



# TRIAG<sup>®</sup>

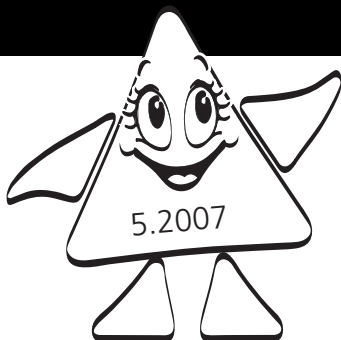
***kleinste Spannmodule  
für den Vorrichtungsbau!***

***micro*CLAMP**

***smallest vice modules for  
dedicated fixtures!***



***le plus petit module de serrage  
pour la construction de gabarits!***



### Hohe Spanndichte = **microCLAMP** Kleinst-Spannmodule für den Vorrichtungsbau.

Die Spannmodule haben auf der Vorderseite eine Niederzugbacke, 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 2,1t (21'000N)
- Benötigter Platz zwischen den Werkstücken ab 15 mm
- Spannhub ab 1,5 mm
- Genaue Positionierung durch Passschrauben und Positionierstifte



### High workholding density = **microCLAMP** Extremely small clamping modules for fixture construction.

*These clamping modules have a pull-down 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 2,1t (21'000N)
- Space between workpieces only 15 mm
- Stroke of jaw from 1,5 mm
- Precise positioning by ground shoulder screws or dowel pins



### Haute densité de serrage = **microCLAMP** Module de serrage miniature pour la construction des gabarits.

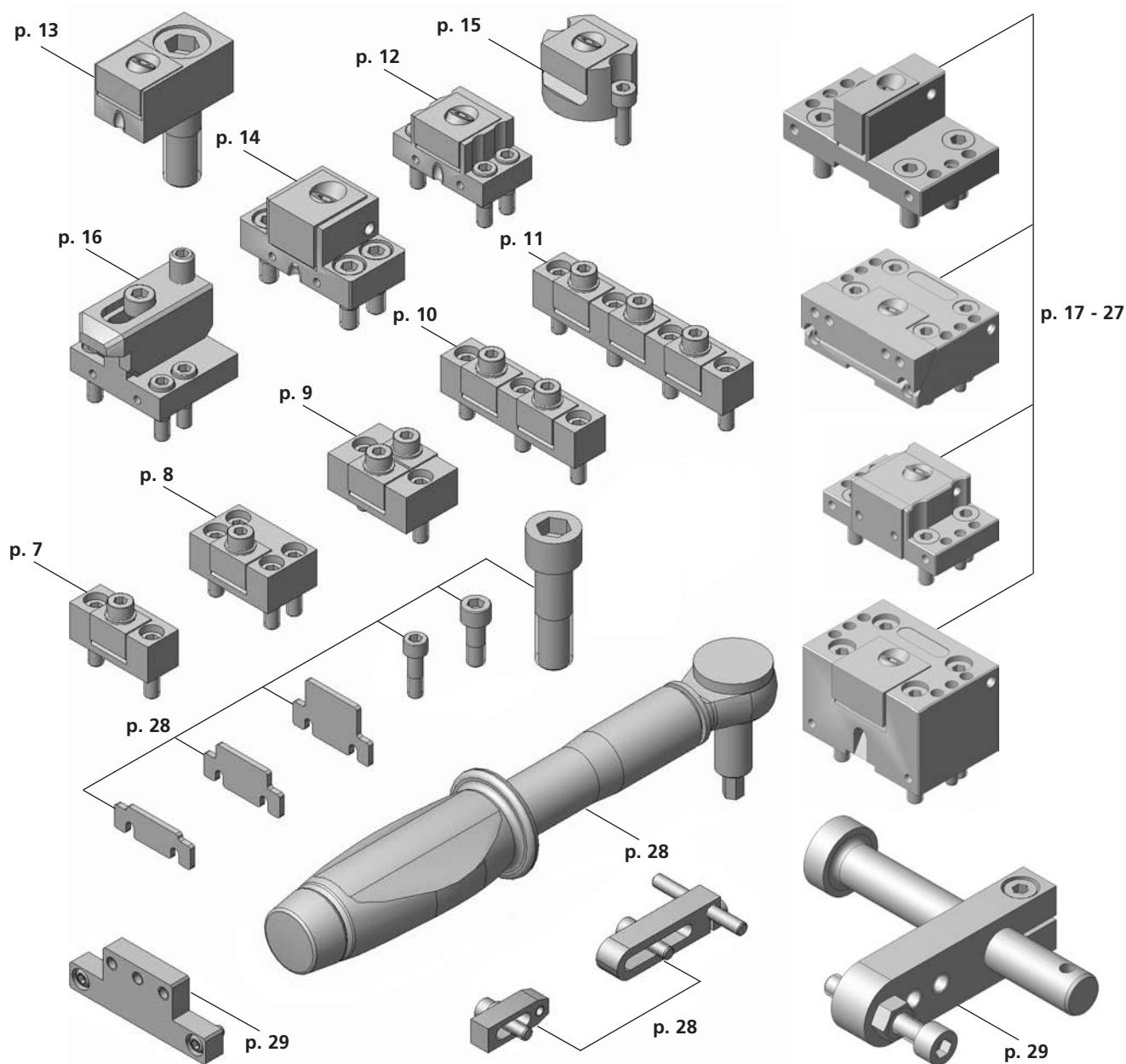
Ces modules de serrages sont munis d'un mors plaquant sur la face avant, la face arrière fonctionne comme surface d'appui pour la pièce suivante. Il est rectifié sur une face exactement par rapport à l'alésage. Donc il est possible de faire des gabarits avec une très haute densité de serrage. Les Micro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

- Force de serrage jusqu'à 2,1t (21'000N)
- 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



Spannkraft / workholding force / force de serrage				Drehmoment / torque / couple de torsion	
	daN	(lb)	t	Nm	(lb/ft)
<b>M5 + M6</b>	500	1100	0,50	4	3
	580	1300	5,58	5	3,7
	690	1500	0,69	6	4,4
	780	1700	0,78	7	5,2
	880	1930	0,88	8	5,9
	980	2150	0,98	9	6,6
	1020	2240	1,02	10	7,4
	<b>M6</b>	1220	2680	1,22	12
1450		3200	1,45	14	10,4
1520		3340	1,52	15	11,1
<b>M8</b>	410	900	0,41	4	3
	490	1080	0,49	5	3,7
	560	1200	0,56	6	4,4
	660	1450	0,66	7	5,2
	730	1600	0,73	8	5,9
	810	1790	0,81	9	6,6
	900	1980	0,90	10	7,4
	1370	3020	1,37	15	11,1
	1810	4000	1,81	20	14,8
	2100	4600	2,10	25	18,4

#### Inhaltsverzeichnis / Index / Contenu



System <i>System / Système</i>	
P	Power Clamp
C	Compact Clamp
M	Micro Clamp
V	Vorrichtungsbaumodule <i>workholding modules for dedicated fixtures</i> module de serrage pour gabarits individuels

bei Anschlagmodulen <i>for end module / pour module d'appui</i>	
N	nitriergelärtet <i>nitrated</i> nitruré
D	durchgelärtet <i>through hardened</i> trempé
bei Spannmodulen <i>for vice modules / pour module de serrage</i>	
1 2 4	Anzahl Spannbacken <i>number of jaws</i> nombre de mors
-	keine Spannbacke <i>no clamping jaw</i> sans mors de serrage

**M**

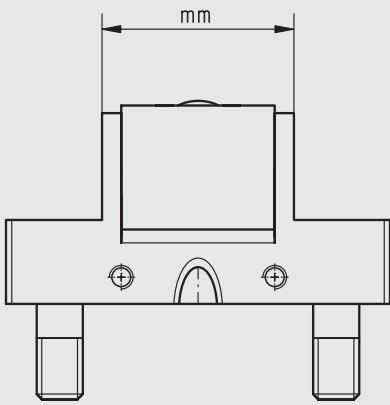
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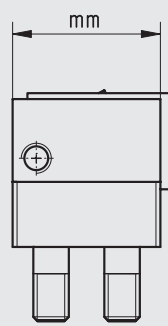
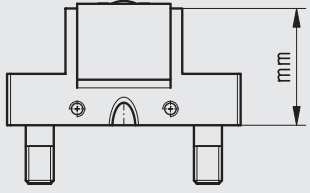
**1**

**F**

Modultyp <i>type of module / type de module</i>	
A	Anschlagmodul <i>end module</i> module d'appui
S	Spannmodul <i>vice module</i> module de serrage
T	Trägermodul <i>supporting module</i> module support
R	Rundes Modul <i>round module</i> module ronde
V	Vertikalspannmodul <i>vertical clamp</i> module de serrage vertical

Anschlagfläche der Module <i>datum face / surface d'appui</i>	
F	Anschlagfläche glatt <i>datum face flat</i> face d'appui lisse
R	Anschlagfläche geriffelt <i>datum face double serrated</i> face d'appui striée en croix
D	eine Seite glatt, eine Seite geriffelt <i>one face flat, one face double serrated</i> une face lisse, une face striée en croix
G	Anschlagfläche gerillt <i>datum face serrated</i> face d'appui strié
X	spezielle Ausführung <i>special execution</i> exécution spéciale

<b>Modulnutzbreite</b> <i>module clamping width / largeur utile du module</i>	
19	
20	
22	
24	
25	
26	
35	
39	
41	
48	
60	
61	
80	
85	
94	

<b>Modulnutztiefe oder -höhe</b> <i>module clamping depth or height / profondeur ou hauteur utile du module</i>	
<b>MS:</b> <b>Tiefe</b> <i>depth</i> <i>profondeur</i>	
<b>VS:</b> <b>Höhe</b> <i>height</i> <i>hauteur</i>	

**35**

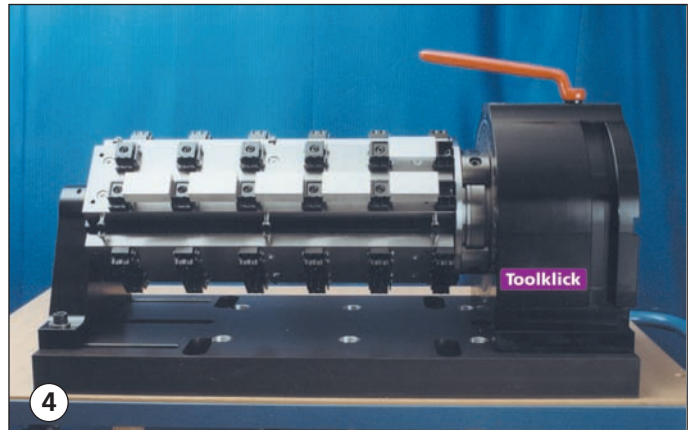
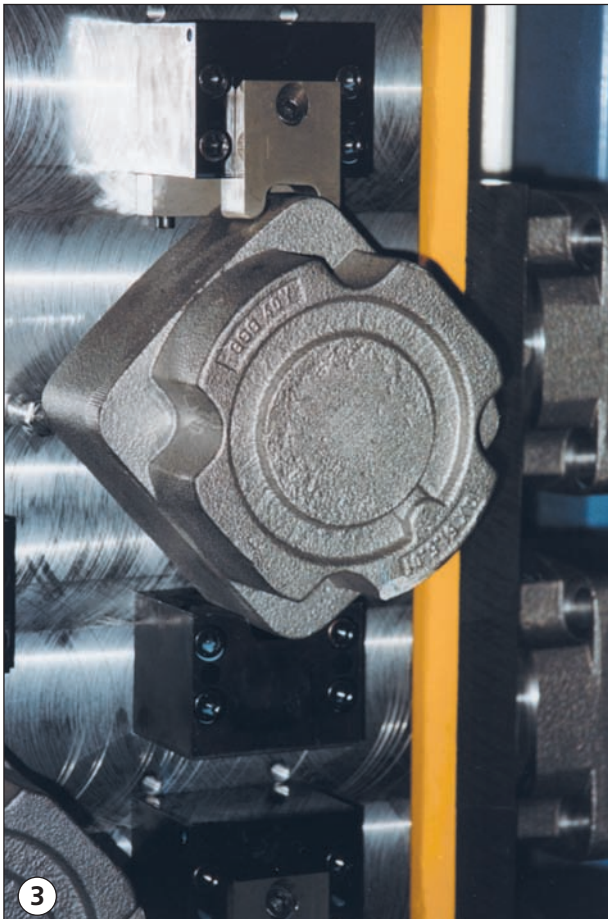
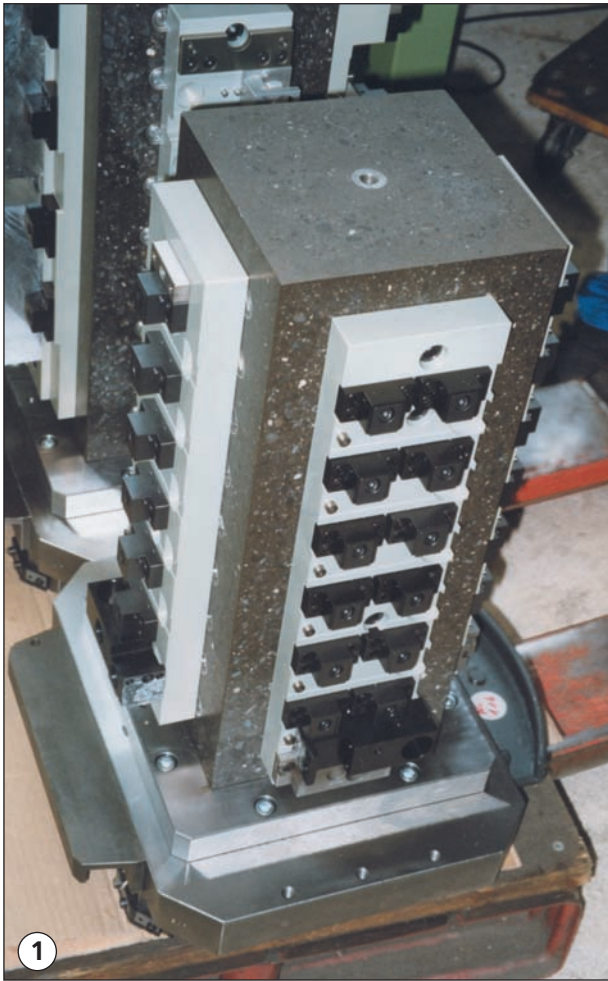
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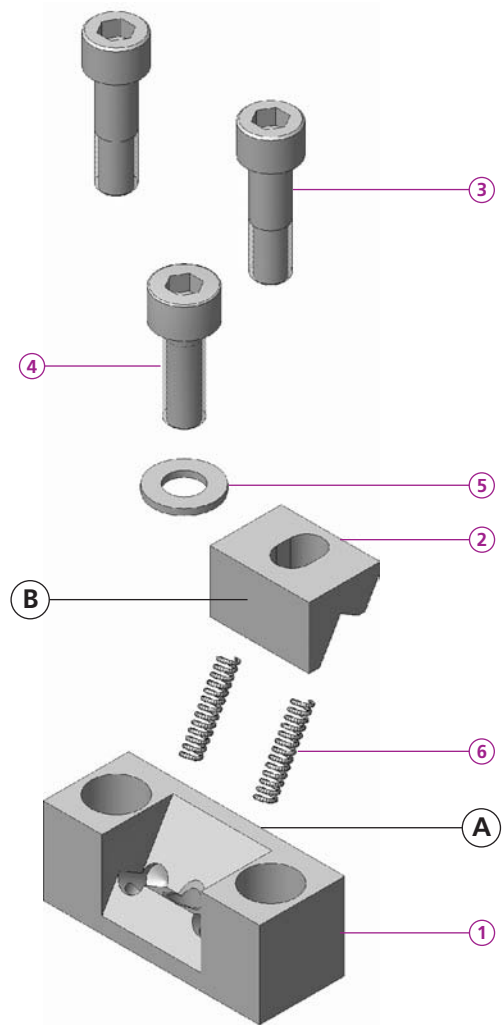
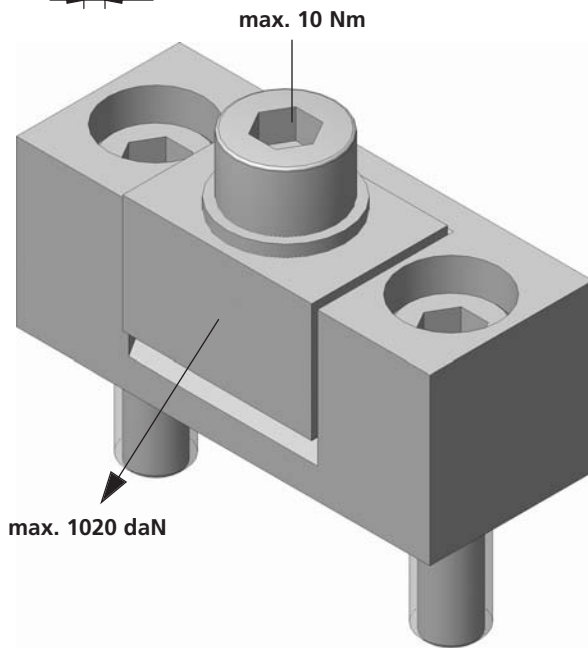
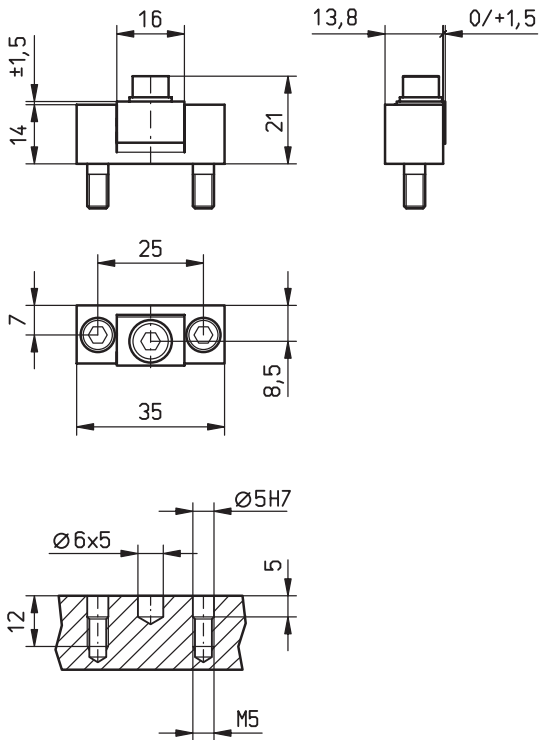
**14**

**B01**

<b>Backenhub</b> <i>stroke of clamping jaw / cours du mors de serrage</i>	
<b>N</b>	Niederzug <i>pull down</i> <i>abaissant</i>
<b>L</b>	linear parallel <i>linear parallel</i> <i>linéaire parallèle</i>
<b>-</b>	ohne Spannbacke <i>no clamping jaw</i> <i>sans mors de serrage</i>

<b>Spannbackentyp</b> <i>type of clamping jaw / type du mors de serrage</i>	
<b>B01</b> - <b>B99</b>	Siehe Seite 28 <i>see page 28</i> <i>voir page 28</i>
<b>-01</b> - <b>-99</b>	Modul ohne Zubehör <i>module without accessories</i> <i>module sans accessoires</i>
<b>X30</b> <b>X50</b> <b>X60</b>	Trägermodullänge <i>Supporting module length</i> <i>longueur du module support</i>



