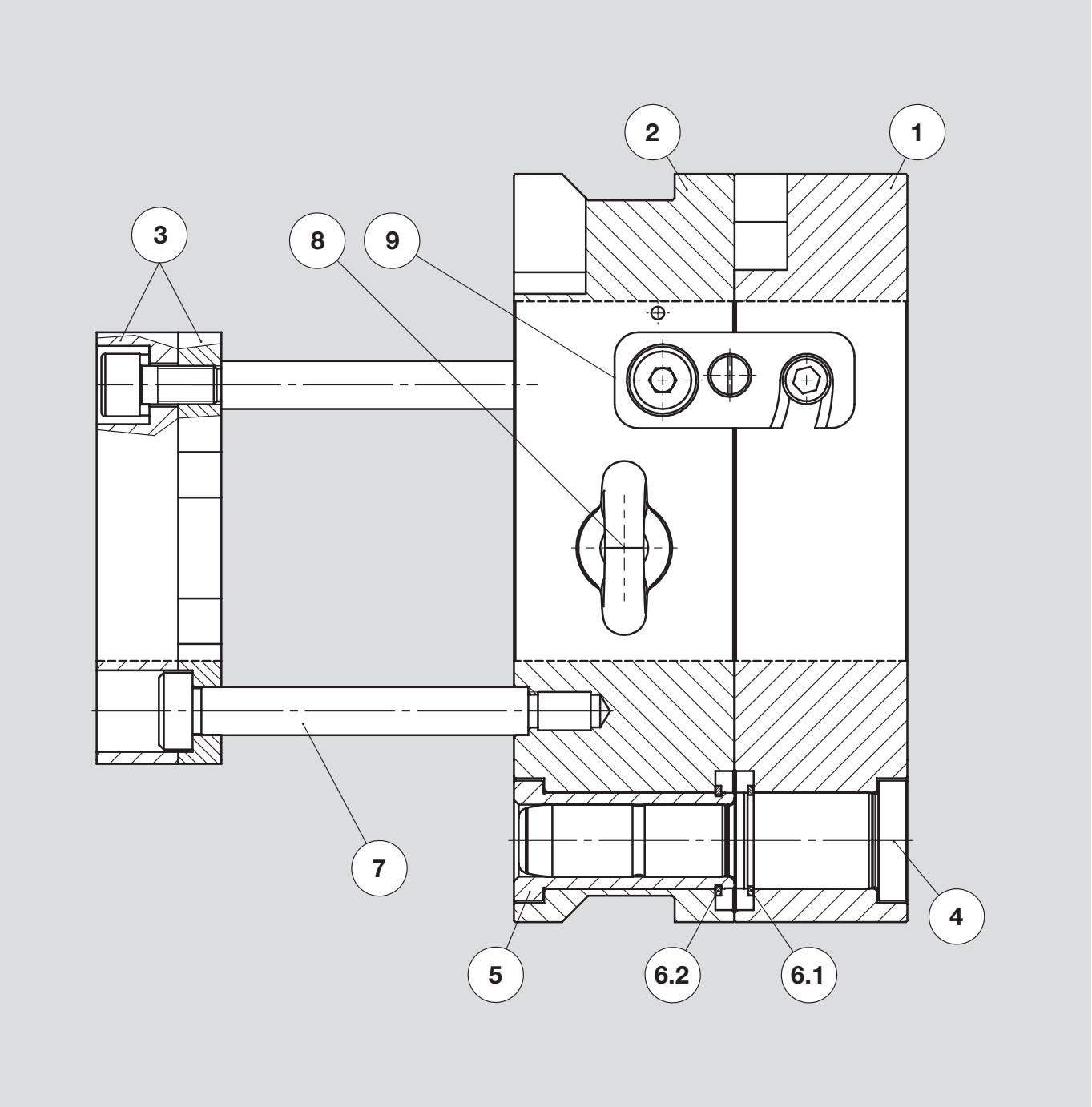
Dimensions de montage

K3600/... Montage

En état ouvert, le système complet de moules à changement rapide K 3600 / . . . est monté du côté de l'éjecteur par le biais de la mâchoire de serrage du Système Clever Mold à l'aide du volant à main.

La batterie d'éjection est fixée sur la barre de serrage par le biais de deux griffes de serrage.

Ensuite, la presse est resserrée afin que la plaque porte-empreinte fixe puisse être attachée.

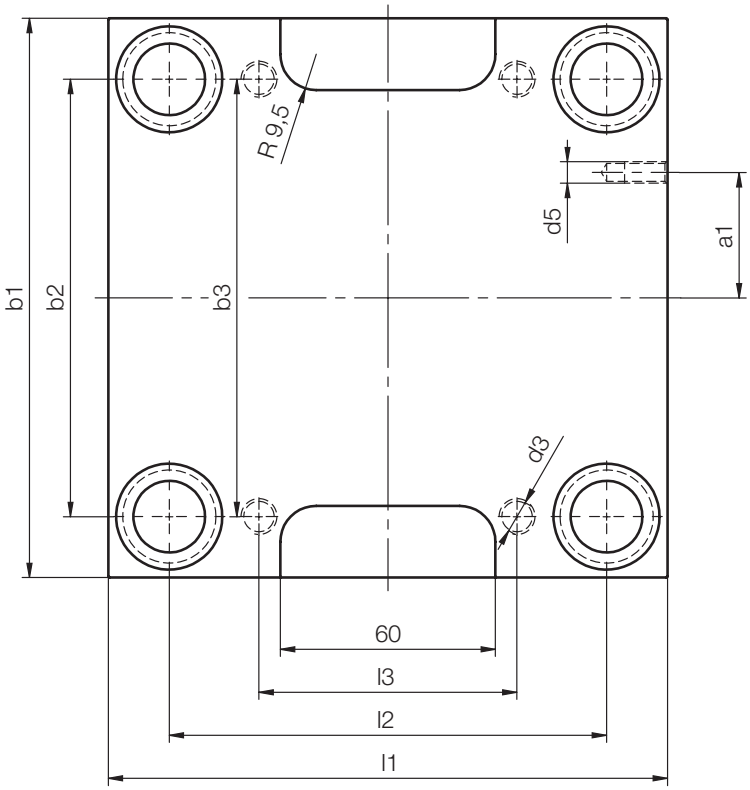


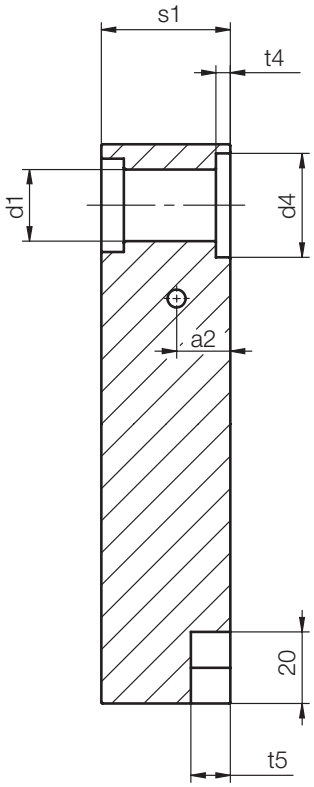
Stückliste Parts list Liste de pièces

Pos.	Benennung	Designation	Désignation	St. / PC.	Nr. / No.
1	Formplatte (FS)	Fixed mould plate	Plaque porte-empreinte fixe	1	K 3620 / . . :
2	Formplatte (BS)	Moving mould plate	Plaque porte-empreinte mobile	1	K 3621 / . . .
3	Auswerferpaket	Ejector assembly	Batterie d'éjection	1	K 3660 - 3670 / . . .
4	Führungssäule	Guide pillar	Colonne de guidage	4	Z 032 / . . .
5	Führungsbuchse	Guide bush	Bague de guidage	4	Z 11 / . . .
6.1	Sicherungsring	External circlip	Circlip	4	Z 67 / . . .
6.2	Sicherungsring	External circlip	Circlip	4	Z 67 / . . .
7	Schulterschraube	Shoulder screw	Vis à tête cylindrique épaulée	4	Z 38 / 10 x 70
8	Ringschraube	Lifting eye bolt	Anneau de levage	1	Z 710 / . . .
9	Werkzeugsicherung	Tool safety device	Sécutité d'outillage	1	Z 73 / . . .

K3620/...

Formplatte (FS)
Fixed mould plate
Plaque porte-empreinte fixe

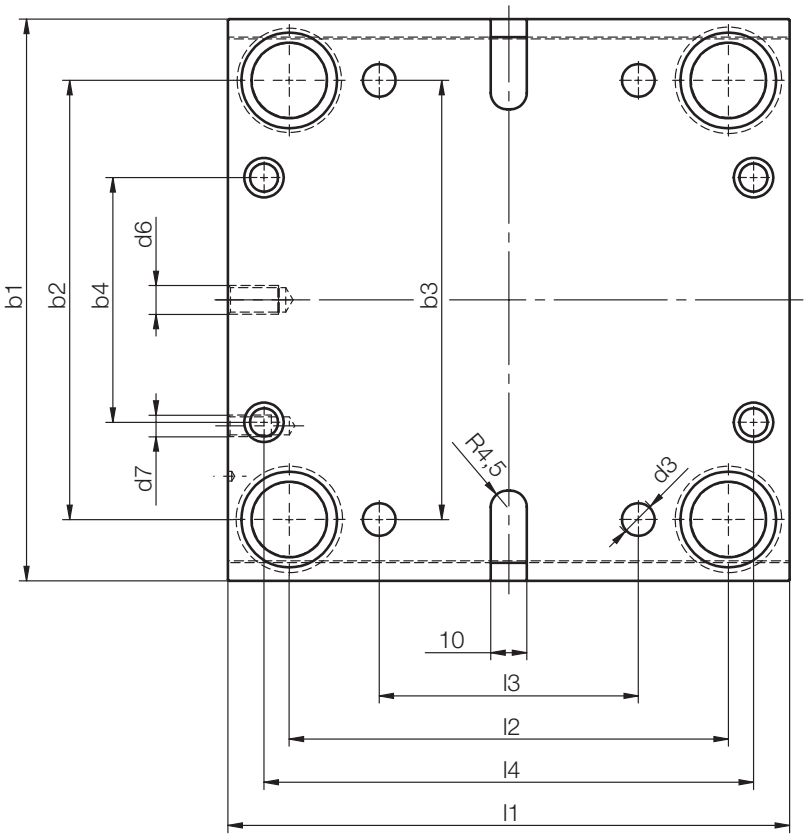


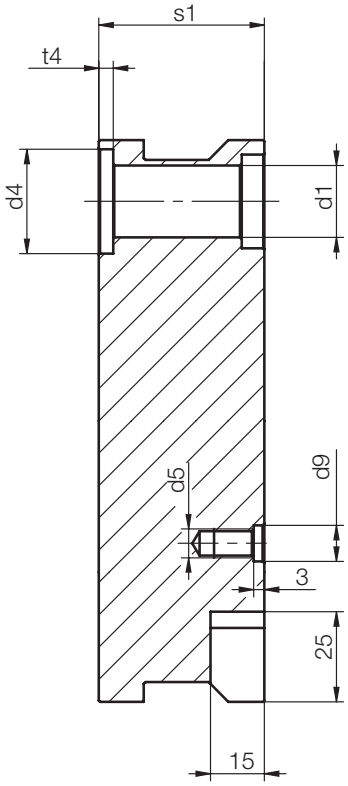


t5	t4	a2	a1	b3	b2	l3	l2	d5	d4	d3	d1	**b1**	**l1**	**s1**	Mat. 1.2767	Mat. Toolox33	**Nr. / No.**
11	4	15	35	122	122	72	122	M6	29	M10	20	**156**	**156**	**36**	■	■	K3620/ 156x156x 36/Mat.
21														**46**	■	■	46
31														**56**	■	■	56
11				148	148	150	202		36		26	**190**	**246**	**36**	■	■	K3620/ 190x246x 36/Mat.
21														**46**	■	■	46
31														**56**	■	■	56
21	5			200	200	186	244		41	M12	30	**246**	**296**	**46**	■	■	K3620/ 246x296x 46/Mat.
31														**56**	■	■	56
41														**66**	■	■	66
21				248	248	284	340					**296**	**396**	**46**	■	■	K3620/ 296x396x 46/Mat.
31														**56**	■	■	56
41														**66**	■	■	66

K3621/...

