Spannelemente

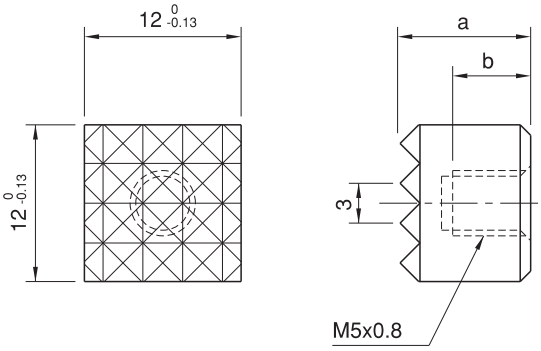
Clamping Components

Druckstück
Pressure Pad

Referenz-Nr. Order No.	a ($^{0}_{-0.13}$)	b	(g)
1287-CT9120	12	7.8	13

1287
- Gehärtet
- Schwarz beschichtet

1287
- Hardened
- Black coating

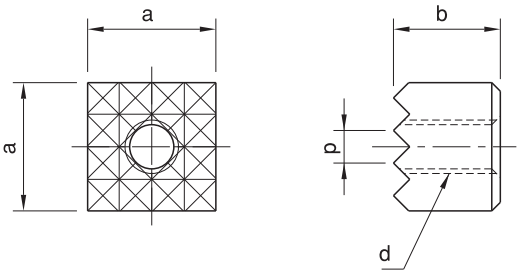


Druckstück
Pressure Pad

Referenz-Nr. Order No.	a ($^{0}_{-0.13}$)	b ($^{0}_{-0.13}$)	d	p	(g)
1287-HS9102	10	12	M5x0.8	2.3	7.5
1287-HS9122	12	12	M5x0.8	3	11
1287-HS9160	16	12	M6x1	3	17
1287-HS9202	20	12	M5x0.8	3	33.5
1287-HS9252	25	12	M6x1	3	53

1287
- Gehärtet
- Schwarz beschichtet

1287
- Hardened
- Black coating

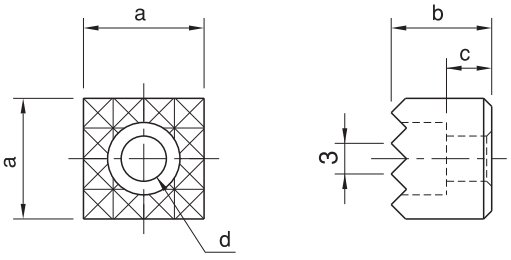


Druckstück
Pressure Pad

Referenz-Nr. Order No.	a ($^{0}_{-0.13}$)	b ($^{0}_{-0.13}$)	c	d	(g)
1287-HS9122C	12	12	6.5	M4	10
1287-HS9160C	16	12	4.5	M4	16
1287-HS9202C	20	12	5.5	M5	31
1287-HS9252C	25	12	4.5	M6	49

1287
- Gehärtet
- Schwarz beschichtet

1287
- Hardened
- Black coating

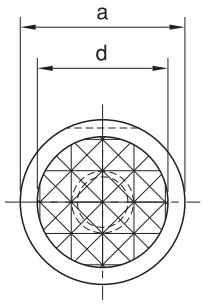


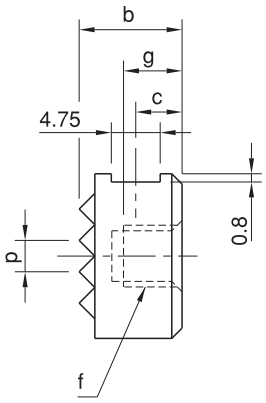
Druckstück
Pressure Pad

Referenz-Nr. Order No.	a (0 -0.13)	b (0 -0.13)	c	d	f	g	p	(g)
1288-CT102	10	12	6	7.9	M5x0.8	8	2.3	6
1288-CT122	12	12	6	9.5	M5x0.8	8	3	9
1288-CT162	16	12	6	12.7	M6x1	7.8	3	17
1288-CT202	20	12	6	15.9	M6x1	7.8	3	28
1288-CT252	25	12	6	19.1	M6x1	7.8	3	43

1288
- Gehärtet
- Schwarz beschichtet

1288
- Hardened
- Black coating



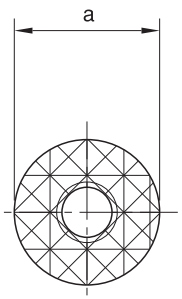


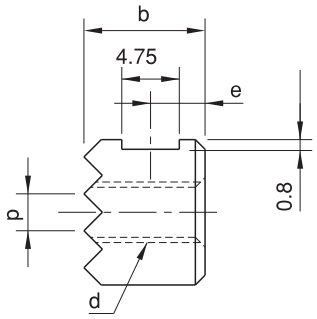
Druckstück
Pressure Pad

Referenz-Nr. Order No.	a (0 -0.13)	b (0 -0.13)	d	e	p	(g)
1288-HS102	10	12	M5x0.8	6	2.3	6
1288-HS122	12	12	M5x0.8	6	3	9
1288-HS162	16	12	M6x1	6	3	15
1288-HS202	20	12	M6x1	6	3	25
1288-HS252	25	12	M6x1	6	3	40

1288
- Gehärtet
- Schwarz beschichtet

1288
- Hardened
- Black coating



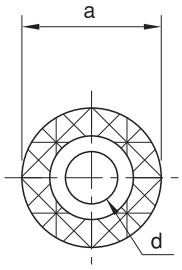


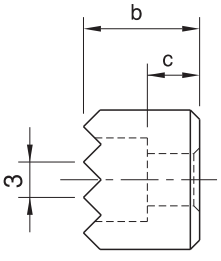
Druckstück
Pressure Pad

Referenz-Nr. Order No.	a (0 -0.13)	b (0 -0.13)	c	d	(g)
1288-HS122C	12	12	6.5	M4	8
1288-HS162C	16	12	6.5	M4	15
1288-HS202C	20	12	6.5	M5	23
1288-HS252C	25	12	6.5	M6	38

1288
- Gehärtet
- Schwarz beschichtet

1288
- Hardened
- Black coating





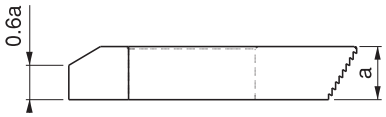
Spanneisen mit Treppenzähnen

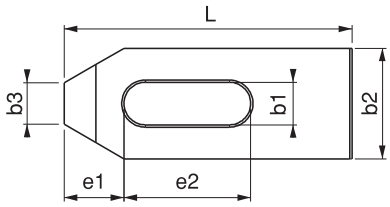
Serrated Thread Clamp

Referenz-Nr. Order No.	L	b1	Gewinde metric	Zollgewinde whitworth	a	b2	b3	e1	e2	(g)
1290-06050	50	6.6	M6	1/4	10	20	8	10	20	50
1290-06080	80								30	95
1290-08060	60	9	M8	5/16	12	25	10	13	22	100
1290-08100	100								45	170
1290-10080	80	11	M10	3/8	15	30	12	15	30	190
1290-10100	100								45	225
1290-12100	100	14.5	M12-M14	1/2	20	40	14	21	45	435
1290-12125	125								55	580
1290-16125	125	18.5	M16-M18	5/8	25	50	18	26	55	855
1290-16160	160								65	1175

1290
- kompatibel mit Nr. 1310
- Gehärtet
- Schwarz beschichtet

1290
- Product is used with Nr. 1310 Serrated Support
- Hardened
- Black Coating

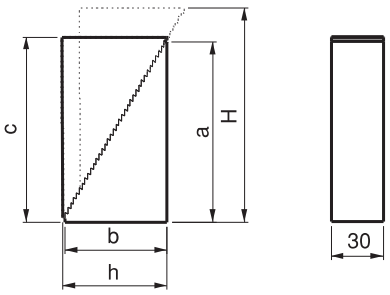




Spannunterlagen mit Treppenzähnen

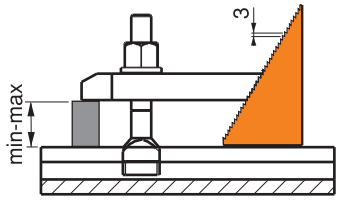
Serrated Thread Support

Referenz-Nr. Order No.	h-H	a	b	c	min-max	(g)
1310-01	37-85	57	35	60	0-40	505
1310-02	48-112	73	45	76	0-60	825
1310-03	58-139	90	55	93	0-75	1250
1310-04	66-165	108	64	111	0-90	685



1310
- kompatibel mit Nr. 1290
- Schwarz beschichtet

1310
- Product is used with Nr. 1290 Serrated Thread Clamp
- Black Coating



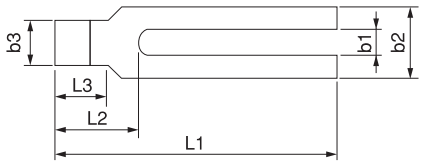
Gabelspanneisen abgeschrägt

Bifurcated Clamp

Referenz-Nr. Order No.	b1	L1	Gewinde metric	Zollgewinde whitworth	a	b2	b3	L2	L3	(g)
1320-08100	9	100	M8	5/16	15	30	16	32	18	240
1320-10125	11	125	M10	3/8	20	30	20	38	24	380
1320-12160	14.5	160	M12-M14	1/2	25	40	24	47	30	800
1320-12200	14.5	200	M12-M14	1/2	25	40	24	47	30	950
1320-16200	18.5	200	M16-M18	5/8	30	50	28	57	36	1500
1320-16250	18.5	250	M16-M18	5/8	30	50	28	57	36	1850
1320-20250	22.5	250	M20-M22	3/4	40	60	35	68	45	2900
1320-20315	22.5	315	M20-M22	3/4	40	60	35	68	45	3600
1320-24250	26	250	M24	1	40	70	43	83	56	3400
1320-24315	26	315	M24	1	40	70	43	83	56	4300
1320-30315	33	315	M30	1 ¼	50	80	50	88	56	6000
1320-30400	33	400	M30	1 ¼	50	80	50	88	56	7300

1320
- Gehärtet
- Schwarz beschichtet

1320
- Hardened
- Black Coating



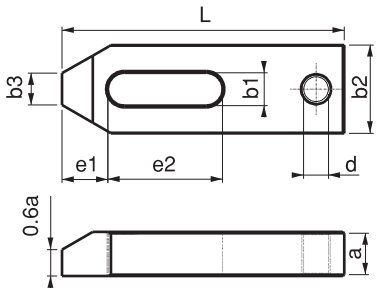
Spanneisen mit Stützgewinde

Straight Clamp with Support Hole

Referenz-Nr. Order No.	L	b1	Gewinde metric	Zollgewinde whitworth	a	b2	b3	e1	e2	d	(g)
1330-06050	50	6,6	M6	1/4	10	20	8	10	20	M8	50
1330-08060	60	9	M8	5/16	12	25	10	13	22	M8	105
1330-10080	80	11	M10	3/8	15	30	12	15	30	M10	210
1330-12100	100	14.5	M12-M14	1/2	20	40	14	21	40	M12	465
1330-12125	125							21	50		590
1330-16125	125	18.5	M16-M18	5/8	25	50	18	26	45	M16	930
1330-16160	160								65		1200
1330-20160	160	22.5	M20-M22	3/4	30	60	22	30	60	M20	1710
1330-20200	200				30	60	22		80		2170
1330-20250	250				35	70	30		100		3885
1330-24160	160	26	M24	1	30	70	26	35	60	M24	1965
1330-24200	200				35	70	26		80		2920
1330-24250	250				35	70	26		100		3720
1330-24315	315				40	80	35		100		6435
1330-30250	250	33	M30	11/4	40	80	34	45	100	M24	4825
1330-30315	315				50				130		7665
1330-36400	400	43	M36-M42	11/2	58	100	43	100	150	M30	14490

1330
- Gehärtet
- Schwarz beschichtet

1330
- Hardened
- Black Coating



Spanneisen gerade

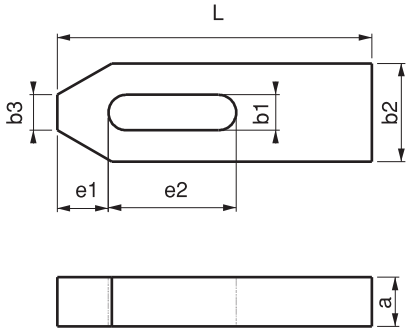
Straight Clamp

Referenz-Nr. Order No.	L	b1	Gewinde metric	Zollgewinde whitworth	a	b2	b3	e1	e2	(g)
1350-06050	50	6,6	M6	1/4	10	20	8	10	20	60
1350-08060	60	9	M8	5/16	12	25	10	13	22	110
1350-10080	80	11	M10	3/8	15	30	12	15	30	185
1350-12100	100	14,5	M12-M14	1/2	20	40	14	21	40	480
1350-12125	125							21	50	610
1350-16125	125	18,5	M16-M18	5/8	25	50	18	26	45	980
1350-16160	160								65	1240
1350-20160	160	22,5	M20-M22	3/4	30	60	22	30	60	1795
1350-20200	200								80	2255
1350-24200	200	26	M24	1	30	70	26	35	80	2570
1350-24250	250				35				100	3875
1350-30250	250	33	M30	11/4	40	80	34	45	100	4990
1350-30315	315				50				130	7885
1350-36400	400	43	M36-M42	11/2	60	100	43	100	150	14450

DIN 6314

1350
- Gehärtet
- Schwarz beschichtet

1350
- Hardened
- Black Coating

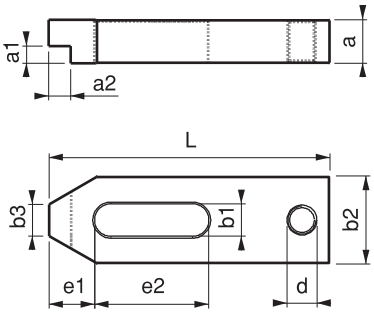


Stufenspanneisen mit Stützgewinde

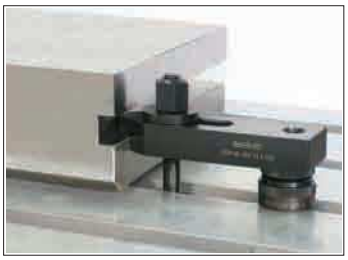
Straight Clamp with Stepped Support Hole

