



SPARE PARTS ERSATZTEILE

TURNING SPARE PARTS ERSATZTEILE ZUM DREHEN

Screws **J02-05**
Schrauben

Lock pins **J06**
Rohrstifte

Clamps **J06-09**
Pratzen

Shim seats **J10-15**
Unterlegplatten

Seats **J15**
Kassetten

Levers **J16-17**
Kniehebel

Others **J17-18**
Andere

Wrenches **J19**
Schlüssel

MILLING SPARE PARTS ERSATZTEILE ZUM FRÄSEN

Screws **J20-22**
Schrauben

Washers **J22**
Unterlegscheiben

Shim seats **J23**
Unterlegplatten

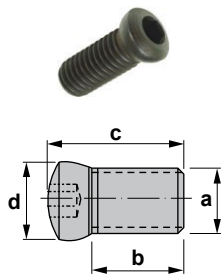
Wedges and seats **J24**
Keile und Kassetten

Seats and cartridges **J25-27**
Kassetten

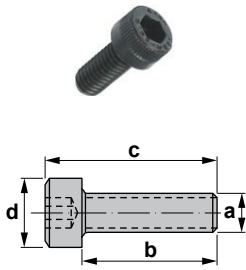
Wrenches **J28**
Schlüssel



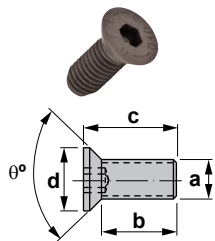
Screws (Allen) / Schrauben (Imbus)



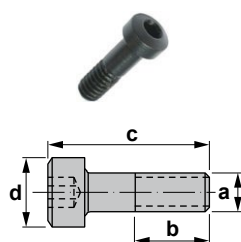
Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1006	M6x1	11,2	17,0	9,0	A4	3.5



Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1075	M5x0.8	25,0	30,1	8,35	A4	3.5
1076	M6x1	30,0	36,0	10,00	A5	4.0
1078	M8x1.25	40,0	48,1	12,60	A6	-
1093	M3x0.5	8,0	11,2	5,40	A2.5	2.0
1095	M5x0.8	8,2	11,8	8,40	A4	3.5
1096	M6x1	25,0	31,0	10,00	A5	4.0
1296	M6x1	10,0	14,0	9,80	A5	4.0
1392	M2.5	9,6	12,5	4,40	A2	1.4
1393	M3x0.5	4,0	7,0	5,50	A2.5	2.0
1394	M4	6,1	8,6	6,90	A2.5	2.0
1396	M6x1	16,0	21,9	9,75	A5	4.0
1494	M4x0.7	12,0	16,0	7,00	A3	3.0
1495	M5x0.8	16,0	21,2	8,40	A4	3.5
1496	M6x1	12,0	16,0	9,80	A4	3.5
1695	M5x0.8	20,0	23,6	8,30	A4	3.5
1696	M6x1	25,0	29,0	10,00	A4	3.5
1905	M5x0.8	12,0	16,9	8,30	A4	3.5
1906	M6x1	20,0	26,0	10,00	A5	4.0
1916	M6x1	12,0	18,0	10,00	A5	4.0

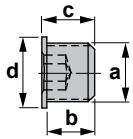


Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1059	M10x1.5	13,2	18,5	11,5	60	A6	
1192	M8x1.25	13,8	20,0	14,1	70	A5	4.0

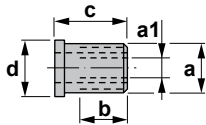


Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1614	W1/4	12	25	10	A4	3.5

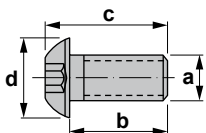
Screws (Allen) / Screws (Imbus)



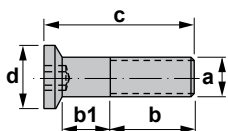
Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1598	1/8 GAS	7,0	8,0	11,5	A5	4.0



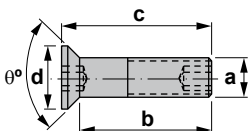
Reference Bezeichnung	a	a1	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1750	M5x0.5	M3.5x0.6	5,0	8,5	6,2	A3.5	-
1760	M6x0.75	M4x0.5	5,5	10,0	7,7	A4	3.5
1764	M5x0.8	M5x0.8	5,8	8,0	6,3	A2	1.4
1765	M6x0.75	M4x0.5	6,0	10,0	7,5	A4	3.5
1766	M6x1	M6x1	6,5	10,0	7,8	A2.5	2.0
1768	M6x1	M6x1	13,3	15,5	10,4	A3	3.0
1770	M6x1	M6x1	11,0	15,0	11,9	A3	3.0



Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1803	M3	8,0	9,4	5,5	A2	1.4
1804	M4x0.7	10,0	12,1	7,5	A2.5	2.0
1806	M6x1	25,0	28,2	10,5	A4	3.5
1808	M8x1.25	30,0	34,3	14,0	A5	4.0
1810	M10x1.5	40,0	45,3	18,0	A6	-
1813	M3	4,5	5,9	5,5	A2	1.4
1814	M4	3,5	5,5	7,5	A2.5	2.0
1815	M5x0.8	12,5	15,0	9,3	A3	3.0
1816	M6x1	20,0	23,2	10,5	A4	3.5



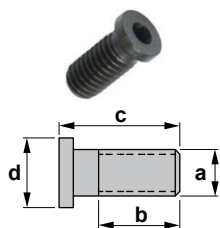
Reference Bezeichnung	a	b	b1	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1907	M7x0.75	14,0	10,6	27,5	10,7	A4	3.5
1915	M5x0.8	12,1	8,0	23,0	8,7	A2.5	2.0



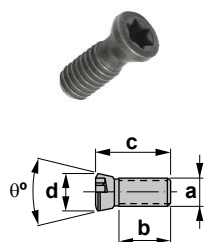
Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1935	M3.5x0.6	11,5	13	5,6	90	A2	1.4
1950	M5x0.8	16,7	19	7,9	92	A2.5	2.0
1955	M5x0.8	16,9	19	8,9	90	A3	3.0



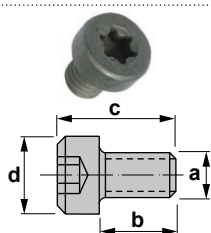
Screws (Torx) / Schrauben (Torx)



Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1140	M4x0.7	3,2	7,5	5,0	T15	3.0
1150	M5x0.8	10,0	13,5	6,4	T9	1.4
1151	M5x0.8	7,0	10,5	6,4	T9	1.4
1160	M6x1	9,5	13,5	7,8	T20	4.0
1161	M6x1	6,5	10,5	7,9	T20	4.0
1180	M8x1	9,5	13,5	11,0	T25	5.0

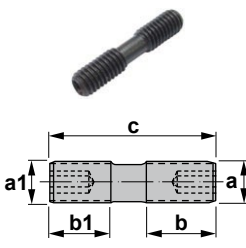


Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1182	M8x1	9,5	13,5	10,5	60	T25	5.0
1220	M2x0.4	3,7	5,5	3,3	55	T6	0.6
1222	M2.2x0.45	3,5	6,0	3,3	55	T6	0.6
1225	M2.5x0.45	4,0	7,0	3,3	55	T7	0.9
1226	M2.5	6,0	8,3	4,0	94	T8	1.2
1230	M3x0.5	5,6	9,0	4,4	55	T8	1.2
1235	M3.5	6,5	9,5	5,3	55	T15	3.0
1240	M4x0.7	6,2	11,0	5,3	55	T15	3.0
1244	M4x0.7	8,0	12,0	7,0	55	T20	4.0
1250	M5x0.8	6,0	12,0	7,0	55	T20	4.0
1255	M5x0.8	9,0	12,0	7,0	94	T20	4.0
1260	M6x1	11,5	16,0	7,9	55	T25	5.0
1334	M3.5x0.6	7,2	12,0	5,3	55	T15	3.0
1335	M3.5x0.6	10,2	15,0	5,3	55	T20	3.0
1340	M4x0.7	11,2	16,0	5,3	55	T15	3.0
1350	M5x0.8	17,8	22,0	7,0	55	T20	4.0
1360	M6x1	17,0	22,5	7,9	55	T25	5.0
1415	M1.6x0.35	1,5	3,2	2,6	60	T6	0.6
1420	M2x0.4	2,2	4,3	3,3	55	T6	0.6
1422	M2.2x0.45	1,8	4,3	3,3	55	T6	0.6
1425	M2.5x0.45	3,0	5,5	3,3	55	T7	0.9
1430	M3x0.5	2,8	5,8	4,4	55	T8	1.2
1440	M4x0.7	3,2	7,5	5,3	55	T15	3.0
1450	M5x0.8	11,0	17,0	7,0	55	T20	4.0
1535	M3.5	7,5	10,0	5,0	94	T10	2.0
1540	M4x0.5	7,9	14,1	6,8	60	T15	3.0
1622	M2.2x0.45	4,0	6,0	3,4	60	T7	0.9
1625	M2.5x0.45	3,6	6,5	3,8	60	T8	1.2
1630	M3x0.5	5,2	8,3	4,3	60	T9	1.4
1635	M3.5x0.6	5,5	9,0	4,7	60	T10	2.0
1640	M4	7,0	10,5	5,5	60	T15	3.0
SA3	5-40UNC-3A	12,0	15,0	5,5	60	T10	2.0
SA3T	5-40UNC-3A	9,5	12,5	5,5	60	T10	2.0
SA4	8-UNC	11,0	15,0	7,5	60	T20	4.0
SA5	10-32UNF	16,8	22,0	8,2	60	T25	5.0
SN3	5-40UNC-3A	6,5	9,5	5,5	60	T10	2.0
SN4	8-UNC	8,0	12,0	7,5	60	T20	4.0