Formplatte (BS)
Moving mould plate
Plaque porte-empreinte mobile

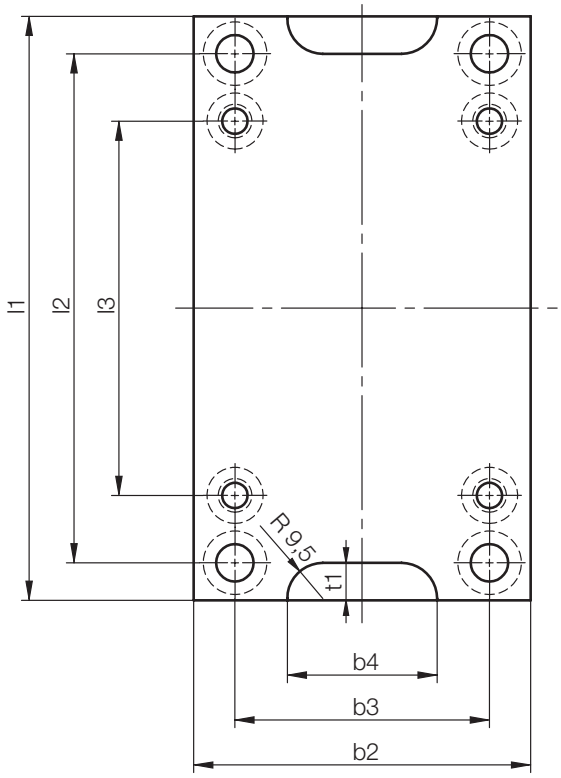


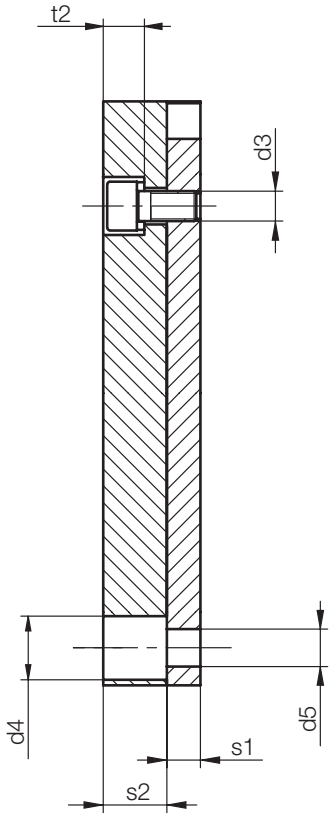


t4	b4	b3	b2	l4	l3	l2	d9	d7	d6	d5	d4	d3	d1	**b1**	**l1**	**s1**	Mat. 1.2767	Mat. Toolox33	**Nr. / No.**
4	68	122	122	136	72	122	10	M6	M8	M8	29	M10	20	**156**	**156**	**46**	■	■	K3621/ 156x156x 46/Mat.
																56	■	■	56
	90	148	148	216	150	202			M10		36		26	**190**	**246**	**46**	■	■	K3621/ 190x246x 46/Mat.
																66	■	■	66
5	130	200	200	264	186	244			M12		41	M12	30	**246**	**296**	**56**	■	■	K3621/ 246x296x 56/Mat.
																76	■	■	76
	176	248	248	364	284	340								**296**	**396**	**66**	■	■	K3621/ 296x396x 66/Mat.
																86	■	■	86

K3660 - 3670/...

Auswerferpaket
Ejector assembly
Batterie d'éjection



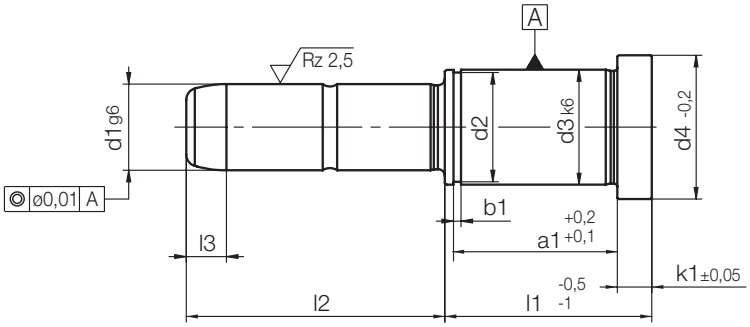


d5	d4	d3	l3	l2	b3	b2	s1	s2	b4	t2	t1	**b1**	**l1**	**Mat.** 1.1730	**Mat.** 1.2312	**Nr. / No.**
10	17	M 8	100	136	68	90	9	17	40	11	10	**156**	**156**	■	■	K 3660-3670 / 156 x 156 / Mat.
			182	216	90	112	12					**190**	**246**	■	■	190 x 246
			230	264	130	158						**246**	**296**	■	■	246 x 296
			330	364	176	200	17	22				**296**	**396**	■	■	296 x 396

Z032/...

Führungssäule, ohne Zentrieransatz
Guide pillar, shouldered
Colonne de guidage, sans plot de centrage

Mat.: ≈ 1.0401/690 + 70 HV 30
≈ DIN 16761-B

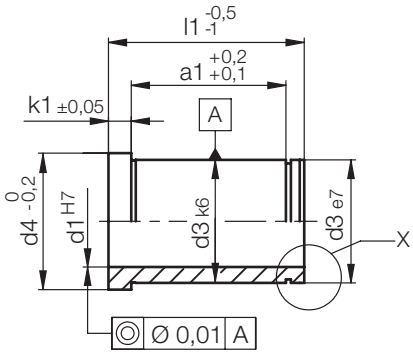


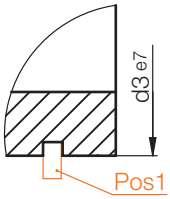
k1	a1	b1	l3	d4	d3	d2	l1	d1	l2	Nr. / No.
6	27,3	1,3	7	25	20	19	**36**	**15**	**45**	Z 032 / 36 x 15 x 45
									55	36 x 15 x 55
	37,3						**46**		**45**	46 x 15 x 45
	47,3						**56**		**35**	56 x 15 x 35
									55	56 x 15 x 55
	27,3			31	26	24,9	**36**	**20**	**45**	Z 032 / 36 x 20 x 45
									65	36 x 20 x 65
	37,3						**46**		**45**	46 x 20 x 45
									65	46 x 20 x 65
	47,3						**56**		**35**	56 x 20 x 35
									55	56 x 20 x 55
	36,6	1,6		35	30	28,6	**46**	**22**	**50**	Z 032 / 46 x 22 x 50
									70	46 x 22 x 70
	46,6						**56**		**55**	56 x 22 x 55
									75	56 x 22 x 75
	56,6						**66**		**55**	66 x 22 x 55
									75	66 x 22 x 75
	36,6						**46**	**24**	**65**	Z 032 / 46 x 24 x 65
									85	46 x 24 x 85
	46,6						**56**		**55**	56 x 24 x 55
									75	56 x 24 x 75
	56,6						**66**		**55**	66 x 24 x 55
									75	66 x 24 x 75

Z11/...

Führungsbuchse, ohne Zentrieransatz
Guide bush, headed
Bague de guidage, sans plot de centrage

Mat.: ≈ 1.0401/690 + 70 HV 30
≈ DIN 16716 - E





Umfangreiches Z11/... Programm siehe Z-Katalog, Bereich 1.

Refer to the Z-catalogue, section 1 for a comprehensive range of Z11/... .

Pour une gamme complète Z11/..., voir le catalogue Z, secteur 1.

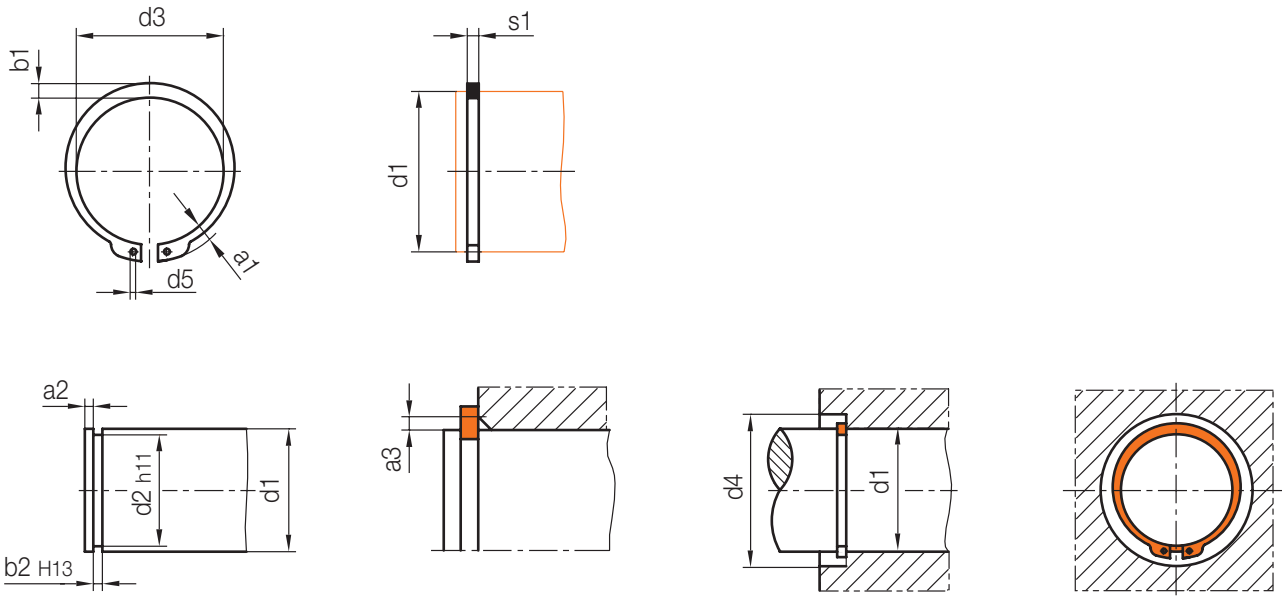
k1	a1	l2	d4	d3	**l1**	**d1**	**Nr. / No.**
6	36	46	25	20	**46**	**15**	Z11/ 46 x 15
	46	56			**56**		56
	36	46	31	26	**46**	**20**	Z11/ 46 x 20
	46	56			**66**		66

k1	a1	l2	d4	d3	**l1**	**d1**	**Nr. / No.**
6	45	56	35	30	**56**	**22**	Z11/ 46 x 15
	65	76			**76**		56
	55	66			**66**	**24**	Z11/ 46 x 20
	75	86			**86**		66

Z67/...

Sicherungsring, für Wellen
External circlip
Circlip pour arbre

DIN 471



Umfangreiches Z67/... Programm siehe Z-Katalog, Bereich 2.
Refer to the Z-catalogue, section 2 for a comprehensive range of Z67/... .
Pour une gamme complète Z67/..., voir le catalogue Z, secteur 2.

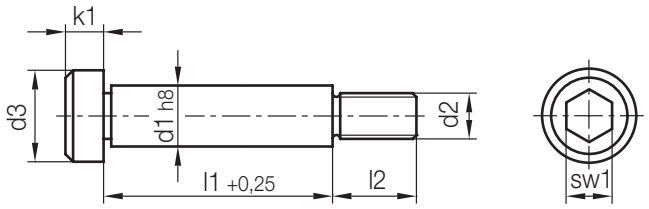
	≤ a3	≤ a2	a1	b2	b1	d5	d4	d3	d2	**d1**	**s1**	**Nr. / No.**
20	1,5	1,5	4	1,3	2,6	2	29	18,5	19	**20**	**1,2**	Z67/ 20 x 1,2
10			4,5		3,1		36	24,2	24,9	**26**		26
	1,5	2,1	5	1,6	3,5		41	27,9	28,6	**30**	**1,5**	Z67/ 30 x 1,5

= Verpackungseinheit / packing unit / unité d'emballage

Z38/...

Schulterschraube
Shoulder screw
Vis à tête cylindrique épaulée

Mat.: 12.9 / 40 ± 2 HRC
≈ ISO 7379



Umfangreiches Z38/... Programm siehe Z-Katalog, Bereich 2.

Refer to the Z-catalogue, section 2 for a comprehensive range of Z38/. . . .

Pour une gamme complète Z38/. . . , voir le catalogue Z, secteur 2.

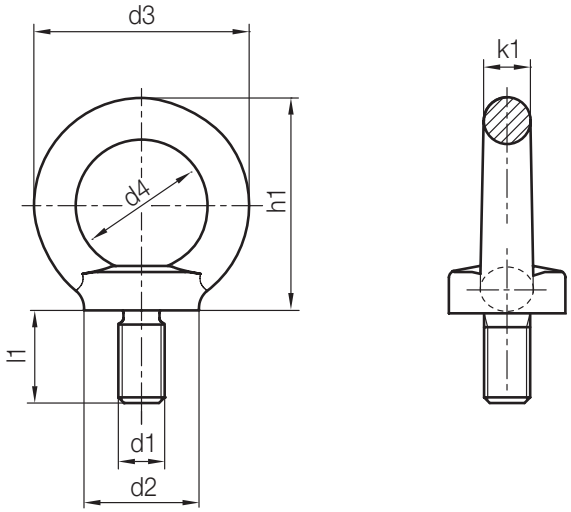
	sw1	k1	l2	d3	d2	**d1**	**l1**	**Nr. / No.**
4	5	7	13	16	M8	**10**	**70**	Z38/10x70

= Verpackungseinheit / packing unit / unité d'emballage

Z710/...

Ringschraube
Lifting eye bolt
Anneau de levage

Mat : C15E
DIN 580
Max. °C: 200



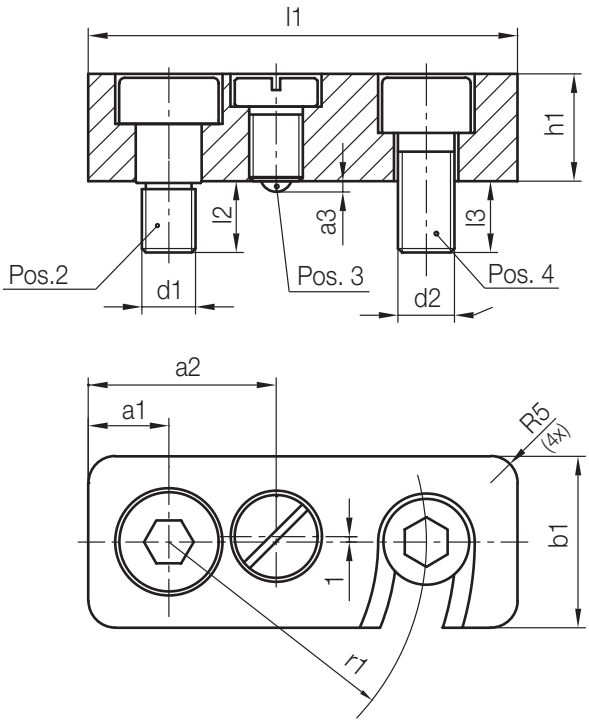
Umfangreiches Z710/... Programm siehe Z-Katalog, Bereich 2.
Refer to the Z-catalogue, section 2 for a comprehensive range of Z710/... .
Pour une gamme complète Z710/..., voir le catalogue Z, secteur 2.

max. F1 [kg]	max. F2 [kg]	k1	h1	l1	d4	d3	d2	**d1**	**Nr. / No.**
140	100	8	36	13	20	36	20	**M 8**	Z710/ 8
230	170	10	45	17	25	45	25	**M 10**	10
340	240	12	53	20,5	30	54	30	**M 12**	12

Z73/...

