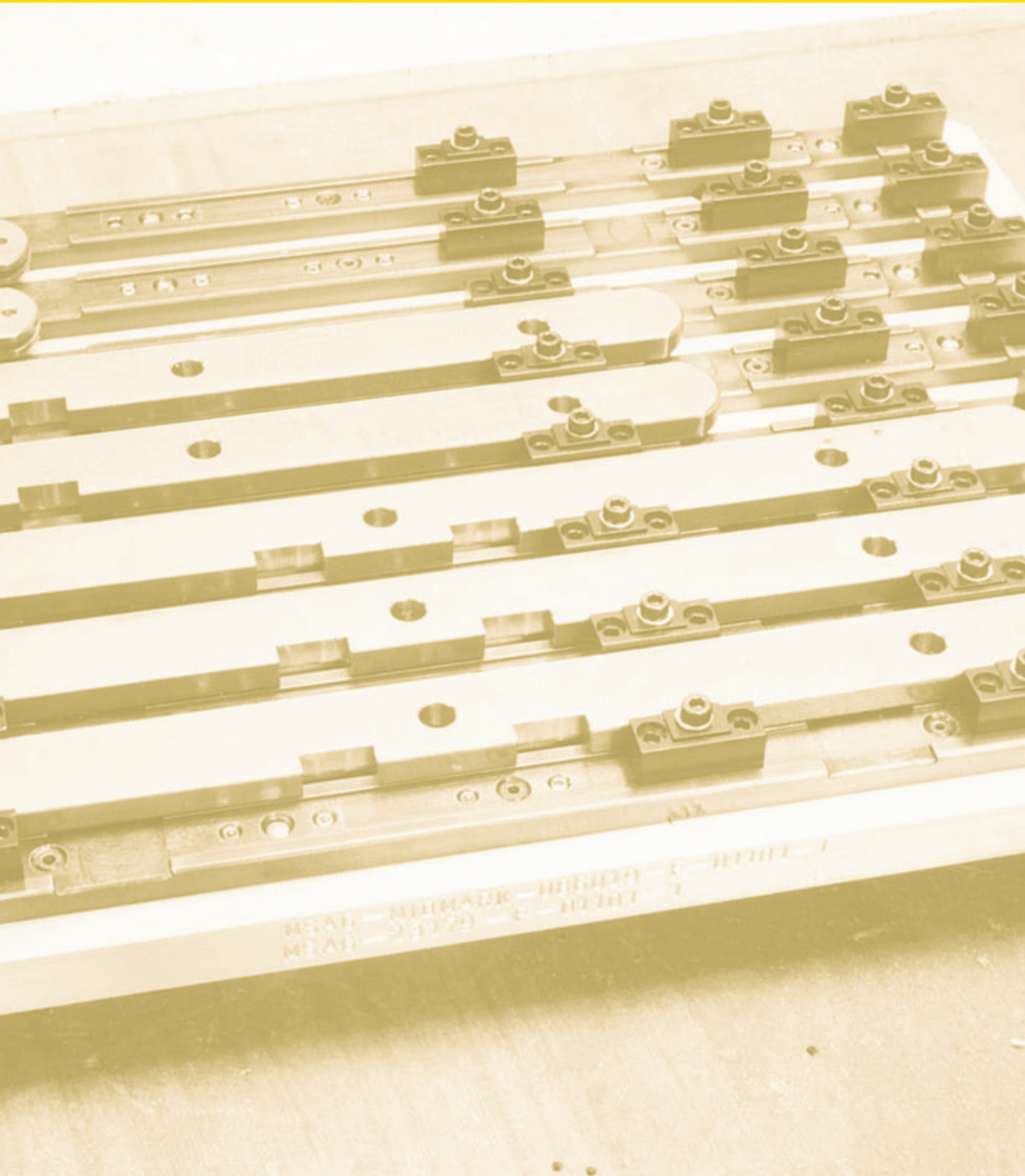
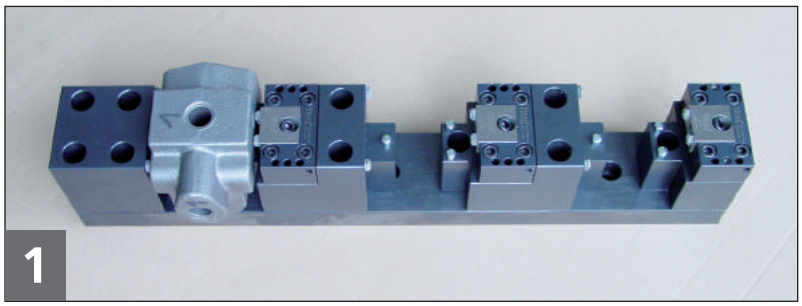
THIEME

microCLAMP

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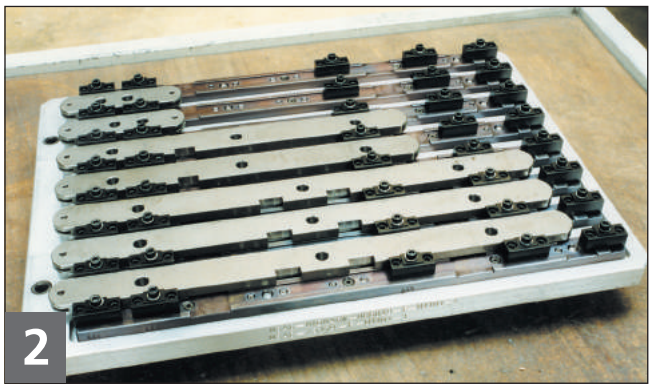
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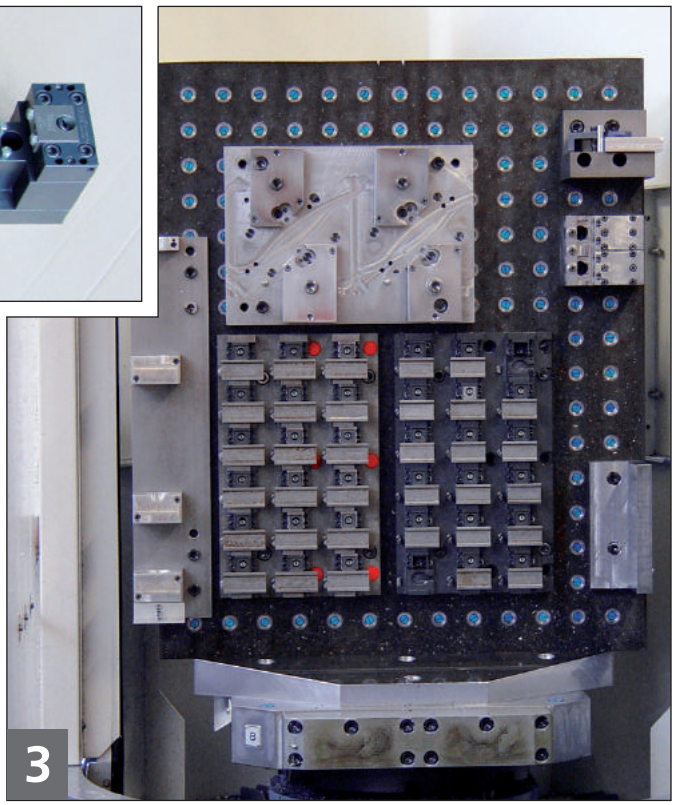
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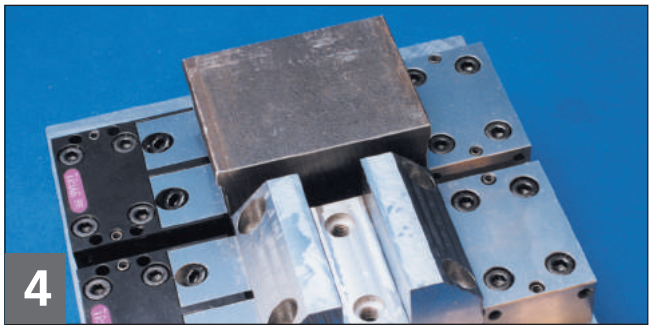
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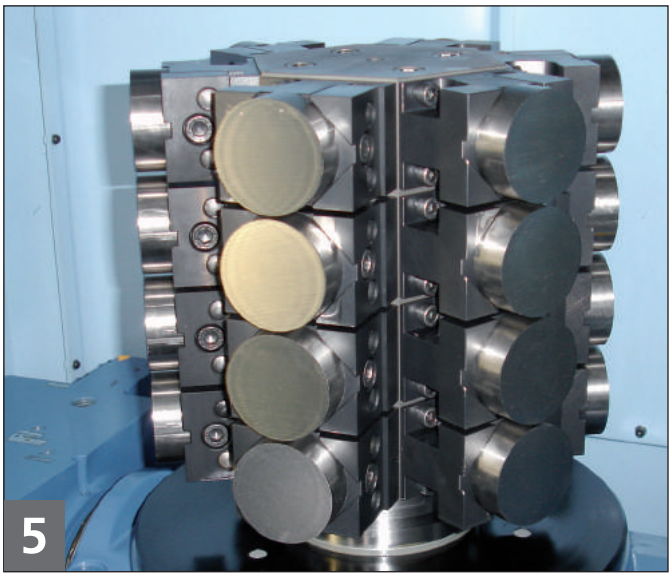
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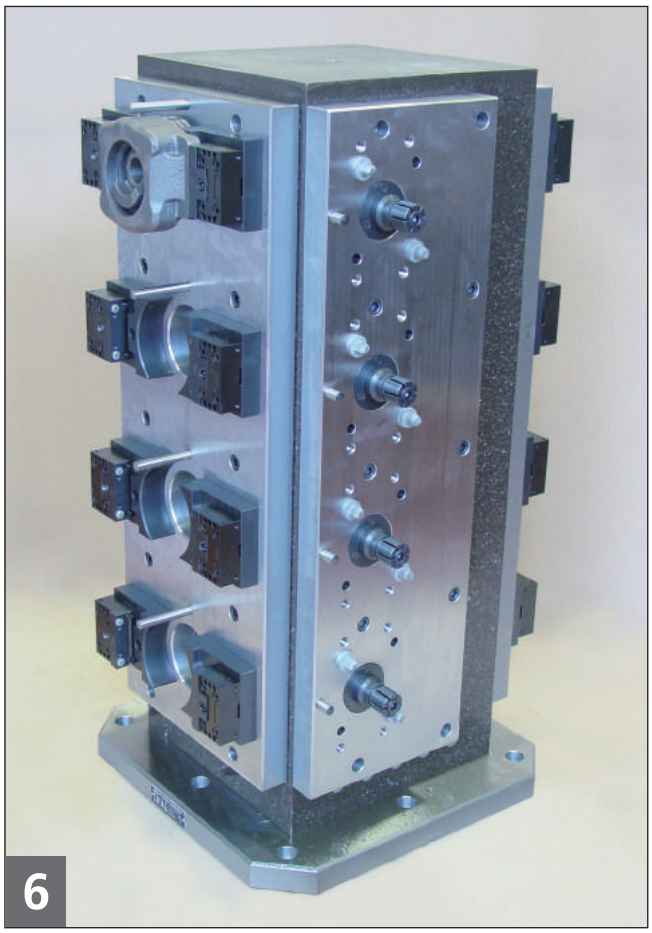
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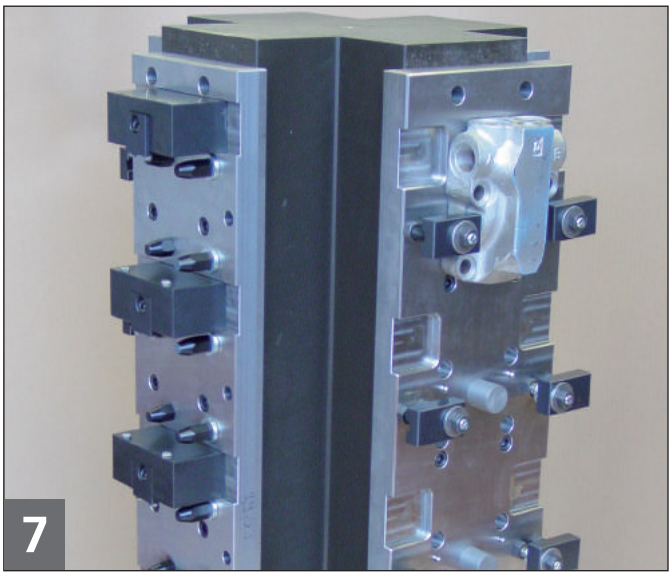
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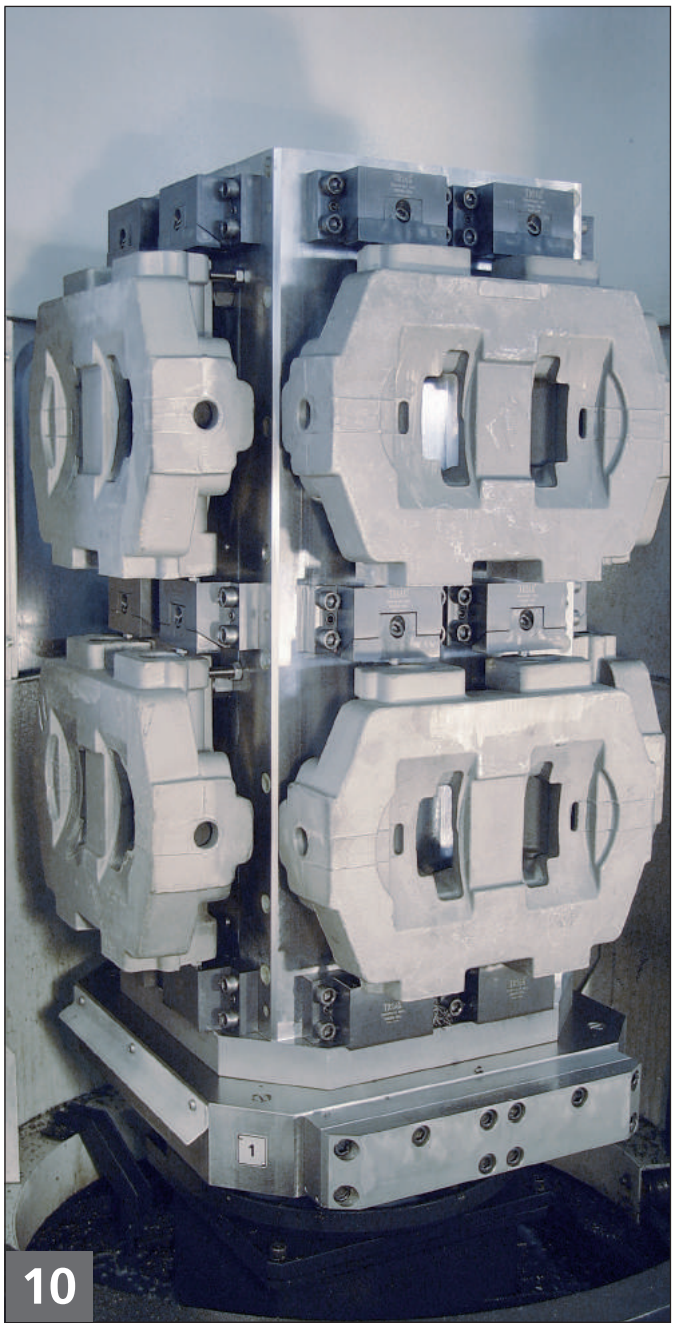
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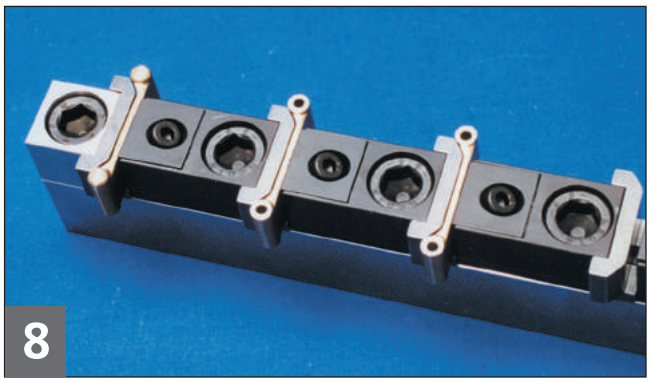
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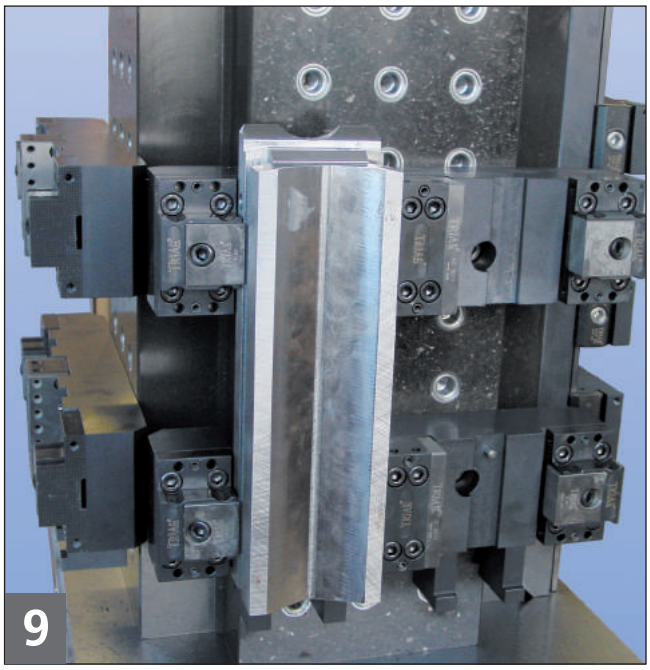
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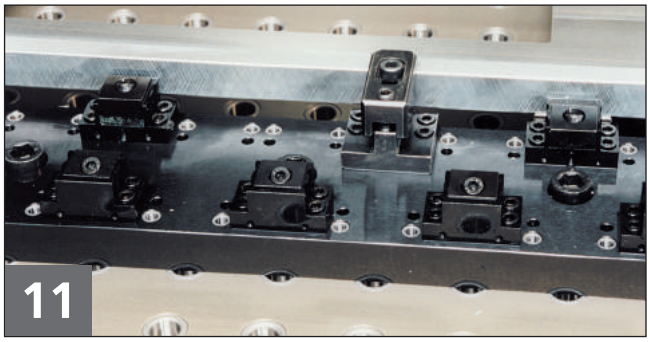
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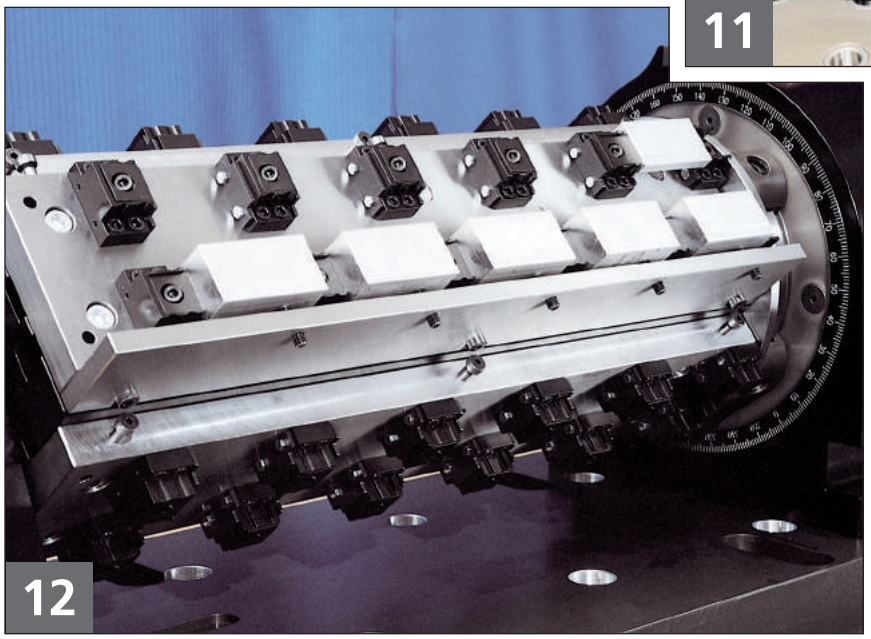
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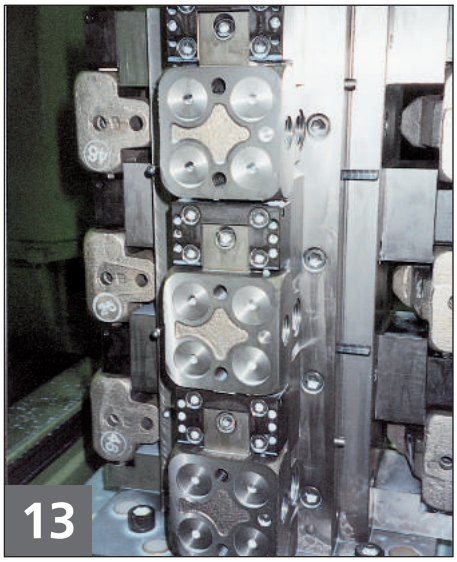
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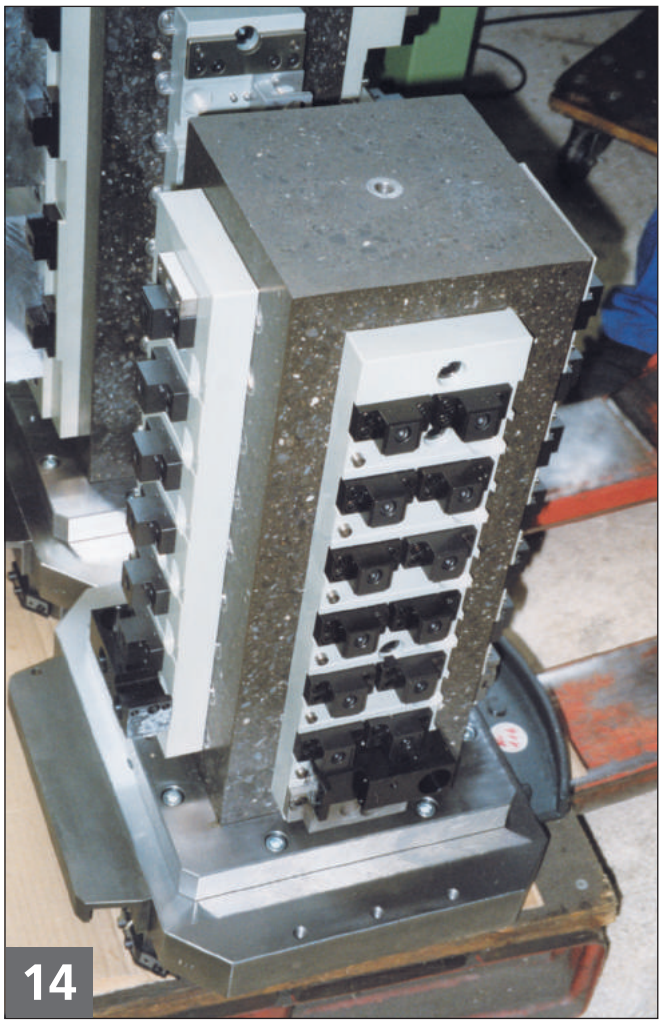
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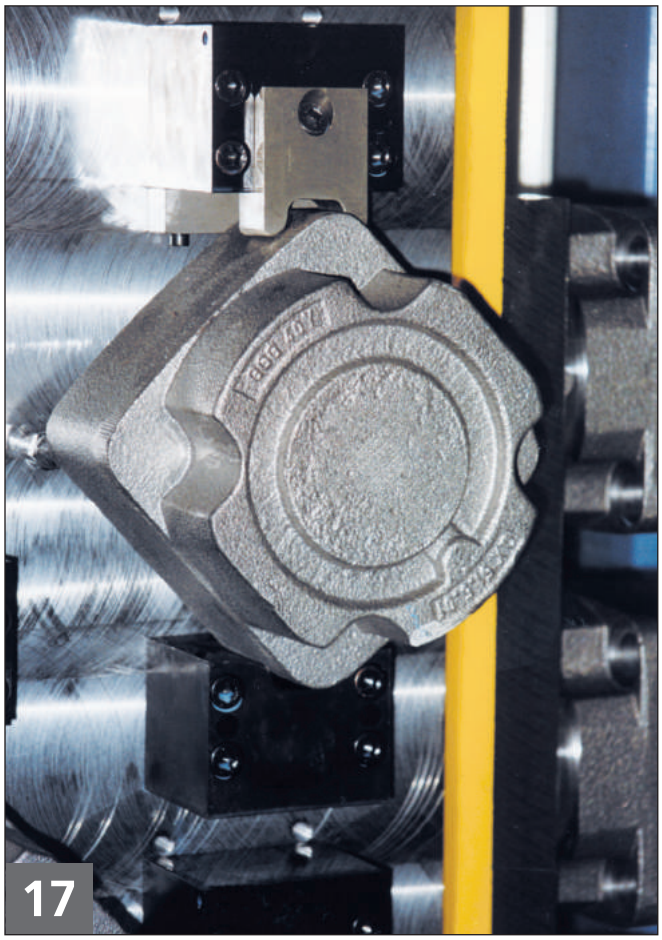
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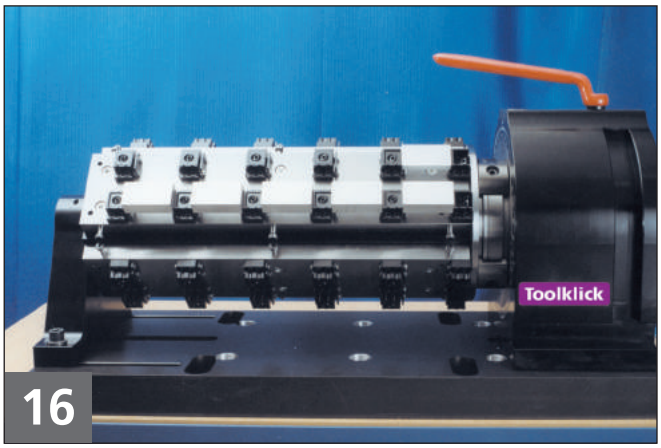
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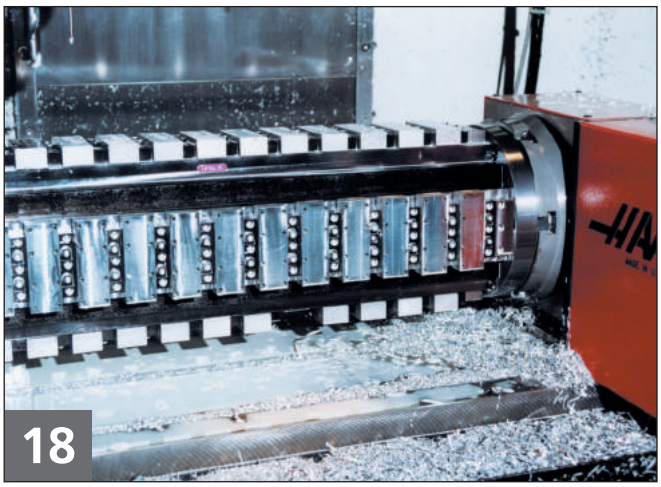
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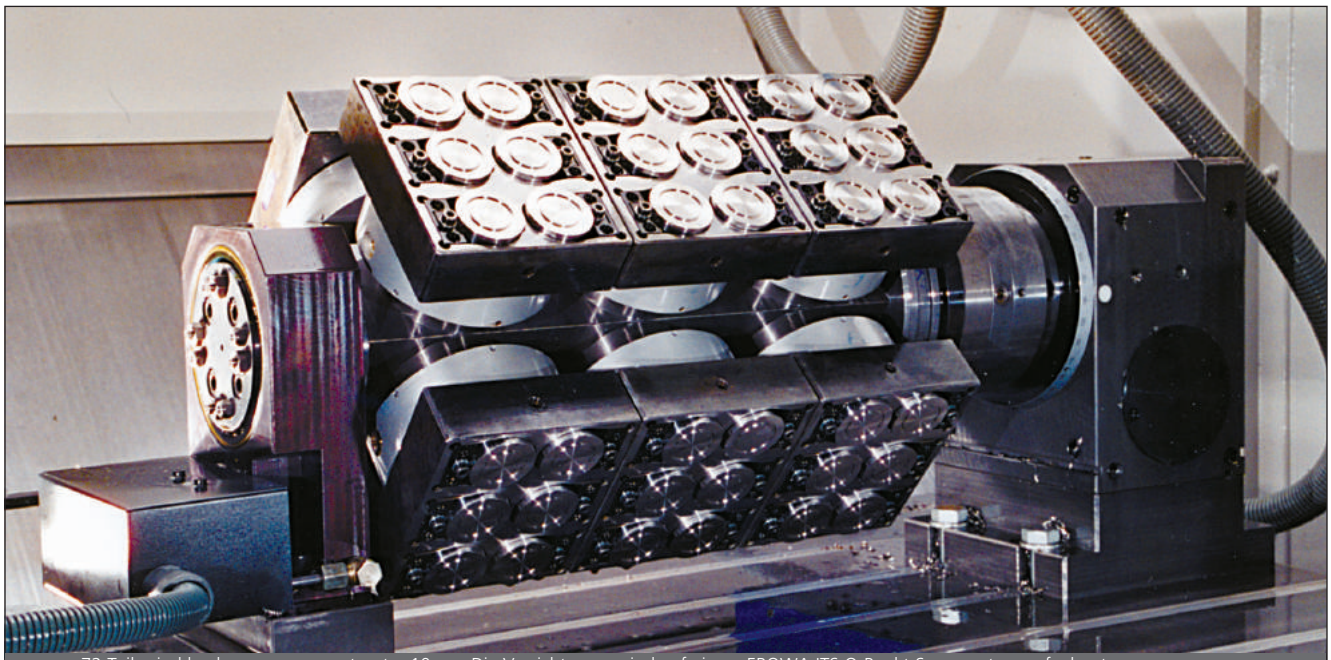


19 72 Teile sind hochgenau gespannt unter 10 my. Die Vorrichtungen sind auf einem EROWA ITS O-Punkt Spannsystem aufgebaut
72 parts are clamped within 10 microns the clamp fixtures are set up on a EROWA ITS palleting system
72 pièces sont serrées avec grande précision (en dessous de 10 microns). Le dispositif de serrage est monté sur un système de palettisation EROWA.

