

Spannelemente

Clamping Equipment



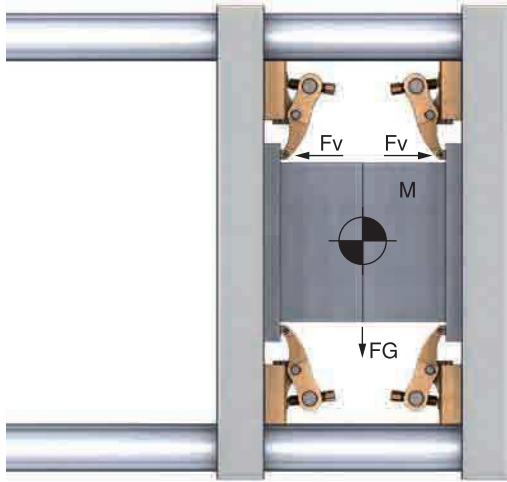
Kraftspanner Verschiebbar

Combined Sliding Clamp



Berechnung für die Anwendung

Calculation For The Application



Anwendungsbeispiel für Spritzgusswerkzeuge Power Clamp For Injection Moulding

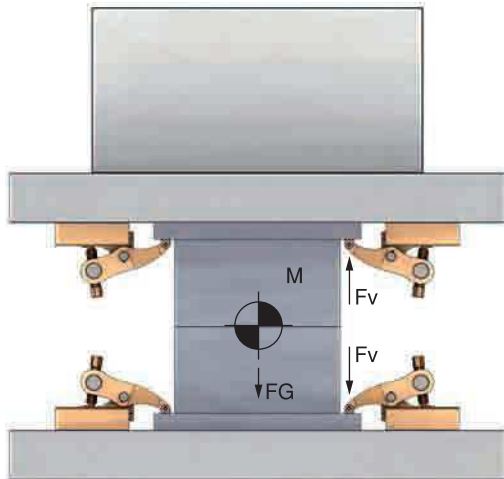
Rechenformel / Formula Calculator

$$\frac{M \times FG}{1000} = \text{kN} \quad \frac{2500 \times 9.81}{1000} = 24.52 \text{ kN}$$

$$\frac{\text{kN}}{\mu} = \text{Ergebnis / Result} \quad \frac{24.52}{0.14} = 175.14 \text{ kN}$$

$$\frac{\text{Ergebnis}}{F_v} = \text{Spann-Anzahl} \quad \frac{175.14 \text{ kN}}{25 \text{ kN}} = 7 \text{ Spannen / Clamp}$$

8 Stück verwenden
8 pcs Use



Anwendungsbeispiel für Presswerkzeuge Power Clamp For Press Moulding

Rechenformel / Formula Calculator

$$\frac{M \times FG}{1000} = \text{kN} \quad \frac{5000 \times 9.81}{1000} = 49.050 \text{ kN}$$

$$\frac{\text{kN}}{\mu} = \text{Ergebnis / Result} \quad \frac{49.05}{0.14} = 350.35 \text{ kN}$$

(Oberes Werkzeug %60) (%60 Oberes Werkzeug= 210.21)
(Unteres Werkzeug % 40) (% 40 Unteres Werkzeug= 140.14)

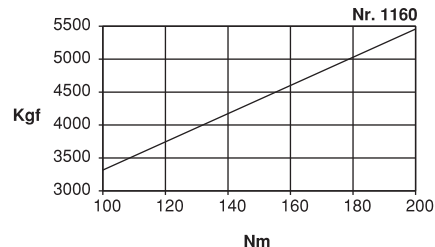
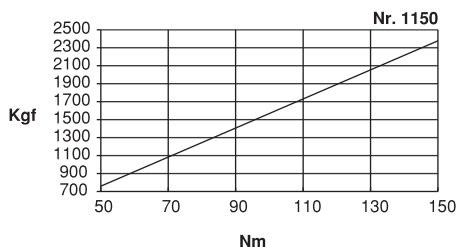
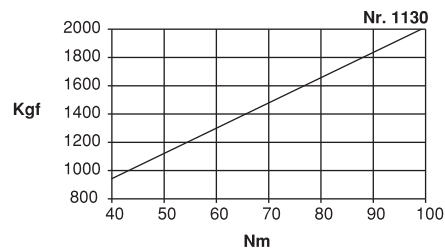
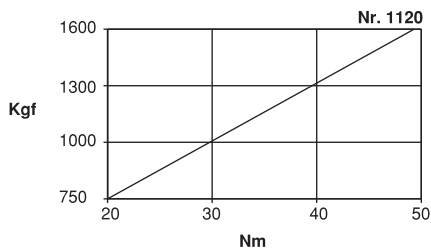
$$\frac{\text{Ergebnis}}{F_v} = \text{Spann-Anzahl} \quad \frac{210.21 \text{ kN}}{25 \text{ kN}} = 8 \text{ Spann-Anzahl}$$

8 Number of Clamp

$$\frac{\text{Ergebnis}}{F_v} = \text{Spann-Anzahl} \quad \frac{140.14 \text{ kN}}{25 \text{ kN}} = 5.6 \text{ Spannen / Clamp}$$

6 Stück verwenden
6 pcs Use

Kraftdiagramm / Force Diagram



Referenz-Nr. Order No.		m	h		s	s1	e1	d	sw	L	e	b	c	Spannkraft Clamping Force Kgf	
			min	max											
1120-014 T	14	M12	0	50	12-66	25	100	M14	8	104	35.5	38	13	1600	1700
1120-016 T	16	M12	0	50	12-66	25	100	M14	8	104	35.5	38	13	1600	1700
1120-018 T	18	M12	0	50	12-66	25	100	M14	8	104	35.5	38	13	1600	1700
1130-014 T	14	M12	0	60	15-83	30	113	M18	10	130	39	48	17.5	2000	3040
1130-016 T	16	M12	0	60	15-83	30	113	M18	10	130	39	48	17.5	2000	3055
1130-018 T	18	M12	0	60	15-83	30	113	M18	10	130	39	48	17.5	2000	3085
1130-020 T	20	M12	0	60	15-83	30	113	M18	10	130	39	48	17.5	2000	3135
1130-022 T	22	M12	0	60	15-83	30	113	M18	10	130	39	48	17.5	2000	3150

1120-1130

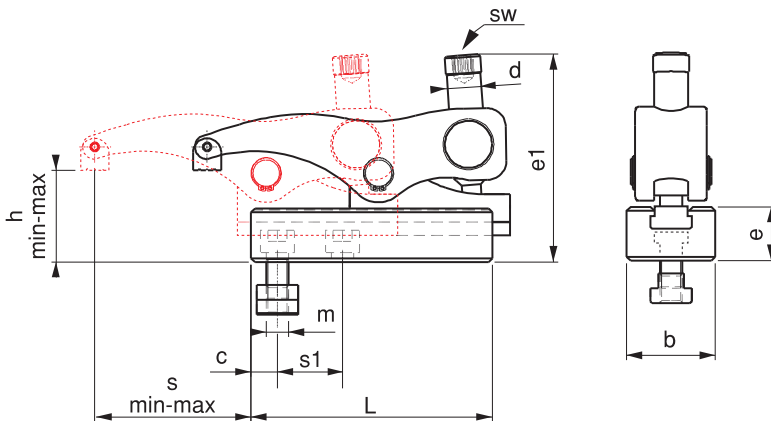
• **1120** (a) 14-18 in T-Nut wird Inbusschraube M12 DIN 508 mit T-Nutmutter verwendet. Spannhöhe 0-50 mm, Spannweite 54 mm, Spannkraft 1600 kg.

• **1130** (a) 14-22 in T-Nut wird Inbusschraube M12 DIN 508 mit T-Nutmutter verwendet. Spannhöhe 0-60 mm, Spannweite 68 mm, Spannkraft 2000 kg.

1120-1130

• **1120** (a) 14-18 is used in T-Slot and M12 imbus bolt is used with DIN 508 T-Nut. Height clamping gap of the piece is 0-50mm, back-and- forth movement distance is 54mm. Clamping force is 1600 kgf.

• **1130** (a) 14-22 is used in T-Slot and M12 imbus bolt is used with DIN 508 T-Nut. Height clamping gap of the piece is 0-60mm, back-and- forth movement distance is 68mm. Clamping force is 2000 kgf.