Werkzeugsicherung
Tool safety device
Sécurité d'outillage

Mat.: 1.2312 / 1080 N/mm²
orange - pulverbeschichtet
powder coated
revêtement à la poudre



Umfangreiches Z73/... Programm siehe Z-Katalog, Bereich 2.
Refer to the Z-catalogue, section 2 for a comprehensive range of Z73/... .
Pour une gamme complète Z73/..., voir le catalogue Z, secteur 2.

Pos. 4	Pos. 3	Pos. 2	r1	a3	a2	a1	l3	l2	d2	d1	**h1**	**b1**	**l1**	**Nr. / No.**
Z31/ 6x14	Z36/ 5x12	Z381/ 6x 6	30	0,9	24	10	8	9	M 6	M 6	**12**	**20**	**50**	Z73/12x20x50

Ermöglicher für Innovation
Enabler for innovation

Ich entwickle für Ihre Formen von Morgen.

- HASCO-Produktentwicklung im Haus
- Vom Prototypen zum Neuprodukt
- Hohe Innovationsfrequenz
- Innovationspartnerschaften mit Kunden
- Produktivitätssteigerung für den Formenbau

I develop for your moulds of tomorrow.

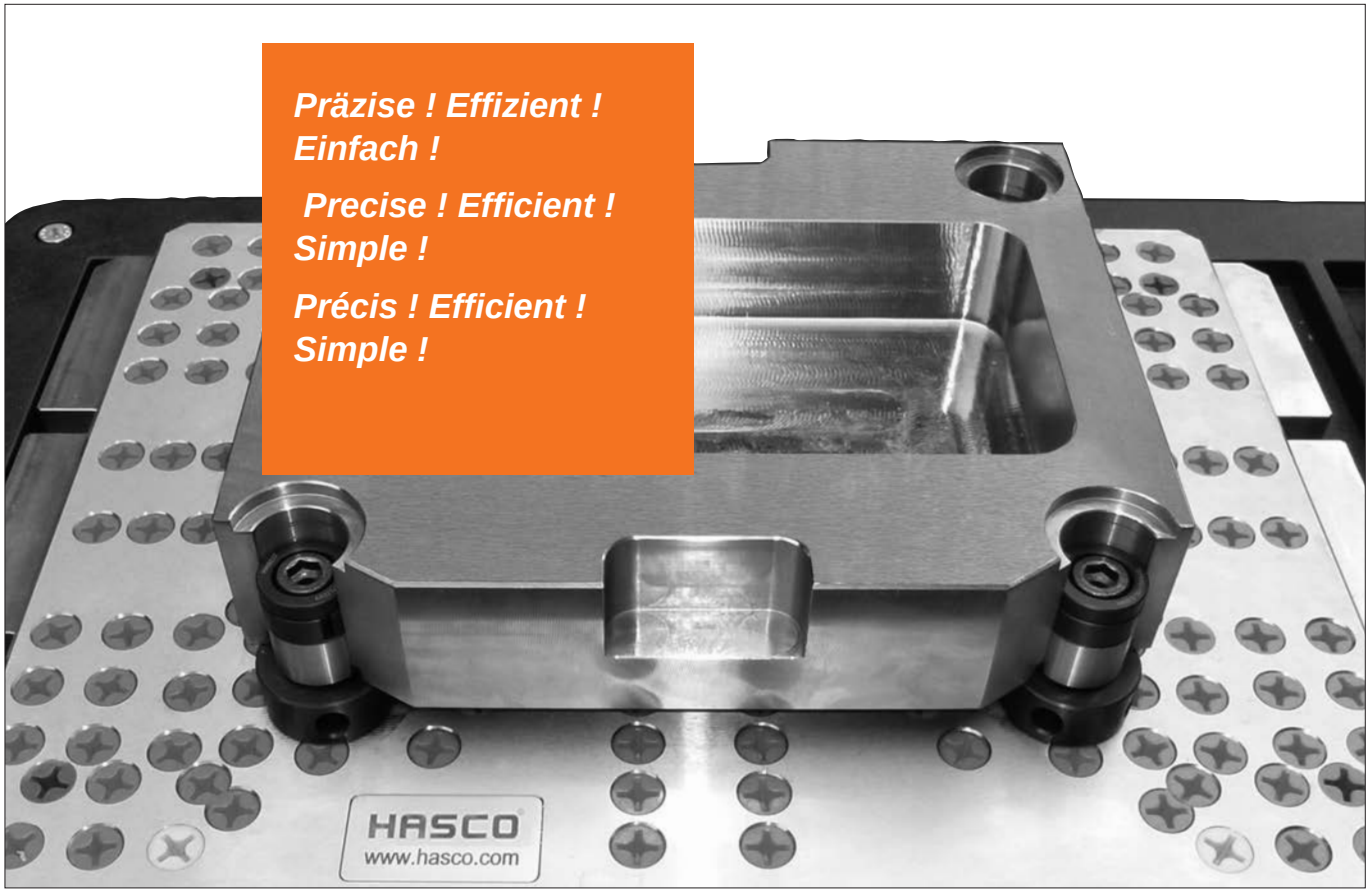
- In-house development
- Prototype to product
- High innovation frequency
- Close partnerships with customers
- Our goal is to boost your productivity

HASCO

Ermöglichen mit System.

A 8001/. . .

Spannvorrichtung
Clamping fixture
Table de bridage



Die HASCO-Spannvorrichtung A 8001/... wurde zum präzisen Aufspannen und Ausrichten von HASCO K- und Auswerferplatten entwickelt.

Besondere Merkmale

- Wirtschaftliches Spannen von HASCO Systemplatten (K- und Auswerferplatten sowie Platten des Kleinserienwerkzeuges K 3600/...)
- Horizontale und vertikale Bearbeitung aller gängigen Werkzeugabmessungen problemlos möglich
- Hochpräzise Positionierung der Zentrieraufnahmen durch engste Toleranzen gewährleistet Wiederholgenauigkeiten von 10 µm
- Spreizspannen in den Systemen ermöglicht eine optimale 5-Seiten-Bearbeitung

The HASCO clamping device A 8001/... was developed for precision clamping and alignment of HASCO K-and ejector plates.

Special Features

- Cost-efficient clamping of HASCO system plates (K-plates, ejector plates as well as plates of the Small series mould K 3600/...)
- Problem-free horizontal and vertical machining of all common mould dimensions
- High-precision positioning of the location elements through very tight tolerances, ensuring a repeat accuracy of 10 µm
- Expanding collet clamping in the system holes permit optimum 5-side processing

La table de bridage A 8001/... de HASCO a été développé pour la fixation et l'orientation précises de plaques K et plaques d'éjection de HASCO.

Caractéristiques particulières

- Fixation rapide des plaques HASCO (K/..., batterie d'éjection ainsi que plaques de moule petite série type K 3600/...)
- Usinage horizontal et vertical avec tous types d'outils sans problème
- Positionnement ultra-précis par des tolérances de fabrication très serrées et répétabilité de 10 µm
- Fixation interne dans les alésages permettant des usinages de façon optimale sur les 5 faces

- Mit den drei Standardgrößen der A 8001 /. . . Grundplatten können alle Werkzeugabmessungen von 156 x 156 bis 596 x 796 bearbeitet werden
- Einfaches Handling durch separate Zubehör-Steckmodule sortiert nach Systemdurchmessern
- Minimale Rüstzeiten durch den Einsatz farbiger Stopfen zur Kennzeichnung der Stichmaß-Position für die Systemplatten
- Korrosionsbeständige A 8001 /. . . Grundplatten aus Edelstahl und DLC beschichtete Funktionselemente garantieren Verschleißminimierung und Langlebigkeit
- Sonderausführungen der Grundplatten nach Kundenwunsch realisierbar

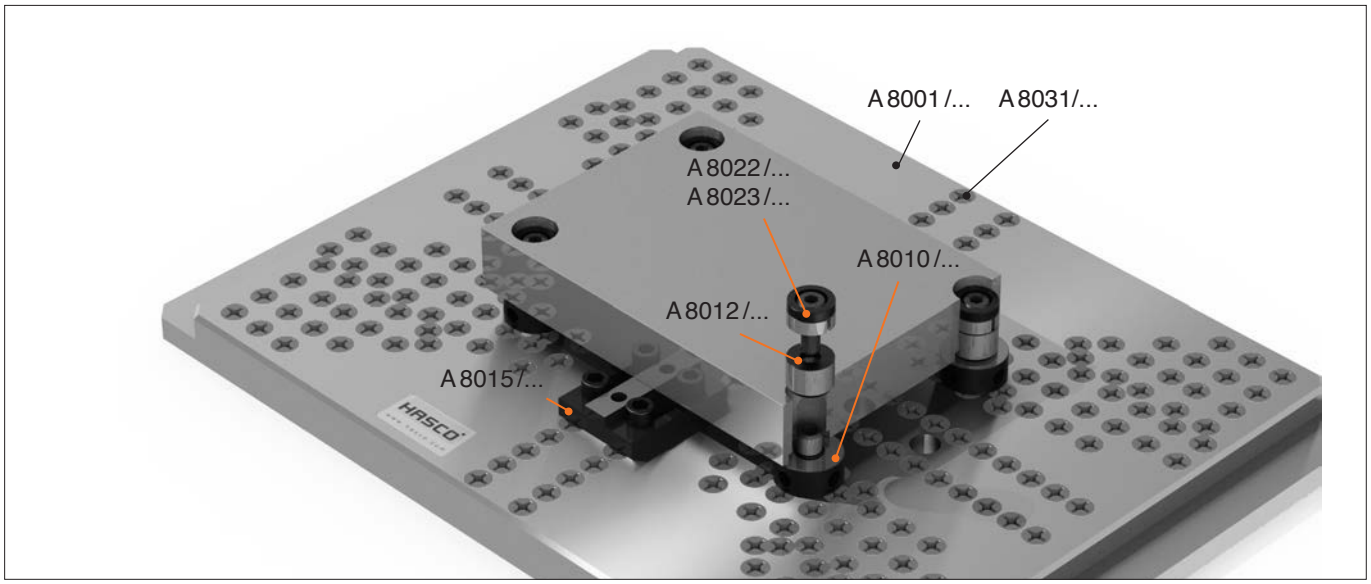
- With the three standard sizes of the A 8001 /. . . base plates, all tool dimensions of 156 x 156 to 596 x 796 can be processed.
- Easy handling through separate accessory plug-in modules classified by system diameter
- Minimal set-up times through the use of coloured plugs to mark the hole positions for the system plates
- Corrosion-resistant A 8001 /. . . base plates in stainless steel and DLC-coated functional elements guarantee minimal wear and a long life
- Special customised base plate versions available

- Avec les trois tailles standard de plaques de base A 8001/. . . , il est possible d'usiner toutes les tailles de moule de 156 x 156 jusqu'à 596 x 796
- Manipulation aisée grâce à un support d'accessoires séparé avec tri selon les diamètres de colonnage
- Temps de changement minimum grâce aux bouchons colorés permettant un repérage rapide et visuel des positions de colonnage
- Plaques de base A 8001/. . . anti-corrosion en acier haute qualité 1.2099 et revêtement DLC sur les éléments de centrage garanti un minimum d'usure et une durée de vie inégalée
- Possibilité de réaliser des plaques de base sur-mesure selon le souhait du client

Spannen mit Spreizelementen

Clamping with expansion elements

Bridage de plaques avec des éléments de serrage



Spannen von K-Platten mit Spreizelementen (A 8022 /... , A 8023 /...) in den Systembohrungen

Die Zentrieraufnahmen A 8010 /. . . werden auf die Grundplatte A 8001/. . . mit der Montagehilfe A 8037/. . . geschraubt.

Die Zentrieraufnahmen müssen das gleiche Stichmaß aufweisen wie die Systembohrungen der zu spannenden K-Platte (schnelle Umsetzung durch Stichmaßschablonen).

Anschließend wird die K-Platte auf die Zentrieraufnahmen gelegt und mit den Zentrierhülsen A 8012 /. . . positioniert.

Die K-Platte wird mit den Spreizelementen A 8022 /. . . oder A 8023 /. . . , abhängig des Systemdurchmessers, wiederholgenau gespannt.

Verwendung des Stützkörpers A 8015/. . .

Zum Abstützen, speziell von größeren und dünnen Platten, empfiehlt sich der Einsatz des Stützkörpers A 8015 /. . . .

Verwendung der Ausziehstange A 8035 /. . . und Ausziehverlängerung A 8036 /. . .

Das Entfernen der Zentrierhülse A 8012 /. . . aus der Systembohrung, erfolgt mit der Ausziehstange A 8035 /. . . .
Für tiefere Systembohrungen empfiehlt sich der Einsatz der Ausziehverlängerung A 8036 /. . ., welche auf die Ausziehstange aufgeschraubt wird.