20 84 Teile sind gespannt mit Micro Clamp und werden jeweils nachts unbemannt produziert
84 parts are clamped with Micro Clamp and are machined always at right unmanned
84 pièces sont serrées avec les modules Micro – Clamp, idéal pour le travail de nuit sans surveillance.

Kleinst-Spannmodule für den Vorrichtungsbau.

Hohe Spanndichte

Die Spannmodule haben auf der Vorderseite eine Spannbacke, die Rückseite ist zu den Befestigungsbohrungen massgenau geschliffen. Damit kann diese Anschlagfläche für das folgende Werkstück genutzt werden. Diese Anordnung lässt eine sehr hohe Spanndichte zu. Beim kleinsten Micro Clamp-Modul sind nur 15 mm Spannabstand erforderlich.

- Maximale Spannkraft der Module 2,8 t (28'000N)
- Benötigter Platz zwischen den Werkstücken ab 15 mm
- Spannhub ab 1,5 mm
- Genaue Positionierung durch Passschrauben und Positionierstifte

Extremely small clamping modules for dedicated fixtures.

High workholding density

These clamping modules have a clamping jaw on the front, while rear is precisely ground with reference to the fixing holes. This means that it can be used as a datum face for the following workpiece. This arrangement allows very high clamping densities. Only 15 mm clamping clearance is needed between workpieces using the smallest Micro Clamp module.

- *Clamping force up to 2,8 t (28'000N)*
- *Space between workpieces only 15 mm*
- *Stroke of jaw from 1,5 mm*
- *Precise positioning by ground shoulder screws or dowel pins*

Modules de serrage miniatures pour la construction de gabarits.

Haute densité de serrage

Ces modules de serrage sont munis d'un mors du serrage sur la face avant, la face arrière fonctionne comme surface d'appui pour la pièce suivante. Il est rectifié sur une face exactement par rapport à l'alésage. Donc il est possible de faire des gabarits avec une très haute densité de serrage. Les Micro Clamp les plus petits permettent une distance d'une pièce à l'autre de 15 mm seulement.

- Force de serrage jusqu'à 2,8 t (28'000N)
- Distance entre les pièces à usiner à partir de 15 mm
- Course du mors à partir de 1,5 mm
- Positionnement exacte par vis d'ajustage ou des chevilles

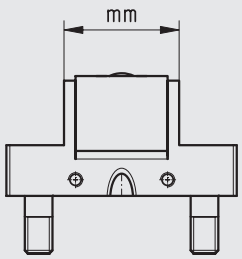
Bestellschlüssel
Order code
Code pour commande

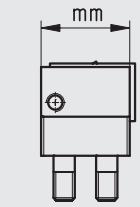
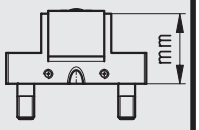
microCLAMP

System *System* Système	
A	Apto Clamp
P	Power Clamp
C	Compact Clamp
M	Micro Clamp
V	Vorrichtungsbaumodule *Workholding modules for dedicated fixtures* Module de serrage pour gabarits individuels

bei Anschlagmodulen *for end module* pour module d'appui	
N	nitriergehärtet *nitrated* nitruré
D	durchgehärtet *through hardened* trempé

bei Spannmodulen *for vice modules* pour module de serrage	
1 2 4	Anzahl Spannbacken *Number of jaws* Nombre de mors
-	keine Spannbacke *no clamping jaw* sans mors de serrage

Modulnutzbreite *Module clamping width* Largeur utile du module	
19 25 26 34 43 48 58 61 68 78 94 125	

Modulnutztiefe / -höhe *Module clamping depth or height* Profondeur ou hauteur utile du module	
MS: Tiefe *Depth* Profondeur	
VS: Höhe *Height* Hauteur	

M S 1 F 35 N 14 B01

Modultyp *Type of module* Type de module	
A	Anschlagmodul *End module* Module d'appui
S	Spannmodul *Clamping module* Module de serrage
T	Trägermodul *Supporting module* Module support
R	Rohling / Rundes Modul *Blank / Round module* Èbauche / Module ronde
V	Vertikalspannmodul *Vertical clamp* Module de serrage vertical

Anschlagfläche der Module *Datum face* Surface d'appui	
F	Anschlagfläche glatt *Datum face flat* Face d'appui lisse
R	Anschlagfläche geriffelt *Datum face double serrated* Face d'appui striée en croix
D	eine Seite glatt, eine Seite geriffelt *one face flat, one face double serrated* une face lisse, une face striée en croix
G	Anschlagfläche gerillt *Datum face serrated* Face d'appui strié
X	spezielle Ausführung *special execution* exécution spéciale
5X	5axes Clamp
P PV P6	prägen *stamping* imprimer

Backenhub *Stroke of clamping jaw* Course du mors de serrage	
N	Niederzug *Pull down* Abaissant
L	linear / parallel *linear / parallel* linèaire / parallèle
-	ohne Spannbacke *no clamping jaw* sans mors de serrage

Spannbackentyp *type of clamping jaw* type du mors de serrage	
B01 - B99	Spannbacke *Clamping jaw* Mors de serrage
-01 - -105	Modul ohne Zubehör *Module without accessories* Module sans accéssoires
W F	weich / *soft* / doux glatt / *flat* / lisse
PRG PRGV PRG6	Prägebacke *Stamping jaw* Mors d'impression

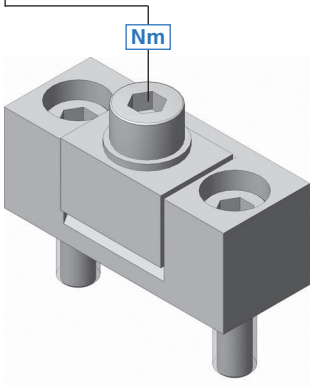
ACHTUNG / CAUTION / ATTENTION

WICHTIG: Die im Micro Clamp Kapitel angegebenen Drehmomente sind die absoluten Maximalwerte. Über die Spannkräfte gibt die untenstehende Tabelle Auskunft.

IMPORTANT: *The torque numbers specified in the Micro Clamp chapter represent the absolute maximum. The table at the bottom of this page provides further information on the workholding forces.*

IMPORTANT: Les valeurs des couples de torsion mentionnées dans le chapitre Micro Clamp sont les valeurs maximales absolues. Pour les forces de serrage vous pouvez vous référer à la tabelle ci-dessous.

MC-Module			Schraube *Screw* Vis	Drehmoment max. *Torque max.* Couple de torsion max.		Spannkraft max. *Workholding force max.* Force de serrage max.		
				Nm	(lb-ft)	daN	(lb)	t
MS2P (MS2P)	58L14	PRG15	M8 (linear / linèaire)	15	11	600	300	0,6
MAND	58-14	PRG	M8	8	5,9	730	1600	0,73
MS2F (MS1F)	58L14	W251	M8 (linear / linèaire)	15	11	600	33	0,6
MANF	58-14	W25 (N25)	M8	8	5,9	730	1600	0,73
MV1F	20L35	BV1	M6 (linear / linèaire)	15	11	920	2070	0,92
MR1F	30N23	-07	M5	10	7,4	1020	2240	1,02
MS1F	22N40	-07		10	7,4	1020	2240	1,02
MS1F	24N22	-07		10	7,4	1020	2240	1,02
MS1R/F	25N25	-13	M6	15	11	1520	3340	1,52
MS1F	35L14	-150	M6 x 0,5 (linear / linèaire)	10	7,4	570	1260	0,57
MS1F	35N14	-01	M5	10	7,4	1020	2240	1,02
MS1F	35N22	-01		10	7,4	1020	2240	1,02
MS2X	25N23	-01		10	7,4	1020	2240	1,02
MS2F	60N14	-01		10	7,4	1020	2240	1,02
MS3F	85N14	-01		10	7,4	1020	2240	1,02
VS1R	19N35	-20	M6	15	11	1520	3340	1,52
VS1R	26L35	-31	M8 (linear / linèaire)	25	18,4	2100	4600	2,10
VS1R	26N35	-26	M8	25	18,4	2100	4600	2,10
VS1R	38N50	-60		25	18,4	2100	4600	2,10
VS1R/F	41L30	-51	(linear / linèaire)	25	18,4	2100	4600	2,10
VS1R/F	41N30	-60		25	18,4	2100	4600	2,10
VS1R/F	80L30	-51	(linear / linèaire)	25	18,4	2100	4600	2,10
VS1R/F	80N30	-36		25	18,4	2100	4600	2,10
VS1R	80N50	-36		25	18,4	2100	4600	2,10
VS1R/F	80N30	-60		25	18,4	2100	4600	2,10
VS1R	80N50	-60		25	18,4	2100	4600	2,10
VS1R/F	125N49	-95	M10	40	29,5	2800	6150	2,80
VS2R	80N30	-60		25	18,4	2100	4600	2,10
VS2F	90N30	-60		25	18,4	2100	4600	2,10
VS1X	59L60	K	(linear / linèaire)	50	37	1880	4180	1,88
VS1X	59L60	H5	(linear / linèaire)	50	37	1640	3640	1,64

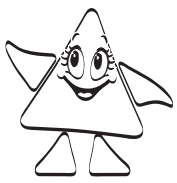


M5 + M6	4	3	500	1100	0,50
	5	3,7	580	1300	0,58
	6	4,4	690	1500	0,69
	7	5,2	780	1700	0,78
	8	5,9	880	1930	0,88
	9	6,6	980	2150	0,98
	10	7,4	1020	2240	1,02
M6	12	8,9	1220	2680	1,22
	14	10,4	1450	3200	1,45
	15	11	1520	3340	1,52
M8	4	3	410	900	0,41
	5	3,7	490	1080	0,49
	6	4,4	560	1200	0,56
	7	5,2	660	1450	0,66
	8	5,9	730	1600	0,73
	9	6,6	810	1790	0,81
	10	7,4	900	1980	0,90
	15	11	1520	3340	1,52
	20	14,8	1810	4000	1,81
	25	18,4	2100	4600	2,10
M10	10	7,4	400	890	0,40
	20	14,8	1400	3080	1,40
	30	22,1	2000	4400	2,00
	40	29,5	2800	6150	2,80

Spannbacken und Schrauben regelmässig fetten!

Lubricate clamping jaw and screws regularly with grease!

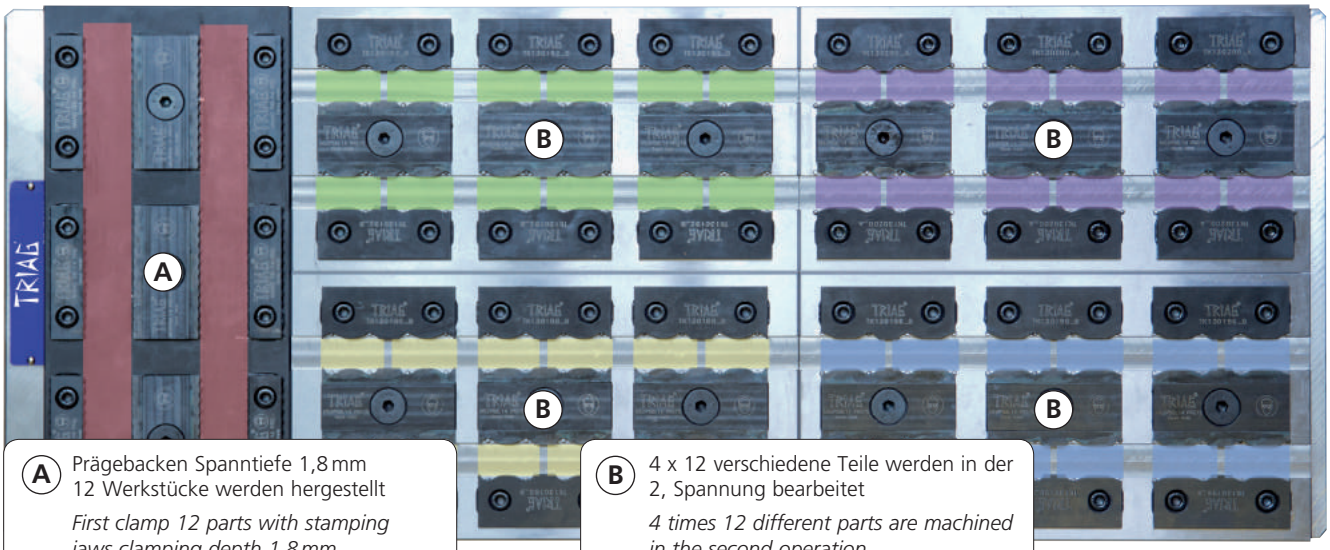
Lubrifiez le mors et les vis régulièrement!



Keilspanner in weicher Ausführung zum Bearbeiten von Formbacken.

Double angle clamps with soft jaws for making shaped forms.

Modules de serrage doux pour l'exécution de formes différentes



A Prägebacken Spanntiefe 1,8 mm
12 Werkstücke werden hergestellt

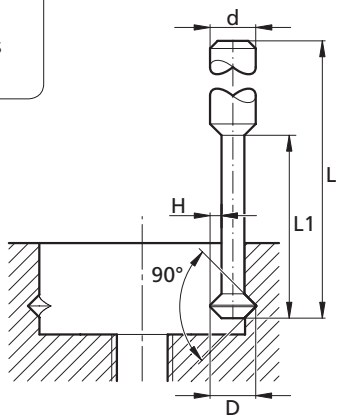
First clamp 12 parts with stamping jaws clamping depth 1,8 mm

Mors d'impression profondeur de serrage 1,8 mm 12 pièces sont produites

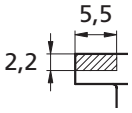
B 4 x 12 verschiedene Teile werden in der 2, Spannung bearbeitet

4 times 12 different parts are machined in the second operation

4 x 12 pièces différentes sont usinées (2 pièces par modules)



45°		d	D	L1	H	z	L
TK150057_A	A90 MT8	6	6,0	24,0	1,5	3	58



Zum Erstellen Ihrer individuellen Formbacke:

Schnittzeichnung zum Ermitteln der maximalen Bearbeitungsprofiltiefe

If a dedicated jaw is being machined:

This sketch will be of help regarding the workpiece penetration depth

Pour régler votre mors individuel aux étages:

Dessin en coupe pour déterminer la profondeur maximum du profil à usiner

für / *for* / pour *TK120529

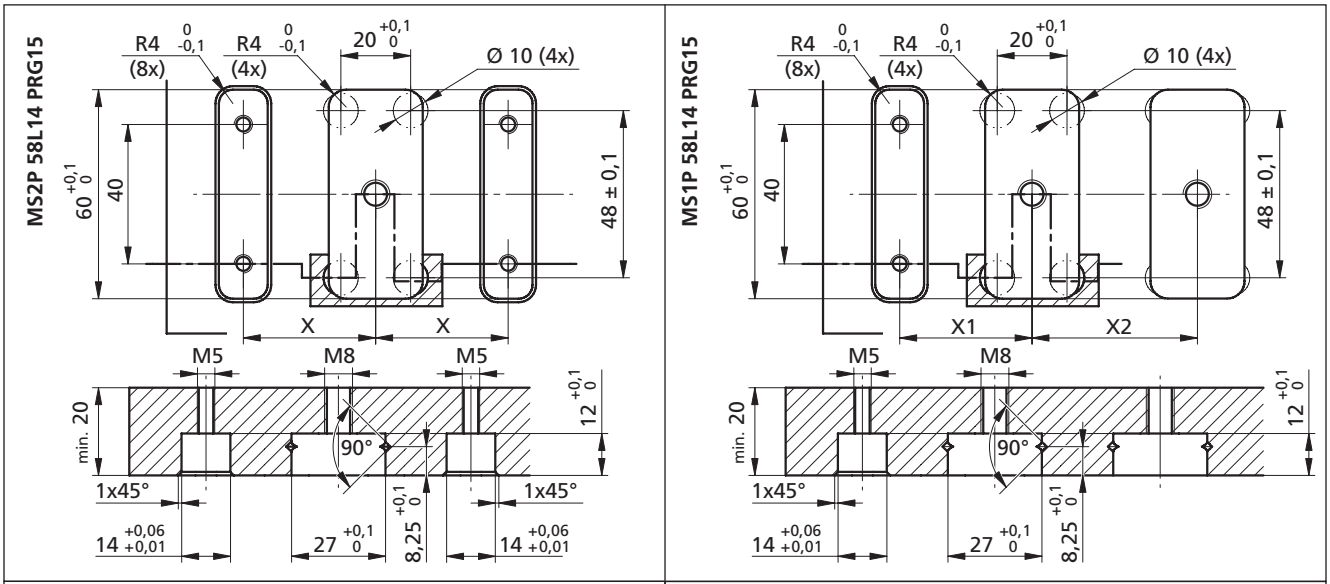
Fertigungsmasse für die Vorrichtungsplatte:
Machining data for the fixture plate:
Cotes d'usinage pour la plaque de base:

Seite / *Page* 136 ▶

MS2P 58L14 PRG15 MAND 58 -14 PRG6
MS1P 58L14 PRG15
MAND 58 -14 PRG

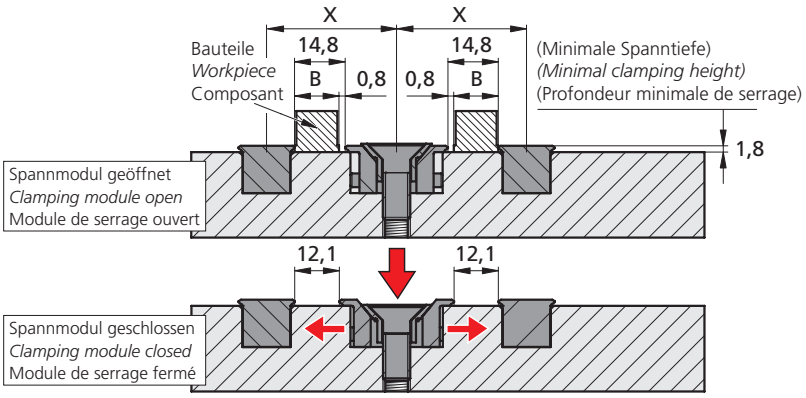
microCLAMP

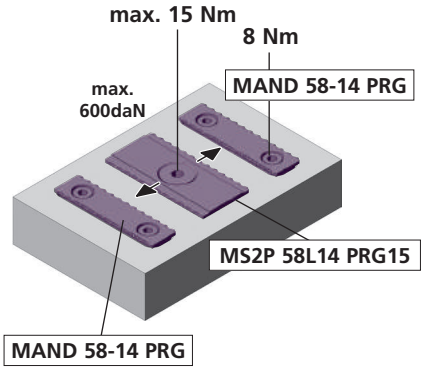
Fertigungsmasse für die Vorrichtungsplatte: / *Machining data for the fixture plate:* / Cotes d'usinage pour la plaque de base:



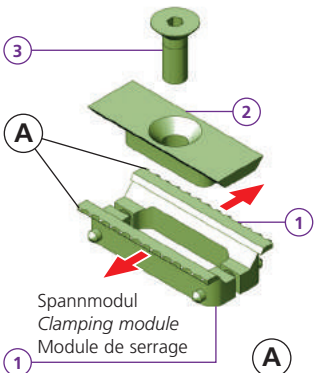
Mass **X (X1) = B + 24 mm** **Beispiel:** Bauteilbreite = 14 mm	***Dimension*** ***X (X1) = B + 24 mm*** ***Example:*** *Width of component part* = 14 mm	**Dimension** **X (X1) = B + 24 mm** **Exemple:** Largeur de la pièce à usiner = 14 mm
Taschenabstand X = 14 + 24 = 38 Das ergibt eine Einlegeluft von 0,8 mm (Hub bis 2,7 mm)	*Distance of pocket* X = 14 + 24 = 38 *This makes a play of 0,8 mm (stroke till 2,7 mm)*	Distance de la poche X = 14 + 24 = 38 Ça donne un jeu de 0,8 mm (course jusqu'à 2,7 mm)

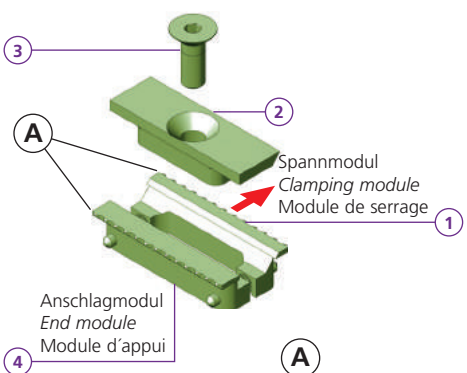
Mass **X2 = B + 33,5 mm** **Beispiel:** Bauteilbreite = 14 mm	***Dimension*** ***X2 = B + 33,5 mm*** ***Example:*** *Width of component part* = 14 mm	**Dimension** **X2 = B + 33,5 mm** **Exemple:** Largeur de la pièce à usiner = 14 mm
Taschenabstand X = 14 + 33,5 = 47,5 Das ergibt eine Einlegeluft von 0,8 mm (Hub bis 2,7 mm)	*Distance of pocket* X = 14 + 33,5 = 47,5 *This makes a play of 0,8 mm (stroke till 2,7 mm)*	Distance de la poche X = 14 + 33,5 = 47,5 Ça donne un jeu de 0,8 mm (course jusqu'à 2,7 mm)

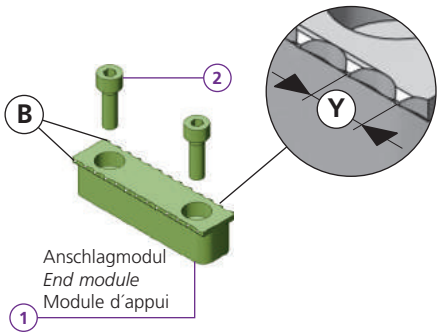




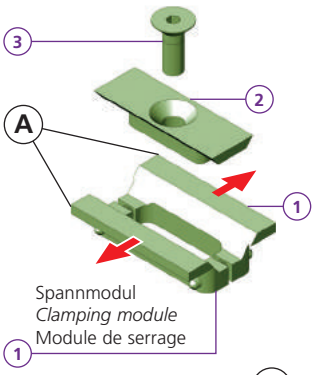
Hub bis / *Stroke till* / Course jusqu'à = 2,7 mm

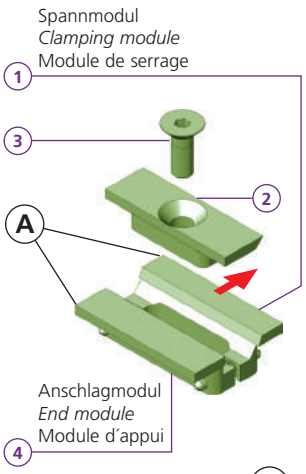


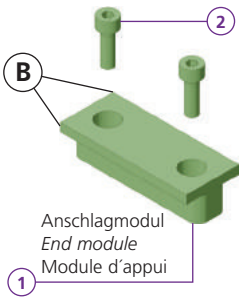


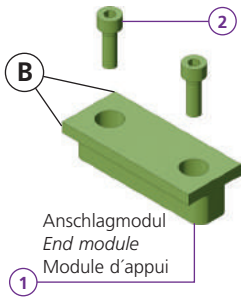


MS2P 58L14 PRG15 (A)		MS1P 58L14 PRG15 (A)		MAND 58-14 PRG (B)		MAND 58-14 PRG6 (B)	
1	2x TK120225	1	1x TK120225	1	1x TK120226	1	1x TB150282
2	1x TK120227	2	1x TK120721	2	2x M5X16 ISO 4762	2	2x M5X16 ISO 4762
3	1x M8x22 DIN 7991	3	1x M8x22 DIN 7991	Y	4,7 mm	Y	6,0 mm
		4	1x TK120720				
kg	~0,12	kg	~0,12	kg	~0,08	kg	~0,08









A

MS2F 58L14 W251

1	2x	TK120531
2	1x	TK120227
3	1x	M8x22 DIN 7991
kg		~0,12

A

MS1F 58L14 W251

1	1x	TK120531
2	1x	TK120227
3	1x	M8x22 DIN 7991
4	1x	TH130566
kg		~0,12

B

MANF 58-14 W25

1	1x	*TK120529
2	2x	M5X16 ISO 4762
kg		~0,11

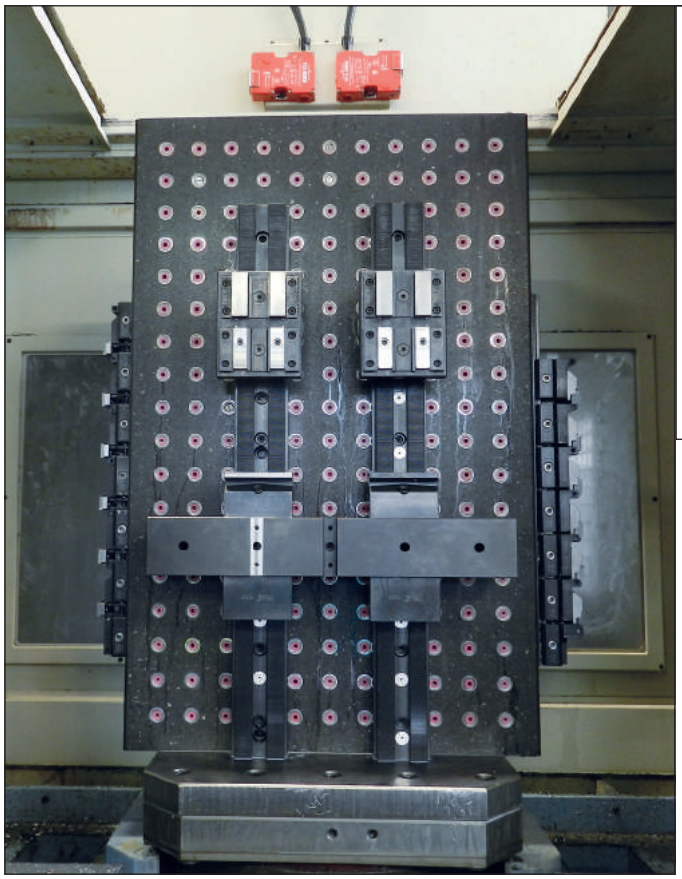
B

MANF 58-14 F25

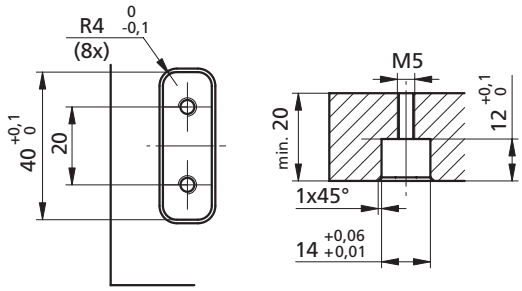
1	1x	TK150033
2	2x	M5X16 ISO 4762
kg		~0,11

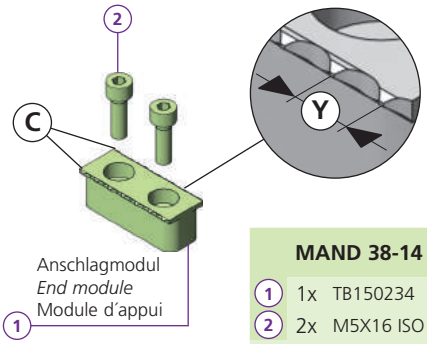
HV700
x0,2mm

Fertigungsmass für die Vorrichtungsplatte: / *Machining data for the fixture plate:* / Cotes d'usinage pour la plaque de base: p. 136



Fertigungsmass für die Vorrichtungsplatte:
Machining data for the fixture plate:
Cotes d'usinage pour la plaque de base:





