GUHRING

More than countersinking

Countersinks, de-burring and chamfering tools
for the machining of hole
entries and exits as well as cross holes

COUNTERSINKS

GUHRING

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
60° countersinks								
DIN 334	C		HSS	bright	6,300 - 25,000	472	105	1371
DIN 334	A		HSS	steam tempered >Ø 8,00	8,000 - 20,000	470	105	1372
DIN 334	D		HSS	steam tempered	16,000 - 80,000	473	105	1373
DIN 334	B		HSS	steam tempered	16,000 - 100,000	471	105	1374
90° countersinks								
DIN 335	A		HSS	steam tempered >Ø 8,00	8,000 - 20,000	474	105	1375
DIN 335	C		HSS	bright	4,300 - 31,000	476	105	1376
DIN 335	C		HSS	A	4,300 - 31,000	1326	105	1376
DIN 335	C		HSS	S	5,000 - 31,000	327	105	1376
DIN 335	D		HSS	bright	15,000 - 100,000	477	105	1377
DIN 335	D		HSS	S	25,000 - 50,000	328	105	1377
DIN 335	B		HSS	steam tempered	16,000 - 100,000	475	105	1378
90° countersinks								
DIN 335	C		HSS	bright	7,000 - 7,000	498	105	1379
DIN 335	C		HSS	S	7,000 - 7,000	499	105	1379

bright · steam tempered · nitrided lands · nitrided · golden brown · A TiAlN · a TiAlN nanoA · A TiAlN SuperA

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
90° countersinks for fine tolerances								
DIN 1866			HSS	○	2,000 - 19,000	436	105	1380
90° countersinks for medial tolerances								
DIN 1866			HSS	○	6,600 - 21,500	437	105	1381
90° countersinks for tapping size holes								
DIN 1866			HSS	○	6,000 - 19,000	438	105	1382
120° countersinks								
DIN 347	A		HSS	○ >Ø 8,00	8,000 - 20,000	478	105	1383
Guhring std.			HSS	○	16,000 - 16,000	480	105	1384
Guhring std.			HSS	●	25,000 - 40,000	481	105	1385
DIN 347	B		HSS	●	25,000 - 100,000	479	105	1386
Counterbores with fixed pilots for fine tolerances								
DIN 373			HSS	○	2,200 - 20,000	482	105	1387
DIN 373			HSS	(S)	8,000 - 20,000	324	105	1387
Guhring std.			HSS	●	18,000 - 40,000	485	105	1388

(C) TiCN (Cb) Carbo (D) Cristall (F) FIRE/nanoFIRE (P) AlCrN (S) TiN (S+) TiN+ (M) MolyGlide (Y) Signum

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Counterbores with fixed pilots for medial tolerances								
DIN 373			HSS	○	6,000 - 20,000	483	105	1389
DIN 373			HSS	S	6,000 - 18,000	325	105	1389
Guhring std.			HSS	●	18,000 - 40,000	486	105	1390
Counterbores with fixed pilots for tapping size holes								
DIN 373			HSS	○	6,000 - 20,000	484	105	1391
DIN 373			HSS	S	6,000 - 18,000	326	105	1391
Guhring std.			HSS	●	20,000 - 26,000	487	105	1392
Counterbores with hole for detachable pilot								
DIN 375			HSS	●	15,000 - 63,000	463	105	1393
Detachable pilot for fine tolerances								
DIN 1868			HSS	○	8,400 - 25,000	464	105	1394
Detachable pilot for medial tolerances								
DIN 1868			HSS	○	9,000 - 39,000	465	105	1395
Detachable pilot for taping size holes								
DIN 1868			HSS	○	6,800 - 32,000	466	105	1396

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Form	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Spot facers								
DIN 1862			HSS-E		3,500 - 13,000	432	105	1397
DIN 1862			HSS-E		6,000 - 30,000	433	105	1398
DIN 1862			HSS-E		10,000 - 30,000	434	105	1399
DIN 1862			HSS-E		20,000 - 48,000	435	105	1400
De-burring forks								
Guhring std.			Solid carbide		2,000 - 8,000	4101	120	1401
Guhring std.			Solid carbide		2,000 - 8,000	4100	120	1402
Front/back deburrer 90°								
Guhring std.		NEW	Solid carbide	a	3,000 - 12,000	495	120	1403

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Standard	Type	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Pilot counterbores								
Guhring std.	KS 125		HSS	◯	12,000 - 57,000	1601	104	1404
Guhring std.	KS 140		HSS	◯	5,000 - 45,000	1602	104	1405
Guhring std.	KS 108		Carbide	◯	5,900 - 75,000	1603	104	1406
Guhring std.	KS 115		Carbide	◯	18,000 - 74,000	1604	104	1407
Spotfacers								
Guhring std.	KS 100		Carbide	◯	9,000 - 67,000	1606	104	1408
90° countersinks								
Guhring std.	KS 100		HSS	◯	12,000 - 30,000	1622	104	1409

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Standard	Type	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Threaded pins								
DIN 551					-	**1624**	104	1410
Tool extractors								
Guhring std.					-	**1650**	104	1411
Guhring std.					-	**1651**	104	1411
Pilots with angled flat								
Guhring std.				○	-	**1615**	104	1412
Pilots complete								
Guhring std.				○	-	**1616**	104	1414
Pilots complete with pilot sleeve								
Guhring std.				○	-	**1617**	104	1418
Holding screws								
Guhring std.					-	**1647**	104	1420
Safety bolts								
Guhring std.					-	**1648**	104	1421

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Standard	Type	Tool illustration	Tool material	Surface	d1	Guhring no.	Discount group	Standard range page
Locknuts								
Guhring std.					-	**1649**	104	1422
Standard short holders with straight shank								
Guhring std.					-	**1625**	104	1423
Standard short holders with taper shank								
Guhring std.					-	**1626**	104	1424
Standard long holders with taper shank								
Guhring std.					-	**1628**	104	1425

bright | steam tempered | nitrided lands | nitrided | golden brown | TiAlN | TiAlN nanoA | TiAlN SuperA

GUHRING

SPECIAL COUNTERSINKS

For non-standard countersink forms we produce special tools to suit the application. Please contact us and we shall convince you with our flexibility of design.

Tools with bold feed column no. are preferred choice.

For exact definition of tools please refer to the "Standard range and technical data" pages.

For multi-fluted countersinking tools the Ø-range for the respective flute no. is in brackets.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Angle of taper
Form
Std. range page

Counter-sink Ø mm	Feed column no. 81	82	83	84	85	86
	f (mm/rev.)					
2.00	0.03	0.04	0.06	0.08	0.10	0.13
2.50	0.03	0.05	0.07	0.10	0.13	0.16
3.15	0.03	0.05	0.08	0.11	0.15	0.20
4.00	0.04	0.06	0.09	0.13	0.17	0.22
5.00	0.04	0.07	0.10	0.14	0.18	0.23
6.30	0.04	0.07	0.12	0.15	0.19	0.24
8.00	0.05	0.08	0.13	0.16	0.20	0.25
10.00	0.06	0.09	0.14	0.17	0.22	0.26
12.50	0.06	0.10	0.15	0.19	0.23	0.28
16.00	0.07	0.11	0.17	0.21	0.26	0.31
20.00	0.08	0.13	0.18	0.23	0.28	0.33
25.00	0.09	0.15	0.21	0.26	0.30	0.38
31.50	0.12	0.17	0.24	0.30	0.36	0.42
40.00	0.14	0.21	0.28	0.34	0.40	0.46
50.00	0.17	0.24	0.31	0.36	0.42	0.48
63.00	0.20	0.27	0.33	0.38	0.44	0.50
80.00	0.23	0.30	0.35	0.40	0.46	0.52
100.00	0.25	0.30	0.35	0.40	0.46	0.52

Coolant:
○ Air
● Neat oil
◍ Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◍
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◍
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◍
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◍
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◍
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◍
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◍
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◍
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◍
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◍
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◍
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◍
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◍○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◍○
Spheroidal graphite iron and malleable cast iron	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◍
	0.7070 EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◍
Chilled cast iron	–		≤350 HB	◍
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◍
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◍
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◍
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◍
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◍
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◍
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◍
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◍●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◍○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◍○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◍○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◍○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◍○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◍ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ AlTiN SuperA

Countersinks

436	437	438	470	471	472	473
1866	1866	1866	334	334	334	334
HSS	HSS	HSS	HSS	HSS	HSS	HSS
○	○	○	○ ● >Ø 8,00	●	○	●
90°	90°	90°	60°	60°	60°	60°
			A	B	C	D
1382	1383	1384	1374	1376	1373	1375

v_c m/min	Feed column no.						
32	**85**	85	85	85	85	**85**	**85**
30	**85**	85	85	84	84	**85**	**85**
32	**85**	85	85	85	85	**85**	**85**
30	**85**	85	85	84	84	**85**	**85**
32	**85**	85	85	84	84	**85**	**85**
30	**85**	85	85	84	84	**85**	**85**
20	**84**	84	84	84	84	**84**	**84**
15	**84**	84	84	84	84	**84**	**84**
12	**84**	84	84	**84**	**84**	84	84
25	**85**	85	85	85	85	**85**	**85**
15	**84**	84	84	**84**	**84**	**84**	**84**
10	**84**	84	84	84	84	84	84
15	**85**	85	85	84	84	**85**	**85**
12	**84**	84	84	**84**	**84**	84	84
17	**84**	84	84	84	84	**84**	**84**
15	**84**	84	84	84	84	**84**	**84**
15	**84**	84	84	84	84	**84**	**84**
10	**84**	84	84	84	84	**84**	**84**
16	**84**	84	84	84	84	**84**	**84**
12	**84**	84	84	84	84	**84**	**84**
14	**84**	84	84	84	84	**84**	**84**
8	**84**	84	84	84	84	**84**	**84**
25	**85**	85	85	84	84	**85**	**85**
16	**84**	84	84	84	84	**84**	**84**
22	**84**	84	84	84	84	**84**	**84**
20	**84**	84	84	84	84	**84**	**84**
8	**84**	84	84	84	84	**84**	**84**
15	**85**	85	85	85	85	**85**	**85**
10	**85**	85	85	**84**	**84**	**85**	**85**
90	**85**	85	85	85	85	**85**	**85**
70	**86**	86	86	85	85	**86**	**86**
40	**85**	85	85	85	85	**85**	**85**
30	**85**	85	85	85	85	**85**	**85**
100	**86**	86	86	85	85	**86**	**86**
60	**84**	84	84	84	84	**84**	**84**
80	**85**	85	85	84	84	**85**	**85**
50	**85**	85	85	84	84	**85**	**85**
30	**86**	86	86	85	85	**86**	**86**
26	**86**	86	86	85	85	**86**	**86**
24	**86**	86	86	85	85	**86**	**86**
20	**86**	86	86	85	85	**86**	**86**
30	**84**	84	84	84	84	84	84
40	**85**	85	85	84	84	85	85
70	**84**	84	84	84	84	84	84

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Tools with bold feed column no. are preferred choice.