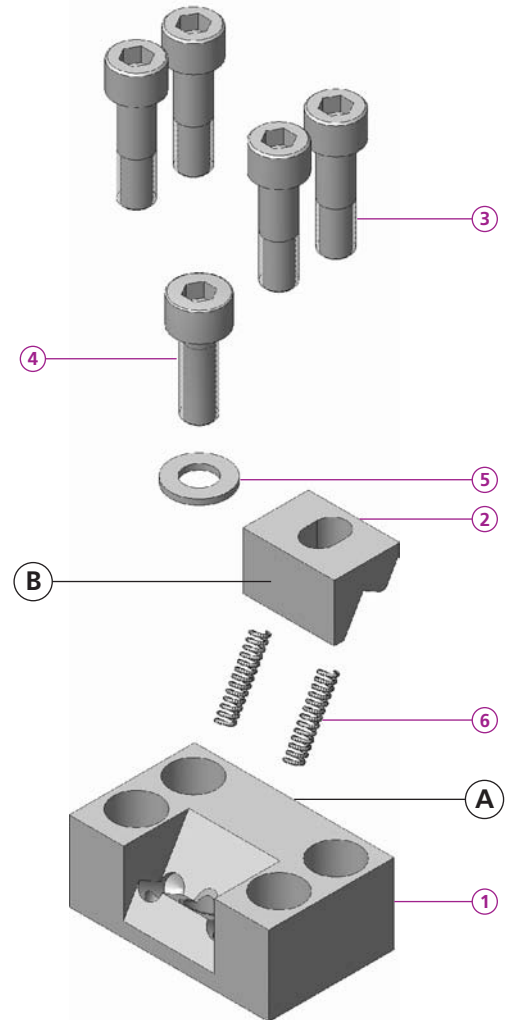
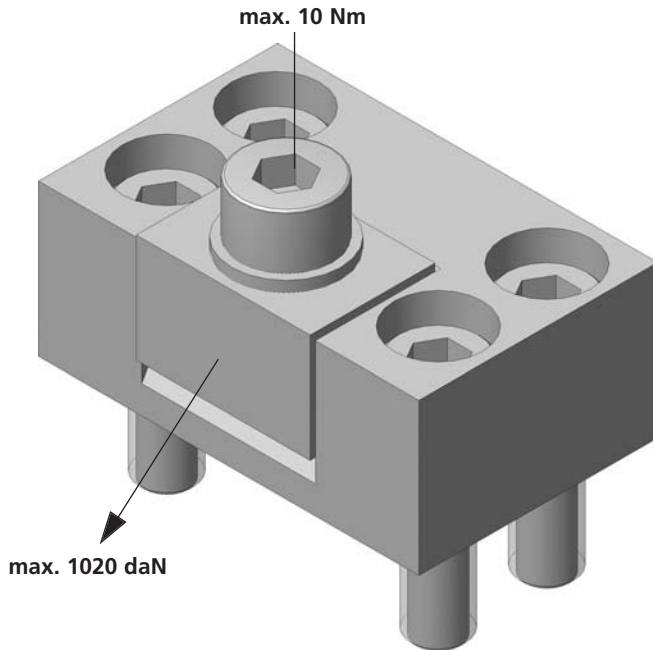
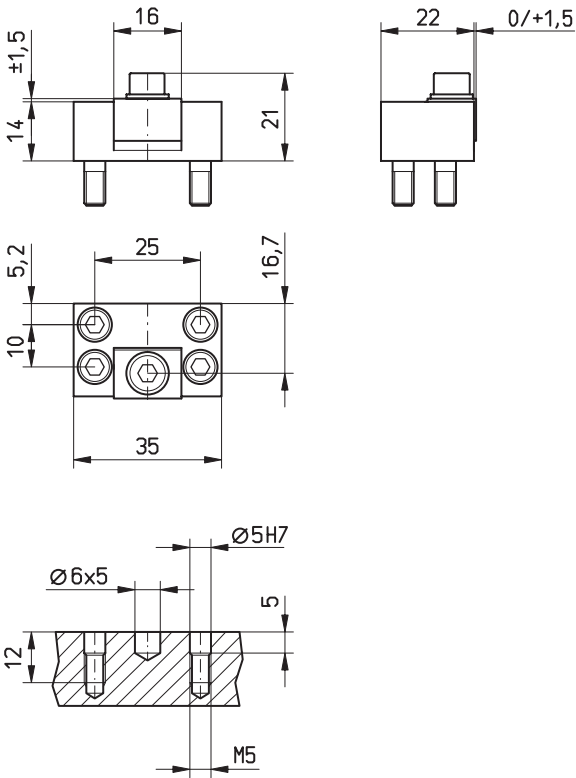


**Achtung:** Bei Spannkraften über 400 daN (0,4t) sollte das Spannmodul in eine Nut eingelassen werden (Nuttiefe mindestens 1mm)  
**Remark:** Using forces higher than 400 daN, clamps must be mounted into a slot (depth min. 1mm)  
**Attention:** Avec des forces de serrage en dessus de 400 daN, le module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

Bestellbeispiel / ordering example / exemple de commande: MS1F 35N14 B01

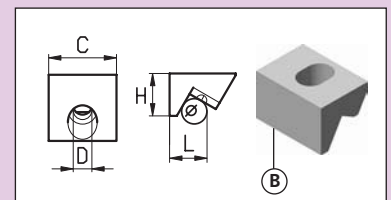
MS1F 35N14 -01		B01	B02	B03	B04
①	1x MS1F 35N14 -01	①	①	①	①
②	1x	②	②	②	②
③	2x MS 50	③	③	③	③
④	1x M5x14 ISO 4762	④	④	④	④
⑤	1x 5x10x1 DIN 125 A	⑤	⑤	⑤	⑤
⑥	2x FED 02813	⑥	⑥	⑥	⑥
kg	0,05	i	HV700x HV700x 0,2mm 0,2mm	*	Messing Brass laiton

\* = weich / soft / doux



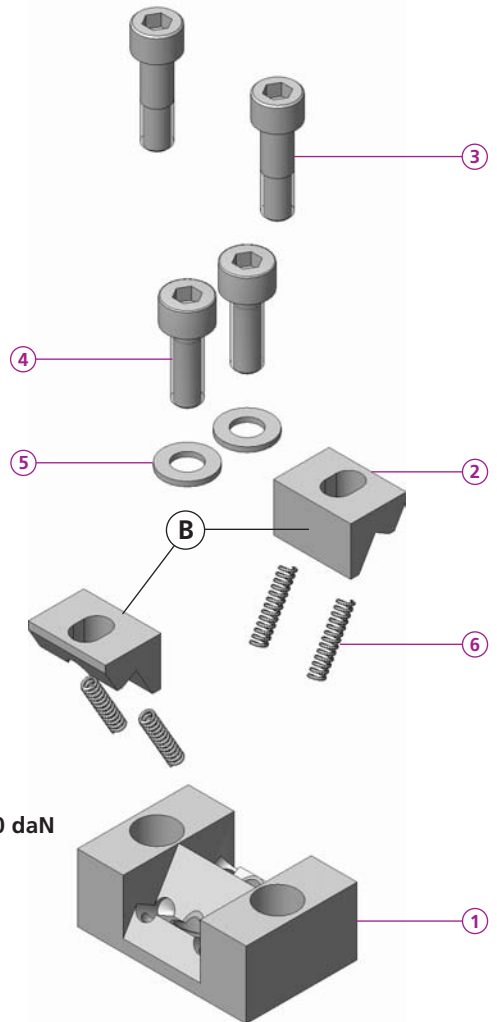
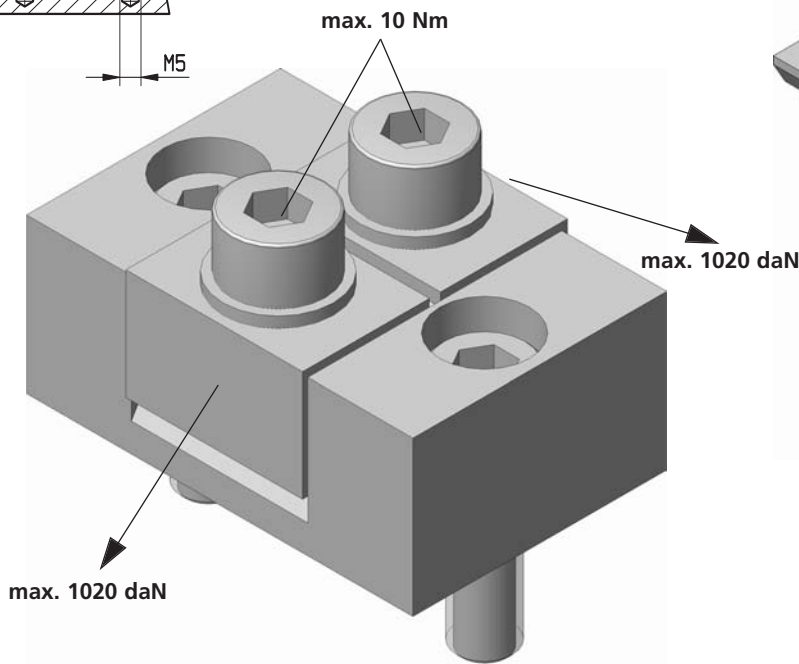
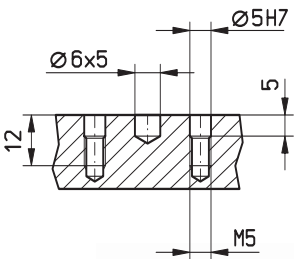
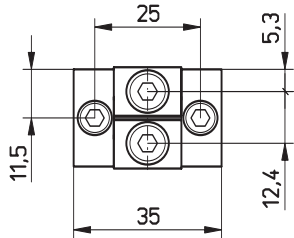
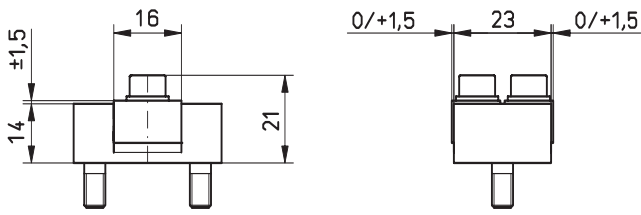
Bestellbeispiel / ordering example / exemple de commande: MS1F 35N22 B01

MS1F 35N22 -01		A	B	B01	B02	B03	B04
1x	MS1F 35N22 -01						
1x							
4x	MS 50						
1x	M5x14 ISO 4762						
1x	5x10x1 DIN 125 A						
2x	FED 02813						
kg	0,08						
				C	C	C	C
				H	H	H	H
				L	L	L	L
				D	D	D	D
				e	e	e	e
				i	i	*	Messing
					0,2mm	0,2mm	Brass
							laiton



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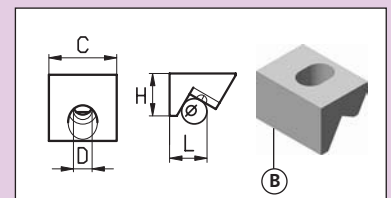


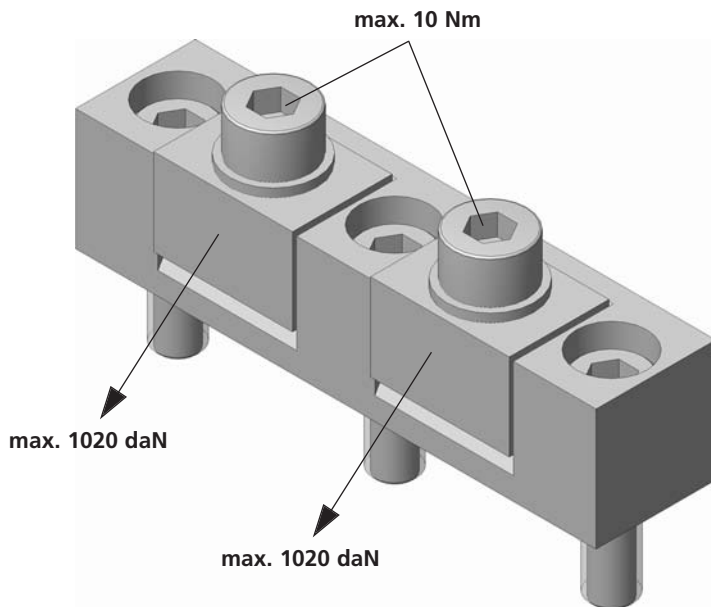
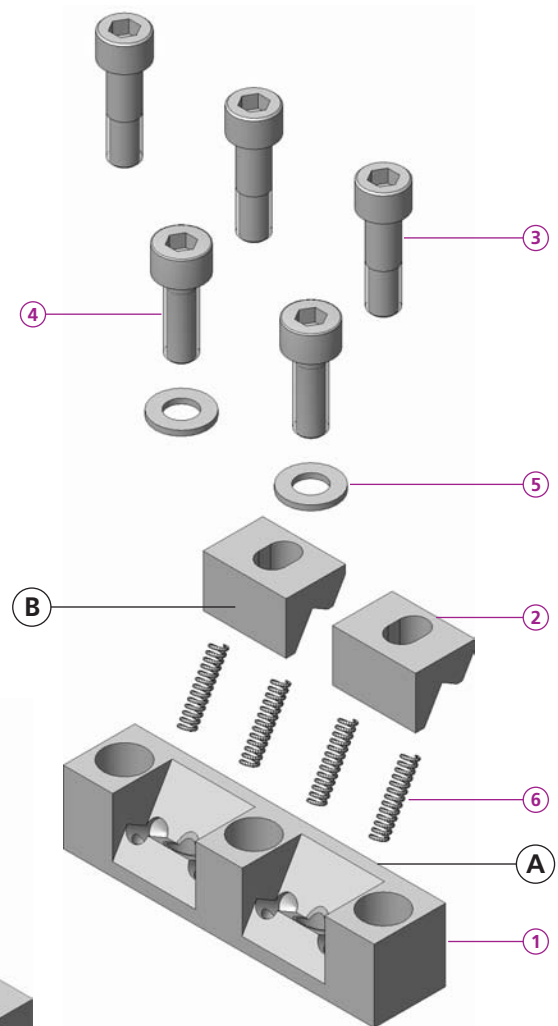
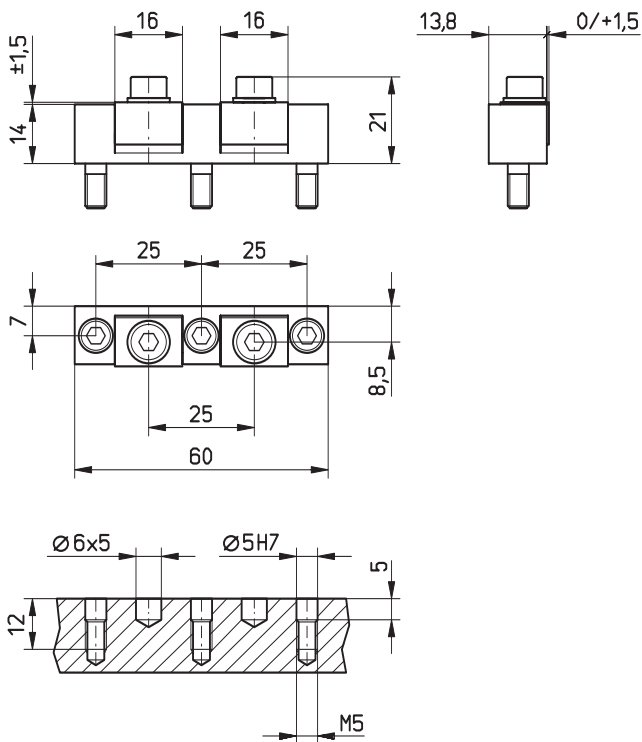
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Bestellbeispiel / ordering example / exemple de commande: MS2X 35N23 B01

MS2X 35N23 -01		B01	B02	B03	B04
1x	MS2X 35N23 -01				
2x					
2x	MS 50				
2x	M5x14 ISO 4762				
2x	5x10x1 DIN 125 A				
4x	FED 02813				
kg	0,085				
		C	H	L	D
		16	10	8	5,5
		16	10	8	5,5
		16	10	11	5,5
		16	10	8	5,5
		e	e	e	e
		4	4	4	4
		i	i	*	
		HV700x	HV700x		Messing
		0,2mm	0,2mm		Brass
					laiton

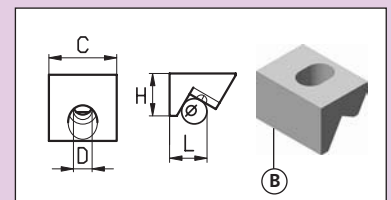
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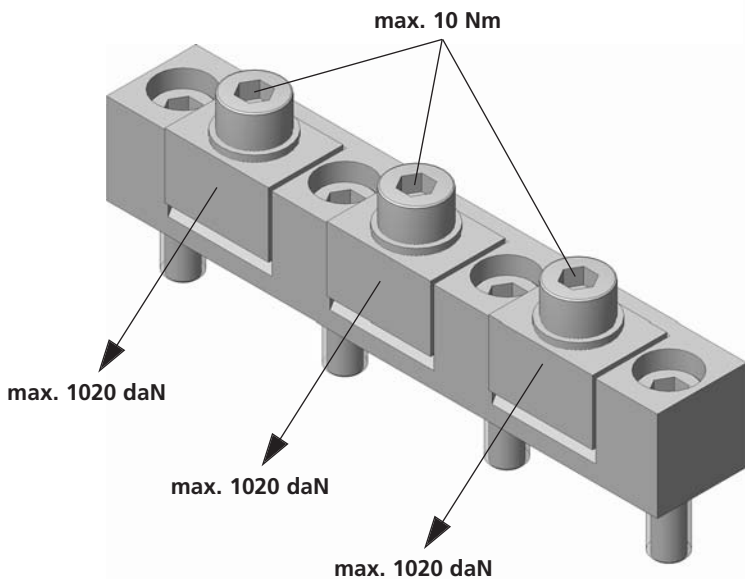
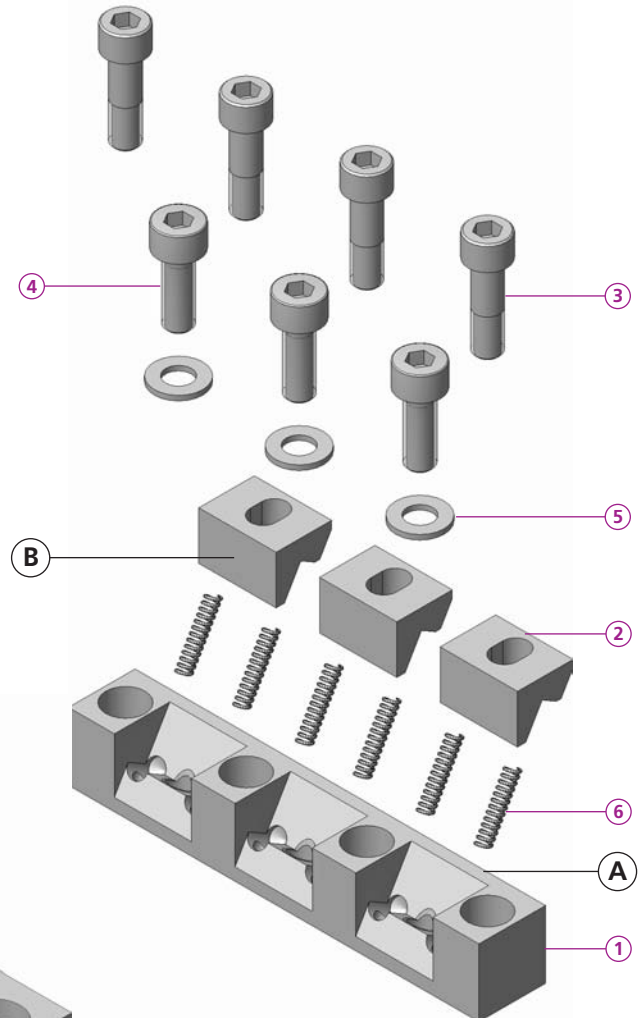
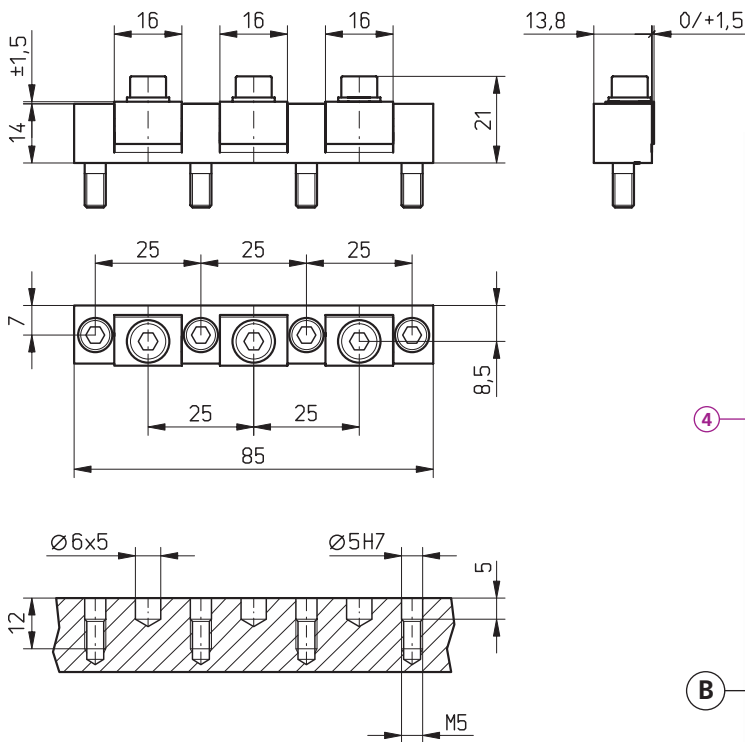