C

MAND 38-14 PRG

1	1x	TB150234
2	2x	M5X16 ISO 4762
Y		4,7 mm
kg		~0,08

B

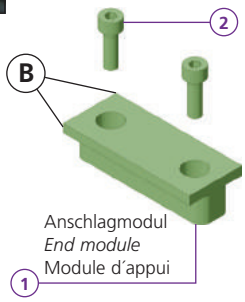
MANF 38-14 F25

1	1x	TK160533
2	2x	M5X16 ISO 4762
kg		~0,08

B

MANF 38-14 W25

1	1x	*TK160544
2	2x	M5X16 ISO 4762
kg		~0,08

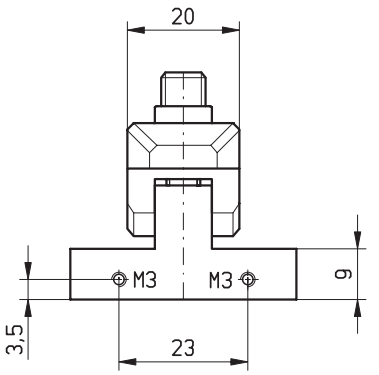


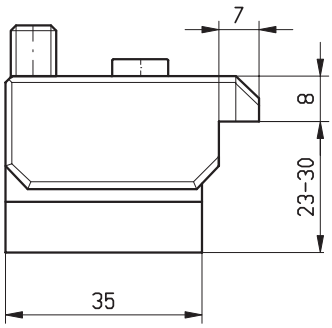
C

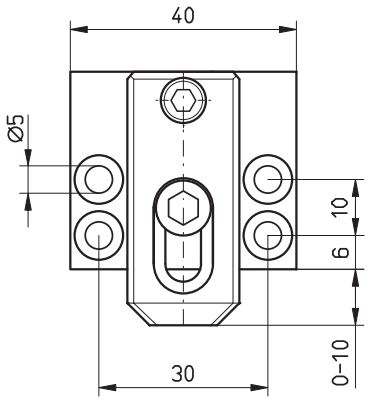
MAND 38-14 PRG6

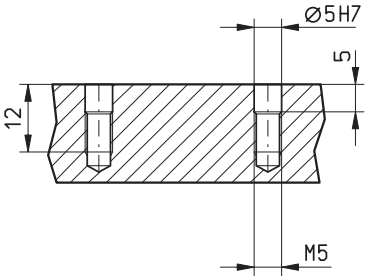
1	1x	TB150283
2	2x	M5X16 ISO 4762
Y		6,0 mm
kg		~0,08

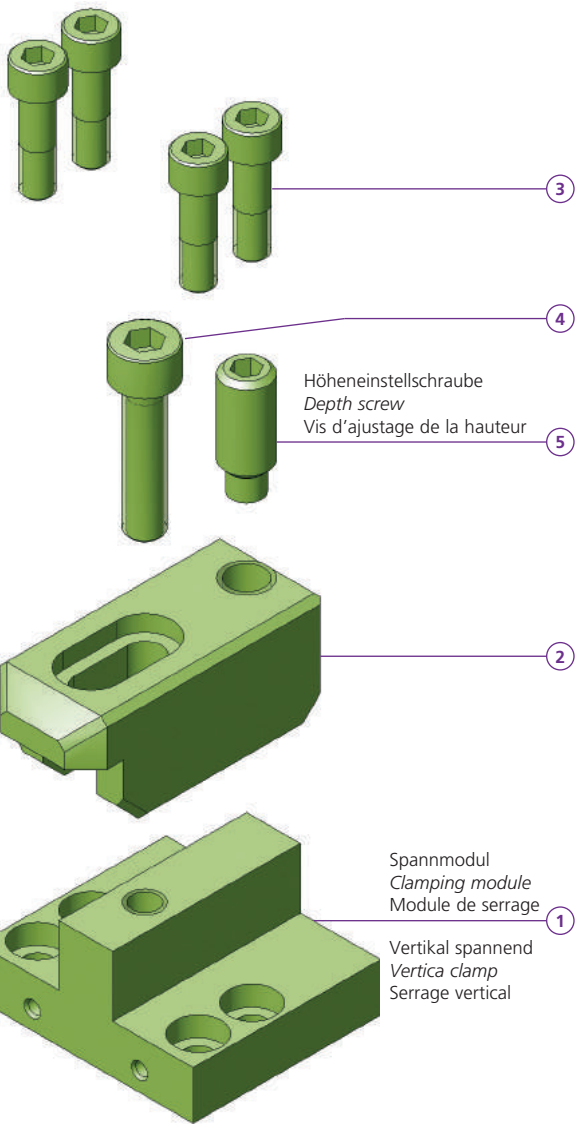
* = weich / *soft* / doux

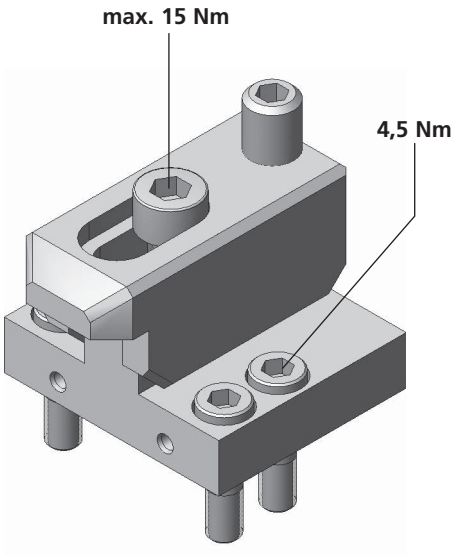






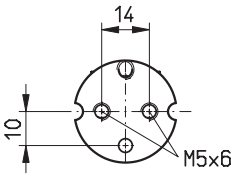


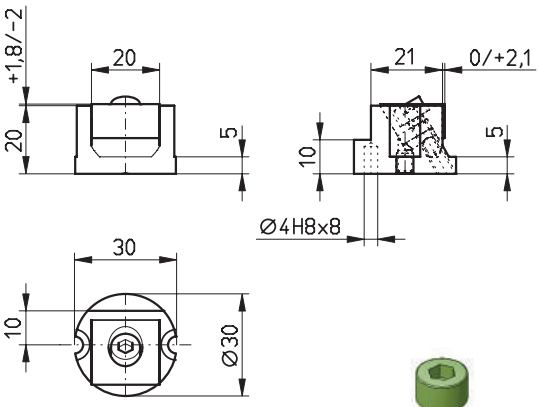




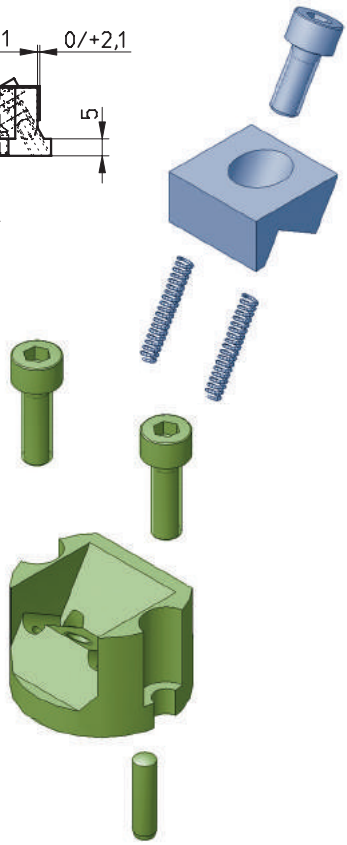
	MV1F 20L35 BV1	
1	1x	TF140710
2	1x	BV1
3	4x	MS 50
4	1x	M6x25 ISO 4762
5	1x	M8x20 ISO 4028
kg		~0,225

Bestellbeispiel / *Ordering example* / Exemple de commande: MV1F 20L35 BV1

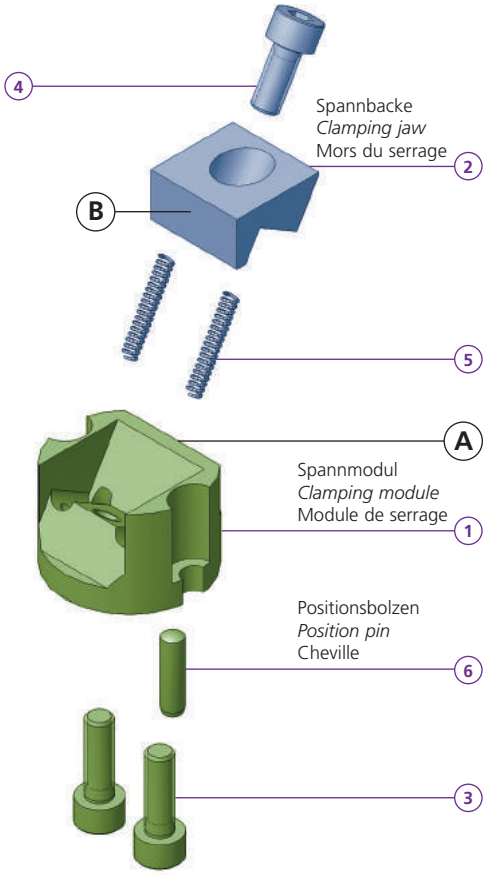


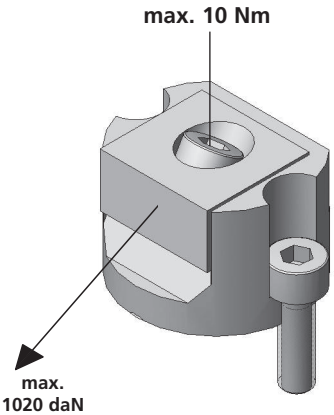


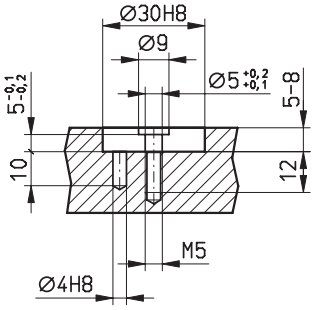
Version 2

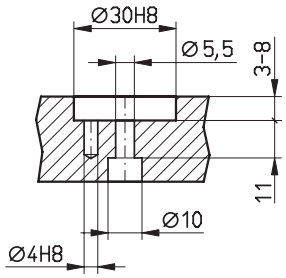


Version 1





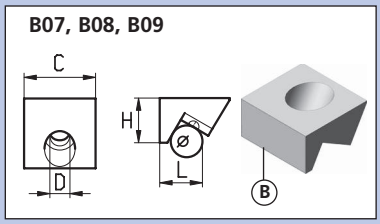




Bestellbeispiel / *Ordering example* / Exemple de commande:
1x MR1F 30N23 & 1x B07

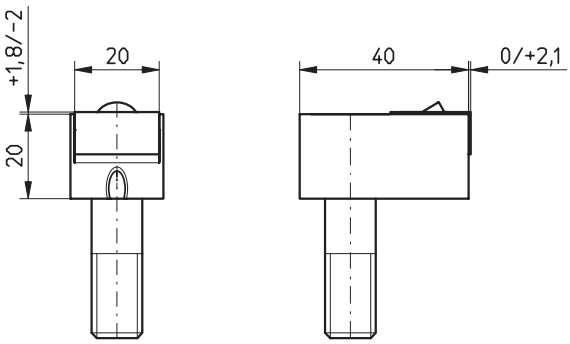
MR1F 30N23 -07		
1	1x	TF140711
2	1x	
3	2x	M5x16 ISO 4762
4	1x	M5x12 ISO 4762
5	2x	FED 03018
6	1x	Ø 4x14 DIN 6325
kg		~0,095

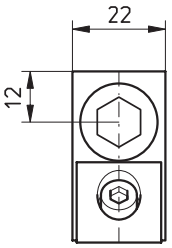
	B07	B08	B09
C	20	20	20
H	10	10	10
L	9,5	9,5	9,5
D	5,5	5,5	5,5
ø	6	6	6
i	HV700 x0,2mm	HV700 x0,2mm	*

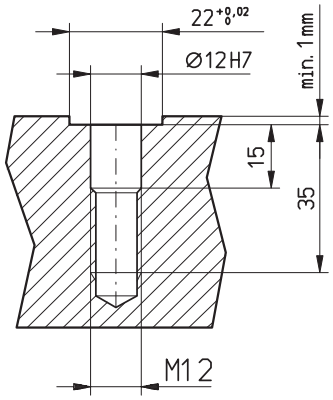


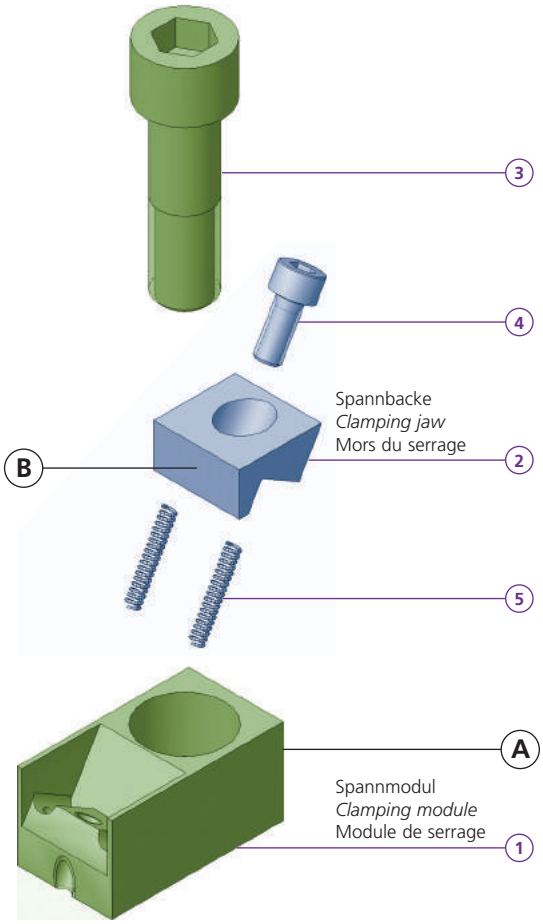
* = weich / *soft* / doux

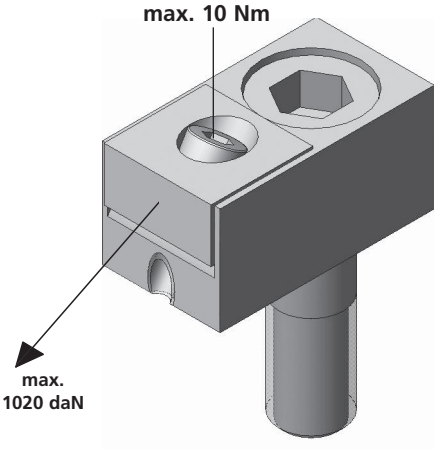
Separat bestellen / *Separate order* / Commander séparément







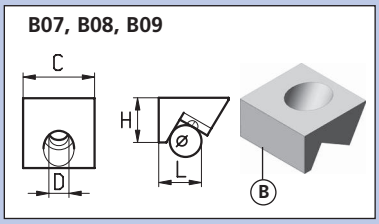




Bestellbeispiel / *Ordering example* / Exemple de commande:
1x MS1F 22N40 & 1x B07

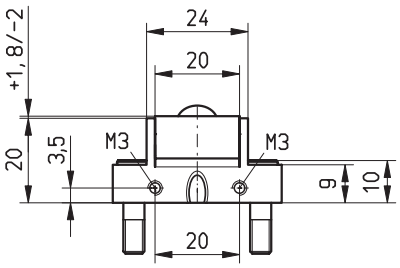
A	MS1F 22N40 -07
1	1x TF140712
2	1x
3	1x TWPAS 1240
4	1x M5x12 ISO 4762
5	2x FED 03018
kg	~0,15

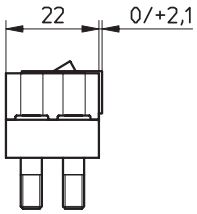
B	B07	B08	B09
C	20	20	20
H	10	10	10
L	9,5	9,5	9,5
D	5,5	5,5	5,5
ø	6	6	6
i	HV700 x0,2mm	HV700 x0,2mm	*

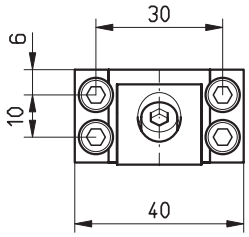


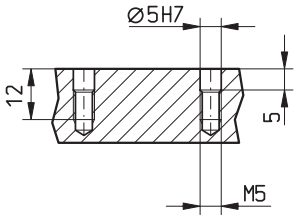
Separat bestellen / *Separate order* / Commander séparément

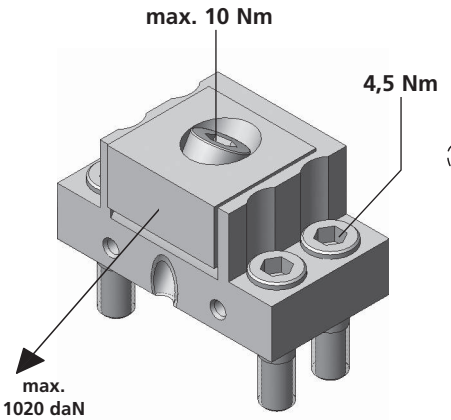
* = weich / *soft* / doux

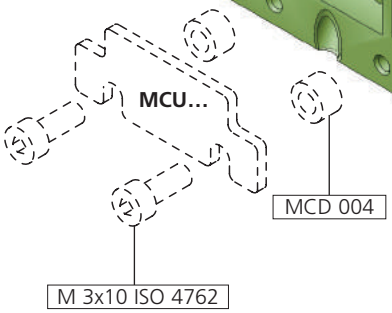


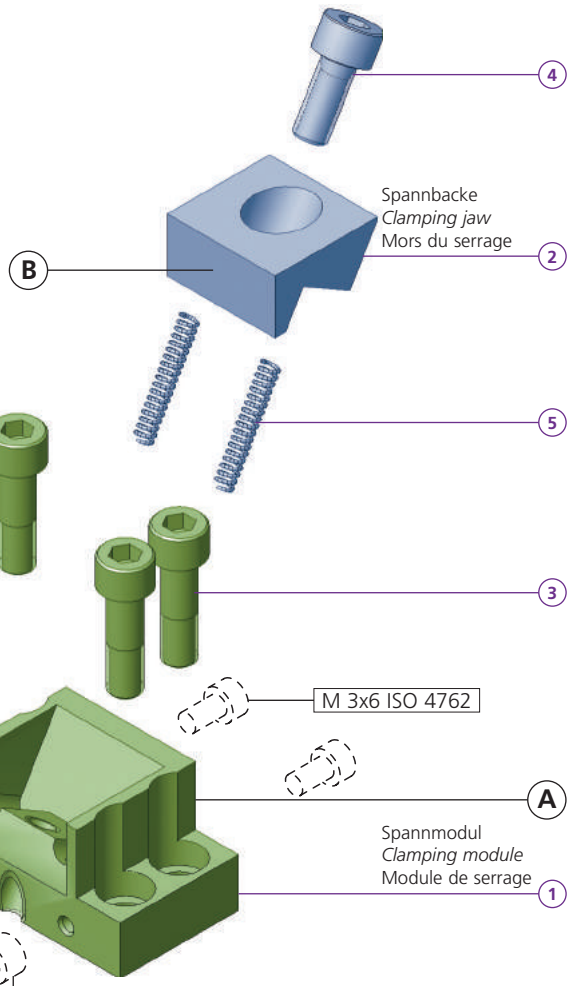




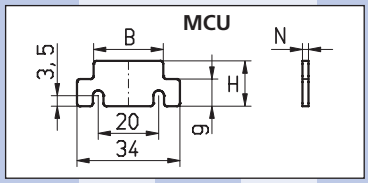








		H	B	N
MCU	11037	11	23	2
	15037	15	23	2
	18037	18	23	2
	20037	20	23	2
	22537	22,5	23	2
2x	M3x10 ISO 4262			
2x	M3x6 ISO 4262			
2x	MCD 004			



Achtung: Bei Spannkräften über 400 daN (0,4t) sollte das Spannmodul in eine Nut eingelassen werden (Nuttiefe mindestens 1mm)

Remark: *Using forces higher than 400 daN, clamps must be mounted into a slot (depth min. 1mm)*

Attention: Avec des forces de serrage en dessus de 400 daN, le module de serrage doit être encastré dans une rainure de 1mm de profondeur minimum

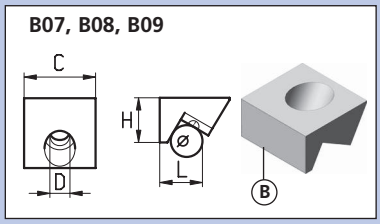
A

	MS1F 24N22 -07
1	1x TF140713
	MS1R 24N22 -07
1	1x TW100172-01
2	1x
3	4x MS 50
4	1x M5x12 ISO 4762
5	2x FED 03018
kg	~0,125

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x **MS1F 24N22** & 1x **B07**

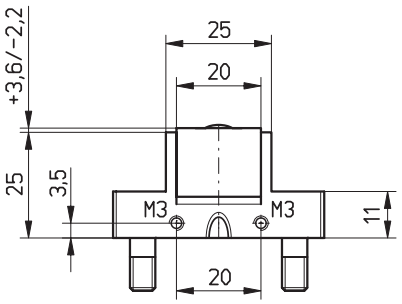
B

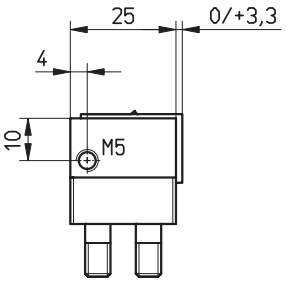
	B07	**B08**	**B09**
C	20	20	20
H	10	10	10
L	9,5	9,5	9,5
D	5,5	5,5	5,5
ø	6	6	6
i	HV700 x0,2mm	HV700 x0,2mm	*

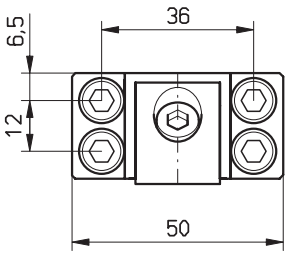


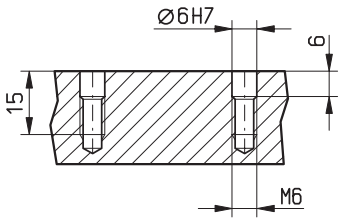
*** = weich / *soft* / doux**

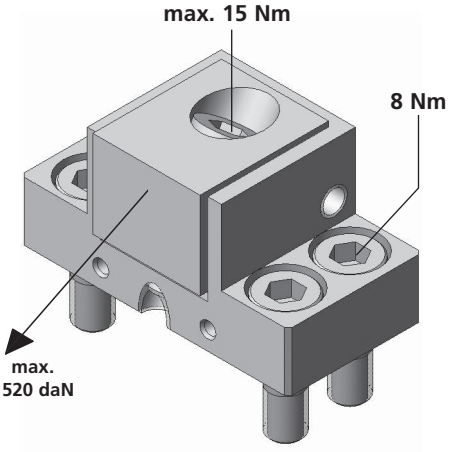
Separat bestellen / *Separate order* / Commander séparément

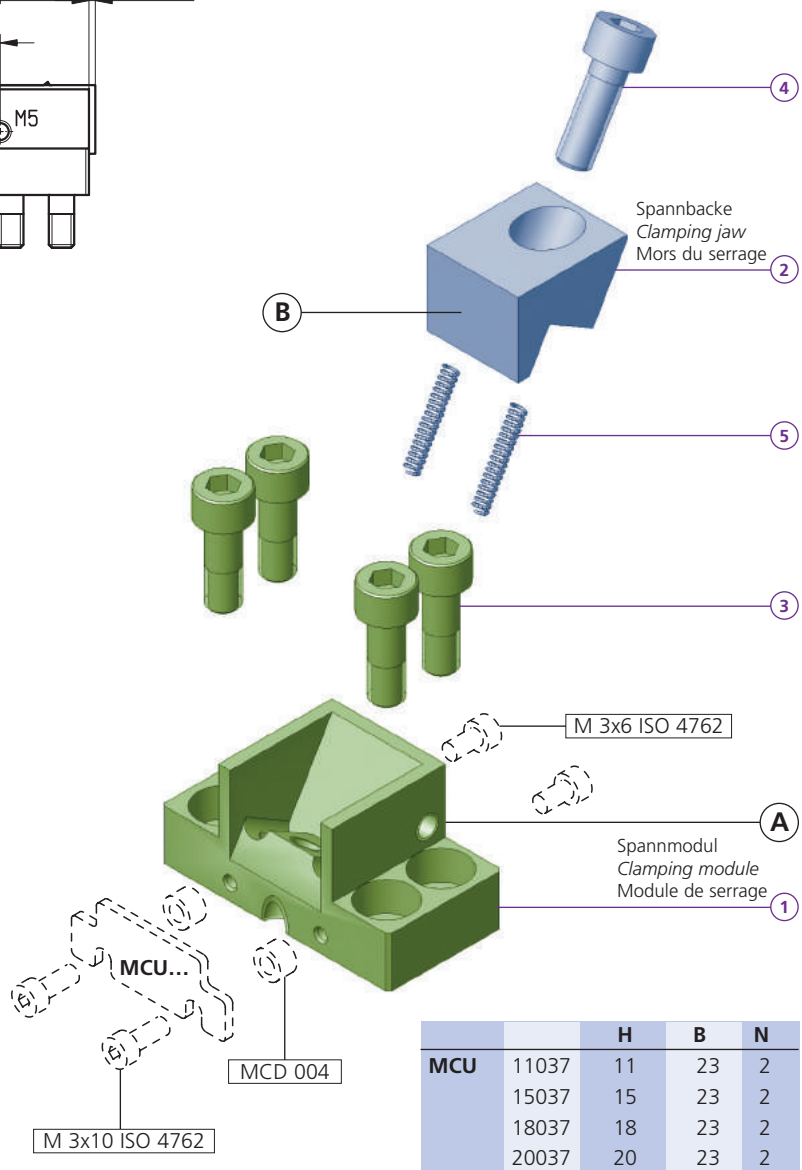




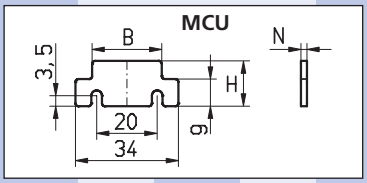








		H	B	N
MCU	11037	11	23	2
	15037	15	23	2
	18037	18	23	2
	20037	20	23	2
	22537	22,5	23	2
2x	M3x10 ISO 4262			
2x	M3x6 ISO 4262			
2x	MCD 004			



Achtung: Bei Spannkräften über 400 daN (0,4t) sollte das Spannmodul in eine Nut eingelassen werden (Nuttiefe mindestens 1mm)

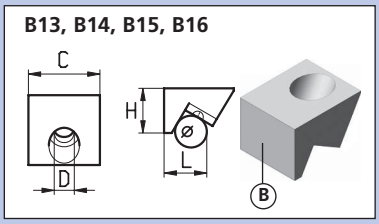
Remark: *Using forces higher than 400 daN, clamps must be mounted into a slot (depth min. 1mm)*

Attention: Avec des forces de serrage en dessus de 400 daN, le module de serrage doit être encastré dans une rainure de 1mm de profondeur minimum

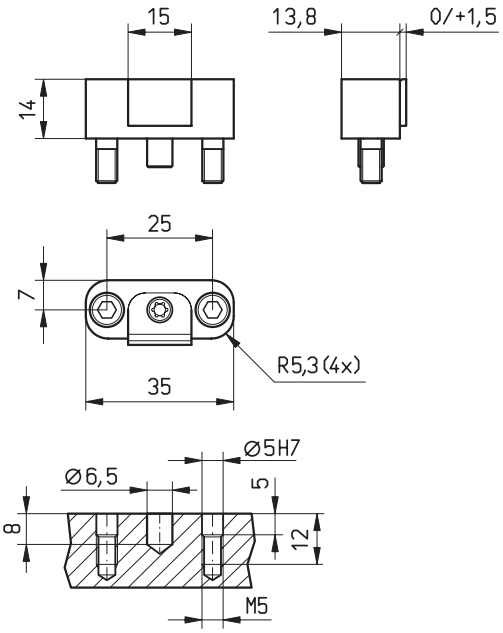
Bestellbeispiel / *Ordering example* / Exemple de commande:
1x MS1F 25N25 & 1x B13

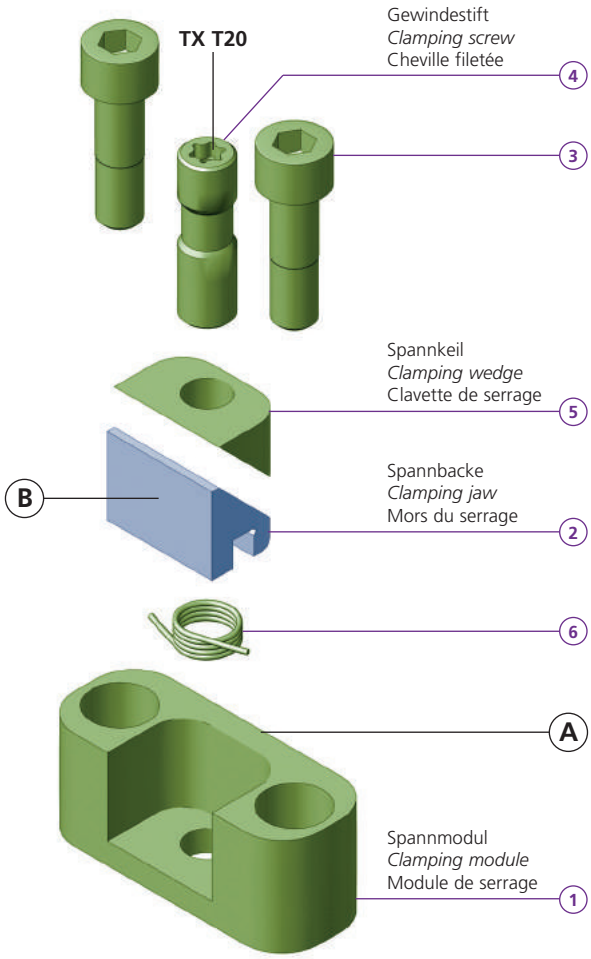
A	
MS1F 25N25 -13	
1	1x TF140714
MS1R 25N25 -13	
1	1x TF140715
2	1x
3	4x MS 60
4	1x M6x16 ISO 4762
5	2x FED 03018
kg	~0,165