ANWENDUNG;

- 1- Zwischenelement an Werkstück befestigen
- 2- Grundkörper auf Zwischenelement verschieben
- 3- Werkstück mit Inbusschraube befestigen
- 4- Werkstück ist zum Bearbeiten bereit

APPLICATION;

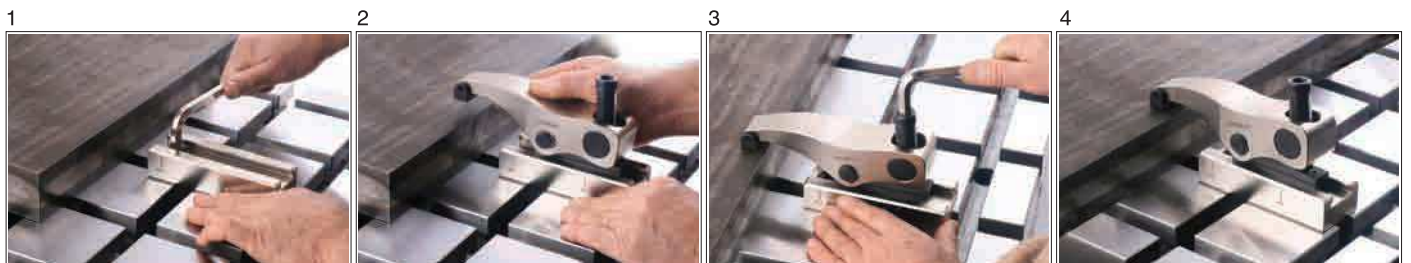
- 1- Slide cradle is brought to suitable form with the work piece and then it is fixed
- 2- Upper body is driven to the slide and it is brought to desired position
- 3- Work piece is fixed with the imbus bolt of the clamp
- 4- Then the work piece becomes ready to be machined.

Verwendung

Injektionsmaschinen, Pressen, Fräsmaschinen, Bohrzentren, verschiedene Industriemaschinen

Area of Use

Injection Machines, Presses, Milling Machines, Drilling Machines and various Industrial Machines



Referenz-Nr. Order No.		m	h		s	s1	e1	d	sw	L	e	b	c	Spannkraft Clamping Force Kgf		
			min	max												
1150-118 T	18	M16	0	65	18-96	35	125	M20	12	140	43	55	19.5	2500	4410	
1150-120 T	20	M16	0	65	18-96	35	125	M20	12	140	43	55	19.5	2500	4460	
1150-122 T	22	M16	0	65	18-96	35	125	M20	12	140	43	55	19.5	2500	4515	
1150-124 T	24	M16	0	65	18-96	35	125	M20	12	140	43	55	19.5	2500	4620	
1150-128 T	28	M16	0	65	18-96	35	125	M20	12	140	43	55	19.5	2500	4725	
1160-222 T	22	M20	20	80	17-92	41.5	175	M24	12	24	178	55	74	24	5500	9030
1160-224 T	24	M20	20	80	17-92	41.5	175	M24	12	24	178	55	74	24	5500	9120
1160-228 T	28	M24	20	80	17-92	41.5	175	M24	12	24	178	55	74	24	5500	9180
1160-236 T	36	M24	20	80	17-92	41.5	175	M24	12	24	178	55	74	24	5500	9600

1150-1160

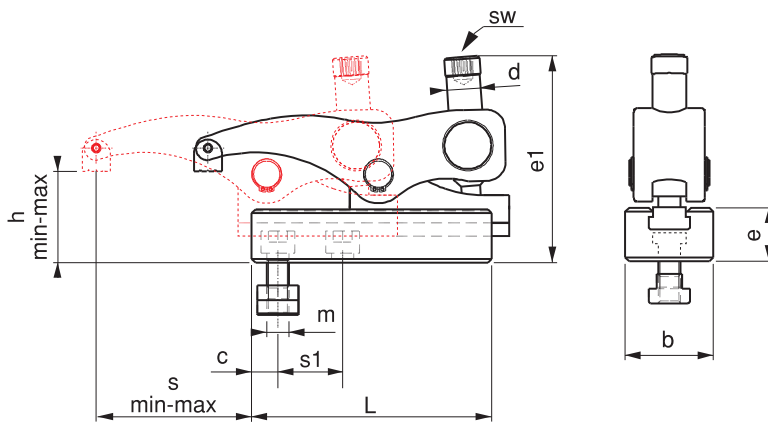
• **1150** (a) 18-28 in T-Nut wird Inbusschraube M16 DIN 508 mit T-Nutmutter verwendet. Spannhöhe 0-65 mm, Spannweite 78 mm, Spannkraft 2500 kg.

• **1160** (a) 22-36 in T-Nut wird Inbusschraube M20-M24 DIN 508 mit T-Nutmutter verwendet. Spannhöhe 20-80 mm, Spannweite 73 mm, Spannkraft 5500 kg.

1150-1160

• **Nr. 1150** (a) 18-28 is used in T-Slot and M16 imbus bolt is used with DIN 508 T-Nut. Height clamping gap of the piece is 0-65mm, back-and- forth movement distance is 78mm. Clamping force is 2500 kgf.

• **Nr. 1160** (a) 22-36 is used in T-Slot and M20-M24 imbus bolt is used with DIN 508 T-Nut. Height clamping gap of the piece is 20-80mm, back-and- forth movement distance is 73mm. Clamping force is 5500 kgf.


ANWENDUNG;

- 1- Zwischenelement an Werkstück befestigen
- 2- Grundkörper auf Zwischenelement verschieben
- 3- Werkstück mit Inbusschraube befestigen
- 4- Werkstück ist zum Bearbeiten bereit

APPLICATION;

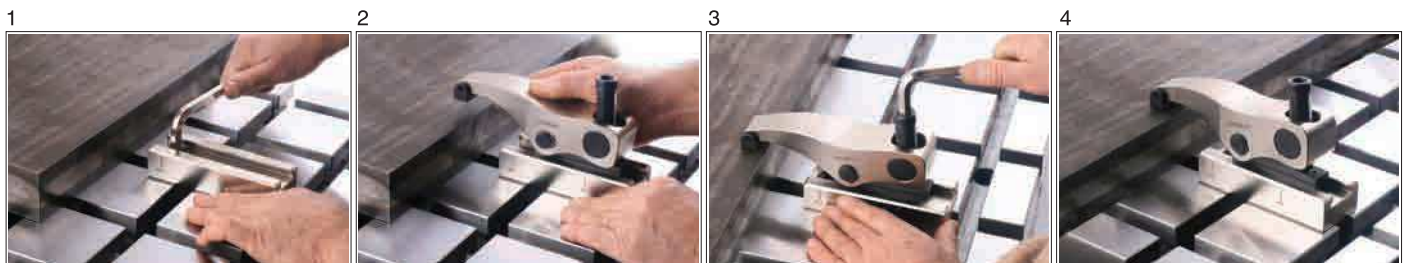
- 1- Slide cradle is brought to suitable form with the work piece and then it is fixed
- 2- Upper body is driven to the slide and it is brought to desired position
- 3- Work piece is fixed with the imbus bolt of the clamp
- 4- Then the work piece becomes ready to be machined.

Verwendung

Injektionsmaschinen, Pressen, Fräsmaschinen, Bohrzentren, verschiedene Industriemaschinen

Area of Use

Injection Machines, Presses, Milling Machines, Drilling Machines and various Industrial Machines



Referenz-Nr. Order No.		m	h		s	e1	e2	d		L	b	e3	c	
			min	max										
1120-014 DT	14	M12	36	86	12-66	136	71.5	M14	8	104	38	38	13	2540
1120-016 DT	16	M12	36	86	12-66	136	71.5	M14	8	104	38	38	13	2540
1120-018 DT	18	M12	36	86	12-66	136	71.5	M14	8	104	38	38	13	2540
1130-014 DT	14	M12	45	105	15-83	158	83	M18	10	130	48	45	17.5	4750
1130-016 DT	16	M12	45	105	15-83	158	83	M18	10	130	48	45	17.5	4775
1130-018 DT	18	M12	45	105	15-83	158	83	M18	10	130	48	45	17.5	4805
1130-020 DT	20	M12	45	105	15-83	158	83	M18	10	130	48	45	17.5	4855
1130-022 DT	22	M12	45	105	15-83	158	83	M18	10	130	48	45	17.5	4905

1120

- Verwendung mit Inbusschraube M12 DIN 508 und T-Nutmutter
- Spannhöhe 36-86 mm
- Spannkraft 1600 kg.

1130

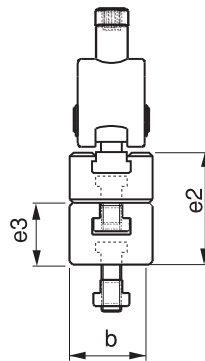
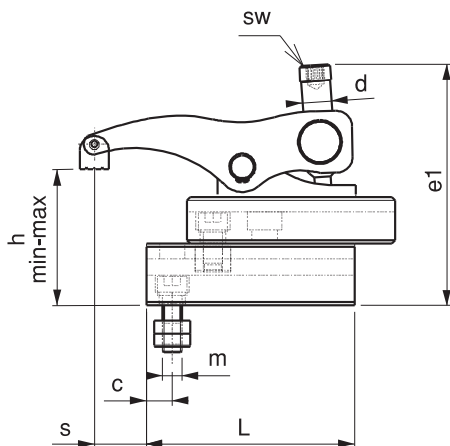
- Verwendung mit Inbusschraube M12 DIN 508 und T-Nutmutter
- Spannhöhe 45-105 mm
- Spannkraft 2000 kg.