Referenz-Nr. Order No.	L	b1	Gewinde metric	Zollgewinde whitworth	a	b2	a1xa2	b3	e1	e2	d	(g)
1370-10080	80	11	M10	3/8	15	30	5x8	12	15	30	M10	180
1370-12100	100	14.5	M12-14	1/2	20	40	8x10	14	21	40	M12	410
1370-12125	125									50		590
1370-16125	125	18.5	M16-18	5/8	25	50	10x12.5	18	26	45	M16	910
1370-16160	160									65		1180
1370-20160	160	22.5	M20-22	3/4	30	60	12x15	22	30	60	M20	1575
1370-20200	200									80		2150
1370-24160	160	26	M24	1	30	70	12x15	26	35	60	M24	1800
1370-24200	200				35		14x17			80		2875
1370-24250	250				35		14x17			100		3500

1370
- verwendbar in engen Bereichen
- Gehärtet
- Schwarz beschichtet



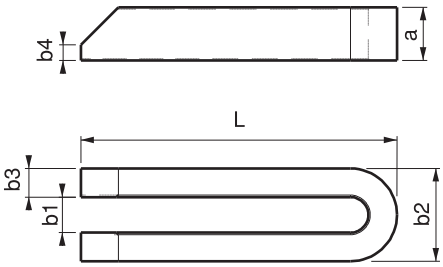
1370
- This product is used in restricted areas with the purpose of gaining height
- Hardened
- Black Coating



Gabelspanneisen abgeschrägt

Bifurcated Clamp

Referenz-Nr. Order No.	L	b1	Gewinde metric	Zollgewinde whitworth	a	b2	b3	b4	(g)
1390-06060	60	6.6	M6	1/4	12	19	6.2	3	65
1390-08080	80	9	M8	5/16	15	25	8	4	140
1390-10100	100	11	M10	3/8	20	30	9.5	5	240
1390-12125	125	14.5	M12-M14	1/2	25	38	12	6	700
1390-12160	160								915
1390-12200	200								1235
1390-16160	160	18.5	M16-M18	5/8	27	48	15	8	945
1390-16200	200				27			8	1215
1390-16250	250				37			10	2000
1390-20200	200	22.5	M20-M22	3/4	37	52	15	10	1650
1390-20250	250				37	62	20		2765
1390-20315	315				37	62	20		3510
1390-20500	500				47	62	20		7200
1390-24200	200	26	M24	1	37	66	20	10	2260
1390-24250	250				37				2740
1390-24315	315				37				3515
1390-24500	500				47				7100
1390-30250	250	33	M30	11/4	47	73	20	12	3500
1390-30315	315				47	73	20		4190
1390-30400	400				47	73	20		5735
1390-30600	600				46	73	20		8455
1390-301000	1000				57	93	30		28000
1390-36400	400	40	M36	11/2	57	100	30	12	10800
1390-36600	600								16500
1390-42600	600	43	M42	11/2	77	123	40	12	28800



DIN 6315B

1390
- Erleichterung bei Stufenspannen in engen Bereichen
- Gehärtet
- Schwarz beschichtet

1390
- Due to the structure of the clamp, this product provides convenience for the couplings of formed work pieces on graded surfaces
- Hardened
- Black Coating

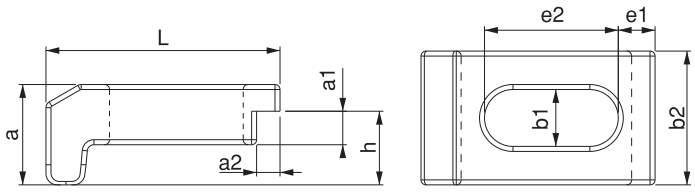
Platten-Spanneisen gekröpft

Plate Sliding Clamp

Referenz-Nr. Order No.	L	b1	Gewinde metric	Zollgewinde whitworth	a	b2	a1xa2	e1	e2	h	(g)
1387-12070	70	13	M12	1/2	21.5	40	8x6	11	40	14	255
1387-16070	70	17	M16	5/8	29.5	40	10x7	11	40	22	290

1387
- Vorteil : arbeitet ohne Heber
- Gehärtet
- Schwarz beschichtet

1387
- Provides the advantage of working without support.
- Hardened
- Black coated



Gabelspanneisen mit Stufe und Stützgewinde

Bifurcated Clamp with Stepped Support Hole

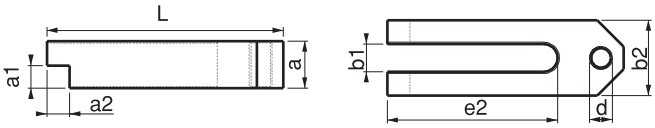
Referenz-Nr. Order No.	L	b1	Gewinde metric	Zollgewinde whitworth	a	e2	a1xa2	b2	d	(g)
1400-10100	100	11	M10	3/8	20	70	10x10	30	M10	260
1400-12125	125	14.5	M12-14	1/2	25	90	12x12	40	M12	565
1400-16160	160	18.5	M16-18	5/8	30	110	15x15	50	M16	1235
1400-20200	200	22.5	M20-22	3/4	40	135	20x20	60	M20	2460

1400
- Gehärtet
- Schwarz beschichtet

Erleichterung bei Stufenspannen in engen Bereichen.

It provides usage advantage in gradual and limited areas.

1400
- Hardened
- Black Coating



Gabelspanneisen mit Stützgewinde

Bifurcated Clamp with Support Hole

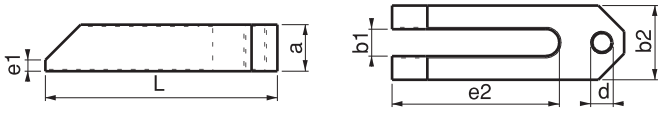
Referenz-Nr. Order No.	L	b1	Gewinde metric	Zollgewinde whitworth	a	e1	e2	b2	d	(g)
1410-10100	100	11	M10	3/8	20	5	70	30	M10	260
1410-12125	125	14.5	M12-14	1/2	25	6	90	40	M12	560
1410-16160	160	18.5	M16-18	5/8	30	8	110	50	M16	1230
1410-20200	200	22.5	M20-22	3/4	40	10	135	60	M20	1490

1410
- Gehärtet
- Schwarz beschichtet

Erleichterung bei Stufenspannen in engen Bereichen.

It provides usage advantage for gradual parts during forward tightenings.

1410
- Hardened
- Black Coating



Spanneisen gekröpft mit Stützgewinde

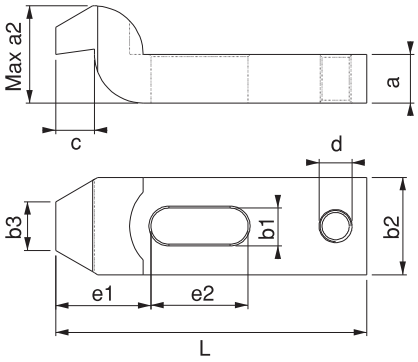
Z-Type Clamp with Support Hole

Referenz-Nr. Order No.	L	b1	Gewinde metric	Zollgewinde whitworth	a	a2	b2	b3	c	e1	e2	d	(g)
1450-06060	60	6.6	M6	1/4	10	20	20	10	8	20	20	M8	80
1450-08080	80	9	M8	5/16	12	24	25	12	9	25	25	M8	170
1450-10100	100	11	M10	3/8	15	30	30	15	12	32	32	M10	245
1450-12125	125	14.5	M12-M14	1/2	19	40	38	20	16	40	40	M12	600
1450-16125	125	18.5	M16-M18	5/8	24	50	48	25	20	49	40	M16	925
1450-16160	160										50		1205
1450-20160	160	22.5	M20-M22	3/4	29	58	58	30	24	55	55	M20	1705
1450-20200	200										70		2145
1450-24160	160	26	M24	1	33	70	70	35	28	53	55	M24	2110
1450-24200	200									72	60		3070
1450-24250	250									72	80		3710
1450-30250	250	33	M30	11/4	38	80	77	40	40	91	80	M24	4635
1450-30315	315				48	100					100		7050

DIN 6316

1450

- Dieses Produkt bietet den Vorteil, von der Höhe und den Durchgängen der Schraube zu profitieren.
- Gehärtet
- Schwarz beschichtet



1450

- This product provides advantage to gain from the height and in the passings of the bolt
- Hardened
- Black Coating

Gabelspanneisen mit rundem Spannansatz

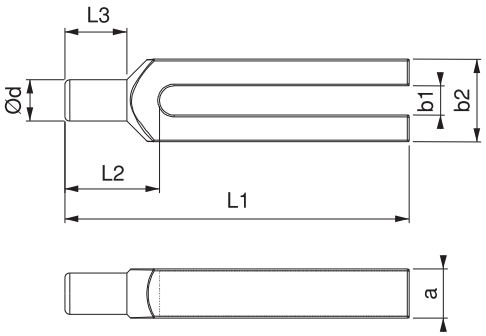
Forked Clamp with Pin Head

Referenz-Nr. Order No.	L1	b1	Gewinde metric	Zollgewinde whitworth	a	b2	Ød	L2	L3	(g)
1470-08100	100	9	M8	5/6	15	30	12	30	18	180
1470-10125	125	11	M10	3/8	20	30	16	36	24	290
1470-12160	160	14.5	M12-M14	1/2	25	40	20	45	30	715
1470-12200	200									815
1470-16200	200	18.5	M16-M18	5/8	30	50	24	55	36	1210
1470-16250	250									1550
1470-20250	250	22.5	M20-M22	3/4	40	60	30	65	45	2680
1470-20315	315									3435
1470-24250	250	26	M24	1	40	70	38	80	56	3060
1470-24315	315									4120
1470-30315	315	34	M30	11/4	50	80	45	85	56	5600
1470-30400	400									7135

DIN 6315C

1470

- Befestigung Werkstücke mit Loch in der Spannfläche
- Gehärtet
- Schwarz beschichtet



1470

- This product fixes the work pieces by entering in the holed surfaces of various work pieces
- Hardened
- Black Coating

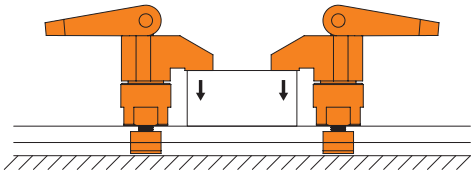
Aufspannelement

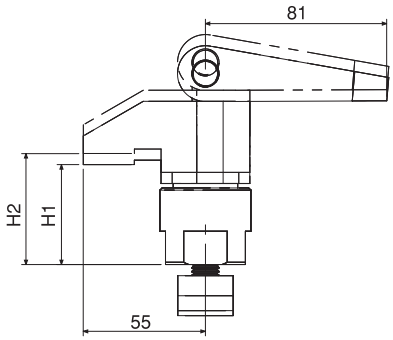
Above Clamping

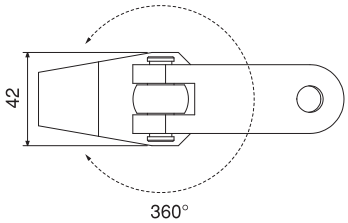
Referenz-Nr. Order No.	a	H1 - H2 (mm)	Spannkraft Clamping Force Kgf	(g)
1472-02530	14-16-18-20-22	25 - 30	1000	1000
1472-03035		30 - 35	1000	1150
1472-03540		35 - 40	1000	1225
1472-04045		40 - 45	1000	1245
1472-04550		45 - 50	1000	1275

1472
- Gehärtet
- Schwarz beschichtet

1472
- Hardened
- Black Coating







Spannstift

Spring Locating Pins

Referenz-Nr. Order No.	P(N)	D	H (0 -1)	D1	H1	A Bewegung Travel	d (+0.1 0)	(g)
1473-06001	76	10	11	6	10.7	1	10	4
1473-08001	102	12	13	8	13.9	1.3	12	8
1473-10001	204	16	17	10	16.7	1.6	16	16

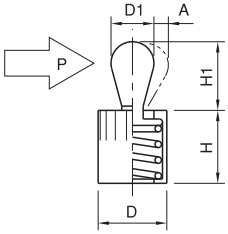
1473

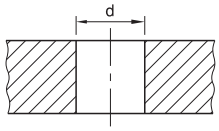
Eigenschaft
- Ideal für temporäres Spannen.

Hinweis
- Min. P-Wert für Stiftbewegung
- bis 90 °C

Features
- Ideal for temporary clamping of low-profile workpieces.

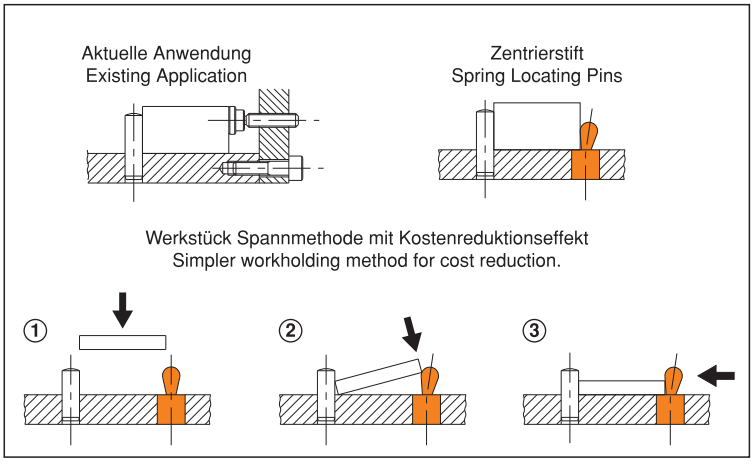
Note
- The stated value "P" denotes the minimum force needed to move the pin.
- Heat resistance : 90 °C



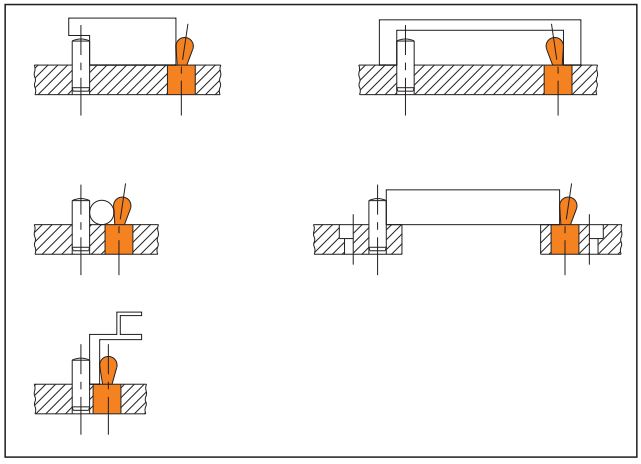


Montage-Bohrung
Installation Hole

Anwendung / How To Use



Anwendungsbeispiel / Application Examples



Referenz-Nr. Order No.	S	d (F7)	H2	D1	H (±0.01)	D	M	Dp	R
1474-06000	2	12	10	28	50	65	M8	40	160
1474-08000	2.5	16	12	34	63	80	M10	50	180

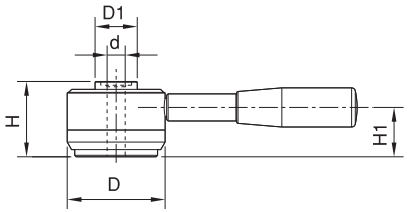
Referenz-Nr. Order No.	D2	H1	zulässige Belastung (N) Allowable Operating Load (N)	Spannkraft Clamping Force Kgf	empfohlene Toleranz für Werkstückstärke Recommended Workpiece Thickness Tolerance	(kg)
1474-06000	26	36	600	600	±0.5	1.2
1474-08000	28	45	600	800	±0.8	2.2

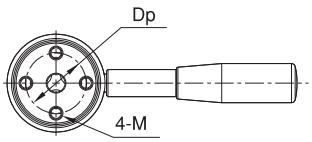
1474
• Schwarz beschichtet

1474
• Black coated

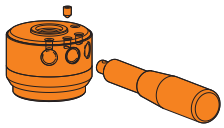
Hinweis
• Spannbolzen und Zugschrauben müssen extra bestellt werden.