B	B13	B14	B15	B16
C	20	20	20	20
H	16	16	16	16
L	13,8	13,8	13,8	19
D	6,5	6,5	6,5	6,5
ø	10	10	10	10
i	HV700 x0,2mm	HV700 x0,2mm	*	*

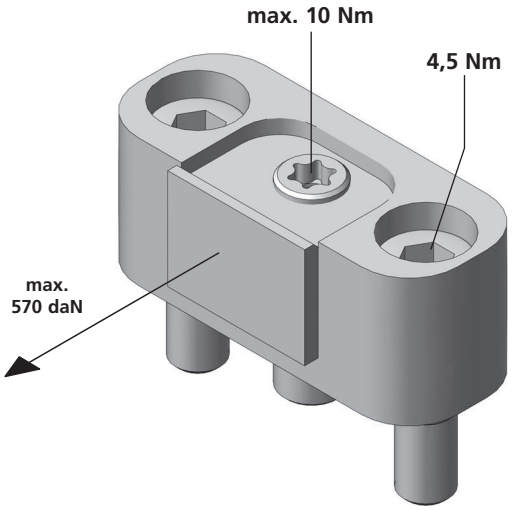


* = weich / *soft* / doux





Drehmoment *Torque* Couple de torsion				Spannkraft *Workholding force* Force de serrage
7 Nm	lb-ft	5,18	= 0,39 t	390 daN
8 Nm	lb-ft	5,92	= 0,45 t	450 daN
9 Nm	lb-ft	6,66	= 0,51 t	510 daN
10 Nm	lb-ft	7,4	= 0,57 t	570 daN

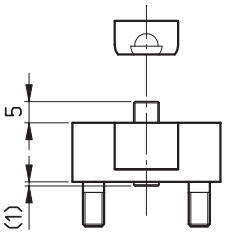


Montageanleitung / *Mounting instruction* / Notice de montage

Positionieren des Gewindestiftes vor Aufsetzen des Spannkeils

Before mounting the wedge the clamping screw must be positioned

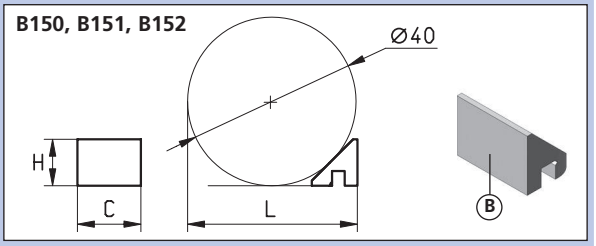
Positionner la cheville filetée avant de mettre la clavette de serrage



Achtung: Bei Spannkräften über 400 daN (0,4t) sollte das Spannmodul in eine Nut eingelassen werden (Nuttiefe mindestens 1mm)
Remark: *Using forces higher than 400 daN, clamps must be mounted into a slot (depth min. 1mm)*
Attention: Avec des forces de serrage en dessus de 400 daN, le module de serrage doit être encastré dans une rainure de 1mm de profondeur minimum

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x **MS1F 35L14** & 1x **B150**

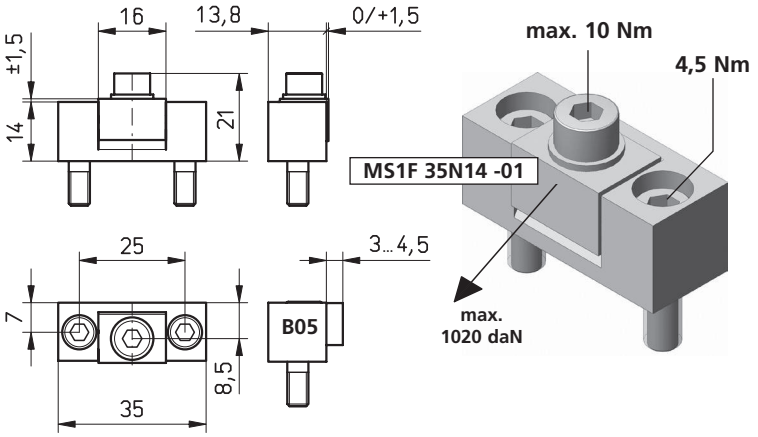
	A	B		
	MS1F 35L14 -150			
1	1x TF140716			
	MS1R 35L14 -150	**B150**	**B151**	**B152**
1	1x TF140717			
2	1x			
3	2x MS 50			
4	1x GEWST6L20			
5	1x MSK15W45			
6	1x SFED6W90			
C		15	15	15
H		11	11	11
L		40,3	40,3	40,3
ø		40	40	40
i		HV700 x0,2mm	HV700 x0,2mm	ALU
kg	~0,03			

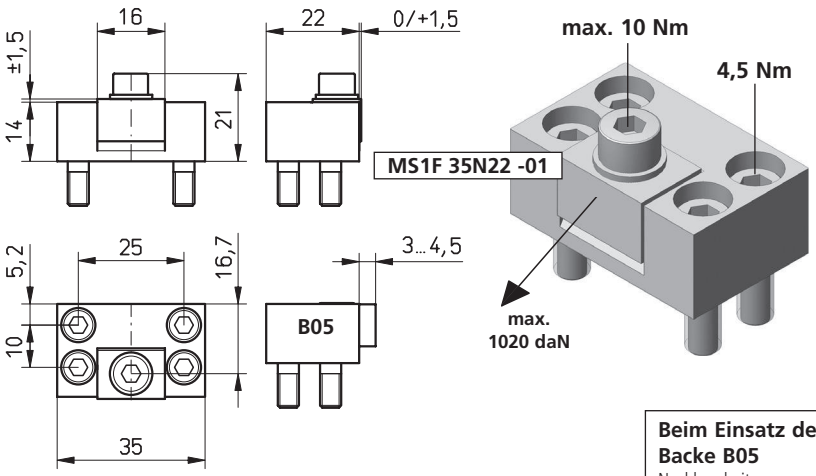


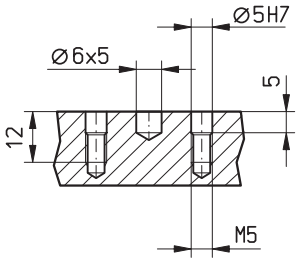
Separat bestellen / *Separate order* / Commander séparément

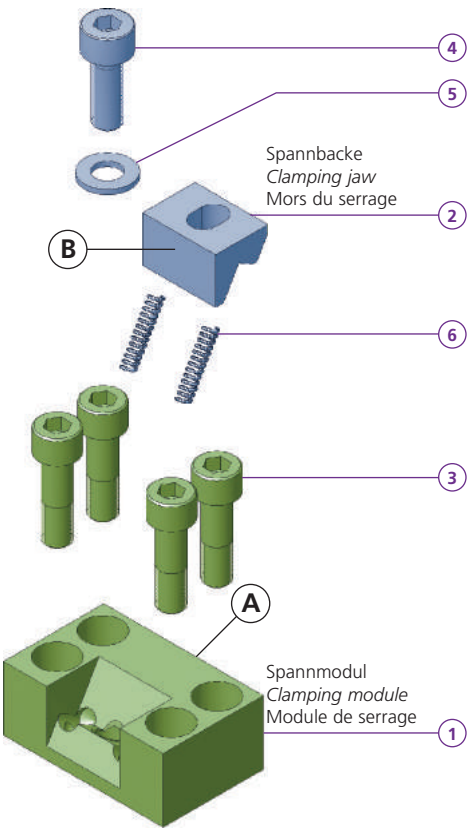
MS1F 35N14 -01
MS1F 35N22 -01

microCLAMP





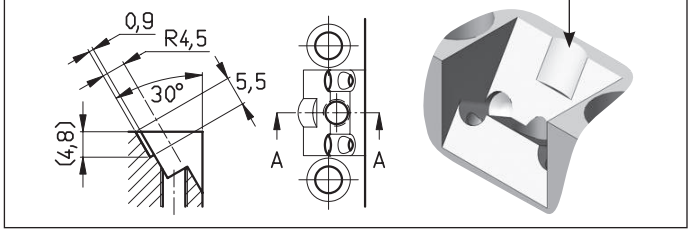




Beim Einsatz der Backe B05
Nachbearbeitung am Modul, falls gesamter Backenhub (1,1 bis 1,5mm) verlangt ist.

Jaw B05 in use
If a stroke of 1,1 to 1,5mm is required the module must be machined according to this sketch.

Pour l'utilisation du mors B05
Travail de reprise au module si la course du mors totale (1,1 jusqu'à 1,5mm) est exigée.



Achtung: Bei Spannkräften über 400 daN (0,4t) sollte das Spannmodul in eine Nut eingelassen werden (Nuttiefe mindestens 1mm)

Remark: *Using forces higher than 400 daN, clamps must be mounted into a slot (depth min. 1mm)*

Attention: Avec des forces de serrage en dessus de 400 daN, le module de serrage doit être encastré dans une rainure de 1mm de profondeur minimum

MS1F 35N14 -01

1	1x	TF140718
2	1x	
3	2x	MS 50
4	1x	M5x14 ISO 4762
5	1x	5x10x1 DIN 125 A
6	2x	FED 02813
kg		~0,05

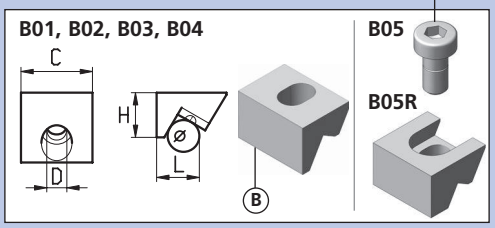
MS1F 35N22 -01

1	1x	TF140719
3	4x	MS 50
kg		~0,08

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x MS1F 35N14 & 1x B01

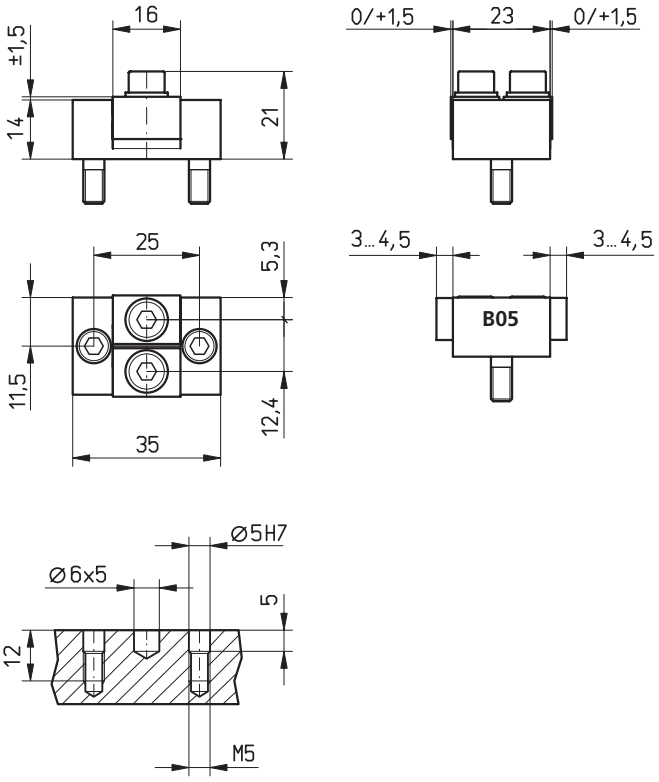
	B01	B02	B03	B04	B05	B05 R
C	16	16	16	16	16	16
H	10	10	10	10	10	10
L	8	8	11	8	10	10
D	5,5	5,5	5,5	5,5	5,2	5,2
ø	4	4	4	4	4	4
i	HV700 x0,2mm	HV700 x0,2mm	*	Messing *Brass* Laiton	HV700 x0,2mm	HV700 x0,2mm

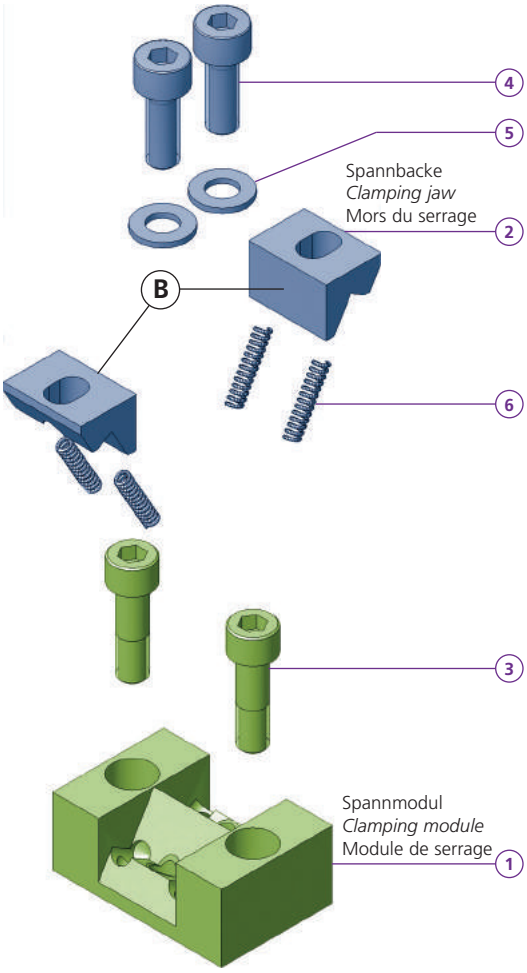
M5x10 DIN 6912

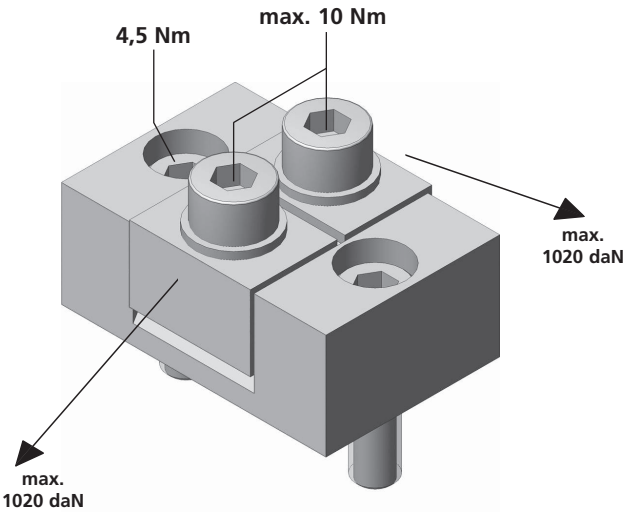


Separat bestellen / *Separate order* / Commander séparément

* = weich / *soft* / doux



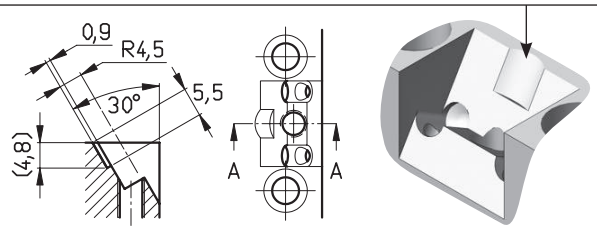




Beim Einsatz der Backe B05
Nachbearbeitung am Modul, falls gesamter Backenhub (1,1 bis 1,5mm) verlangt ist.

Jaw B05 in use
If a stroke of 1,1 to 1,5mm is required the module must be machined according to this sketch.

Pour l'utilisation du mors B05
Travail de reprise au module si la course du mors totale (1,1 jusqu'à 1,5mm) est exigée.



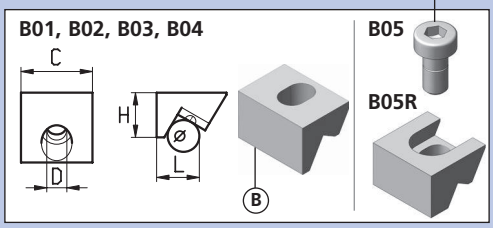
Achtung: Bei Spannkräften über 400 daN (0,4t) sollte das Spannmodul in eine Nut eingelassen werden (Nuttiefe mindestens 1mm)
Remark: *Using forces higher than 400 daN, clamps must be mounted into a slot (depth min. 1mm)*
Attention: Avec des forces de serrage en dessus de 400 daN, le module de serrage doit être encastré dans une rainure de 1mm de profondeur minimum

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x MS2X 35N23 & 2x B01

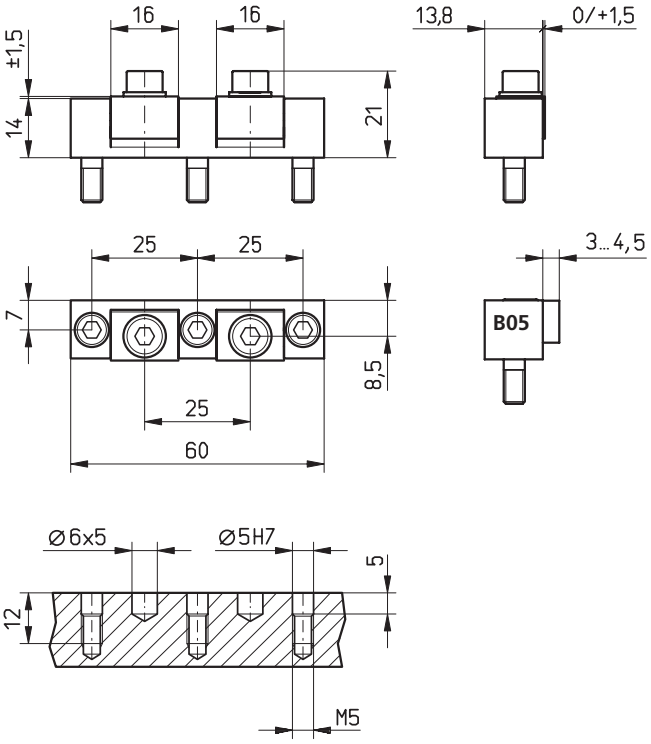
MS2X 35N23 -01	
1	1x TF140720
2	2x
3	2x MS 50
4	2x M5x14 ISO 4762
5	2x 5x10x1 DIN 125 A
6	4x FED 02813
kg	~0,085

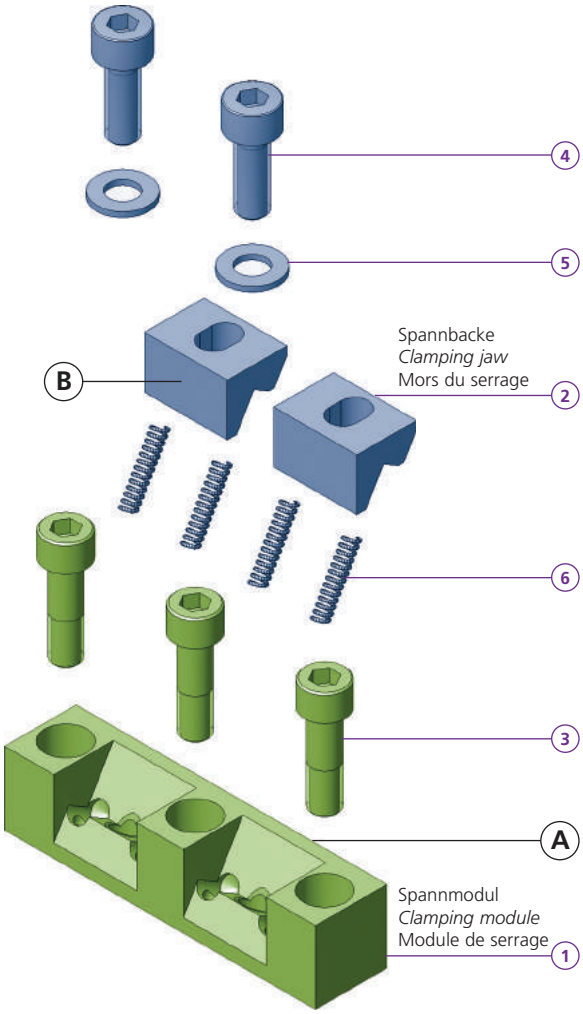
B	B01	B02	B03	B04	B05	B05 R
C	16	16	16	16	16	16
H	10	10	10	10	10	10
L	8	8	11	8	10	10
D	5,5	5,5	5,5	5,5	5,2	5,2
ø	4	4	4	4	4	4
i	HV700 x0,2mm	HV700 x0,2mm	*	Messing *Brass* Laiton	HV700 x0,2mm	HV700 x0,2mm

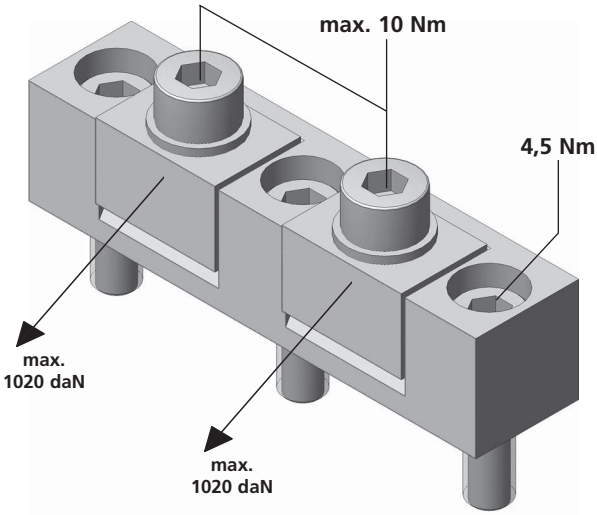
M5x10 DIN 6912



* = weich / *soft* / doux



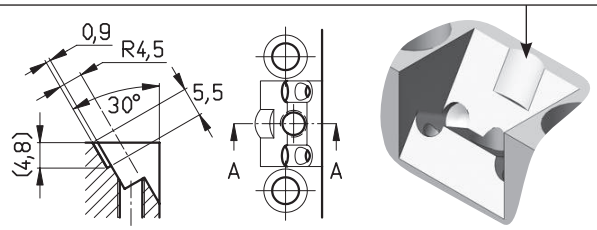




Beim Einsatz der Backe B05
Nachbearbeitung am Modul, falls gesamter Backenhub (1,1 bis 1,5mm) verlangt ist.

Jaw B05 in use
If a stroke of 1,1 to 1,5mm is required the module must be machined according to this sketch.

Pour l'utilisation du mors B05
Travail de reprise au module si la course du mors totale (1,1 jusqu'à 1,5mm) est exigée.

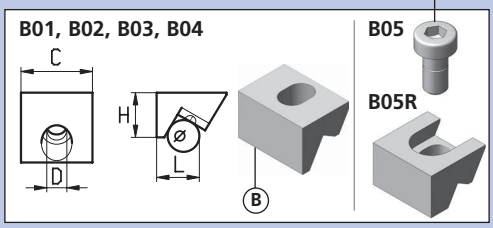


Achtung: Bei Spannkräften über 400 daN (0,4t) sollte das Spannmodul in eine Nut eingelassen werden (Nuttiefe mindestens 1mm)
Remark: *Using forces higher than 400 daN, clamps must be mounted into a slot (depth min. 1mm)*
Attention: Avec des forces de serrage en dessus de 400 daN, le module de serrage doit être encastré dans une rainure de 1mm de profondeur minimum

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x MS2F 60N14 & 2x B01

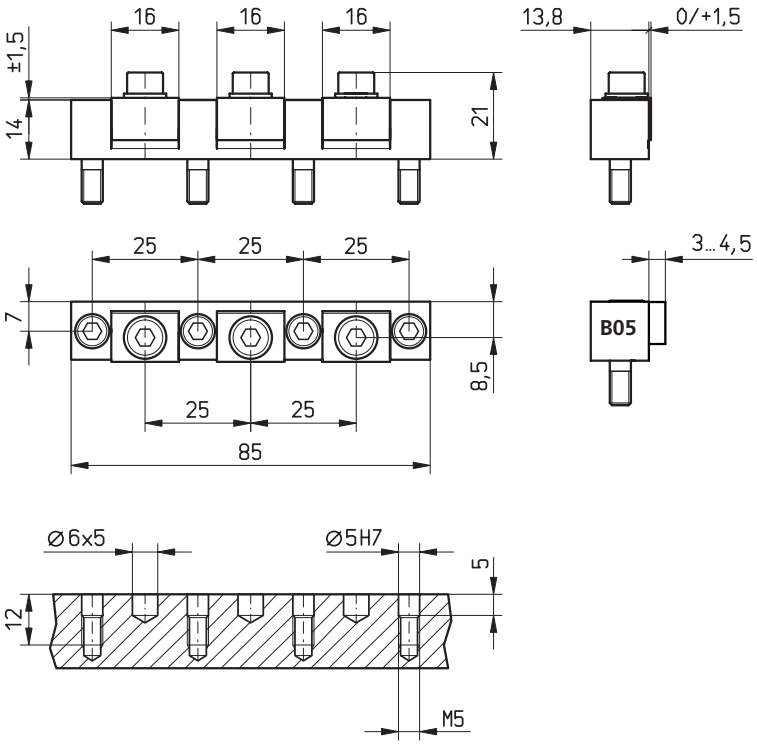
MS2F 60N14 -01		B01	B02	B03	B04	B05	B05 R
1	1x TF140721						
2	2x						
3	3x MS 50						
4	2x M5x14 ISO 4762						
5	2x 5x10x1 DIN 125 A						
6	4x FED 02813						
kg	~0,09						
C		16	16	16	16	16	16
H		10	10	10	10	10	10
L		8	8	11	8	10	10
D		5,5	5,5	5,5	5,5	5,2	5,2
ø		4	4	4	4	4	4
i		HV700 x0,2mm	HV700 x0,2mm	*	Messing *Brass* Laiton	HV700 x0,2mm	HV700 x0,2mm

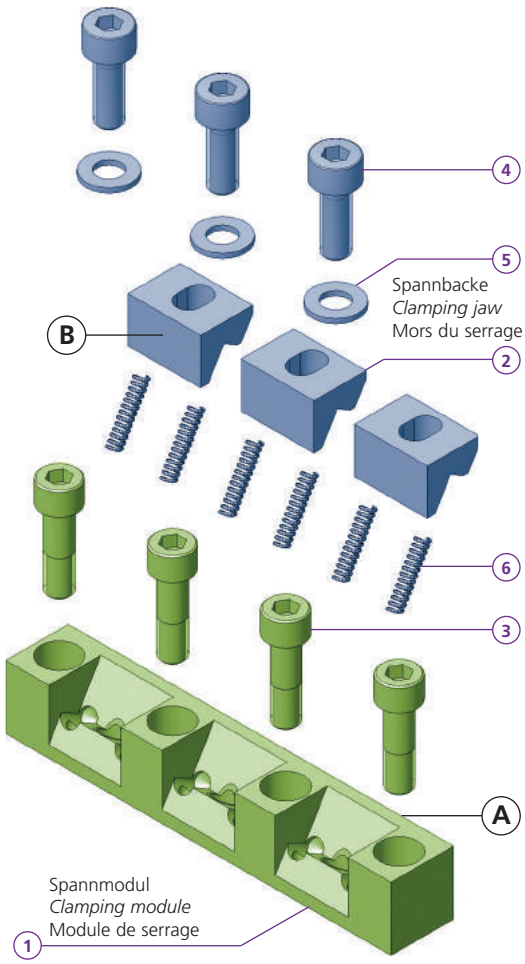
M5x10 DIN 6912

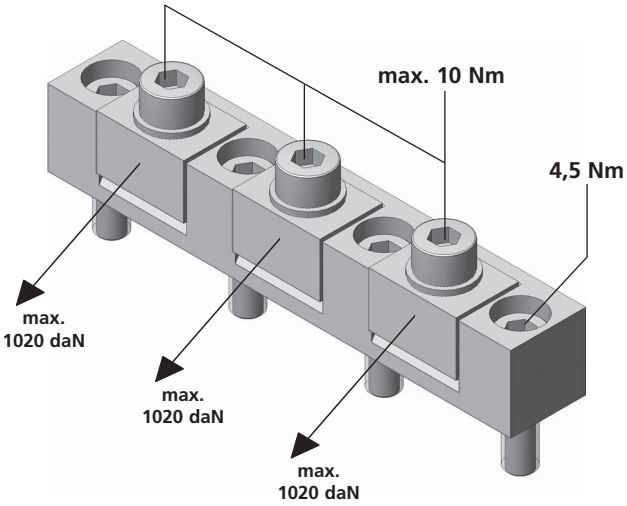


* = weich / *soft* / doux

Separat bestellen / *Separate order* / Commander séparément



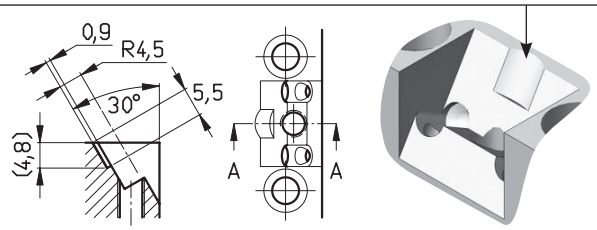




Beim Einsatz der Backe B05
Nachbearbeitung am Modul, falls gesamter Backenhub (1,1 bis 1,5mm) verlangt ist.