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Guhring no.
Standard/DIN
Tool material
Surface finish
Angle of taper
Form
Std. range page

Counter-sink Ø mm	Feed column no.					
	81	**82**	**83**	**84**	**85**	**86**
	f (mm/rev.)					
2.00	0.03	0.04	0.06	0.08	0.10	0.13
2.50	0.03	0.05	0.07	0.10	0.13	0.16
3.15	0.03	0.05	0.08	0.11	0.15	0.20
4.00	0.04	0.06	0.09	0.13	0.17	0.22
5.00	0.04	0.07	0.10	0.14	0.18	0.23
6.30	0.04	0.07	0.12	0.15	0.19	0.24
8.00	0.05	0.08	0.13	0.16	0.20	0.25
10.00	0.06	0.09	0.14	0.17	0.22	0.26
12.50	0.06	0.10	0.15	0.19	0.23	0.28
16.00	0.07	0.11	0.17	0.21	0.26	0.31
20.00	0.08	0.13	0.18	0.23	0.28	0.33
25.00	0.09	0.15	0.21	0.26	0.30	0.38
31.50	0.12	0.17	0.24	0.30	0.36	0.42
40.00	0.14	0.21	0.28	0.34	0.40	0.46
50.00	0.17	0.24	0.31	0.36	0.42	0.48
63.00	0.20	0.27	0.33	0.38	0.44	0.50
80.00	0.23	0.30	0.35	0.40	0.46	0.52
100.00	0.25	0.30	0.35	0.40	0.46	0.52

Coolant:
○ Air
● Neat oil
● Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		●
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		●
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		●
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		●
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		●
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		●
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		●
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		●
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		●
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		●
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		●
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		●
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	● ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	● ○
Spheroidal graphite iron and malleable cast iron	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	●
	0.7070 EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	●
Chilled cast iron	–		≤350 HB	●
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		●
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		●
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		●
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		●
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		●
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		●
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		●
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		● ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		● ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	● ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	● ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		● ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		● ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ● steam tempered ◐ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A AlTiN SuperA

Countersinks

474	475	476	477	478	479	480	481
335	335	335	335	347	347	G.S.	G.S.
HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS
>Ø 8,00				>Ø 8,00			
90°	90°	90°	90°	120°	120°	120°	120°
A	B	C	D	A	B		
1377	1380	1378	1379	1385	1388	1386	1387

1326
335
HSS
A
90°
C
1378

327	328
335	335
HSS	HSS
S	S
90°	90°
C	D
1378	1379

v_c m/min	Feed column no.							
32	85	85	86	86	85	85	85	85
30	85	85	85	85	84	84	85	85
32	85	85	86	86	85	85	85	85
30	85	85	85	85	84	84	85	85
32	85	85	85	85	84	84	85	85
30	85	85	85	85	84	84	85	85
20	84	84	85	85	84	84	84	84
15	84	84	85	85	84	84	84	84
12	84	84	84	84	84	84	84	84
25	85	85	86	86	85	85	85	85
15	84	84	85	85	84	84	84	84
10	84	84	84	84	84	84	84	84
15	85	85	85	85	84	84	85	85
12	84	84	84	84	84	84	84	84
17	84	84	85	85	84	84	84	84
15	84	84	84	84	84	84	84	84
15	84	84	84	84	84	84	84	84
10	84	84	84	84	84	84	84	84
16	84	84	85	85	84	84	84	84
12	84	84	84	84	84	84	84	84
14	84	84	84	84	84	84	84	84
8	84	84	84	84	84	84	84	84
25	85	85	85	85	84	84	85	85
16	84	84	85	85	84	84	84	84
22	84	84	85	85	84	84	84	84
20	84	84	84	84	84	84	84	84
8	84	84	84	84	84	84	84	84
15	85	85	86	86	85	85	85	85
10	85	85	85	85	84	84	85	85
90	85	85	86	86	85	85	85	85
70	86	86	86	86	85	85	86	86
40	85	85	86	86	85	85	85	85
30	85	85	86	86	85	85	85	85
100	86	86	86	86	85	85	86	86
60	84	84	85	85	84	84	84	84
80	85	85	85	85	84	84	85	85
50	85	85	85	85	84	84	85	85
30	86	86	86	86	85	85	86	86
26	86	86	86	86	85	85	86	86
24	86	86	86	86	85	85	86	86
20	86	86	86	86	85	85	86	86
30	84	84	85	85	84	84	84	84
40	85	85	85	85	84	84	85	85
70	84	84	85	85	84	84	84	84

v_c m/min	Feed column no.
37	86
35	85
37	86
35	85
37	85
35	85
23	85
17	85
14	84
29	86
17	85
12	84
17	85
14	84
20	85
17	84
17	84
12	84
18	85
14	84
16	84
9	84
29	85
18	85
25	85
23	84
9	84
17	86
12	85
104	86
81	86
46	86
35	86
115	86
69	85
92	85
58	85
35	86
30	86
28	86
23	86
35	85
46	85
81	85

v_c m/min	Feed column no.	
35	86	86
33	85	85
35	86	86
33	85	85
35	85	85
33	85	85
22	85	85
17	85	85
13	84	84
28	86	86
17	85	85
11	84	84
17	85	85
13	84	84
19	85	85
17	84	84
17	84	84
11	84	84
18	85	85
13	84	84
15	84	84
9	84	84
28	85	85
18	85	85
24	85	85
22	84	84
9	84	84
17	86	86
11	85	85
99	86	86
77	86	86
44	86	86
33	86	86
110	86	86
66	85	85
88	85	85
55	85	85
33	86	86
29	86	86
26	86	86
22	86	86
33	85	85
44	85	85
77	85	85

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Tools with bold feed column no. are preferred choice.

For exact definition of tools please refer to the "Standard range and technical data" pages.

For multi-fluted countersinking tools the Ø-range for the respective flute no. is in brackets.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Pilot
Std. range page

Counter-sink Ø mm	Feed column no. 81	82	83	84	85	86
	f (mm/rev.)					
2.00	0.03	0.04	0.06	0.08	0.10	0.13
2.50	0.03	0.05	0.07	0.10	0.13	0.16
3.15	0.03	0.05	0.08	0.11	0.15	0.20
4.00	0.04	0.06	0.09	0.13	0.17	0.22
5.00	0.04	0.07	0.10	0.14	0.18	0.23
6.30	0.04	0.07	0.12	0.15	0.19	0.24
8.00	0.05	0.08	0.13	0.16	0.20	0.25
10.00	0.06	0.09	0.14	0.17	0.22	0.26
12.50	0.06	0.10	0.15	0.19	0.23	0.28
16.00	0.07	0.11	0.17	0.21	0.26	0.31
20.00	0.08	0.13	0.18	0.23	0.28	0.33
25.00	0.09	0.15	0.21	0.26	0.30	0.38
31.50	0.12	0.17	0.24	0.30	0.36	0.42
40.00	0.14	0.21	0.28	0.34	0.40	0.46
50.00	0.17	0.24	0.31	0.36	0.42	0.48
63.00	0.20	0.27	0.33	0.38	0.44	0.50
80.00	0.23	0.30	0.35	0.40	0.46	0.52
100.00	0.25	0.30	0.35	0.40	0.46	0.52

Coolant:
○ Air
● Neat oil
◍ Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◍
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◍
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◍
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◍
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◍
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◍
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◍
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◍
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◍
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◍
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◍
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◍
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◍○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◍○
Spheroidal graphite iron and malleable cast iron	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◍
	0.7070 EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◍
Chilled cast iron	–		≤350 HB	◍
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◍
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◍
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◍
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◍
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◍
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◍
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◍
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◍●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◍○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◍○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◍○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◍○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◍○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◍ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ AlTiN SuperA

Counterbores

482	483	484	463	485	486	487
373	373	373	375	G.S.	G.S.	G.S.
HSS	HSS	HSS	HSS	HSS	HSS	HSS
○	○	○	●	●	●	●
with fixed pilot			detach.	with fixed pilot		
1389	1391	1393	1395	1390	1392	1394

324	325	326
373	373	373
HSS	HSS	HSS
S	S	S
with fixed pilot		
1389	1391	1393

Spot facers

432	433	434	435
1862	1862	1862	1862
HSS-E	HSS-E	HSS-E	HSS-E
●	●	●	●
1399	1400	1401	1402

v_c m/min	Feed column no.							v_c m/min	Feed column no.			v_c m/min	Feed column no.			
32	85	85	85	85	85	85	85	35	85	85	85	30	82	83	83	83
30	85	85	85	85	85	85	85	33	85	85	85	27	82	82	82	82
32	85	85	85	85	85	85	85	35	85	85	85	30	**82**	**83**	**83**	**83**
30	85	85	85	85	85	85	85	33	85	85	85	27	82	82	82	82
32	85	85	85	85	85	85	85	35	85	85	85	30	82	82	82	82
30	85	85	85	85	85	85	85	33	85	85	85	27	82	82	82	82
20	84	84	84	84	84	84	84	22	84	84	84	24	**81**	**82**	**82**	**82**
15	84	84	84	84	84	84	84	17	84	84	84	20	**81**	**82**	**82**	**82**
12	84	84	84	84	84	84	84	13	84	84	84	15	**81**	**81**	**81**	**81**
25	85	85	85	85	85	85	85	28	85	85	85	28	82	83	83	83
15	84	84	84	84	84	84	84	17	84	84	84	18	**81**	**82**	**82**	**82**
10	84	84	84	84	84	84	84	11	84	84	84	12	**81**	**81**	**81**	**81**
15	85	85	85	84	85	85	85	17	85	85	85	18	**81**	**82**	**82**	**82**
12	84	84	84	84	84	84	84	13	84	84	84	15	**81**	**81**	**81**	**81**
17	84	84	84	84	84	84	84	19	84	84	84	20	81	82	82	82
15	84	84	84	84	84	84	84	17	84	84	84	17	**81**	**81**	**81**	**81**
15	84	84	84	84	84	84	84	17	84	84	84	20	**81**	**81**	**81**	**81**
10	84	84	84	84	84	84	84	11	84	84	84	12	81	81	81	81
16	84	84	84	84	84	84	84	18	84	84	84	12	81	82	82	82
12	84	84	84	84	84	84	84	13	84	84	84	6	81	81	81	81
14	84	84	84	84	84	84	84	15	84	84	84	8	81	81	81	81
8	84	84	84	84	84	84	84	9	84	84	84	8	81	81	81	81
25	85	85	85	85	85	85	85	28	85	85	85	12	82	82	82	82
16	84	84	84	84	84	84	84	18	84	84	84	10	81	82	82	82
22	84	84	84	84	84	84	84	24	84	84	84	10	81	82	82	82
20	84	84	84	84	84	84	84	22	84	84	84	8	81	81	81	81
8	84	84	84	84	84	84	84	9	84	84	84	5	81	81	81	81
15	85	85	85	85	85	85	85	17	85	85	85	10	82	83	83	83
10	85	85	85	85	85	85	85	11	85	85	85	7	82	82	82	82
90	85	85	85	85	85	85	85	99	85	85	85	100	82	83	83	83
70	86	86	86	86	86	86	86	77	86	86	86	80	83	84	84	84
40	85	85	85	85	85	85	85	44	85	85	85	80	82	83	83	83
30	85	85	85	85	85	85	85	33	85	85	85	70	82	83	83	83
100	86	86	86	86	86	86	86	110	86	86	86	75	83	84	84	84
60	84	84	84	84	84	84	84	66	84	84	84	50	81	82	82	82
80	85	85	85	85	85	85	85	88	85	85	85	60	82	82	82	82
50	85	85	85	85	85	85	85	55	85	85	85	45	82	82	82	82
30	86	86	86	86	86	86	86	33	86	86	86	40	83	84	84	84
26	86	86	86	86	86	86	86	29	86	86	86	36	**83**	**84**	**84**	**84**
24	86	86	86	86	86	86	86	26	86	86	86	35	83	84	84	84
20	86	86	86	86	86	86	86	22	86	86	86	28	83	84	84	84
30	84	84	84	84	84	84	84	33	84	84	84	25	81	82	82	82
40	85	85	85	85	85	85	85	44	85	85	85	32	82	82	82	82
70	84	84	84	84	84	84	84	77	84	84	84	60	81	82	82	82

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Tools with bold feed column no. are preferred choice.

For exact definition of tools please refer to the "Standard range and technical data" pages.

For multi-fluted countersinking tools the Ø-range for the respective flute no. is in brackets.

To select the optimal tool and the recommended machining parameters for your application, please also use the electronic version of the GuhringNavigator on the internet: www.guehring.de.