Clamping of K-plates with expansion elements (A 8022 /... , A 8023 /...) in the guide holes

The location elements A 8010 /. . . are screwed to the base plate A 8001/. . ., with the assembly tool A 8037/. . . .

The location elements must have the same gauge as the system bores of the K-plate to be clamped (rapid implementation through hole spacing templates).

Then the K-plate is placed on the location elements and positioned using the centring sleeves A 8012 /. . . .

The K-plate is clamped repeat accurately with the expansion elements A 8022 /. . . or A 8023 /. . ., depending on the system diameter.

Use of support element A 8015/. . .

For support, especially of larger and thin plates, it is recommended to use the support element A 8015 /. . . .

Use of the pulling bar A 8035 /. . . and extension A 8036 /. . .

The centring sleeve A 8012 /. . . is removed from the system bore with the pulling bar A 8035 /. . . .

For deeper system bores it is recommended to use the extension, A 8036 /. . . which is screwed to the pulling bar.

Bridage de plaques K avec éléments de serrage (A 8022 /... , A 8023 /...) noyés dans les alésage

Les centreurs A 8010 /. . . seront vissés sur la plaque de base A 8001/. . . avec l'outil de montage A 8037/. . . .

Les centreurs doivent présenter les mêmes cotes que les alésages de système des plaques K à visser (mise en oeuvre rapide avec jauges d'entre-axe).

Ensuite, la plaque K sera posée sur les centreurs et positionnée avec les douilles de centrage A 8012 /. . . .

La plaque K sera fixée répétitible avec les éléments de serrage A 8022 /. . . ou A 8023 /. . ., selon le diamètre du système.

Utilisation du support A 8015/. . .

Pour soutenir, spécialement les plaques des plus importantes et fins, il est recommandé d'utiliser l'élément de support A 8015 /. . . .

Utilisation de l'extracteur A 8035 /. . . et de la rallonge d'extracteur A 8036 /. . .

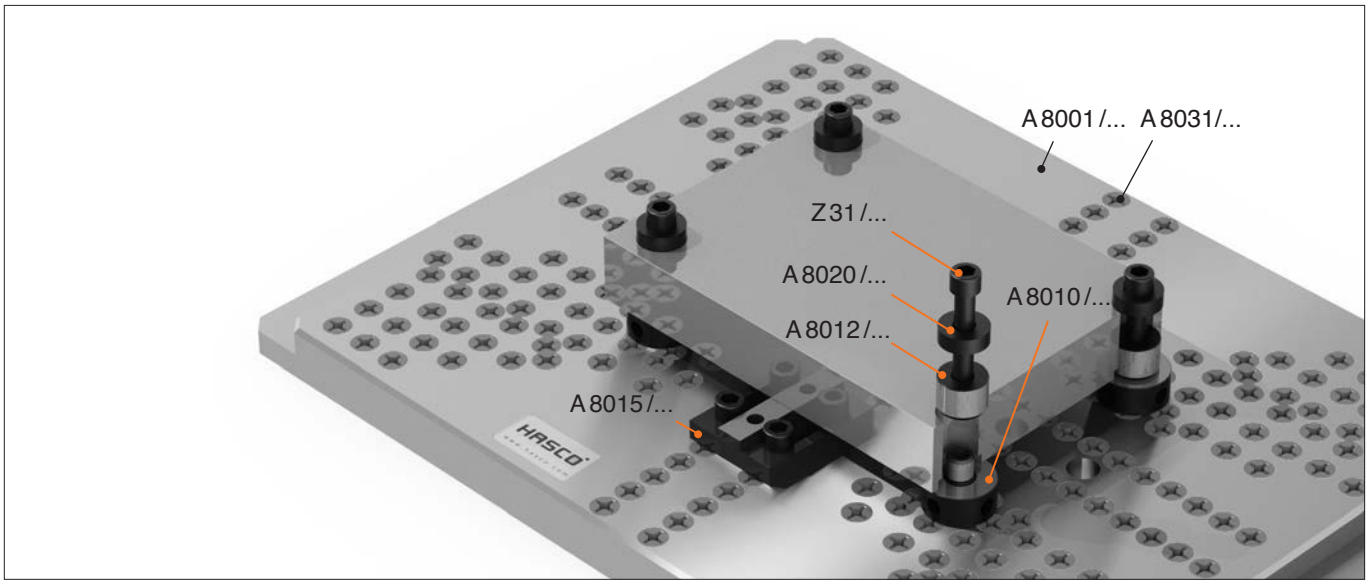
L'extracteur A 8035 /. . . sert à enlever la douille de centrage A8012/... de l'alésage de système.

Pour des alésages de système plus profonds, il est recommandé de recourir à la rallonge d'extracteur A 8036 /. . . qui sera vissée sur l'extracteur.

Spannen mit Spannscheibe

Clamping with locking washer

Fixation de plaques avec rondelle de serrage



Spannen von K-Platten mit Spannscheibe A 8020 /. . .

Die Zentrieraufnahmen A 8010/. . . werden auf die Grundplatte A 8001/. . ., mit der Montagehilfe A 8037/. . ., geschraubt.

Die Zentrieraufnahmen müssen das gleiche Stichmaß aufweisen, wie die Systembohrungen der zu spannenden K-Platte.

Anschließend wird die K-Platte auf die Zentrieraufnahmen gelegt und mit den Zentrierhülsen A 8012/. . . positioniert.

Gespannt wird die K-Platte, indem die Spannscheibe A 8020/. . . mit den Zentrieraufnahmen, über Kreuz, mit Z 31/. . . verschraubt werden.

Die Ausdrehung der Spannscheibe A 8020/. . . muss in Richtung der Platte zeigen.

Vorzugsweise für große Plattenstärken und/oder zum Vorschruppen.

Verwendung der Montagehilfe A 8037/. . .

Die Montagehilfe dient zum Ein- und Ausschrauben der Zentrieraufnahme A 8010/. . . und Distanzsäule A 8011/. . . und zum Demontieren der Verschlussstopfen A 8031/. . . .

Clamping of K-plates with locking washer A 8020 /. . .

The location elements A 8010/. . . are screwed to the base plate A 8001/. . . with the assembly tool A 8037/. . . .

The location elements must have the same gauge as the system bores of the K-plate to be clamped.

Then the K-plate is placed on the location elements and positioned with the centring sleeves A 8012/. . . .

The K-plate is clamped by screwing the locking washer A 8020/. . . to the centring holders, diagonally, with Z 31/. . . .

The recess of the locking washer must face the plate.

For preferential use with thick plates and/or for roughing.

Use of the assembly tool A 8037/. . .

The assembly tool is used for screwing the location element A 8010/. . . and distance element A 8011/. . . in and out and for dismantling the sealing plugs A 8031/. . . .

Fixation de plaques K avec rondelle de serrage A 8020 /. . .

Les centreurs A 8010/. . . seront vissés sur la plaque de base A 8001/. . . avec l'outil de montage A 8037/. . . .

Les centreurs doivent présenter les mêmes cotes que les alésages de système des plaques K à visser.

Ensuite, la plaque K sera posée sur les centreurs et positionnée avec les douilles de centrage A 8012/. . . .

La plaque K sera fixée en vissant, de manière croisée, les rondelles de serrage A 8020/. . . avec centreurs, avec Z 31/. . . .

Le dévissage des rondelles de serrage doit être orienté contre la plaque.

De préférence pour les grandes épaisseurs et/ou ébauche.

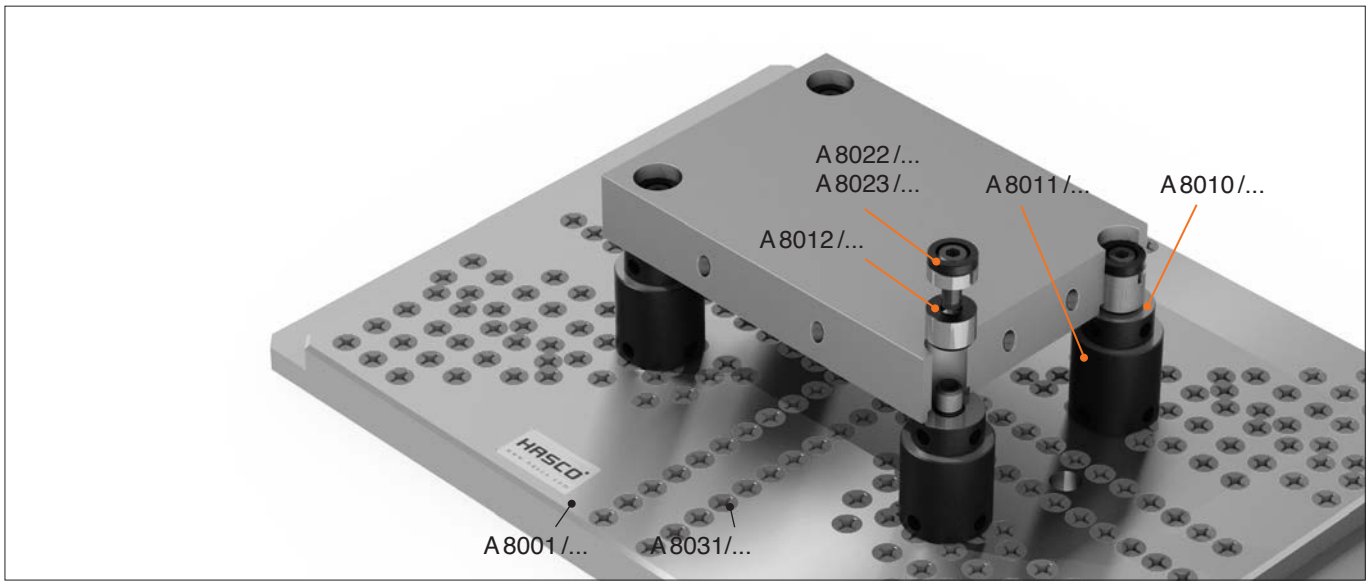
Utilisation de l'outil de montage A 8037/. . .

L'outil de montage sert au vissage et au dévissage du logement de centrage A 8010/. . . et de l'entretoise A 8011/. . . et pour le démontage des bouchons A 8031/. . . .

Seitliche Bearbeitungen

Lateral processing

Usinage latéral



Spannen von K-Platten auch für seitliche Bearbeitungen

Auch für die seitliche Bearbeitungen empfiehlt sich der Einsatz von Distanzsäulen A 8011/. . . . Diese werden auf die Grundplatte A 8001/. . . mit der Montagehilfe A 8037/. . . geschraubt.

Die Distanzsäulen müssen das gleiche Stichmaß aufweisen wie die System-bohrungen der zu spannenden K-Platte.

Danach werden die Zentrieraufnahmen A 8010/. . . auf die Distanzsäulen geschraubt.

Auf die Zentrieraufnahmen wird nun die K-Platte gelegt und mittels Zentrierhülsen A 8012/. . . positioniert.

Die K-Platte kann nun mit den Spannscheiben A 8020/. . . oder den Spreizelementen A 8022/. . . oder A 8023/. . . , abhängig des System-durchmessers, gespannt werden.

Verwendung der Verschlussstopfen A 8031/. . .

Die Verschlussstopfen A 8031/. . . werden in die Bohrungen der Grundplatte A 8001/. . . geschraubt und verhindern das Verschmutzen während der Bearbeitung.

Zur Markierung für schnelles Positionieren empfehlen sich die farbigen Verschlussstopfen A 8031/. . . Typ 2 - 6 (als Kit A 8051/. . .).

Clamping of K-plates also for lateral processing

Also for lateral processing it is recommended to use distance columns A 8011/. . . . These are screwed one above the other to the base plate A 8001/. . . with the assembly tool A 8037/. . . .

The distance columns must have the same gauge as the system bores of the K-plate to be clamped.

Then the location elements A 8010/. . . are screwed to the distance columns.

The K-plate is then placed on the location elements and positioned using centring sleeves A 8012/. . . .

The K-plate can then be clamped with the locking washers A 8020/. . . or the expansion elements A 8022/. . . or A 8023/. . . depending on the system diameter.

Use of the sealing plugs A 8031/. . .

The sealing plugs A 8031/. . . are screwed into the holes in the base plate A 8001/. . . and prevent soiling during processing.

We recommend use of the coloured sealing plugs A 8031/. . . type 2 - 6 (as kit A 8051/. . .) to mark holes for rapid positioning.

Fixation de plaques K aussi pour usinage latéral

Aussi pour l'usinage latéral, il est recommandé d'utiliser les entretoises A 8011/. . . . Celles-ci étant vissées l'une sur l'autre sur la plaque de base A 8001/. . . avec l'outil de montage A 8037/. . . .

Les entretoises doivent présenter les mêmes cotes que les alésages de système des plaques K à visser.

Ensuite, les centreurs A 8010/. . . seront vissés sur les entretoises.

La plaque K sera posée alors posée sur les centreurs et positionnée avec les douilles de centrage A 8012/. . . .

La plaque K pourra alors être fixée avec les rondelles de serrage A 8020/. . . ou les élément de serrage A 8022/. . . ou A 8023/. . ., selon le diamètre du système.

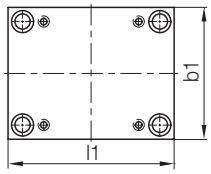
Utilisation des bouchons A 8031/. . .

Le bouchon A 8031/. . . sera vissé dans les orifices de la plaque de base A8001/... et empêche ainsi la pénétration d'impuretés pendant l'usinage.