Jaw B05 in use
If a stroke of 1,1 to 1,5mm is required the module must be machined according to this sketch.

Pour l'utilisation du mors B05
Travail de reprise au module si la course du mors totale (1,1 jusqu'à 1,5mm) est exigée.

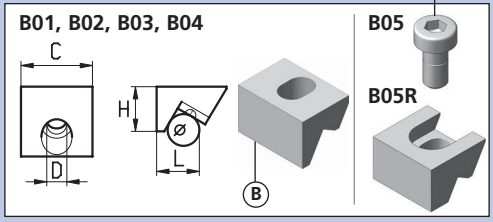


Achtung: Bei Spannkräften über 400 daN (0,4t) sollte das Spannmodul in eine Nut eingelassen werden (Nuttiefe mindestens 1mm)
Remark: *Using forces higher than 400 daN, clamps must be mounted into a slot (depth min. 1mm)*
Attention: Avec des forces de serrage en dessus de 400 daN, le module de serrage doit être encastré dans une rainure de 1mm de profondeur minimum

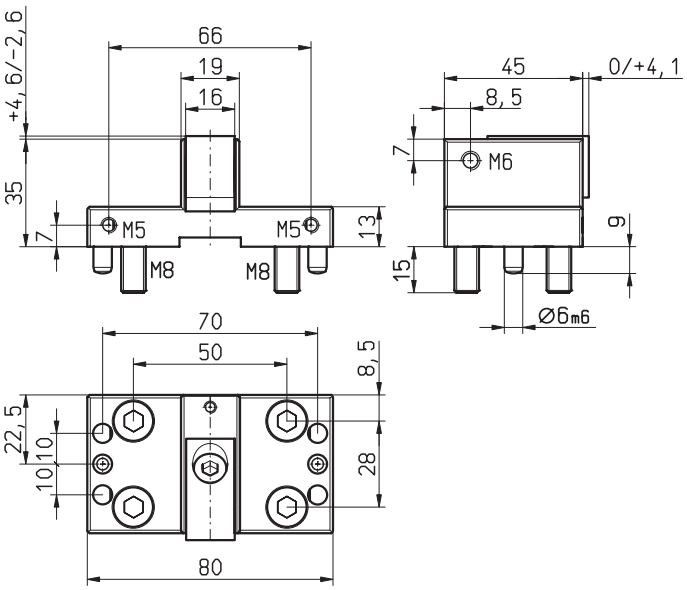
Bestellbeispiel / *Ordering example* / Exemple de commande:
1x MS3F 85N14 & 3x B01

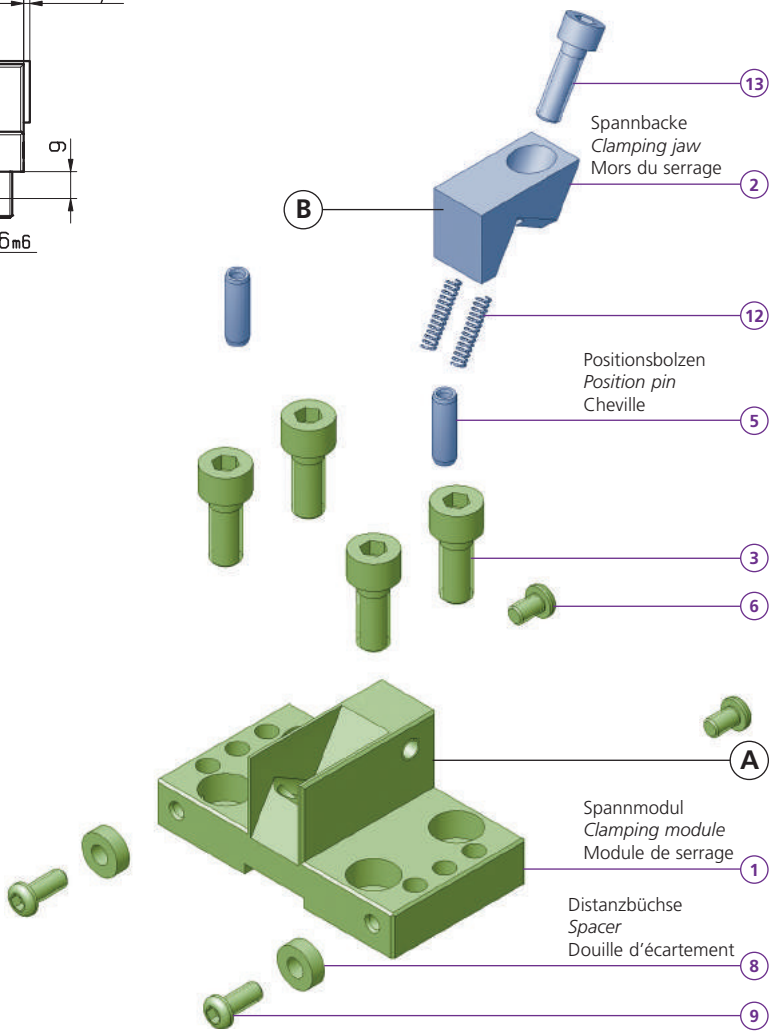
MS3F 85N14 -01		B01	B02	B03	B04	B05	B05 R
C		16	16	16	16	16	16
H		10	10	10	10	10	10
L		8	8	11	8	10	10
D		5,5	5,5	5,5	5,5	5,2	5,2
ø		4	4	4	4	4	4
i		HV700 x0,2mm	HV700 x0,2mm	*	Messing *Brass* Laiton	HV700 x0,2mm	HV700 x0,2mm
1	1x TF140722						
2	3x						
3	4x MS 50						
4	3x M5x14 ISO 4762						
5	3x 5x10x1 DIN 125 A						
6	6x FED 02813						
kg	~0,125						

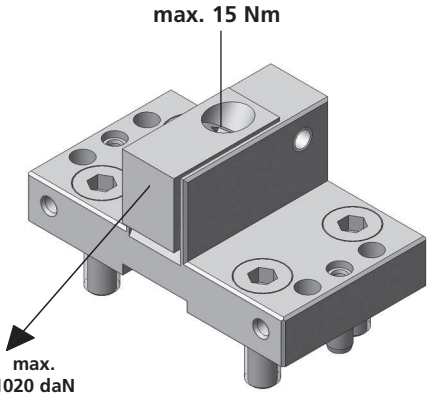
M5x10 DIN 6912



* = weich / *soft* / doux



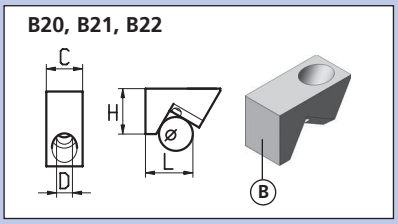




A	
VS1F 19N35 -20	
(1) 1x TF150029	
VS1R 19N35 -20	
(1) 1x TF140723	
(2) 1x	
(3) 4x M8x20 ISO 4762	
(5) 2x CCBO 0802	
(6) 2x M5x8 ISO 7380	
(8) 2x CCD 004	
(9) 2x M5x12 ISO 7380	
(12) 2x FED 0418	
(13) 1x M6x20 ISO 4762	
kg ~0,505	

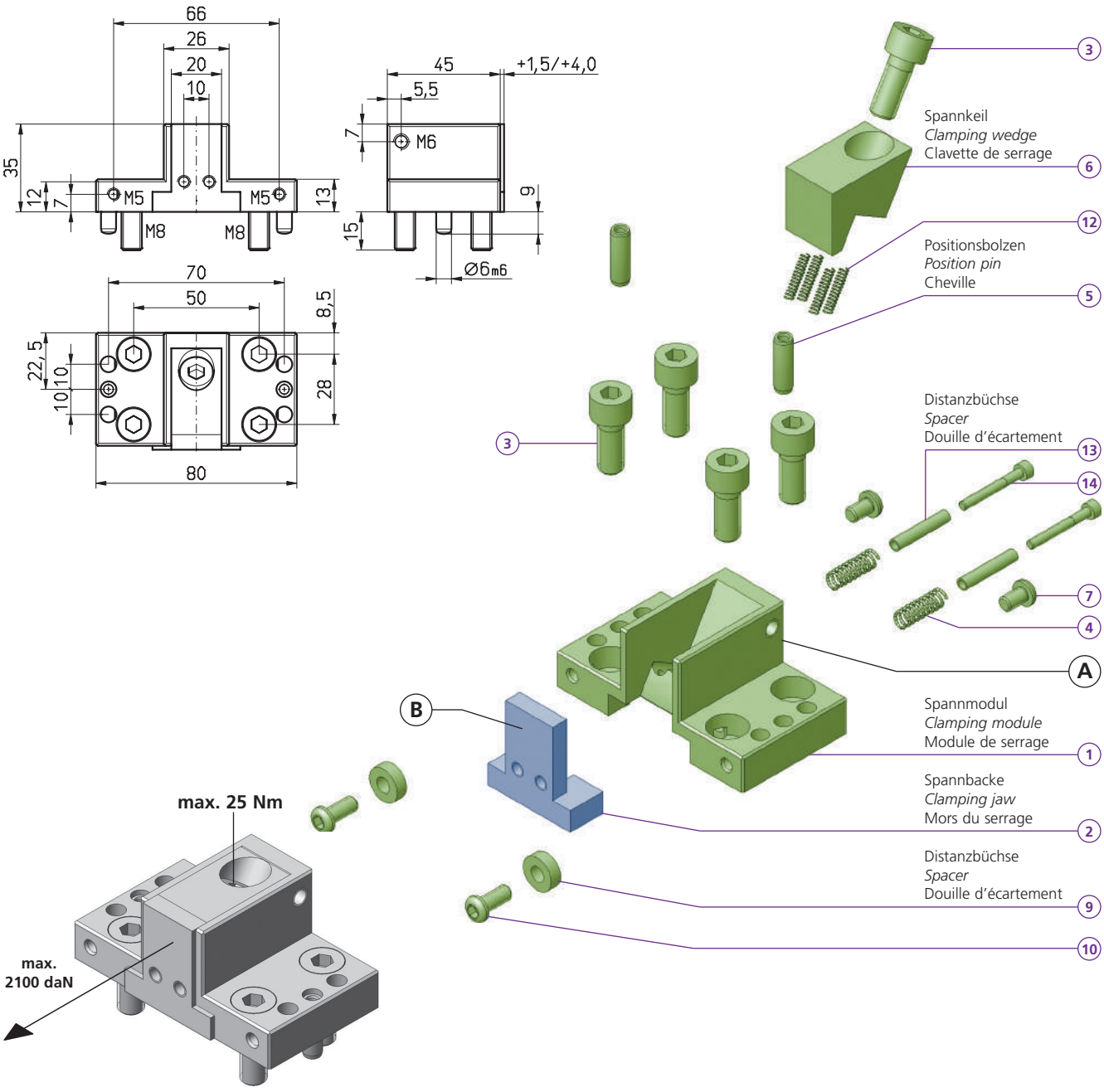
B	B20	B21	B22
(C)	16	16	16
(H)	20	20	20
(L)	19	19	19
(D)	6,5	6,5	6,5
(ø)	12	12	12
(i)	HV700 x0,2mm	HV700 x0,2mm	*

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 19N35 & 1x B20



Separat bestellen / *Separate order* / Commander séparément

* = weich / *soft* / doux



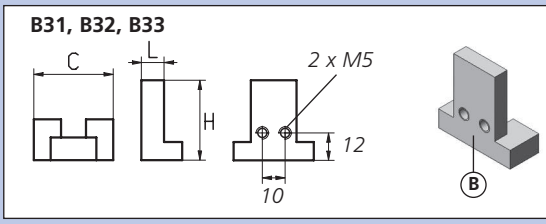
A

VS1R 26L35 -31	
1	1x TF140724
2	1x
3	5x M8x20 ISO 4762
4	2x FED 0618
5	2x CCBO 0802
6	1x B30
7	2x M5x8 ISO 7380
9	2x CCD 004
10	2x M5x12 ISO 7380
12	4x FED 0418
13	2x CCD 422
14	2x M3x25 ISO 4762
kg	~0,55

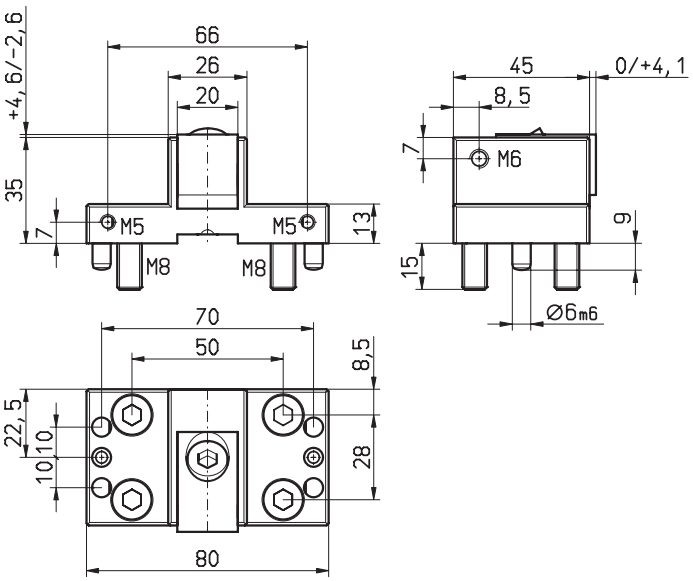
B

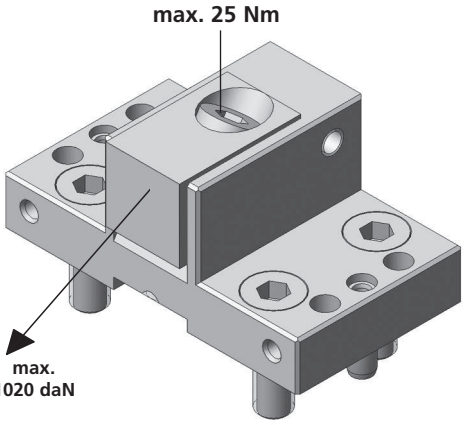
	B31	B32	B33
C	20	20	20
H	35	35	35
L	6	6	6
D	-	-	-
ø	-	-	-
i	HV700 x0,2mm	HV700 x0,2mm	*

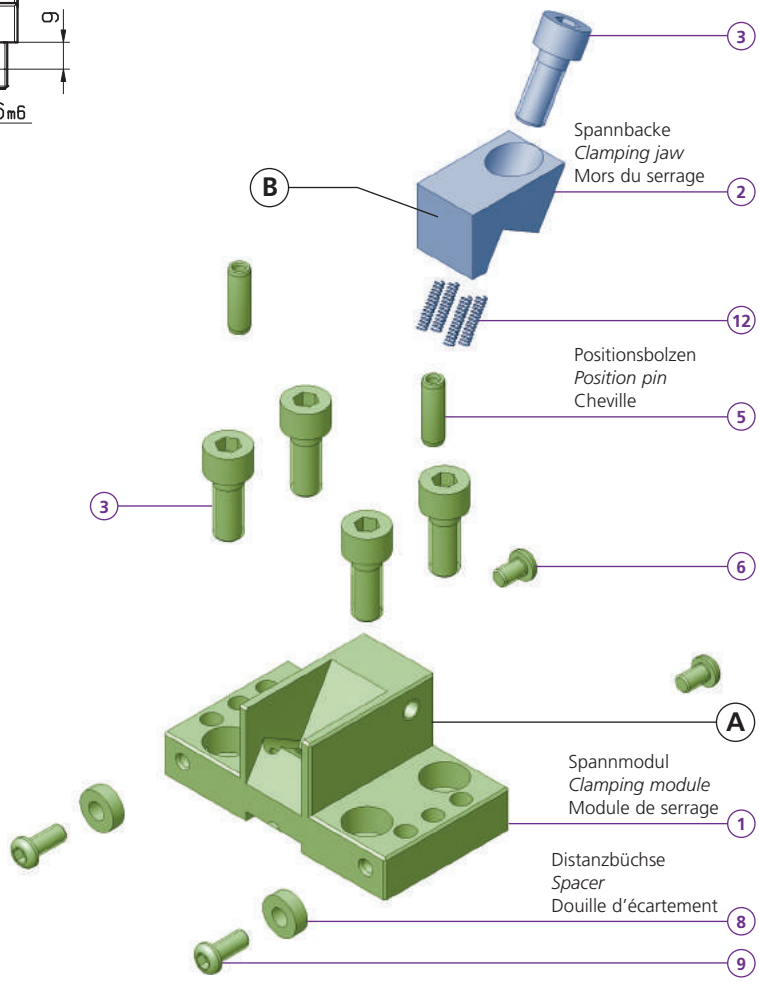
Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 26L35 & 1x B31



Separat bestellen / *Separate order* / Commander séparément



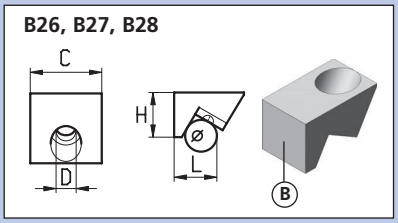




VS1R 26N35 -26	A
1	1x TF140725
2	1x
3	5x M8x20 ISO 4762
5	2x CCBO 0802
6	2x M5x8 ISO 7380
8	2x CCD 004
9	2x M5x12 ISO 7380
12	4x FED 0418
kg	~0,55

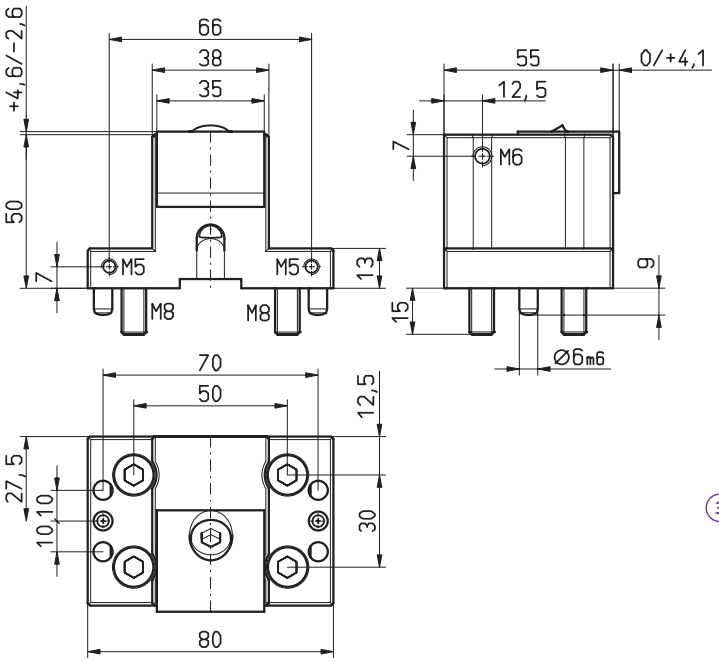
B	B26	B27	B28
C	20	20	20
H	20	20	20
L	19	19	19
D	9	9	9
ø	12	12	12
i	HV700 x0,2mm	HV700 x0,2mm	*

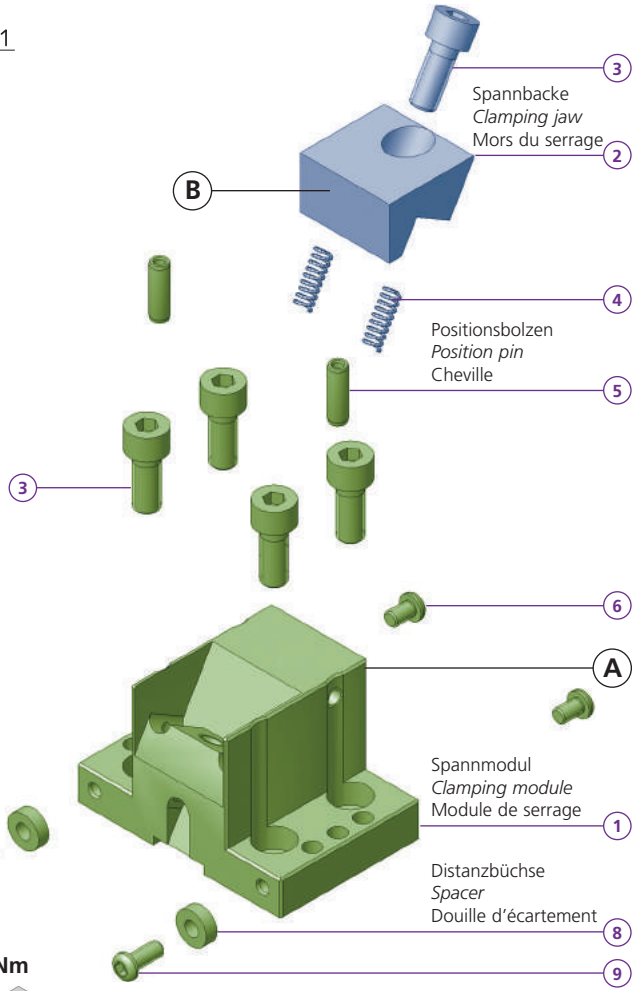
Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 26N35 & 1x B26

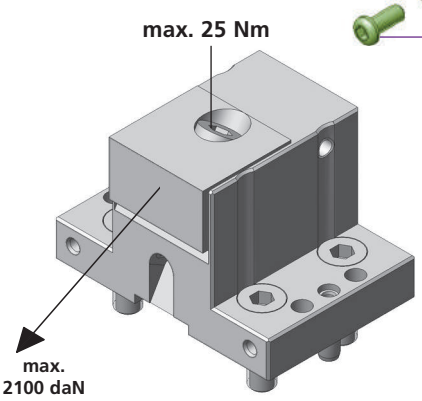


Separat bestellen / *Separate order* / Commander séparément

* = weich / *soft* / doux







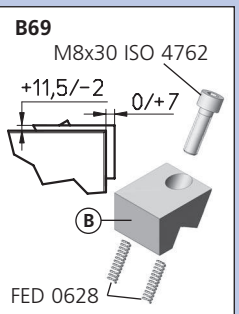
A

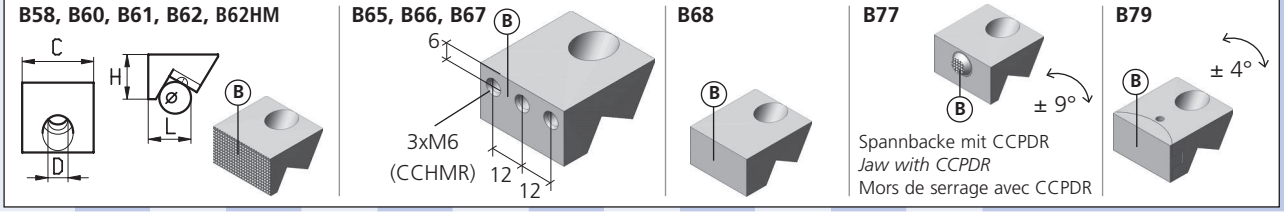
VS1R 38N50 -60		
1	1x	TF140726
2	1x	
3	5x	M8x20 ISO 4762
4	2x	FED 0618
5	2x	CCBO 0802
6	2x	M5x8 ISO 7380
8	2x	CCD 004
9	2x	M5x12 ISO 7380
kg		~1,01

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 38N50 & 1x B60

B

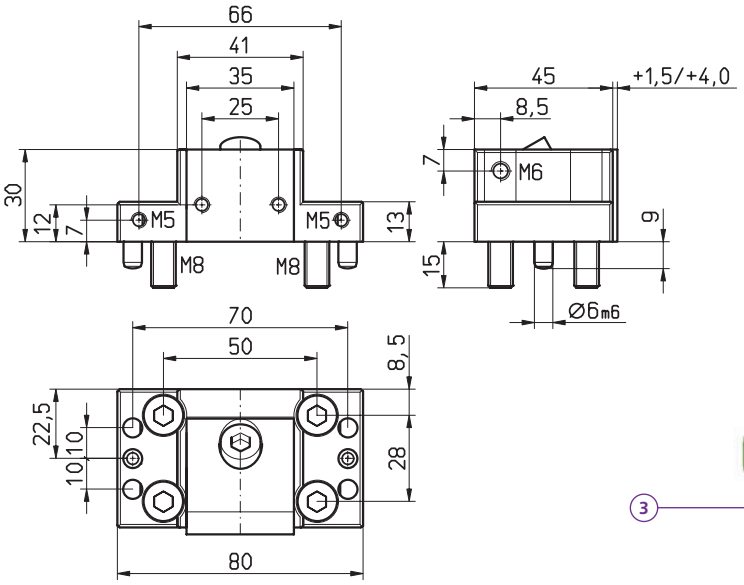
	B58	B60	B61	B62	B62HM	B65	B66	B67	B68	B69	B77	B79	B79R
C	35	35	35	35	35	35	35	35	35	35	35	35	35
H	20	20	20	20	20	20	20	20	20	20	20	20	20
L	24	19	19	19	19	19	19	24	26	22	22	25	25
D	9	9	9	9	9	9	9	9	9	9	9	9	9
ø	12	12	12	12	12	12	12	12	12	12	12	12	12
i	ALU *	56 HRC	56 HRC	*	HM	HV700 x0,2mm	HV700 x0,2mm	HV700 x0,2mm	*	*	56 HRC	HV700 x0,2mm	HV700 x0,2mm

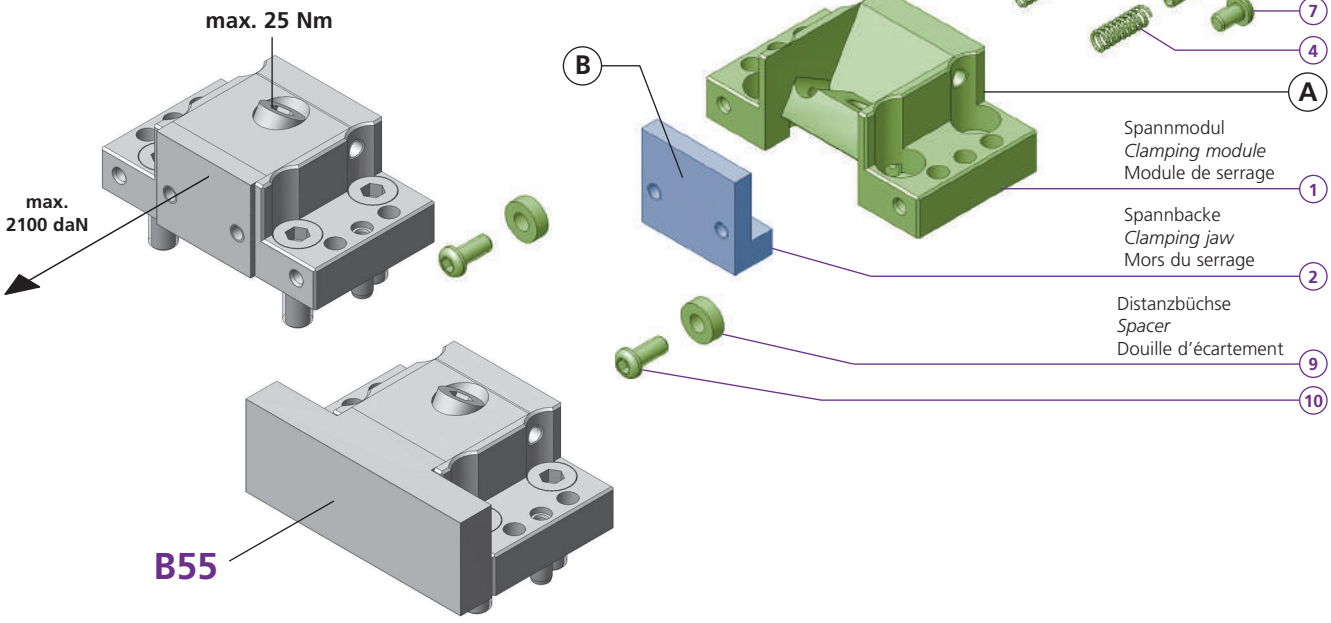




* = weich / *soft* / doux

Separat bestellen / *Separate order* / Commander séparément





VS1F 41L30 -51

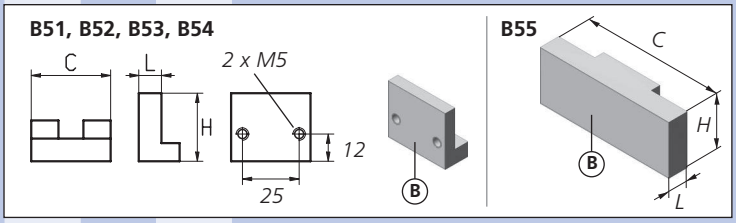
1	1x	TF140727

VS1R 41L30 -51

1	1x	TF140728
2	1x	
3	5x	M8x20 ISO 4762
4	4x	FED 0618
5	2x	CCBO 0802
6	1x	B78
7	2x	M5x8 ISO 7380
9	2x	CCD 004
10	2x	M5x12 ISO 7380
13	2x	CCD 422
14	2x	M3x25 ISO 4762
kg		~0,545 (**B55** = ~0,95)