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		Bestellbeispiel / ordering example / exemple de commande: MS2F 60N14 B01			
		<b>A</b>	<b>B</b>		
<b>MS2F 60N14 -01</b>		<b>B01</b>	<b>B02</b>	<b>B03</b>	<b>B04</b>
<b>1</b>	1x MS2F 60N14 -01	<b>C</b>	16	16	16
<b>2</b>	2x _____	<b>H</b>	10	10	10
<b>3</b>	3x MS 50	<b>L</b>	8	8	11
<b>4</b>	2x M5x14 ISO 4762	<b>D</b>	5,5	5,5	5,5
<b>5</b>	2x 5x10x1 DIN 125 A	<b>e</b>	4	4	4
<b>6</b>	4x FED 02813	<b>i</b>	HV700x HV700x 0,2mm 0,2mm	*	Messing Brass laiton
<b>kg</b>	0,09				

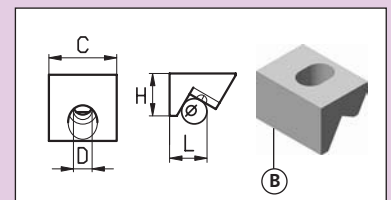




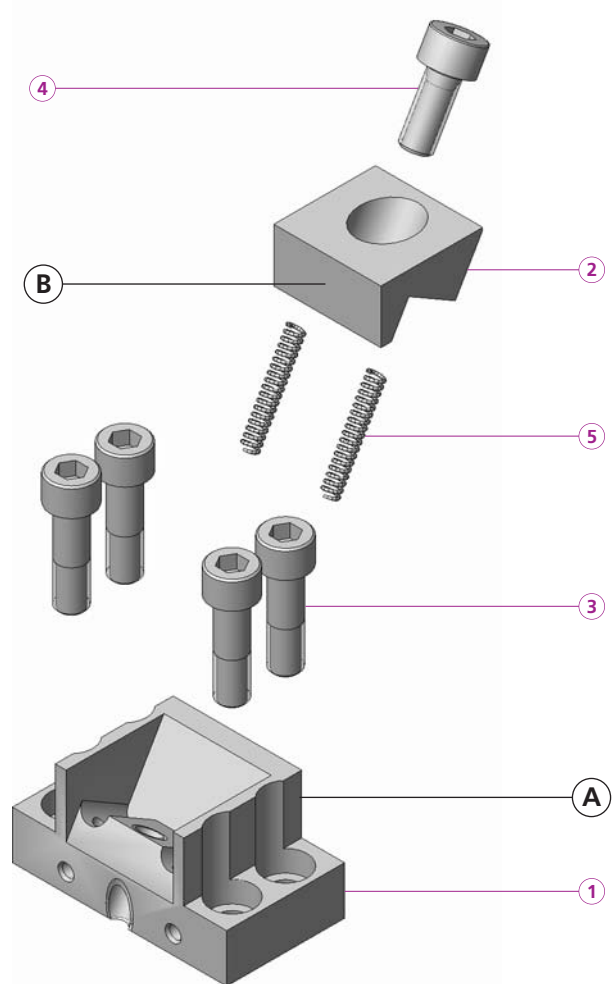
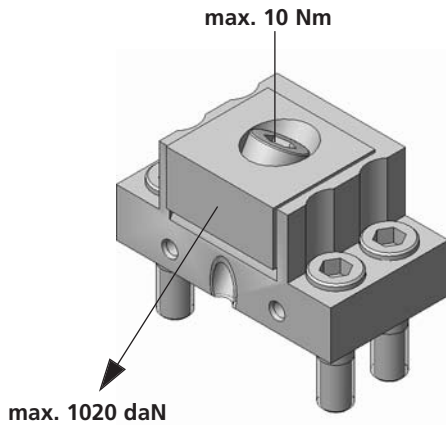
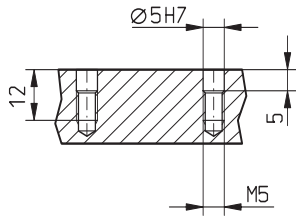
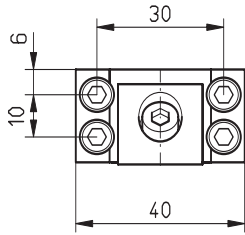
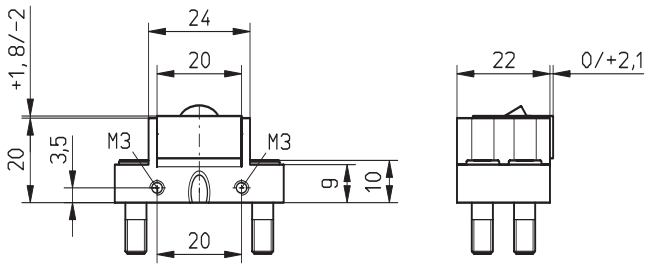
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Bestellbeispiel / ordering example / exemple de commande: MS3F 85N14 B01

MS3F 85N14 -01		B01	B02	B03	B04
1x	MS3F 85N14 -01				
3x					
4x	MS 50				
3x	M5x14 ISO 4762				
3x	5x10x1 DIN 125 A				
6x	FED 02813				
kg	0,125				
		C	C	C	C
		H	H	H	H
		L	L	L	L
		D	D	D	D
		e	e	e	e
		i	i	*	Messing
			0,2mm 0,2mm		Brass
					laiton



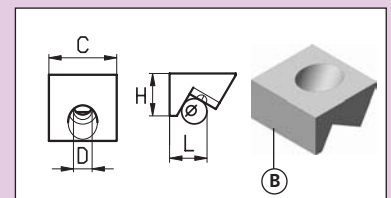
\* = weich / soft / doux

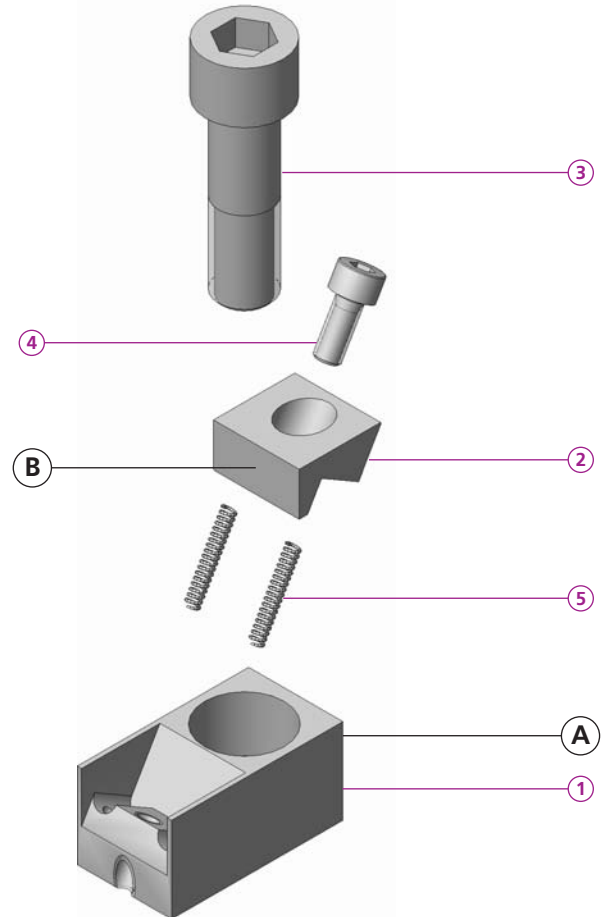
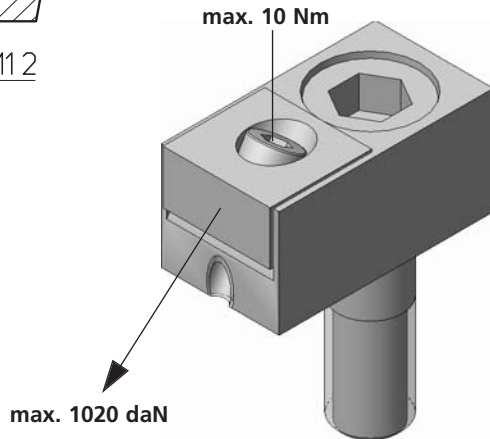
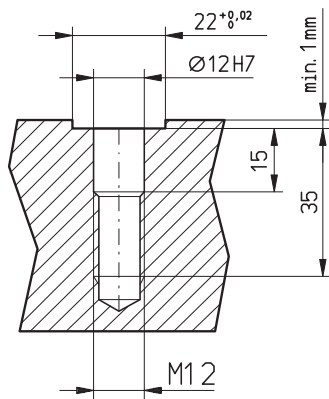
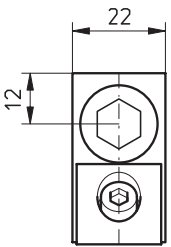
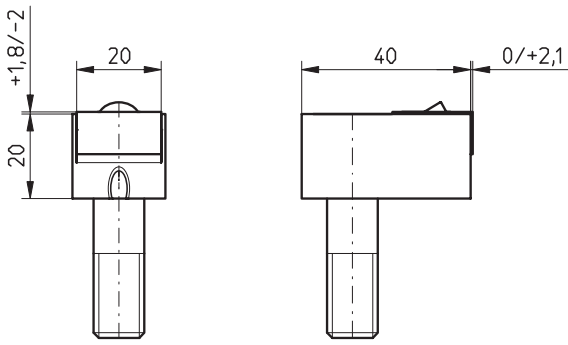


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Bestellbeispiel / ordering example / exemple de commande: MS1F 24N22 B07

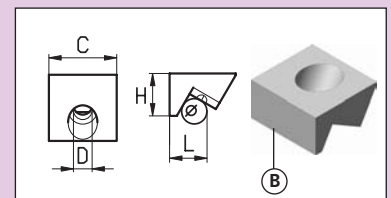
MS1F 24N22 -07		Bestellbeispiel / ordering example / exemple de commande: MS1F 24N22 B07		
		B07	B08	B09
1	1x MS1F 24N22 -07	C	20	20
2	1x	H	10	10
3	4x MS 50	L	9,5	9,5
4	1x M5x12 ISO 4762	D	5.5	5.5
5	2x FED 03018	e	6	6
		i	HV700x HV700x 0,2mm 0.2mm	*
kg	0,125			



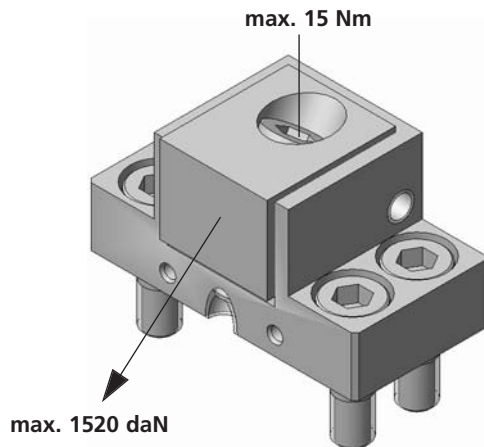
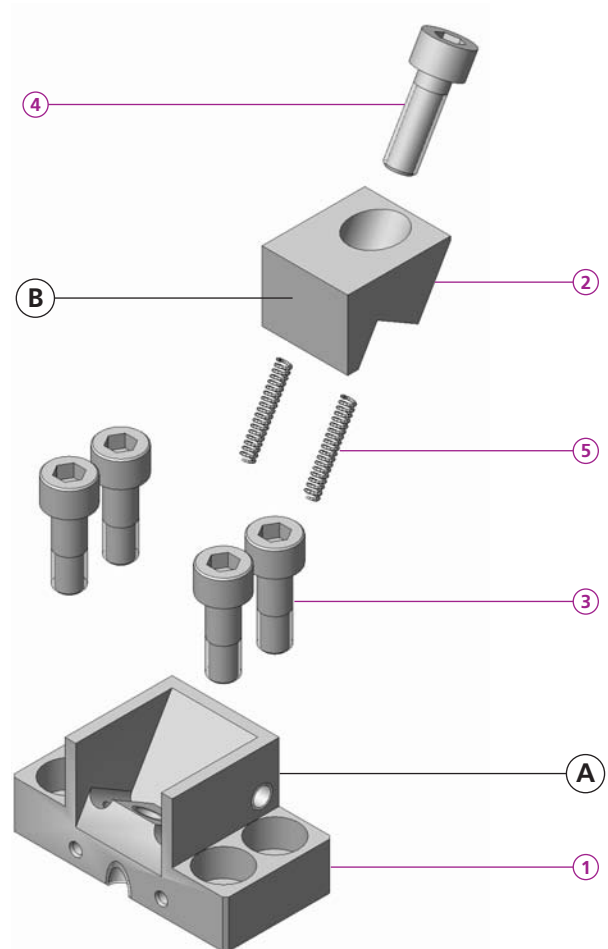
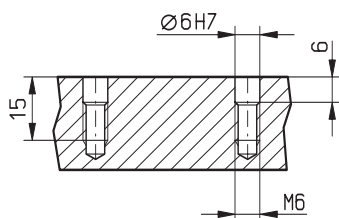
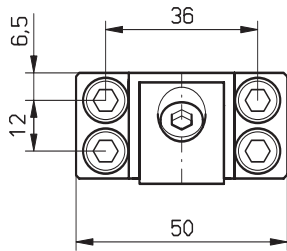
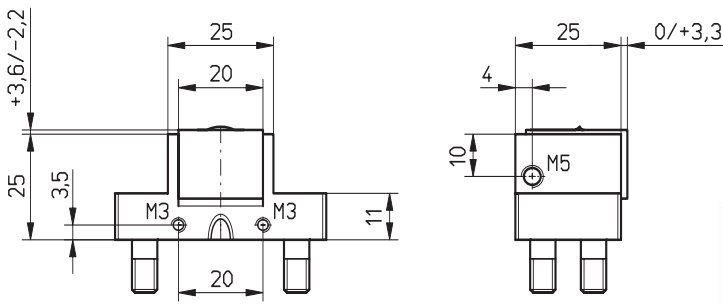


Bestellbeispiel / ordering example / exemple de commande: MS1F 22N40 B07

MS1F 22N40 -07		A	B	B07	B08	B09
①	1x MS1F 22N40 -07					
②	1x					
③	1x TWPAS 1240					
④	1x M5x12 ISO 4762					
⑤	2x FED 03018					
				C	20	20
				H	10	10
				L	9,5	9,5
				D	5,5	5,5
				e	6	6
				i	HV700x 0,2mm	HV700x 0,2mm
kg	0,15					*



\* = weich / soft / doux

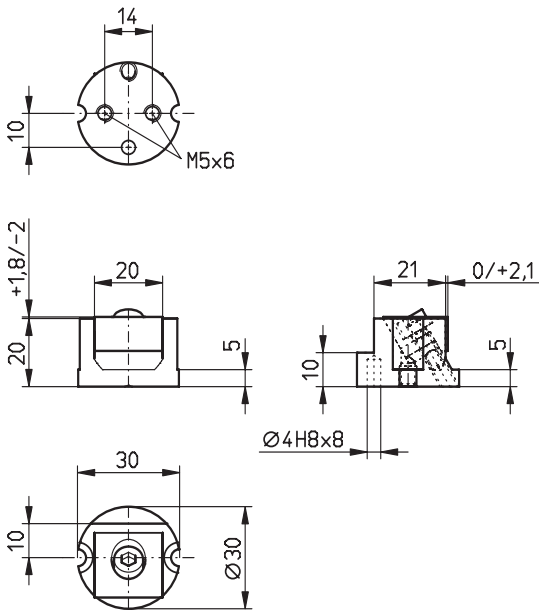


**Achtung:** Bei Spannkraften über 400 daN (0,4t) sollte das Spannmodul in eine Nut eingelassen werden (Nuttiefe mindestens 1mm)  
**Remark:** Using forces higher than 400 daN, clamps must be mounted into a slot (depth min. 1mm)  
**Attention:** Avec des forces de serrage en dessus de 400 daN, le module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