Pour la visualisation et un positionnement rapide nous vous recommandons les bouchons colorés A 8031/. . . type 2 - 6 (en kit A 8051/. . .).

Spannen von HASCO K-Platten

Auflistung von HASCO K-Platten, die mit der Spannvorrichtung A 8001/. . . gespannt werden können.

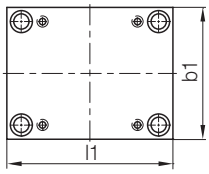


b x l	d1	A 8001/1 (366 x 546)	A 8001/2 (466 x 646)	A 8001/3 (556 x 846)
156 x 156	ø 20	X	X	X
156 x 196		X	X	X
156 x 246		X	X	X
156 x 296		X	X	X
156 x 346		X	X	X
190 x 246	ø 26	X	X	X
196 x 196	ø 26	X	X	X
196 x 296	ø 30	X	X	X
196 x 346		X	X	X
196 x 396		X	X	X
196 x 446		X	X	X
196 x 496		X	X	X
218 x 246	ø 26	X	X	X
218 x 296	ø 30	X	X	X
246 x 246	ø 30	X	X	X
246 x 296		X	X	X
246 x 346		X	X	X
246 x 396		X	X	X
246 x 446		X	X	X
246 x 496		X	X	X
246 x 546			X	X
246 x 596			X	X

Bei den markierten quadratischen Plattengrößen ist eine Aufspannung auch um 90° verdreht möglich.

Clamping of HASCO K-plates

List of HASCO K-plates which can be clamped with the clamping device A 8001/. . . .

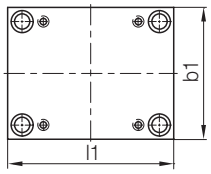


b x l	d1	A 8001/1 (366 x 546)	A 8001/2 (466 x 646)	A 8001/3 (556 x 846)
296 x 296	ø 30	X	X	X
296 x 346		X	X	X
296 x 396		X	X	X
296 x 446		X	X	X
296 x 496		X	X	X
296 x 546			X	X
296 x 596			X	X
296 x 646	ø 42			X
296 x 696				X
346 x 346	ø 30	X	X	X
346 x 396	ø 42	X	X	X
346 x 446		X	X	X
346 x 496		X	X	X
346 x 546			X	X
346 x 596			X	X
346 x 646				X
346 x 696				X
346 x 796				X
396 x 396	ø 42	X	X	X
396 x 446		X	X	X
396 x 496		X	X	X
396 x 546			X	X
396 x 596			X	X
396 x 646				X
396 x 696				X
396 x 796				X

The square plate sizes that are marked can also be rotated through 90° and clamped.

Fixation de plaques K de HASCO

Liste des plaques K de HASCO qui peuvent être fixées avec le dispositif de fixation A 8001/. . . .



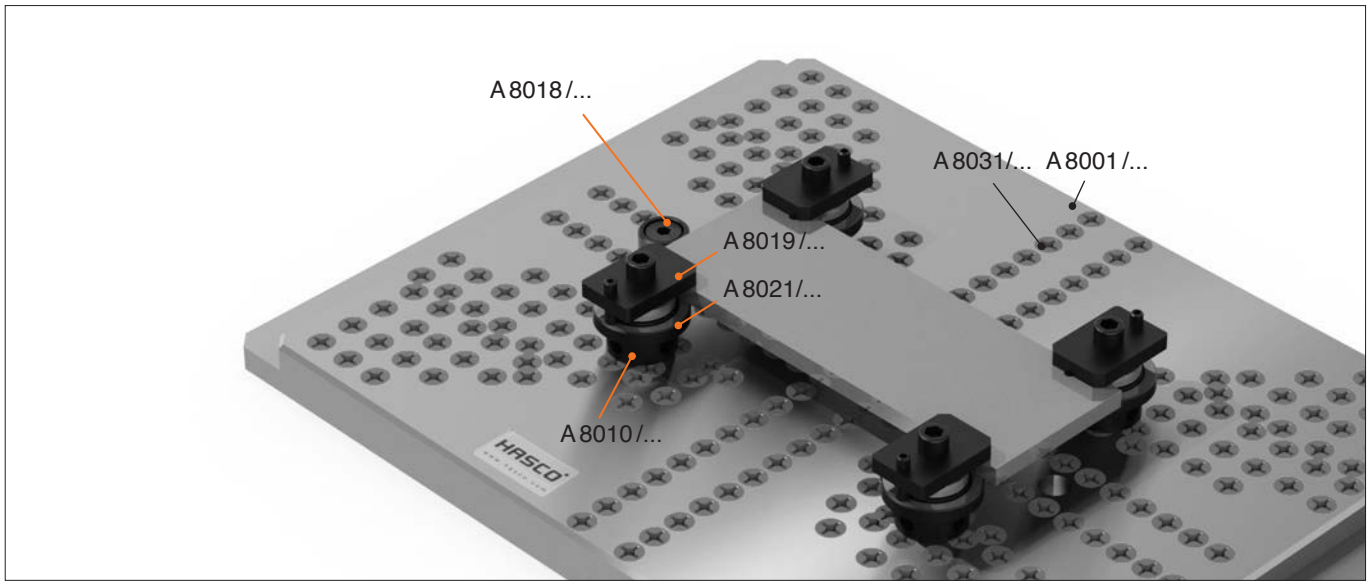
b x l	d1	A 8001/1 (366 x 546)	A 8001/2 (466 x 646)	A 8001/3 (556 x 846)
446 x 446	ø 42		X	X
446 x 496			X	X
446 x 546			X	X
446 x 596			X	X
446 x 646				X
446 x 696				X
446 x 796				X
496 x 496	ø 42		X	X
496 x 546			X	X
496 x 596			X	X
496 x 646				X
496 x 696				X
496 x 796	ø 54			X
546 x 546	ø 42			X
546 x 596				X
546 x 646				X
546 x 696				X
546 x 796	ø 54			X
596 x 596	ø 42			X
596 x 646	ø 54			X
596 x 696				X
596 x 796				X

Les plaques rectangulaires repérées peuvent également être positionnées à 90°.

Spannen von Auswerferplatten

Clamping of ejector plates

Bridage de plaques batterie



Spannen von HASCO Auswerferplatten K 60 und K 70

Problemloses Spannen von Auswerferplatten.

Die Zentrieraufnahmen A 8010/... sind durch vorherige K-Spannung mit entsprechender Formgröße positioniert. Es werden auf einer Seite zwei Auflageteller A 8021/... als Anschlag und Auflage verwendet.

Durch die Positionierung mit einem Anschlagelement A 8018/... wird eine 3-Punkt Anlage realisiert.
Auf der gegenüberliegenden Seite kommen zwei A 8021/... mit kleinerem Durchmesser (mit Markierung) als Auflage zum Einsatz.

Zum Spannen der Auswerferplatte werden vier Spanneisen A 8019/... mit Z 31/... verwendet.

Clamping of HASCO ejector plates K 60 and K 70

Problem-free clamping of ejector plates.

The locating elements A 8010/... are positioned by the previous K clamping with corresponding mould size.
Two support plates A 8021/... are used as a limit stop and support on one side.

A 3-point system is realised by positioning stop device A 8018/....

Two A 8021/... with a smaller diameter (with marking) than the support are used on the opposite side.

For tensioning the ejector plate, four clamps A 8019/... with Z 31/... are used.

Bridage de plaques batterie type K 60 , K 70 de HASCO

Fixation facile de plaques d'éjection.

Les centreurs A 8010/... sont positionnées avec la taille de moules adéquate grâce à la fixation K précédent.
Deux A 8021/... sont utilisées d'un côté comme butée et appui.

Un système à 3 points est réalisé grâce au positionnement de l'A 8018/....

Du côté opposé, deux entretoises support A 8021/... d'un diamètre inférieur (avec marquage) sont utilisées avec comme appui.

Pour la fixation de la plaque d'éjection, quatre brides de fixationA 8019/... sont serrées avec Z 31/....

Spannen von HASCO Auswerferplatten K 60 und K 70

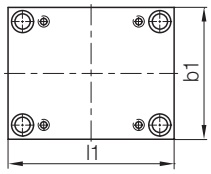
Auflistung von HASCO Auswerferplatten, welche mit der Spannvorrichtung A 8001/. . . gespannt werden können.

Clamping of HASCO ejector plates K 60 and K 70

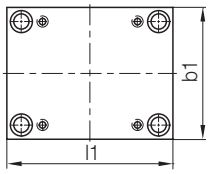
List of HASCO ejector plates which can be clamped with the clamping device A 8001/. . . .

Fixation des plaques d'éjection de HASCO K 60 et K 70

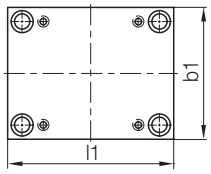
Liste des plaques d'éjection de HASCO qui peuvent être fixées avec le dispositif de fixation A 8001/. . . .



b x l	d1	A 8001/1 (366 x 546)	A 8001/2 (466 x 646)	A 8001/3 (556 x 846)
156 x 156	ø 20	X	X	X
156 x 196		X	X	X
156 x 246		X	X	X
156 x 296		X	X	X
156 x 346		X	X	X
190 x 246	ø 26	X	X	X
196 x 196	ø 26	X	X	X
196 x 296	ø 30	X	X	X
196 x 346		X	X	X
196 x 396		X	X	X
196 x 446		X	X	X
196 x 496		X	X	X
218 x 246	ø 26	X	X	X
218 x 296	ø 30	X	X	X
246 x 246	ø 30	X	X	X
246 x 296		X	X	X
246 x 346		X	X	X
246 x 396		X	X	X
246 x 446		X	X	X
246 x 496		X	X	X
246 x 546			X	X
246 x 596			X	X



b x l	d1	A 8001/1 (366 x 546)	A 8001/2 (466 x 646)	A 8001/3 (556 x 846)
296 x 296	ø 30	X	X	X
296 x 346		X	X	X
296 x 396		X	X	X
296 x 446		X	X	X
296 x 496		X	X	X
296 x 546			X	X
296 x 596			X	X
296 x 646	ø 42			X
296 x 696				X
346 x 346	ø 30	X	X	X
346 x 396	ø 42	X	X	X
346 x 446		X	X	X
346 x 496		X	X	X
346 x 546			X	X
346 x 596			X	X
346 x 646				X
346 x 696				X
346 x 796				X
396 x 396	ø 42	X	X	X
396 x 446		X	X	X
396 x 496		X	X	X
396 x 546			X	X
396 x 596			X	X
396 x 646				X
396 x 696				X
396 x 796				X

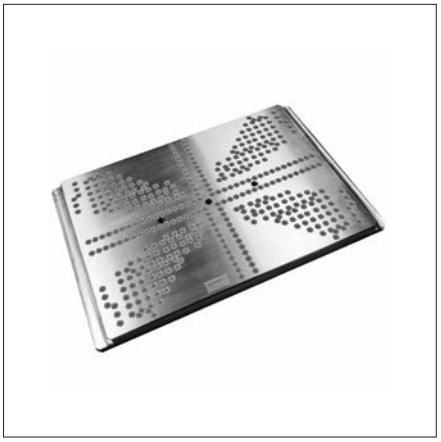


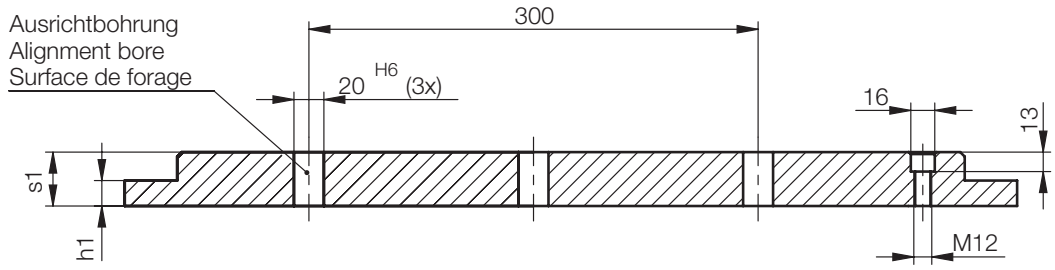
b x l	d1	A 8001/1 (366 x 546)	A 8001/2 (466 x 646)	A 8001/3 (556 x 846)
446 x 446	ø 42		X	X
446 x 496			X	X
446 x 546			X	X
446 x 596			X	X
446 x 646				X
446 x 696				X
446 x 796				X
496 x 496	ø 42		X	X
496 x 546			X	X
496 x 596			X	X
496 x 646				X
496 x 696				X
496 x 796	ø 54			X
546 x 546	ø 42			X
546 x 596				X
546 x 646				X
546 x 696				X
546 x 796	ø 54			X
596 x 596	ø 42			X
596 x 646	ø 54			X
596 x 696				X
596 x 796				X