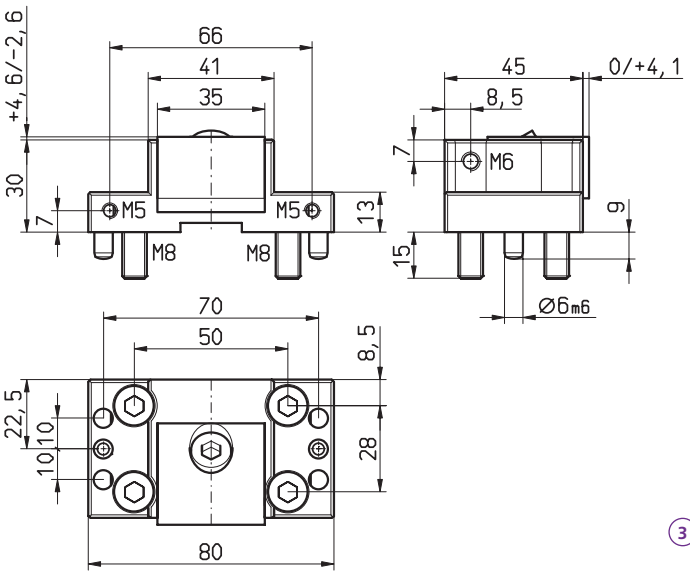
Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 41L30 & 1x B51

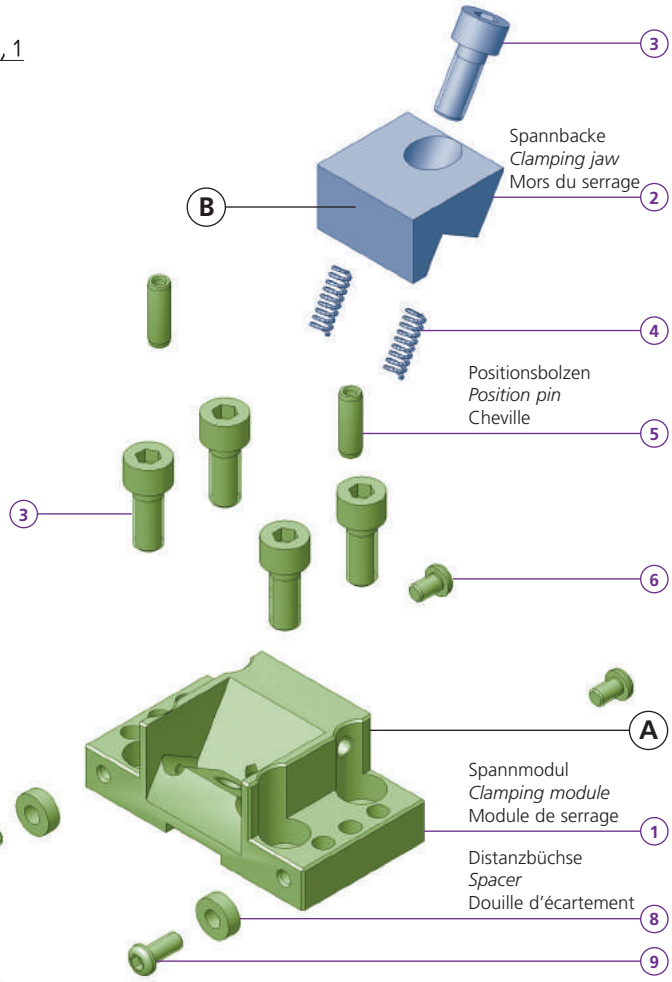
	B51	B52	B53	B54	B55
C	35	35	35	35	80
H	30	30	30	35	30
L	6	6	10	10	11,5
D	-	-	-	-	-
ø	-	-	-	-	-
i	56 HRC	56 HRC	*	*	*

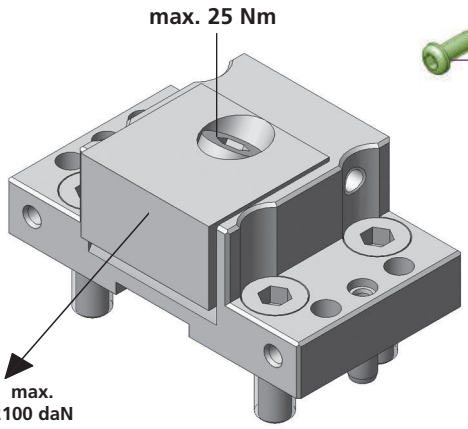


Separat bestellen / *Separate order* / Commander séparément

* = weich / *soft* / doux







A

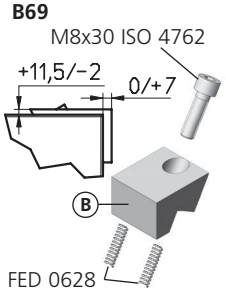
	VS1F 41N30 -60
1	1x TF140729
	VS1R 41N30 -60
1	1x TF140730
2	1x
3	5x M8x20 ISO 4762
4	2x FED 0618
5	2x CCBO 0802
6	2x M5x8 ISO 7380
8	2x CCD 004
9	2x M5x12 ISO 7380
kg	~0,58

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 41N30 & 1x B60

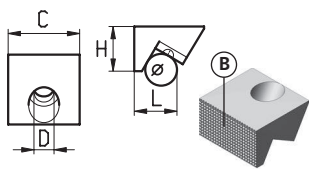
B

	B58	B60	B61	B62	B62HM	B65	B66	B67	B68	B69	B77	B79	B79R
C	35	35	35	35	35	35	35	35	35	35	35	35	35
H	20	20	20	20	20	20	20	20	20	20	20	20	20
L	24	19	19	19	19	19	19	24	26	22	22	25	25
D	9	9	9	9	9	9	9	9	9	9	9	9	9
ø	12	12	12	12	12	12	12	12	12	12	12	12	12
i	ALU *	56 HRC	56 HRC	*	HM	HV700 x0,2mm	HV700 x0,2mm	HV700 x0,2mm	*	*	56 HRC	HV700 x0,2mm	HV700 x0,2mm

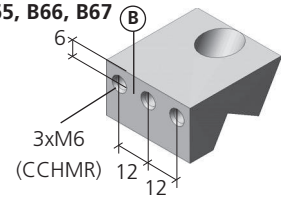
B69



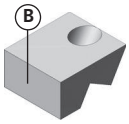
B58, B60, B61, B62, B62HM



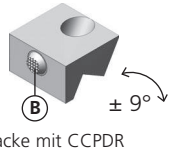
B65, B66, B67



B68

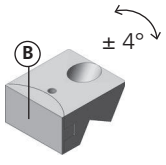


B77



Spannbacke mit CCPDR
Jaw with CCPDR
Mors de serrage avec CCPDR

B79



* = weich / *soft* / doux

Separat bestellen / *Separate order* / Commander séparément

VS1X 68L20 -105

Vorrichtungsbau Modul für Linearbacken

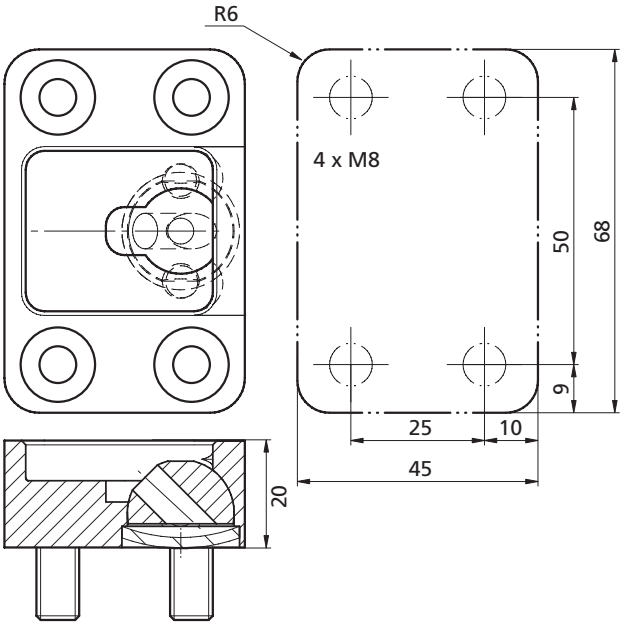
Alle bestehenden Linearbacken passen auf dieses Modul.
Es wird bloss eine Tasche gefräst um das Modul zu positionieren.
Gut geeignet sind die Anschlagbacken Typen **MAND** und **MANF** um als Gegenbacke zu dienen. (**p. 136 / p. 137**)

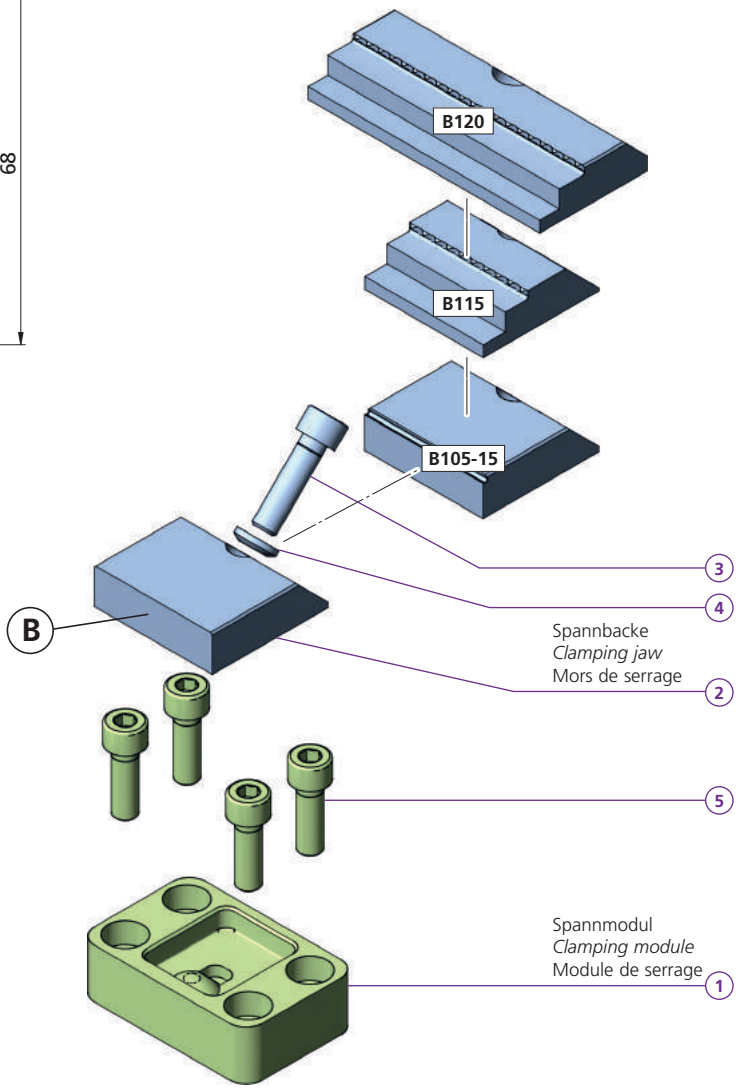
Fixture clamp module for linear jaws

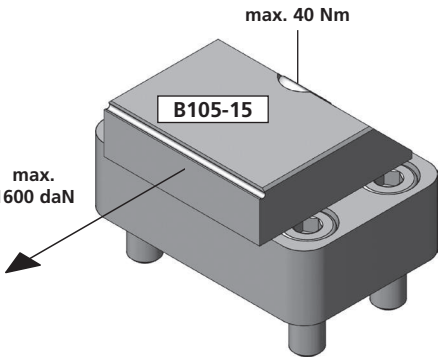
All of our standard linear jaws fit to this clamp module.
All to do is milling a pocket to fit and positioning the clamp modules.
*To use the **MAND** and **MANF** as datum stop will make a perfect match. (**p. 136 / p. 137**)*

Construction de gabarits mors linèaire

Tous les modules linéaires peuvent s'adapter dans le moule de cette module.
On doit seul usiner une poche pour positionner le module dans la plaque du gabarits.
Les modules **MAND** et **MANF** sont propre à prendre comme module fix pour la côté opposé. (**p. 136 / p. 137**)







VS1X 68L20 -105		
1	1x	TB150170
2	1x	
3	1x	M8x25 ISO 4762
4	1x	PCUSR 16
5	4x	M8x25 DIN 912
kg		~0,41

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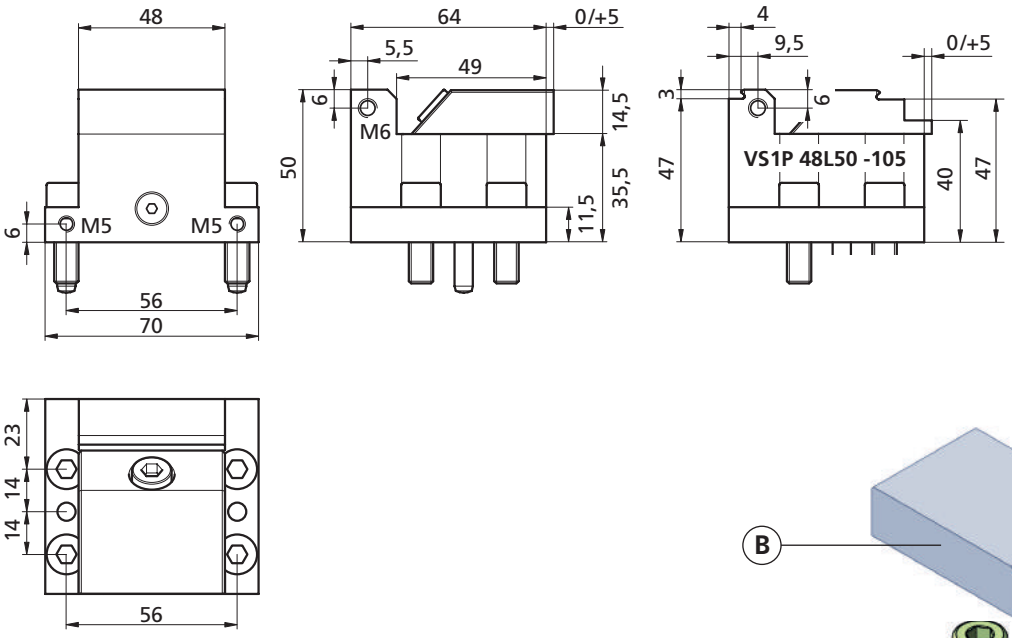
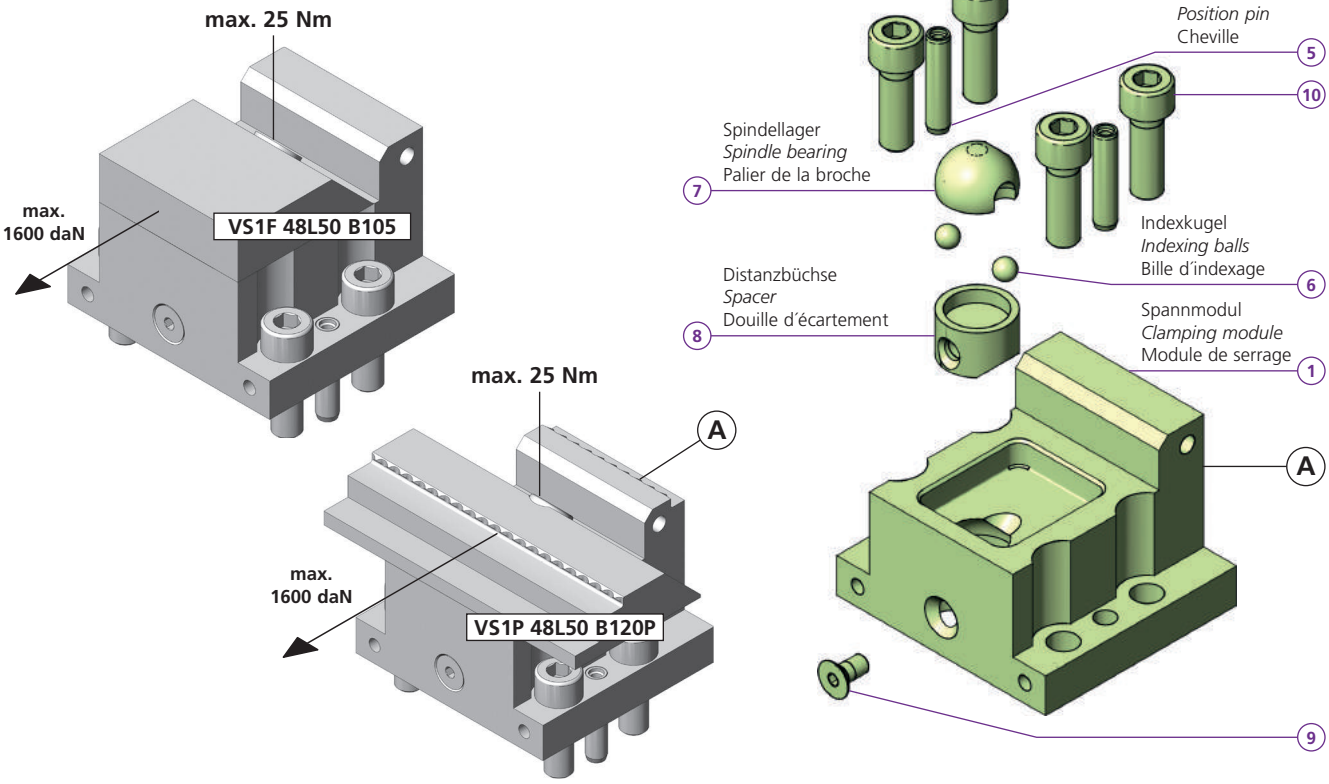
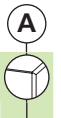
Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1X 68L20 -105 & 1x B105-15







	VS1F 48L50 -105	
1	1x	TK120807
	VS1P 48L50 -105	
1	1x	TK120761
2	1x	
3	1x	M8x30 ISO 4762
4	1x	PCUSR 14
5	1x	6-m6x26 DIN 79790
6	2x	BN 869 d=6
7	1x	PCKMR 45 M8
8	2x	TS 120001-04
9	1x	M5x10 DIN 7991
10	4x	M8x25 DIN 912
kg		~1,21

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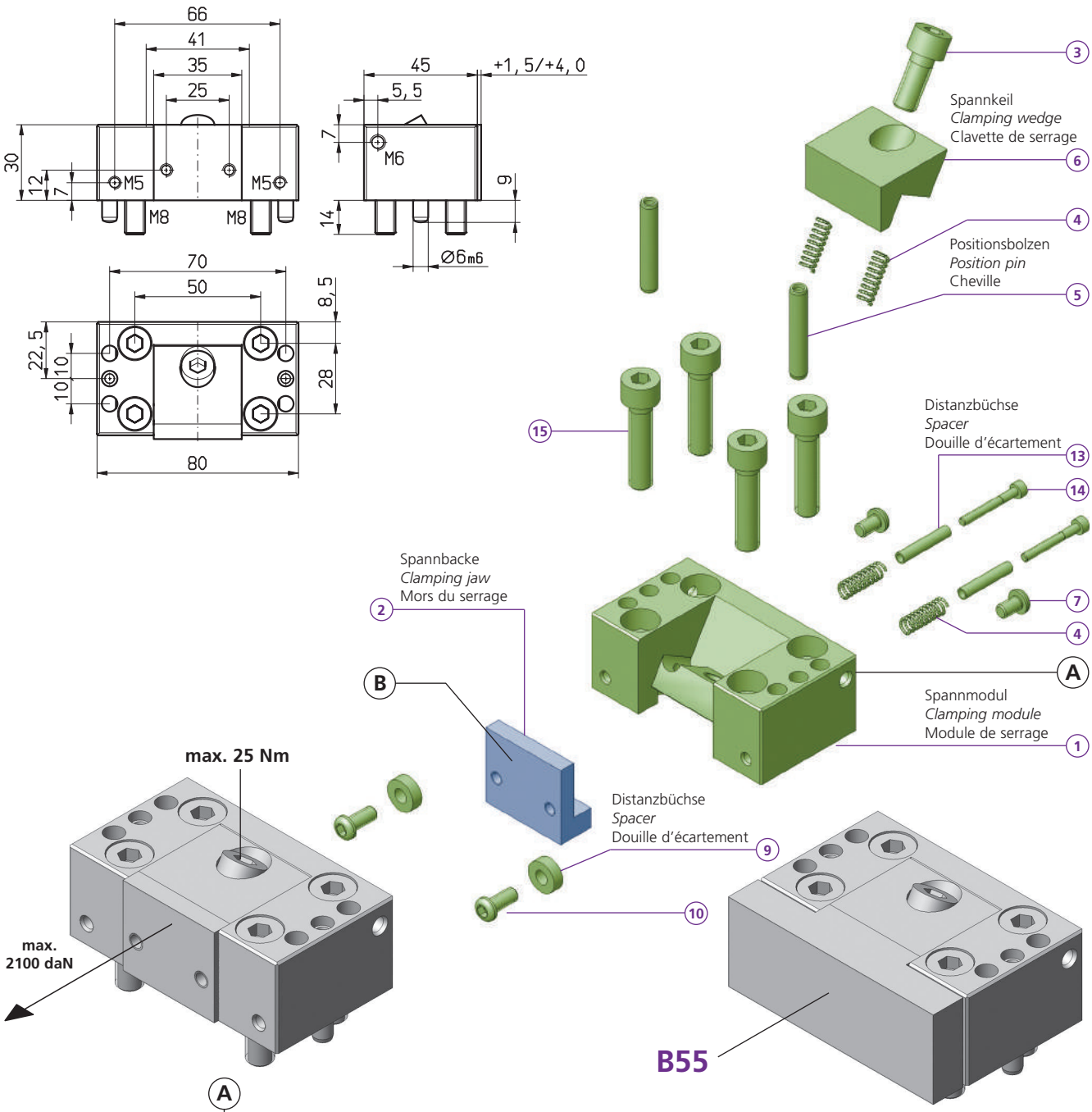
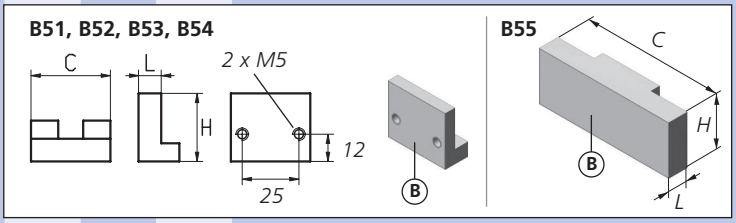
Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1F 48L50 & 1x B105



Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 80L30 & 1x B51

	VS1F 80L30 -51	
1	1x	TF140731
	VS1R 80L30 -51	
1	1x	TF140732
2	1x	
3	1x	M8x20 ISO 4762
4	4x	FED 0618
5	2x	CCBO 0801
6	1x	B78
7	2x	M5x8 ISO 7380
9	2x	CCD 004
10	2x	M5x12 ISO 7380
13	2x	CCD 422
14	2x	M3x25 ISO 4762
15	4x	M8x35 ISO 4762
kg		~0,74 (**B55** = ~0,95)

	B51	B52	B53	B54	B55
C	35	35	35	35	80
H	30	30	30	35	30
L	6	6	10	10	11,5
D	-	-	-	-	-
ø	-	-	-	-	-
i	HV700 x0,2mm	HV700 x0,2mm	*	*	*

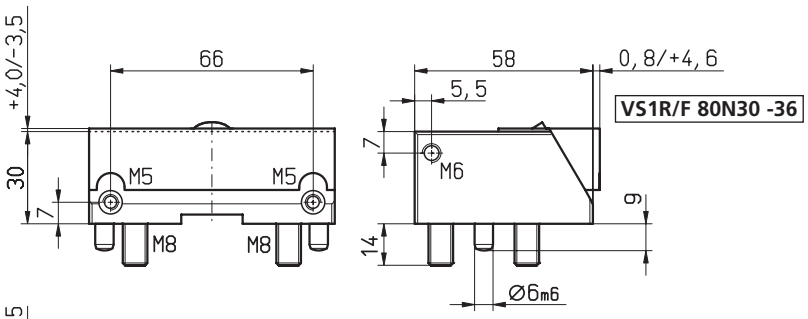


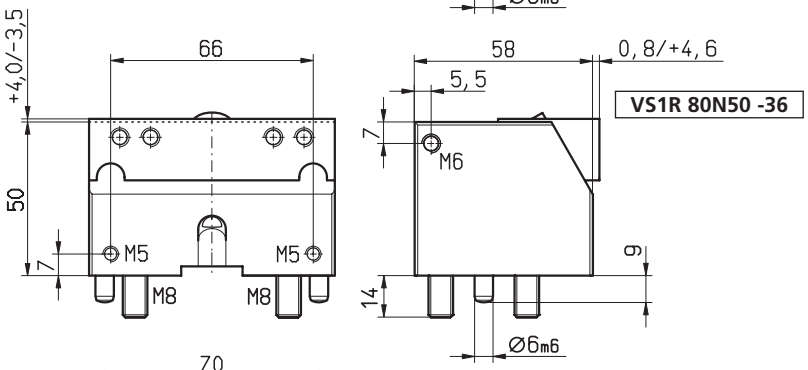
Separat bestellen / *Separate order* / Commander séparément