Bestellbeispiel / ordering example / exemple de commande: MS1F 25N25 B13

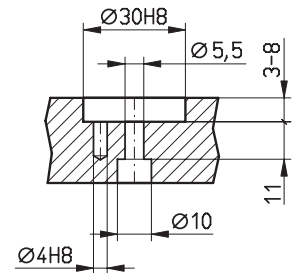
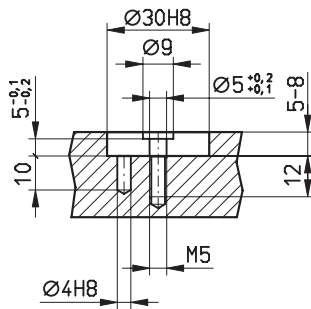
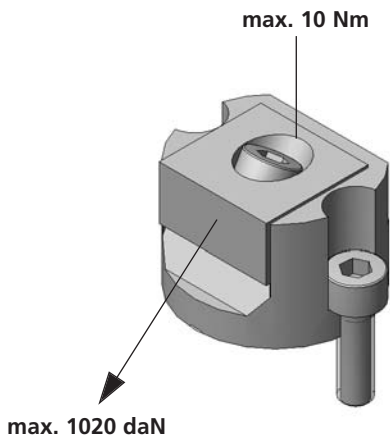
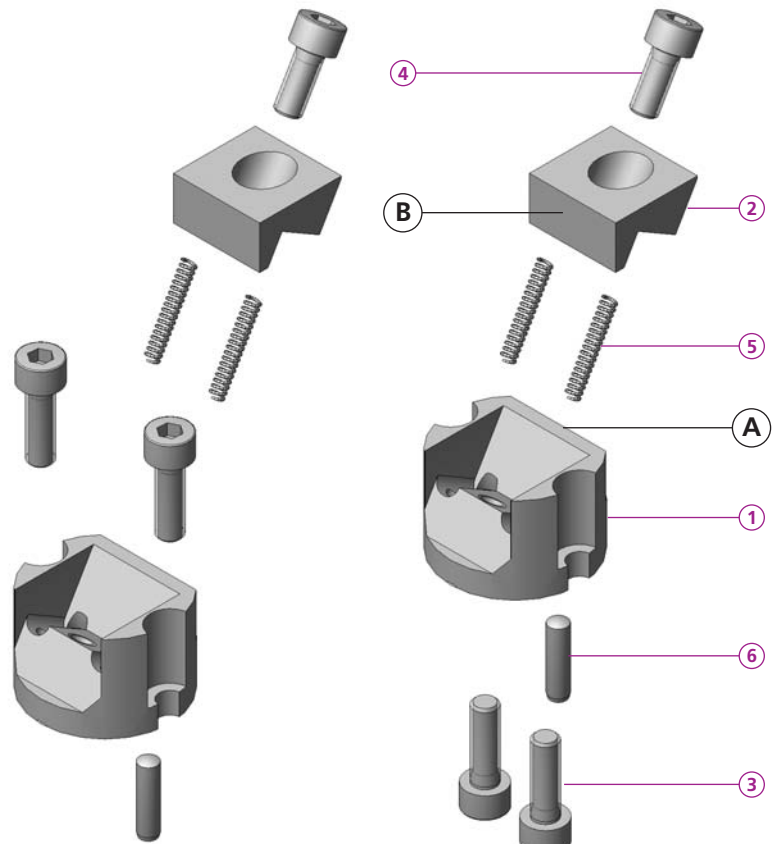
	A	B	B13	B14	B15	B16
<b>MS1F 25N25 -13</b>						
<b>MS1R 25N25 -13</b>						
①	1x MS1R/F 25N25 -13					
②	1x					
③	4x MS 60					
④	1x M6x16 ISO 4762					
⑤	2x FED 03018					
		⑥	20	20	20	20
		⑦	16	16	16	16
		⑧	13,8	13,8	13,8	19
		⑨	6,5	6,5	6,5	6,5
		⑩	10	10	10	10
		⑪	HV700x HV700x 0,2mm 0,2mm	*	*	*
kg	0,165					

\* = weich / soft / doux



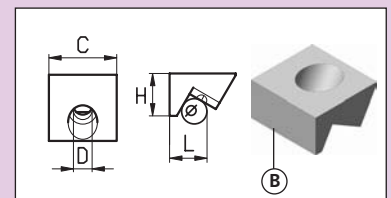
Version 2

Version 1

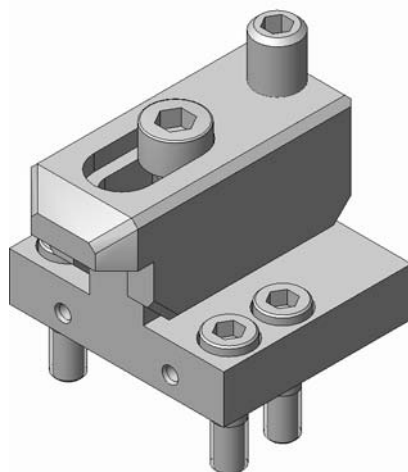
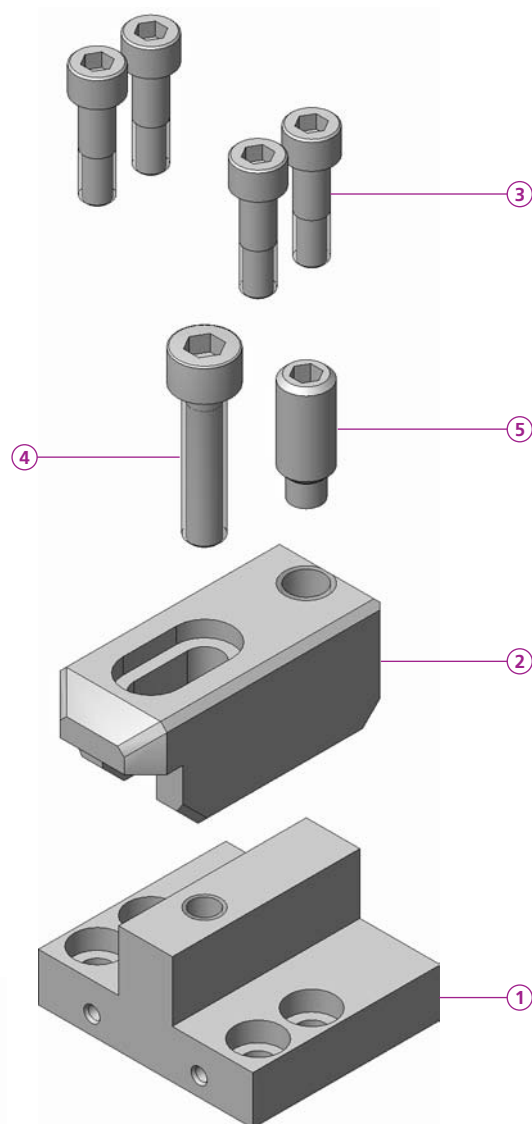
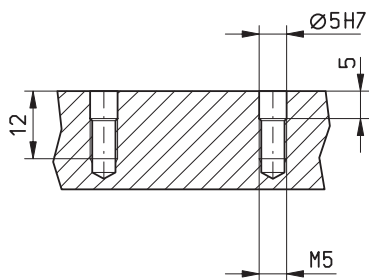
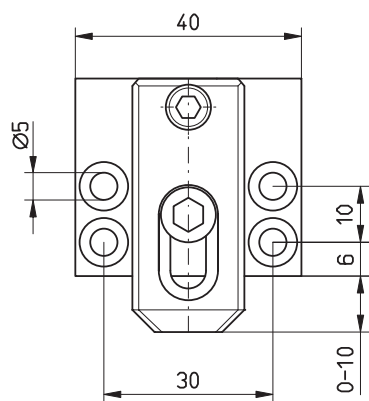
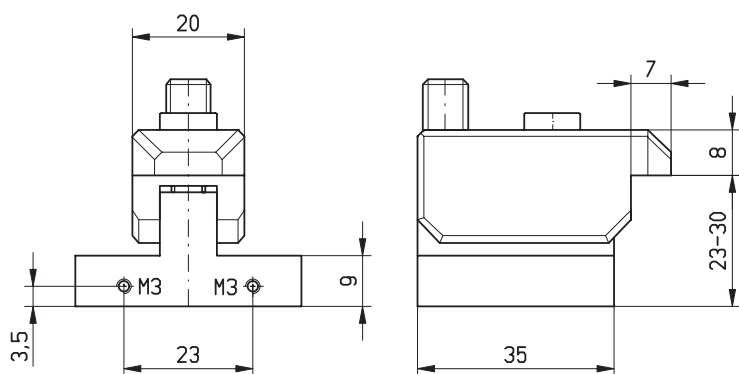


Bestellbeispiel / ordering example / exemple de commande: MR1F 30N23 B07

MR1F 30N23 -07		A	B	B07	B08	B09
1	1x MR1F 30N23 -07					
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					
		C		20	20	20
		H		10	10	10
		L		9,5	9,5	9,5
		D		5,5	5,5	5,5
		e		6	6	6
		i		HV700x 0,2mm	HV700x 0,2mm	*



\* = weich / soft / doux



Bestellbeispiel / ordering example / exemple de commande: MV1F 20L35 BV1

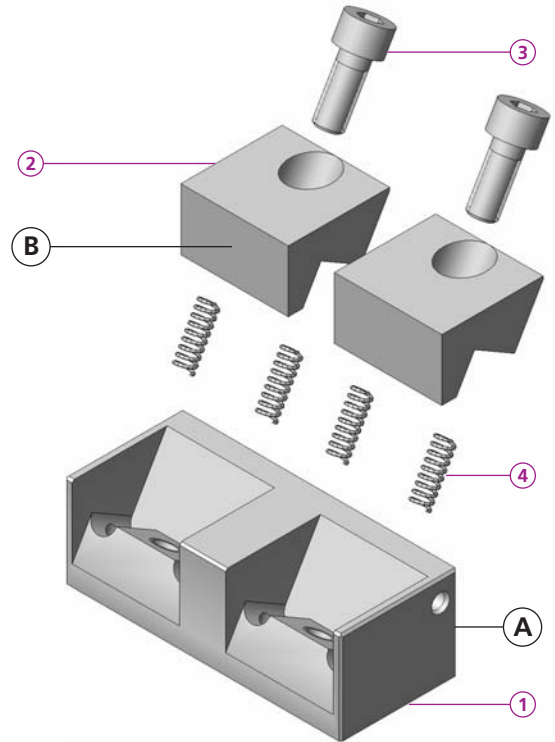
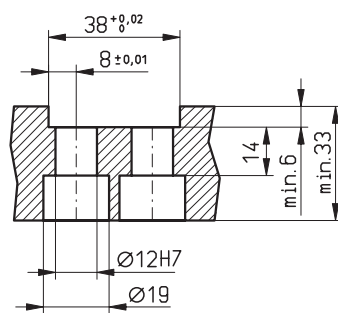
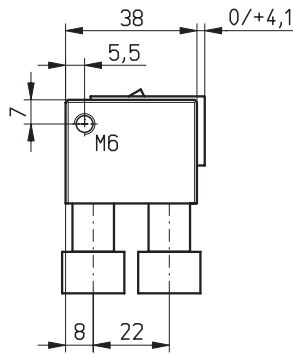
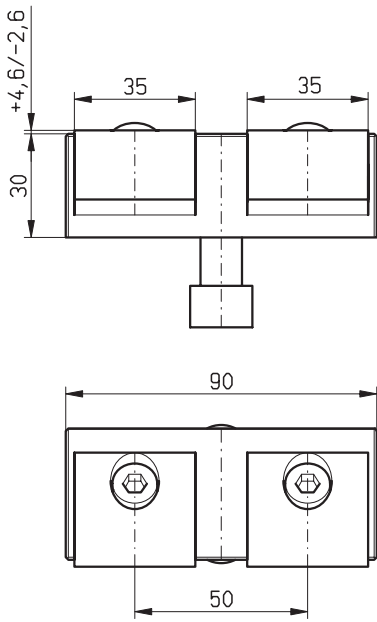
**MV1F 20L35 BV1**

- ① 1x MV1F 20L35 -V1
- ② 1x BV1
- ③ 4x MS 50
- ④ 1x M6x25 ISO 4762
- ⑤ 1x M8x20 ISO 4028

kg 0.225

\* = weich / soft / doux

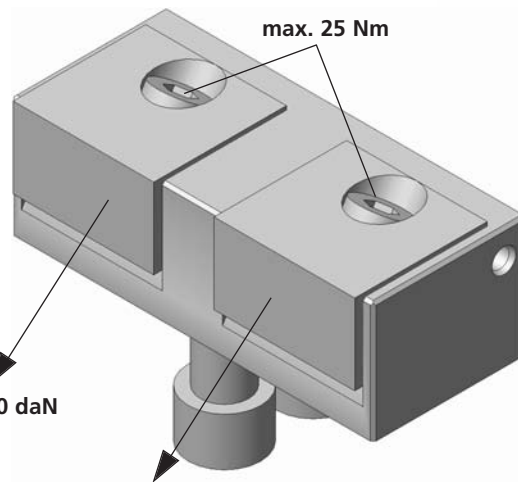




**VS2F 90N30 -60**

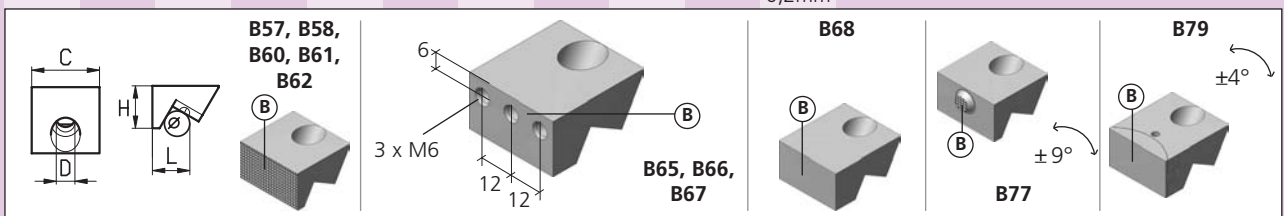
- 1x VS2F 90N30 -60
- 2x \_\_\_\_\_
- 2x M8x20 ISO 4762
- 4x FED 0618
- 2x TWPAS 1232

kg 0,85

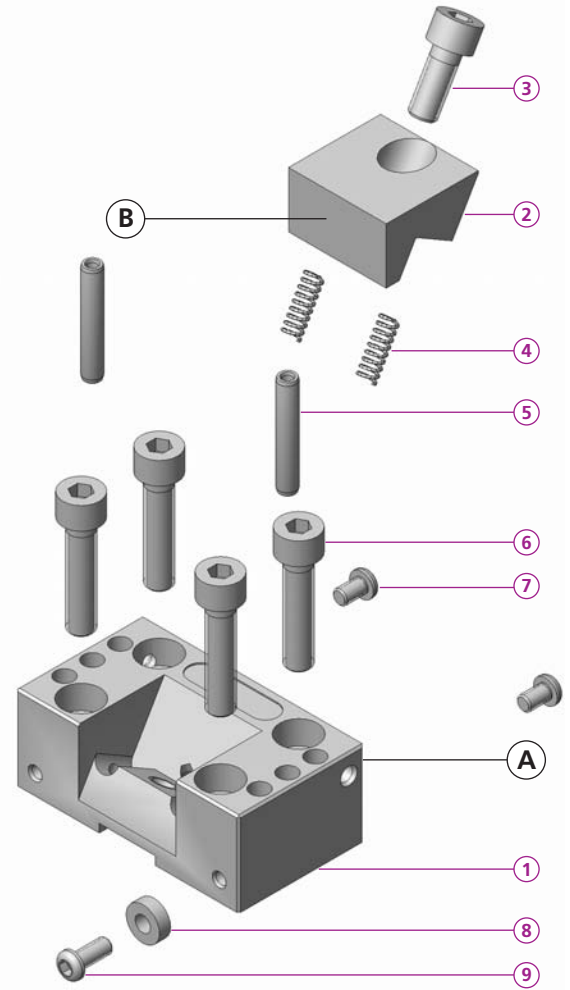
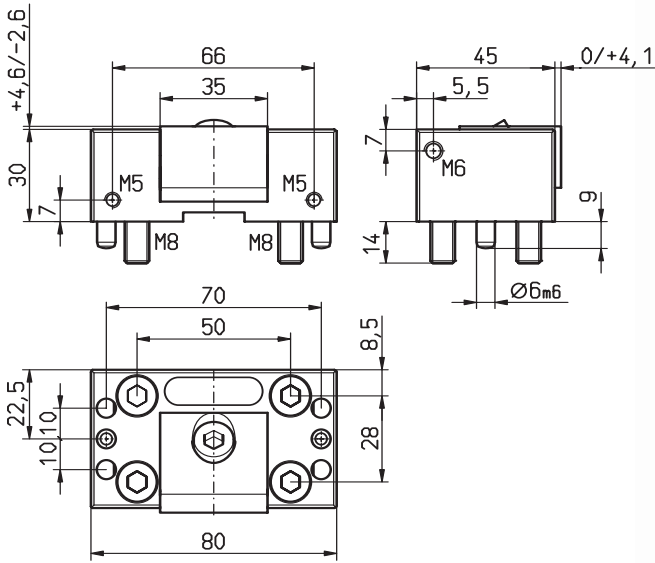


Bestellbeispiel / ordering example / exemple de commande: VS2F 90N30 B60

	B57	B58	B60	B61	B62	B65	B66	B67	B68	B77	B79
<b>C</b>	35	35	35	35	35	35	35	35	35	35	35
<b>H</b>	20	20	20	20	20	20	20	20	20	20	20
<b>L</b>	19	24	19	19	19	19	19	24	26	22	25
<b>D</b>	9	9	9	9	9	9	9	9	9	9	9
<b>e</b>	12	12	12	12	12	12	12	12	12	12	12
<b>i</b>	ALU *	ALU *	56 HRc	56 HRc	*	56 HRc	56 HRc	56 HRc	*	56 HRc	HV700x 0,2mm