Guhring no.
Standard/DIN
Tool material
Surface finish
Type
Std. range page

Counter-sink Ø mm	Feed column no.					
	81	**82**	**83**	**84**	**85**	**86**
	f (mm/rev.)					
2.00	0.03	0.04	0.06	0.08	0.10	0.13
2.50	0.03	0.05	0.07	0.10	0.13	0.16
3.15	0.03	0.05	0.08	0.11	0.15	0.20
4.00	0.04	0.06	0.09	0.13	0.17	0.22
5.00	0.04	0.07	0.10	0.14	0.18	0.23
6.30	0.04	0.07	0.12	0.15	0.19	0.24
8.00	0.05	0.08	0.13	0.16	0.20	0.25
10.00	0.06	0.09	0.14	0.17	0.22	0.26
12.50	0.06	0.10	0.15	0.19	0.23	0.28
16.00	0.07	0.11	0.17	0.21	0.26	0.31
20.00	0.08	0.13	0.18	0.23	0.28	0.33
25.00	0.09	0.15	0.21	0.26	0.30	0.38
31.50	0.12	0.17	0.24	0.30	0.36	0.42
40.00	0.14	0.21	0.28	0.34	0.40	0.46
50.00	0.17	0.24	0.31	0.36	0.42	0.48
63.00	0.20	0.27	0.33	0.38	0.44	0.50
80.00	0.23	0.30	0.35	0.40	0.46	0.52
100.00	0.25	0.30	0.35	0.40	0.46	0.52

Coolant:
○ Air
● Neat oil
◍ Soluble oil

Material group	Material examples, new description (old description in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm²)	Hardness	Coolant
Common structural steels	**1.0035** S185(St33), **1.0486** P275N(StE285), **1.0345** P235GH(H1), **1.0425** P265GH(H2)	≤500		◍
	1.0050 E295 (St50-2), **1.0070** E360 (St70-2), **1.8937** P500NH (WStE500)	≤1000		◍
Free-cutting steels	**1.0718** 11SMnPb30 (9SMnPb28), **1.0736** 11SMn37 (9SMn36)	≤850		◍
	1.0727 46S20 (45S20), **1.0728** (60S20), **1.0757** 46SPb20 (45SPb20)	≤1000		◍
Unalloyed heat-treatable steels	**1.0402** C22, **1.1178** C30E (Ck30)	≤700		◍
	1.0503 C45, **1.1191** C45E (Ck45)	≤850		◍
	1.0601 C60, **1.1221** C60E (Ck60)	≤1000		◍
Alloyed heat-treatable steels	**1.5131** 50MnSi4, **1.7003** 38Cr2, **1.7030** 28Cr4	≤1000		◍
	1.5710 36NiCr6, **1.7035** 41Cr4, **1.7225** 42CrMo4	≤1400		◍
Unalloyed case hardened steels	**1.0301** (C10), **1.1121** C10E (Ck10)	≤850		◍
Alloyed case hardened steels	**1.7276** 10CrMo11, **1.5125** 11MnSi6	≤1000		●
	1.5752 15NiCr13, **1.7131** 16MnCr5, **1.7264** 20CrMo5	≤1400		●
Nitriding steels	**1.8504** 34CrAl6	≤1000		◍
	1.8519 31CrMoV9, **1.8550** 34CrAlNi7	≤1400		●
Tool steels	**1.1750** C75W, **1.2067** 102Cr6, **1.2307** 29CrMoV9	≤850		◍
	1.2080 X210Cr12, **1.2083** X42Cr13, **1.2419** 105WCr6, **1.2767** X45NiCrMo4	≤1400		●
High speed steels	**1.3243** S 6-5-2-5, **1.3343** S 6-5-2, **1.3344** S 6-5-3	≤1400		●
Spring steels	**1.5026** 55Si7, **1.7176** 55Cr3, **1.8159** 51CrV4 (51CrV4)		≤350 HB	●
Stainless steels, sulphured	**1.4005** X12CrS13, **1.4104** X14CrMoS17, **1.4105** X6CrMoS17, **1.4305** X8CrNiS18-9	≤900		●
austenitic	**1.4301** X5CrNi18-10 (V2A), **1.4541** X6CrNiTi18-10, **1.4571** X6CrNiMoTi 17-12-2 (V4A)	≤1100		●
martensitic	**1.4057** X20CrNi172 (X17CrNi16-2), **1.4122** X39CrMo17-1, **1.4521** X2CrMoTi18-2	≤1500		●
Hardened steels	–		≤48 HRC	●
			≤66 HRC	●
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		●
Cast iron	**0.6010** EN-GJL-100 (GG10), **0.6020** EN-GJL-200 (GG20)		≤240 HB	◍ ○
	0.6025 EN-GJL-250 (GG25), **0.6035** EN-GJL-350 (GG35)		≤350 HB	◍ ○
Spheroidal graphite iron and malleable cast iron	**0.7050** EN-GJS-500-7 (GGG50), **0.8035** EN-GJMW-350-4 (GTW35)		≤240 HB	◍
	0.7070 EN-GJS-700-2 (GGG70), **0.8170** EN-GJMB-700-2 (GTS70)		≤350 HB	◍
Chilled cast iron	–		≤350 HB	◍
Ti and Ti-alloys	**3.7024** Ti99,5, **3.7114** TiAl5Sn2,5, **3.7124** TiCu2	≤850		●
	3.7154 TiAl6Zr5, **3.7165** TiAl6V4, **3.7184** TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤1400		●
Aluminium and Al-alloys	**3.0255** Al99,5, **3.2315** AlMgSi1, **3.3515** AlMg1	≤400		◍
Al wrought alloys	**3.0615** AlMgSiPb, **3.1325** AlCuMg1, **3.3245** AlMg3Si, **3.4365** AlZnMgCu1,5	≤650		◍
Al cast alloys ≤ 10 % Si	**3.2131** G-AlSi5Cu1, **3.2153** G-AlSi7Cu3, **3.2573** G-AlSi9	≤600		◍
≤ 24 % Si	**3.2581** G-AlSi12, **3.2583** G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		◍
Magnesium alloys	**3.5200** MgMn2, **3.5812.05** G-MgAl8Zn1, **3.5612.05** G-MgAl6Zn1	≤400		○
Copper, low-alloyed	**2.0070** SE-Cu, **2.1020** CuSn6, **2.1096** G-CuSn5ZnPb	≤500		◍
Brass, short-chipping	**2.0380** CuZn39Pb2, **2.0401** CuZn39Pb3, **2.0410** CuZn43Pb2	≤600		◍
long-chipping	**2.0250** CuZn20, **2.0280** CuZn33, **2.0332** CuZn37Pb0,5	≤600		◍
Bronze, short-chipping	**2.1090** CuSn7ZnPb, **2.1170** CuPb5Sn5, **2.1176** CuPb10Sn	≤600		◍ ●
	2.0790 CuNi18Zn19Pb	≤850		●
Bronze, long-chipping	**2.0916** CuAl5, **2.0960** CuAl9Mn, **2.1050** CuSn10	≤850		●
	2.0980 CuAl11Ni, **2.1247** CuBe2	≤1000		●
Duroplastics	Bakelit, Resopal, Pertinax, Moltopren	≤150		○
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		◍ ○
New cast materials GGV	**EN-GJV250** (GGV25), **EN-GJV350** (GGV35)		≤220 HB	◍ ○
	EN-GJV400 (GGV40), **EN-GJV500** (GGV50), SiMo 6		≤300 HB	◍ ○
New cast materials ADI	**EN-GJS-800-8** (ADI800), **EN-GJS-1000-5** (ADI1000)	≤1000		◍ ○
	EN-GJS-1200-2 (ADI1200), **EN-GJS-1400-1** (ADI1400)	≤1400		◍ ○
Kevlar	Kevlar	≤1000		○
Glass, carbon concentrated plastics	GFK/CFK	≤1000		○

○ bright ◍ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ AlTiN SuperA

Pilot counterbores

1601	1602	1603	1604
G.S.	G.S.	G.S.	G.S.
HSS	HSS	Carbide	Carbide
○	○	○	○
KS 125	KS 140	KS 108	KS 115
1406	1407	1408	1409

Spotfacers

1606
G.S.
Carbide
○
KS 100
1410

Taper countersinks

1622
G.S.
HSS
○
KS 100
1411

v_c m/min	Feed column no.		v_c m/min	Feed column no.		v_c m/min	Feed column no.	v_c m/min	Feed column no.
30	82	**82**	50	83	82	53	83	30	**85**
27	82	**82**	45	82	82	48	82	27	**85**
30	82	**82**	45	83	82	48	83	30	**85**
27	82	**82**	35	82	82	37	82	27	**85**
30	82	**82**	45	82	82	48	82	30	**85**
27	82	**82**	40	82	82	42	82	27	**85**
24	81	**81**	30	82	82	32	82	24	**84**
20	81	**81**	30	82	82	32	82	20	**84**
15	**81**	81	22	81	81	23	81	15	**84**
28	82	**82**	50	83	82	53	83	28	**85**
18	81	**81**	35	82	82	37	82	18	84
12	**81**	81	20	81	81	21	81	12	84
18	**81**	**81**	35	82	82	37	82	18	84
15	**81**	81	20	81	81	21	81	15	84
20	81	**81**	40	82	82	42	82	20	**84**
17	81	**81**	35	81	81	37	81	17	**84**
20	81	**81**	35	81	81	37	81	20	84
12	**81**	81	25	81	81	27	81	12	84
12	81	**81**	37	82	82	39	82	12	84
6	81	**81**	33	81	81	35	81	6	84
8	81	**81**	35	81	82	37	81	8	84
8	81	81	16	81	81	17	81	8	84
12	**82**	82	50	**84**	83	53	84	12	**85**
10	**81**	81	40	**83**	82	42	83	10	**84**
10	**81**	81	50	83	82	53	83	10	**84**
8	**81**	81	40	82	82	42	82	8	**84**
5	**81**	81	20	81	81	21	81	5	84
10	82	**82**	20	83	81	21	83	10	85
7	82	**82**	15	82	81	16	82	7	85
100	82	**82**	80	83	84	84	83	100	**85**
80	83	**83**	80	84	84	84	84	80	**86**
80	82	**82**	60	**83**	84	63	**83**	80	**85**
70	82	**82**	45	**83**	83	48	**83**	70	**85**
75	83	**83**	80	84	84	84	84	75	86
50	81	**81**	80	82	82	84	82	50	84
60	**82**	**82**	50	**82**	83	53	**82**	60	**85**
45	**82**	**82**	40	82	84	42	82	45	**85**
40	**83**	**83**	35	**84**	82	37	**84**	40	86
36	**83**	**83**	30	**84**	82	32	**84**	36	86
35	83	83	25	84	82	27	84	35	86
28	83	83	22	84	81	23	84	28	86
25	81	81	50	82	83	53	82	25	84
32	82	82	80	82	84	84	82	32	85
60	81	81	50	82	83	53	82	60	84

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Countersinking

60° countersinks

three-fluted
radial relief ground

Guhring no.	**472**
Standard	**DIN 334**
Tool material	**HSS**
Surface	○
Type	
Cutting direction	right-hand
Form	C
Tolerance	
Discount group	105
Standard range page	1371

60° countersinks

Multi-fluted
straight-fluted
with relief-ground

Guhring no.	**470**
Standard	**DIN 334**
Tool material	**HSS**
Surface	● >Ø 8,00
Type	
Cutting direction	right-hand
Form	A
Tolerance	
Discount group	105
Standard range page	1372

60° countersinks

three-fluted
radial relief ground

Guhring no.	**473**
Standard	**DIN 334**
Tool material	**HSS**
Surface	●
Type	
Cutting direction	right-hand
Form	D
Tolerance	
Discount group	105
Standard range page	1373

60° countersinks

Multi-fluted
straight-fluted
with relief-ground
Ø 100.00 mm to Guhring standard

Guhring no.	**471**
Standard	**DIN 334**
Tool material	**HSS**
Surface	●
Type	
Cutting direction	right-hand
Form	B
Tolerance	
Discount group	105
Standard range page	1374

90° countersinks

Multi-fluted
straight-fluted
with relief-ground

Guhring no.	**474**
Standard	**DIN 335**
Tool material	**HSS**
Surface	● >Ø 8,00
Type	
Cutting direction	right-hand
Form	A
Tolerance	
Discount group	105
Standard range page	1375

○ bright ● steam tempered ◐ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

90° countersinks

three-fluted
radial relief ground

Guhring no.	**476**
Standard	**DIN 335**
Tool material	**HSS**
Surface	◯
Type	
Cutting direction	right-hand
Form	C
Tolerance	
Discount group	105
Standard range page	1376

90° countersinks

three-fluted
radial relief ground

Guhring no.	**1326**
Standard	**DIN 335**
Tool material	**HSS**
Surface	A
Type	
Cutting direction	right-hand
Form	C
Tolerance	
Discount group	105
Standard range page	1376

90° countersinks

three-fluted
radial relief ground

Guhring no.	**327**
Standard	**DIN 335**
Tool material	**HSS**
Surface	S
Type	
Cutting direction	right-hand
Form	C
Tolerance	
Discount group	105
Standard range page	1376

90° countersinks

three-fluted
radial relief ground
Ø 100.00 mm to Guhring standard

Guhring no.	**477**
Standard	**DIN 335**
Tool material	**HSS**
Surface	◯
Type	
Cutting direction	right-hand
Form	D
Tolerance	
Discount group	105
Standard range page	1377

90° countersinks

three-fluted
radial relief ground

Guhring no.	**328**
Standard	**DIN 335**
Tool material	**HSS**
Surface	S
Type	
Cutting direction	right-hand
Form	D
Tolerance	
Discount group	105
Standard range page	1377

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90° countersinks

Multi-fluted
straight-fluted
with relief-ground
Ø 100.00 mm to Guhring standard

Guhring no.	475
Standard	DIN 335
Tool material	HSS
Surface	
Type	
Cutting direction	right-hand
Form	B
Tolerance	
Discount group	105
Standard range page	1378