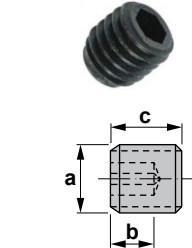
Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
SY3	5-40UNC	4,2	6,9	5,4	T10	2.0
SY4	8-32UNC	5,3	9,1	6,8	T20	4.0
SY5	10-32UNF	5,8	9,2	8,4	T25	5.0

Clamp screws / Schrauben für Prätzen



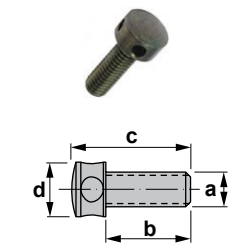
Reference Bezeichnung	a	a1	b	b1	c	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1085	M5x0.8L	M5x0.8R	7,9	7,9	21,3	A2.5	2.0
1086	M6x1L	M6x1R	11,4	11,4	29,4	A3	3.0
1098	M8x1L	M8x1R	12,7	10,4	29,4	A4	3.5
1186	M6x1L	M6x1R	7,1	7,1	20,5	A3	3.0

Screws / Schrauben



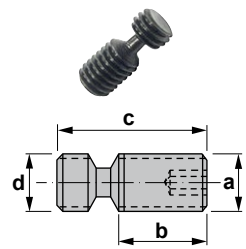
Reference Bezeichnung	a	b	c	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1503	M3x0.5	2,0	4	A1.5	0.6
1504	M4x0.7	2,0	4	A2	1.4
1505	M5x0.8R	3,0	5	A2.5	2.0
1506	M6x1R	4,0	5	A3	3.0
1508	M8x1.25R	5,0	8	A4	3.5
1592	1/8 GAS	3,7	8	A5	4.0

Adjustable screws / Verstellbare Schrauben

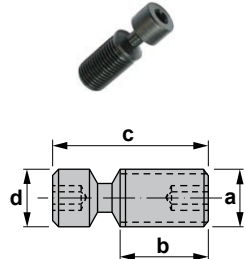


Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1403	M3x0.5	6,5	9,5	4	A4	3.5
1404	M4x0.7	9,0	12,5	7	A2.5	2.0
1405	M5x0.8	10,5	16,5	9	A2	1.4
1406	M6x1	12,0	18,0	11	A2.5	2.0
1408	M8x1.25	15,0	21,0	13	A3	3.0

Lever lock system - Screws / Schrauben für Kniehebel-System



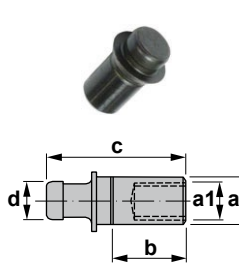
Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1605	M5x0.8	6,1	12,0	5	A2	1.4
1705	M5x0.8	8,1	14,0	5	A2	1.4
1715	M5x0.8	4,3	9,6	5	A2	1.4



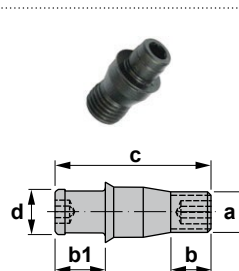
Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1606	M6x1	8,6	16,7	6	A2.5	2.0
1608	M8x1	8,7	20,7	8	A3	3.0
1610	M10x1	13,3	27,2	10	A4	3.5
1612	M12x1	17,3	36,0	12	A5	4.0
1618	M8x1	11,2	22,5	8	A3	3.0
1626	M6x1	8,0	13,4	6	A2.5	2.0
1638	M8x1	10,3	21,1	8	A3	3.0
1648	M8x1	9,1	17,0	8	A3	3.0
1706	M6x1	12,6	20,7	6	A2.5	2.0
1708	M8x1	12,2	23,5	8	A3	3.0
1710	M10x1	17,3	30,4	10	A4	3.5



Lock pins / Rohrstifte

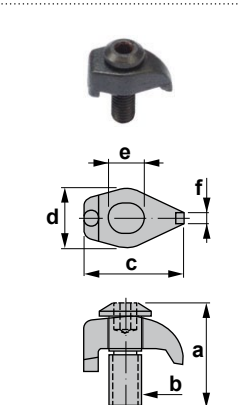


Reference Bezeichnung	a	a1	b	c	d
1642	4,5	M3x0.5	7,6	13,2	3,7
1643	4,5	M3x0.5	3,4	8,5	3,7
1644	4,5	M3x0.5	5,0	10,1	3,7
1647	6,0	M4x0.7	3,1	8,5	5,0
1661	6,0	M4x0.7	5,6	13,5	5,0
1682	8,0	M6x1	9,2	16,5	7,7

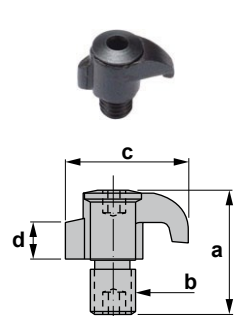


Reference Bezeichnung	a	b	b1	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1656	1/4" 26FILS	4,0	5,5	17,2	4,9	A2.5	2.0
1657	M6x1	5,0	7,0	18,6	5,0	A2.5	2.0
1665	M5x0.8	2,3	5,0	13,0	3,6	A2	1.4
1666	1/4" 26FILS	2,9	6,9	18,6	5,0	A2.5	2.0
1670	3/8" 24FILS	4,5	7,8	21,9	7,4	A4	3.5
1673	M6	4,8	6,3	22,0	6,3	A3	3.0
1674	M6	4,5	6,3	21,9	7,7	A4	3.5
1675	M5x0.8	3,4	5,0	16,2	3,6	A2	1.4
1686	1/4" 26FILS	3,5	5,5	13,3	5,0	A2.5	2.0

Top clamp (C) system - Clamps / Obere-Klemmung-Pratzen



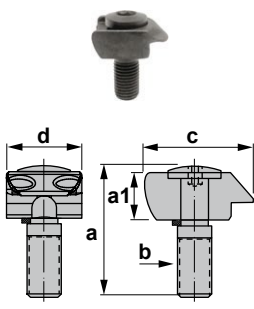
Reference Bezeichnung	a	b	c	d	e	f	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
2000	9,5	M3x0.5	9,5	5,4	3,2	2	A1.5	0.6
2304	14,0	M4x0.7	13,2	8,0	5,0	2	A2.5	2.0
2305	18,7	M5x0.8	16,8	10,0	5,5	2	A3	3.0



Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
2107	14,0	M5x0.8	13,8	4,1	A2.5	2.0
2109	16,3	M6x1	16,2	5,0	A3	3.0
2119	15,3	M6x1	16,5	5,2	A3	3.0
2207	15,8	M5x0.8	13,8	4,1	A2.5	2.0
2209	21,0	M6x1	16,5	5,0	A3	3.0
2211	24,0	M8x1	20,5	7,6	A4	3.5
2307	14,0	M5x0.8	13,8	4,1	A2.5	2.0
2516	15,8	M5x0.8	14,8	7,3	T15	3.0
2522	20,0	M6x1	18,0	9,5	T15	3.0
2527	26,0	M8x1.25	24,5	13,0	T25	5.0