1120

- M12 imbus bolt is used with DIN 508 "T" clamp.
- Height clamping gap of the piece is 36-86mm
- Clamping Force is 1600kgf

1130

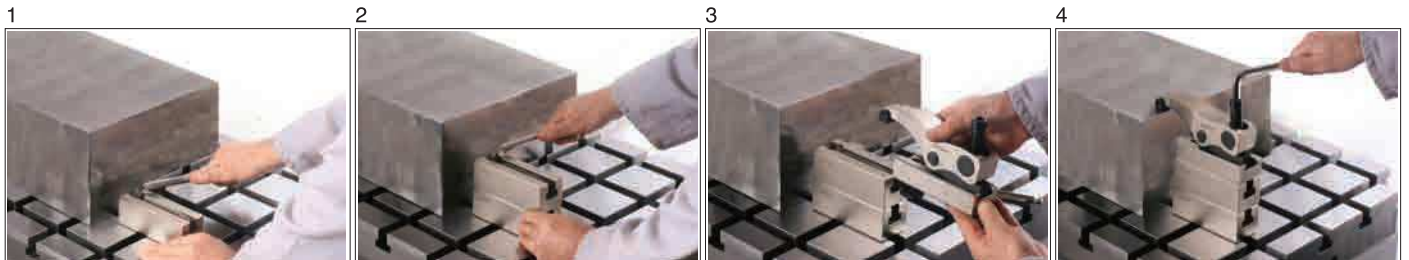
- M12 imbus bolt is used with DIN 508 "T" clamp.
- Height clamping gap of the piece is 45-105mm
- Clamping Force is 2000kgf


ANWENDUNG;

- 1- Zwischenstück an Werkstück befestigen
- 2- Höhen-Anpassung durch weitere Zwischenstücke
- 3- Grundkörper auf Zwischenstück schieben, Inbusschraube auf T-Nut positionieren
- 4- Werkstück mit Inbusschraube befestigen

APPLICATION

- 1- Bottom support is brought to suitable form with the work piece and then it is fixed.
- 2- Desired distance is reached by increasing K.K.S.P supports
- 3- K.K.S.P is applied in "T" slot with imbus bolt against "T" clamp
- 4- Work piece is fixed with the imbus bolt of the clamp



Referenz-Nr. Order No.		m	h		s	e1	e2	d	sw		L	b	e3	c	
			min	max											
1150-118 DT	18	M16	48	113	18-96	173	90	M20	12		140	55	48	19.5	6625
1150-120 DT	20	M16	48	113	18-96	173	90	M20	12		140	55	48	19.5	6690
1150-122 DT	22	M16	48	113	18-96	173	90	M20	12		140	55	48	19.5	6750
1150-124 DT	24	M16	48	113	18-96	173	90	M20	12		140	55	48	19.5	6840
1150-128 DT	28	M16	48	113	18-96	173	90	M20	12		140	55	48	19.5	6960
1160-222 DT	22	M20	79	139	17-92	235	114	M24	12	24	178	74	59	24	13330
1160-224 DT	24	M20	79	139	17-92	235	114	M24	12	24	178	74	59	24	13465
1160-228 DT	28	M24	79	139	17-92	235	114	M24	12	24	178	74	59	24	13580
1160-236 DT	36	M24	79	139	17-92	235	114	M24	12	24	178	74	59	24	13890

1150

- Verwendung mit Inbusschraube M16 DIN 508 und T-Nutmutter
- Spannhöhe 48-113 mm
- Spannkraft 2500 kg.

1150

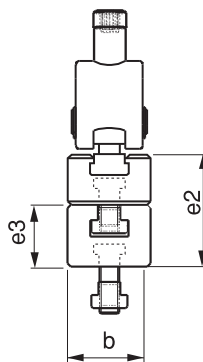
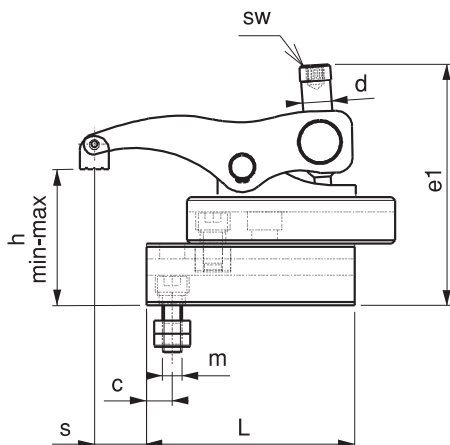
- M16 imbus bolt is used with DIN 508 "T" clamp.
- Height clamping gap of the piece is 48-113mm
- Clamping Force is 2500kgf

1160

- Verwendung mit Inbusschraube M20-M24 DIN 508 und T-Nutmutter
- Spannhöhe 79-139 mm
- Spannkraft 5500 kg.

1160

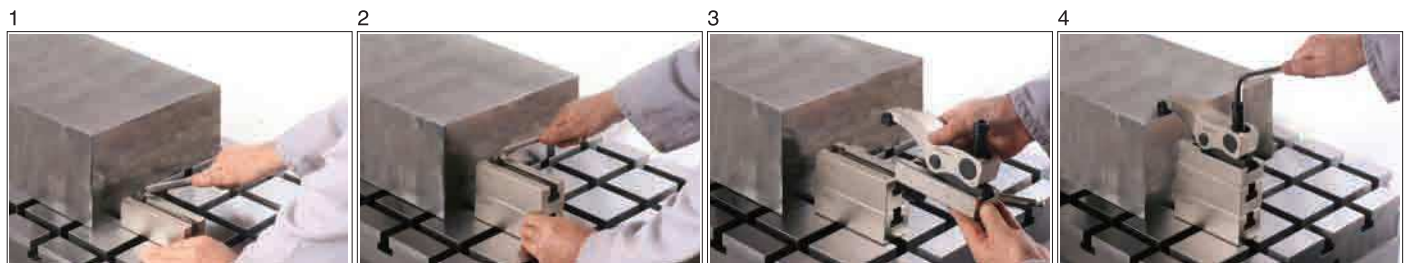
- M20-M24 imbus bolt is used with DIN 508 "T" clamp.
- Height clamping gap of the piece is 79-139mm
- Clamping Force is 5500kgf


ANWENDUNG;

- 1- Zwischenstück an Werkstück befestigen
- 2- Höhen-Anpassung durch weitere Zwischenstücke
- 3- Grundkörper auf Zwischenstück schieben, Inbusschraube auf T-Nut positionieren
- 4- Werkstück mit Inbusschraube befestigen

APPLICATION

- 1- Bottom support is brought to suitable form with the work piece and then it is fixed.
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- 3- K.K.S.P is applied in "T" slot with imbus bolt against "T" clamp
- 4- Work piece is fixed with the imbus bolt of the clamp



Referenz-Nr. Order No.		h		s	s1	e1	d	sw	L	e	b	c	k	Spannkraft Clamping Force Kgf	 (g)
		min	max												
1120-010 M	M10	0	50	12-66	25	100	M14	8	104	35.5	38	13	20	1600	1700
1120-012 M	M12	0	50	12-66	25	100	M14	8	104	35.5	38	13	20	1600	1700
1130-012 M	M12	0	60	15-83	30	113	M18	10	130	39	48	17.5	22	2000	3000
1130-016 M	M16	0	60	15-83	30	113	M18	10	130	39	48	17.5	26	2000	3030

1120

- Für Gewinde M12-M16 Inbusschrauben 1120-310 / 1120-312 verwenden
- Spannhöhe 0-50 mm
- Spannkraft 1600 kg

1130

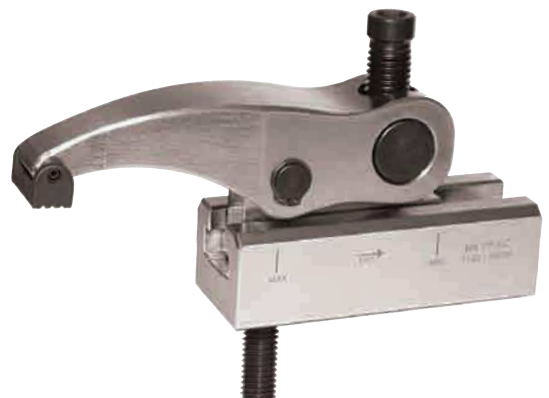
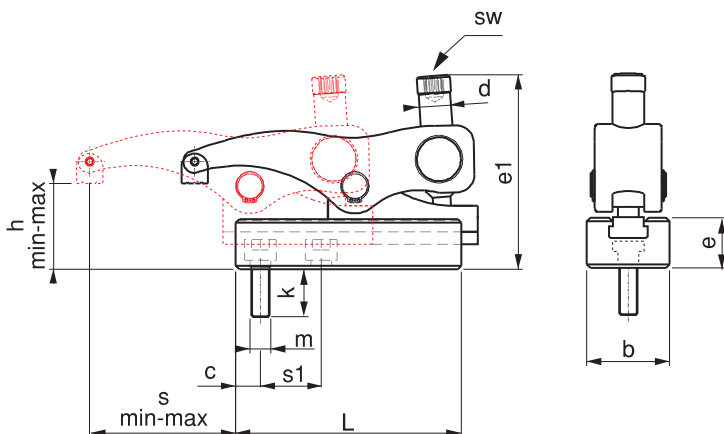
- Für Gewinde M12-M16 Inbusschrauben 1130-412 / 1130-416 verwenden
- Spannhöhe 0-60 mm
- Spannkraft 2000 kg

1120

- In the outer holes M12-M16 are used with the Reference Nr. imbus bolt (1120-310)-(1120-312)
- Height clamping gap of the piece is 0-50mm
- Clamping Force is 1600 kgf.