\* = weich / soft / doux

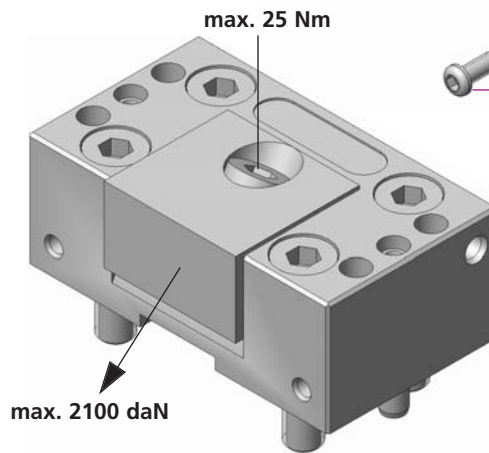


**VS1F 80N30 -60**

**VS1R 80N30 -60**

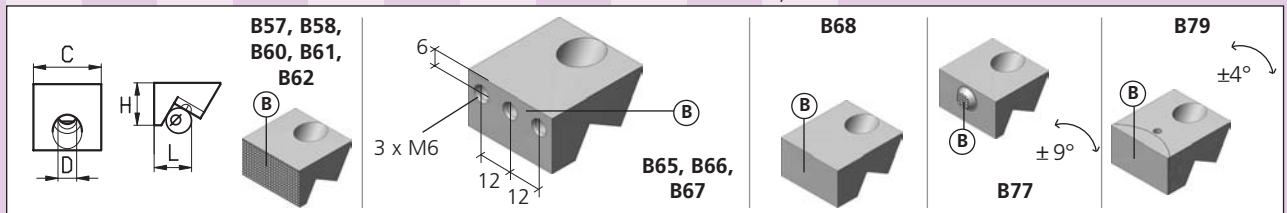
- 1x CS1R/F 80N30 -60
- 1x
- 2x M8x20 ISO 4762
- 2x FED 0618
- 2x CCBO 0801
- 4x M8x35 ISO 4762
- 2x M5x8 ISO 7380
- 2x CCD 004
- 2x M5x12 ISO 7380

kg 0,74

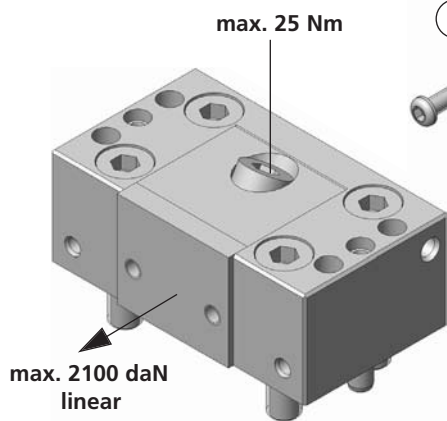
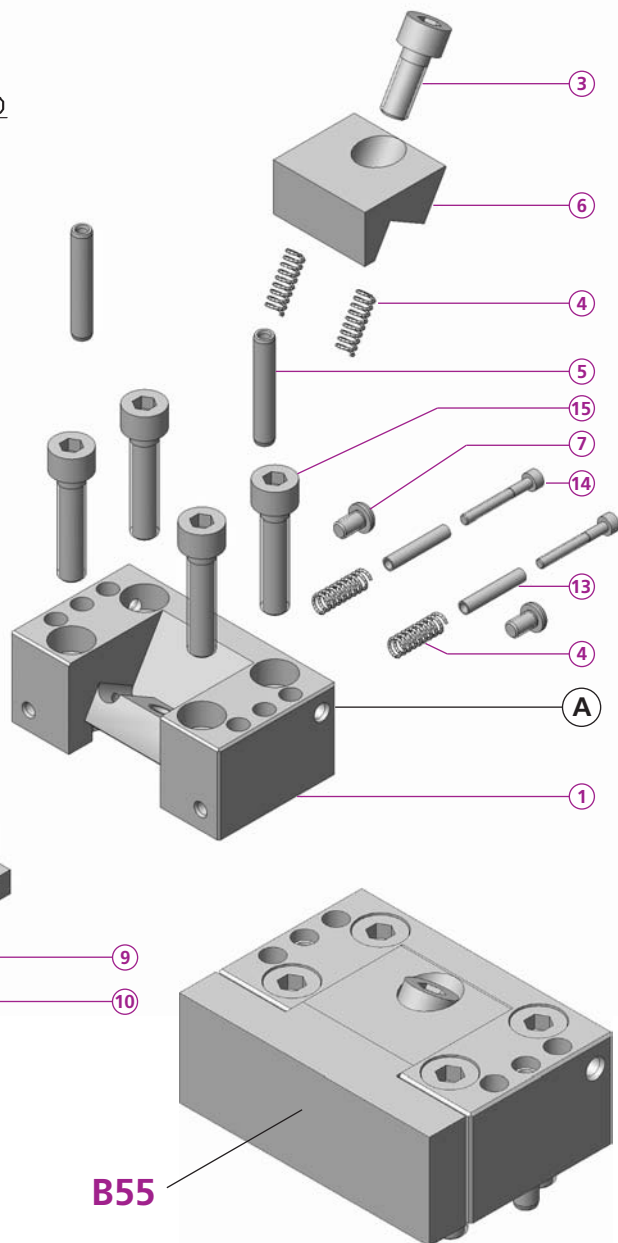
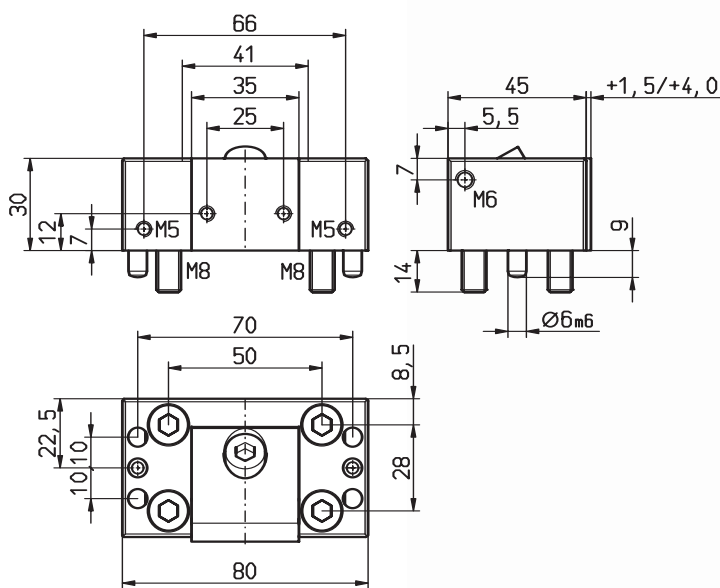


Bestellbeispiel / ordering example / exemple de commande: VS1F 80N30 B60

	B57	B58	B60	B61	B62	B65	B66	B67	B68	B77	B79
(C)	35	35	35	35	35	35	35	35	35	35	35
(H)	20	20	20	20	20	20	20	20	20	20	20
(L)	19	24	19	19	19	19	19	24	26	22	25
(D)	9	9	9	9	9	9	9	9	9	9	9
(e)	12	12	12	12	12	12	12	12	12	12	12
(i)	ALU *	ALU *	56 HRC	56 HRC	*	56 HRC	56 HRC	56 HRC	*	56 HRC	HV700x 0,2mm



\* = weich / soft / doux



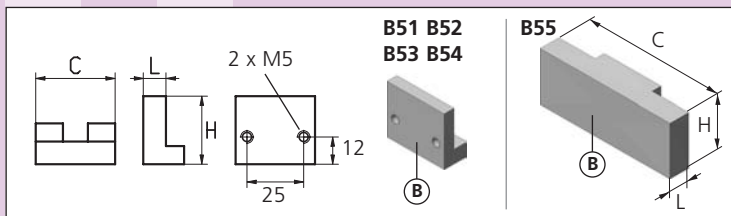
Bestellbeispiel / ordering example / exemple de commande: VS1R 80L30 B51

VS1R 80L30 -51

- ① 1x CS1R 80L30 -51
- ② 1x \_\_\_\_\_
- ③ 1x M8x20 ISO 4762
- ④ 6x FED 0618
- ⑤ 2x CCBO 0801
- ⑥ 1x B78
- ⑦ 2x M5x8 ISO 7380
- ⑧ 2x CCD 004
- ⑨ 2x M5x12 ISO 7380

- ⑩ 2x CCD 422
- ⑪ 2x M3x25 ISO 4762
- ⑫ 4x M8x35 ISO 4762
- kg 0,74 (B55 = 0,95)

	B51	B52	B53	B54	B55
①	35	35	35	35	80
②	30	30	30	35	30
③	6	6	10	10	11.5
④	-	-	-	-	-
⑤	-	-	-	-	-
⑥	56 HRC	56 HRC	*	*	*

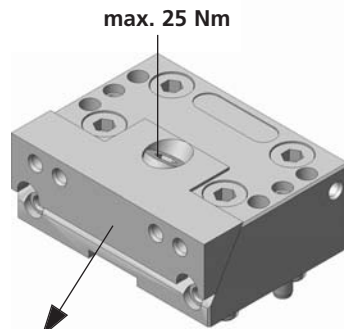
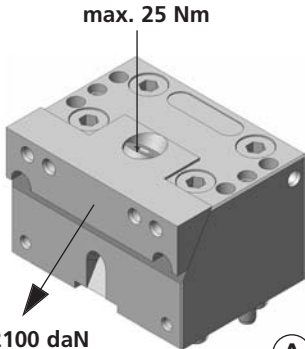
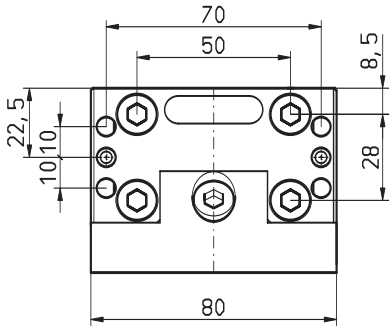
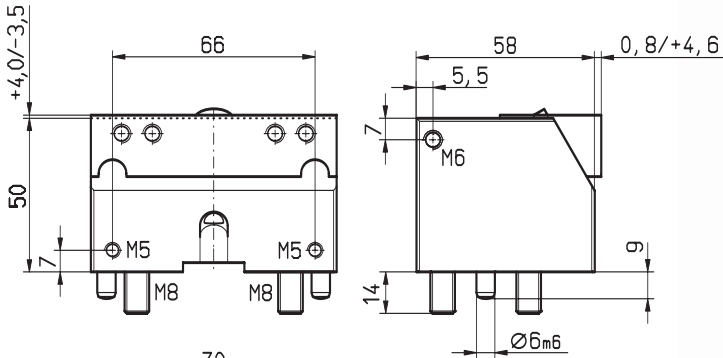
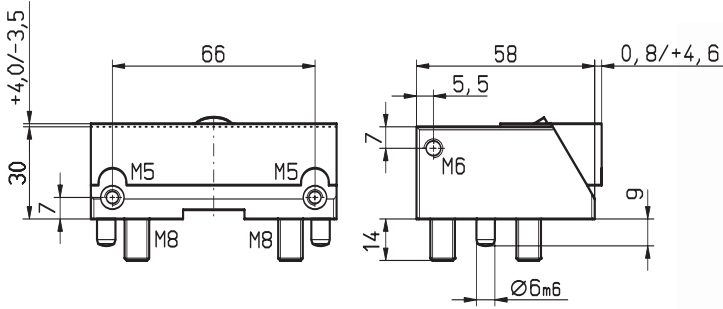


\* = weich / soft / doux

**VS1R 80N50 -36**

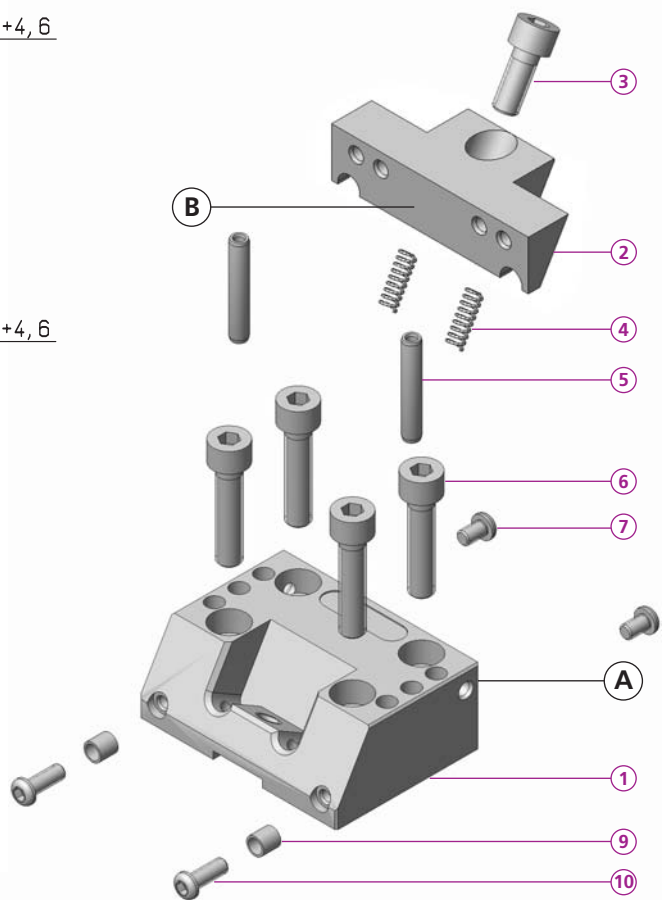
**VS1R/F 80N30 -36 VS1R 80N50 -36**

**microCLAMP**



max. 2100 daN

max. 2100 daN



Bestellbeispiel / ordering example / exemple de commande: **VS1R 80N30 B36**

**VS1F 80N30 -36**

**VS1R 80N30 -36**

- ① 1x CS1R/F 80N30 -36
- ② 1x \_\_\_\_\_
- ③ 1x M8x20 ISO 4762
- ④ 4x FED 0618
- ⑤ 2x CCBO 0801
- ⑥ 4x M8x35 ISO 4762
- ⑦ 2x M5x8 ISO 4762
- ⑨ 2x CCD 007
- ⑩ 2x M5x16 ISO 4762

- ⑫ 1x M6x8 ISO 7380

kg 1,04

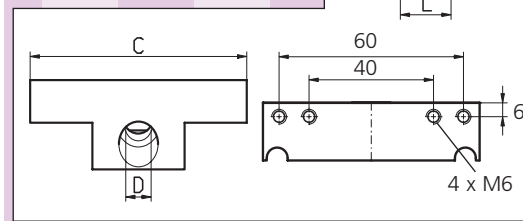
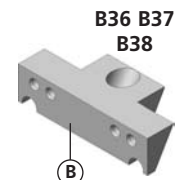
**VS1R 80N50 -36**

- ① 1x CS1R 80N50 -36
- ② 1x \_\_\_\_\_
- ③ 1x M8x20 ISO 4762
- ④ 4x FED 0618
- ⑤ 2x CCBO 0803
- ⑥ 4x M8x55 ISO 4762
- ⑦ 2x M5x8 ISO 4762
- ⑨ 2x PCD 005
- ⑩ 2x M5x12 ISO 4762

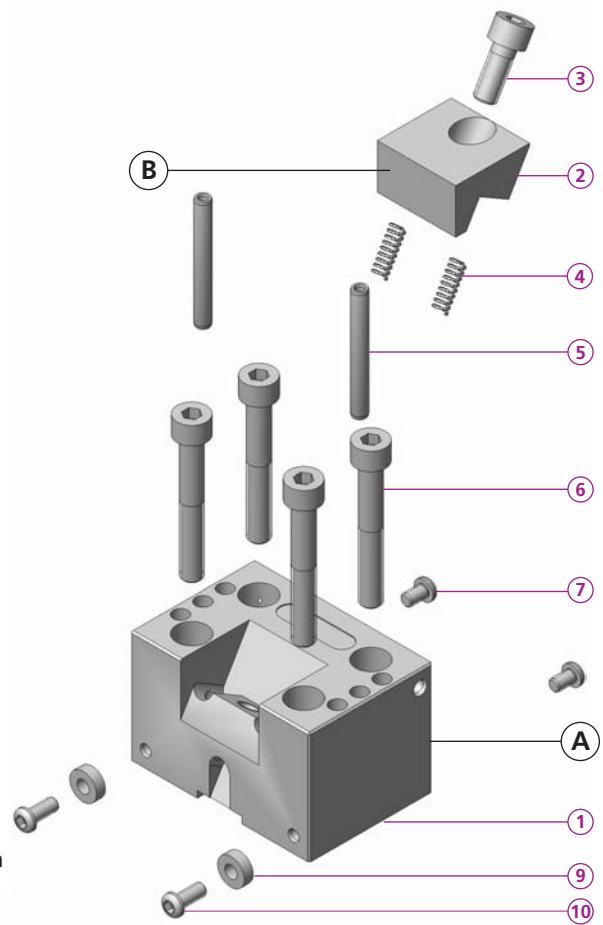
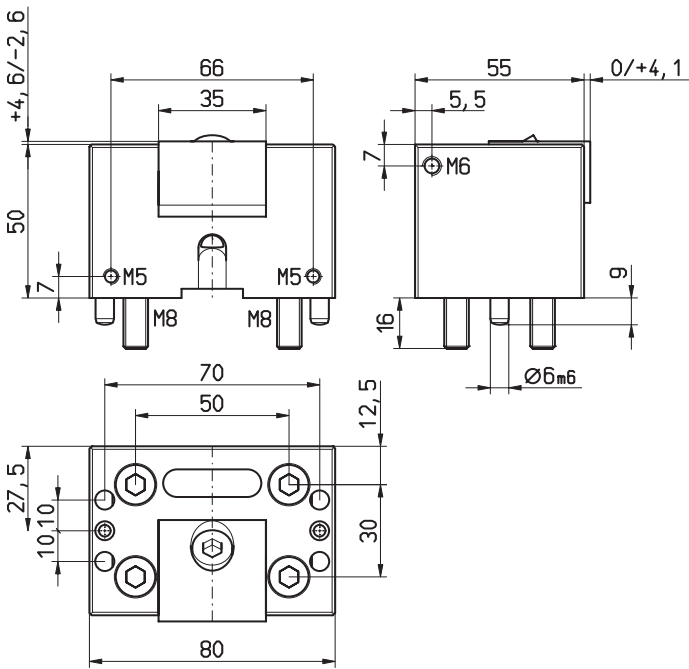
- ⑫ 1x M6x8 ISO 7380

kg 1,685

	B36	B37	B38
③	80	80	80
④	20	20	20
⑤	19	19	19
⑥	9	9	9
⑦	12	12	12
i	HV 700x 0,2mm	HV 700x 0,2mm	*



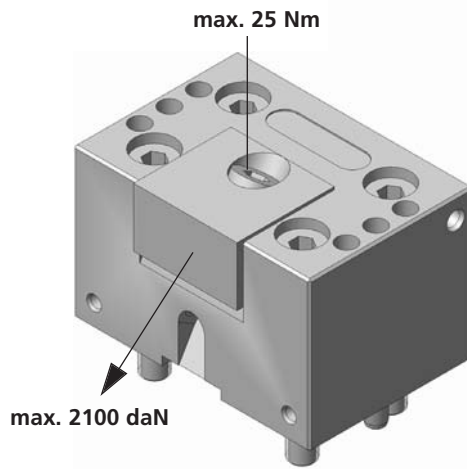
\* = weich / soft / doux



**VS1R 80N50 -60**

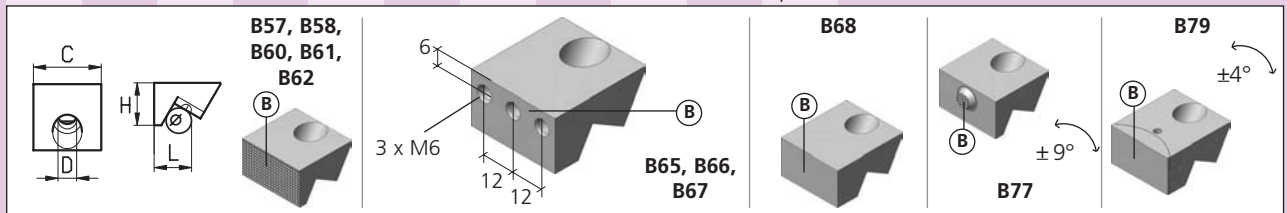
- 1 1x CS1R 80N50 -60
- 2 1x \_\_\_\_\_
- 3 2x M8x20 ISO 4762
- 4 2x FED 0618
- 5 2x CCBO 0803
- 6 4x M8x55 ISO 4762
- 7 2x M5x8 ISO 7380
- 9 2x CCD 004
- 10 2x M5x12 ISO 7380

kg 1,60

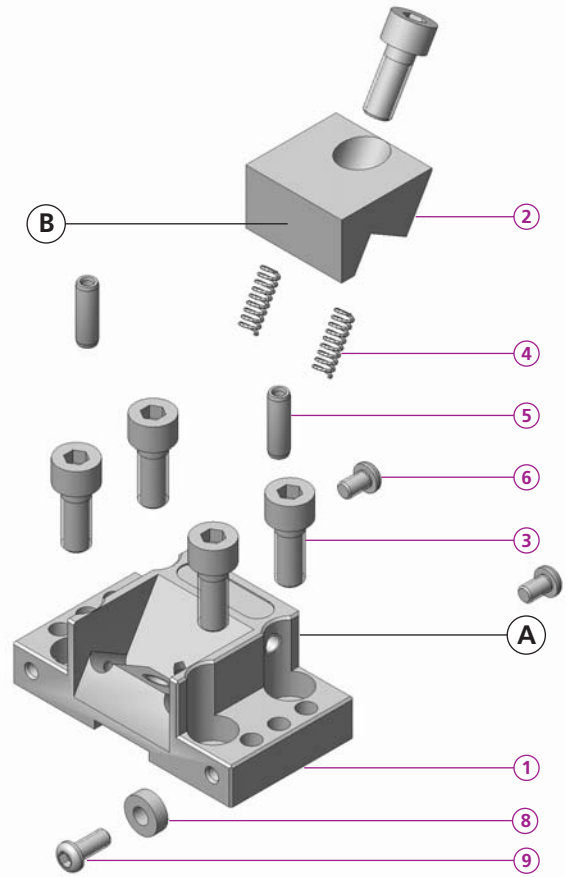
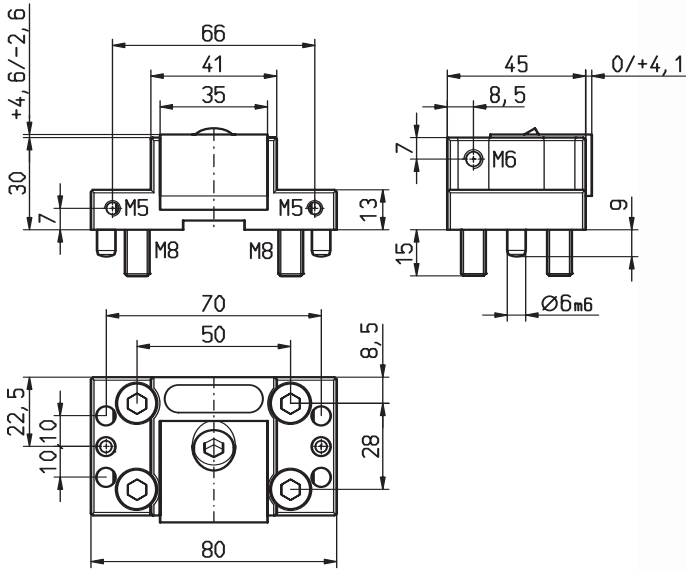