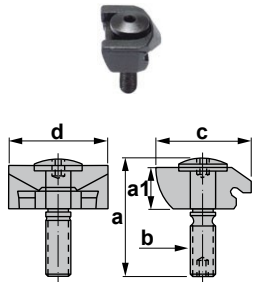
Wedge clamp (M) system - Clamps / M-Klemmung-Pratzen

Reference Bezeichnung	a	a1	b	c	d	Wrench Schlüssel	Torque (N.m)
							Drehmoment (N·m)
2006	19,5	6,8	M5x0.5	14,7	11	A2.5	2.0
2011	26,0	8,1	M8x1	22,0	17	A5	4.0
2014	26,0	8,3	M8x1	21,4	15	A5	4.0
2015	26,0	8,2	M8x1	22,1	12	A5	4.0
2024	24,0	9,2	M8x1	22,5	17	A5	4.0

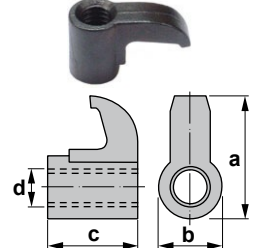


Wedge clamp (M-K) system - Clamps / M/K-Klemmung-Pratzen

Reference Bezeichnung	a	a1	b	c	d	Wrench Schlüssel	Torque (N.m)
							Drehmoment (N·m)
2017	24	8,0	M5x0.8	15,7	18,6	A2.5	2.0
2018	24	8,4	M5x0.8	15,7	18,6	A2.5	2.0
2023	24	7,3	M6x1	15,7	24,4	A3	3.0

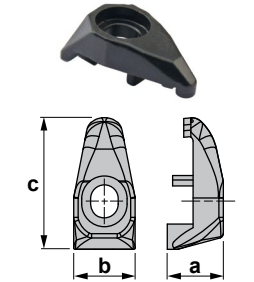


Reference Bezeichnung	a	b	c	d
2604	14,8	7,9	11,2	M5x0.8L
2613	18,5	9,5	13,5	M6x1L
2614	21,7	9,5	13,5	M6x1L
2616	24,0	9,5	13,5	M6x1L
2621	22,4	10,9	16,8	M8x1L



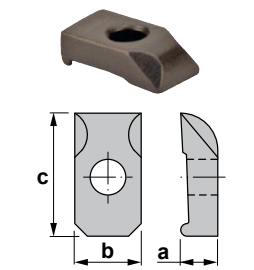
Dimple lock system - Clamps / Dimple-Lock-Pratzen

Reference Bezeichnung	a	b	c
2308	9,4	10,9	24,8
2312	12,0	14,0	28,8
2319	13,4	15,9	33,3
2708	11,3	12,9	24,2
2712	12,6	13,8	29,6
2716	14,2	13,8	33,9
2719	14,2	13,8	35,4

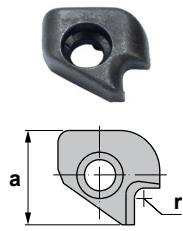


Threading - Clamps / Gewindedreh-Pratzen

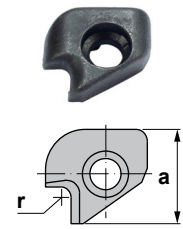
Reference Bezeichnung	a	b	c	Wrench Schlüssel	Torque (N.m)
2101	5,3	9,5	17,8	T15	0.6



KNUX - Clamps / KNUX-Pratzen

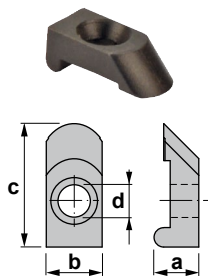


Reference Bezeichnung	a	r
2316	23,5	2,5

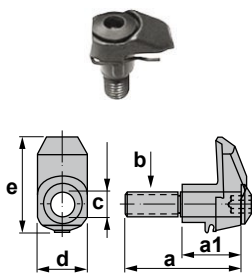


Reference Bezeichnung	a	r
2326	23,5	2,5

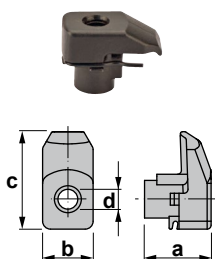
Ceramic tools - Clamps / Keramikwerkzeug-Pratzen



Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
2120	7,0	5,5	18,7	5,1	40	T15	3.0
2121	6,9	8,6	19,0	7,5	45	T20	4.0
2122	8,5	11,8	24,7	8,2	45	T25	5.0


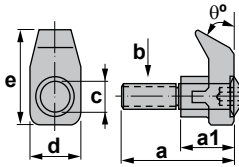



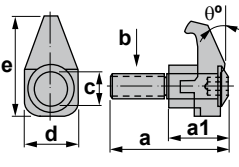
Reference Bezeichnung	a	a1	b	c	d	e	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
2413	29,7	16,0	M8x1.25	8,2	12,7	21,9	A4	3.5
2417	29,7	17,6	M8x1.25	8,0	12,7	24,6	A4	3.5




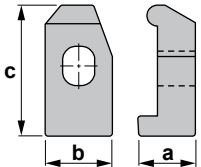
Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
2713	8,2	12,7	22,4	5,0	A3	3.0
2717	8,1	12,7	24,6	5,0	A3	3.0


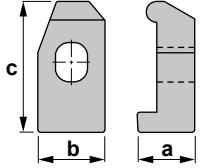
Ceramic tools - Clamps / Keramikwerkzeug-Pratzen

 	Reference Bezeichnung	a	a1	b	c	d	e	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
	2414	29,7	15,1	M8x1.25	8,2	12,7	22,5	20	A4	3.5

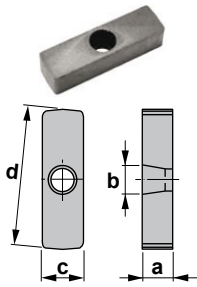
 	Reference Bezeichnung	a	a1	b	c	d	e	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
	2415	29,7	15,7	M8x1.25	8,2	13	25,9	8	A4	3.5
	2428	29,7	15,7	M8x1.25	8,2	13	28,6	7	A4	3.5
	2432	29,7	15,7	M8x1.25	8,2	13	28,6	7	A4	3.5
	2471	29,7	15,7	M8x1.25	8,2	13	25,9	8	A4	3.5

Notch tools - Clamps / "Notch" Werkzeug-Pratzen

 	Reference Bezeichnung	a	b	c
	TF-146	5,5	9,0	13,7
	TF-72	9,7	11,3	22,0
	TF-74	7,2	9,0	13,7

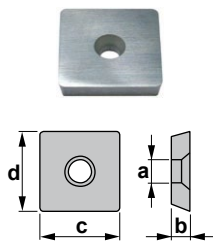
 	Reference Bezeichnung	a	b	c
	TF-147	5,5	9,0	13,7
	TF-73	9,7	11,3	22,0
	TF-75	7,2	9,0	13,7

Shim seat / Unterlegplatten

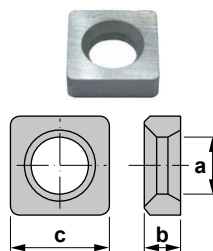


Reference Bezeichnung	a	b	c	d
3521	4,76	4,2	6,3	22,2

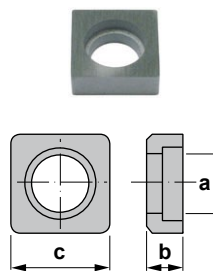
Square shim seats / Vierkantige Unterlegplatten



Reference Bezeichnung	a	b	c	d
3109	2,3	3,18	8,14	8,14
3112	2,3	3,18	11,3	11,3
3119	3,3	3,18	17,3	17,3



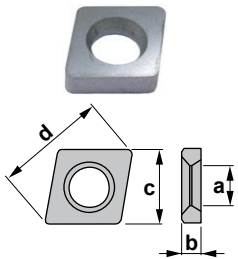
Reference Bezeichnung	a	b	c
3509	4,9	3,18	8,5
3512	6,4	3,18	11,6
3515	7,9	4,76	14,6
3519	9,6	4,76	17,8
3525	12,8	6,35	24,2