1130

- In the outer holes M12-M16 are used with the Reference Nr. imbus bolt (1130-412)-(1130-416)
- Height clamping gap of the piece is 0-60mm
- Clamping Force is 2000 kgf.

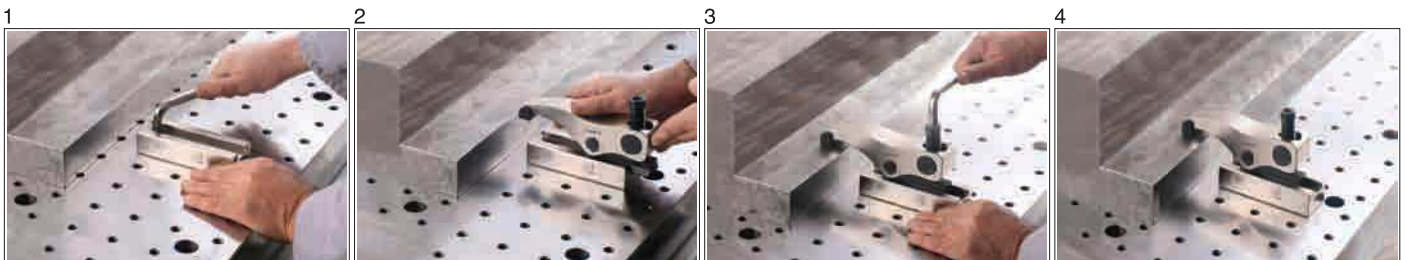


VORTEILE;

- Spannkraft 1600 kg - 2000 kg
- Verwendung in Löchern und T-Kanal
- Mit verschieben unterschiedliche Positionierungen möglich
- Unterschiedliche Spannweiten mittels Inbusschraube ohne Stütze
- Praktische Bauart ermöglicht einfaches und schnelles Spannen

ADVANTAGES

- 1600 kgf - 2000 kgf Clamping Force.
- Usings in the hole and "T" channel.
- Ability to be fixed in various positions by sliding on the slide.
- It clamps high and low distances without support with the imbus bolt.
- It provides rapid and easy connection due to it's practical structure.



Referenz-Nr. Order No.		h		s	s1	e1	d	sw		L	e	b	c	k	Spannkraft Clamping Force Kgf	 (g)
		min	max													
1150-116 M	M16	0	65	18-96	35	125	M20	12		140	43	55	19.5	26	2500	4340
1150-118 M	M18	0	65	18-96	35	125	M20	12		140	43	55	19.5	30	2500	4360
1150-120 M	M20	0	65	18-96	35	125	M20	12		140	43	55	19.5	30	2500	4370
1160-220 M	M20	20	80	17-92	41.5	175	M24	12	24	178	55	74	24	34	5500	8880
1160-222 M	M22	20	80	17-92	41.5	175	M24	12	24	178	55	74	24	38	5500	8900
1160-224 M	M24	20	80	17-92	41.5	175	M24	12	24	178	55	74	24	44	5500	8920
1160-230 M	M30*	20	80	17-92	41.5	175	M24	12	24	178	55	74	24	51	5500	9110

1150

- Für Gewinde M16-M18-M20 Inbusschrauben 1150-516 / 1150-518 / 1150-520 verwenden
- Spannhöhe 0-65 mm
- Spannkraft 2500 kg

1160

- Für Gewinde M20-M22-M24-M30 Inbusschrauben 1160-620 / 1160-622 / 1160-624 / 1160-724 / 1160-730 verwenden
- Spannhöhe 20-80 mm
- Spannkraft 5500 kg

Hinweis: Die Bohrung für Zylinderschraube des Trägerelements von 1160-230M ist außerhalb der Standardabmessungen. Sie wird für diesen Artikel speziell gefertigt.

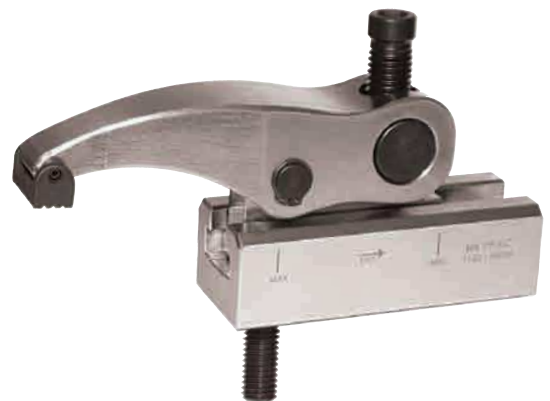
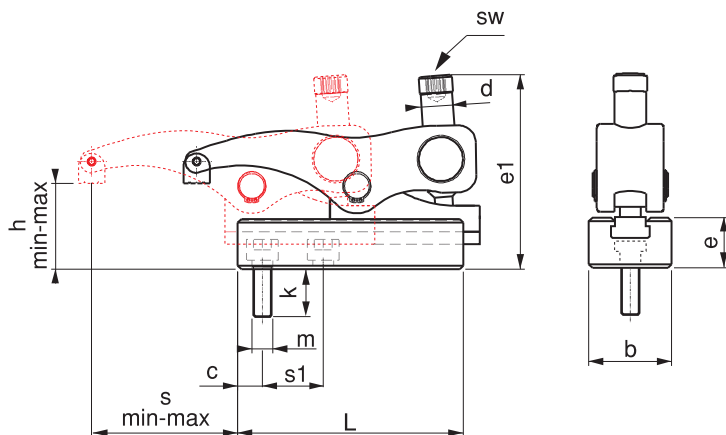
1150

- In the outer holes M16-M18-M20 are used with the Reference Nr. imbus bolt (1150-516)-(1150-518)-(1150-520).
- Height clamping gap of the piece is 0-65mm
- Clamping Force is 2500 kgf.

1160

- In the outer holes M20-M22-M24-M30 are used with the Reference Nr. imbus bolt (1160-620)-(1160-622)-(1160-624)-(1160-724)-(1160-730)
- Height clamping gap of the piece is 20-80mm
- Clamping Force is 5500 kgf.

Note: The drilling for cylinder head screw of the support element for 1160-230M is not standard. It is specially manufactured for this product.

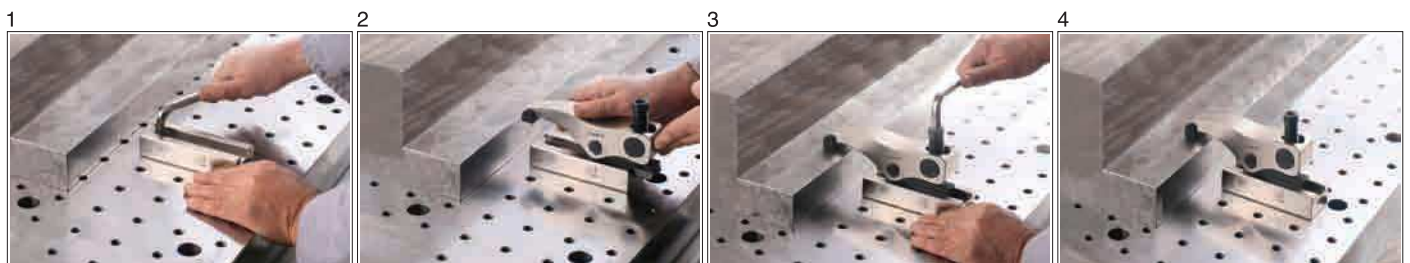


VORTEILE;

- Spannkraft 2500 kg - 5500 kg
- Verwendung in Löchern und T-Kanal
- Mit verschieben unterschiedliche Positionierungen möglich
- Unterschiedliche Spannweiten mittels Inbusschraube ohne Stütze
- Praktische Bauart ermöglicht einfaches und schnelles Spannen

ADVANTAGES

- 2500 kgf - 5500 kgf Clamping Force.
- Usings in the hole and "T" channel.
- Ability to be fixed in various positions by sliding on the slide.
- It clamps high and low distances without support with the imbus bolt.
- It provides rapid and easy connection due to it's practical structure.