Note
• Clamping Pins or Screws must be ordered separately.

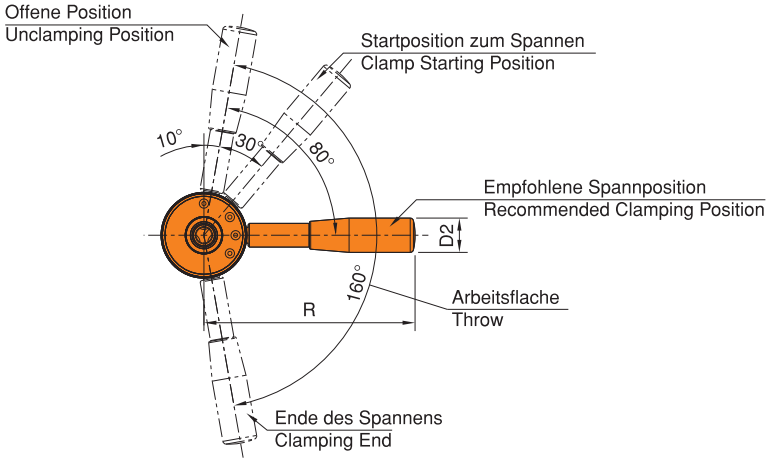


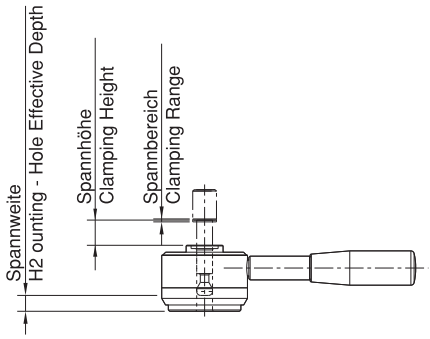


3 mögliche Montagepositionen für den Griff



The handle can be removed by loosening the locking screw. To keep the handle mounted permanently, make sure that the locking screw is fully tightened. 3 options of handle mounting position.





Spannbolzen
Clamping Pins

Referenz-Nr. Order No.	D2 (f7)	D1 (f7)	L (By 0.1mm)	D	L2	L1	L3	D3	M	M1	(g)
1475-00012	12	12	0<L<100	18	23	38	21.5	6.5	M8	M8	70 ~ 160
1475-00016	16	16	0<L<100	24	23	38	21.5	6.5	M8	M8	175 ~ 265

1475
Bolzen
- Harte: Induktion
- Geschliffen

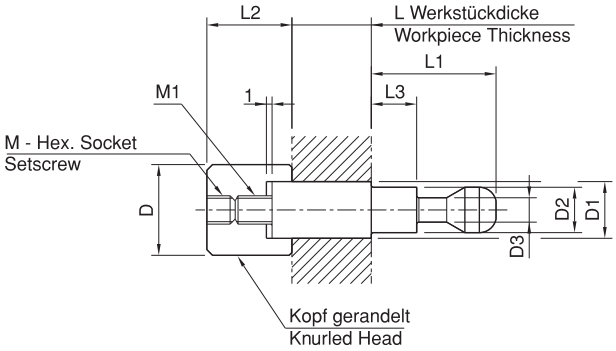
Kopf
- Schwarz beschichtet

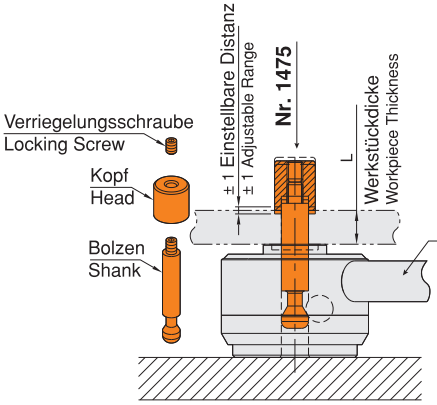
1475
Shank
- Hardness: Induction
- Precision ground

Head
- Black coated

Hinweis
- Fertigung gem. Anforderung

Note
- Custom Clamping Pins are available on request.





Verwendung / How To Use

L in der Werkstückdicke ± 1mm mm einstellbar

L dimension is adjustable by ± 1mm to fit actual workpiece thickness.

Spannschraube
Clamping Screws

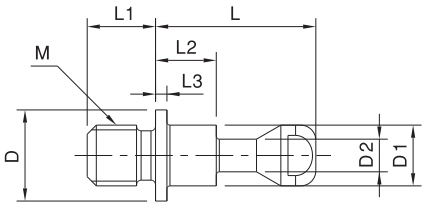
Referenz-Nr. Order No.	D1	M	L1	L	D	L2	L3	D2	W	L4	(g)
1476-00012	12	M12	13	38	20	21.5	2	6.5	10	4	40
1476-00016	12	M16	17	38	20	21.5	2	6.5	10	4	55

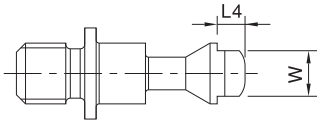
1476
- Schwarz beschichtet

1476
- Black coated

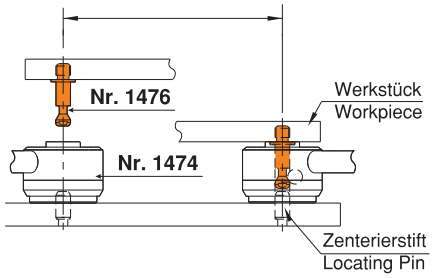
Hinweis
- Sonderlängen auf Anfrage

Note
- Custom Clamping Screws (different screw thread sizes) are available on request.





Zugschrauben müssen in den empfohlenen Abstandstoleranzen sein.
Recommended Spacing Tolerancein Use of Clamping Screws

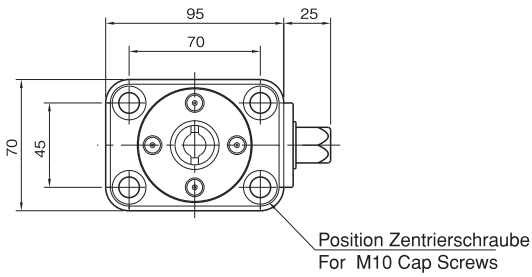


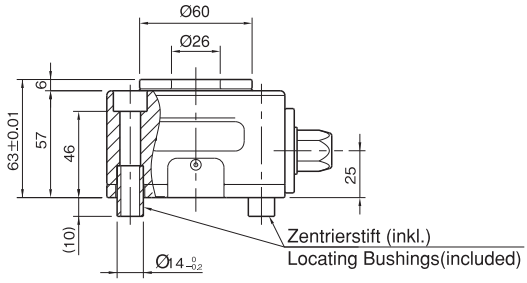
Niederzugspanner

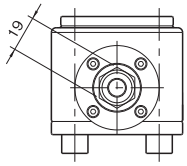
Power-tool Actuated Block Pull Clamps

Referenz-Nr. Order No.	Spannkraft Clamping Force Kgf	Tork N-m	(kg)
1477-00012	1200	40	2.3

1477

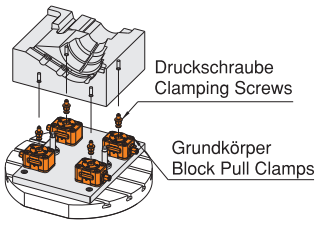






1. Alle offenen Flächen des Werkstücks können bearbeitet werden.

1. Ideal for 5-Axis Machining
Block Pull Clamps mount under a workpiece making its surfaces to be machined fully open for the cutting tool. This allows completing multiple machining processes at a time.

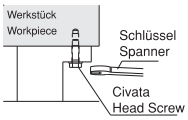


2. Mit Blockziehen ist das Spannen leichter und pratktischer als das Konventionelle.

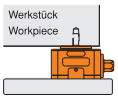
2. Better Workability
Block Pull Clamps allow fastening a workpiece easily, unlike the conventional method of fastening with hexagon head screws from below.

3. Bearbeitung mehrerer unterschiedlicher Werkstücke möglich

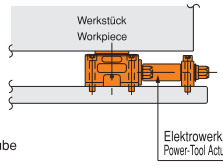
3. Actuated Remote-Control Units
If used in conjunction with Power-Tool Actuated Remote-Control Units, Block Pull Clamps can be installed at the best possible position under the workpiece.



Aktuelle Anwendung
Conventional Method

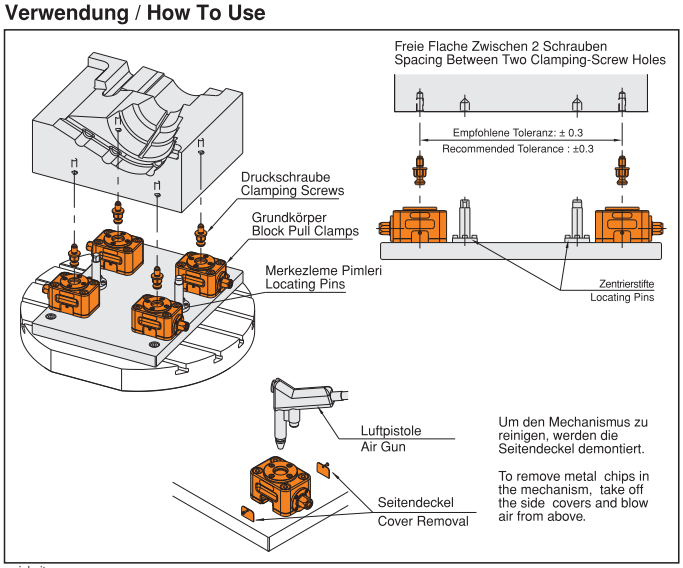


Anwendung mit Druckschraube
Application with pull stud



Elektrowerkzeugbetätigte Fernbedieneinheit
Power-Tool Actuated Remote-Control Unit

Verwendung / How To Use



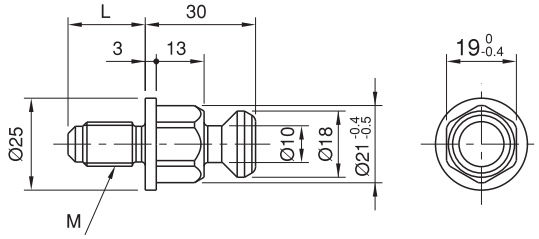
Spannbolzen

Clamping Screws

Referenz-Nr. Order No.	M	L	(g)
1478-00012	M12x	21	75
1478-00016	M16	28	98

1478
- Gehärtet
- Schwarz beschichtet

1478
- Hardened
- Black coated



Referenz-Nr. Order No.	Spannhöhe Clamping Height				Spannhub Clamping Stroke	L2	L3	L1	L4	W	L	H4	B	Dp
	Kontakt bearbeitete Fläche Finished Surface Contact		Kontakt grobe Fläche Rough Surface Contact											
	Min.	Max.	Min.	Max.										
1479-0618	21.8 (21.8-24.8)	23.8 (23.8-26.8)	21.4 (21.4-24.4)	23.4 (23.4-26.4)	3	22	6	26	11.5	36	18	6	4.3	27
1479-0823	30.3 (30.3-34.3)	32.3 (32.3-36.3)	31.2 (31.2-35.2)	33.2 (33.2-37.2)	4	30	8	35	15.3	45	23	8	5.3	34
1479-1030	30.5 (30.5-34.5)	37 (37-41)	31.5 (31.5-35.5)	38 (38-42)	4	37	8	45	20.7	65	30	12	8.4	48
1479-1240	34.5 (34.5-39.5)	44 (44-49)	37 (37-42)	46.5 (46.5-51.5)	5	45	8	55	25.4	85	40	15	10.5	64

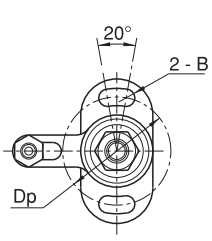
Referenz-Nr. Order No.	H	D	W1	W2	H2	H1	M1	H3	W3	M	Spannkraft Clamping Force Kgf	zulässiges Drehmoment Allowable Screw Torque (N-m)	(g)
1479-0618	56.5	18	8	4.3	10	29	M4	22.8	10	M6	230	6	94
1479-0823	73.5	23	10	5.3	14	39	M5	28.5	13	M8	360	10.5	210
1479-1030	91	30	16	8.4	18	48	M8	45.5	17	M10	600	30	515
1479-1240	114	40	20	10.4	22	58	M10	57	19	M12	750	45	1100

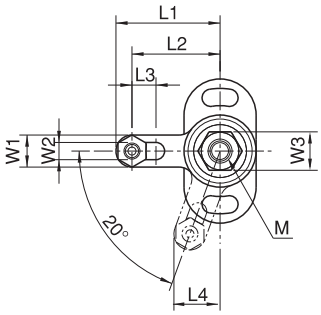
1479
Körper
- Gehärtet
- Schwarz beschichtet

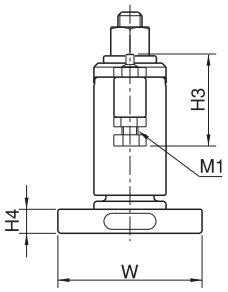
Spannspindel
- Schwarz beschichtet

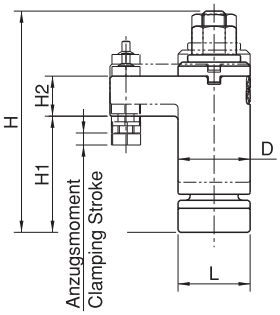
1479
Body
- Hardened
- Black coated

Clamping Spindle
- Black coated





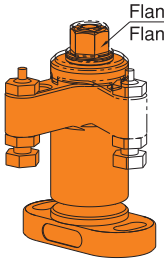




Hinweis
- Spannen mit Drehmomentschlüssel

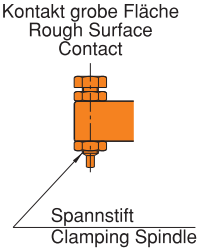
Note
- Do not use a power tool (impact wrench etc.) to turn the flange nut, for damage prevention.