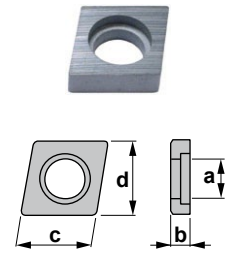


Reference Bezeichnung	a	b	c
3514	6,6	3,96	11,4
ISSN-422	8,0	3,15	12,4
ISSN-432	7,4	4,76	12,4
ISSN-434	7,4	4,76	12,4
ISSN-442	7,4	6,35	12,4
ISSN-454	7,4	7,92	12,4
ISSN-533	9,3	4,76	15,6
ISSN-534	9,6	4,80	15,7
ISSN-633	11,3	4,76	18,8

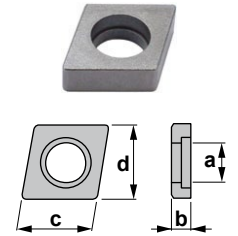


80° Rhombic shim seats / 80° rhombische Unterlegplatten

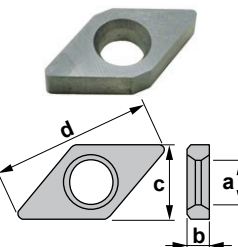
	Reference Bezeichnung	a	b	c	d
		3609	4,8	3,18	8,5
	3612	6,4	3,18	11,6	17,1
	3616	7,9	4,76	14,6	20,9
	3619	9,6	4,76	17,8	26,0
	3625	12,8	6,35	24,2	36,0

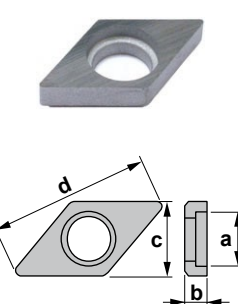
	Reference Bezeichnung	a	b	c	d
		3614	6,5	3,95	11,4
	ICSN-332	6,2	5,00	9,0	9,0
	ICSN-422	7,2	3,00	12,5	12,5
	ICSN-432	7,4	4,76	12,4	12,4
	ICSN-434	7,4	4,76	12,4	12,4
	ICSN-442	7,4	6,35	12,4	12,4
	ICSN-443	7,7	6,40	12,4	12,4
	ICSN-454	7,4	7,94	12,4	12,4
	ICSN-523	9,9	3,18	15,6	15,6
	ICSN-533	9,9	4,76	15,6	15,6
	ICSN-623	11,3	3,18	18,8	18,8
	ICSN-633	11,3	4,76	18,8	18,8

75° Rhombic shim seats / 75° rhombische Unterlegplatten

	Reference Bezeichnung	a	b	c	d
		IESN-432	7,4	4,76	12,4

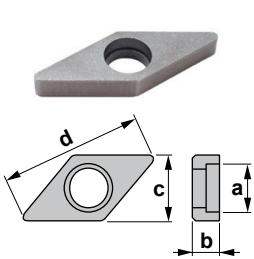
55° Rhombic shim seats / 55° rhombische Unterlegplatten

	Reference Bezeichnung	a	b	c	d
		3711	4,9	2,70	8,5
	3715	6,4	3,18	11,6	23,4
	3725	6,5	4,77	11,7	23,4

	Reference Bezeichnung	a	b	c	d
		3714	6,6	3,18	8,50
	IDSN-322	6,4	3,18	9,39	18,2
	IDSN-334	6,8	4,76	9,95	17,8
	IDSN-354	6,8	7,92	9,95	17,8
	IDSN-422	8,2	4,76	12,60	25,6
	IDSN-432	8,2	4,76	12,50	25,6
	IDSN-434	8,2	4,76	12,50	23,4

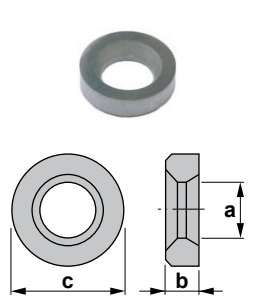


35° Rhombic shim seats / 35° rhombische Unterlegplatten

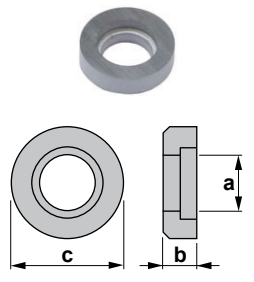


Reference Bezeichnung	a	b	c	d
3718	6,7	3,18	8,4	26,0
3722	8,1	3,97	11,0	27,3
IVSN-322	6,6	3,18	9,4	25,9
IVSN-342	6,6	6,35	9,2	26,9

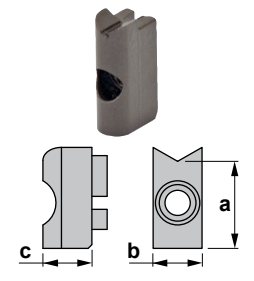
Round shim seats / Runde Unterlegplatten



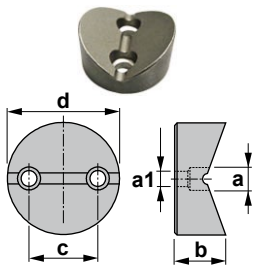
Reference Bezeichnung	a	b	c
3810	4,9	3,18	8,34
3812	4,9	3,18	9,90
3816	6,4	4,76	13,55
3820	8,0	4,76	17,25
3825	9,6	6,35	21,90
3832	12,6	6,35	28,00
3909	4,9	3,18	8,80
3912	6,4	3,18	11,60
3915	8,0	4,76	15,20
3919	9,6	4,76	18,40
3925	12,9	6,35	24,80



Reference Bezeichnung	a	b	c
3811	5,3	3,18	8,80
3814	5,3	3,18	10,60
IRSN-42	7,4	2,38	12,45
IRSN-43	7,4	4,76	12,45
IRSN-44	7,3	6,40	12,45
IRSN-45	7,4	7,92	12,45
IRSN-53	9,8	4,76	15,60
IRSN-63	11,3	4,76	18,80
IRSN-84	14,5	6,35	25,15

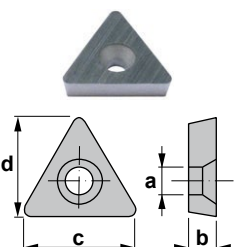


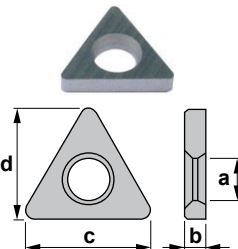
Reference Bezeichnung	a	b	c
3806	13,95	5,0	8,6
3807	15,55	5,0	8,6
3808	17,15	5,0	8,6
3849	13,75	7,7	7,7
3852	15,20	11,1	10,8

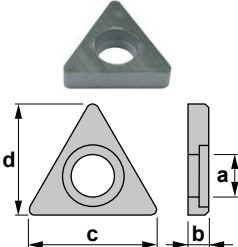


Reference Bezeichnung	a	a1	b	c	d
3817	4,5	3	7,75	7,0	13,55
3819	4,5	3	8,51	8,4	16,55
3835	4,5	3	10,04	13,5	22,00

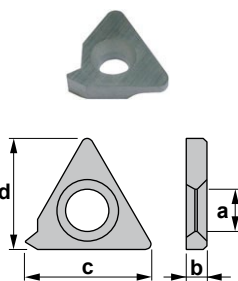
Triangular shim seats / Dreikantige Unterlegplatten

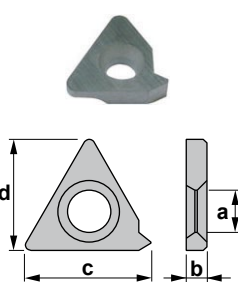
	Reference Bezeichnung	a	b	c	d
	3116	2,3	3,18	13,03	11,5
3122	3,3	3,18	17,19	15,1	

	Reference Bezeichnung	a	b	c	d
	3416	4,9	2,76	13,52	11,9
3422	6,3	3,18	18,92	16,6	
3427	8,0	4,76	24,60	24,6	
3433	9,8	4,76	28,50	27,8	

	Reference Bezeichnung	a	b	c	d
	3414	5,30	3,18	13,55	11,9
ITSN-322	5,90	3,18	14,60	12,9	
ITSN-324	5,70	3,30	14,25	12,8	
ITSN-342	5,90	6,35	14,90	13,1	
ITSN-433	7,40	4,76	19,70	17,3	
ITSN-443	7,65	6,35	20,20	17,8	

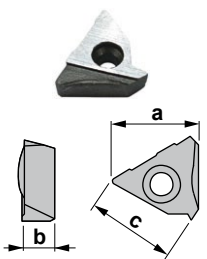
Shim seats for threading / Unterlegplatten für Gewindedrehwerkzeuge