Kraftspanner Oberteil

Upper Slide Group

Referenz-Nr. Order No.		h		sw		
		min	max			
1120-0050	14-18	0	50	8	-	860
1130-0060	14-22	0	60	10	-	1680
1150-0062	18-28	0	65	12	-	2565
1160-2080	22-36	20	80	12	24	5050

1120-1130-1150-1160

- Kraftspanner obere Gruppe: Stahl geschmiedet
- Gehärtet

1120-1130-1150-1160

- Upper Slide Group: Forged Steel
- Hardened



Kraftspanner Grundelement

Body with Bottom T-Slide

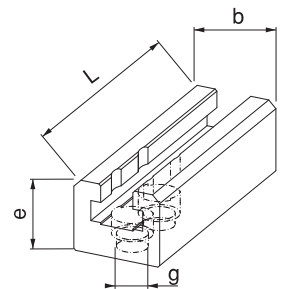
Referenz-Nr. Order No.	g		L	b	e	
1130-047	M12 M16	18-28	130	48	39	1275
1150-053	M16 M18 M20	18-28	140	55	42	1700
1160-074	M20 M22 M24	22-28	178	74	55	3650
1160-075	M30*	36	178	74	55	3650

1120-1130-1150-1160

- Gehärtet

1120-1130-1150-1160

- Hardened



Kraftspanner Zwischenelement

Bottom Support

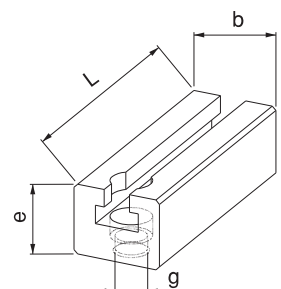
Referenz-Nr. Order No.	g		L	b	e	
1130-045	M12 M16	14	130	48	45	1630
1150-048	M16 M18 M20	18	140	55	48	2070
1160-059	M20 M22 M24	28	178	74	55	3980

1120-1130-1150-1160

- Gehärtet

1120-1130-1150-1160

- Hardened



Spannschraubensatz

Clamp Lifting Bolt and Nut

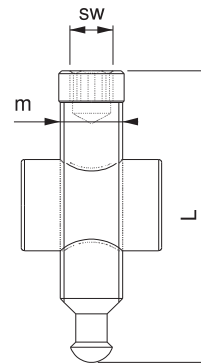
Referenz-Nr. Order No.	m	L	SW		
1120-0714	M14	72	8	-	138
1130-0818	M18	83	10	-	235
1150-0920	M20	96	12	-	360
1160-1024	M24	134	12	24	795

1120-1130-1150-1160

- Gehärtet
- Schwarz beschichtet

1120-1130-1150-1160

- Hardened
- Black Coating



Referenz-Nr. Order No.	m	L	d	sw	
1120-310	M10	29	16.5	8	28
1120-312	M12	29	16.5	8	34
1130-412	M12	30	20.5	10	45
1130-416	M16	34	20.5	10	75
1150-516	M16	34	24.5	12	75
1150-518	M18	38	24.5	12	90
1150-520	M20	38	24.5	12	105
1160-620	M20	45	34	12	170
1160-622	M22	49	34	12	95
1160-624	M24	45	34	12	390
1160-724	M24	55	34	12	405
1160-730	M30*	66	38.5	12	400

1120-1130-1150-1160

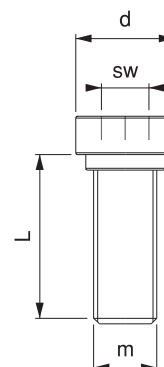
- Für Gewindelöcher M12-M16-M18-M20
- Qualität 10.9
- Schwarz beschichtet



1120-1130-1150-1160

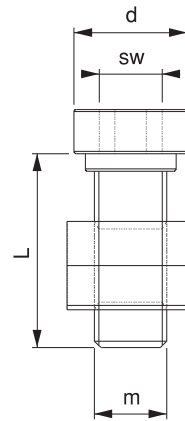
- For M12-M16-M18-M20 thread holes
- Quality 10.9
- Black Coating

Inbusschraube

Imbus Bolt for Fixing



Referenz-Nr. Order No.		m	L	d	sw	
1120-512	12	M10	29	16.5	8	48
1120-514*	14	M12	29	16.5	8	54
1130-614*	14	M12	30	20.5	10	80
1130-616	16	M12	30	20.5	10	100
1130-618	18	M12	30	20.5	10	130
1130-620	20	M12	36	20.5	10	180
1130-622	22	M12	36	20.5	10	220
1150-718*	18	M16	34	24.5	12	145
1150-720	20	M16	34	24.5	12	190
1150-722	22	M16	42	24.5	12	260
1150-724	24	M16	42	24.5	12	350
1150-728	28	M16	42	24.5	12	470
1160-822	22	M20	45	34	12	320
1160-824	24	M20	45	34	12	410
1160-826*	28	M24	45	34	12	550
1160-828	28	M24	55	34	12	580
1160-832	32	M24	61	34	12	603
1160-836	36	M24	66	38.5	12	865




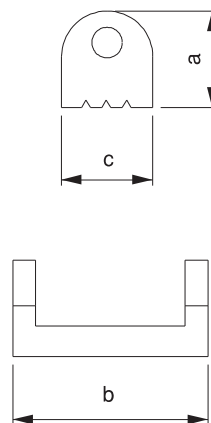
1120-1130-1150-1160

- (a) 14-28 T-Nut Fixier-Imbusschraube und T-Nut DIN 508
- Qualität 10.9
- Schwarz beschichtet
- Stützschrauben unten

1120-1130-1150-1160

- (a) 14-28 T-Slot fixing imbus bolt and T-Nut DIN 508
- Quality 10.9
- Black Coating
- Star-marked codes are bottom support bolts.

Referenz-Nr. Order No.	a	b	c	
1120-DP	13.5	26.5	12	15
1120-BSP	15.5	26.5	12	18
1120-ESP	18	26.5	12	21
1130-DP	17	32	15	20
1130-BSP	19	32	15	30
1130-ESP	22	32	15	30
1150-DP	19	38	18	40
1150-BSP	21	38	18	40
1150-ESP	25	38	18	50
1160-DP	22	44	22	55
1160-BSP	25	44	22	70
1160-ESP	28	44	22	80



Spannbacke

Front Press Clamp



1120-1130-1150-1160

- DP: Spannen flacher Werkstücke
- BSP: zylindrisch spannen in der Länge
- ESP: zylindrisch spannen in der Breite
- Schwarz beschichtet

1120-1130-1150-1160

- Product DP : Straight piece clamping
- Product BSP: Longitudinal cylinder clamping
- Product ESP: Lateril cylinder clamping
- Black Coating

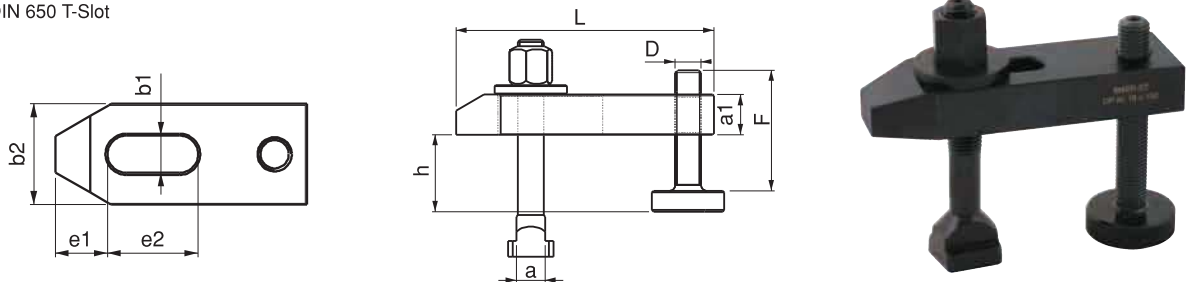
Referenz-Nr. Order No.		L	Nr.1330		e1	e2	b1	Nr.1610	h	Nr.1490 D x F	
			a1	b2							
1170-1010080	10	80	15	30	15	30	11	M10x10x80	10-35	M10x42	370
1170-1212100	12	100	20	40	21	40	14.5	M12x12x100	12-40	M12x50	740
1170-1212125	12	125	20	40	21	50	14.5	M12x12x160	12-85	M12x95	940
1170-1214100	14	100	20	40	21	40	14.5	M12x14x100	12-40	M12x50	705
1170-1214125	14	125	20	40	21	50	14.5	M12x14x160	12-85	M12x95	965
1170-1616125	16	125	25	50	26	45	18.5	M16x16x125	15-50	M16x62	1115
1170-1616160	16	160	25	50	26	65	18.5	M16x16x160	15-85	M16x97	1870
1170-1618125	18	125	25	50	26	45	18.5	M16x18x125	15-50	M16x62	1540
1170-1618160	18	160	25	50	26	65	18.5	M16x18x160	15-85	M16x97	1900
1170-2020160	20	160	30	60	30	60	22.5	M20x20x160	15-45	M20x62	1675
1170-2020200	20	200	30	60	30	80	22.5	M20x20x200	15-80	M20x97	3295
1170-2022160	22	160	30	60	30	60	22.5	M20x22x160	15-45	M20x62	2730
1170-2022200	22	200	30	60	30	80	22.5	M20x22x200	15-80	M20x97	3340
1170-2424160	24	160	30	70	35	60	26.5	M24x24x160	16-60	M24x81	3465
1170-2424200	24	200	30	70	35	80	26.5	M24x24x200	16-95	M24x116	4660
1170-2428160	28	160	30	70	35	60	26.5	M24x28x160	16-60	M24x81	5560
1170-2428200	28	200	30	70	35	80	26.5	M24x28x200	16-95	M24x116	4755