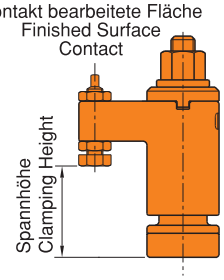
Verwendung / How To Use



Den Flansch in der Spannposition drehen.

Turning the flange nut allows the clamp arm to swing into position for clamping.





Referenz-Nr. Order No.	H1	S	S1	M	L2	L1	W	L	H4	d	P	H	D	W1	H2	W2	H3
1480-00012	80	10	11	M12	55	66	90	50	15	11	70	139	50	22	30	19	29
1480-00016	95	10	15	M16	65	79	100	60	20	13	80	165	60	28	35	24	35

Referenz-Nr. Order No.	Spannkraft Clamping Force Kgf	Drehmoment Allowable Screw Torque (N - m)	Spannrichtung Clamping Direction	(kg)
1480-00012	600	28	im Uhrzeigersinn Clockwise	1.6
1480-00016	1000	55	im Uhrzeigersinn Clockwise	2.9

1480
Körper
- Gehärtet
- Schwarz beschichtet

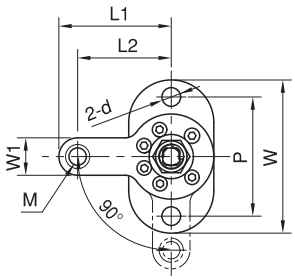
Spannbacke
- Gehärtet
- Schwarz beschichtet

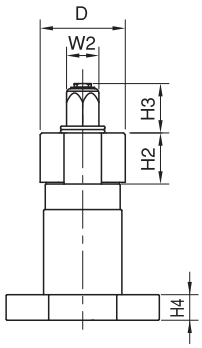
1480
Body
- Hardened
- Black coated

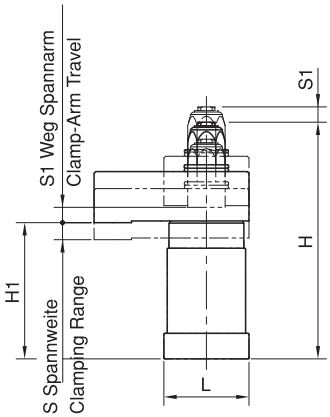
Clamping Arm
- Hardened
- Black coated

Eigenschaften
- Der Klemmarm schwenkt schnell auf die Drehgeschwindigkeit eines Schlagschraubers ein, um schnell zu klemmen.
- Spannt mit kurzer Bewegung

Features
- The clamp arm swings in swift response to the turning speed of an impact wrench, for quick clamping.
- A short clamp-arm travel allows quick clamping.



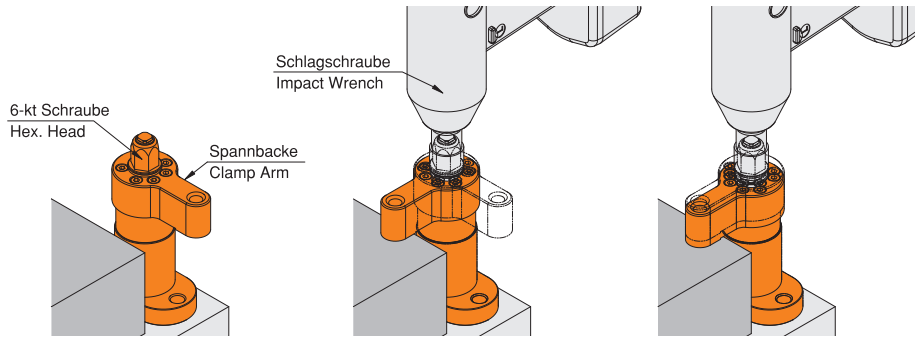


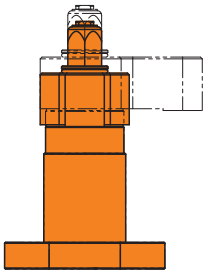


Hinweis
- Spannen unbedingt mit Drehmomentschlüssel

Note
- Do not use applying higher torque than allowable for a long period of time, to avoid damage. Using a torque-settable impact wrench is recommended.

Verwendung / How To Use





Spannen schwenkbar für Roboterfertigung

For robotized production lines, use Spiral-Acting Swing Clamps.

Referenz-Nr. Order No.	Spannhöhe Clamping Height				Spannhub Clamping Stroke	Vorhubphase Advance Stroke	L2	L3	L1	L4	W	L	H5	B
	Kontakt bearbeitete Fläche Finished Surface Contact		Kontakt grobe Fläche Rough Surface Contact											
	Min.	Max.	Min.	Max.										
1481-0150R	31.3 (30.6-32)	33.3 (32.6-34)	32.2 (31.5-32.9)	34.2 (33.5-34.9)	1.4	1.1	30	8	35	15.3	45	23	8	5.3
1481-0150L														
1481-0200R	32.5 (31.7-33.2)	39 (38.2-39.7)	33.5 (32.7-34.2)	40 (39.2-40.7)	1.5	1.4	37	8	45	20.7	65	30	12	8.4
1481-0200L														
1481-0300R	36.5 (33.5-37.4)	46 (45-46.9)	39 (38-39.9)	48.5 (47.5-49.4)	1.9	1.7	45	8	55	25.4	85	40	15	10.5
1481-0300L														

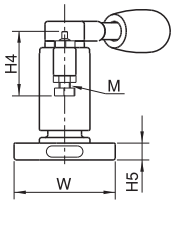
Referenz-Nr. Order No.	Dp	H	D	W1	W2	H3	H2	M	H4	R	A	H1	zulässige Betriebslast Allowable Operating Load (N)	Spannkraft Clamping Force Kgf	(g)
1481-0150R	34	66	23	10	5.3	14	40	M5	28.5	63	20	61.3	150	180	250
1481-0150L															
1481-0200R	48	82	30	16	8.4	18	50	M8	45.5	80	26	76.5	200	220	570
1481-0200L															
1481-0300R	64	100	40	20	10.4	22	60	M10	57	100	33	93	300	350	1200
1481-0300L															

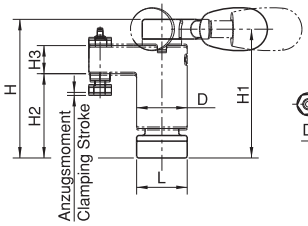
1481
Körper
- Gehärtet
- Schwarz beschichtet

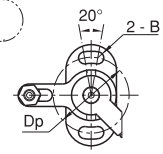
Spannspindel
- Schwarz beschichtet

1481
Body
- Hardened
- Black coated

Clamping Spindle
- Black coated

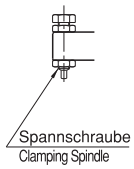




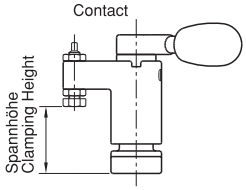


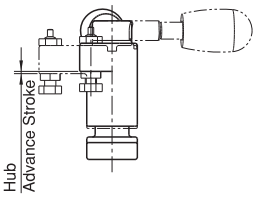
Montagelöcher
Mounting Holes

Kontakt grobe Fläche
Rough Surface
Contact

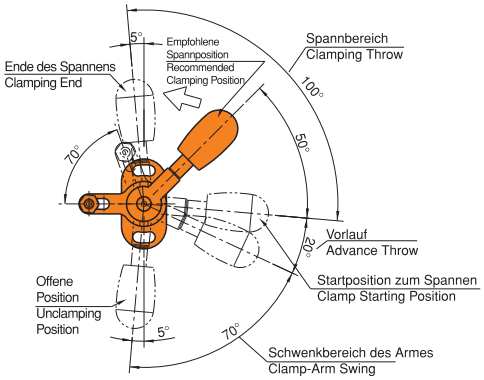


Kontakt bearbeitete Fläche
Finished Surface
Contact

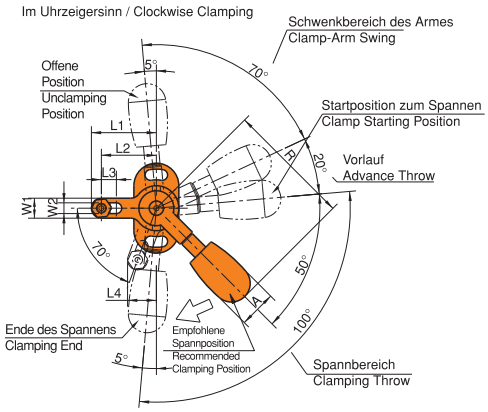




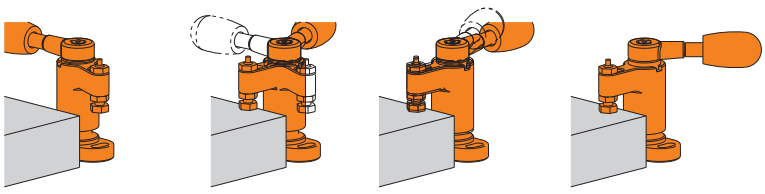
Gegen den Uhrzeigersinn
Counterclockwise Clamping



Im Uhrzeigersinn / Clockwise Clamping



Verwendung / How To Use



Referenz-Nr. Order No.	Spannhöhe Clamping Height				Spannhub Clamping Stroke	Vorhubphase Advance Stroke	L2	L3	L1	L4	W	L	H5	B
	Kontakt bearbeitete Fläche Finished Surface Contact		Kontakt grobe Fläche Rough Surface Contact											
	Min.	Max.	Min.	Max.										
1482-0150R	31.3 (30.8-31.8)	33.3 (32.8-33.8)	32.2 (31.7-32.7)	34.2 (33.7-34.7)	1	1.5	30	8	35	15.3	45	23	8	5.3
1482-0150L														
1482-0200R	32.5 (31.9-33.1)	39 (38.4-39.6)	33.5 (32.9-34.1)	40 (39.4-40.6)	1.2	1.8	37	8	45	20.7	65	30	12	8.4
1482-0200L														
1482-0300R	36.5 (35.7-37.2)	46 (45.2-46.7)	39 (38.2-39.7)	48.5 (47.7-39.2)	1.5	2.3	45	8	55	25.4	85	40	15	10.5
1482-0300L														

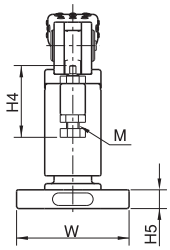
Referenz-Nr. Order No.	Dp	H	D	W1	W2	H3	H2	M	H4	R	A	H1	zulässige Betriebslast Allowable Operating Load (N)	Spannkraft Clamping Force Kgf	(g)
1482-0150R	34	131	23	10	5.3	14	40	M5	28.5	63	19	68	150	150	272
1482-0150L															
1482-0200R	48	167	30	16	8.4	18	50	M8	45.5	80	24	87	200	210	625
1482-0200L															
1482-0300R	64	207	40	20	10.4	22	60	M10	57	100	30	107	300	280	1340
1482-0300L															

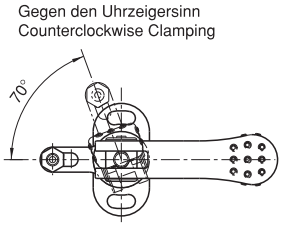
1482
Körper
- Gehärtet
- Schwarz beschichtet

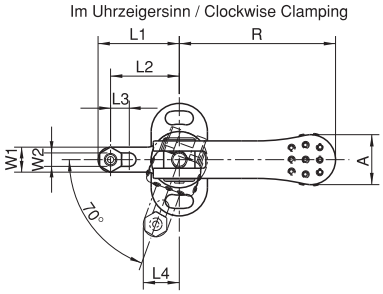
Spannspindel
- Schwarz beschichtet

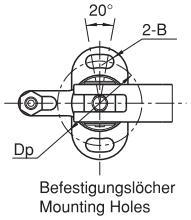
1482
Body
- Hardened
- Black coated

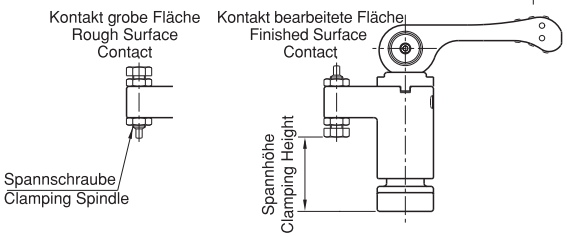
Clamping Spindle
- Black coated

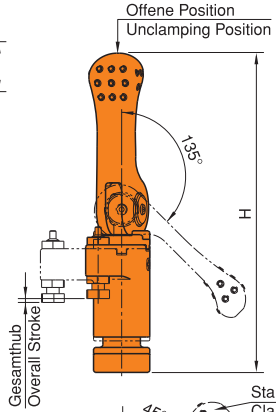




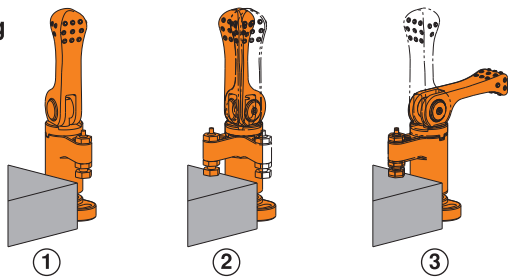


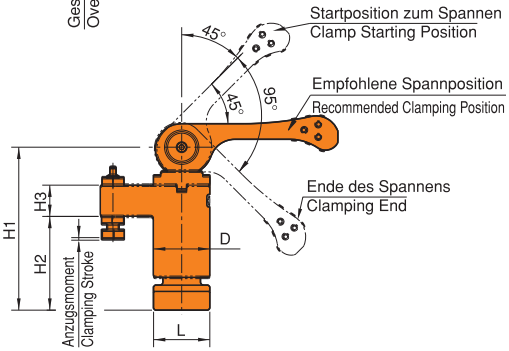






Verwendung
How To Use





Referenz-Nr. Order No.	Spannhöhe Clamping Height				Spannhub Clamping Stroke	L2	L5	W	L	H4	d	P	H	L1	L3	W1
	Kontakt bearbeitete Fläche Finished Surface Contact		Kontakt grobe Fläche Rough Surface Contact													
	Min.	Max.	Min.	Max.												
1483-03240	32 (32-29.5)	40 (40-37.5)	35 (35-32.5)	43 (43-40.5)	2.5	20	11	42	18	8	5.5	32	81	25.5	25	26
1483-03748	37 (37-33.5)	48 (48-44.5)	42 (42-38.5)	53 (53-49.5)	3.5	25	14	52	22	10	6.6	40	100	32	31	32