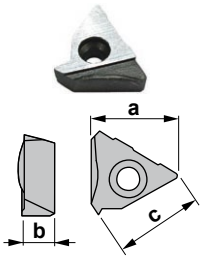
	Reference Bezeichnung	a	b	c	d
	3424+1°	3,95	3,2	12,8	12,8
3424+2°	3,95	3,2	12,8	12,8	
3424+3°	3,95	3,2	12,8	12,8	
3424-1°	3,95	3,2	12,8	12,8	
3424-2°	3,95	3,2	12,8	12,8	
3424-3°	3,95	3,2	12,8	12,8	
YE3	3,95	3,2	12,7	12,4	
YE4	5,30	4,0	17,3	17,3	
YE5	6,30	5,8	23,6	22,3	

	Reference Bezeichnung	a	b	c	d
	3425+1°	3,95	3,2	12,8	12,8
3425+2°	3,95	3,2	12,8	12,8	
3425+3°	3,95	3,2	12,8	12,8	
3425-1°	3,95	3,2	12,8	12,8	
3425-2°	3,95	3,2	12,8	12,8	
3425-3°	3,95	3,2	12,8	12,8	
YI3	3,95	3,2	12,8	12,8	
YI4	5,30	4,0	17,3	17,3	
YI5	6,30	5,8	23,6	22,3	

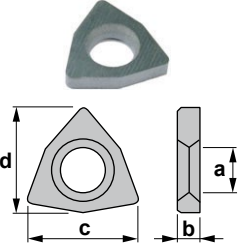


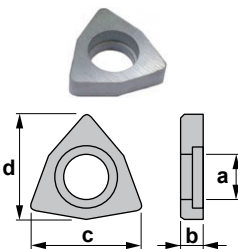
Threading shim seats / Unterlegplatten für Gewindedrehwerkzeuge

	Reference Bezeichnung	a	b	c
	3126R	12,8	4,76	11,2
3132R	16,9	4,76	14,0	

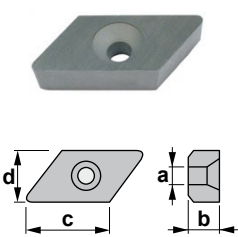
	Reference Bezeichnung	a	b	c
	3132L	16,9	4,76	14,0

Trigon shim seats / Trigon Unterlegplatten

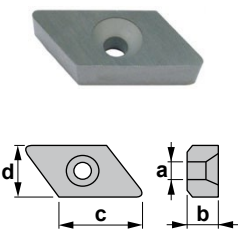
	Reference Bezeichnung	a	b	c	d
	3007	4,9	3,18	11,3	10,8
3008	6,4	3,18	15,8	15,2	

	Reference Bezeichnung	a	b	c	d
	3006	5,1	3,18	11,3	10,8
IWSN-322	5,7	3,18	11,9	11,4	
IWSN-433	7,3	4,76	16,0	15,3	

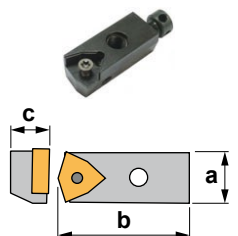
KNUX - Shim seats / KNUX - Unterlegplatten

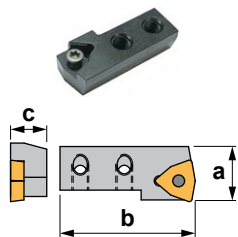
	Reference Bezeichnung	a	b	c	d
	3226	3,3	4,76	14,5	9,25

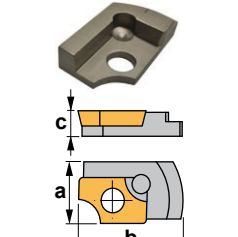
KNUX - Shim seats / KNUX - Unterlegplatten

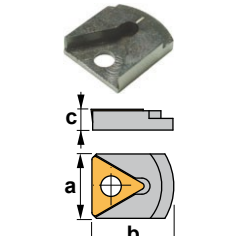
	Reference Bezeichnung	a	b	c	d
	3236	3,3	4,76	14,5	9,25

Seats / Kassetten

	Reference Bezeichnung	a	b	c
	6806	12,8	32	10,7

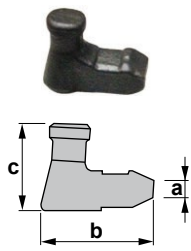
	Reference Bezeichnung	a	b	c
	6816	16,3	40	10,7

	Reference Bezeichnung	a	b	c
	6925	12,7	22	4,8

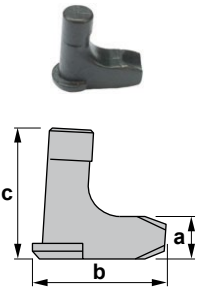
	Reference Bezeichnung	a	b	c
	6926	16	19,5	4,8



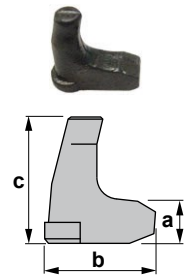
Levers / Kniehebel



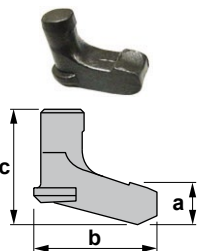
Reference Bezeichnung	a	b	c
8005	2,3	10,1	7,8



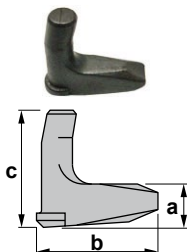
Reference Bezeichnung	a	b	c
8009	3,4	10,2	12,0
8012	4,2	13,5	13,1
8015	5,3	19,2	17,2
8016	5,4	16,5	17,1
8019	8,2	20,6	21,0
8025	8,2	25,7	25,2



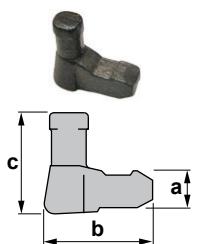
Reference Bezeichnung	a	b	c
8110	4,0	11,0	11,6
8112	4,2	13,0	13,1
8120	6,8	20,4	18,4
8125	7,6	23,7	22,9
8132	9,0	30,2	26,7



Reference Bezeichnung	a	b	c
8212	4,7	13,4	12,1
8219	7,2	20,5	20,2



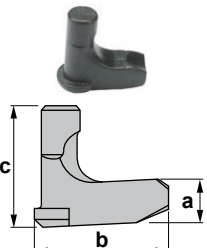
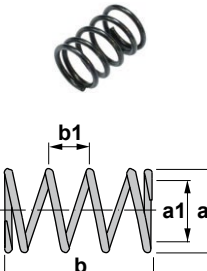
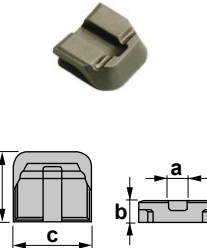
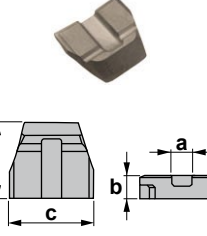
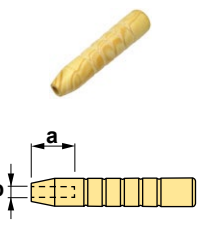
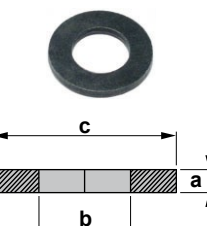
Reference Bezeichnung	a	b	c
8116	6,7	18,6	17,7
8312	4,2	13,5	13,2



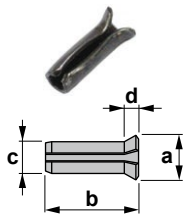
Reference Bezeichnung	a	b	c
8216	3,4	10,1	9,5



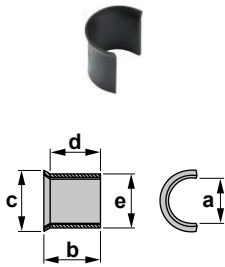
Levers and others / Kniehebel und Andere

	Reference Bezeichnung	a	b	c	
	8415	5,9	16,2	14,7	
	Reference Bezeichnung	a	a1	b	b1
	4294	6,9	5,3	12,5	2,5
	4295	9,5	7,0	16,5	3,5
	Reference Bezeichnung	a	b	c	d
	9414	2,6	2	12,6	11
	Reference Bezeichnung	a	b	c	d
	9416	3	3,5	12,6	11
	Reference Bezeichnung	a	b		
	0009	15	4,0		
	0012	15	5,0		
	0015	15	6,3		
	0019	12	8,5		
	0025	14	12,0		
	Reference Bezeichnung	a	b	c	
	2803	0,5	3,2	6,8	
	2804	0,8	4,3	9,0	
	2806	1,5	6,4	12,0	
	2808	1,6	8,4	16,0	
	2810	2,5	10,5	21,0	