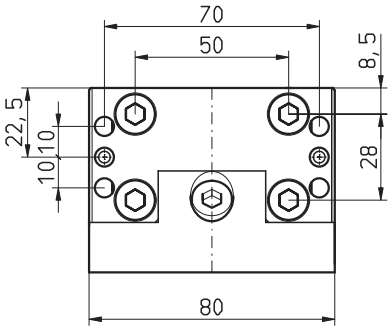
* = weich / *soft* / doux

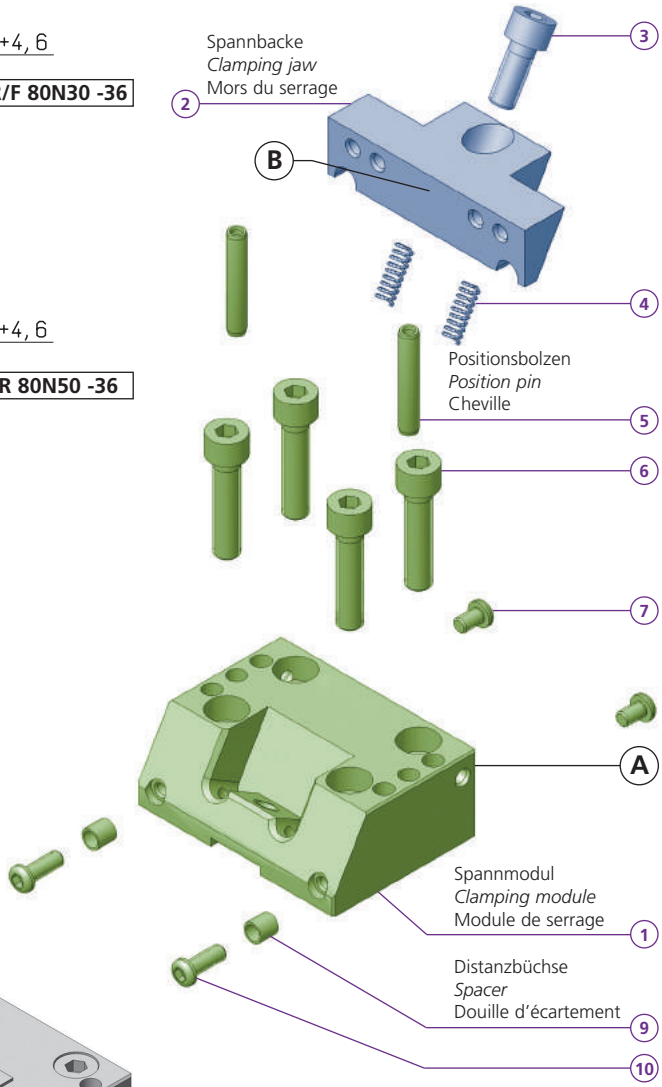
VS1R/F 80N30 -36
VS1R 80N50 -36

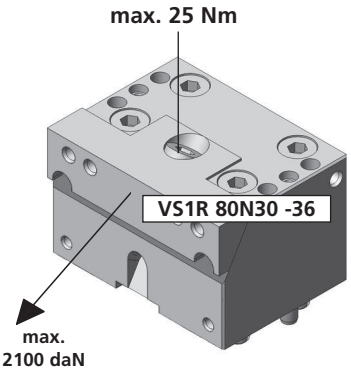
microCLAMP

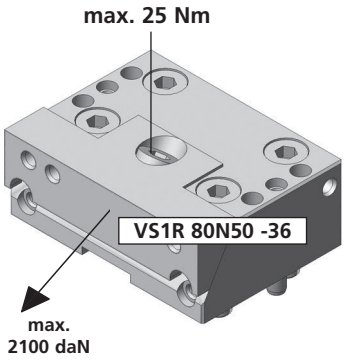




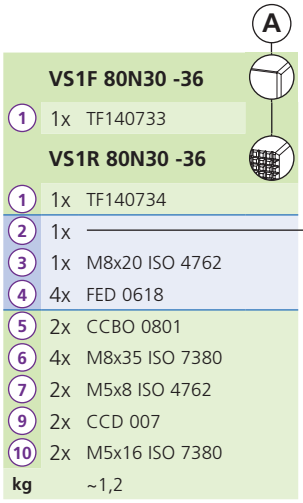


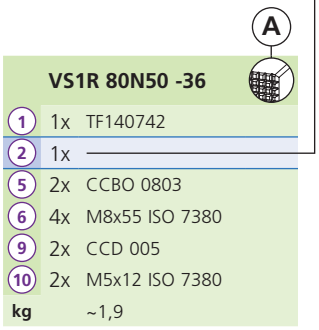


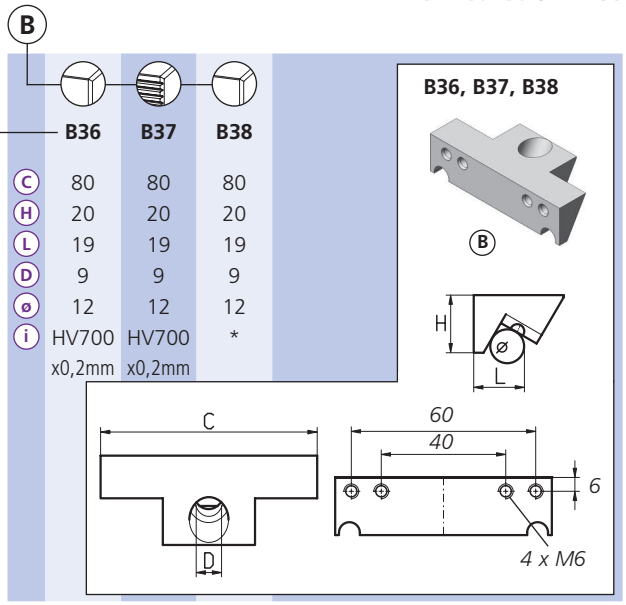




Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 80N30 & 1x B36

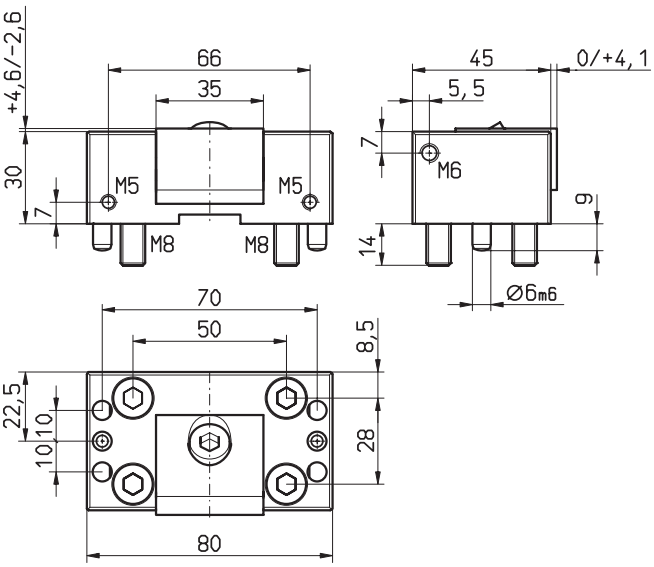


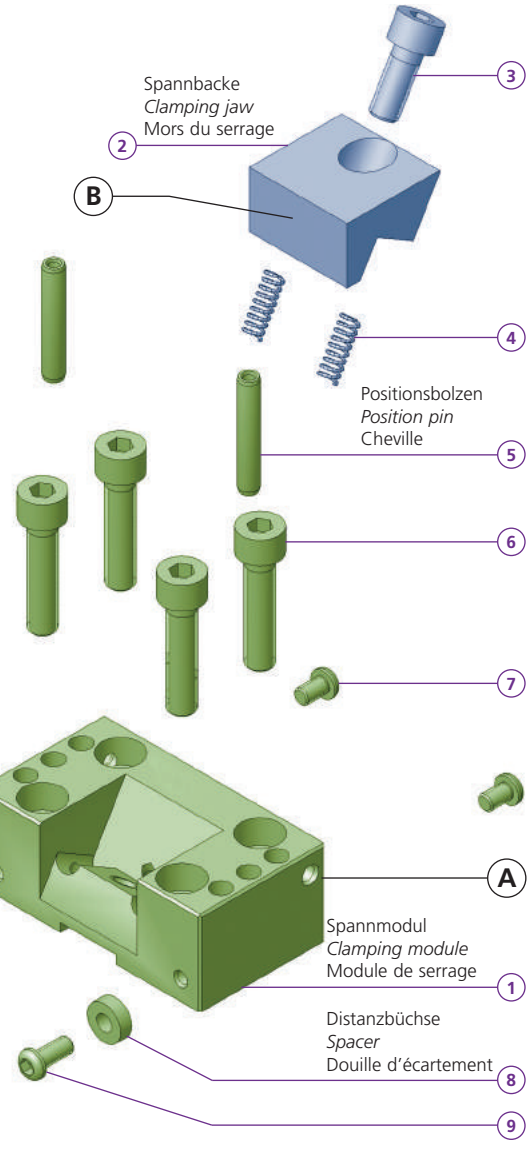


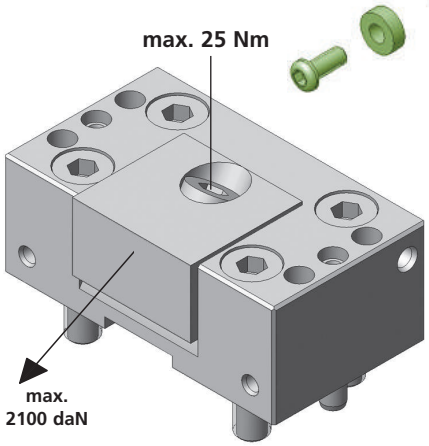


* = weich / *soft* / doux

Separat bestellen / *Separate order* / Commander séparément





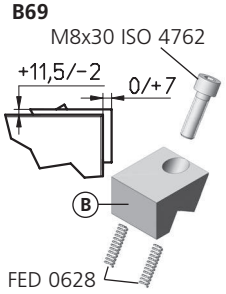


	VS1F 80N30 -60	
1	1x	TF140735
	VS1R 80N30 -60	
1	1x	TF140736
2	1x	
3	1x	M8x20 ISO 4762
4	2x	FED 0618
5	2x	CCBO 0801
6	4x	M8x35 ISO 4762
7	2x	M5x8 ISO 7380
8	2x	CCD 004
9	2x	M5x12 ISO 7380
kg		~0,74

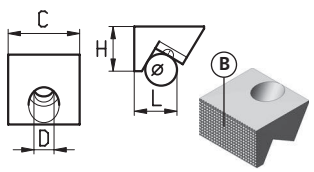
Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1F 80N30 & 1x B60

	B58	B60	B61	B62	B62HM	B65	B66	B67	B68	B69	B77	B79	B79R
C	35	35	35	35	35	35	35	35	35	35	35	35	35
H	20	20	20	20	20	20	20	20	20	20	20	20	20
L	24	19	19	19	19	19	19	24	26	22	22	25	25
D	9	9	9	9	9	9	9	9	9	9	9	9	9
ø	12	12	12	12	12	12	12	12	12	12	12	12	12
i	ALU *	56 HRC	56 HRC	*	HM	HV700 x0,2mm	HV700 x0,2mm	HV700 x0,2mm	*	*	56 HRC	HV700 x0,2mm	HV700 x0,2mm

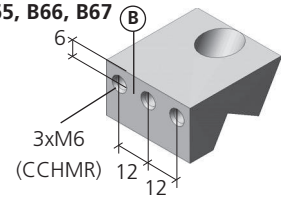
B69



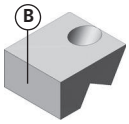
B58, B60, B61, B62, B62HM



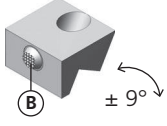
B65, B66, B67



B68

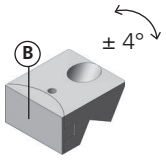


B77

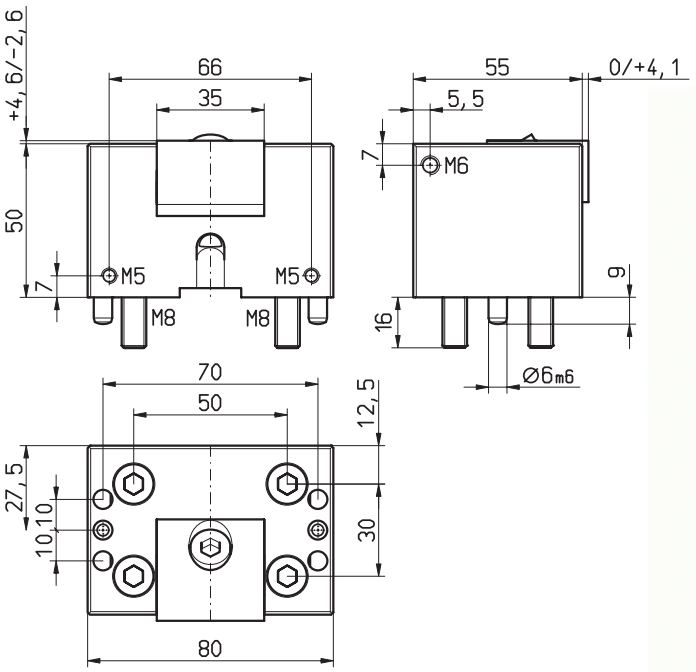


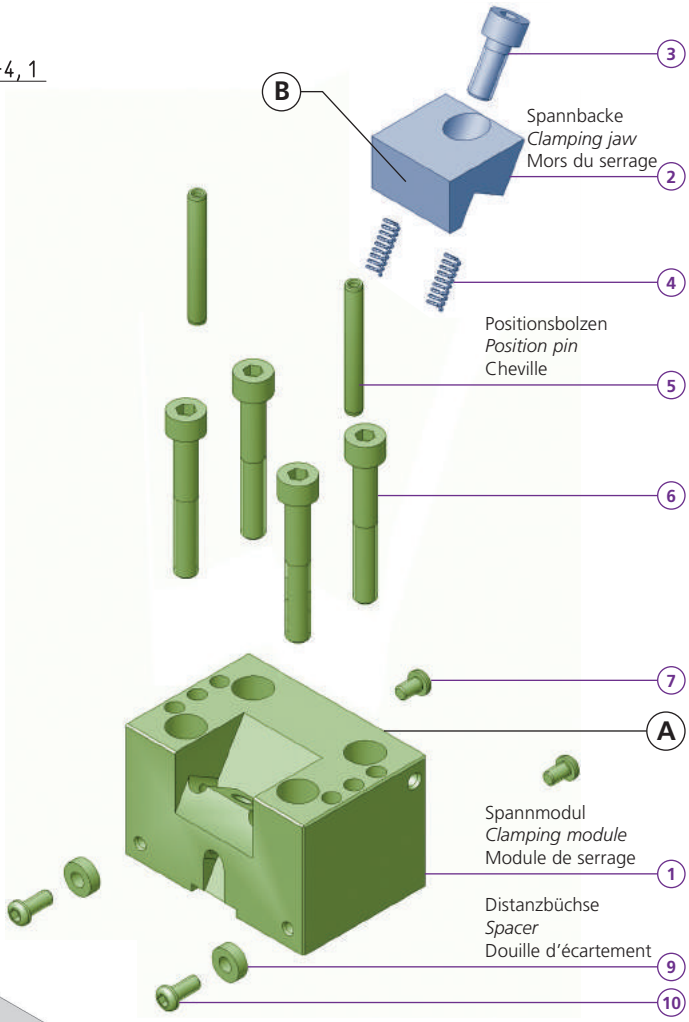
Spannbacke mit CCPDR
Jaw with CCPDR
Mors de serrage avec CCPDR

B79

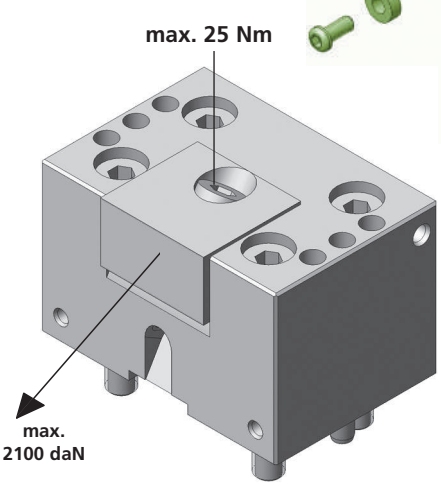


Separat bestellen / *Separate order* / Commander séparément



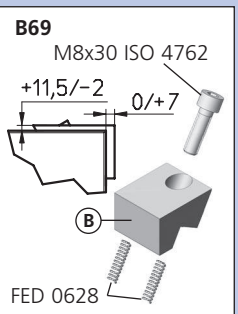


VS1R 80N50 -60		
1	1x	TF140737
2	1x	
3	1x	M8x20 ISO 4762
4	2x	FED 0618
5	2x	CCBO 0803
6	4x	M8x55 ISO 4762
7	2x	M5x8 ISO 7380
9	2x	CCD 004
10	2x	M5x12 ISO 7380
kg		~1,6

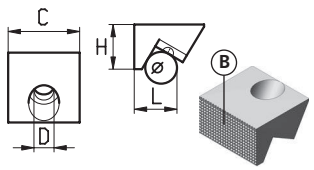


Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 80N50 & 1x B60

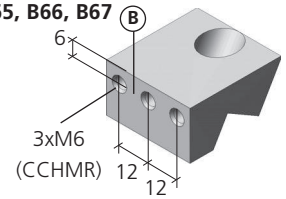
	B58	B60	B61	B62	B62HM	B65	B66	B67	B68	B69	B77	B79	B79R
C	35	35	35	35	35	35	35	35	35	35	35	35	35
H	20	20	20	20	20	20	20	20	20	20	20	20	20
L	24	19	19	19	19	19	19	24	26	22	22	25	25
D	9	9	9	9	9	9	9	9	9	9	9	9	9
ø	12	12	12	12	12	12	12	12	12	12	12	12	12
i	ALU *	56 HRC	56 HRC	*	HM	HV700 x0,2mm	HV700 x0,2mm	HV700 x0,2mm	*	*	56 HRC	HV700 x0,2mm	HV700 x0,2mm



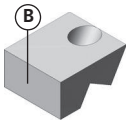
B58, B60, B61, B62, B62HM



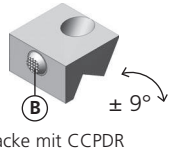
B65, B66, B67



B68

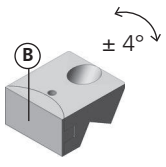


B77



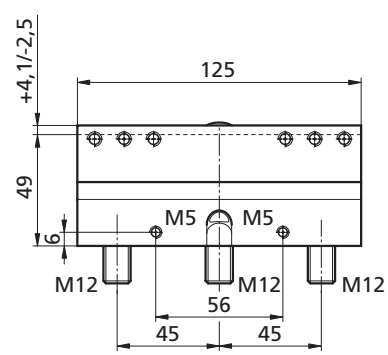
Spannbacke mit CCPDR
Jaw with CCPDR
Mors de serrage avec CCPDR

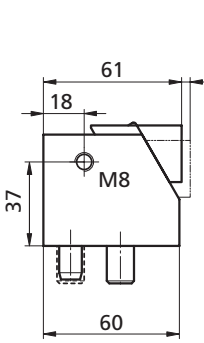
B79

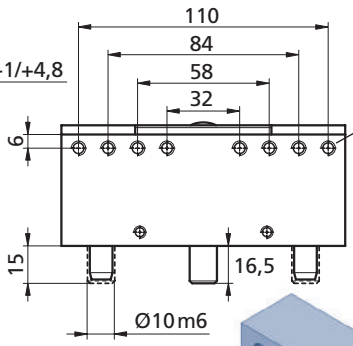


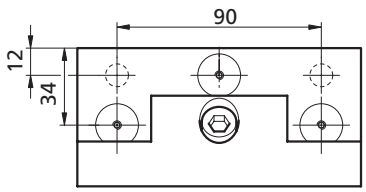
* = weich / *soft* / doux

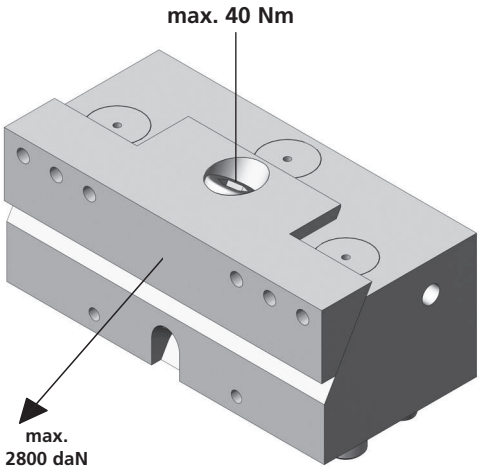
Separat bestellen / *Separate order* / Commander séparément

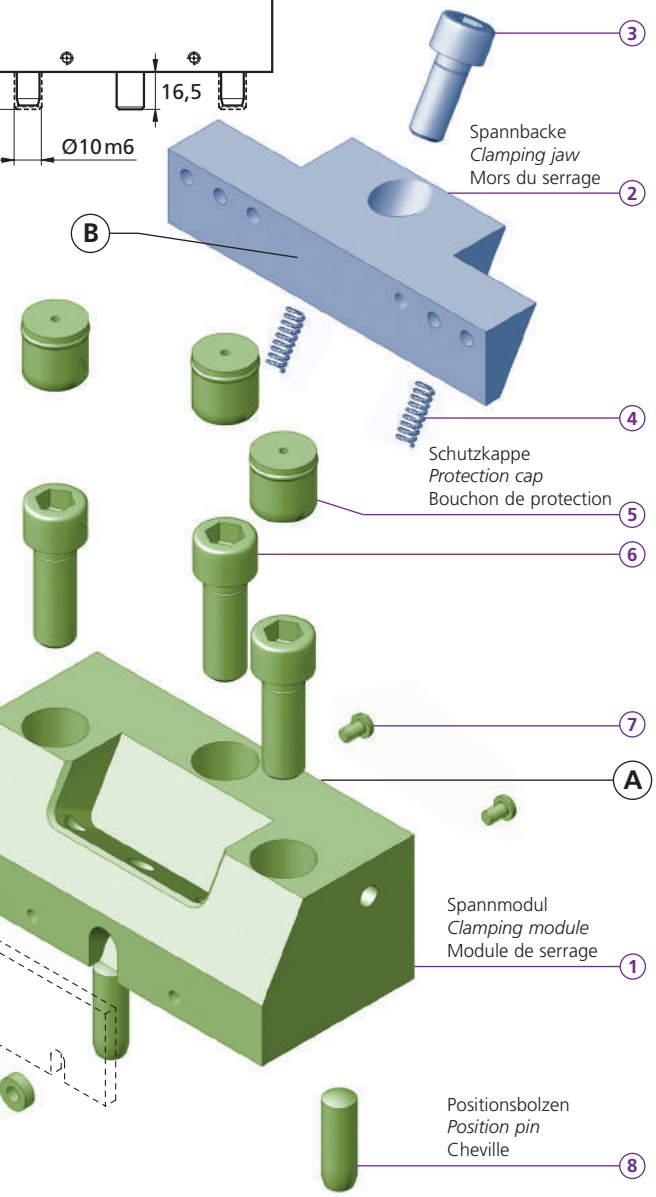












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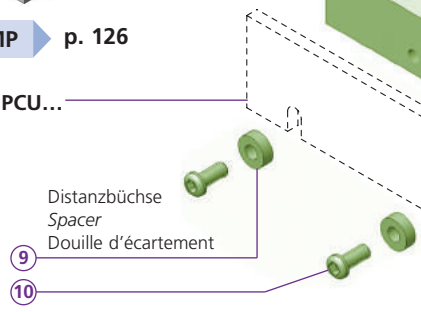
Parallelunterlage
Steel parallels
Cales parallèles

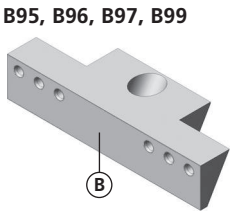
PCU...

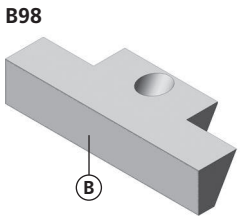


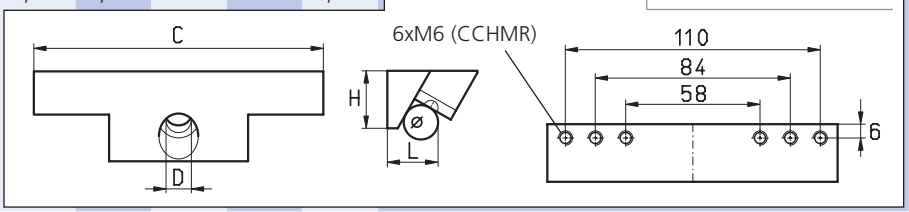
Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS1R 125N49 & 1x B95

	VS1F 125N49 -95
1	1x TF140738
	VS1R 125N49 -95
1	1x TF140739
2	1x
3	1x M10x25 ISO 4762
4	2x FED 0618
5	3x PCPF 16L18 Alu
6	3x M12x35 ISO 4762
7	3x M5x8 ISO 7380
8	2x 10m 6x30 ISO 8734
9	2x CCD 004
10	2x M5x12 ISO 7380
kg	~2,6

	B95	B96	B97	B98	B99
C	125	125	125	125	125
H	25	25	25	25	25
L	23	23	23	30	23
D	11	11	11	11	11
ø	15	15	15	15	15
i	HV700 x0,2mm	HV700 x0,2mm	*	*	HV700 x0,2mm

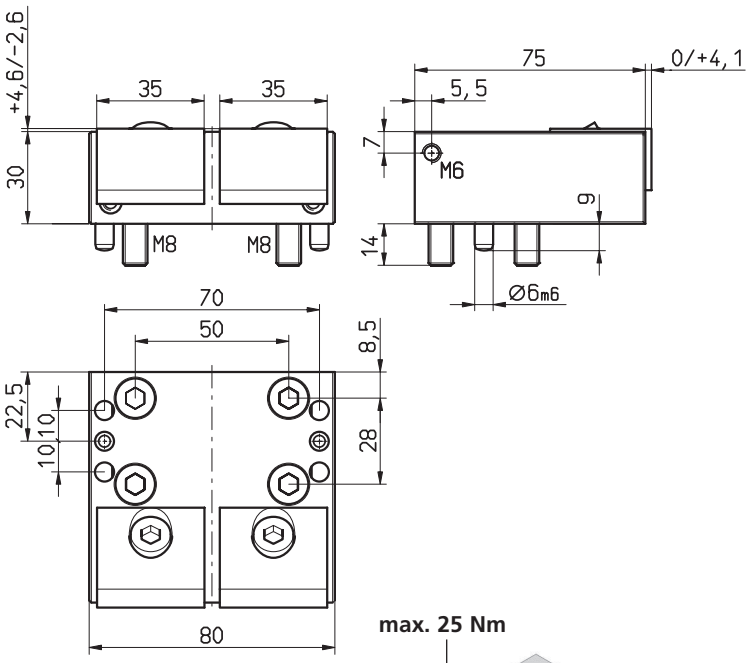


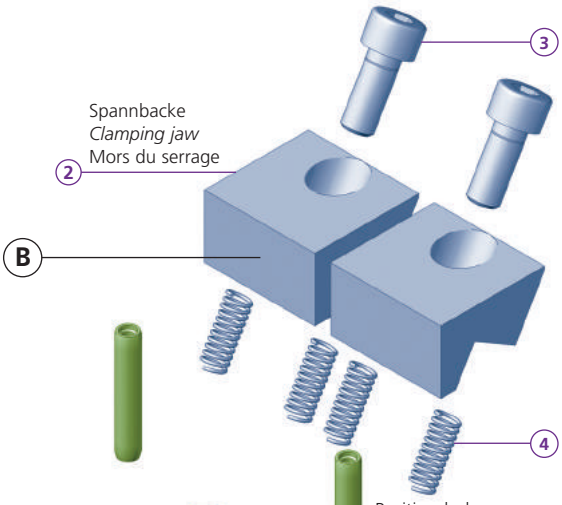


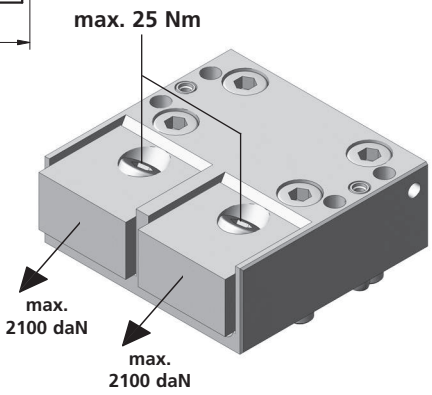


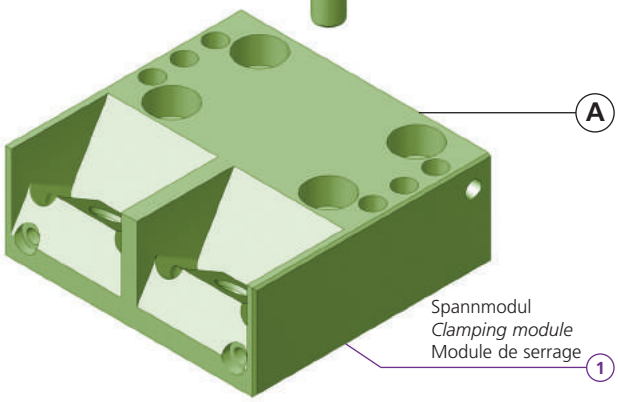
* = weich / *soft* / doux

Separat bestellen / *Separate order* / Commander séparément





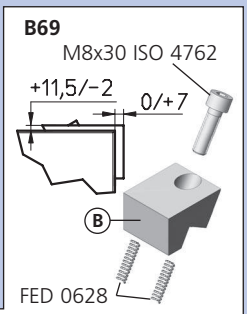


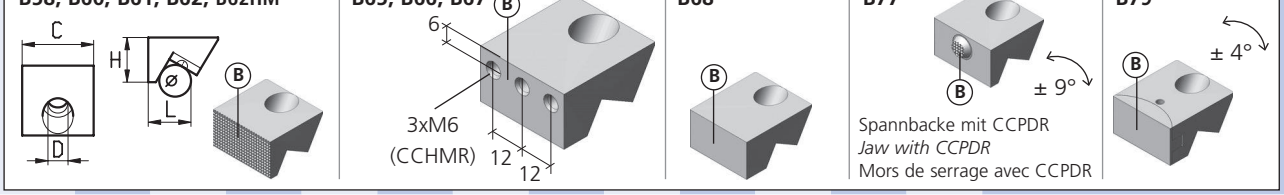


VS2R 80N30 -60	
1	1x TF140740
2	2x
3	2x M8x20 ISO 4762
4	4x FED 0618
5	2x CCBO 0801
6	4x M8x35 ISO 4762
kg	~1,3

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS2R 80N30 & 2x B60

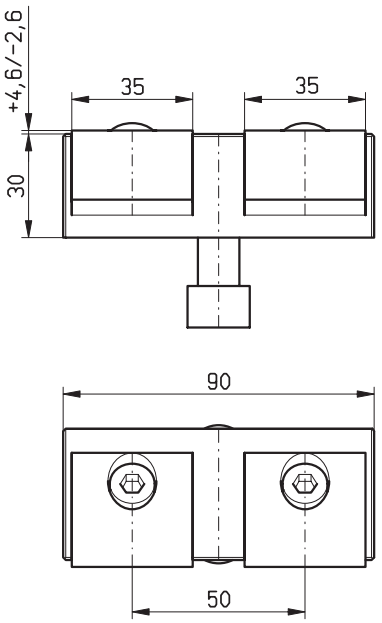
	B58	B60	B61	B62	B62HM	B65	B66	B67	B68	B69	B77	B79	B79R
C	35	35	35	35	35	35	35	35	35	35	35	35	35
H	20	20	20	20	20	20	20	20	20	20	20	20	20
L	24	19	19	19	19	19	19	24	26	22	22	25	25
D	9	9	9	9	9	9	9	9	9	9	9	9	9
ø	12	12	12	12	12	12	12	12	12	12	12	12	12
i	ALU *	56 HRC	56 HRC	*	HM	HV700 x0,2mm	HV700 x0,2mm	HV700 x0,2mm	*	*	56 HRC	HV700 x0,2mm	HV700 x0,2mm