90° countersinks

three-fluted
radial relief ground

Set in case,
consisting of Guhring no. 476,
nom.-Ø:
6.30 mm
8.30 mm
10.40 mm
12.40 mm
16.50 mm
20.50 mm

Guhring no.	498
Standard	DIN 335
Tool material	HSS
Surface	
Type	
Cutting direction	right-hand
Form	C
Tolerance	
Discount group	105
Standard range page	1379

90° countersinks

radial relief ground
three-fluted

Set in case,
consisting of Guhring no. 327,
nom.-Ø:
6.30 mm
8.30 mm
10.40 mm
12.40 mm
16.50 mm
20.50 mm

Guhring no.	499
Standard	DIN 335
Tool material	HSS
Surface	S
Type	
Cutting direction	right-hand
Form	C
Tolerance	
Discount group	105
Standard range page	1379

90° countersinks for fine tolerances

right hand spiral flutes
with fixed pilot
Ø 19.00 mm to Guhring standard

Guhring no.	436
Standard	DIN 1866
Tool material	HSS
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1380

90° countersinks for medial tolerances

right hand spiral flutes
with fixed pilot
Ø 21.50 mm to Guhring standard

Guhring no.	437
Standard	DIN 1866
Tool material	HSS
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1381

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90° countersinks for tapping size holes

right hand spiral flutes
with fixed pilot
Ø 19.00 mm to Guhring standard

Guhring no.	**438**
Standard	**DIN 1866**
Tool material	**HSS**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1382

120° countersinks

Multi-fluted
straight-fluted
with relief-ground
≤ 12.50 mm and Ø 20.00 mm to Guhring standard

Guhring no.	**478**
Standard	**DIN 347**
Tool material	**HSS**
Surface	>Ø 8,00
Type	
Cutting direction	right-hand
Form	A
Tolerance	
Discount group	105
Standard range page	1383

120° countersinks

three-fluted
similar DIN 347
radial relief ground

Guhring no.	**480**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1384

120° countersinks

three-fluted
similar DIN 347
radial relief ground

Guhring no.	**481**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1385

120° countersinks

Multi-fluted
straight-fluted
with relief-ground
≤ 20.00 mm and Ø 100.00 mm to Guhring standard

Guhring no.	**479**
Standard	**DIN 347**
Tool material	**HSS**
Surface	
Type	
Cutting direction	right-hand
Form	B
Tolerance	
Discount group	105
Standard range page	1386

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Counterbores with fixed pilots for fine tolerances

right hand spiral flutes
with fixed pilot

Guhring no.	482
Standard	DIN 373
Tool material	HSS
Surface	○
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1387

Counterbores with fixed pilots for fine tolerances

right hand spiral flutes
with fixed pilot

Guhring no.	324
Standard	DIN 373
Tool material	HSS
Surface	S
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1387

Counterbores with fixed pilots for fine tolerances

right hand spiral flutes
with fixed pilot

For fine tolerance clearance holes to DIN ISO 273

Guhring no.	485
Standard	Guhring std.
Tool material	HSS
Surface	●
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1388

Counterbores with fixed pilots for medial tolerances

right hand spiral flutes
with fixed pilot

For countersinks to DIN 974, part 1

Guhring no.	483
Standard	DIN 373
Tool material	HSS
Surface	○
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1389

Counterbores with fixed pilots for medial tolerances

right hand spiral flutes
with fixed pilot

For countersinks to DIN 974, part 1

Guhring no.	325
Standard	DIN 373
Tool material	HSS
Surface	S
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1389

○ bright ● steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Counterbores with fixed pilots for medial tolerances

right hand spiral flutes
with fixed pilot

For countersinks to DIN 974, part 1
For fine tolerance clearance holes to DIN ISO 273

Guhring no.	**486**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1390

Counterbores with fixed pilots for tapping size holes

right hand spiral flutes
with fixed pilot

Guhring no.	**484**
Standard	**DIN 373**
Tool material	**HSS**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1391

Counterbores with fixed pilots for tapping size holes

right hand spiral flutes
with fixed pilot

For countersinks to DIN 974, part 1

Guhring no.	**326**
Standard	**DIN 373**
Tool material	**HSS**
Surface	S
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1391

Counterbores with fixed pilots for tapping size holes

right hand spiral flutes
with fixed pilot

For tapping size holes to DIN 336, page 1

Guhring no.	**487**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1392

Counterbores with hole for detachable pilot

right hand spiral flutes

For countersinks to DIN 974, part 1
to suit detachable pilot:
Guhring no. 464 for fine tolerances
Guhring no. 465 for medial tolerances
Guhring no. 466 for tapping size holes

Guhring no.	**463**
Standard	**DIN 375**
Tool material	**HSS**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1393

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Spot facers

right hand spiral flutes
Internal drawbolt thread M6 to DIN 228, part 1, form A

Guhring no.	**432**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1397

Spot facers

right hand spiral flutes
Internal drawbolt thread M10 to DIN 228, part 1, form A

Guhring no.	**433**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1398

Spot facers

right hand spiral flutes
Internal drawbolt thread M12 to DIN 228, part 1, form A

Guhring no.	**434**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1399

Spot facers

right hand spiral flutes
Internal drawbolt thread M16 to DIN 228, part 1, form A

Guhring no.	**435**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	
Type	
Cutting direction	right-hand
Form	
Tolerance	
Discount group	105
Standard range page	1400

bright | steam tempered | nitrided lands | nitrided | golden brown | TiAlN | TiAlN nanoA | TiAlN SuperA

De-burring forks

with shank
to DIN 6535
für die Aufnahme in Hydraulik-Dehnspannfutter und Schrumpffutter
with internal coolant supply

for internal and external de-burring
universal for tooling, milling, turning and robotic applications.

Guhring no.	**4101**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Surface	◯
Type	EW 100 G
Cutting direction	right-hand
Form	
Tolerance	
Discount group	120
Standard range page	1401

De-burring forks

mit durchgängig zylindrischem Schaft für die Aufnahme in Spannzangen
with internal coolant supply

for internal and external de-burring
universal for tooling, milling, turning and robotic applications.

Guhring no.	**4100**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Surface	◯
Type	EW 100 G
Cutting direction	right-hand
Form	
Tolerance	
Discount group	120
Standard range page	1402

Front/back deburrer 90°

with shank
to DIN 6535
für die Aufnahme in Hydraulik-Dehnspannfutter und Schrumpffutter

for internal and external de-burring
of holes and contours

Guhring no.	**495**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Surface	a
Type	EW 100 VR
Cutting direction	right-hand
Form	
Tolerance	
Discount group	120
Standard range page	1403

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Pilot counterbores

Multi-fluted
Tolerance on Ø k8
helix angle 18°
Clearance angle 6°
with drawbolt thread
with detachable pilot

Guhring no.	1601
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	KS 125
Cutting direction	right-hand
Form	
Tolerance	k8
Discount group	104
Standard range page	1404

Pilot counterbores

Multi-fluted
Tolerance on Ø k8
Helix angle: ≤ Ø 8.5 mm 25°, > Ø 8.5 mm 30°
Clearance angle 6°
with drawbolt thread from taper size 1 onwards
with detachable pilot

Guhring no.	1602
Standard	Guhring std.
Tool material	HSS
Surface	◯
Type	KS 140
Cutting direction	right-hand
Form	
Tolerance	k8
Discount group	104
Standard range page	1405

Pilot counterbores

three-fluted
Tolerance on Ø k8
Helix angle: ≤ Ø 13 mm 8°, > Ø 13 mm 12°
Clearance angle 6°
≤ Ø 8.5 mm without screwed shank
> Ø 8.5 mm with screwed shank
with detachable pilot

Guhring no.	1603
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	KS 108
Cutting direction	right-hand
Form	
Tolerance	k8
Discount group	104
Standard range page	1406

Pilot counterbores

three-fluted
Tolerance on Ø k8
helix angle 15°
Clearance angle 6°
with drawbolt thread
with detachable pilot

Guhring no.	1604
Standard	Guhring std.
Tool material	Carbide
Surface	◯
Type	KS 115
Cutting direction	right-hand
Form	
Tolerance	k8
Discount group	104
Standard range page	1407

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Spotfacers

Multi-fluted
Tolerance on Ø k10
helix angle 0°
Clearance angle 6°
without screwed shank
with detachable pilot

Guhring no.	**1606**
Standard	**Guhring std.**
Tool material	**Carbide**
Surface	◯
Type	KS 100
Cutting direction	right-hand
Form	
Tolerance	k10
Discount group	104
Standard range page	1408

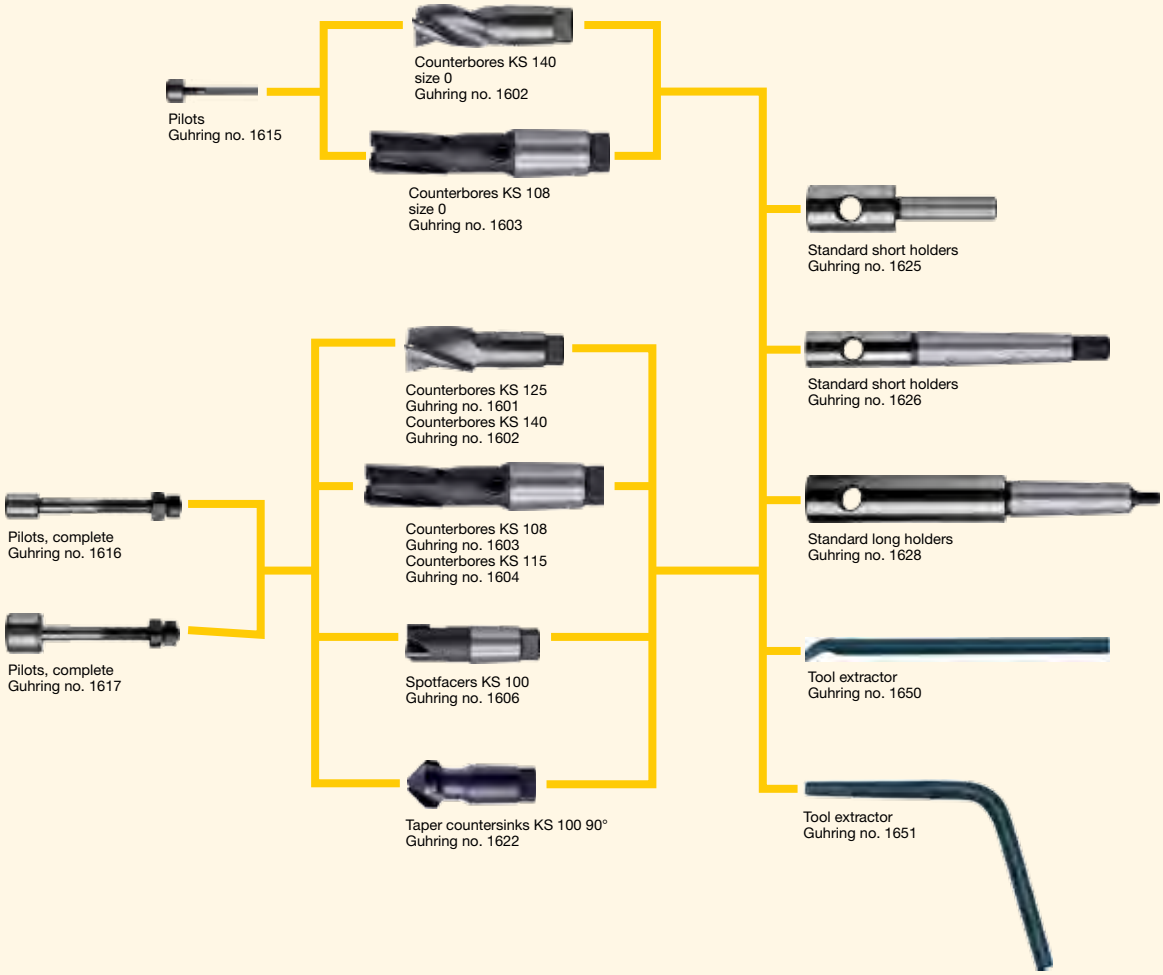
90° countersinks

three-fluted
helix angle 20°
Axial relief ground
with drawbolt thread

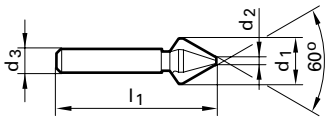
Guhring no.	**1622**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	◯
Type	KS 100
Cutting direction	right-hand
Form	
Tolerance	
Discount group	104
Standard range page	1409