Bestellbeispiel / ordering example / exemple de commande: **VS1R 80N50 B60**

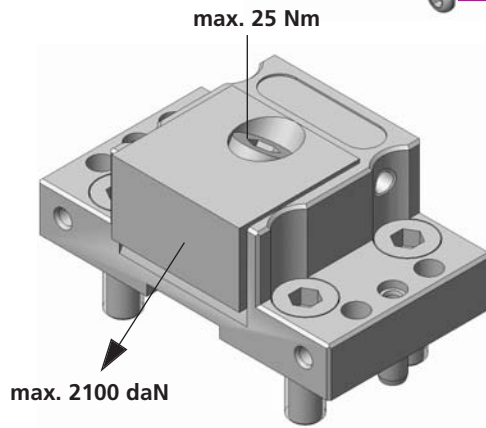
	B57	B58	B60	B61	B62	B65	B66	B67	B68	B77	B79
(C)	35	35	35	35	35	35	35	35	35	35	35
(H)	20	20	20	20	20	20	20	20	20	20	20
(L)	19	24	19	19	19	19	19	24	26	22	25
(D)	9	9	9	9	9	9	9	9	9	9	9
(e)	12	12	12	12	12	12	12	12	12	12	12
(i)	ALU *	ALU *	56 HRC	56 HRC	*	56 HRC	56 HRC	56 HRC	*	56 HRC	HV700x 0,2mm



\* = weich / soft / doux

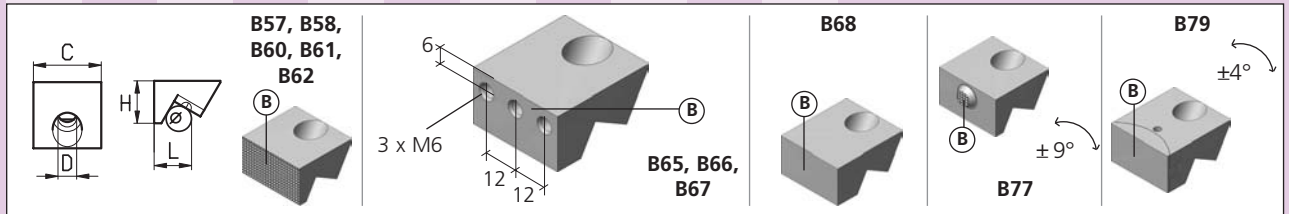


- VS1F 41N30 -60**
  - VS1R 41N30 -60**
- 1 1x CS1R/F 41N30 -60
  - 2 1x
  - 3 2x M8x20 ISO 4762
  - 4 2x FED 0618
  - 5 2x CCBO 0802
  - 6 2x M5x8 ISO 7380
  - 8 2x CCD 004
  - 9 2x M5x12 ISO 7380
- kg 0,58

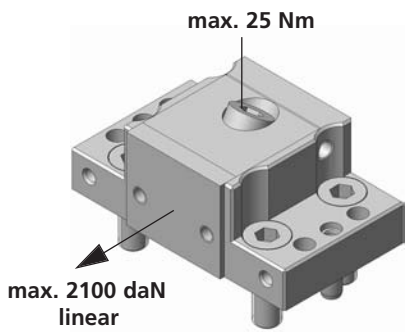
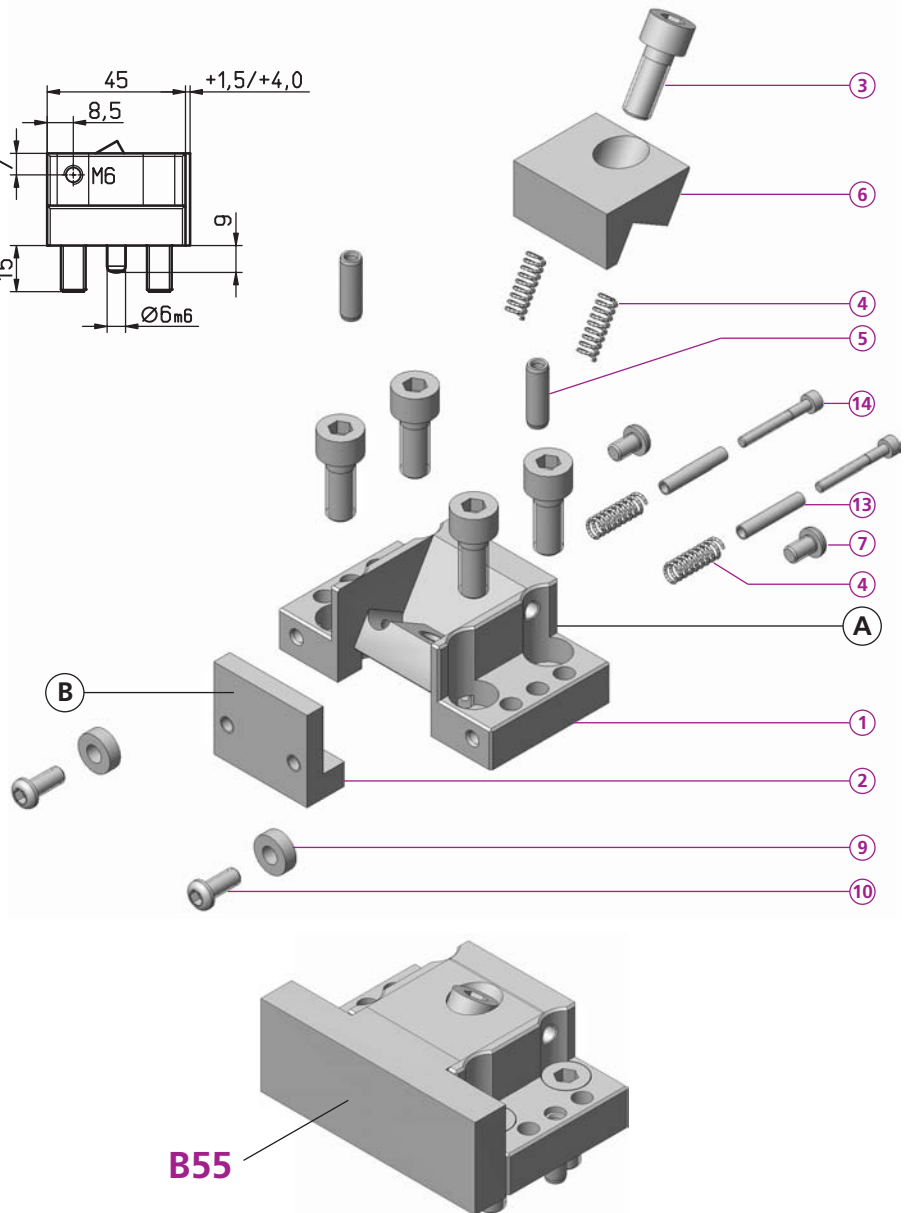
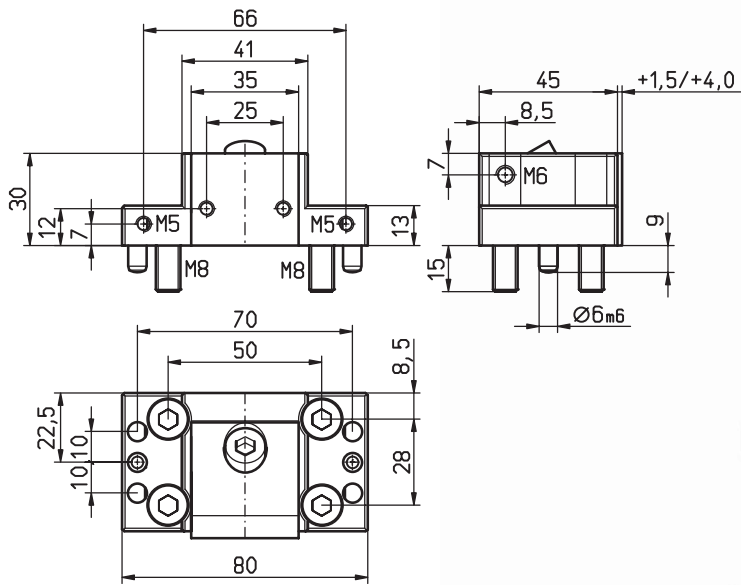


Bestellbeispiel / ordering example / exemple de commande: **VS1R 41N30 B60**

	B57	B58	B60	B61	B62	B65	B66	B67	B68	B77	B79
<b>C</b>	35	35	35	35	35	35	35	35	35	35	35
<b>H</b>	20	20	20	20	20	20	20	20	20	20	20
<b>L</b>	19	24	19	19	19	19	19	24	26	22	25
<b>D</b>	9	9	9	9	9	9	9	9	9	9	9
<b>ø</b>	12	12	12	12	12	12	12	12	12	12	12
<b>i</b>	ALU *	ALU *	56 HRc	56 HRc	*	56 HRc	56 HRc	56 HRc	*	56 HRc	HV700x 0,2mm

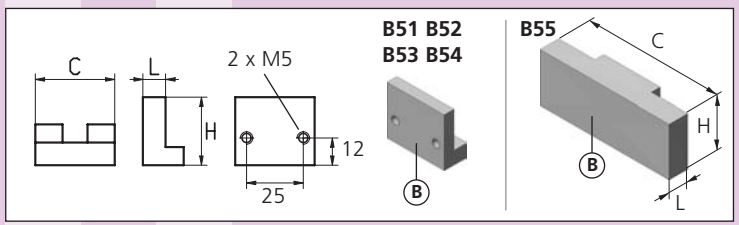


\* = weich / soft / doux

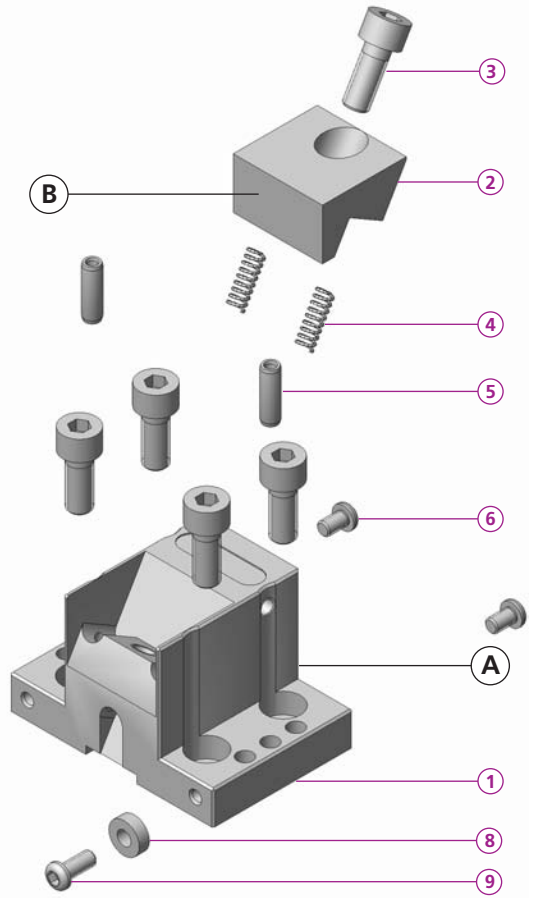
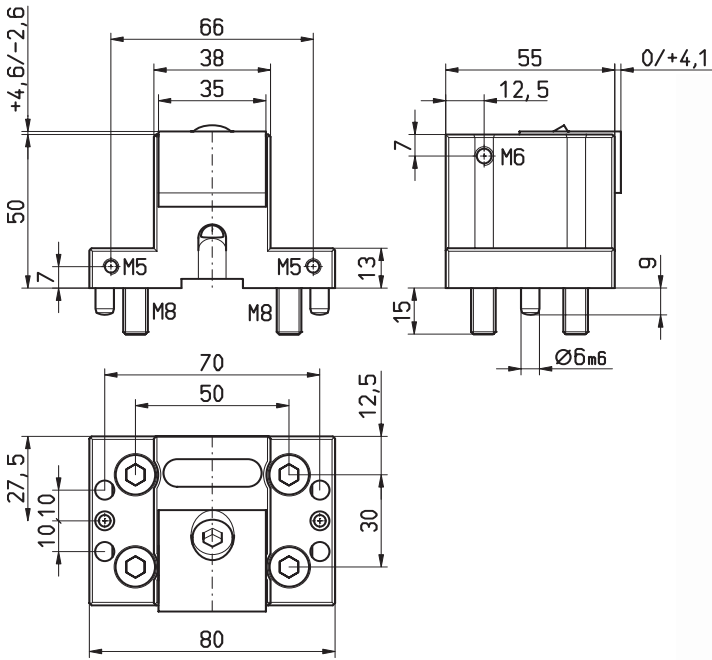


Bestellbeispiel / ordering example / exemple de commande: VS1R 41L30 B51

	A	B	C	H	L	D	o	i
<b>VS1F 41L30 -51</b>								
<b>VS1R 41L30 -51</b>								
<b>1</b>	1x CS1R/F 41L30 -51	B51	B52	B53	B54	B55		
<b>2</b>	1x							
<b>3</b>	1x M8x20 ISO 4762							
<b>4</b>	6x FED 0618							
<b>5</b>	2x CCBO 0802							
<b>6</b>	1x B78							
<b>7</b>	2x M5x8 ISO 7380							
<b>9</b>	2x CCD 004							
<b>10</b>	2x M5x12 ISO 7380							
<b>13</b>	2x CCD 422							
<b>14</b>	2x M3x25 ISO 4762							
<b>kg</b>	0,545 (B55 = 0,95)							



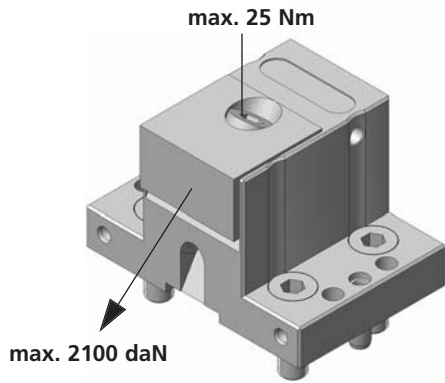
\* = weich / soft / doux



**VS1R 38N50 -60**

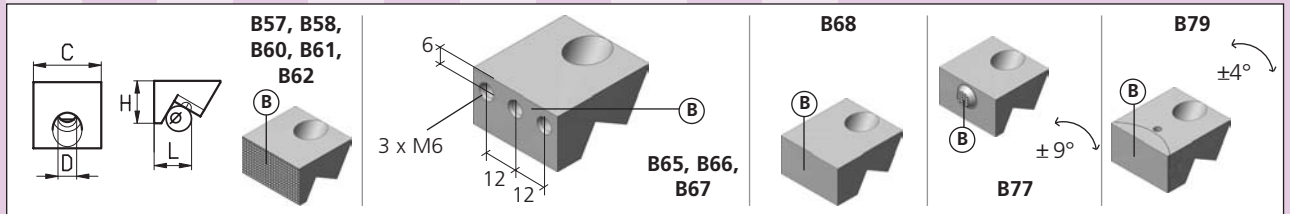
- ① 1x CS1R 38N50 -60
- ② 1x —
- ③ 5x M8x20 ISO 4762
- ④ 2x FED 0618
- ⑤ 2x CCBO 0802
- ⑥ 2x M5x8 ISO 7380
- ⑧ 2x CCD 004
- ⑨ 2x M5x12 ISO 7380

kg 1,01



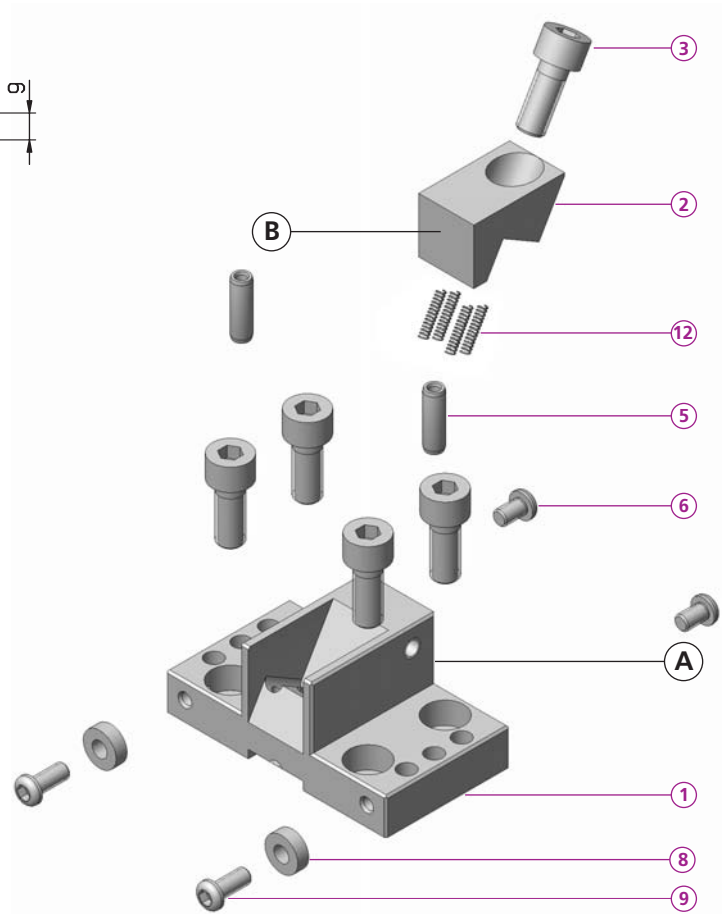
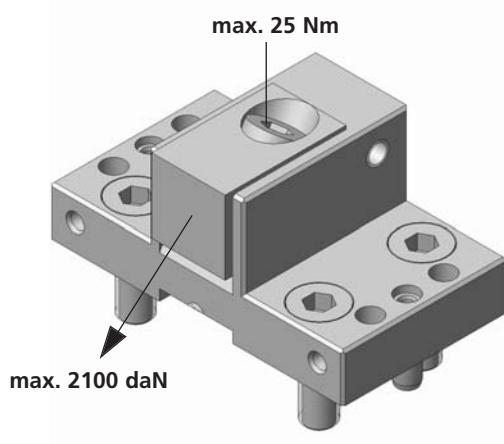
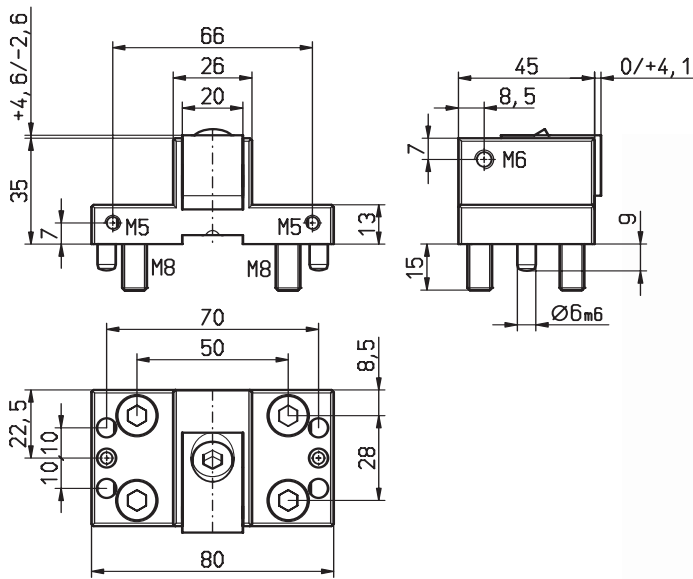
Bestellbeispiel / ordering example / exemple de commande: **VS1R 38N50 B60**