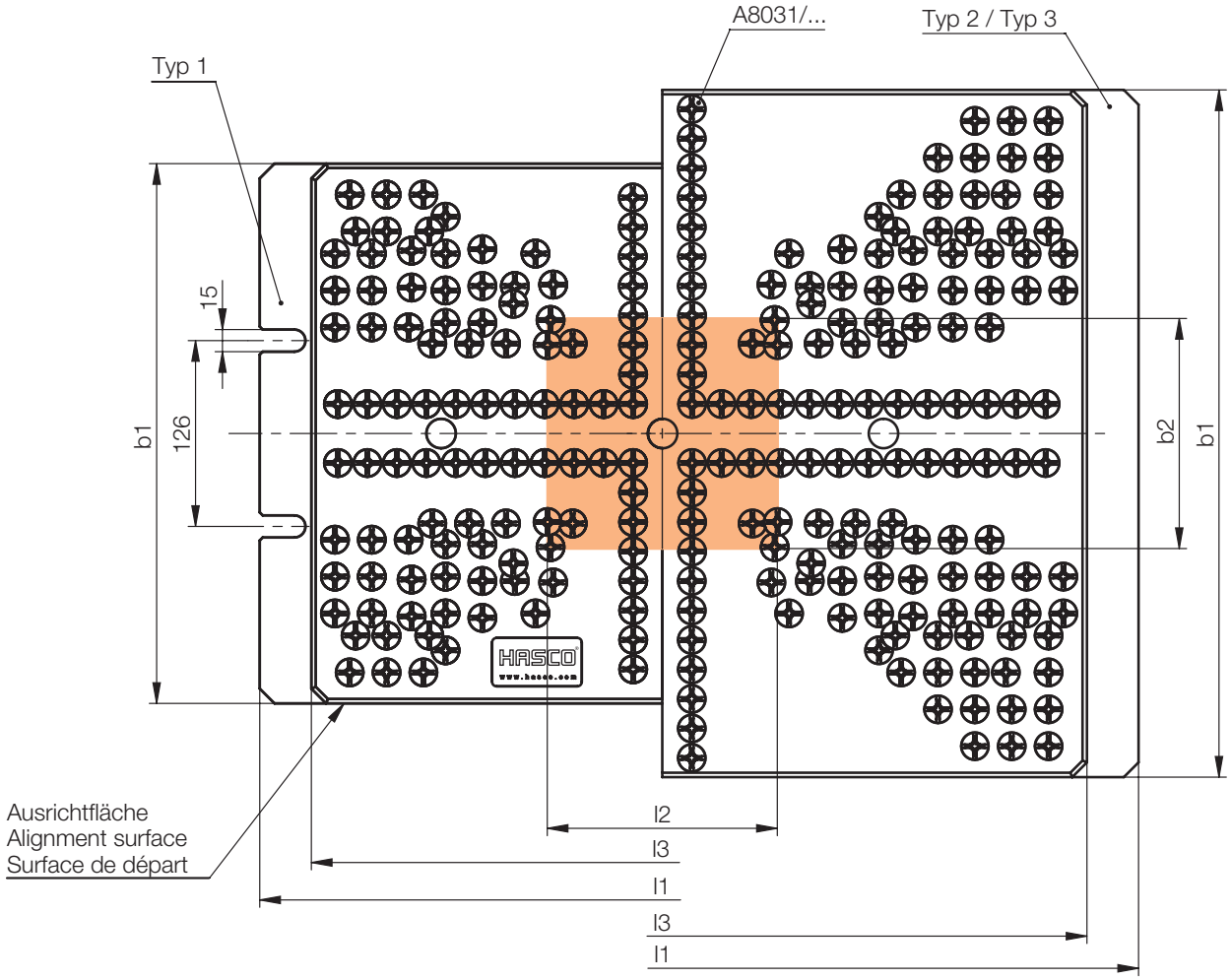
A8001/...

Grundplatte
Base plate
Plaque de base

Mat.: 1.2099 HASCO.M / 1060 N/mm²



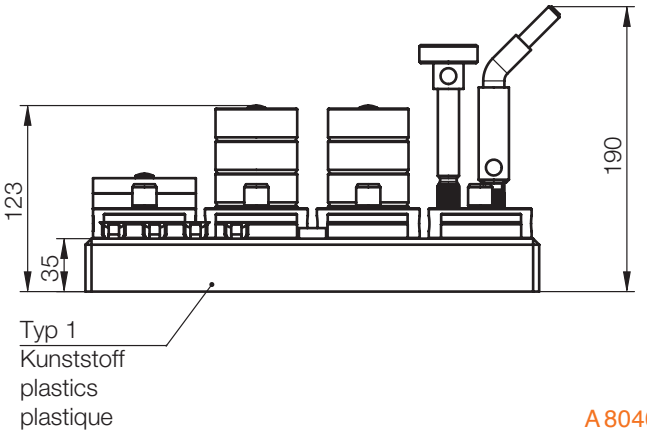


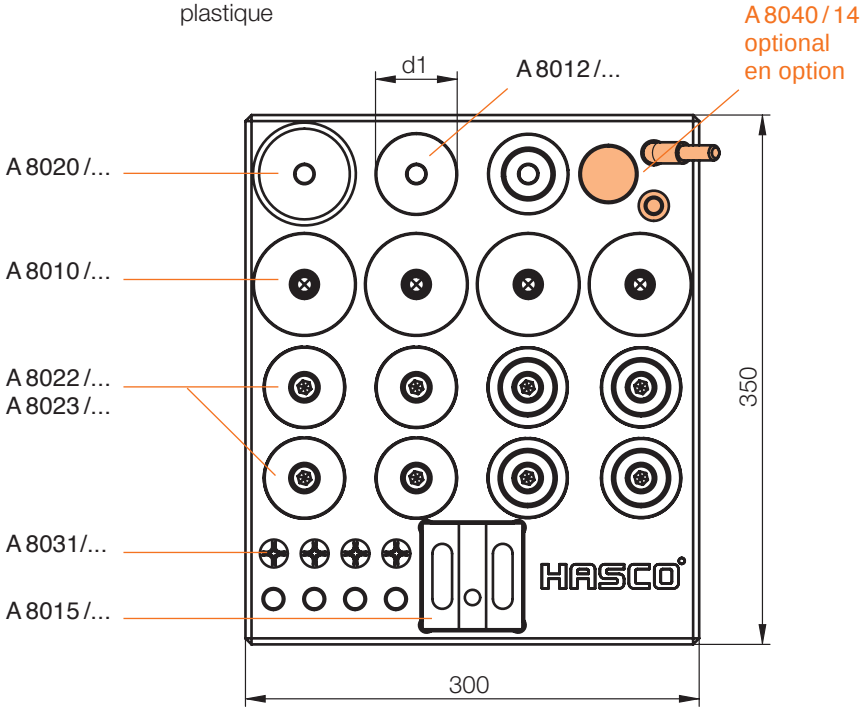


h1	s1	min. b2	max. b2	b1	l3	min. l2	max. l2	l1	Typ	Nr. / No.
17	36	156	396	366	476	156	496	546	**1**	A 8001 / 1
			496	466	576		596	646	**2**	2
23	46		596	556	776		796	846	**3**	3

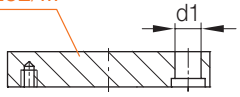
A8005/1...

Steckmodul, bestückt
Plug-in module, fitted
Module plug-in, monté





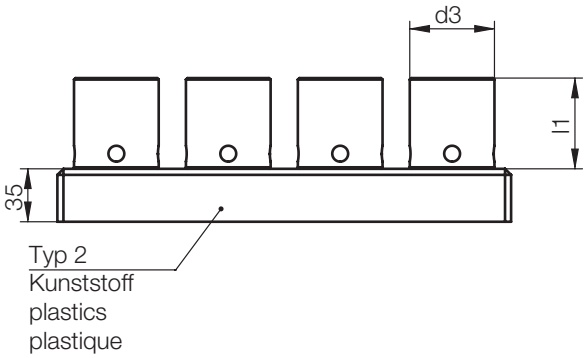
z.B. / e.g. / p. ex.
K 20/...
K 252/...

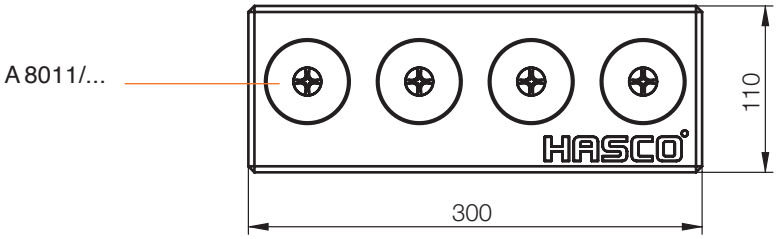


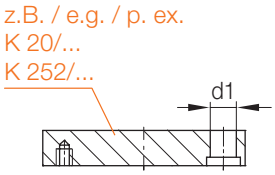
Ø d1	**Typ 1** Modul module module	**Typ 2** Bestückung assembly équipement	**Nr. / No.**
20	**1**	**1**	A 8005/1 x 1
26		**2**	2
30		**3**	3
42		**4**	4
54		**5**	5

A8005/2...

Steckmodul, bestückt
Plug-in module, fitted
Module plug-in, monté



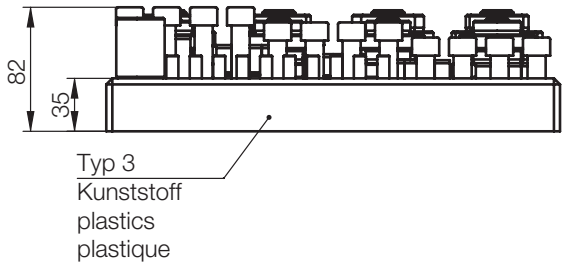


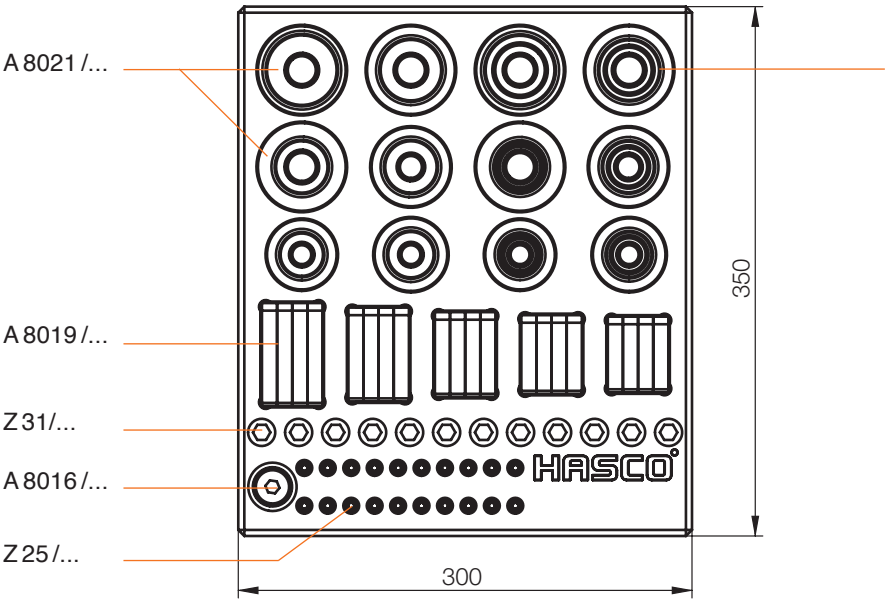


Ø d1	d3	l1	**Typ 1** Modul module module	**Typ 2** Bestückung assembly équipement	**Nr. / No.**
20	56	60	**2**	**1**	A 8005 / 2 x 1
26					
30					
42					
20	56	90		**2**	A 8005 / 2 x 2
26					
30					
42					
54	68	60		**3**	A 8005 / 2 x 3
		90		**4**	A 8005 / 2 x 4

A8005/3...

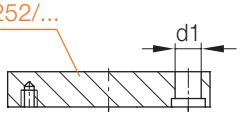
Steckmodul, bestückt
Plug-in module, fitted
Module plug-in, monté





mit Untermaßmarkierung
with undersize marking
avec marquage de sous-dimension

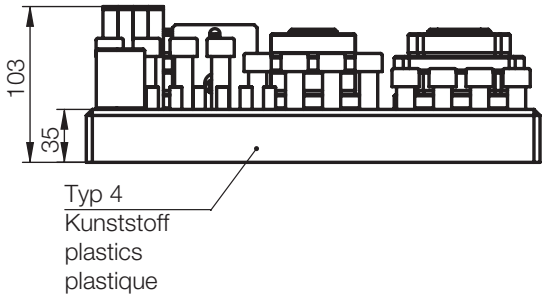
z.B. / e.g. / p. ex.
K 20/...
K 252/...

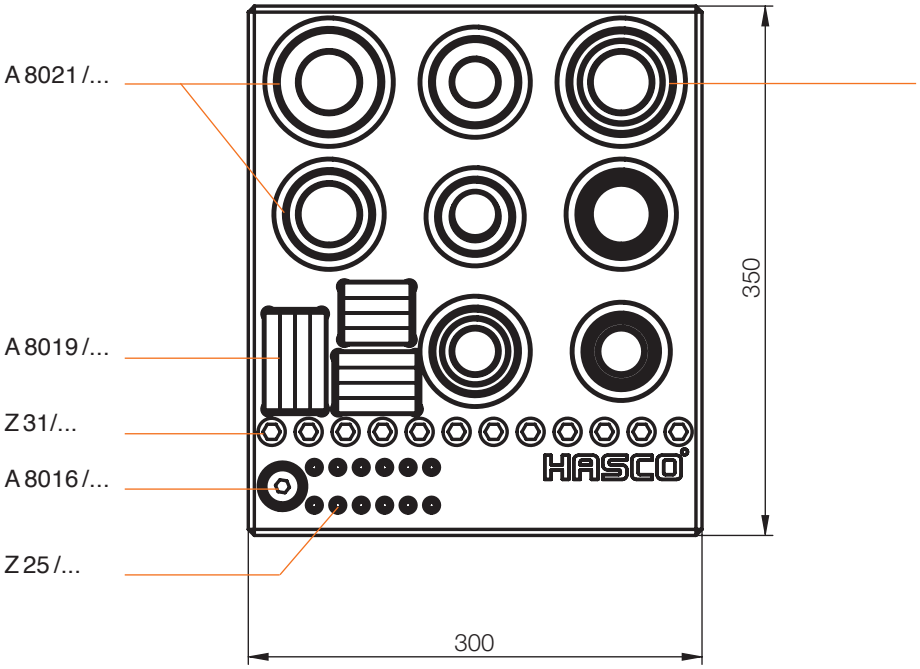


Ø d1	**Typ 1** Modul module module	**Typ 2** Bestückung assembly équipement	**Nr. / No.**
20	**3**	**1**	A 8005 / 3 x 1
26			
30			

A8005/4...