Short counterbore system without tool safety device

for use with conventional machines



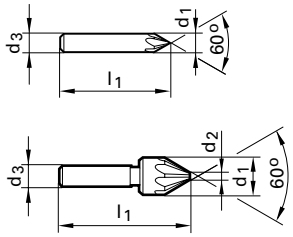
Guhring no.	**472**
Standard	**DIN 334**
Tool material	**HSS**
Surface	◯
Form	**C**
Discount group	**105**
Techn. data page	**1360**



d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
6.300	5.000	45.00	1.600	3	●
8.000	6.000	50.00	2.000	3	●
12.500	8.000	56.00	3.200	3	●
16.000	10.000	63.00	4.000	3	●
20.000	10.000	67.00	5.000	3	●
25.000	10.000	71.00	6.300	3	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

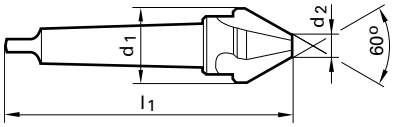
Guhring no.	**470**
Standard	**DIN 334**
Tool material	**HSS**
Surface	>Ø 8,00
Form	**A**
Discount group	**105**
Techn. data page	**1360**



d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
8.000	8.000	50.00		5	●
12.500	8.000	50.00	2.000	5	●
16.000	10.000	60.00	3.200	7	●
20.000	10.000	63.00	5.000	7	●

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

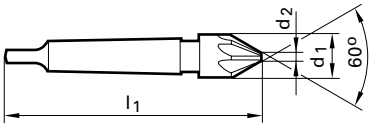
Guhring no.	**473**
Standard	**DIN 334**
Tool material	**HSS**
Surface	
Form	**D**
Discount group	**105**
Techn. data page	**1360**



d1	MK	l1	d2	Z	Availability
mm		mm	mm		
16.000	1	90.00	4.000	3	●
20.000	2	106.00	5.000	3	●
25.000	2	112.00	6.300	3	●
31.500	2	118.00	10.000	3	●
40.000	3	150.00	12.500	3	●
50.000	3	160.00	16.000	3	●
63.000	4	190.00	20.000	3	●
80.000	4	200.00	25.000	3	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

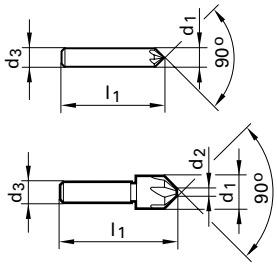
Guhring no.	**471**
Standard	**DIN 334**
Tool material	**HSS**
Surface	●
Form	**B**
Discount group	**105**
Techn. data page	**1360**



d1	MK	l1	d2	Z	Availability
mm		mm	mm		
16.000	1	100.00	3.200	7	●
25.000	2	125.00	7.000	9	●
31.500	2	132.00	9.000	9	●
40.000	3	160.00	12.000	11	●
50.000	3	170.00	16.000	13	○
100.000	4	224.00	31.500	17	●

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

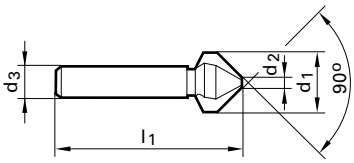
Guhring no.	**474**
Standard	**DIN 335**
Tool material	**HSS**
Surface	>Ø 8,00
Form	**A**
Discount group	**105**
Techn. data page	**1360**



d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
8.000	8.000	48.00		5	●
12.500	8.000	48.00	2.000	5	●
16.000	10.000	56.00	3.200	7	●
20.000	10.000	60.00	5.000	7	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

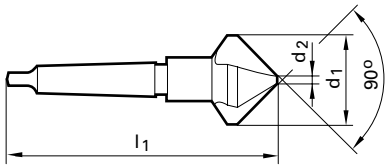
Guhring no.	476	1326	327
Standard	DIN 335	DIN 335	DIN 335
Tool material	HSS	HSS	HSS
Surface	○	A	S
Form	C	C	C
Discount group	105	105	105
Techn. data page	1361	1361	1361



d1 mm	d3 mm	l1 mm	d2 mm	Z	Availability	Availability	Availability
4.300	4.000	40.00	1.300	3	●	●	
5.000	4.000	40.00	1.500	3	●	○	●
5.300	4.000	40.00	1.500	3	●		
5.800	5.000	45.00	1.500	3	●	○	
6.000	5.000	45.00	1.500	3	●	●	
6.300	5.000	45.00	1.500	3	●	●	●
7.000	6.000	50.00	1.800	3	●	○	
7.300	6.000	50.00	1.800	3	●		
8.000	6.000	50.00	2.000	3	●	●	●
8.300	6.000	50.00	2.000	3	●	●	●
9.400	6.000	50.00	2.200	3	●		●
10.000	6.000	50.00	2.500	3	●	●	●
10.400	6.000	50.00	2.500	3	●	●	●
11.500	8.000	56.00	2.800	3	●	○	●
12.400	8.000	56.00	2.800	3	●	●	●
13.400	8.000	56.00	2.900	3	●	○	●
15.000	10.000	60.00	3.200	3	●	●	●
16.500	10.000	60.00	3.200	3	●	●	●
19.000	10.000	63.00	3.500	3	●	●	
20.500	10.000	63.00	3.500	3	●	●	●
23.000	10.000	67.00	3.800	3	●	●	
25.000	10.000	67.00	3.800	3	●	●	●
26.000	10.000	67.00	3.800	3	●	●	
28.000	12.000	71.00	4.000	3	●	○	
30.000	12.000	71.00	4.200	3	●	●	●
31.000	12.000	71.00	4.200	3	●	●	●

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

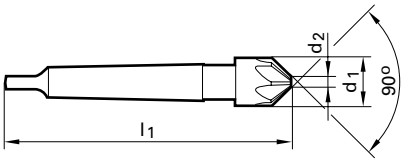
Guhring no.	477	328
Standard	DIN 335	DIN 335
Tool material	HSS	HSS
Surface	○	S
Form	D	D
Discount group	105	105
Techn. data page	1361	1361



d1	MK	l1	d2	Z	Availability	Availability
mm		mm	mm			
15.000	1	85.00	3.200	3	●	
16.500	1	85.00	3.200	3	●	
19.000	2	100.00	3.500	3	❍	
20.500	2	100.00	3.500	3	●	
23.000	2	106.00	3.800	3	●	
25.000	2	106.00	3.800	3	●	●
26.000	2	106.00	3.800	3	❍	
28.000	2	112.00	4.000	3	●	
30.000	2	112.00	4.200	3	●	
31.000	2	112.00	4.200	3	●	●
34.000	2	118.00	4.500	3	●	
37.000	2	118.00	4.800	3	●	●
40.000	3	140.00	10.000	3	●	●
50.000	3	150.00	14.000	3	●	●
63.000	4	180.00	16.000	3	●	
80.000	4	190.00	22.000	3	●	
100.000	4	200.00	28.000	3	●	

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Guhring no.	**475**
Standard	**DIN 335**
Tool material	**HSS**
Surface	
Form	**B**
Discount group	**105**
Techn. data page	**1362**



d1	MK	l1	d2	Z	Availability
mm		mm	mm		
16.000	1	95.00	3.200	7	●
20.000	2	106.00	5.000	7	●
25.000	2	118.00	7.000	9	●
31.500	2	122.00	9.000	9	●
40.000	3	150.00	12.000	11	●
50.000	3	155.00	16.000	13	●
63.000	4	185.00	20.000	15	●
80.000	4	196.00	25.000	17	●
100.000	4	212.00	31.500	17	○

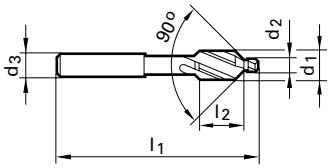
○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

Guhring no.	498	499
Standard	DIN 335	
Tool material	HSS	
Surface	◯	S
Form	C	C
Discount group	105	105
Techn. data page	1362	1362

d1 mm	no. per set	Code no.	Availability	
6,30-20,50	6.00	7.000	●	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

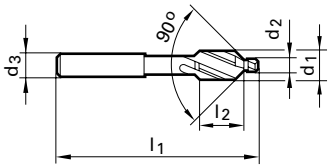
Guhring no.	**436**
Standard	**DIN 1866**
Tool material	**HSS**
Surface	○
Form	
Discount group	**105**
Techn. data page	**1362**



d1	d2	d3	l1	l2	Z	thread	Availability
mm	mm	mm	mm	mm			
2.000	1.100	2.000	45.00	7.00	2	M 1	❍
2.500	1.300	2.500	45.00	7.00	2	M 1,2	❍
2.800	1.500	2.800	45.00	7.00	2	M 1,4	❍
3.300	1.700	3.300	56.00	10.00	2	M 1,6	❍
3.800	2.000	3.800	56.00	10.00	2	M 1,8	❍
4.300	2.200	4.300	56.00	10.00	2	M 2	●
5.000	2.700	5.000	56.00	10.00	2	M 2,5	●
6.000	3.200	5.000	71.00	14.00	3	M 3	●
8.000	4.300	5.000	71.00	14.00	3	M 4	●
10.000	5.300	8.000	80.00	18.00	3	M 5	●
11.500	6.400	8.000	80.00	18.00	3	M 6	●
15.000	8.400	12.500	100.00	22.00	3	M 8	●
19.000	10.500	12.500	100.00	22.00	3	M10	❍

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

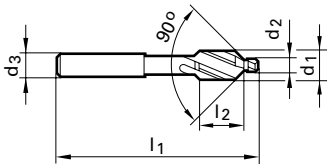
Guhring no.	**437**
Standard	**DIN 1866**
Tool material	**HSS**
Surface	○
Form	
Discount group	**105**
Techn. data page	**1362**



d1	d2	d3	l1	l2	Z	thread	Availability
mm	mm	mm	mm	mm			
6.600	3.400	5.000	71.00	14.00	3	M 3	●
7.600	3.900	5.000	71.00	14.00	3	M 3,5	❍
9.000	4.500	8.000	80.00	18.00	3	M 4	●
11.000	5.500	8.000	80.00	18.00	3	M 5	●
13.000	6.600	12.500	100.00	22.00	3	M 6	●
17.200	9.000	12.500	100.00	22.00	3	M 8	●
21.500	11.000	12.500	100.00	22.00	3	M10	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

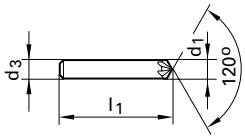
Guhring no.	**438**
Standard	**DIN 1866**
Tool material	**HSS**
Surface	○
Form	
Discount group	**105**
Techn. data page	**1363**

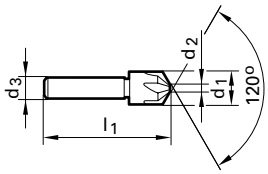


d1	d2	d3	l1	l2	Z	thread	Availability
mm	mm	mm	mm	mm			
6.000	2.500	5.000	71.00	14.00	3	M 3	●
7.000	2.900	5.000	71.00	14.00	3	M 3,5	❍
8.000	3.300	5.000	71.00	14.00	3	M 4	●
10.000	4.200	8.000	80.00	18.00	3	M 5	●
11.500	5.000	8.000	80.00	18.00	3	M 6	●
15.000	6.800	12.500	100.00	22.00	3	M 8	●
19.000	8.500	12.500	100.00	22.00	3	M10	❍

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**478**
Standard	**DIN 347**
Tool material	**HSS**
Surface	>Ø 8,00
Form	**A**
Discount group	**105**
Techn. data page	**1363**

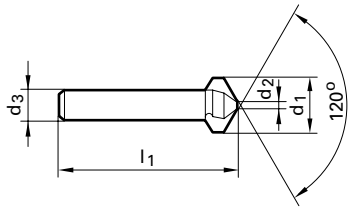




d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
8.000	8.000	42.00	2.000	5	●
12.500	8.000	42.00	2.000	5	●
16.000	10.000	53.00	3.200	7	●
20.000	10.000	56.00	5.000	7	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

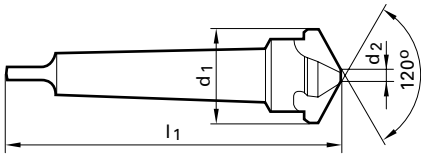
Guhring no.	**480**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	○
Form	
Discount group	**105**
Techn. data page	**1363**



d1	d3	l1	d2	Z	Availability
mm	mm	mm	mm		
16.000	10.000	53.00	4.000	3	●

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

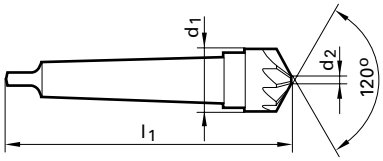
Guhring no.	**481**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Form	
Discount group	**105**
Techn. data page	**1363**



d1	MK	l1	d2	Z	Availability
mm		mm	mm		
25.000	2	112.00	6.300	3	●
40.000	3	140.00	12.500	3	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