	B57	B58	B60	B61	B62	B65	B66	B67	B68	B77	B79
③	35	35	35	35	35	35	35	35	35	35	35
④	20	20	20	20	20	20	20	20	20	20	20
⑤	19	24	19	19	19	19	19	24	26	22	25
⑥	9	9	9	9	9	9	9	9	9	9	9
⑦	12	12	12	12	12	12	12	12	12	12	12
⑧	ALU *	ALU *	56 HRC	56 HRC	*	56 HRC	56 HRC	56 HRC	*	56 HRC	HV700x 0,2mm



\* = weich / soft / doux

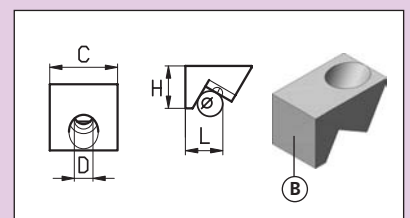




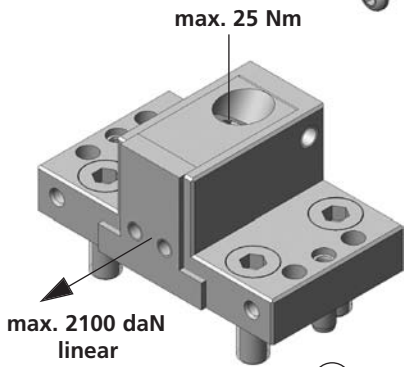
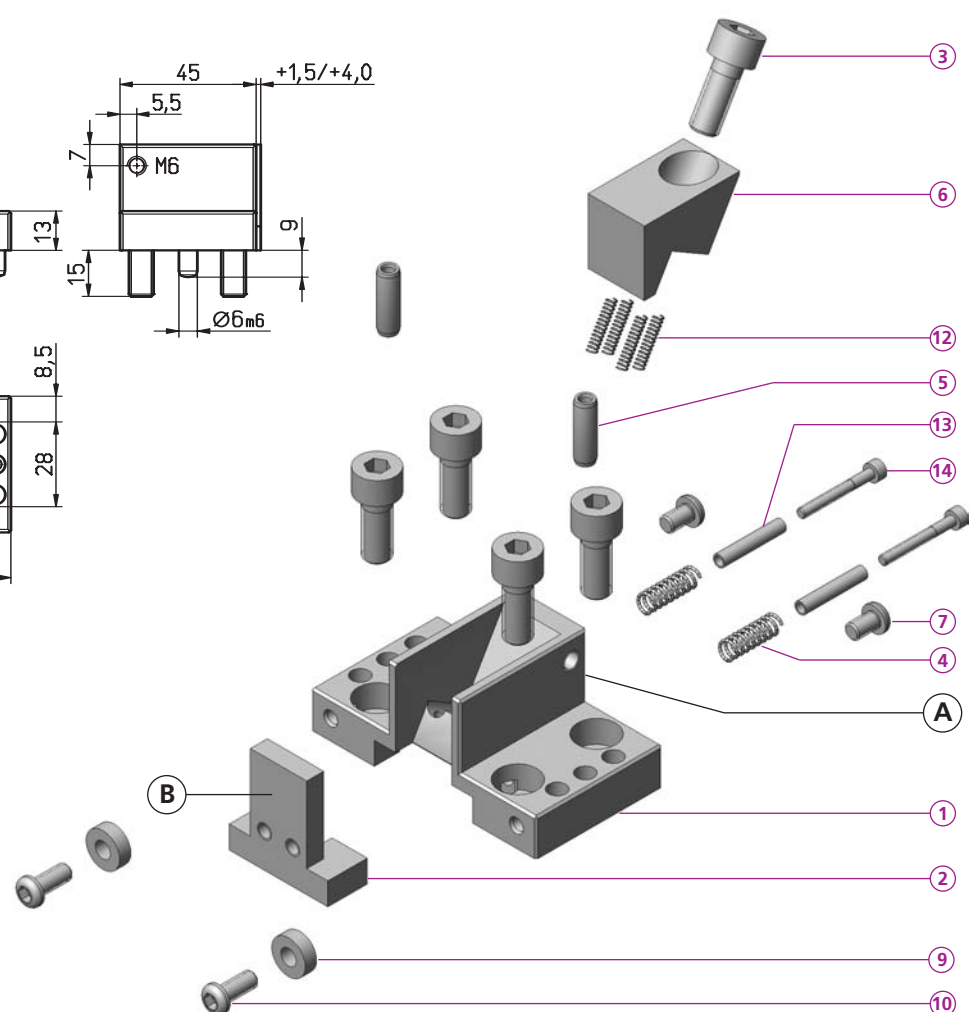
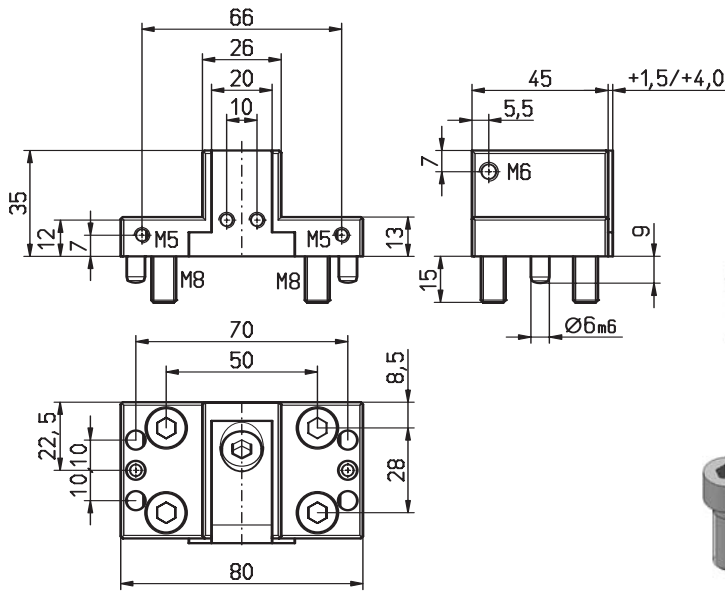
Bestellbeispiel / ordering example / exemple de commande: VS1R 26N35 B26

VS1R 26N35 -26	
1	1x CS1R 26N35 -26
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

	B26	B27	B28
C	20	20	20
H	20	20	20
L	19	19	19
D	9	9	9
o	12	12	12
i	56 HRc	56 HRc	*



\* = weich / soft / doux



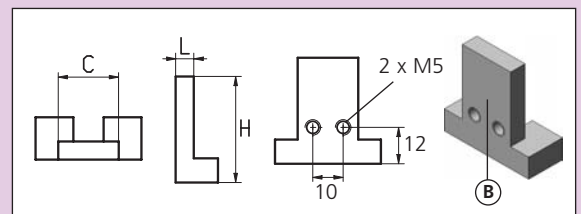
Bestellbeispiel / ordering example / exemple de commande: VS1R 26L35 B31

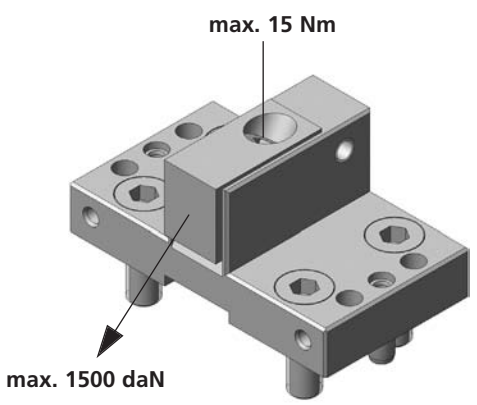
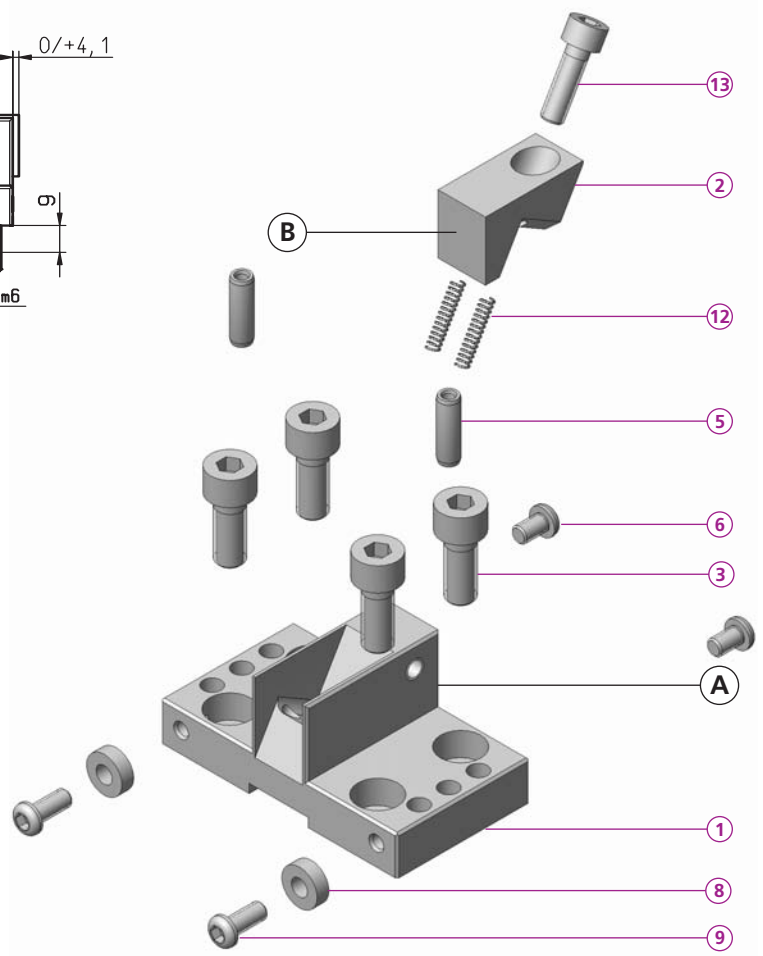
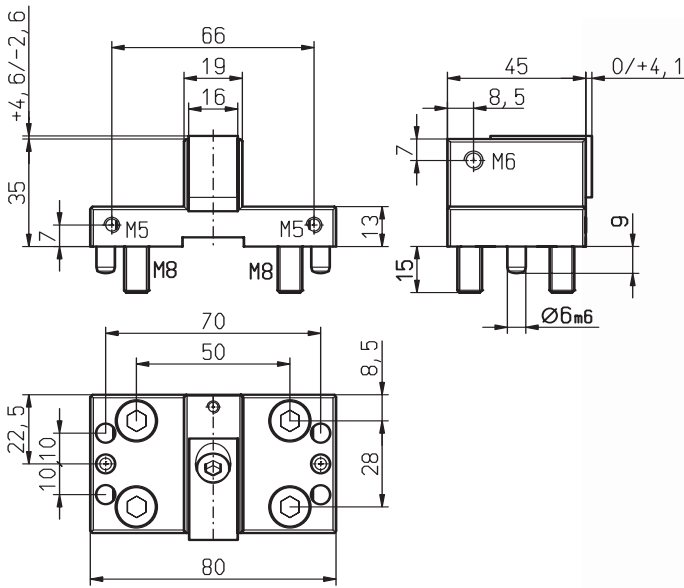
VS1R 26L35 -31

- ① 1x VS1R 26L35 -31
- 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

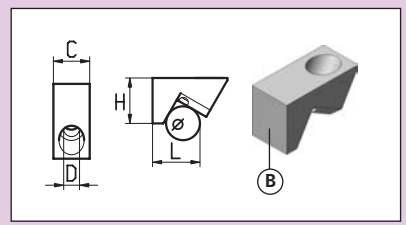
	B31	B32	B33
③	20	20	20
⑥	35	35	35
⑦	6	6	6
⑧	-	-	-
⑨	-	-	-
⑩	HV700x 0,2mm	HV700x 0,2mm	*





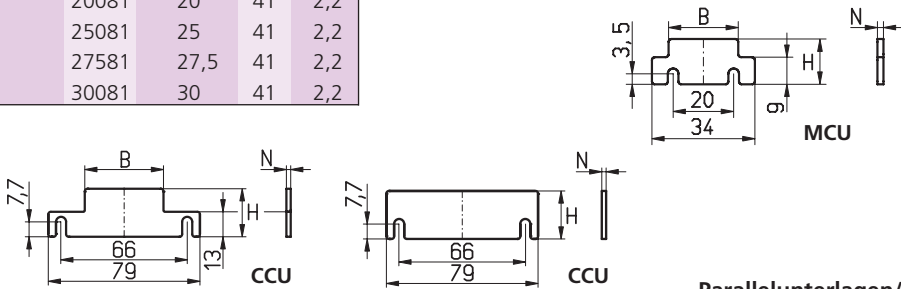
Bestellbeispiel / ordering example / exemple de commande: VS1R 19N35 B20

VS1R 19N35 -20		A	B	C	H	L	D	d	i
		B20	B21	B22	16	20	19	6,5	12
1	1x CS1R 19N35 -20								
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	2x FED 0418								
13	1x M6x20 ISO 4762								
kg	0,505								



\* = weich / soft / doux

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



Parallelunterlagen/ steel parallels / cales parallèles

**SL0**  
**SL1**

4-20 Nm (1/4")  
8-54 Nm (3/8")

Nuss 1/4"      4 mm  
5 mm  
6 mm

Nuss 3/8"      6 mm  
8 mm  
10 mm

**CCHMR**  
HM  
carbide  
carbure

**CCPD**  
60 HRC

**CCPDR**  
60 HRC

**CCPF M12 Alu**

**CC BUE 12 18 12**

026 - 13160 - 4  
026 - 13164 - 5  
026 - 13168 - 6  
026 - 13172 - 8  
026 - 13176 - 10

	D	G	L	B	K	S
<b>MS 50</b>	5h6	M5	17	9	5	4
<b>MS 60</b>	6h6	M6	17	9	6	5
<b>TW PAS 1240</b>	12h6	M12	40	20	12	10
<b>TW PAS 1232</b>	12h6	M12	32	20	12	10