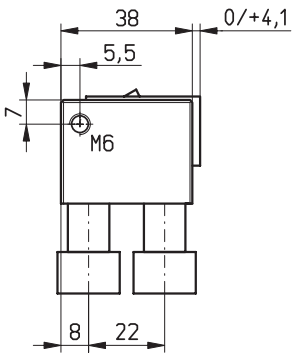


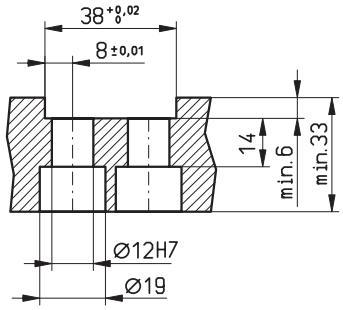


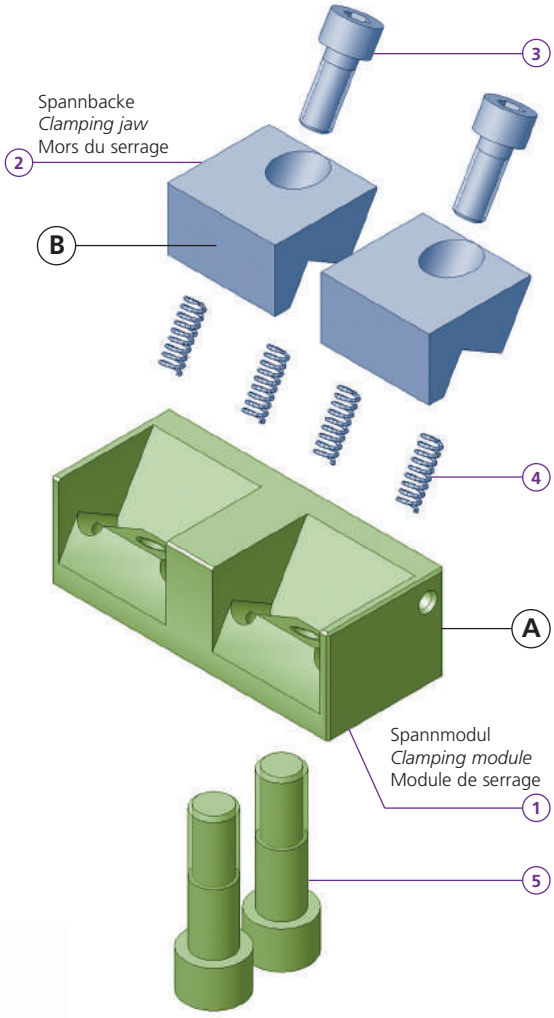
* = weich / *soft* / doux

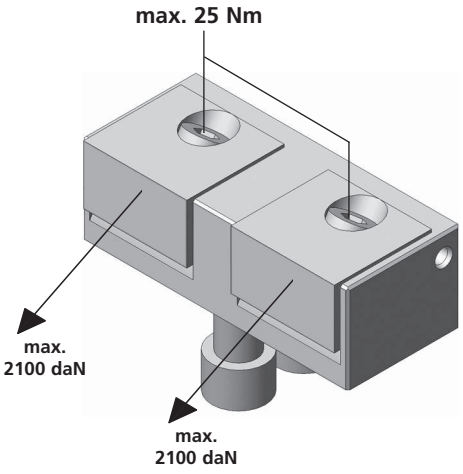
Separat bestellen / *Separate order* / Commander séparément











A

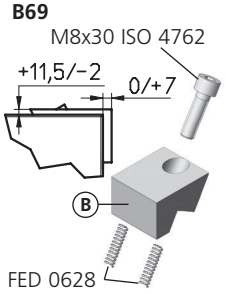
VS2F 90N30 -60	
1	1x TF140741
2	2x
3	2x M8x20 ISO 4762
4	4x FED 0618
5	2x TWPAS 1232
kg	~0,85

Bestellbeispiel / *Ordering example* / Exemple de commande:
1x VS2F 90N30 & 2x B60

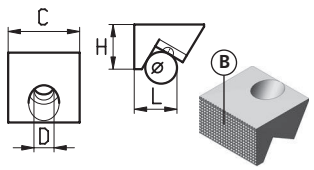
B

	B58	B60	B61	B62	B62HM	B65	B66	B67	B68	B69	B77	B79	B79R
C	35	35	35	35	35	35	35	35	35	35	35	35	35
H	20	20	20	20	20	20	20	20	20	20	20	20	20
L	24	19	19	19	19	19	19	24	26	22	22	25	25
D	9	9	9	9	9	9	9	9	9	9	9	9	9
ø	12	12	12	12	12	12	12	12	12	12	12	12	12
i	ALU *	56 HRC	56 HRC	*	HM	HV700 x0,2mm	HV700 x0,2mm	HV700 x0,2mm	*	*	56 HRC	HV700 x0,2mm	HV700 x0,2mm

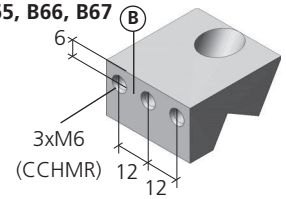
B69



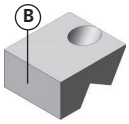
B58, B60, B61, B62, B62HM



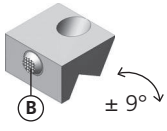
B65, B66, B67



B68

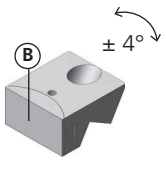


B77



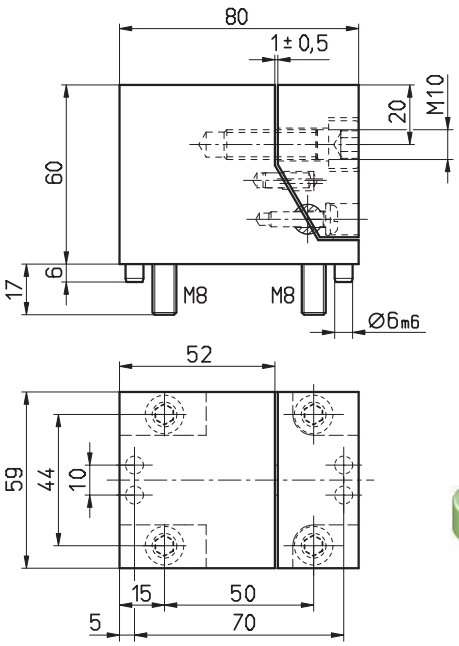
Spannbacke mit CCPDR
Jaw with CCPDR
Mors de serrage avec CCPDR

B79

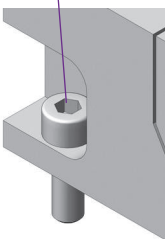


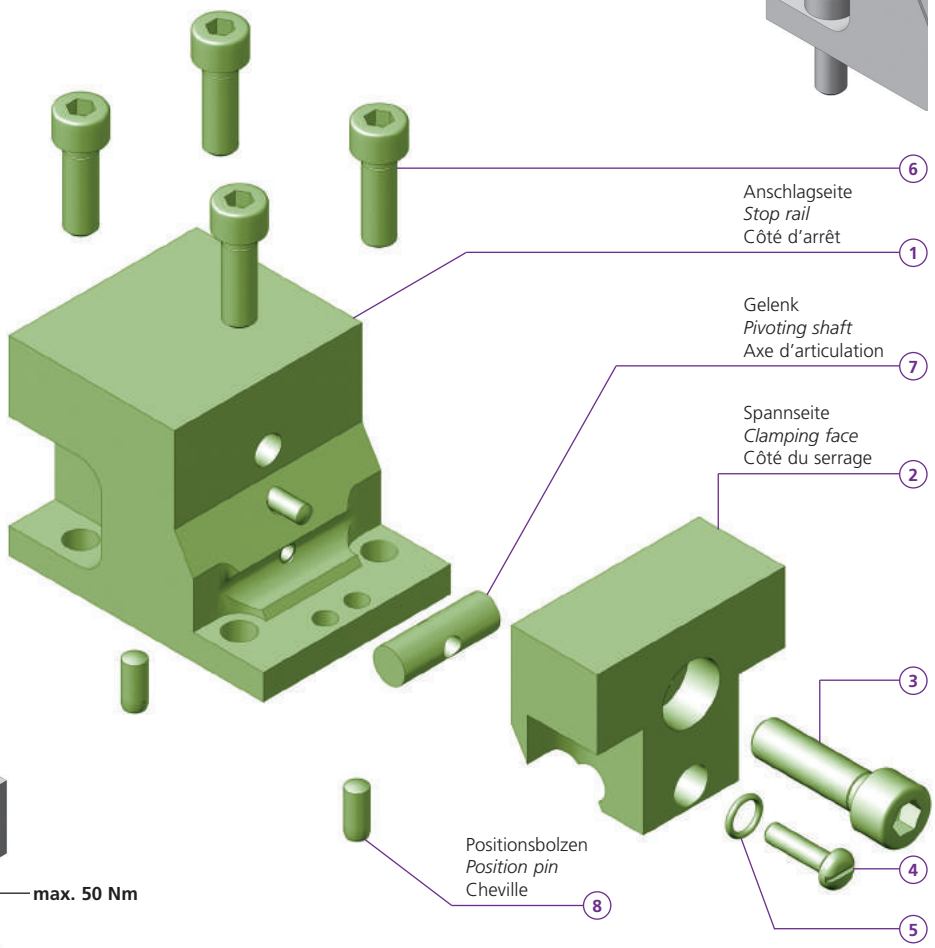
Separat bestellen / *Separate order* / Commander séparément

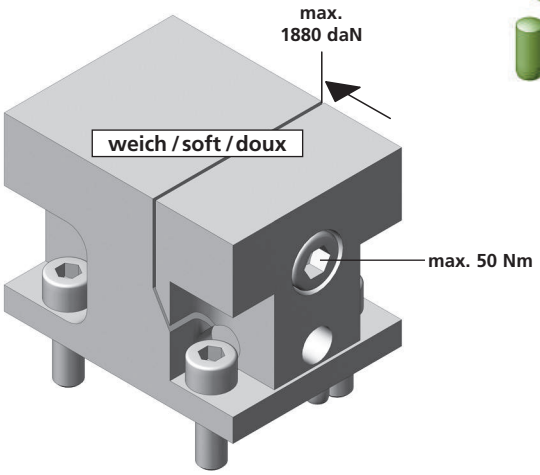
* = weich / *soft* / doux



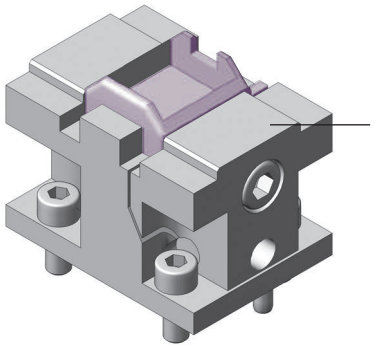
Empfohlener Sechskantschlüssel
Recommended hexagon wrench
Clé hexagonale recommandée
PB 2212 L/6 (SWISS TOOLS)







Anwendungsbeispiel
Application example
Exemple d'application

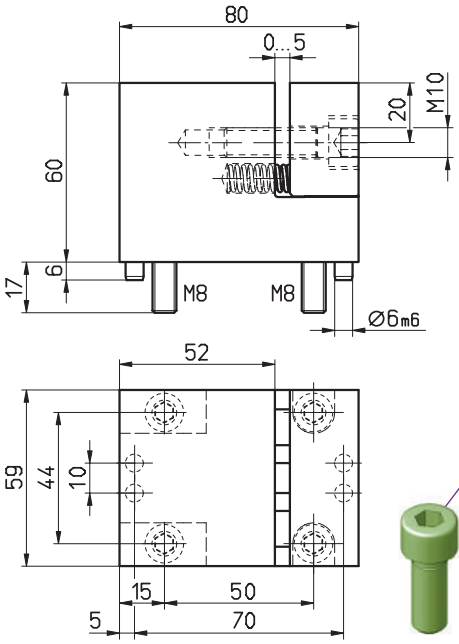


Spannstelle an Werkstück angepasst und nitriert.
Clamping face machined to the shape of the workpiece and nitrided.
Position de serrage adaptée à la pièce et nitrurée.

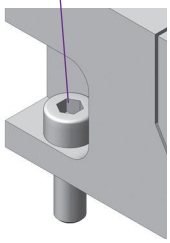
	* VS1X 59L60 K
1	1x T00296
2	1x T00295
3	1x M10x35 ISO 4762
4	1x M5x20 BN 344
5	1x OR Ø 8x1,5
6	4x M8x25 ISO 4762
7	1x VSX59L60KG
8	2x 6m 6x14 DIN 6325
kg	~1,89

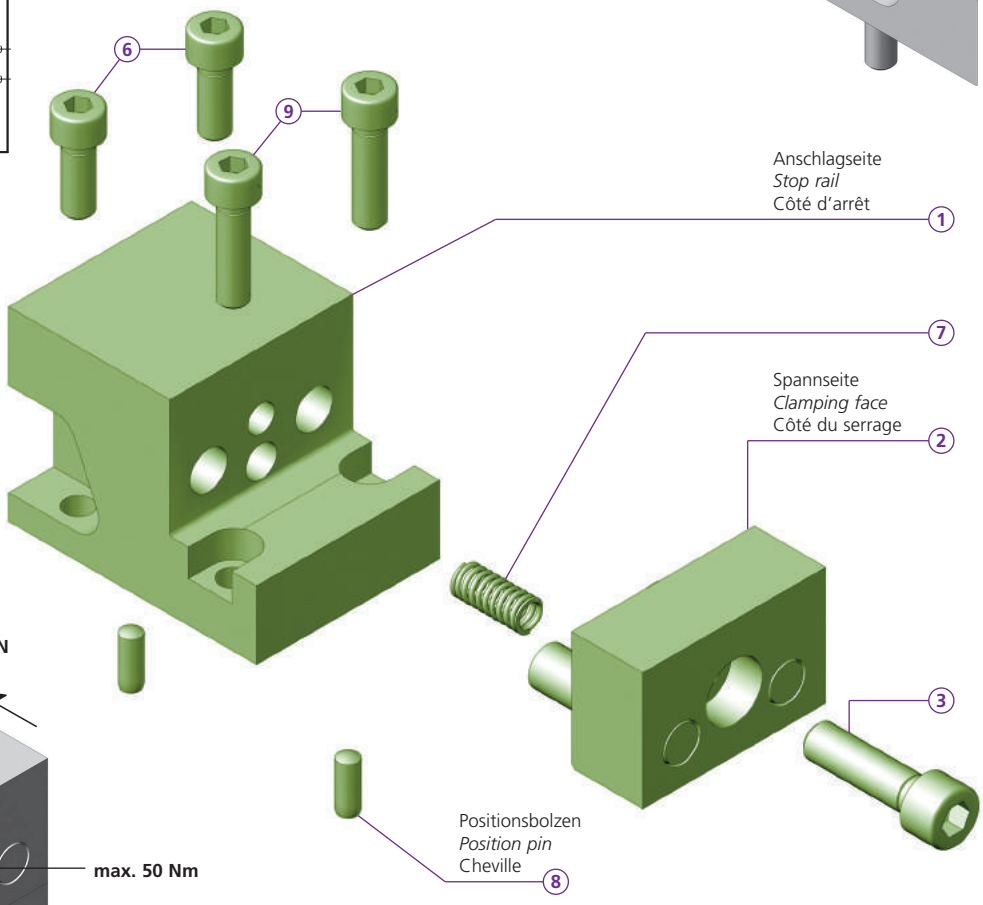
Bestellbeispiel / *Ordering example* / Exemple de commande: VS1X 59L60 K

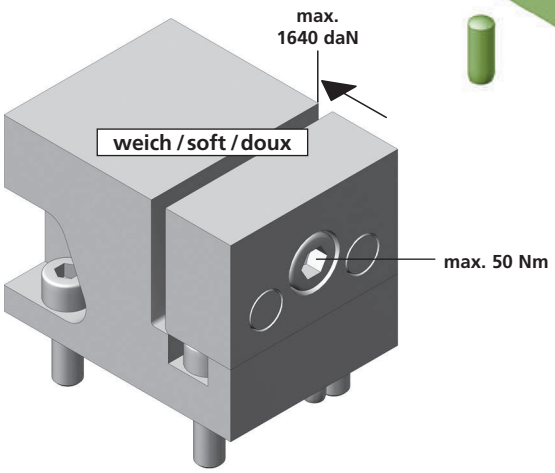
*** = Stahl / *Steel* / Acier 1.2312**



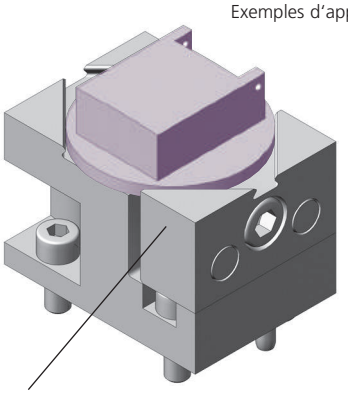
Empfohlener Sechskantschlüssel
Recommended hexagon wrench
Clé hexagonale recommandée
PB 2212 L/6 (SWISS TOOLS)

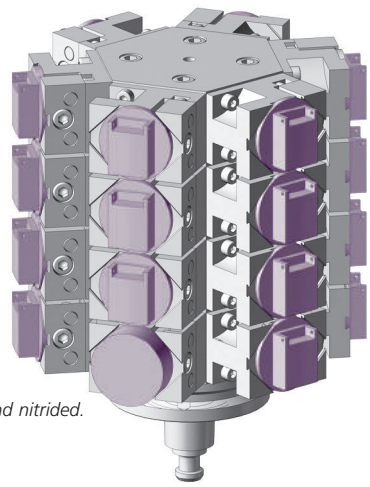






Anwendungsbeispiele
Sample applications
Exemples d'applications





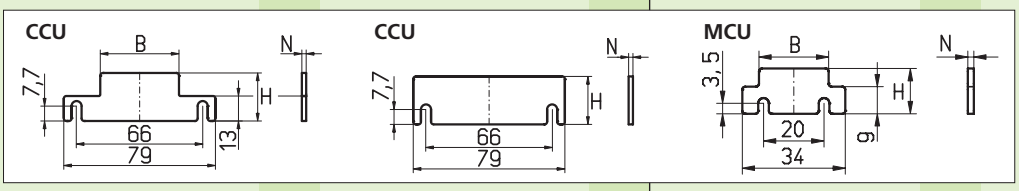
Spannstelle an Werkstück angepasst und nitriert.
Clamping face machined to the shape of the workpiece and nitrided.
Position de serrage adaptée à la pièce et nitrurée.

	* VS1X 59L60 H5
1	1x T00316
2	1x T00315
3	1x M10x35 ISO 4762
6	2x M8x25 ISO 4762
7	1x FED 0833
8	2x 6m 6x14 DIN 6325
9	2x M8x30 ISO 4762
kg	~1,94

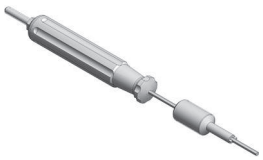
Bestellbeispiel / *Ordering example* / Exemple de commande: VS1X 59L60 H5

*** = Stahl / *Steel* / Acier 1.2312**

durchgehärtet / *through hardened* / trempé								nitriert / *nitrated* / nitruré							
H	26mm	B	N	H	41mm	B	N	H	23mm	B	N	H	41mm	B	N
15	**CCU 15026**	26	2,2	15	**CCU 15081**	41	2,2	11	**MCU 11037**	23	2	15	**CCU 15083**	41	3
20	**CCU 20026**	26	2,2	20	**CCU 20081**	41	2,2	15	**MCU 15037**	23	2	20	**CCU 20083**	41	3
25	**CCU 25026**	26	2,2	25	**CCU 25081**	41	2,2	18	**MCU 18037**	23	2	25	**CCU 25083**	41	3
30	**CCU 30026**	26	2,2	27,5	**CCU 27581**	41	2,2	20	**MCU 20037**	23	2	27,5	**CCU 27583**	41	3
32,5	**CCU 32526**	26	2,2	30	**CCU 30081**	41	2,2	22,5	**MCU 22537**	23	2				
H	**38mm**	**B**	**N**	**H**	**80mm**	**B**	**N**	**H**	**26mm**	**B**	**N**	**H**	**80mm**	**B**	**N**
30	**CCU 30039**	38	2,2	15	**CCU 15080**	79	2,2	15	**CCU 15027**	26	3	15	**CCU 15082**	79	3
35	**CCU 35039**	38	2,2	20	**CCU 20080**	79	2,2	20	**CCU 20027**	26	3	20	**CCU 20082**	79	3
40	**CCU 40039**	38	2,2	25	**CCU 25080**	79	2,2	25	**CCU 25027**	26	3	25	**CCU 25082**	79	3
45	**CCU 45039**	38	2,2	27,5	**CCU 27580**	79	2,2	30	**CCU 30027**	26	3	27,5	**CCU 27582**	79	3
				30	**CCU 30080**	79	2,2	32,5	**CCU 32527**	26	3				
				35	**CCU 35080**	79	2,2								
				40	**CCU 40080**	79	2,2								
				45	**CCU 45080**	79	2,2								

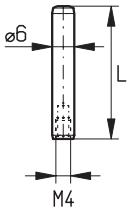


Schraubenzieher mit Konterung
Screwdriver with holding sleeve
Tournevis pour chevilles extensibles



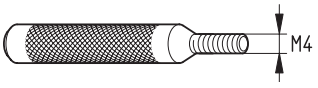
CCBX SK

Positionsbolzen
Position pin
Cheville de positionnement



		L
CCBO	**0801**	36
CCBO	**0802**	20
CCBO	**0803**	50

Bolzen-Auszieher
Pin puller
Extracteur de chevilles



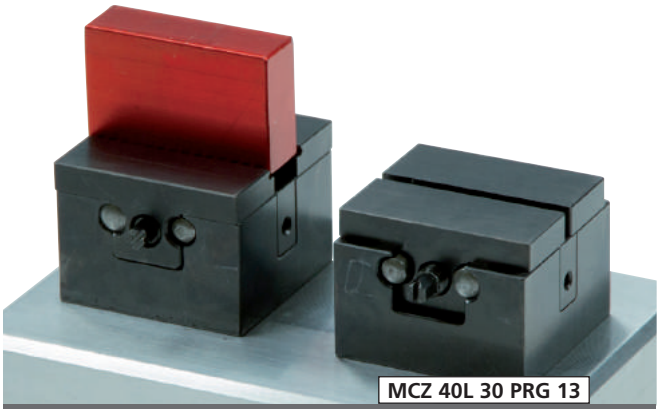
CCAZ 1050

Positionierstift (spreizbar)
Locating pin *(expandable)*
Goupille d'arrêt (extensible)

CCBX 0802

MCZ 100 L50

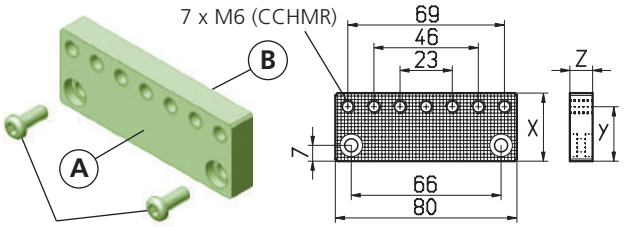
Mehr Informationen siehe Zentrischspanner
For more information check the self centring vise (Seite / *Page* / Page 256)
Pour plus d'informations visiter le étau auto centrant



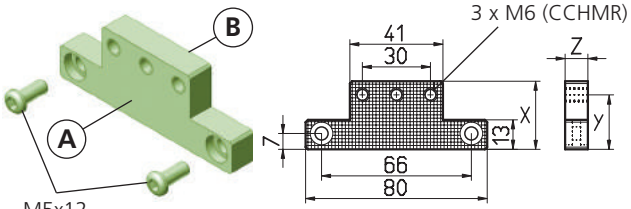
MCZ 40L 30 PRG 13

Mehr Informationen siehe Zentrischspanner
For more information check the self centring vise (Seite / *Page* / Page 251)
Pour plus d'informations visiter le étau auto centrant

Universalbacke / *Universal jaw* / Mors universel

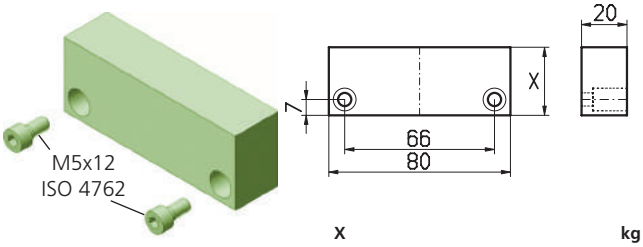


	A	B	X	Y	Z		kg
CC 8011	●	●	30	24	10	56 HRC	~ 0,15
CC 8025	●	●	50	44	10	56 HRC	~ 0,28
CC 8040*	●		30	29	20	*	~ 0,33



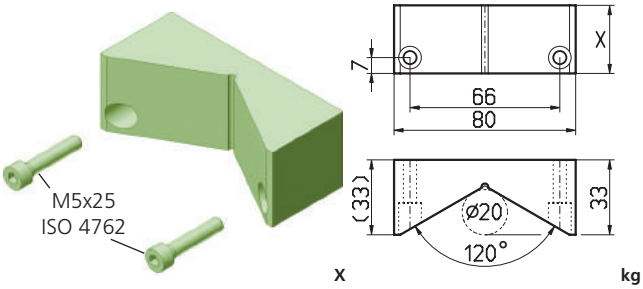
	A	B	X	Y	Z		kg
CC 8021	●	●	30	24	10	56 HRC	~ 0,11
CC 8026	●	●	50	44	10	56 HRC	~ 0,17
CC 8041*	●		30	24	20	*	~ 0,24

Weiche Backe / *Soft jaw* / Mors doux

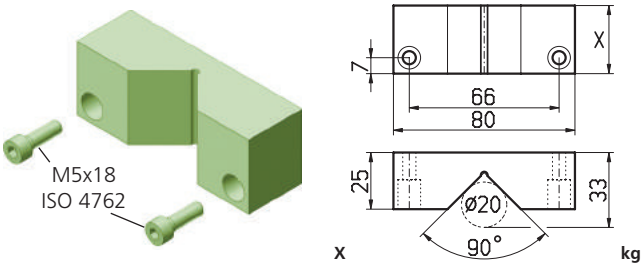


	X	kg
CC 8030	30	~ 0,35
CC 8050	50	~ 0,59

Prismabacke / *Prismatic jaw* / Mors avec prisme

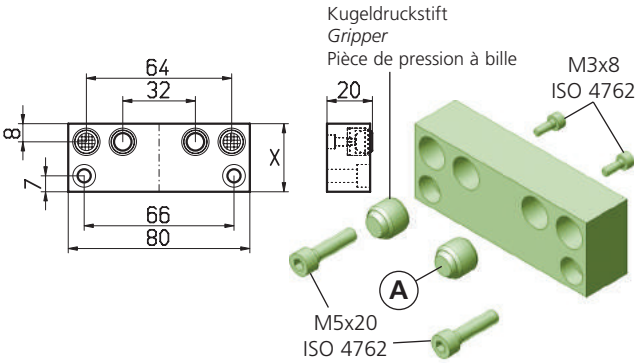


	X			kg
CC 8050 V120°	30	min. ø 8 max. ø 120	56 HRC	~ 0,41



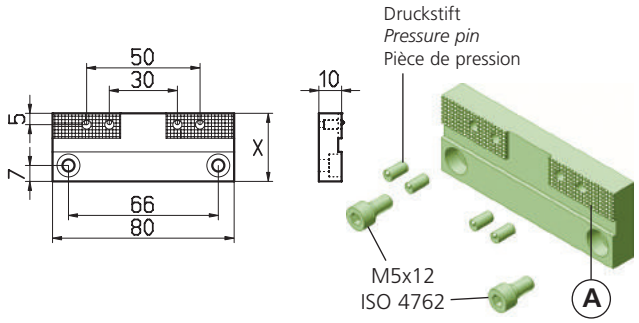
	X			kg
CC 8050 V90°	30	min. ø 6 max. ø 42	56 HRC	~ 0,38

Backe mit 2 Pendeldruckstücken
Jaw with 2 swiveling balls
Mors avec deux pièces de pression mobiles



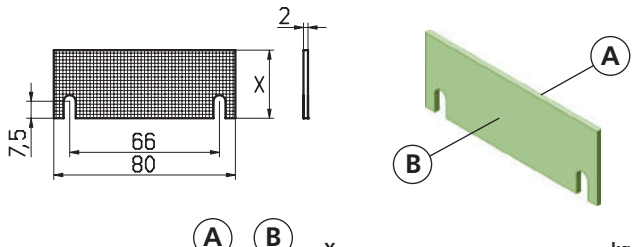
	A	X	kg
CC 8060	●	30	~ 0,30
CC 8060R	●	30	

Backe für Druckstift
Jaw for pressure pin
Mors pour pièce de pression

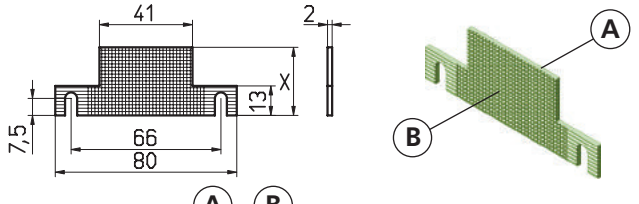


	A	X	kg
CC 8070	●	30	~ 0,17

Backe / *Jaw* / Mors



	A	B	X		kg
CC 8210	●	●	30	HV 700x0,2	~ 0,03
CC 8211	●	●	30		



	A	B	X		kg
CC 8220	●	●	30	HV 700x0,2	~ 0,02
CC 8221	●	●	30		

* = weich / *soft* / doux

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