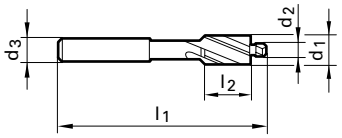
Guhring no.	**479**
Standard	**DIN 347**
Tool material	**HSS**
Surface	
Form	**B**
Discount group	**105**
Techn. data page	**1363**



d1	MK	l1	d2	Z	Availability
mm		mm	mm		
25.000	2	112.00	7.000	9	❍
40.000	3	140.00	12.000	11	❍
63.000	4	170.00	20.000	15	❍
100.000	4	200.00	31.500	17	❍

bright | steam tempered | nitrided lands | nitrided | golden brown | TiAlN | TiAlN nanoA | TiAlN SuperA

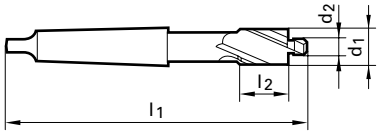
Guhring no.	**482**	**324**
Standard	**DIN 373**	**DIN 373**
Tool material	**HSS**	**HSS**
Surface	○	S
Form		
Discount group	**105**	**105**
Techn. data page	**1364**	**1364**



d1	d2	d3	l1	l2	Z	thread	Availability	Availability
mm	mm	mm	mm	mm				
2.200	1.100	2.200	45.00	7.00	2	M 1	❍	
2.500	1.300	2.500	45.00	7.00	2	M 1,2	❍	
3.800	1.800	3.800	56.00	10.00	2	M 1,7	❍	
4.300	2.200	4.300	56.00	10.00	2	M 2	●	
5.500	2.800	5.000	71.00	14.00	3	M 2,6	●	
6.000	3.200	5.000	71.00	14.00	3	M 3	●	
6.500	3.700	5.000	71.00	14.00	3	M 3,5	❍	
8.000	4.300	5.000	71.00	14.00	3	M 4	●	●
10.000	5.300	8.000	80.00	18.00	3	M 5	●	●
11.000	6.400	8.000	80.00	18.00	3	M 6	●	●
15.000	8.400	12.500	100.00	22.00	3	M 8	●	●
18.000	10.500	12.500	100.00	22.00	3	M10	●	●
20.000	13.000	12.500	100.00	22.00	3	M12	●	●

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

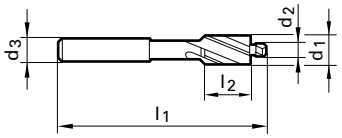
Guhring no.	**485**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Form	
Discount group	**105**
Techn. data page	**1364**



d1	d2	MK	l1	l2	Z	thread	Availability
mm	mm		mm	mm			
18.000	10.500	2	150.00	25.00	3	M10	○
20.000	13.000	2	150.00	25.00	3	M12	●
24.000	15.000	2	162.00	30.00	3	M14	●
26.000	17.000	3	192.00	35.00	3	M16	●
30.000	19.000	3	192.00	35.00	3	M18	●
33.000	21.000	3	204.00	40.00	3	M 20	●
40.000	25.000	3	204.00	40.00	3	M 24	●

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

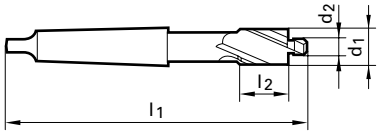
Guhring no.	**483**	**325**
Standard	**DIN 373**	**DIN 373**
Tool material	**HSS**	**HSS**
Surface	○	S
Form		
Discount group	**105**	**105**
Techn. data page	**1364**	**1364**



d1	d2	d3	l1	l2	Z	thread	Availability	Availability
mm	mm	mm	mm	mm				
6.000	3.400	5.000	71.00	14.00	3	M 3	●	○
8.000	4.500	5.000	71.00	14.00	3	M 4	●	●
10.000	5.500	8.000	80.00	18.00	3	M 5	●	●
11.000	6.600	8.000	80.00	18.00	3	M 6	●	●
15.000	9.000	12.500	100.00	22.00	3	M 8	●	●
18.000	11.000	12.500	100.00	22.00	3	M10	●	●
20.000	13.500	12.500	100.00	22.00	3	M12	●	

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

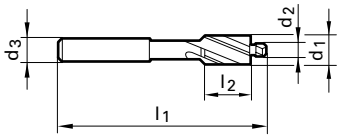
Guhring no.	**486**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Form	
Discount group	**105**
Techn. data page	**1365**



d1	d2	MK	l1	l2	Z	thread	Availability
mm	mm		mm	mm			
18.000	11.000	2	150.00	25.00	3	M10	●
20.000	13.500	2	150.00	25.00	3	M12	●
24.000	15.500	2	162.00	30.00	3	M14	◐
26.000	17.500	3	192.00	35.00	3	M16	●
33.000	22.000	3	204.00	40.00	3	M 20	●
40.000	26.000	3	204.00	40.00	3	M 24	●

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

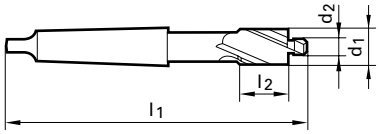
Guhring no.	**484**	**326**
Standard	**DIN 373**	**DIN 373**
Tool material	**HSS**	**HSS**
Surface	○	S
Form		
Discount group	**105**	**105**
Techn. data page	**1365**	**1365**



d1	d2	d3	l1	l2	Z	thread	Availability	Availability
mm	mm	mm	mm	mm				
6.000	2.500	5.000	71.00	14.00	3	M 3	●	●
8.000	3.300	5.000	71.00	14.00	3	M 4	●	●
10.000	4.200	8.000	80.00	18.00	3	M 5	●	○
11.000	5.000	8.000	80.00	18.00	3	M 6	●	○
15.000	6.800	12.500	100.00	22.00	3	M 8	●	
18.000	8.500	12.500	100.00	22.00	3	M10	●	○
20.000	10.200	12.500	100.00	22.00	3	M12	●	

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

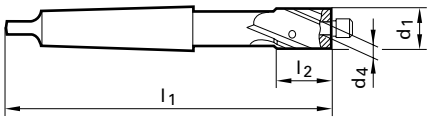
Guhring no.	**487**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	
Form	
Discount group	**105**
Techn. data page	**1365**



d1	d2	MK	l1	l2	Z	thread	Availability
mm	mm		mm	mm			
20.000	10.200	2	150.00	25.00	3	M12	❍
24.000	12.000	2	162.00	30.00	3	M14	❍
26.000	14.000	3	192.00	35.00	3	M16	●

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

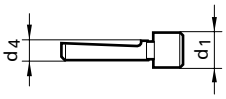
Guhring no.	**463**
Standard	**DIN 375**
Tool material	**HSS**
Surface	
Form	
Discount group	**105**
Techn. data page	**1365**



d1	MK	d4 H8	l1	l2	Z	Availability
mm		mm	mm	mm		
15.000	2	4.000	132.00	22.00	3	●
18.000	2	5.000	140.00	25.00	3	❍
20.000	2	5.000	140.00	25.00	3	●
24.000	2	6.000	150.00	30.00	3	●
26.000	3	8.000	180.00	35.00	3	●
30.000	3	8.000	180.00	35.00	3	●
33.000	3	10.000	190.00	40.00	3	●
63.000	4	16.000	250.00	63.00	4	❍

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

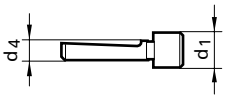
Guhring no.	**464**
Standard	**DIN 1868**
Discount group	**105**
Techn. data page	



d1	d4	G	for	Code no.	Availability
mm	mm		mm		
8.400	4.000	M8	15,0	8.404	❍
8.400	5.000	M8	18,0/20,0	8.405	❍
10.500	5.000	M10	18,0/20,0	10.505	❍
10.500	6.000	M10	24,0	10.506	❍
13.000	5.000	M12	20,0	13.005	❍
13.000	6.000	M12	24,0	13.006	❍
13.000	8.000	M12	26,0	13.008	❍
15.000	6.000	M14	24,0	15.006	❍
15.000	8.000	M14	26,0/30,0	15.008	❍
17.000	8.000	M16	26,0/30,0	17.008	❍
17.000	10.000	M16	33,0	17.010	❍
19.000	8.000	M18	30,0	19.008	❍
19.000	10.000	M18	33,0/36,0	19.010	❍
21.000	10.000	M20	33,0/36,0/40,0	21.010	❍
23.000	10.000	M22	36,0/40,0	23.010	❍
23.000	12.000	M22	43,0	23.012	❍
25.000	10.000	M24	40,0	25.010	❍
25.000	12.000	M24	43,0/46,0	25.012	❍

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

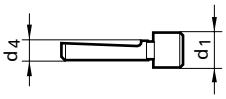
Guhring no.	**465**
Standard	**DIN 1868**
Discount group	**105**
Techn. data page	



d1	d4	G	for	Code no.	Availability
mm	mm		mm		
9.000	4.000	M8	15,0	9.004	❍
9.000	5.000	M8	18,0/20,0	9.005	❍
11.000	5.000	M10	18,0/20,0	11.005	❍
11.000	6.000	M10	24,0	11.006	❍
13.500	5.000	M12	20,0	13.505	❍
13.500	6.000	M12	24,0	13.506	❍
13.500	8.000	M12	26,0	13.508	❍
15.500	6.000	M14	24,0	15.506	❍
15.500	8.000	M14	26,0/30,0	15.508	❍
17.500	8.000	M16	26,0/30,0	17.508	❍
17.500	10.000	M16	33,0	17.510	❍
20.000	8.000	M18	30,0	20.008	❍
20.000	10.000	M18	33,0/36,0	20.010	❍
22.000	10.000	M20	33,0/36,0/40,0	22.010	❍
24.000	10.000	M22	36,0/40,0	24.010	❍
24.000	12.000	M22	43,0	24.012	❍
26.000	10.000	M24	40,0	26.010	❍
26.000	12.000	M24	43,0/46,0	26.012	❍
30.000	12.000	M27	43,0/46,0	30.012	❍
30.000	16.000	M27	53,0	30.016	❍
33.000	12.000	M30	48,0	33.012	❍
33.000	16.000	M30	53,0/61,0	33.016	❍
36.000	16.000	M33	53,0/57,0	36.016	❍
39.000	16.000	M36	57,0/61,0	39.016	❍

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

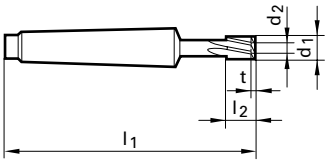
Guhring no.	**466**
Standard	**DIN 1868**
Discount group	**105**
Techn. data page	



d1	d4	G	for	Code no.	Availability
mm	mm		mm		
6.800	4.000	M8	15,0	6.804	❍
6.800	5.000	M8	18,0/20,0	6.805	❍
8.500	5.000	M10	18,0/20,0	8.505	❍
8.500	6.000	M10	24,0	8.506	❍
10.200	5.000	M12	20,0	10.205	❍
10.200	6.000	M12	24,0	10.206	❍
10.200	8.000	M12	26,0	10.208	❍
12.000	6.000	M14	24,0	12.006	❍
12.000	8.000	M14	26,0/30,0	12.008	❍
14.000	8.000	M16	26,0/30,0	14.008	❍
14.000	10.000	M16	30,0	14.010	❍
15.500	8.000	M18	30,0	15.508	❍
15.500	10.000	M18	33,0/36,0	15.510	❍
17.500	10.000	M20	33,0/36,0/40,0	17.510	❍
19.500	10.000	M22	36,0/40,0	19.510	❍
19.500	12.000	M22	43,0	19.512	❍
21.000	10.000	M24	40,0	21.010	❍
21.000	12.000	M24	43,0/46,0	21.012	❍
24.000	12.000	M27	43,0/46,0	24.012	❍
24.000	16.000	M27	53,0	24.016	❍
26.500	12.000	M30	48,0	26.512	❍
26.500	16.000	M30	53,0/61,0	26.516	❍
29.500	16.000	M33	53,0/57,0	29.516	❍
32.000	16.000	M36	57,0/61,0	32.016	❍