1170

- kompatibel mit "T-Nut" DIN 650

1170

- Product is suitable to DIN 650 T-Slot



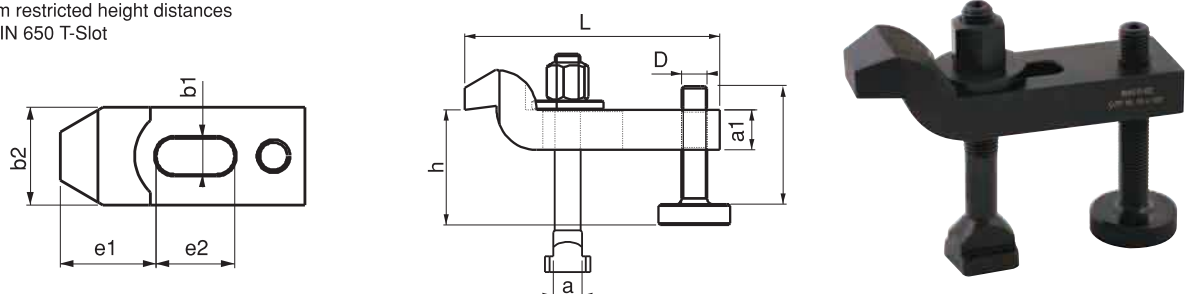
Referenz-Nr. Order No.		L	Nr.1450		e1	e2	b1	Nr.1610	h	Nr.1490 D x F	
			a1	b2							
1190-1010100	10	100	15	30	32	32	11	M10x10x80	26-50	M10x42	405
1190-1212125	12	125	20	40	40	40	14.5	M12x12x100	33-60	M12x50	870
1190-1214125	14	125	20	40	40	40	14.5	M12x14x100	37-60	M12x50	890
1190-1616160	16	160	25	50	49	50	18.5	M16x16x125	41-75	M16x62	1785
1190-1618160	18	160	25	50	49	50	18.5	M16x18x125	41-75	M16x62	1810
1190-2020200	20	200	30	60	55	70	22.5	M20x20x160	46-75	M20x62	3105
1190-2022200	22	200	30	60	55	70	22.5	M20x22x160	46-75	M20x62	3155
1190-2424200	24	200	35	70	72	60	26	M24x24x200	52-95	M24x81	4695
1190-2428200	28	200	35	70	72	60	26	M24x28x200	52-95	M24x81	4790

1190

- Verwendung in engen Bereichen
- kompatibel mit "T-Nut" DIN 650

1190

- This is used to gain from restricted height distances
- Product is suitable to DIN 650 T-Slot



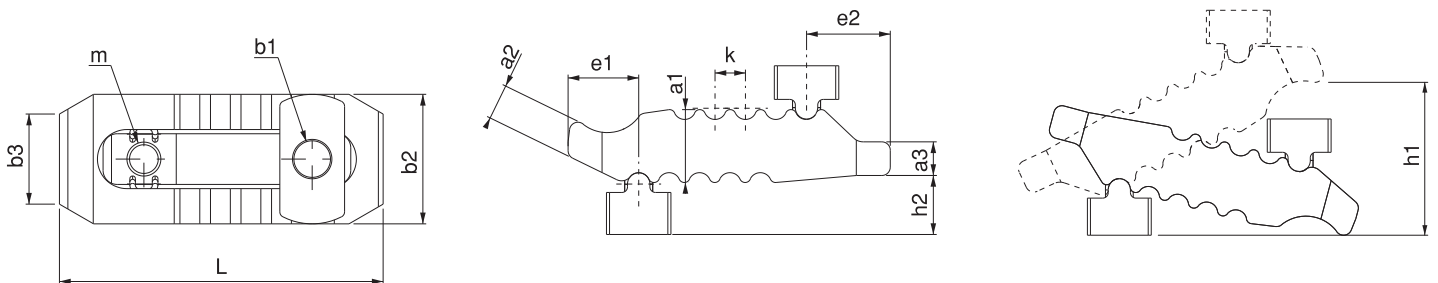
Referenz-Nr. Order No.		a1	a2	a3	b2xL	b3	e1	e2	h2	k	b1	m	h1	kgf	
1195-44115	10-12-14	27	12.5	12	44x115	30	25	30	21	11	13	M12	0-55	3000	506
1195-55150	12-14-16-18	36	18	17	55x150	41	35	36	23	12	17	M16	0-70	4000	1382
1195-63187	16-18-20-22	42	25	20	63x187	30	44	44	32.5	14	21	M20	0-80	6000	2241
1195-70235	20-22-24-28	51	36.5	24	70x235	30	60	47	34	17	25	M20	0-100	7500	3550

1195

- Material: Geschmiedeter Stahl
- Gehärtet
- Schwarz beschichtet

1195

- Material: Forged Steel
- Hardened
- Black coating



Spannpratze mit Gegenhalter, verstellbar

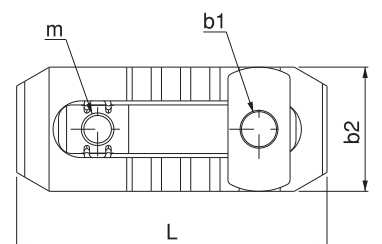
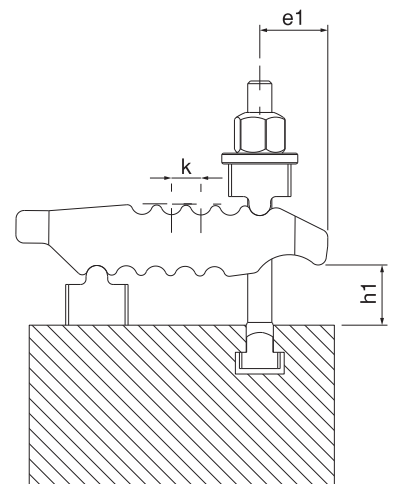
Referenz-Nr. Order No.	b1	b2xL	e1	h1	k	m			Spannkraft Clamping Force Kgf	
1195-1010100	13	44x115	25	0-55	11	M12	10	M10x10x100	2500	613
1195-1212125	13	44x115	25	0-55	11	M12	12	M12x12x125	3000	686
1195-1214125	13	44x115	25	0-55	11	M12	14	M12x14x125	3000	705
1195-1212160	17	55x150	35	0-70	12	M16	12	M12x12x160	3500	1591
1195-1214160	17	55x150	35	0-70	12	M16	14	M12x14x160	3500	1610
1195-1616160	17	55x150	35	0-70	12	M16	16	M16x16x160	4000	1798
1195-1618160	17	55x150	35	0-70	12	M16	18	M16x18x160	4000	1818
1195-1616200	21	63x187	44	0-80	14	M20	16	M16x16x200	5500	2715
1195-1618200	21	63x187	44	0-80	14	M20	18	M16x18x200	5500	3018
1195-2020200	21	63x187	44	0-80	14	M20	20	M20x20x200	6000	3018
1195-2022200	21	63x187	44	0-80	14	M20	22	M20x22x200	6000	3060
1195-2020250	25	70x235	60	0-100	17	M20	20	M20x20x250	7000	4368
1195-2022250	25	70x235	60	0-100	17	M20	22	M20x22x250	7000	4410
1195-2424250	25	70x235	60	0-100	17	M20	24	M24x24x250	7500	4895
1195-2428250	25	70x235	60	0-100	17	M20	28	M24x28x250	7500	4966

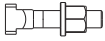
1195

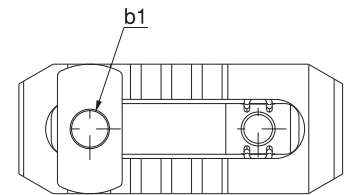
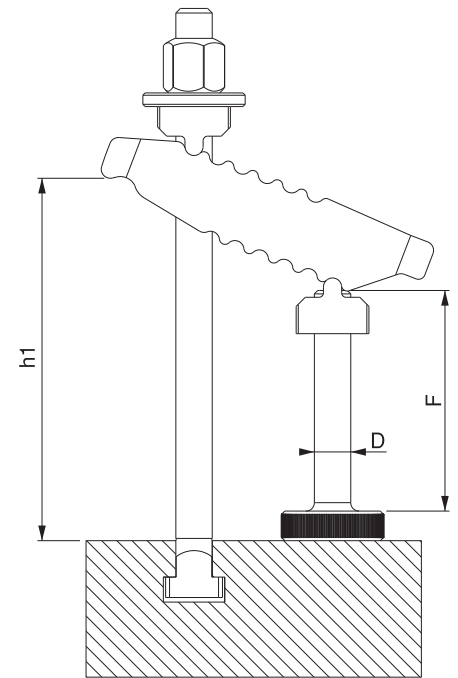
- kompatibel mit "T-Nut" DIN 650