**FA 1240**

**FA 1260**

DS 0402-90°	DSE 0402-60°	DSE 0402-90°
60 HRC	60 HRC	60 HRC

3 x M6 für / for / pour CCHMR

	A	B	X	Y
CC 8011			30	24
CC 8025			50	44

3 x M6 für / for / pour CCHMR

	A	B	X	Y
CC 8021			30	24
CC 8026			50	44

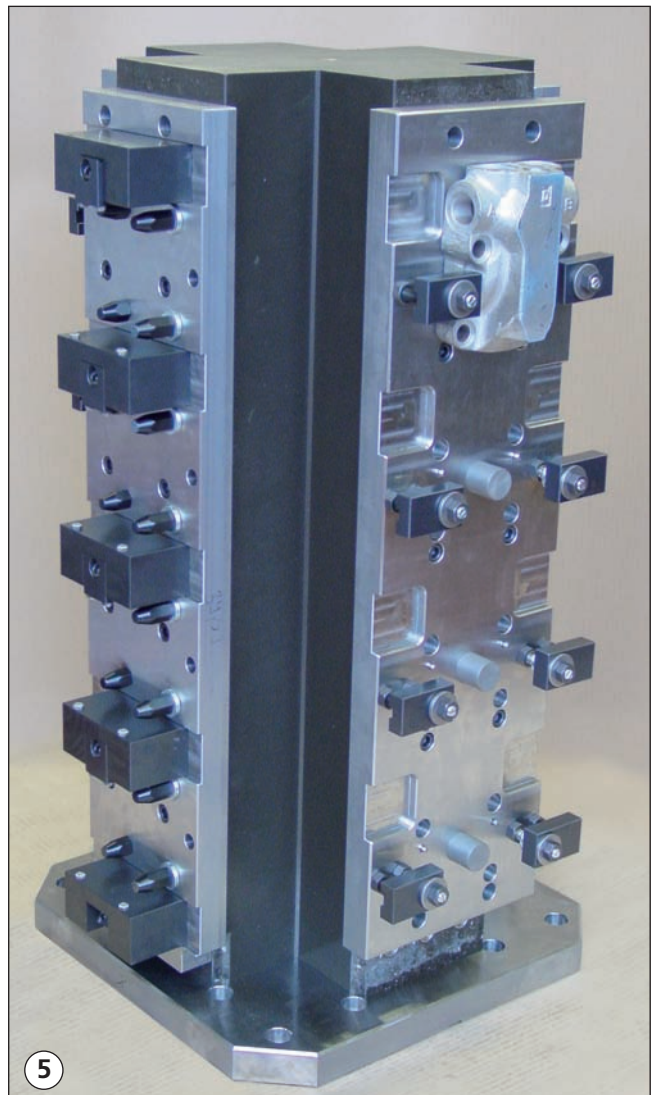
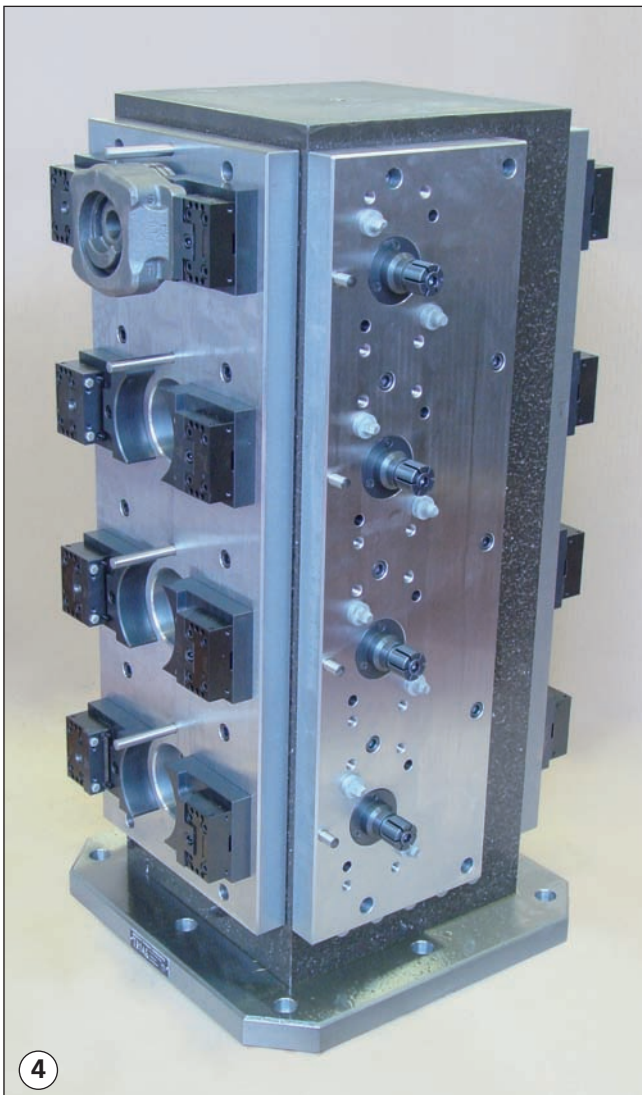
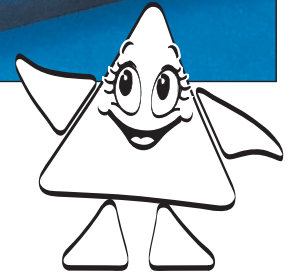
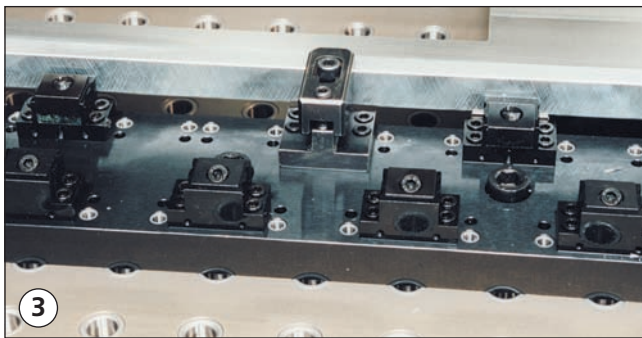
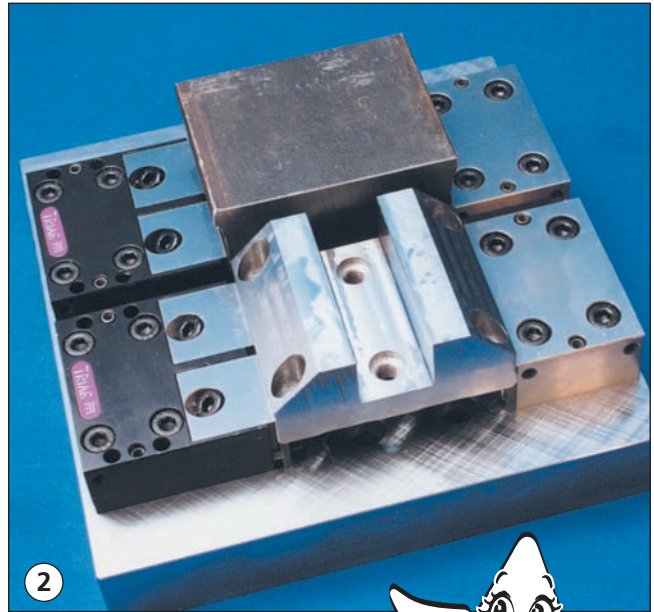
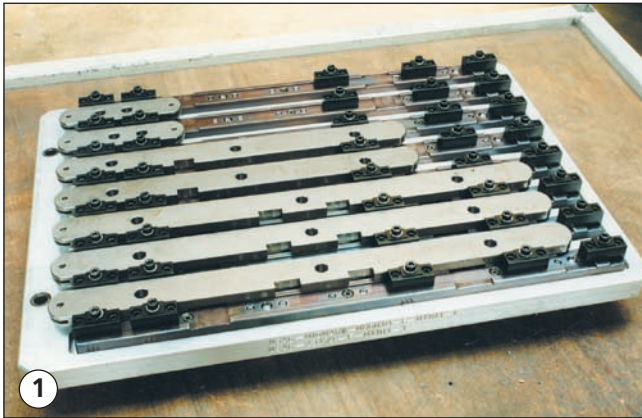
CC 8030	X	30
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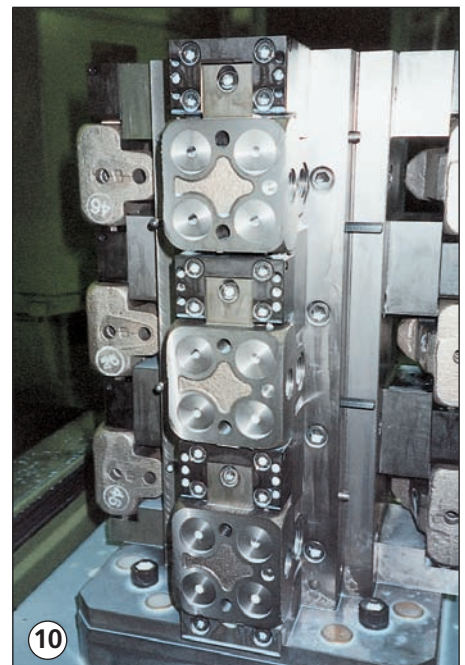
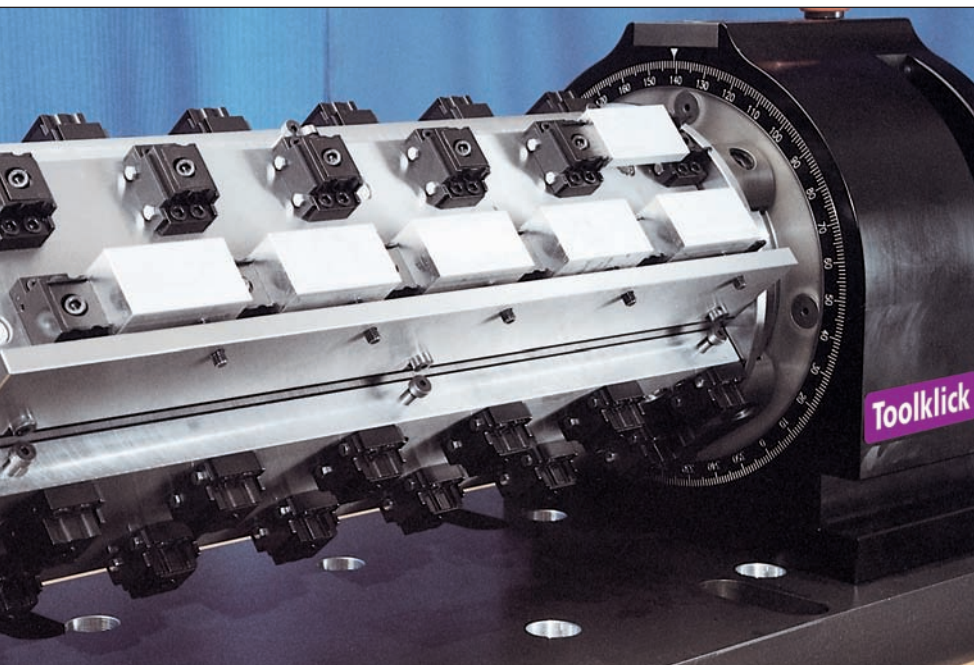
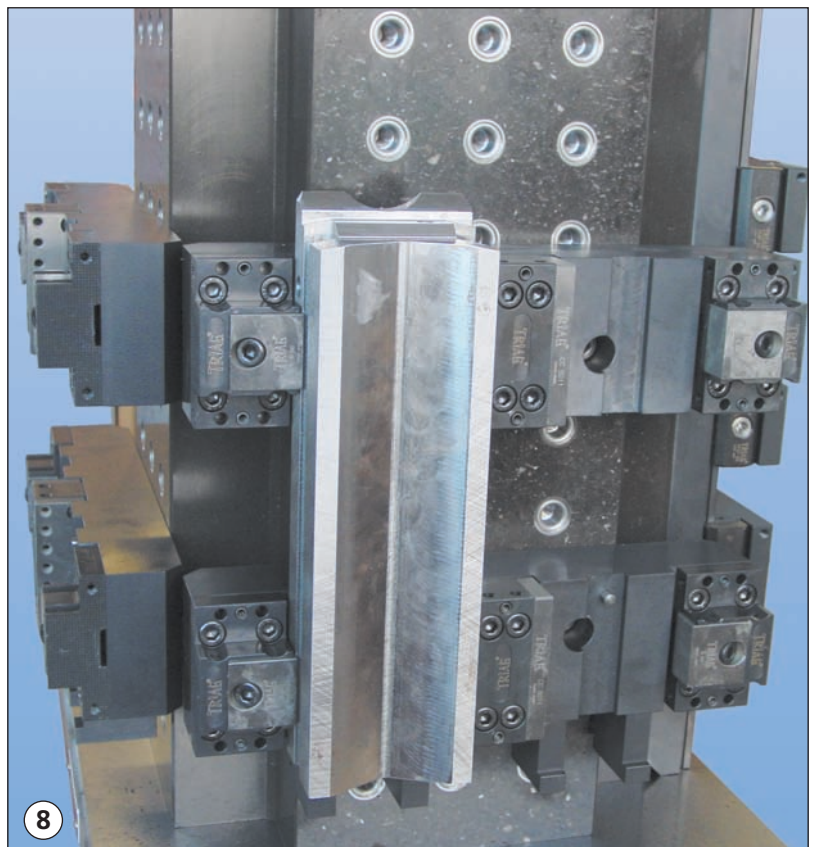
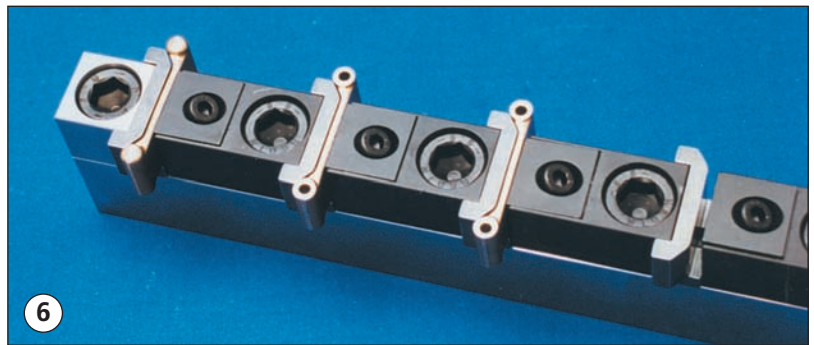
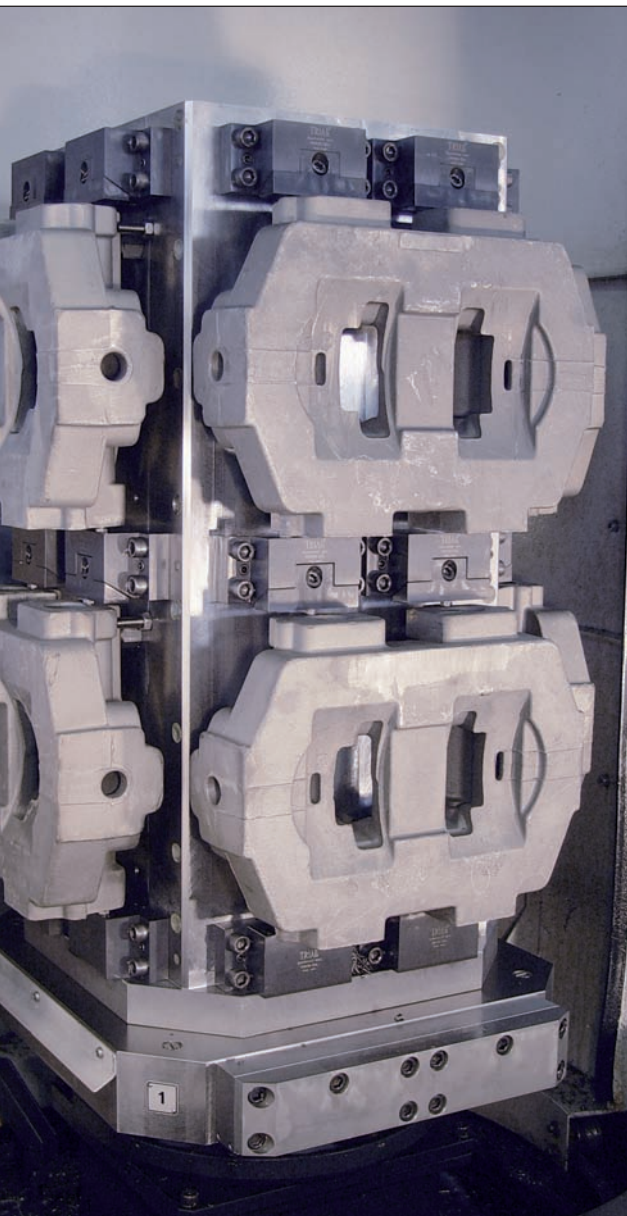
weich / soft / doux

CC 8030	X	30
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FA UM 2070	
①	1x FA 2070
②	1x FAD 2092
③	1x MG 1645
④	1x M6 ISO 4032
⑤	1x M6x35 ISO 4762
⑥	1x M5x14 ISO 4762
⑦	1x M3x8 ISO 10642

Bestellbeispiel / ordering example / exemple de commande: FA UM 2070







### powerCLAMP

Das schnellstverstellbare Mehrfachspannsystem! Die Positionierung erfolgt mittels einer Verzahnung auf der Schiene. Befestigung mit einer Schraube!

*The quickest multiple workholding system for easy set up! Positioning by means of ground teeth on the base rail. Repositioning by opening one single screw!*

Le système de serrage multiple le plus rapide à régler! Le positionnement du module s'effectue grâce à une denture rectifiée sur le rail de base. Le positionnement du module est garanti par une seule vis.



### compactCLAMP

Das flexible Mehrfachspannsystem! Die Positionierung erfolgt mittels Präzisionsbohrungen in Noniusanordnung. Die Spannelemente werden mit der Basis verstiftet und können daher nicht verschieben.

*the flexible multiple workholding system! Positioning by bores arranged in vernier type layout. The workholding modules are pinned down to the base and thus can't move.*

Le système de serrage multiple le plus flexible. Le positionnement s'effectue avec des alésages de précision disposés en ordre Nonius. Les modules de serrage sont fixés sur la base avec des goupilles et de ce fait ne peuvent se déplacer.



### microCLAMP

Kleinste Module für den Vorrichtungsbau. Sie haben eine grosse Spannkraft (bis 21'000N), der benötigte Abstand zwischen den Werkstücken ist im optimalfall nur 15 mm.

*Smallest modules for dedicated fixtures. Having a high clamping force (up to 21'000N) the distance between workpieces is only 15mm in optimum set up.*

Le plus petit module de serrage pour la construction de gabarits. Les modules de serrage Micro Clamp ont une grande force de serrage ( jusqu'à 21.000 N ) la distance nécessaire entre les pièces à usiner est dans le cas optimal de 15 mm.



### tripoxyMINERAL

Spanntürme aus Mineralguss. Die Vibrationsdämpfung ist zehn mal besser als bei Grauguss. Das spezifische Gewicht ist hingegen kleiner als bei Aluminium. Erhältlich in vielen verschiedenen Formen.

*Tombstones made of composite concrete. Vibration damping effect is ten times better than with cast iron. Specific weight on the other hand is less than aluminum. Available in many different shapes.*

Les tourelles de serrage en fonte minérale. L'atténuation des vibrations est dix fois supérieur à la fonte grise. Le poids spécifique est plus petit que l'aluminium. Elles sont livrables en diverses formes.



### mivaCLAMP

Vakuumspannsystem: Bestens geeignet für plattenförmige Werkstücke (auch nicht magnetische). Es können sowohl Druckstellen als auch Deformatoren an labilen Teilen vermieden werden.

*Workholding by vacuum: Suited for plateshaped workpieces (also for non magnetical). Pressure marks as well as deformations on soft parts can be avoided.*

La meilleure solution pour la fixation de pièces plates (aussi non magnétique) Pas de marques ou blessures sur des matières tendres et pas de déformation avec des pièces instables.



### triGEL

Unser Gefrierspannsystem. Sehr gut geeignet für unförmige Teile. Es erlaubt mehrseitiges Bearbeiten ohne Neuspannen. Das Haftvermögen ist sehr gross, wobei die Gefrier- und Auftauzeiten sehr gering sind.

*Workholding by freezing: Well suited for strandely shaped parts. It allows processing from more than one side without unclamping. Holding effects are very strong whereas freezing and defrosting times are very short.*

Notre système de fixation par gel. Recommandé pour des pièces difformes. Permet l'usinage sur plusieurs côtés sans nouvelle fixation. La force de fixation est très grande et le temps de prise et de dégel est très court.



### oppSystem

Unser Nullpunkt-Palettiersystem ermöglicht ein genaues Positionieren von Mehrfachspannsystemen, Schraubstöcken und Vorrichtungen auf Maschinentischen oder Spanntürmen.

*Our zero-point palleting system allowsexact positioning of multiple workholding systems, vices and dedicated fixtures on machining tables or tombstones.*

Notre système de palettisation point zéro garanti un positionnement précis du système de serrage multiple, des étaux, gabarits, constructions spéciales sur la table de la machine ou sur la tourelle de fixation.



### 5axesCLAMP

Dieses modulare Spannsystem wurde speziell für 5-Achsen-Maschinen entwickelt. Es ermöglicht ein freies zukommen der Maschinenspindel zum Werkstück. Sowohl kleine wie grosse Werkstücke können damit problemlos gespannt werden.

*This modular workholding system was especially developed for 5-axes machines. It allows the machine spindle to access freely to the workpiece. Both small and large workpieces can be clamped without difficulties.*

Ce système de serrage modulaire a été développé spécialement pour les machines à 5 axes. Ce système autorise un libre accès avec la broche de la machine vers la pièce à usiner. Ce système garanti le serrage de petites et de grandes pièces à usiner.