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

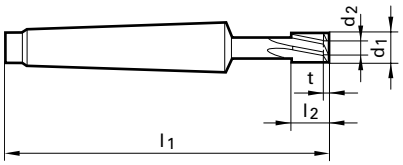
Guhring no.	**432**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	
Form	
Tolerance	
Discount group	**105**
Techn. data page	**1366**



d1	MK	d2	l1	l2	t	Z	Availability
mm		mm	mm	mm	mm		
3.500	1		80.00	5.00		4	❍
4.500	1		80.00	5.00		4	❍
5.500	1		85.00	8.00		4	❍
11.000	1	5.000	95.00	16.00	1.50	6	❍
13.000	1	5.000	95.00	16.00	1.50	6	❍

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

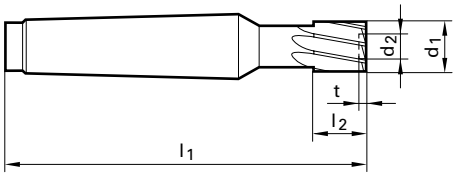
Guhring no.	**433**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	●
Form	
Tolerance	
Discount group	**105**
Techn. data page	**1366**



d1	MK	d2	l1	l2	t	Z	Availability
mm		mm	mm	mm	mm		
6.000	2		112.00	10.00		6	●
8.000	2		112.00	10.00		6	○
10.000	2	5.000	112.00	16.00	1.50	6	●
12.000	2	5.000	112.00	16.00	1.50	6	●
13.000	2	5.000	112.00	16.00	1.50	6	○
14.000	2	6.000	125.00	20.00	2.00	6	○
15.000	2	6.000	125.00	20.00	2.00	6	●
16.000	2	8.000	125.00	20.00	2.00	8	●
18.000	2	10.000	125.00	20.00	2.00	8	●
23.000	2	12.000	125.00	25.00	3.00	8	○
25.000	2	12.000	125.00	25.00	3.00	8	○
27.000	2	15.000	125.00	25.00	3.50	8	○
28.000	2	15.000	125.00	25.00	3.50	8	○
29.000	2	15.000	125.00	25.00	3.50	8	○
30.000	2	15.000	125.00	25.00	3.50	8	○

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

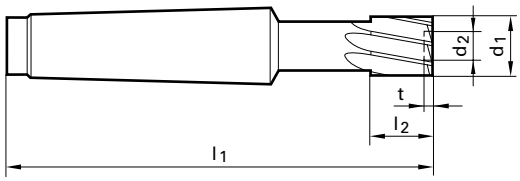
Guhring no.	**434**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	
Form	
Tolerance	
Discount group	**105**
Techn. data page	**1366**



d1	MK	d2	l1	l2	t	Z	Availability
mm		mm	mm	mm	mm		
10.000	3	5.000	125.00	16.00	1.50	6	❍
11.000	3	5.000	125.00	16.00	1.50	6	❍
13.000	3	5.000	125.00	16.00	1.50	6	❍
14.000	3	6.000	135.00	20.00	2.00	6	❍
18.000	3	10.000	135.00	20.00	2.00	8	❍
20.000	3	12.000	145.00	25.00	3.00	8	❍
22.000	3	12.000	145.00	25.00	3.00	8	❍
23.000	3	12.000	145.00	25.00	3.00	8	❍
25.000	3	12.000	145.00	25.00	3.00	8	❍
27.000	3	15.000	145.00	25.00	3.50	8	❍
28.000	3	15.000	145.00	25.00	3.50	8	❍
29.000	3	15.000	145.00	25.00	3.50	8	❍
30.000	3	15.000	145.00	25.00	3.50	8	❍

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

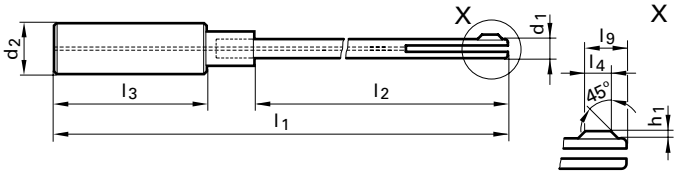
Guhring no.	**435**
Standard	**DIN 1862**
Tool material	**HSS-E**
Surface	
Form	
Tolerance	
Discount group	**105**
Techn. data page	**1366**



d1	MK	d2	l1	l2	t	Z	Availability
mm		mm	mm	mm	mm		
20.000	4	12.000	175.00	25.00	3.00	8	❍
21.000	4	12.000	175.00	25.00	3.00	8	❍
22.000	4	12.000	175.00	25.00	3.00	8	❍
23.000	4	12.000	175.00	25.00	3.00	8	❍
24.000	4	12.000	175.00	25.00	3.00	8	❍
25.000	4	12.000	175.00	25.00	3.00	8	❍
26.000	4	15.000	175.00	25.00	3.50	8	❍
27.000	4	15.000	175.00	25.00	3.50	8	❍
28.000	4	15.000	175.00	25.00	3.50	8	❍
29.000	4	15.000	175.00	25.00	3.50	8	❍
30.000	4	15.000	175.00	25.00	3.50	8	❍
31.000	4	15.000	175.00	25.00	3.50	8	❍
33.000	4	16.000	195.00	32.00	3.50	10	❍
34.000	4	16.000	195.00	32.00	3.50	10	❍
35.000	4	16.000	195.00	32.00	3.50	10	❍
37.000	4	18.000	195.00	32.00	4.00	10	❍
38.000	4	18.000	195.00	32.00	4.00	10	❍
39.000	4	18.000	195.00	32.00	4.00	10	❍
41.000	4	20.000	210.00	40.00	4.00	10	❍
43.000	4	20.000	210.00	40.00	4.00	10	❍
44.000	4	20.000	210.00	40.00	4.00	10	❍
45.000	4	22.000	210.00	40.00	4.50	10	❍
46.000	4	22.000	210.00	40.00	4.50	10	❍
47.000	4	22.000	210.00	40.00	4.50	10	❍
48.000	4	22.000	210.00	40.00	4.50	10	❍

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

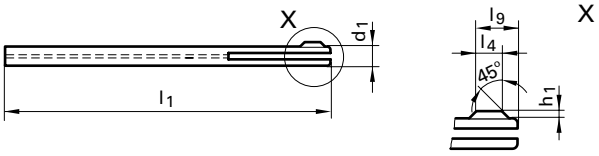
Guhring no.	4101
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	○
Type	EW 100 G
Discount group	120
Techn. data page	1367



nom. Ø	d1	for Ø range	d2	l1	l2	l3	l4	l9	h1	Availability
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
2.000	1.900	1,91 - 2,15	6.000	120.00	69.00	36.00	1.00	2.05	0.35	●
2.250	2.100	2,16 - 2,40	6.000	120.00	69.00	36.00	1.50	2.60	0.40	●
2.500	2.400	2,41 - 2,70	6.000	120.00	69.00	36.00	1.50	2.90	0.40	●
2.750	2.600	2,71 - 2,90	6.000	130.00	79.00	36.00	1.50	2.95	0.45	❍
3.000	2.900	2,91 - 3,25	6.000	130.00	79.00	36.00	2.00	3.65	0.45	●
3.500	3.200	3,26 - 3,60	10.000	135.00	80.00	40.00	2.00	3.80	0.60	❍
4.000	3.600	3,61 - 4,25	10.000	135.00	80.00	40.00	2.00	4.10	0.70	●
4.500	4.200	4,26 - 4,75	10.000	135.00	80.00	40.00	2.50	4.60	0.70	●
5.000	4.700	4,76 - 5,30	10.000	145.00	80.00	40.00	2.50	4.85	0.75	●
5.500	5.200	5,31 - 5,80	10.000	145.00	90.00	40.00	2.50	4.85	0.75	●
6.000	5.600	5,81 - 6,20	10.000	155.00	90.00	40.00	3.00	5.80	0.80	●
6.500	6.000	6,21 - 6,70	16.000	165.00	102.00	48.00	3.00	5.90	0.90	●
7.000	6.500	6,71 - 7,10	16.000	165.00	102.00	48.00	3.00	5.85	0.85	●
7.500	6.900	7,11 - 7,60	16.000	165.00	102.00	48.00	3.50	6.95	0.95	❍
8.000	7.300	7,61 - 8,05	16.000	165.00	102.00	48.00	3.50	7.00	1.00	●

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	4100
Standard	Guhring std.
Tool material	Solid carbide
Carbide grade	K
Surface	○
Type	EW 100 G
Discount group	120
Techn. data page	1367

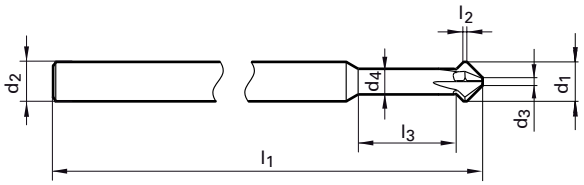


nom. Ø	d1	for Ø range	l1	l4	l9	h1	Availability
mm	mm	mm	mm	mm	mm	mm	
2.000	1.900	1,91 - 2,15	80.00	1.00	2.05	0.35	●
2.250	2.100	2,16 - 2,40	80.00	1.50	2.60	0.40	●
2.500	2.400	2,41 - 2,70	80.00	1.50	2.90	0.40	●
2.750	2.600	2,71 - 2,90	90.00	1.50	2.95	0.45	●
3.000	2.900	2,91 - 3,25	90.00	2.00	3.65	0.45	●
3.500	3.200	3,26 - 3,60	90.00	2.00	3.80	0.60	●
4.000	3.600	3,61 - 4,25	90.00	2.00	4.10	0.70	●
4.500	4.200	4,26 - 4,75	90.00	2.50	4.60	0.70	●
5.000	4.700	4,76 - 5,30	100.00	2.50	4.85	0.75	●
5.500	5.200	5,31 - 5,80	100.00	2.50	4.85	0.75	●
6.000	5.600	5,81 - 6,20	110.00	3.00	5.80	0.80	●
6.500	6.000	6,21 - 6,70	110.00	3.00	5.90	0.90	●
7.000	6.500	6,71 - 7,10	110.00	3.00	5.85	0.85	○
7.500	6.900	7,11 - 7,60	110.00	3.50	6.95	0.95	○
8.000	7.300	7,61 - 8,05	110.00	3.50	7.00	1.00	●

○ bright ◐ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**495**
Standard	**Guhring std.**
Tool material	**Solid carbide**
Carbide grade	**K/P**
Surface	a
Type	**EW 100 VR**
Discount group	**120**
Techn. data page	**1367**

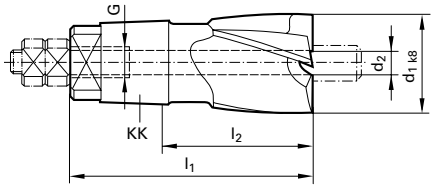
NEW



d1 h8	d2 h6	d3	d4	l1	l2	l3	Availability
mm	mm	mm	mm	mm	mm	mm	
3.000	4.000	0.600	2.200	75.00	0.50	9.40	●
4.000	4.000	0.800	2.900	75.00	0.50	12.40	●
5.000	5.000	1.000	3.900	75.00	0.50	15.00	●
6.000	6.000	1.200	3.900	100.00	0.50	14.30	●
8.000	6.000	1.600		100.00	0.50	59.00	●
10.000	6.000	2.000		100.00	0.50	53.00	●
12.000	6.000	2.400		100.00	0.50	46.00	●

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

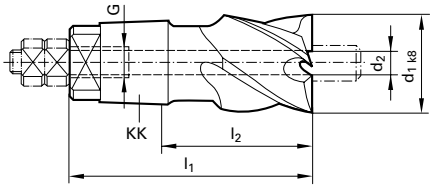
Guhring no.	1601
Standard	Guhring std.
Tool material	HSS
Surface	○
Type	KS 125
Tolerance	
Discount group	104
Techn. data page	1368



d1	d2	G	KK	l1	l2	Z	Availability
mm	mm			mm	mm		
12.000	3.000	M 4	1	40.00	25.00	3	❍
12.500	3.000		1	40.00	25.00	3	❍
14.000	4.000	M 5	2	48.00	30.00	3	❍
14.500	4.000	M 5	2	48.00	30.00	3	❍
15.000	4.000	M 5	2	48.00	30.00	3	❍
16.000	4.000	M 5	2	48.00	30.00	3	❍
18.000	5.000	M 6	3	56.00	34.00	4	❍
20.000	5.000	M 6	3	56.00	34.00	4	❍
21.000	5.000	M 6	3	56.00	34.00	4	❍
23.000	6.000	M 8	4	61.00	38.00	4	❍
25.000	6.000	M 8	4	61.00	37.00	4	❍
26.000	6.000	M 8	4	61.00	38.00	4	❍
28.000	6.000	M 8	4	61.00	38.00	4	❍
30.000	6.000	M 8	4	61.00	38.00	4	❍
52.000	9.000	M12	5 1/2	68.00	39.00	4	❍
53.000	9.000	M12	5 1/2	68.00	39.00	4	❍
55.000	9.000	M12	5 1/2	68.00	39.00	4	❍
57.000	9.000	M12	5 1/2	68.00	39.00	4	❍