1195

- Product is suitable to DIN 650 T-Slot



Referenz-Nr. Order No.	B1	D x F	 DIN 787	h1
1195-10101005013	13	M12x50	M10x10x100	15-31
1195-12121605013	13	M12x50	M12x12x160	15-97
1195-12141605013	13	M12x50	M12x14x160	15-97
1195-12122006217	17	M16x62	M12x12x200	18-126
1195-12142006217	17	M16x62	M12x14x200	18-126
1195-16162006217	17	M16x62	M16x16x200	18-126
1195-16182006217	17	M16x62	M16x18x200	18-126
1195-12122009717	17	M16x97	M12x12x200	18-120
1195-12142009717	17	M16x97	M12x14x200	18-120
1195-16162509717	17	M16x97	M16x16x250	39-161
1195-16182509717	17	M16x97	M16x18x250	39-161
1195-16162506221	21	M20x62	M16x16x250	18-129
1195-16182506221	21	M20x62	M16x18x250	18-129
1195-20202506221	21	M20x62	M20x20x250	18-129
1195-20222506221	21	M20x62	M20x22x250	18-129
1195-16162509721	21	M20x97	M16x16x250	18-151
1195-16182509721	21	M20x97	M16x18x250	18-151
1195-20203159721	21	M20x97	M20x20x315	42-184
1195-20223159721	21	M20x97	M20x22x315	42-184
1195-20203156225	25	M20x62	M20x20x315	21-147
1195-20223156225	25	M20x62	M20x22x315	21-147
1195-24243156225	25	M20x62	M24x24x315	21-147
1195-24283156225	25	M20x62	M24x28x315	21-147
1195-20203159725	25	M20x97	M20x20x315	21-182
1195-20223159725	25	M20x97	M20x22x315	21-182
1195-24243159725	25	M20x97	M24x24x315	21-182
1195-24283159725	25	M20x97	M24x28x315	21-182


1195

- kompatibel mit "T-Nut" DIN 650

1195

- Product is suitable to DIN 650 T-Slot

Referenz-Nr. Order No.			b1	b2xL	d	e1	e2	h	
		DIN 787							(g)
1200-50140	-	-	17	50x140	60	30	55	75	900
1200-60175	-	-	21	60x175	80	40	70	85	1600
1200-12125	12	M12x12x125	17	50x140	60	30	55	0-50	1070
1200-14125	14	M12x14x125	17	50x140	60	30	55	0-55	1080
1200-16160	16	M16x16x160	17	50x140	60	30	55	0-75	1270
1200-18160	18	M16x18x160	17	50x140	60	30	55	0-75	1280
1200-20200	20	M20x20x200	21	60x175	80	40	70	0-85	2300
1200-22200	22	M20x22x200	21	60x175	80	40	70	0-85	2370

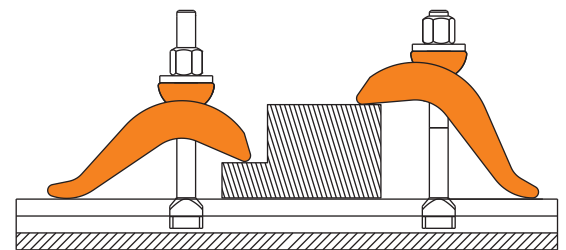
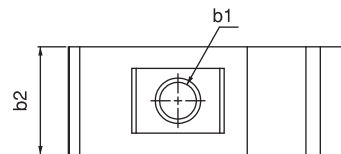
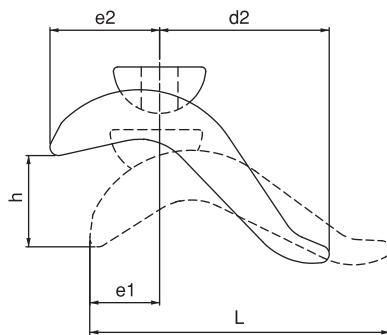


1200

- Material: Geschmiedeter Stahl
- Gehärtet
- Verzinkt

1200

- Material: Forged Steel
- Hardened
- Zinc Coating



Spannpratze

Stepped Coupling Clamp

Referenz-Nr. Order No.	b1			m	h	b x L	c	d	e1	k x3	
			DIN 787								(kg)
1205-017	17	16-18	-	93	15-50	65x165	39	128	30	17	2.10
1205-021	21	20-22	-	111	20-65	75x189	43	146	33	19	3.20
1205-025	25	24-28	-	126	20-75	85x213	49	164	39	21	4.50
1205-031	31	36	-	143.5	20-85	95x238	56	182	46	23	6.30
1205-016	17	16	M16x16x125	93	15-50	65x165	39	128	30	17	2.50
1205-018	17	18	M16x18x125	93	15-50	65x165	39	128	30	17	2.50
1205-020	21	20	M20x20x160	111	20-65	75x189	43	146	33	19	3.90
1205-022	21	22	M20x22x160	111	20-65	75x189	43	146	33	19	3.90
1205-024	25	24	M24x24x200	126	20-75	85x213	49	164	39	21	5.70
1205-028	25	28	M24x28x200	126	20-75	85x213	49	164	39	21	5.70
1205-036	31	36	M30x36x250	143.5	20-85	95x238	56	182	46	23	8.80

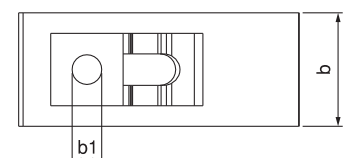
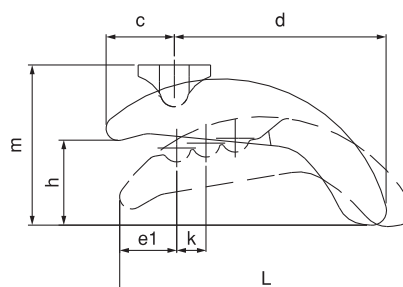




1205

- Verwendung im Bereich 15-85 mm ohne Stütze
- Material: Geschmiedeter Stahl
- Gehärtet
- Verzinkt

1205

- It provides using between 15-85 mm without supporting.
- Material: Forged Steel
- Hardened
- Zinc Coating



Referenz-Nr. Order No.	b1	a		m	h	b x L	c	d	e1	k x4	
1210-013	13	12-14	-	52	0-40	40x90	28	48	23	14	340
1210-017	18	16-18	-	80	0-60	58x130	38	74	29	18	990
1210-021	22	20-22	-	98	0-75	68x140	46	80	32	20	1450
1210-025	26	24-28	-	110	0-90	78x175	52	100	39	24	2360
1210-012	13	12	M12x12x100	52	0-40	40x90	28	48	23	14	400
1210-014	13	14	M12x14x100	52	0-40	40x90	28	48	23	14	420
1210-016	18	16	M16x16x160	80	0-60	58x130	38	74	29	18	1140
1210-018	18	18	M16x18x160	80	0-60	58x130	38	74	29	18	1145
1210-020	22	20	M20x20x200	98	0-75	68x140	46	80	32	20	1560

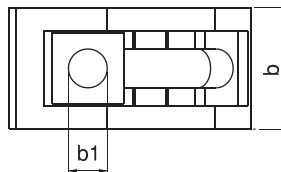
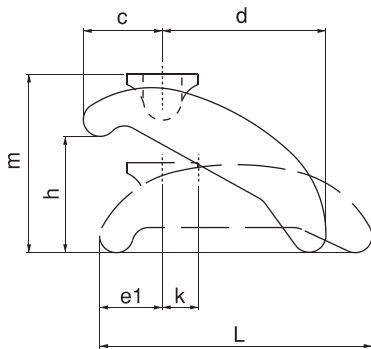



1210

- Verwendung im Bereich 0-75 mm ohne Stütze
- Material: Geschmiedeter Stahl
- Gehärtet
- Verzinkt

1210

- It provides using between 0-75 mm without supporting.
- Material: Forged Steel
- Hardened
- Zinc Coating



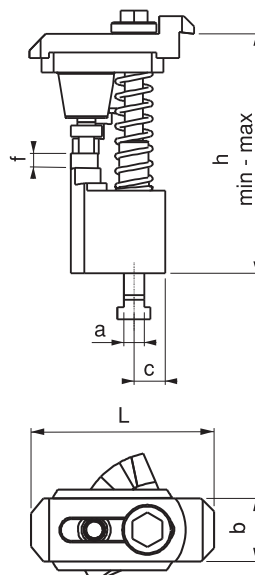
Referenz-Nr. Order No.	a	h min - max	f	c	L	b	
1230-01	14-16-18-20-22	40 - 80	5	16	110	38	1200
1230-02		70 - 125	10	16	110	38	1490
1230-03		120 - 175	10	18	110	38	2700
1230-04		170 - 225	10	23	110	38	4260

1230

- beidseitig verwendbar Feinabstufung der Rastentreppe ermöglicht Verwendung in engen Bereichen
- kompatibel mit "T-Nut" DIN 650
- Spanneisen: gehärtet
- Schraube: 10.9
- Körper: statisch lackiert, Rest Schwarz beschichtet

1230

- Double-sided usage of the clamp provides using advantage in restricted areas
- Product is suitable to DIN 650 T-Slot
- Clamp Material: Hardened
- Bolt Quality: 10.9
- Body is statically painted and the other parts are black coated