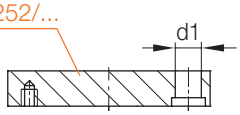
Steckmodul, bestückt
Plug-in module, fitted
Module plug-in, monté





mit Untermaßmarkierung
with undersize marking
avec marquage de sous-dimension

z.B. / e.g. / p. ex.
K 20/...
K 252/...

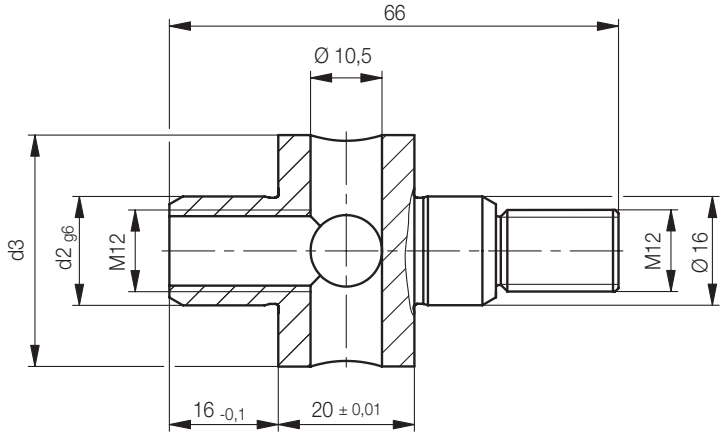


Ø d1	**Typ 1** Modul module module	**Typ 2** Bestückung assembly équipement	**Nr. / No.**
42	**4**	**1**	A 8005 / 4 x 1
54			

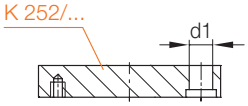
A8010/...

Zentrieraufnahme
Locating element
Centreur

Mat.: 1.7131 / 58 ± 2 HRC



z.B. / e.g. / p. ex.
K 20/...
K 252/...

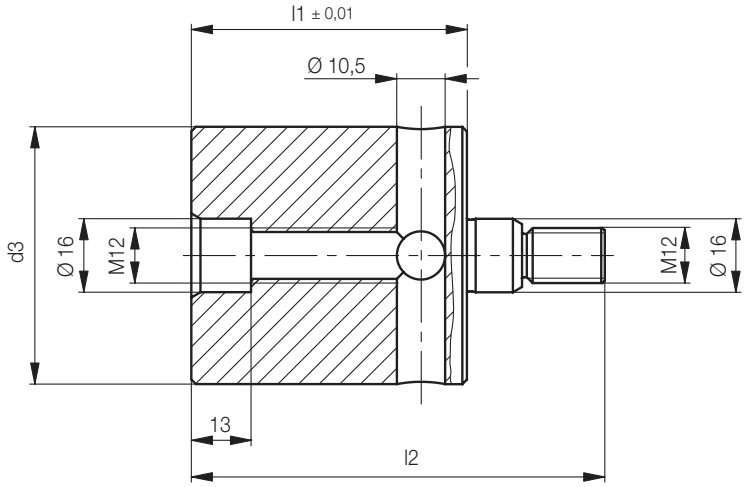


d2	K 252 ø d1	K 20 Ø d1	d3	Nr. / No.
16	19,6	**20**	**34**	A 8010 / 20 x 34
18	25,5	**26**	**40**	26 x 40
22	29,4	**30**	**44**	30 x 44
32	41,3	**42**	**56**	42 x 56
42	53,2	**54**	**68**	54 x 68

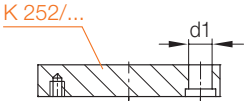
A8011/...

Distanzsäule
Distance column
Entretoise

Mat.: 1.7131 / 58 ± 2 HRC



z.B. / e.g. / p. ex.
K 20/...
K 252/...



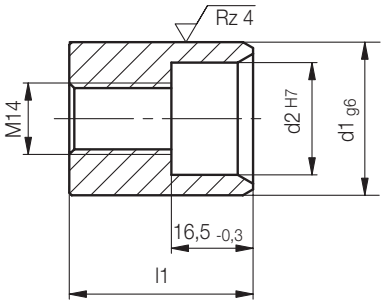
l2	K 252 ø d1	K 20 Ø d1	d3	l1	Nr. / No.
90	19,6	20	**56**	**60**	A 8011 / 56 x 60
	25,5	26			
	29,4	30			
	41,3	42			
120	19,6	20	**56**	**90**	A 8011 / 56 x 90

l2	K 252 ø d1	K 20 Ø d1	d3	l1	Nr. / No.
120	25,5	26	**56**	**90**	A 8011 / 56 x 90
	29,4	30			
	41,3	42			
90	53,2	54	**68**	**60**	A 8011 / 68 x 60
120				**90**	A 8011 / 68 x 90

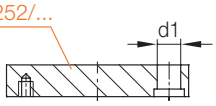
A8012/...

Zentrierhülse
Centring sleeve
Douille de centrage

Mat.: 1.7131 / 58 ± 2 HRC



z.B. / e.g. / p. ex.
K 20/...
K 252/...



mit Untermaßmarkierung / with undersize marking
avec marquage de sous-dimension

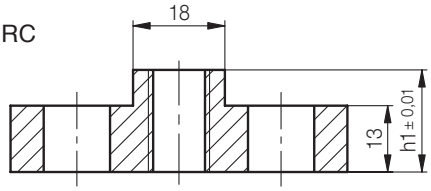
Typ	d2	d1	l1	Nr. / No.
1	16	**19,6**	**21,5**	A 8012 / 19,6 x 21,5
		20		20
	18	**25,5**		25,5
		26		26
	22	**29,4**		29,4

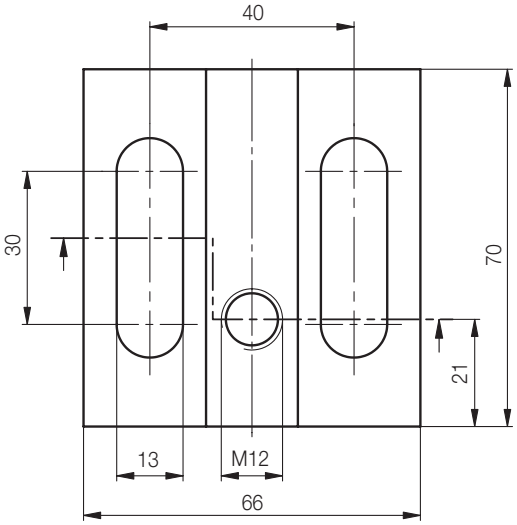
Typ	d2	d1	l1	Nr. / No.
1	22	**30**	**21,5**	A 8012 / 30 x 21,5
	32	**41,3**		41,3
		42		42
	42	**53,2**		53,2
		54		54

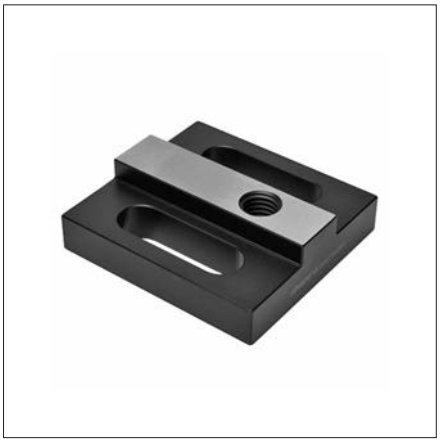
A8015/...

Stützkörper
Support element
Elément de support

Mat.: 1.2162 / 58 ± 2 HRC





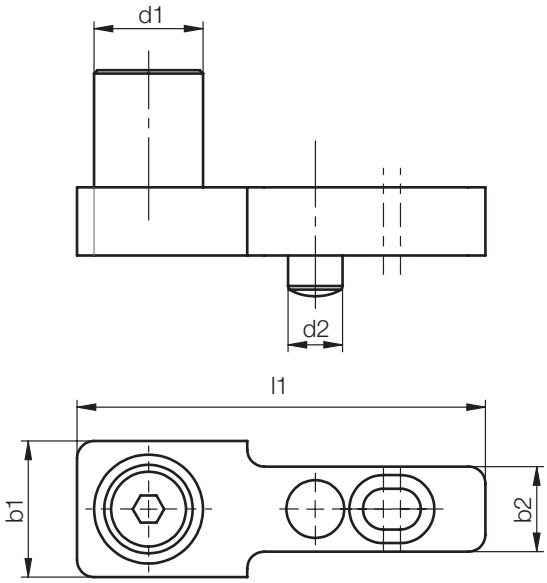


h1	Nr. / No.
20	A 8015 / 20
30	30

A8018/...

Anschlagelement
Stop device
Butée

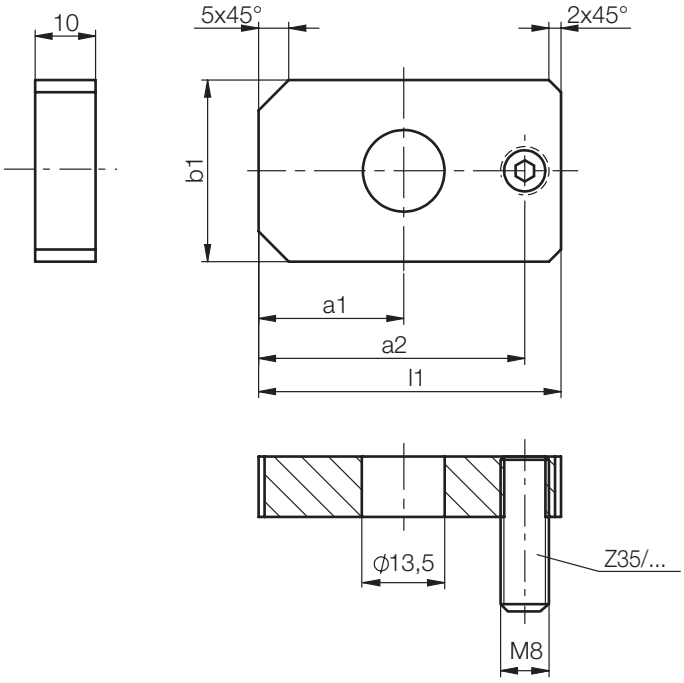
Mat.: 1.7131 / 58 ± 2 HRC



b2	b1	l1	d2	**d1**	**Nr. / No.**
25	40	120	16	**32**	A 8018 / 32

A8019/...

Spanneisen
Clamp
Bride de fixation

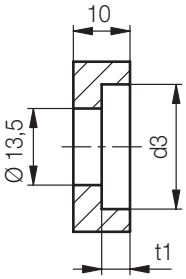


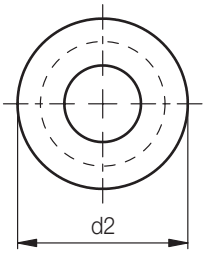
l1	a1	a2	**b1**	**Nr. / No.**
50	24	44	**30**	A 8019 / 30
52	25	46	**32**	32
56	27	50	**36**	36
62	30	56	**42**	42
68	33	62	**48**	48
76	37	70	**56**	56
88	43	82	**68**	68

A8020/...

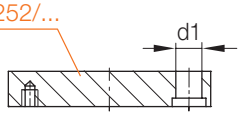
Spannscheibe
Locking washer
Rondelle de serrage

Mat.: 1.2312 / 1080 N/mm²





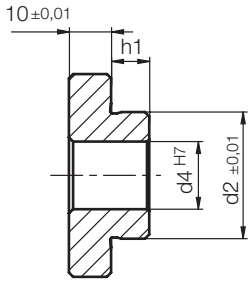
z.B. / e.g. / p. ex.
K 20/...
K 252/...

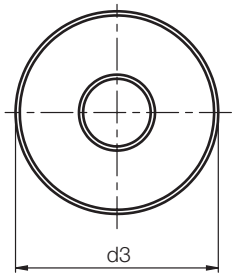


t1	d3	K 252 ø d1	K 20 Ø d1	d2	Nr. / No.
5	22	19,6	**20**	**30**	A 8020 / 20 x 30
	30	25,5	**26**	**38**	26 x 38
1	36	29,4	**30**	**44**	30 x 44
	48	41,3	**42**	**56**	42 x 56
	60	53,2	**54**	**68**	54 x 68

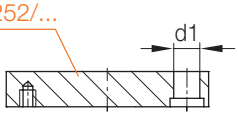
A8021/...

Auflageteller
Support plate
Entretoise support





z.B. / e.g. / p. ex.
K 20/...
K 252/...