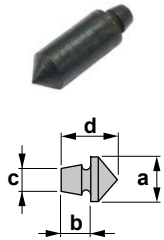
Others / Andere



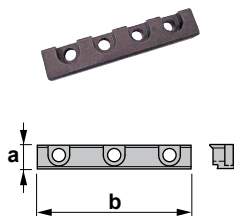
Reference Bezeichnung	a	b	c	d
4002	2,7	10	2,1	1,1
4012	3,6	10	3,0	1,5
4022	4,5	10	4,0	1,5



Reference Bezeichnung	a	b	c	d	e
4109	4,4	5,2	5,7	4,6	4,9
4110	4,4	6,8	5,6	6,1	4,9
4112	5,5	5,9	7,0	5,2	6,6
4115	7,0	9,2	9,0	7,7	8,2
4116	5,4	9,2	6,8	8,5	6,5
4119	8,5	11,3	10,5	9,8	9,7
4125	10,0	11,9	15,2	9,7	13,2
4129	8,3	9,2	10,5	8,4	9,8
4133	8,3	9,2	10,4	8,4	9,8
4135	5,5	7,7	7,2	6,8	6,6



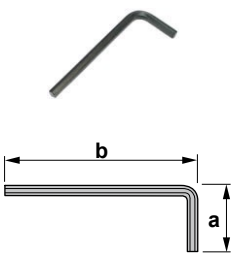
Reference Bezeichnung	a	b	c	d
4201	4,8	3,1	2,5	5,9
4202	4,8	3,1	2,5	8,1
4203	4,8	3,1	2,5	12,5
4204	4,8	3,1	2,5	14,5



Reference Bezeichnung	a	b
2916	10,0	64
2920	16,2	75
2930	19,3	84
2935	19,3	94
2942	19,3	104
2950	21,0	110

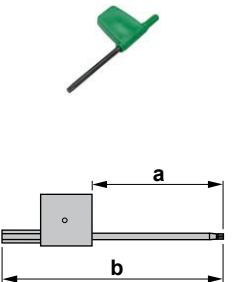


Wrenches (Allen) / Schlüssel (Imbus)



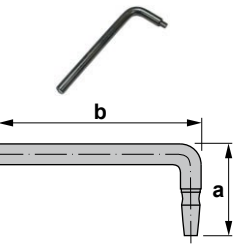
Reference Bezeichnung	a	b	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
5002	18,0	51,5	A2	1.4
5003	22,2	64,4	A3	3.0
5004	27,6	72,6	A4	3.5
5005	32,0	83,0	A5	4.0
5006	37,0	96,0	A6	-
5015	14,4	45,5	A1.5	0.6
5025	19,0	57,3	A2.5	2.0

Wrenches (Torx) / Schlüssel (Torx)

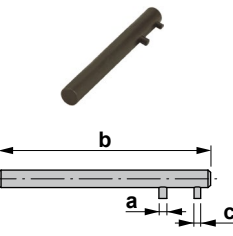


Reference Bezeichnung	a	b	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
5506	34,5	62,0	T6	0.6
5507	35,0	63,0	T7	0.9
5508	44,0	72,0	T8	1.2
5509	38,0	74,0	T9	1.4
5510	38,0	74,0	T10	2.0
5515	45,5	82,5	T15	3.0
5516	42,7	86,7	T15 / A3.5	3.0 / -
5517	45,7	95,7	T15 / A4	3.0 / 3.5
5520	45,9	80,0	T20	4.0
5525	53,0	92,0	T25	5.0

Wrenches for blades / Schlüssel (Stechschwerter)

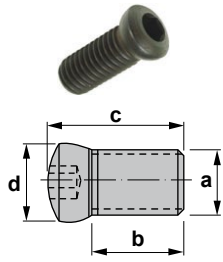


Reference Bezeichnung	a	b
5732	27,5	81

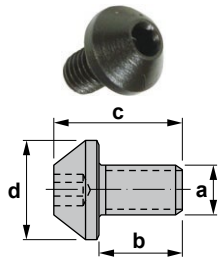


Reference Bezeichnung	a	b	c
5735	3	80	2,5

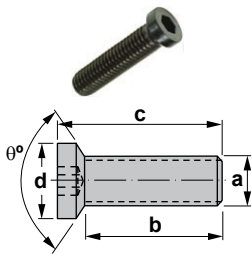
Screws (Allen) / Schrauben (Imbus)



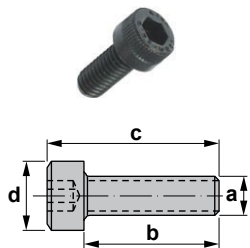
Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1004	M4x0.7	6,8	10,0	5,6	-	A2	1.4
1005	M5x0.8	8,7	12,0	6,8	-	A2.5	2.0
1006	M6x1	11,2	17,0	9,0	-	A4	3.5
1006L	M6x1L	11,2	17,0	9,0	-	A4	3.5
1008	M8x1.25	16,6	22,0	11,0	-	A5	4.0
1016	M6x1	6,6	12,4	9,0	-	A4	3.5



Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1025	M5x0.8	8,0	12,5	9,8	-	A3	3.0



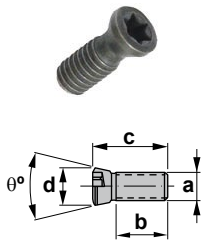
Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1058	M8x1.25	29,0	35,0	11,0	45	A5	4.0
1175	M5x0.8	9,7	14,7	8,6	88	A4	3.5



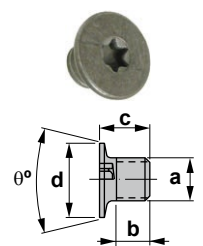
Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
1076	M6x1	30,0	36,0	10,0	-	A5	4.0
1095	M5x0.8	8,2	11,8	8,4	-	A4	3.5
1195	M5x0.8	6,0	10,8	8,3	-	A4	3.5
1296	M6x1	10,0	14,0	9,8	-	A5	4.0
1396	M6x1	16,0	21,9	9,75	-	A5	4.0
912.10	M10x1.5	25,0	35,0	16,0	-	A8	-
912.11	M10	25,0	31,0	16,0	-	A7	-
912.12	M12x1.7	30,0	42,0	18,0	-	A10	-
912.16	M16x2	35,0	51,0	24,0	-	A14	-
912.17	M16x2	35,0	44,0	24,0	-	A12	-
912.20	M20x2.5	39,5	51,0	30,0	-	A14	-
912.52	M12	50,0	62,0	18,0	-	A10	-
912.56	M16x2	47,0	63,0	24,0	-	A14	-



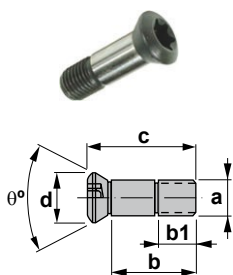
Screws (Torx) / Schrauben (Torx)



Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1182	M8x1	9,5	13,5	10,5	60	T25	5.0
1222	M2.2x0.45	3,5	6,0	3,3	55	T6	0.6
1225	M2.5x0.45	4,0	7,0	3,3	55	T7	0.9
1230	M3x0.5	5,6	9,0	4,4	55	T8	1.2
1235	M3.5	6,5	9,5	5,3	55	T15	3.0
1240	M4x0.7	6,2	11,0	5,3	55	T15	3.0
1240-IP	M4x0.7	6,5	10,0	5,3	60	T15-IP	3.5
1244	M4x0.7	8,0	12,0	7,0	55	T20	4.0
1245	M4.5x0.75	7,4	11,4	6,4	55	T15	3.0
1250	M5x0.8	6,0	12,0	7,0	55	T20	4.0
1261	M6x1	8,5	13,0	7,9	55	T25	5.0
1335	M3.5x0.6	10,2	15,0	5,3	55	T15	3.0
1425	M2.5x0.45	3,0	5,5	3,3	55	T7	0.9
1430	M3x0.5	2,8	5,8	4,4	55	T8	1.2
1430-IP	M3x0.5	4,0	6,7	3,9	60	T10-IP	2.5
1435	M3.5	3,1	7,0	5,3	55	T15	3.0
1440	M4x0.7	3,2	7,5	5,3	55	T15	3.0
1440-IP	M4x0.7	4,2	8,0	5,3	60	T15-IP	3.5
1445	M4.5x0.75	5,4	9,0	6,3	55	T15	3.0
1550	M5x0.8	5,9	11,0	6,4	43	T20	4.0
1622	M2.2x0.45	4,0	6,0	3,4	60	T7	0.9
1625	M2.5x0.45	3,6	6,5	3,8	60	T8	1.2
1630	M3x0.5	5,2	8,3	4,3	60	T9	1.4
1635	M3.5x0.6	5,5	9,0	4,7	60	T10	2.0
1640	M4	7,0	10,5	5,5	60	T15	3.0
1840	M4	3,2	7,5	5,0	40	T15	3.0
1845	M4.5x0.75	6,9	9,0	6,5	90	T15	3.0
1846	M4.5x0.75	6,5	11,2	6,5	90	T15	3.0
1847	M4.5x0.75	8,0	11,0	6,7	90	T15	3.0
1908	M8x1	13,0	20,0	10,4	60	T15	3.0
1910	M10x2.5	17,5	25,0	15,0	60	T15	3.0



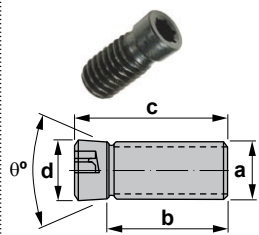
Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1735	M3.5	1,0	3,0	5,2	90	T7	0.9
1745	M4.5x0.75	3,8	5,2	6,7	100	T15	3.0
1835	M3.5x0.6	2,0	4,0	5,2	90	T7	0.9



Reference Bezeichnung	a	b	b1	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1353	M3x0.35	6,0	2,8	7,9	3,7	40	T8	1.2
1354	M3.5x0.6	7,2	3,7	9,6	4,7	40	T10	2.0
1359	M4x0.5	6,8	3,2	8,8	5,8	62	T15	3.0
1509	M5x0.5	7,9	3,6	9,5	6,7	62	T20	4.0
1519	M5x0.5	10,0	4,5	12,8	7,5	62	T20	4.0
1529	M5x0.5	12,7	4,7	15,5	7,5	62	T20	4.0
1609	M6x0.75	17,6	7,1	20,6	9,5	62	T30	7.0
1619	M4x0.7	10,4	5,6	13,6	5,7	42	T15	3.0
1629	M5x0.8	13,5	6,0	16,8	6,9	40	T20	4.0
1649	M8x1	21,2	8,0	26,4	11,9	60	T30	7.0
1809	M8x0.75	21,5	8,8	26,2	11,9	62	T30	7.0

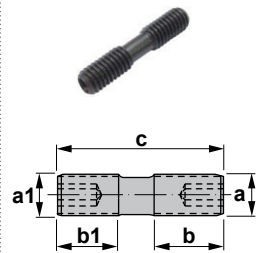


Screws (Torx) / Schrauben (Torx)



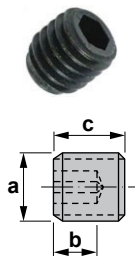
Reference Bezeichnung	a	b	c	d	θ°	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1460	M6x1	8,7	13,6	6,3	120	T20	4.0

Clamp screws / Schrauben für Pratzen



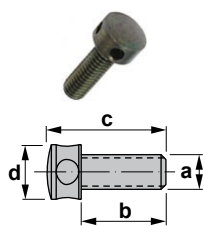
Reference Bezeichnung	a	a1	b	b1	c	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1066	M6x1R	M6x1L	8,0	9,0	21	T15	3.0
1077	M7x0.75R	M7x0.75L	7,5	7,5	18	T20	4.0
1088	M8x1.25R	M8x1.25L	10,0	10,0	24	A4	3.5
1166	M6x1R	M6x1L	4,5	4,5	13	T15	3.0
1188	M8x1R	M8x1L	7,0	7,2	18	A4	3.5
1266	M6x1R	M6x1L	6,0	6,0	16	T15	3.0
1888	M8x1R	M8x1L	9,5	9,5	22	A4	3.5

Set screws / Schrauben



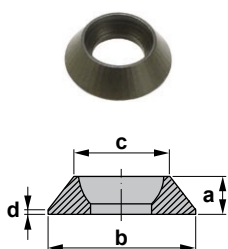
Reference Bezeichnung	a	b	c	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1503	M3x0.5	2,0	4	A1.5	0.6
1504	M4x0.7	2,0	4	A2	1.4
1505	M5x0.8	3,0	5	A2.5	2.0
1506	M6x1	4,0	5	A3	3.0
1508	M8x1.25	5,0	8	A4	3.5
1515	M5x0.8	4,0	8	A4	3.5
1517	M5x0.8	3,5	12	A2.5	2.0
1518	M5x0.8	3,5	16	A2.5	2.0
1534	M4x0.7	3,5	8	A2	1.4

Adjustable screws / Verstellbare Schrauben



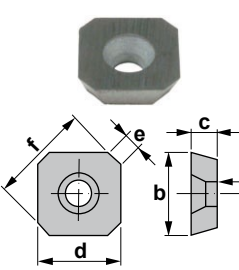
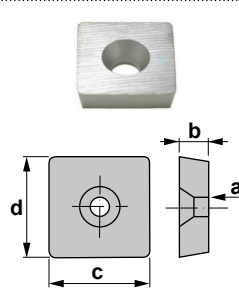
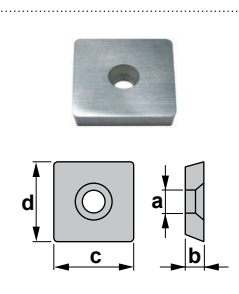
Reference Bezeichnung	a	b	c	d	Wrench Schlüssel	Torque (N.m) Drehmoment (N-m)
1405	M5x0.8	10,5	16,5	9	A2	1.4

Washers / Unterlegscheiben

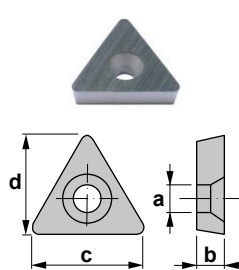


Reference Bezeichnung	a	b	c	d
2009	3,0	9	6,2	0,4
2010	3,2	10	7,2	0,6
2054	3,7	14	7,2	0,6
2063	4,2	14	10,2	0,6
2064	4,2	14	10,2	0,6
2066	4,2	16	10,2	0,6
2088	5,2	18	12,2	1,4

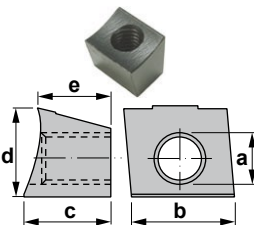
Square shim seats / Vierkantige Unterlegplatten

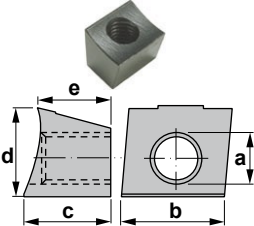
	Reference Bezeichnung	a	b	c	d	e	f
	3010	3,2	10,35	3,18	10,3	2,44	12
	Reference Bezeichnung	a	b	c	d		
	3012	3,3	3,18	11,2	11,2		
	Reference Bezeichnung	a	b	c	d		
	3212	3,3	3,18	12,5	12,5		

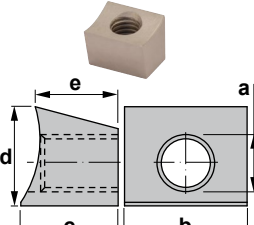
Triangular shim seats / Dreikantige Unterlegplatten

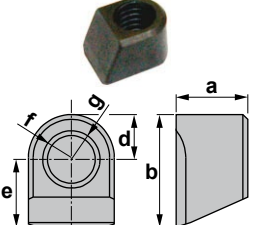
	Reference Bezeichnung	a	b	c	d
	3016	3,3	3,18	13,00	11,5
	3022	4,3	3,18	17,19	15,1