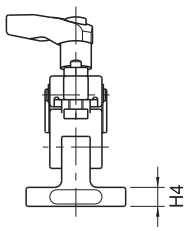
Referenz-Nr. Order No.	W2	H2	H1	M	H3	R	H5	L4	verstellbarer Griff Adjustable Handles	zulässige Betriebslast (N) Allowable Operating Load (N)	Spannkraft Clamping Force Kgf	Spannmechanismus Clamping Mechanism	(g)
1483-03240	22	10	45	M6	24	40	47	16	FKF8-BR	170	240	Schraube Screw	242
1483-03748	28	12	55	M8	30.5	65	63	20	FKF8-BR	210	420	Schraube Screw	490

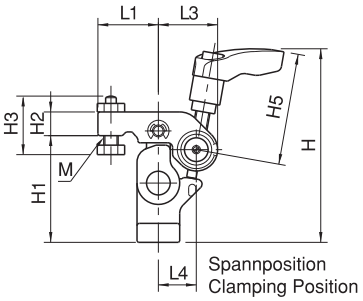
1483
Körper
- Gehärtet
- Schwarz beschichtet

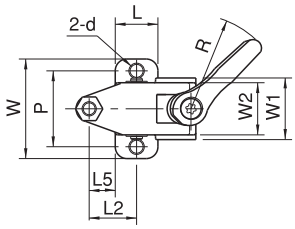
Spannspindel
- Schwarz beschichtet

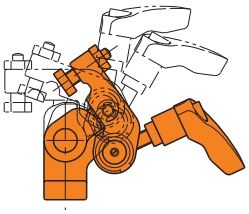
1483
Body
- Hardened
- Black coated

Clamping Spindle
- Black coated

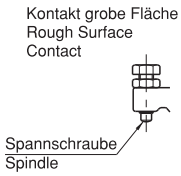


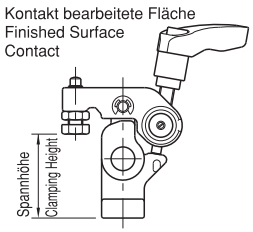


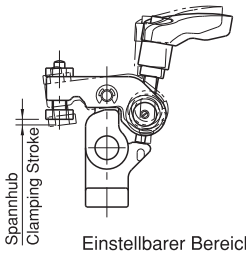




Geöffnete Stellung
Unclamped

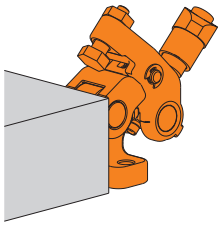




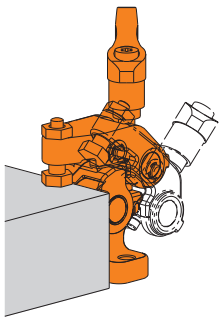


Einstellbarer Bereich
Clamping Throw

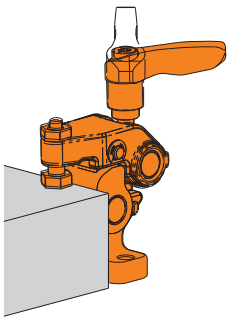
Verwendung / How To Use



①



②



③

Referenz-Nr. Order No.	A	B	C	D	E	F	G (g6)	H	J (h6)	K	L	M	N	P (±0.02)	Q	R
1484-06501	65	57	10	47	39	70	28	12	6	5	19	M6	42	26	32	25
1484-09001	90	72	15	57	46	95	42	14	8	7	23	M8	60	36	38	28

Referenz-Nr. Order No.	T	U	V	W	Z	Spannkraft Clamping Force Kgf	Drehmoment Allowable Screw Torque (N - m)	(kg)
1484-06501	15	18	4	M4	M8	400	60	1.1
1484-09001	17	22	6	M5	M10	600	100	2.6

1484

Technische Daten
- Teile-Wiederholgenauigkeit: ±0.03
- Spannbacken Wiederholgenauigkeit : ±0.02

Hinweis
- Ohne Werkstück nicht spannen.
- Bearbeiten nur so weit es zulässig ist.

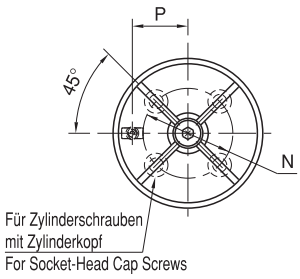
Inhalt
- 1 St. Sicherungsring
- 1 St. Diamantnadel
- 1 St. Inbusmutter

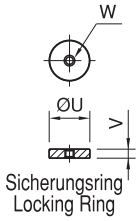
1484

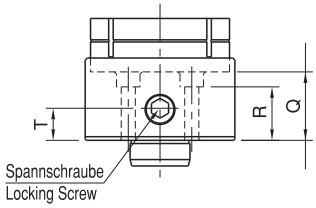
Technical Data
- Part locating repeatability: ±0.03
- Jaw locating repeatability: ±0.02

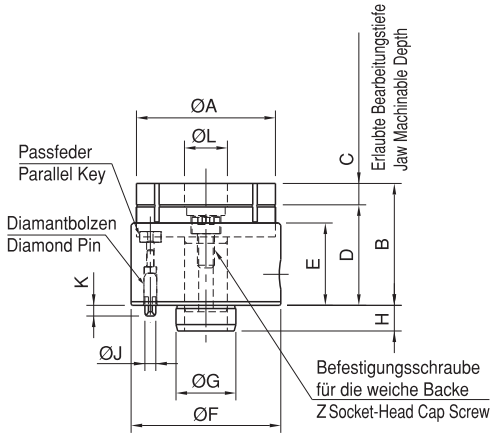
Notes
- Never tighten the locking screw without a part mounted, to avoid damage and deformation
- Do not machine the jaw deeper than allowed.

Included
- 1 of locking ring
- 1 of diamond pin
- 1 of socket-head cap screw









Spannbacken

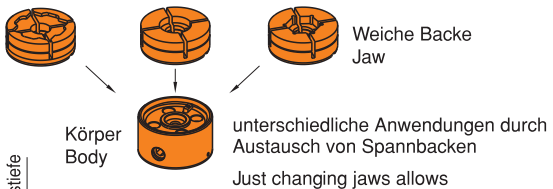
Jaws

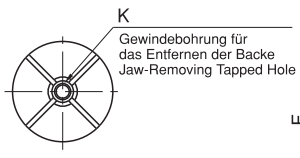
Referenz-Nr. Order No.	A	B	C	D	E	F	G	H	J	K	(g)
1485-06501	65	25	10	15	19	28	18	4	M4	M10	170
1485-09001	90	34	15	19	23	39	22	6	M5	M12	470

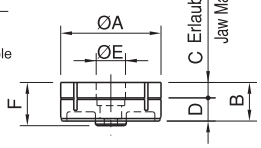
1485
- Material: A7075

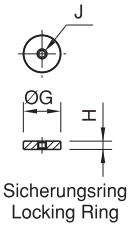
1485
- Material: A7075

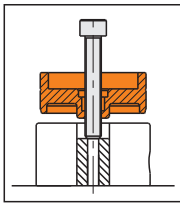
Eigenschaft / Feature











Entfernen der Backe / How To Remove Jaw

Demontage evtl. mittels Schraube

When it is hard to remove the jaw by hand, screw a bolt into the jaw-removing tapped hole to push it against the body, for easier removal.

Referenz-Nr. Order No.	d	h (±0.01)	d1 (g6)	h1	M	h2	dp	p (±0.02)	w	h3	M1	Drehmoment Allowable Screw Torque (N - m)	(kg)
1486-CP125.06501	65	25	28	12	M6	27	42	22	8	12	M8x1.25	15	0.8
1486-CP125.09001	90	30	42	14	M8	30	60	30	8	14	M10x1.5	25	1.7
1486-CP125.12001	120	35	55	18	M10	33	80	43	10	16	M10x1.5	40	3.5
1486-CP125.16001	160	40	63	24	M12	36	110	60	10	18	M12x1.75	40	7.1

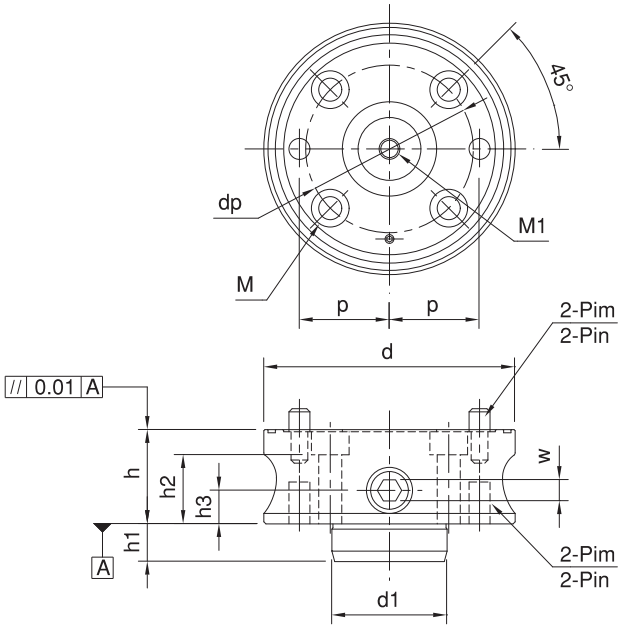
geeignete Spannbacken / Proper Jaws					
äußere Formen spannen / For External Form Holding			innere Formen spannen / For Internal Form Holding		
Referenz-Nr. Order No.	Spannkraft Clamping Force Kgf	Klemmoment Clamping Torque	Referenz-Nr. Order No.	Spannkraft Clamping Force Kgf	Klemmoment Clamping Torque
1486-CP126.06501	4.5	Ø 0.3	1486-CP127.06501	4.5	Ø 0.3
1486-CP126.09001	7		1486-CP127.09001	7	
1486-CP126.12001	10		1486-CP127.12001	10	
1486-CP126.16001	12		1486-CP127.16001	10	

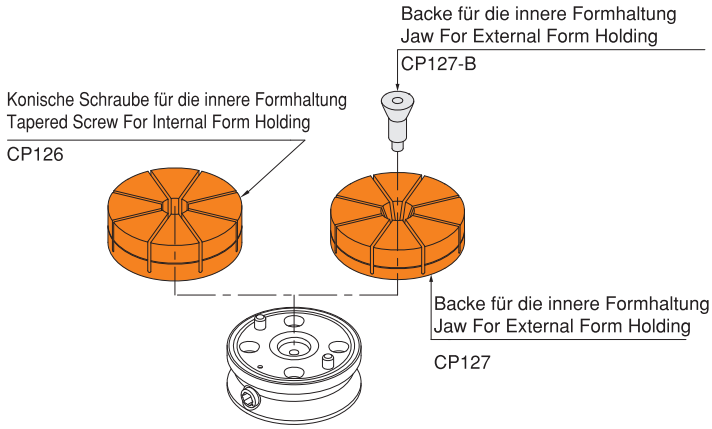
1486
- Nickelbeschichtung
- Werkstück Wiederholgenauigkeit ±0.03
- Weiche Backe Wiederholgenauigkeit ±0.03

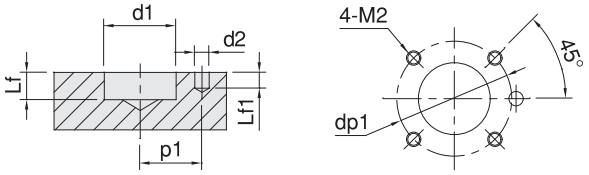
1486
- Nickel Coating
- Part locating repeatability: ±0.03
- Jaw locating repeatability: ±0.03

Hinweis
die Backen muss separat bestellt werden.

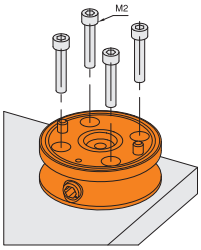
Note
Jaws must be ordered separately.