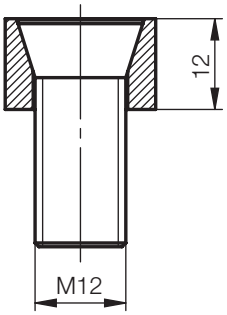
mit Untermaßmarkierung / with undersize marking
avec marquage de sous-dimension

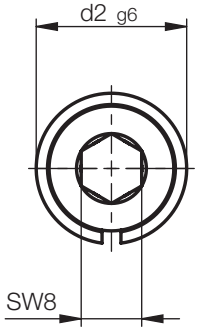
h1	d4	d3	Ø d1	d2	Nr. / No.
9	16	48	**20**	**29,5**	A 8021 / 20 x 29,5
				30	30
		50		**31,5**	31,5
				32	32
11	18	54	**26**	**35,5**	A 8021 / 26 x 35,5
				36	36
	22	60	**30**	**35,5**	A 8021 / 30 x 35,5
				36	36
				41,5	41,5
				42	42

h1	d4	d3	Ø d1	d2	Nr. / No.
11	22	60	**30**	**47,5**	A 8021 / 30 x 47,5
				48	48
15	32	66	**42**	**47,5**	A 8021 / 42 x 47,5
				48	48
		74		**55,5**	55,5
				56	56
	42		**54**	**55,5**	A 8021 / 54 x 55,5
				56	56
		86		**67,5**	67,5
				68	68

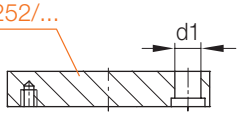
A8022/...

Spreizelement, 2-teilig
Expansion element, 2 components
Elément de serrage, 2 pièce





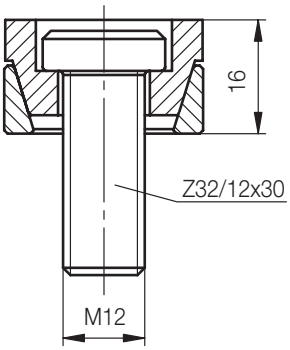
z.B. / e.g. / p. ex.
K 20/...
K 252/...

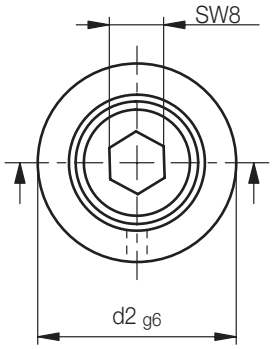


d2	Ø d1	Nr. / No.
19,5	**19,6**	A 8022 / 19,6
19,9	**20**	20
25,4	**25,5**	25,5
25,9	**26**	26

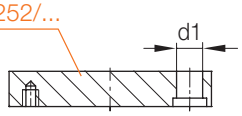
A8023/...

Spreizelement, 3-teilig
Expansion element, 3 components
Elément de serrage, 3 pièce





z.B. / e.g. / p. ex.
K 20/...
K 252/...



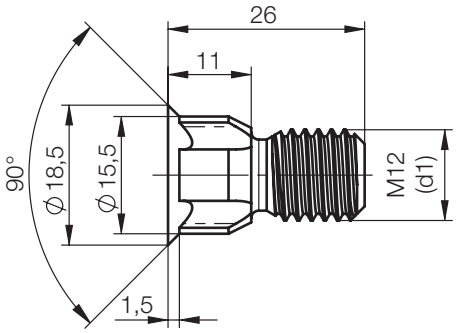
d2	Ø d1	Nr. / No.
29,3	**29,4**	A 8023 / 29,4
29,9	**30**	30
41,2	**41,3**	41,3
41,9	**42**	42
53,1	**53,2**	53,2
53,9	**54**	54

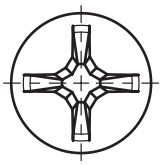
mit Untermaßmarkierung / with undersize marking
avec marquage de sous-dimension

A8031/...

Verschlussstopfen
Sealing plug
Bouchon de fermeture

Mat.: Kunststoff / Plastic / Plastique



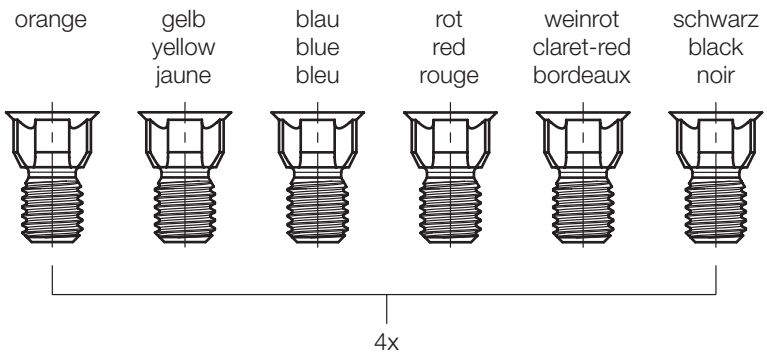


style	d1	Typ	Nr. / No.
orange	12	**1**	A 8031 / 1
gelb / yellow / jaune		**2**	2
rot / red / rouge		**3**	3
blau / blue / bleu		**4**	4
braun / brown / brun		**5**	5
schwarz / black / noir		**6**	6

A8051/...

Verschlussstopfen Kit
Sealing plug-kit
Kit de bouchon de fermeture

Mat.: Kunststoff / Plastic / Plastique

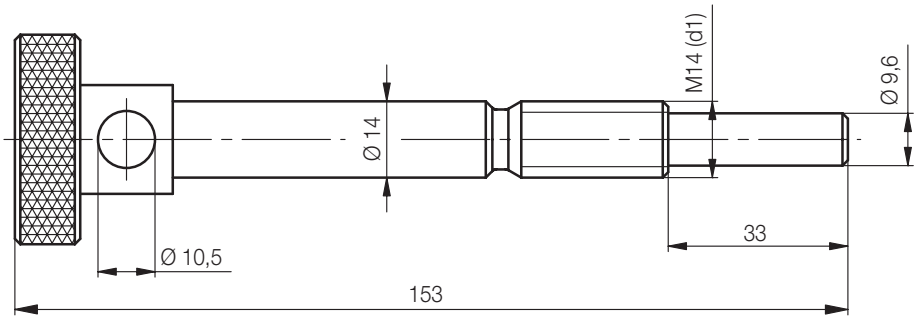


style	Stck. / Pc.	Typ	Nr. / No.
orange	4 pro Farbe per colour par couleur	**1**	A 8051 / 1
gelb / yellow / jaune			
rot / red / rouge			
blau / blue / bleu			
braun / brown / brun			
schwarz / black / noir			

A8035/...

Ausziehstange
Pulling bar
Extrateur

Mat.: 1.2312 / 1080 N/mm2

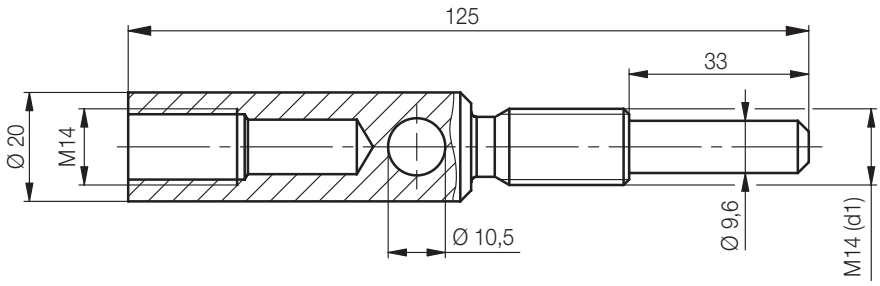


d1	Nr. / No.
M 14	A 8035 / 14

A8036/...

Ausziehverlängerung
Extension
Rallonge

Mat.: 1.2312 / 1080 N/mm2

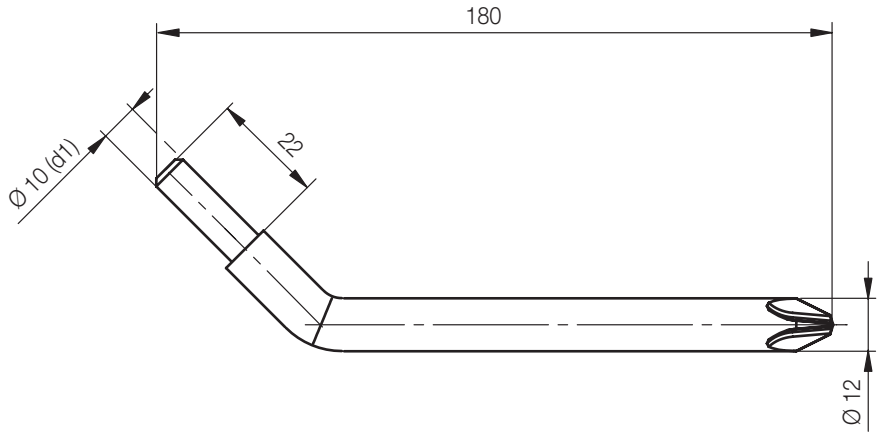


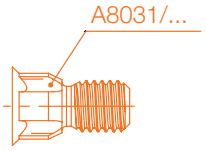
d1	Nr. / No.
M 14	A 8036 / 14

A8037/...

Montagehilfe
Assembly tool
Outil de montage

Mat.: 1.0037

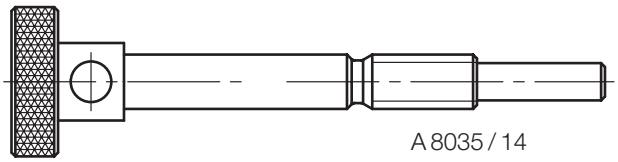




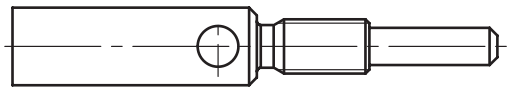
d1	Nr. / No.
10	A 8037 / 10

A8040/...

Montage-Schlüsselsatz
Assembly-kit
Outil de montage



A 8035 / 14



A 8036 / 14

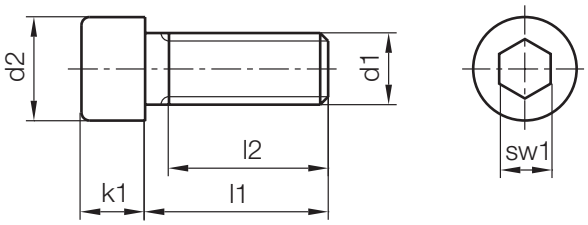
A 8037 / 14

d1	Nr. / No.
14	A 8040 / 14

Z31/...

Zylinderschraube
Hexagon socket head cap screw
Vis à tête cylindrique à 6 pans creux

Mat.: 12.9 / 1000 N/mm2
DIN EN ISO 4762 (DIN 912)



sw1	d2	k1	l2	d1	l1	Nr. / No.
10	18	12	6,8	**M 12**	**12**	Z31/12x 12
			8,8		**14**	14
			10,8		**16**	16
			12,8		**18**	18
			14,8		**20**	20
			16,8		**22**	22
			19,8		**25**	25
			24,8		**30**	30
			29,8		**35**	35
			34,8		**40**	40
			39,8		**45**	45
			44,8		**50**	50
			36		**55**	55
					60	60
					65	65
					70	70
					75	75
					80	80
					90	90
					100	100
					110	110

sw1	d2	k1	l2	d1	l1	Nr. / No.
10	18	12	36	**M 12**	**120**	Z31/12x120
					130	130
					135	135
					140	140
					145	145
					150	150
					160	160
					165	165
					170	170
					180	180
					190	190
					200	200
					220	220
					240	240
					260	260
					270	270
					280	280
					300	300
					320	320
					340	340

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- Pour les solutions multi-bridage avec un design personnalisé de la plaque de base A 8001/...
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	Nr. / No.	Mat.-Nr. / No.	Stck. / Pc.
Grundplatten **Base plates** **Plaques de base**	A 8001 / **1**	2049828	
	A 8001 / **2**	2049829	
	A 8001 / **3**	2049830	
	Nr. / No.	**Mat.-Nr. / No.**	**Stck. / Pc.**
Steckmodule Plug-in modules Modules plug-in **für Systemdurchmesser** **for system diameter** **pour diamètre de colonnage** **Ø 20 - 54**	A 8005 / 1 x **1** (Ø 20)	2049831	
	A 8005 / 1 x **2** (Ø 26)	2049832	
	A 8005 / 1 x **3** (Ø 30)	2049833	
	A 8005 / 1 x **4** (Ø 42)	2049834	
	A 8005 / 1 x **5** (Ø 54)	2049835	
	Nr. / No.	**Mat.-Nr. / No.**	**Stck. / Pc.**
Steckmodule Plug-in modules Modules plug-in **für / for / pour A 8011** (Distanzsäule / Distance column / Entretoise)	A 8005 / 2 x **1**	2049836	
	A 8005 / 2 x **2**	2049837	
	A 8005 / 2 x **3**	2049838	
	A 8005 / 2 x **4**	2049839	
	Nr. / No.	**Mat.-Nr. / No.**	**Stck. / Pc.**
Steckmodule Plug-in modules Modules plug-in **für / for / pour K 60 / K 70**	A 8005 / **3** x 1	2049840	
	A 8005 / **4** x 1	2049841	
	Nr. / No.	**Mat.-Nr. / No.**	**Stck. / Pc.**
Montage-Schlüsselsatz Assembly-kit Outil de montage	A 8040 / 14	2050290	
	Nr. / No.	**Mat.-Nr. / No.**	**Stck. / Pc.**
Verschlussstopfen Kit Sealing plug-kit Kit de bouchon de fermeture	A 8051 / 1	2050291	
	Nr. / No.	**Mat.-Nr. / No.**	**Stck. / Pc.**
Stützkörper Support element Elément de support	A 8015 / 30	2008562	

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