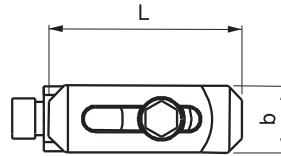


Referenz-Nr. Order No.		h min-max	f	c	L	b	m	sw	Spannkraft Clamping Force Kgf	Nm	
1250 - 02	14-16-18-20-22	80-137	3	17	110	38	M12	19	2250	85	2015
1250 - 03		125-224	3	17	110	38	M12	19	2250	85	2910
1250 - 04		160-300	3	17	110	38	M12	19	2250	85	3665



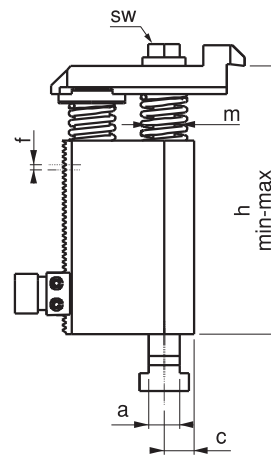
1250

- beidseitig verwendbar Feinabstufung der Rastentreppe ermöglicht Verwendung in engen Bereichen
- kompatibel mit "T-Nut" DIN 650
- Spanneisen: gehartet
- Schraube: 10.9
- Schwarz beschichtet



1250

- Double-sided usage of the clamp and it's stepped lifter's support provides using advantage in restricted areas
- It is suitable to DIN 650 T-Slot
- Clamp Hardness: Hardened
- Bolt Quality: 10.9
- Black coating



Spannpratze stufenlos verstellbar

Unsupported Suspension Clamp

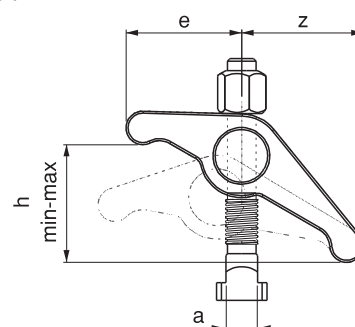
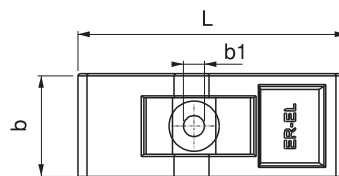
Referenz-Nr. Order No.		h min-max		b1	e	z	L	b	
1270-1012	12	0-45	M10x12x125	11	48	61	109	40	660
1270-1214	14	0-45	M12x14x125	13	48	61	109	40	705
1270-1416	16	0-55	M14x16x125	15	57	72	129	50	1190
1270-1618	18	0-55	M16x18x125	17	57	72	129	50	1265

Ürün Nr. 1270 Desteksiz Askı Pabuç

- Verwendung ohne Stütze 0-55 mm
- Material: Geschmiedeter Stahl
- Spanneisen: gehartet
- Schraube: 12.9
- Verzinkt

Product Nr. 1270 Unsupported Suspension Clamp

- Product provides using between 0-55 mm without using support
- Material: Forged Steel
- Clamp Hardness: Hardened
- Bolt Quality: 12.9
- Zinc Coating



Referenz-Nr. Order No.	a	b	c	d	e	m	sw	m1	imbus	Spannkraft Clamping Force Kgf	Drehmoment Allowable Screw Torque (N-m)	(g)
1275-3012	30	28	16	40	23	M12	30	M8	M10	750	20	300
1275-5012	50	32	20	45	40	M12	36	M12	M12	1000	30	500
1275-5016	50	32	20	45	40	M16	36	M12	M12	1000	30	510
1275-6016	60	40	25	45	45	M16	41	M16	M16	1250	45	750

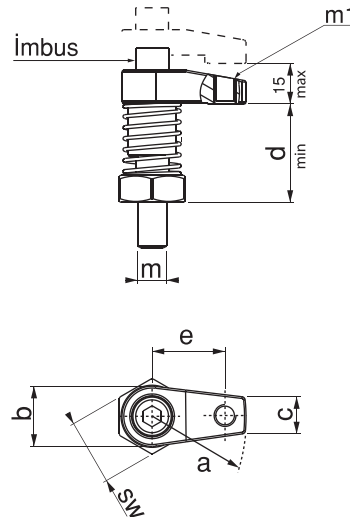
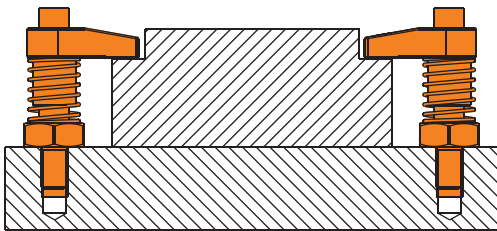


1275

- Verwendung in engen Bereichen
- Gehärtet
- Schwarz beschichtet

1275

- Function working in restricted areas
- Hardened
- Black coated



Referenz-Nr. Order No.	a	∅ b h7	c	d	e	f	g	m	m1	j	Spannkraft Clamping Force Kgf	(g)
1280-3010	30	22	58	80	28	16	30	M10	M8	23	750	220
1280-5012	50	26	70	90	32	20	40	M12	M12	40	1100	400
1280-6016	60	32	74	95	40	25	40	M16	M16	45	1250	610

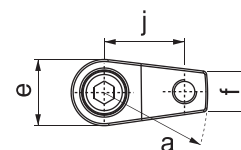
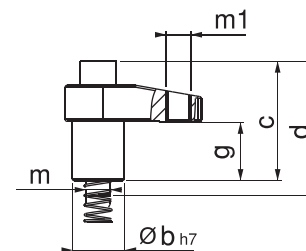


1280

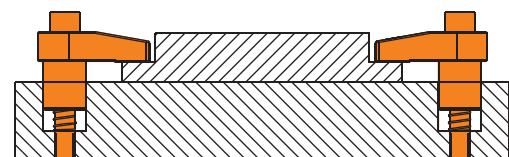
- Verwendung in engen Bereichen, auf Platten
- Gehärtet
- Schwarz beschichtet

1280

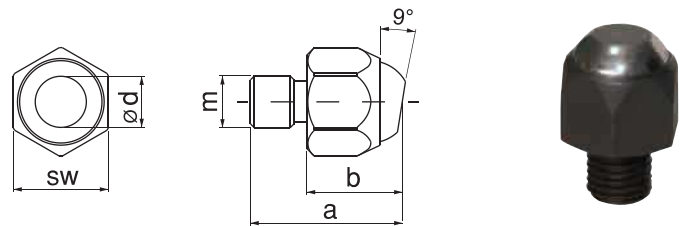
- Function working in restricted areas and variety application at plate
- Hardened
- Black coated



Referenz-Nr. Order No.	a (F7)	b	c	m
1280-3010	22	30	20	M10
1280-5012	26	40	25	M12
1280-6016	32	40	25	M16



Referenz-Nr. Order No.	a	b	m	d	sw	 (g)
1282-0825	25	12	M8	8	14	10
1282-1030	30	17	M10	10	17	30
1282-1235	35	22	M12	12	22	65
1282-1642	42	26	M16	14	27	125



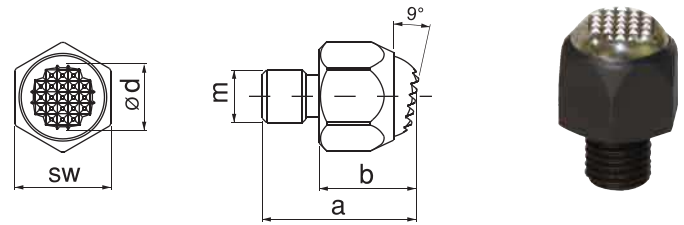
1282

- für plane und saubere Flächen, kompatibel mit Nr. 1275 und 1280
- Gehärtet
- Schwarz beschichtet

1282

- It is applicable with Nr. 1275 and 1280 for graded clean surfaces.
- Hardened
- Black coated

Referenz-Nr. Order No.	a	b	m	d	sw	 (g)
1283-0825	25	12	M8	8	14	10
1283-1030	30	17	M10	10	17	30
1283-1235	35	22	M12	12	22	60
1283-1642	42	26	M16	14	27	120

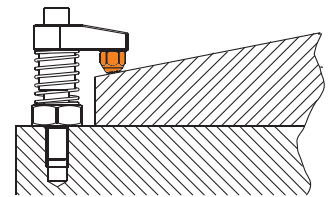


1283

- für plan-saubere Flächen
- Gehärtet
- Schwarz beschichtet

1283

- Its clamping surface is designed with bead graded bad surfaces.
- Hardened
- Black coated



Referenz-Nr. Order No.	a	b F7	c	d	e	f	m	h	 (g)
1285-12080	80	26	36	40	110	M12	M12	40	600
1285-12100	100	26	36	40	130	M12	M12	40	795
1285-16080	80	32	46	50	110	M16	M16	40	945
1285-16100	100	32	46	50	130	M16	M16	40	1230

Distanzhülse

Support to The Hive



1285

- verwendbar mit Nr. 1280 zum Spannen hoher Werkstücke
- Gehärtet
- Schwarz beschichtet

1285

- It is used together with Nr. 1280 for clamping high pieces.
- Hardened
- Black coated