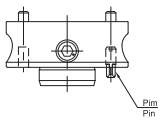






Referenz-Nr. Order No.	d1 (H7)	Lf	d2 (G7)	Lf1	p1 (±0.02)	M2	dp1
1486-CP125.06501	28	13	6	6	22	M 6x1	42
1486-CP125.09001	42	15	8	8	30	M 8x1.25	60
1486-CP125.12001	55	19	10	11	43	M10x1.5	80
1486-CP125.16001	63	25	12	13	60	M12x1.75	110





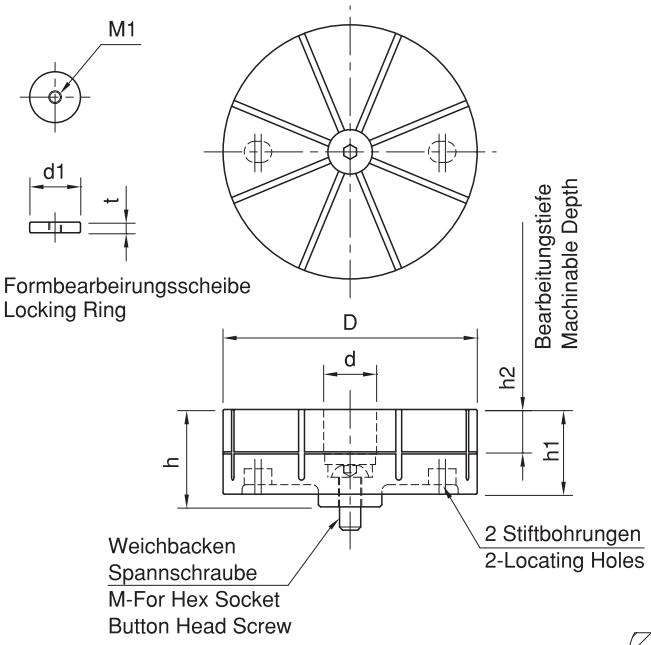
Stiftdurchmesser
Pin Dimensions

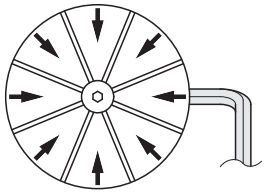
Referenz-Nr. Order No.	Durchmesser Diameter
1486-CP125.06501	Ø 6h6
1486-CP125.09001	Ø 8h6
1486-CP125.12001	Ø 10h6
1486-CP125.16001	Ø 12h6

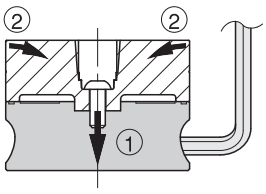
Referenz-Nr. Order No.	D	d	h1	h2	M	h	M	d1	t	(g)
1486-CP126.06501	65	21	25	10	M8x20	29	M5	20	4	200
1486-CP126.09001	90	25	35	15	M10x20	40	M6	24	5	500
1486-CP126.12001	120	25	40	20	M10x25	46	M6	24	5	1100
1486-CP126.16001	160	29	45	25	M12x25	52	M8	28	6	2200

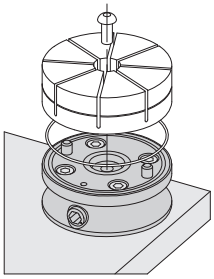
1486
- Material: Aluminium A7075
- Blau Beschichtet
- Klemmoment 0.15mm

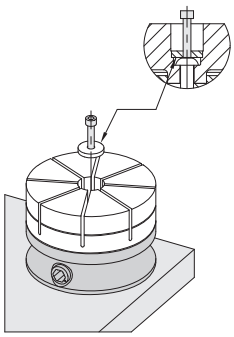
1486
- Material: Aluminum A7075
- Blue coating
- Clamping Torque 0.15mm

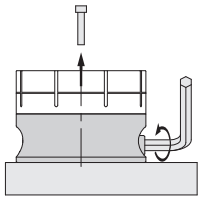


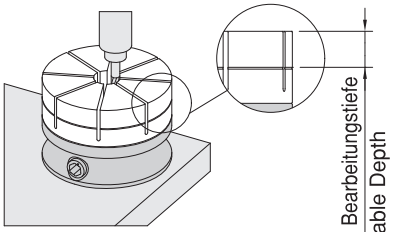


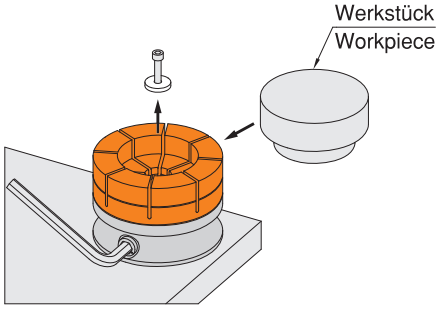


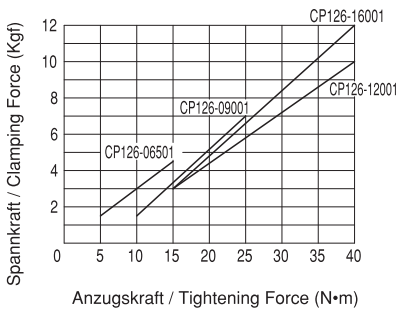








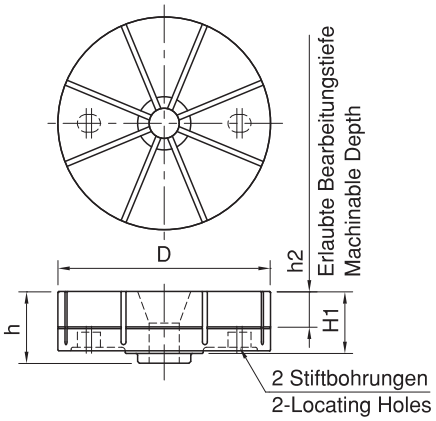


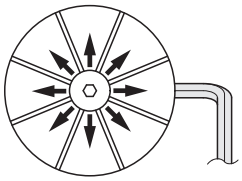


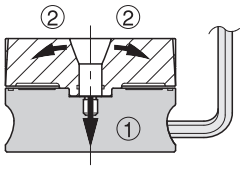
Referenz-Nr. Order No.	D	h1	h2	h	(g)
1486-CP127.06501	65	25	10	28.5	200
1486-CP127.09001	90	30	15	34.5	400
1486-CP127.12001	120	35	20	40.5	900
1486-CP127.16001	160	40	25	46.5	1900

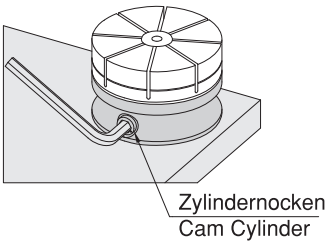
1486
- Material: Aluminium A7075
- SilberBeschichtet
- Klemmoment 0.15mm

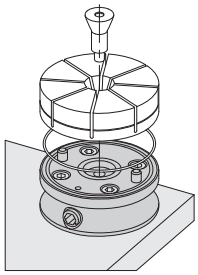
1486
- Material: Aluminum A7075
- Silver coating
- Clamping Torque 0.15mm

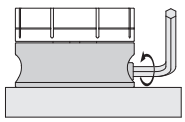


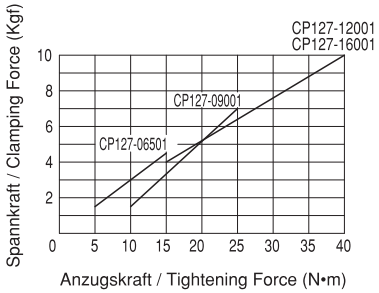


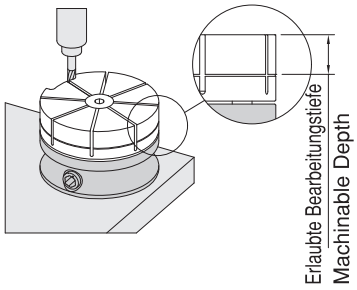


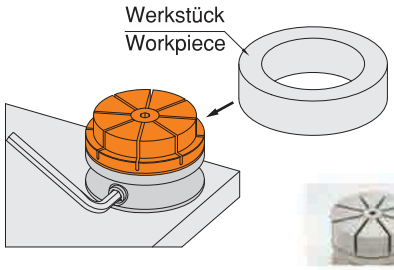












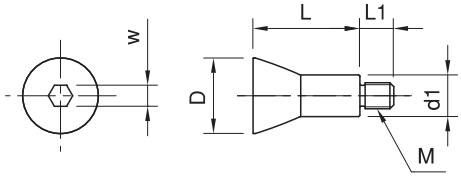
Schraube für innere Spannbacken Außendurchmesser

Inner Diameter Soft Jaw Bolt

Referenz-Nr. Order No.	D	L	M	L1	d1	w	(g)
1486-CP127.06501B	22.5	29	M8	10	13.2	6	50
1486-CP127.09001B	27	35	M10	11	16	8	80
1486-CP127.12001B	29	41	M10	13	16	8	100
1486-CP127.16001B	33	47	M12	14	18	10	150

1486
- SilberBeschichtet

1486
- Silver coating



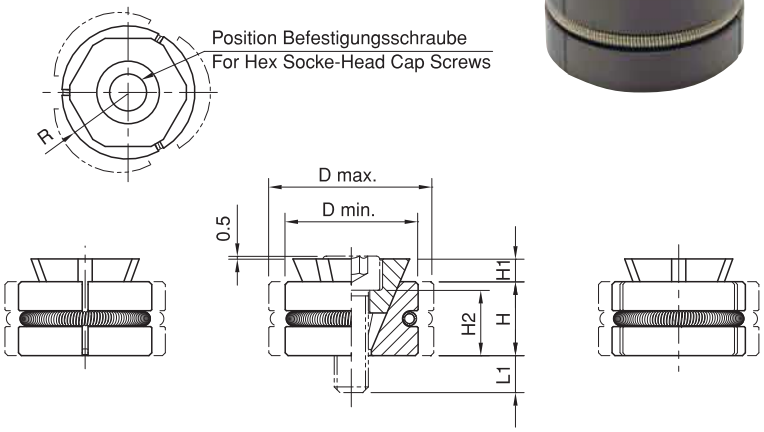
Referenz-Nr. Order No.	D		H	H1	R	H2		L1	geeignete Schrauben Proper Cap Screws	Spannkraft Calmping Force Kgf	(g)
	min.	max.				min.	max.				
1487-04001	19.5	24	9	2.5	R9.5	8	2.6	9.4	M4	200	20
1487-06001	23.5	29	13	4	R11.5	11.5	5	13	M6	500	45
1487-08001	28.5	36	17	5.5	R14	15	6	19	M8	900	90

1487
- Gehärtet
- Schwarz beschichtet

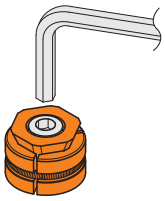
1487
- Hardened
- Black coated

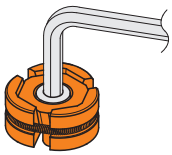
Eigenschaften
- Spannen im Innendruchmesser
- Konische Passfeder ermöglicht kräftiges Spannen.
- Einsatz in Gusslöchern und groben Löchern ist möglich durch langen Hub.

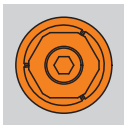
Feature
- These clamps hold the inside diameter of the workpiece.
- The wedge construction allows powerfully clamping the workpiece.
- Long clamping stroke is ideal for holding as-cast or roughly-finished holes.



Verwendung / How To Use







Geöffnet
Unclamping Mode

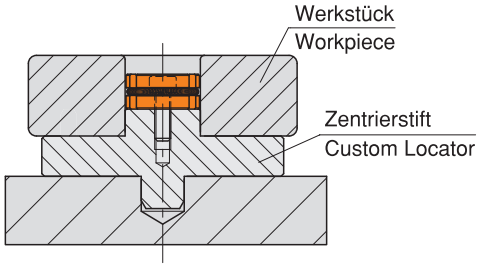
Geschlossen
Clamping Mode

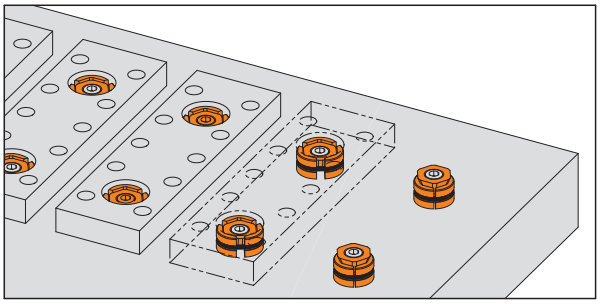
Beim Werkstückspannen Kontakt in Linienform. Bei bearbeiteten Löchern nicht empfehlenswert, da sonst im Loch Deformationen entstehen können.

The clamp makes a line contact with the workpiece at the clamping mode. This contact can mar the surface of the workpiece depending on its materials, and using these clamps for accurately finished holes is not recommended.

Hinweis
- Richtige Zentrierung gem. Zeichnung unten

Notes
- For accurate locating, use these clamps with a locator as shown below.





Beispiel Spannen 2-fach.
Example of application where two I.D. Holding Clamps are used.

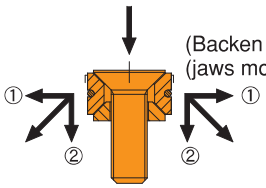
Referenz-Nr. Order No.	d		h		h1	M	L1	W	Spannkraft Clamping Force kgf	Drehmoment Allowable Screw Torque (N - m)	(g)
	min.	max.	d min.	d max.							
1487-04001A	8	10.3	5.5	4.6	0.9	M4x12	7.3	2.5	900	2.1	3
1487-05001A	10	12.3	6.4	5.6	1.1	M5x15	9.1	3.	1500	4.3	5
1487-06001A	12	16.3	8.6	7	1.3	M6x18	11.2	4.	2100	7.3	9
1487-08001A	16	22	11.5	9.4	1.6	M8x25	16.2	5	4000	18	22
1487-04001B	8	10.3	5.5	4.6	5.1	M4x12	7.1	3	1500	2.7	4
1487-05001B	10	12.3	6.4	5.6	6.2	M5x15	9	4	2500	5.4	7
1487-06001B	12	16.3	8.6	7	7.9	M6x18	10.6	5	5000	9.1	11
1487-08001B	16	22	11.5	9.4	10.4	M8x25	15.4	6	9000	25	28

1487
- Gehärtet
- Schwarz beschichtet

1487
- Hardened
- Black Coated

Eigenschaften
- Diese Spannelemente greifen das Werkstück von innen.
- Nockkonstruktion ergmöglicht starkes Spannen.
- Der langespannhubist ideal zum halten der Gussteileodergrob fertige löcher.

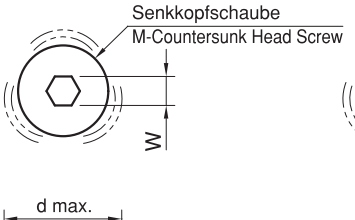
Features
- These clamps hold the inside diameter of the workpiece.
- The wedge costruction allows powerfully clamping in the workpiece.
- Long clamping stroke is ideal for holding as-cast or roughly-finished holes.