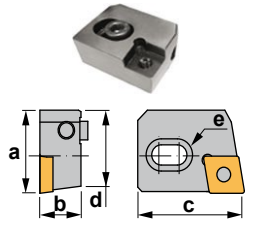
Wedges and seats / Keile und Kassetten

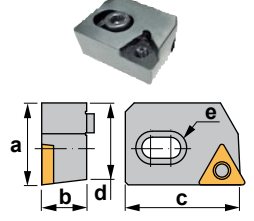
	Reference Bezeichnung	a	b	c	d	e
	6031	M6x1L	13,0	6,0	8,3	4,8
	6032	M6x1L	13,0	6,0	8,5	4,8
	6055	M8x1L	14,6	10,0	13,5	10,0
	6434	M7x0.75L	15,0	10,0	11,8	10,0
	6437	M7x0.75L	13,8	8,5	11,8	8,5

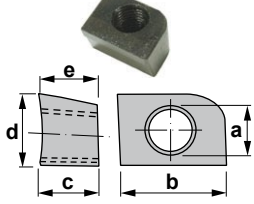
	Reference Bezeichnung	a	b	c	d	e
	6432	M7x0.75L	12,3	8,5	14,0	8,5
	6433	M7x0.75L	15,0	8,5	11,8	8,5
	6488	M7x0.75L	12,0	8,0	12,4	8,0
	6490	M7x0.75L	10,7	8,0	11,9	8,0

	Reference Bezeichnung	a	b	c	d	e
	6112	M6x1L	10,2	10,0	10,2	8,5
	6113	M8x1L	13,2	10,5	13,0	8,5

	Reference Bezeichnung	a	b	c	d	e	f	g
	6226	7,5	11,8	9	4,7	7,1	R4,5	M6

	Reference Bezeichnung	a	b	c	d	e
	6412	27,8	15,3	38,2	25,9	R5.5

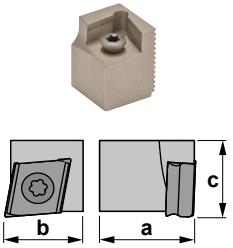
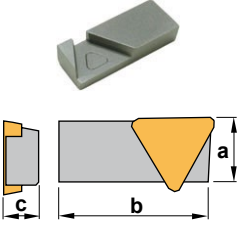
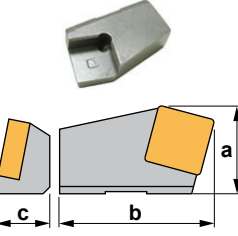
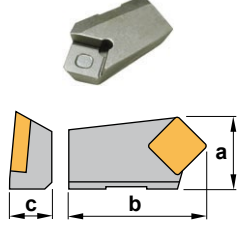
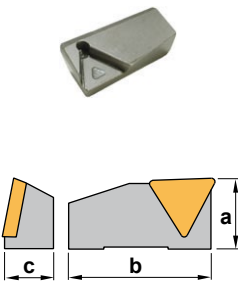
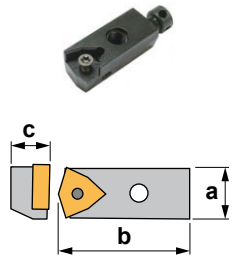
	Reference Bezeichnung	a	b	c	d	e
	6416	27,8	17,5	38,5	25,9	R5.5

	Reference Bezeichnung	a	b	c	d	e
	6435	M7x0.75L	15,0	8,5	11,8	8,5

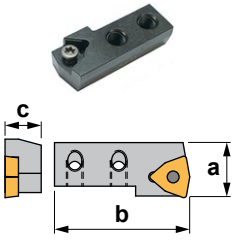
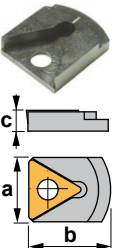
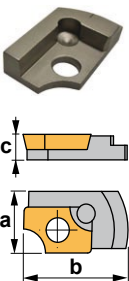
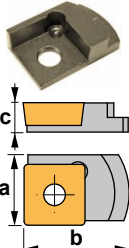
Seats and cartridges / Kassetten

	Reference Bezeichnung	a	b	c	d	e
	6436	M7x0.75L	15,5	10,0	11,8	10,0
	6438	M7x0.75L	18,0	8,5	11,8	8,5
	6489	M7x0.75L	21,8	8,0	12,5	8,0
	6491	M7x0.75L	21,0	8,0	12,6	8,0
	Reference Bezeichnung	a	b	c		
	6230	15	40	8,3		
	Reference Bezeichnung	a	b	c		
	6232	15	40	8,3		
	Reference Bezeichnung	a	b	c		
	6255	15	40	8,3		
	Reference Bezeichnung	a	b	c		
	6742	15	40	8,3		
	Reference Bezeichnung	a	b	c		
	6748	15	40	8,3		
	Reference Bezeichnung	a	b	c		
	6845	15	40	8,3		
	6846	15	40	8,3		

Seats and cartridges / Kassetten

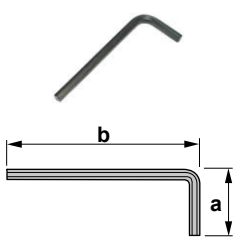
	Reference Bezeichnung	a	b	c
	6938	17,5	14	13,0
	6939	17,5	14	13,0
	6940	19,0	18	16,2
	6941	19,0	18	16,2
	Reference Bezeichnung	a	b	c
	6526	11,5	27	5,93
	Reference Bezeichnung	a	b	c
	6912	18,9	33,2	12
	6914	19,0	32,6	12
	Reference Bezeichnung	a	b	c
	6918	19,2	35	11,2
	6920	20,6	35	11,3
	Reference Bezeichnung	a	b	c
	6927	15,5	33,2	11,8
	6942	18,1	31,2	12,5
	Reference Bezeichnung	a	b	c
	6806	12,8	32	10,7

Seats and cartridges / Kassetten

	Reference Bezeichnung	a	b	c
	6816	16,3	40	10,7
	Reference Bezeichnung	a	b	c
	6921	11	12,9	2,9
	6926	16	19,5	4,8
	Reference Bezeichnung	a	b	c
	6925	12,7	22	4,8
	Reference Bezeichnung	a	b	c
	6944	14,3	21,7	5,9

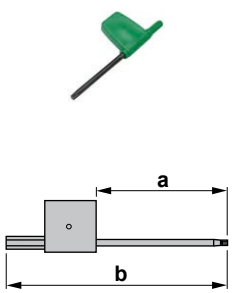


Wrenches (Allen) / Schlüssel (Imbus)

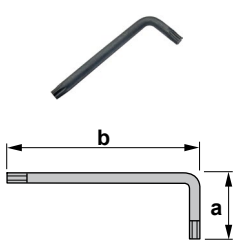


Reference Bezeichnung	a	b	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
5002	18,0	51,5	A2	1.4
5003	22,2	64,4	A3	3.0
5004	27,6	72,6	A4	3.5
5005	32,0	83,0	A5	4.0
5006	37,0	96,0	A6	-
5015	14,4	45,5	A1.5	0.6
5025	19,0	57,3	A2.5	2.0

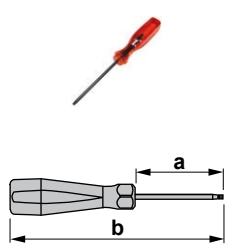
Wrenches (Torx) / Schlüssel (Torx)



Reference Bezeichnung	a	b	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
5506	34,5	62,0	T6	0.6
5507	35,0	63,0	T7	0.9
5508	44,0	72,0	T8	1.2
5509	38,0	74,0	T9	1.4
5510	38,0	74,0	T10	2.0
5510-IP	38,0	74,0	T10-IP	2.5
5515	45,5	82,5	T15	3.0
5515-IP	45,5	82,5	T15-IP	3.5
5520	45,9	80,0	T20	4.0
5525	53,0	92,0	T25	5.0

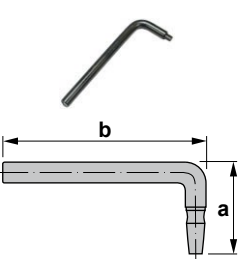


Reference Bezeichnung	a	b	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
5530	27,6	77,6	T30	7.0



Reference Bezeichnung	a	b	Wrench Schlüssel	Torque (N.m) Drehmoment (N·m)
5607	50,8	129,3	T7	0.9
5608	59,0	136,0	T8	1.2
5610	79,2	177,0	T10	2.0
5615	66,6	99,0	T15	3.0
5620	100,0	207,7	T20	4.0
5625	100,0	208,0	T25	5.0

Wrenches for blades / Schlüssel (Stechschwerter)



Reference Bezeichnung	a	b
5732	27,5	81