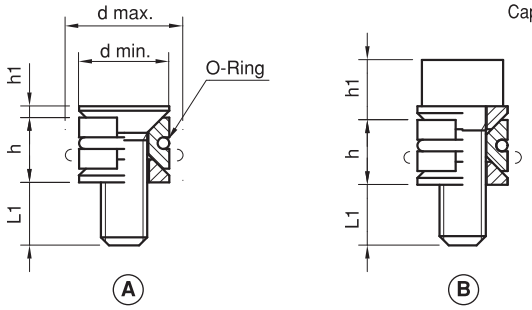


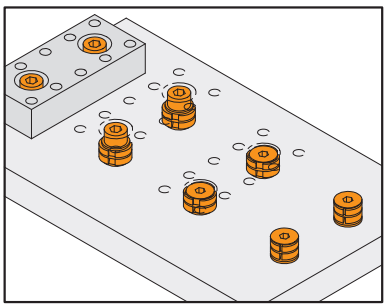
(Backen bewegen sich schräg nach unten.)
(jaws move obliquely downward)

① Horizontaler Druck gegen Wertstück
Horizontal pressure against workpiece

② Vertikaler Druck verhindert, dass sich das Werkstück hebt.
Vertical pressure preventing workpiece lift







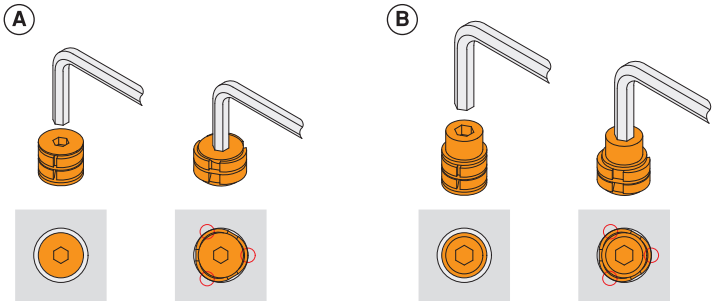
Beispiel: 2 kompakteAnwendungenfürspannen im Loch

Example of applications where two compact ID holding clamps are used.

Verwendung / How To Use

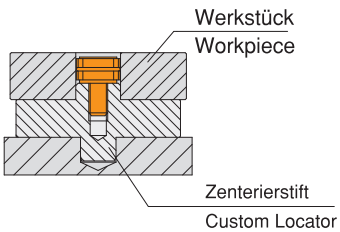
Hinweis
- Klemm das Werkstück auf die Spannmodus der Verbindungsleitung .
  Es ist nicht diese Klemme zu verwenden, für die Fertigbohrungen empfohlen.

Notes
- The clamp makes a line contact with the workpiece at the clamping mode.
  This contact can mark the surface of the workpiece depending on its meterials and using these clamps for accurately finished holes is not recomended.



Hinweis
- Für eine genaue Ortung, verwenden Sie diese Klemmen mit einem Locator, wie unten gezeigt.

Notes
- For accurate locating, use these clamps with a locator as shown below.



Referenz-Nr. Order No.	Durchmesser verstellbarer Werkstückdurchmesser Adaptable Workpiece Dia.	d1	d2	h2	h1	d ($^{0}_{-0.05}$)	h	M	L	w	M1	L1	dp	Spannkraft Clamping Force Kgf	Drehmoment Allowable Screw Torque (N - m)	zulässige Dehnung Recommended Range of Expansion of Dia	zulässiger Öffnungsdurchmesser Allowable Expansion of Dia	(g)
1488-00004	Ø7.1-Ø12.4	12.4	7.1	15	16	29.72	21.8	M4	7.2	3	M3	6	21	420	5	0.07	0.13	45
1488-00006	Ø12.2-Ø14.2	14.2	12.2	15	19	31.5	24.9	M6	11.2	5	M3	6	23.1	440	17	0.08	0.23	60
1488-00008	Ø13.5-Ø20	20	13.5	15	19	37.5	24.9	M8	13.2	6	M3	6	29	1100	34	0.08	0.30	95
1488-00010	Ø18-Ø27	27	18	17.5	22.2	50	28.6	M10	16.3	8	M4	7	39.4	2000	60	0.08	0.35	190
1488-00012	Ø23-Ø35.3	35.3	23	20.6	25.4	56	31.8	M12	20.3	10	M4	7	45.5	2600	150	0.08	0.35	300
1488-0016A	Ø29.3-Ø42	42	29.3	27	31.8	69.5	39.6	M16	21.4	14	M5	13	55.9	4400	280	0.08	0.35	570
1488-0016B	Ø29.3-Ø51.5	51.5	29.3	27	31.8	75.5	39.6	M16	21.4	14	M5	13	63.9	4400	280	0.08	0.35	750
1488-0016C	Ø29.3-Ø77.7	77.7	29.3	32.3	37.6	107.5	45.5	M16	19.3	14	M6	14	92.6	4400	280	0.15-0.4	0.60	1800
1488-0016D	Ø29.3-Ø103	103	29.3	32.3	37.6	132.9	45.5	M16	19.3	14	M6	14	118.1	4400	280	0.15-0.4	0.60	2900
1488-0016E	Ø29.3-Ø175	175	29.3	32.3	37.6	132.9	45.5	M16	19.3	14	M6	14	118.1	4400	280	0.15-0.4	0.80	6500
1488-0016F	Ø29.3-Ø250.2	250.2	29.3	32.3	37.6	152.4	45.5	M16	19.3	14	M6	14	133.4	2600	170	0.15-0.4	0.80	4800

1488

Körper
- Schwarz beschichtet

Schraube
- Gehärtet

Eigenschaft
- Lochdurchmesser halten
- Durch perfekte Verwendung ist mehrfaches Spannen möglich.
- Spannen auch durch hydraulisches Ziehen möglich.
- Anpassung gem. Werkstück möglich.

Hinweis
- Kanten-/Eckenradius bearbeiteter Werkstücke muss mind. 0,5 mm sein.
- Wenn Kanten-/Eckenradius dem Werstückloch entspricht, dann Buchse verwenden.

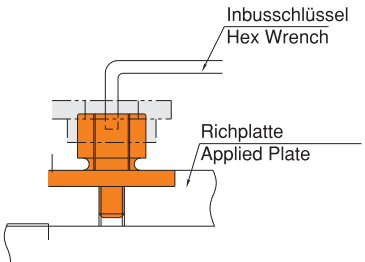
1488

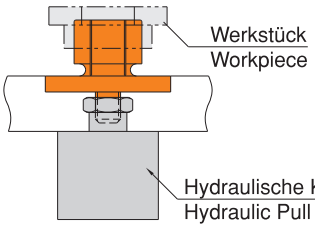
Body
- Black coated

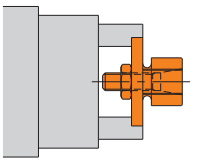
Tapered Screw
- Hardened

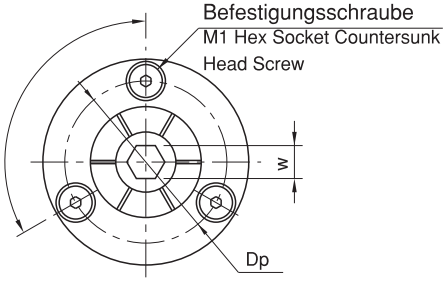
Features
- Can hold workpieces on an inside diameter.
- Perfect for multiple-parts holding arrangement.
- Using hydraulic pull cylinders to clamp instead of using hex wrenchs allows automation.
- Can be machinable to suit your workpieces.

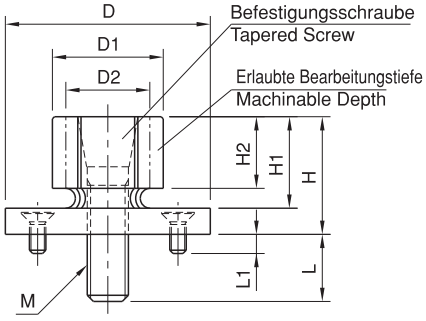
Notes
- The minimum radius of corners at the machined part should be 0.5mm for clamping small workpieces. To prevent stress concentration on these corners, make the radius as large as possible.
- If the radius will interfere with the bottom of the workpiece bore, we suggest a ring or rest-pads be fixed to the flange.











Single-Touch Spanner

Single Touch Clamp

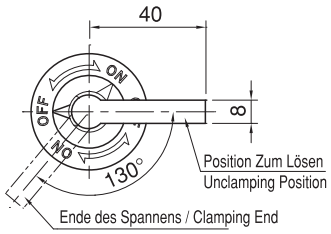
Referenz-Nr. Order No.	Spannkraft Clamping Force (N)	Hubkraft Lifting Force (N)	(g)
1489-0840R.06	600	100	220
1489-0840R.06N	700	-	215

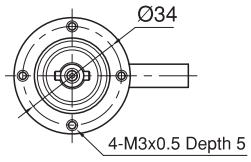
0840R.06

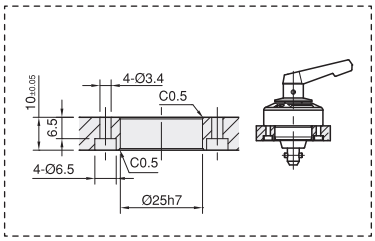
0840R.06N

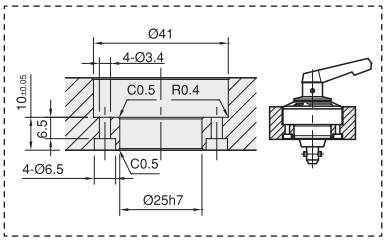
1489
• Schwarz beschichtet

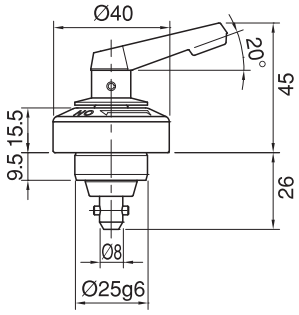
1489
• Black coating

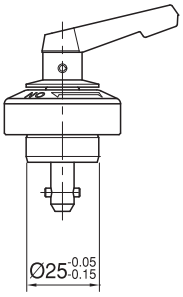






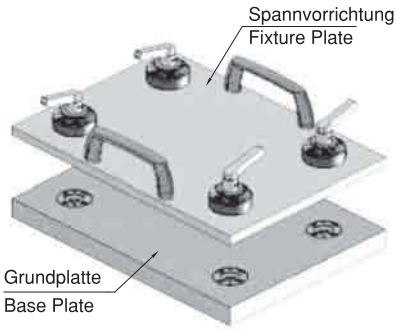


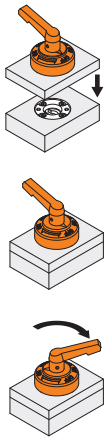




0840R.06

0840R.06N





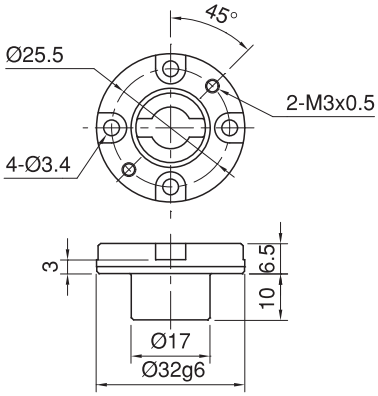
Buchse für Single-Touch Spanner

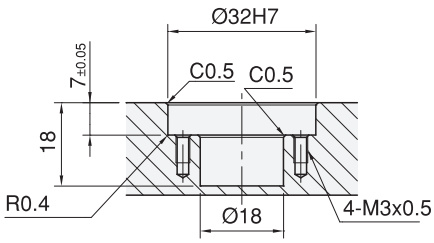
Single Touch Clamping Bush

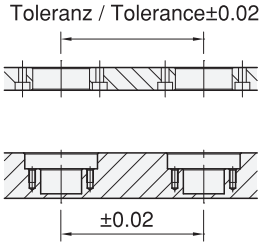
Referenz-Nr. Order No.	(g)
1489-0840R	32

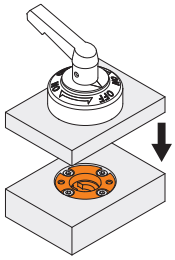
1489
• Schwarz beschichtet

1489
• Black coating









Zentrierbuchse (blind)

Flex Locator Bushings (Blind)

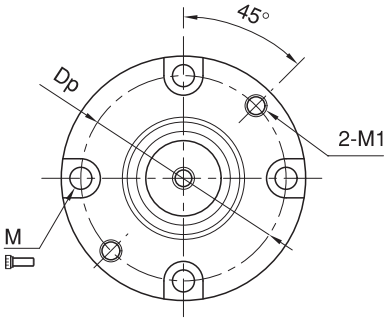
Referenz-Nr. Order No.	D (g6)	H	D1	H1	M	H2	M1	Dp	Hubkraft Lifting Force (N)	(g)
1489-16032K	32	6.5	20	7	M3	3	M3x0.5	25.5	110	60
1489-25050K	50	10	32	9	M4	5	M4x0.7	42	180	160
1489-38070K	70	15	48	14	M5	9	M5x0.8	60	400	508
1489-56095K	95	22	70	21	M6	15	M6x1.0	84	690	1451

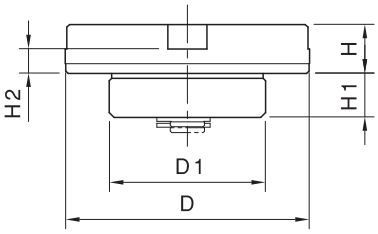
1489

- Die Auftriebskraft ist die Kraft der inneren Feder des Körper die bewegliche Konusbuchsen nach oben zu drücken. (N)
- Wenn die Schrauben nicht in der richtigen Reihenfolge angezogen werden, die Ortung Wiederholbarkeit 0.01 nicht überschreiten
- Wenn die Gesamtbelastung die maximale Ladekapazität überschreitet, die Ortung Wiederholbarkeit 0.01 nicht überschreiten

1489

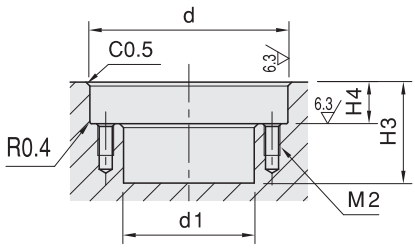
- The lifting force is the power of the inner spring of the body to push up the movable tapered bushing.(N)
- If the screws are not tightened in the correct order, the locating repeatability may exceed 0.01
- If the total load exceeds the maximum loading capacity, the locating repeatability may exceed 0.01

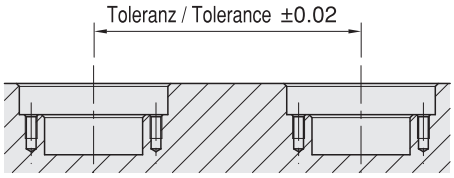


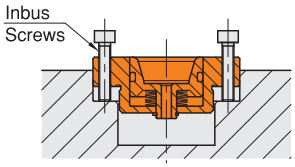


Montagedetails / Mounting Details

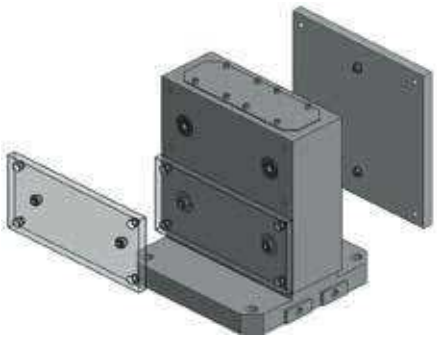
Referenz-Nr. Order No.	d (H7)	H4 (±0.05)	d1	H3	M
1489-16032	32	7	21	18	M3x0.5
1489-25050	50	10.5	33	24	M4x0.7
1489-38070	70	15.5	49	35	M5x0.8
1489-56095	95	22.5	71	51	M6x1.0

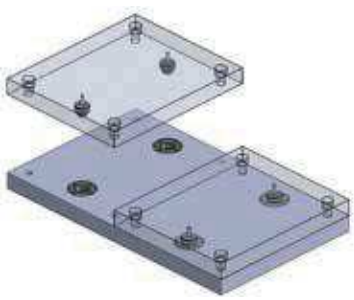


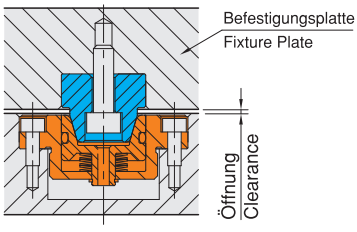




Anwendungsbeispiel / Application Examples



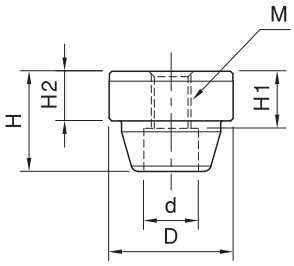




Zentrierstift
Flex Locator Pins

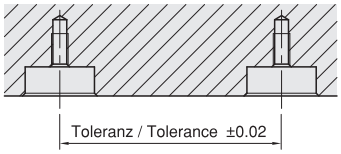
Referenz-Nr. Order No.	D (g6)	H2	H	M	H1	d	(g)
1489-16032	16	5.5	11.5	M5x0.80	6	8	18
1489-25050	25	10	20	M8x1.25	11.5	11	49
1489-38070	38	15	29.5	M10x1.50	18	14	176
1489-56095	56	22	43.5	M16x2.00	28.5	20	569

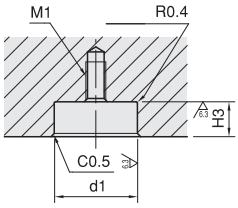
1489

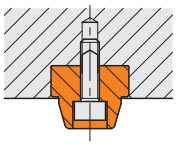


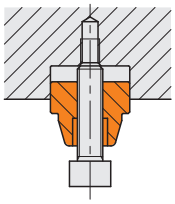
Montagedtails / Mounting Details

Referenz-Nr. Order No.	d1 (H7)	H3 (±0.05)	M1
1489-16032	16	6	M4x0.7
1489-25050	25	10.5	M6x1.00
1489-38070	38	15.5	M8x1.25
1489-56095	56	22.5	M12x1.75





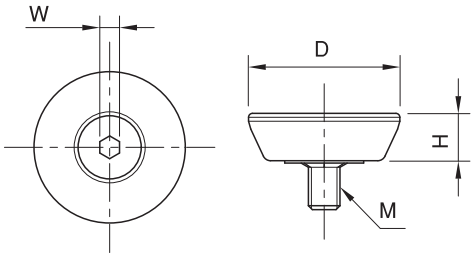




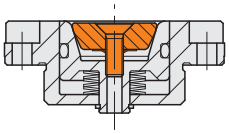
Zentrierschutzkappe
Flex Locator Protecting Covers

Referenz-Nr. Order No.	D	H	M	W	(g)
1489-16032P	12	4	M3x0.5	2	3
1489-38070P	19	6	M4x0.7	2.5	5
1489-25050P	29	7	M5x0.8	3	14
1489-56095P	44	8	M6x1.0	4	35

1489



Montagedtails / Mounting Details



Referenz-Nr. Order No.	D	H	H1	M	Hubkraft Lifting Force (N)	(g)
1489-12025A	25 $^{+0.028}_{+0.018}$	16	8	M8x1.25	540	46
1489-15032A	32 $^{+0.031}_{+0.021}$	20	9	M10x1.50	600	92
1489-20045A	45 $^{+0.031}_{+0.021}$	26	11	M14x1.50	780	230

1489
- Die Auftriebskraft ist die Kraft der inneren Feder des Körper die bewegliche Konusbuchsen nach oben zu drücken. (N)
- Wenn die Schrauben nicht in der richtigen Reihenfolge angezogen werden, die Ortung Wiederholbarkeit 0.01 nicht überschreiten
- Wenn die Gesamtbelastung die maximale Ladekapazität überschreitet, die Ortung Wiederholbarkeit 0.01 nicht überschreiten

1489
- The lifting force is the power of the inner spring of the body to push up the movable tapered bushing.(N)
- If the screws are not tightened in the correct order, the locating repeatability may exceed 0.01
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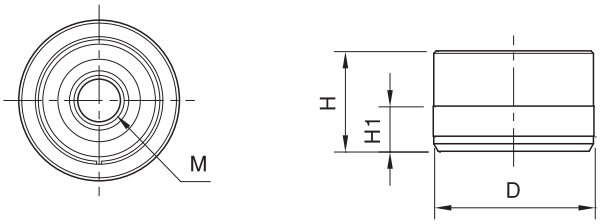
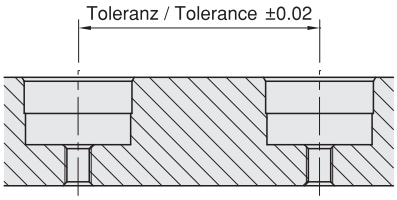
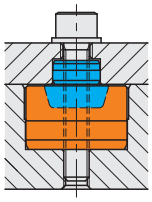
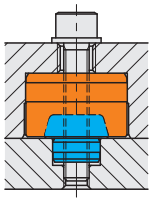


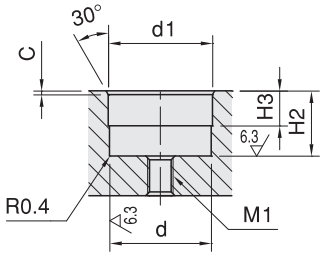
Montagedtails / Mounting Details

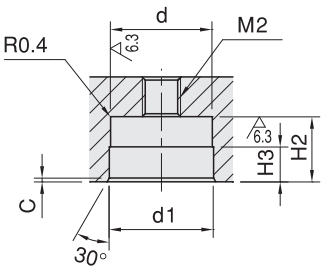
Referenz-Nr. Order No.	d (H6)	H2 (±0.05)	d1	H3	M1	M2
1489-12025	25	16.5	25.2	8	M6x1.00	M10x1.50
1489-15032	32	20.5	32.2	11	M8x1.25	M12x1.75
1489-20045	45	26.5	45.2	15	M12x1.75	M16x2.00



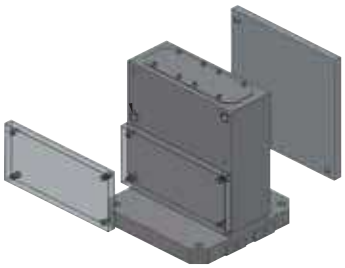


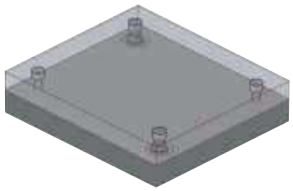


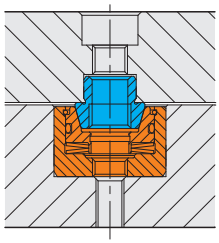


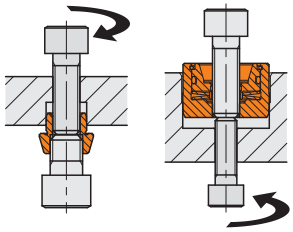


Anwendungsbeispiel / Application Examples





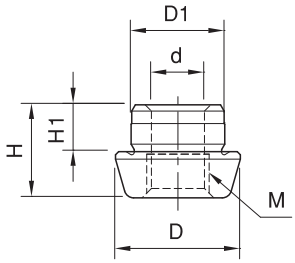




Zentrierpin
Flex Locator Pins

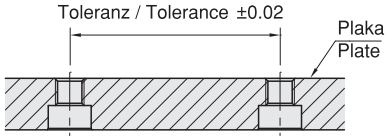
Referenz-Nr. Order No.	D1 (p6)	H1	D	H	M	d	(g)
1489-12025	12	4.5	15	10	M10x1.50	8.5	6
1489-15032	15	7.5	20	15	M12x1.75	10.2	16
1489-20045	20	10	30	20	M16x2.00	14	47

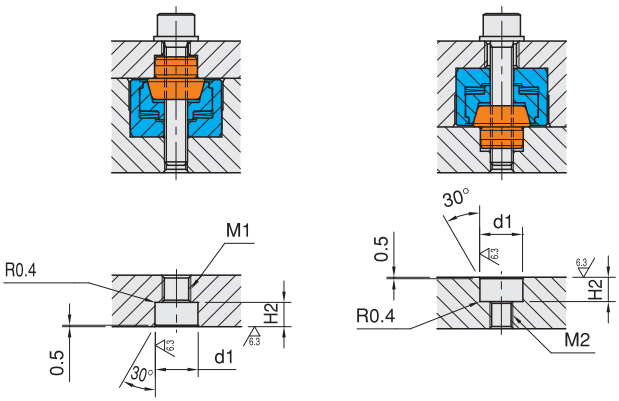
1489



Montagedetails / Mounting Details

Referenz-Nr. Order No.	d (H6)	H2	M1	M2
1489-12025	12	5.5	M8x1.25	M6x1.00
1489-15032	15	8.5	M10x1.50	M8x1.25
1489-20045	20	11	M14x1.50	M12x1.75

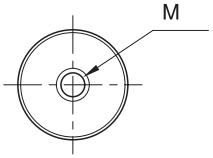


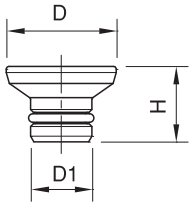


Zentrierschutzkappe
Flex Locator Protecting Covers

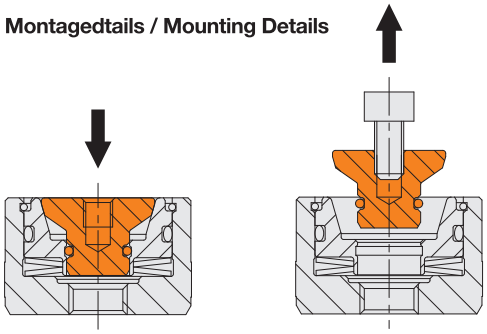
Referenz-Nr. Order No.	D	H	D1	M	(g)
1489-12025P	15	10	9	M4x0.7	2
1489-15032P	19	13	11	M5x0.8	5
1489-20045P	29	18	16	M6x1.0	17

1489





Montagedtails / Mounting Details



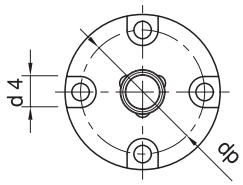
Referenz-Nr. Order No.	d1 g6	h3	d2	h1	D	h	d3 (h8)	h2	d	Lf	d4	dp	M	Luftdruck Air Pressure (MPa)	Spannkraft Clamping Force (N)	(g)
1489-18L4S	24	8	23.4	29.5	40	8	12	11	4.5	3.5	8	32	-	0.5	250	154
1489-26L4S	32	8.5	31.4	31.7	51	9.5	16	16	5.5	4	9.5	41	-	0.5	350	289
1489-18L4SG	24	8	23.4	29.5	40	8	12	11	4.5	3.5	8	32	M4x0.7	0.5	250	136
1489-26L4SG	32	8.5	31.4	31.7	51	9.5	16	16	5.5	4	9.5	41	M5x0.8	0.5	350	252

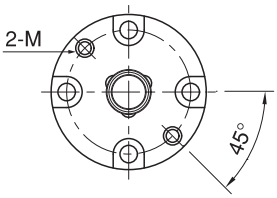
1489
- Nickel beschichtet
- Wiederholunsgenauigkeit ±10µm

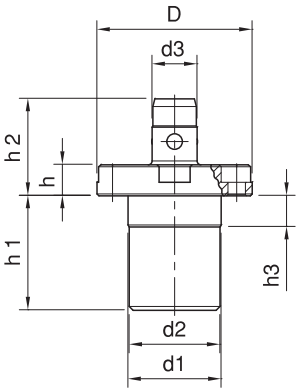
1489
- Nickel Coating
- Repeat Accuracy ±10µm

L4S

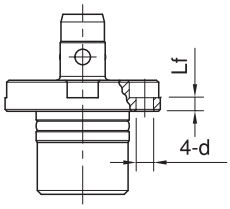
L4SG



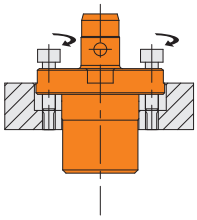


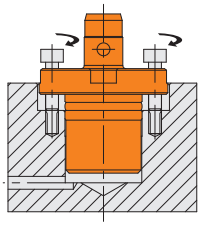


L4S



L4SG





pneumatische Spannbuchse

Pneumatic Clamping Bush

Referenz-Nr. Order No.	D1 g6	h2	d2	h1	D	h	d e7	d1	Lf	d3	M	dp	(g)
1489-18BU	20	7.5	19.6	10.5	36	8	12.1	4.5	3.5	8	M4x0.7	28	57
1489-26BU	25	7	24.6	11	44	9.5	16.1	5.5	4	9.5	M5x0.8	34	97

1489
- Nickel beschichtet
- Wiederholunsgenauigkeit ±10µm

1489
- Nickel Coating
- Repeat Accuracy ±10µm