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

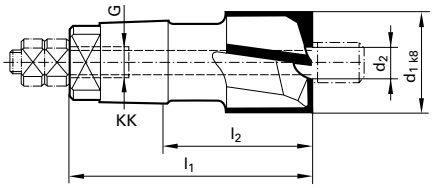
Guhring no.	**1602**
Standard	**Guhring std.**
Tool material	**HSS**
Carbide grade	
Surface	◯
Type	**KS 140**
Tolerance	
Discount group	**104**
Techn. data page	**1368**



d1	d2	G	KK	l1	l2	Z	Code no.	Availability
mm	mm		mm	mm	mm			
5.000	1.700		0	35.00	22.00	3	5.000	❍
6.500	2.000		0	35.00	22.00	3	6.500	❍
7.000	2.500		0	35.00	22.00	3	7.000	❍
8.000	2.500		0	35.00	22.00	3	8.000	❍
8.500	2.500	M 4	0	35.00	22.00	3	8.500	❍
9.000	3.000	M 4	1	40.00	25.00	3	9.000	❍
10.000	3.000	M 4	1	40.00	25.00	3	10.000	❍
13.000	3.000	M 4	1	40.00	25.00	3	13.000	❍
13.001	4.000	M 5	2	48.00	25.00	3	13.001	❍
14.000	3.000	M 4	1	40.00	25.00	3	14.000	❍
14.000	4.000	M 5	2	48.00	30.00	3	14.001	❍
14.500	4.000	M 5	1	40.00	30.00	3	14.500	❍
14.500	4.000	M 5	2	48.00	30.00	3	14.501	❍
16.001	3.000	M 4	2	48.00	25.00	3	16.001	❍
17.500	3.000	M 4	1	40.00	25.00	3	17.500	❍
18.000	3.000	M 4	1	40.00	25.00	4	18.000	❍
18.000	5.000	M 6	3	56.00	34.00	4	18.002	❍
20.000	4.000	M 5	2	48.00	30.00	4	20.000	❍
20.000	5.000	M 6	3	56.00	34.00	4	20.001	❍
21.000	5.000	M 6	3	56.00	34.00	4	21.001	❍
22.000	4.000	M 5	2	48.00	30.00	4	22.000	❍
22.000	5.000	M 6	3	56.00	34.00	4	22.001	❍
23.500	6.000	M 8	4	61.00	37.00	4	23.501	❍
24.001	5.000	M 6	4	61.00	34.00	4	24.001	❍
25.000	5.000	M 6	3	56.00	34.00	4	25.000	❍
25.000	6.000	M 8	4	61.00	37.00	4	25.001	❍
26.000	6.000	M 8	4	61.00	37.00	4	26.001	❍
28.000	5.000	M 6	3	56.00	34.00	4	28.000	❍
28.000	6.000	M 8	4	61.00	37.00	4	28.001	❍
32.000	6.000	M 8	4	61.00	37.00	4	32.000	❍
33.000	6.000	M 8	4	61.00	37.00	4	33.000	❍
40.000	8.000	M10	5	67.00	39.00	4	40.000	❍
45.000	8.000	M10	5	67.00	39.00	4	45.000	❍

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

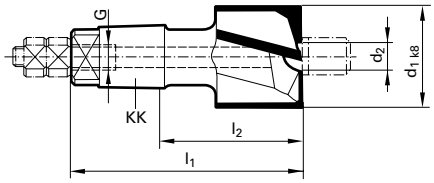
Guhring no.	**1603**
Standard	**Guhring std.**
Tool material	**Carbide**
Carbide grade	**K15**
Surface	◯
Type	**KS 108**
Tolerance	
Discount group	**104**
Techn. data page	**1368**



d1	d2	G	KK	l1	l2	Z	Code no.	Availability
mm	mm		mm	mm	mm			
5.900	2.400		0	35.00	22.00	3	5.900	❍
6.300	2.400		0	35.00	22.00	3	6.300	❍
6.800	2.400		0	35.00	22.00	3	6.800	❍
7.500	3.000		0	35.00	22.00	3	7.500	❍
10.000	3.700	M 4	1	40.00	40.00	3	10.000	❍
11.000	3.700	M 4	1	40.00	25.50	3	11.000	❍
15.000	5.500	M 5	2	48.00	30.00	3	15.000	❍
16.000	5.500	M 5	2	48.00	30.00	3	16.000	❍
17.000	5.500	M 5	2	48.00	30.00	3	17.000	❍
17.500	5.500	M 5	2	48.00	30.00	3	17.500	❍
18.000	6.600	M 6	3	56.00	34.00	3	18.000	❍
20.000	6.600	M 6	3	56.00	34.00	3	20.000	❍
21.000	6.600	M 6	3	56.00	34.00	3	21.000	❍
22.000	6.600	M 6	3	56.00	34.00	3	22.000	❍
24.000	7.700	M 8	4	61.00	37.00	3	24.000	❍
25.000	7.700	M 8	4	61.00	37.00	3	25.000	❍
26.000	7.700	M 8	4	61.00	37.00	3	26.000	❍
33.000	7.700	M 8	4	61.00	37.00	3	33.000	❍
57.000	12.700	M12	5 1/2	68.00	39.00	3	57.000	❍
58.000	12.700	M12	6	70.00	39.00	3	58.000	❍
66.000	13.800	M12	6	70.00	39.00	3	66.000	❍
67.000	13.800	M12	6	70.00	39.00	3	67.000	❍
74.000	15.700	M14	7	80.00	46.00	3	74.000	❍
75.000	15.700	M14	7	80.00	46.00	3	75.000	❍

◯ bright ◯ steam tempered ◓ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**1604**
Standard	**Guhring std.**
Tool material	**Carbide**
Carbide grade	**M20**
Surface	◯
Type	**KS 115**
Tolerance	
Discount group	**104**
Techn. data page	**1368**

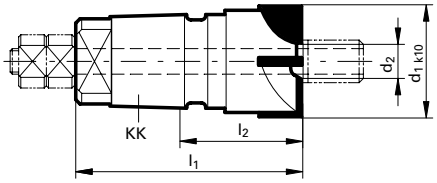


d1	d2	G	KK	l1	l2	Z	Code no.	Availability
mm	mm		mm	mm	mm			
55.000	12.700	M12	5 1/2	68.00	39.00	3	55.000	❍
66.000	13.700	M12	6	70.00	39.00	3	66.000	❍
67.000	13.800	M12	6	70.00	39.00	3	67.000	❍
73.000	15.700	M14	7	80.00	46.00	3	73.000	❍
74.000	15.700	M14	7	80.00	46.00	3	74.000	❍

Countersinks

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

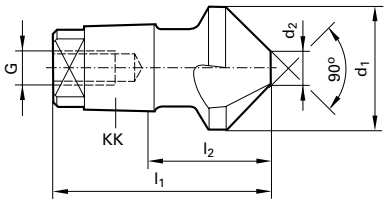
Guhring no.	**1606**
Standard	**Guhring std.**
Tool material	**Carbide**
Carbide grade	**K15**
Surface	○
Type	**KS 100**
Discount group	**104**
Techn. data page	**1369**



d1	d2	KK	l1	l2	Z	Availability
mm	mm	mm	mm	mm		
9.000	4.000	1	32.00	17.50	3	❍
10.000	4.000	1	32.00	17.50	3	❍
12.000	4.000	1	32.00	17.50	3	❍
15.000	5.600	2	37.00	19.00	4	❍
37.000	9.600	5	56.00	28.50	4	❍
54.000	10.600	5 1/2	58.00	30.00	4	❍
57.000	10.600	5 1/2	58.00	30.00	4	❍
60.000	11.800	6	62.00	31.00	4	❍
66.000	11.800	6	62.00	31.00	4	❍
67.000	11.800	6	62.00	31.00	4	❍

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**1622**
Standard	**Guhring std.**
Tool material	**HSS**
Surface	◯
Type	**KS 100**
Tolerance	
Discount group	**104**
Techn. data page	**1369**



d1	d2	G	KK	l1	l2	Z	Availability
mm	mm			mm	mm		
12.000	3.000	M 4	1	33.00	18.00	3	❍
15.000	4.000	M 5	2	39.00	21.00	3	❍
20.000	5.000	M 6	3	46.00	24.00	3	❍
30.000	8.000	M 8	4	53.00	29.00	3	❍

Countersinks

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**1624**
Standard	**DIN 551**
Discount group	**104**
Techn. data page	

KK	G	l1	Code no.	Availability
		mm		
0	M 2,5	3.00	2.500	❍

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	1650	1651
Standard	Guhring std.	
Discount group	104	104
Techn. data page		

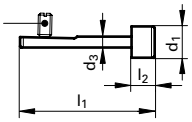
für KK	Code no.	Availability	
0	1.000		❍
1	1.100	❍	❍
2	1.200	❍	❍
3	1.300	❍	❍
4	1.400	❍	❍
5	1.500	❍	❍
5 1/2	1.550	❍	❍
6	1.600	❍	❍
7	1.700	❍	❍

Countersinks

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**1615**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	

Art.-Nr. 1624

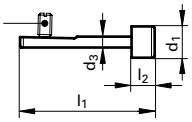


d1	d3	l1	l2	Code no.	Availability
mm	mm	mm	mm		
1.700	1.700	28.00	5.00	1.700	❍
1.800	1.700	28.00	5.00	1.800	❍
2.000	1.700	28.00	5.00	2.000	❍
2.000	2.000	28.00	5.00	2.001	❍
2.200	1.700	28.00	5.00	2.200	❍
2.200	2.000	28.00	5.00	2.201	❍
2.300	2.000	28.00	5.00	2.301	❍
2.400	2.000	28.00	5.00	2.401	❍
2.500	1.700	28.00	5.00	2.500	❍
2.500	2.000	28.00	5.00	2.501	❍
2.600	1.700	28.00	5.00	2.600	❍
2.600	2.000	28.00	5.00	2.601	❍
2.800	2.500	28.00	5.00	2.802	❍
2.900	1.700	28.00	5.00	2.900	❍
2.900	2.500	28.00	5.00	2.902	❍
3.000	1.700	28.00	5.00	3.000	❍
3.100	1.700	28.00	5.00	3.100	❍
3.100	2.000	28.00	5.00	3.101	❍
3.200	2.500	28.00	5.00	3.202	❍
3.300	2.500	28.00	5.00	3.302	❍
3.400	2.000	28.00	5.00	3.401	❍
3.500	2.000	28.00	5.00	3.501	❍
3.700	2.500	28.00	5.00	3.702	❍
3.800	1.700	28.00	5.00	3.800	❍
3.800	2.500	28.00	5.00	3.802	❍
3.900	2.500	28.00	5.00	3.902	❍
4.000	1.700	28.00	5.00	4.000	❍
4.000	2.000	28.00	5.00	4.001	❍
4.100	1.700	28.00	5.00	4.100	❍
4.100	2.000	28.00	5.00	4.101	❍
4.200	1.700	28.00	5.00	4.200	❍
4.200	2.500	28.00	5.00	4.202	❍
4.300	1.700	28.00	5.00	4.300	❍
4.300	2.000	28.00	5.00	4.301	❍
4.300	2.500	28.00	5.00	4.302	❍
4.400	1.700	28.00	5.00	4.400	❍
4.400	2.000	28.00	5.00	4.401	❍
4.400	2.500	28.00	5.00	4.402	❍
4.500	1.700	28.00	5.00	4.500	❍

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**1615**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	

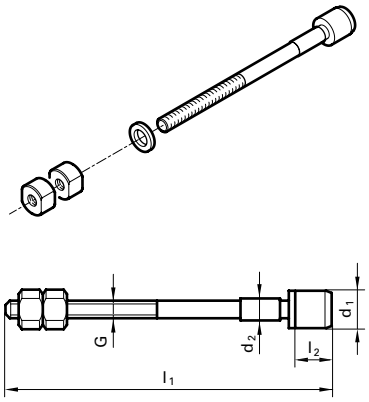
Art.-Nr. 1624



d1	d3	l1	l2	Code no.	Availability
mm	mm	mm	mm		
4.500	2.000	28.00	5.00	4.501	❍
4.500	2.500	28.00	5.00	4.502	❍
4.700	2.000	28.00	5.00	4.701	❍
4.700	2.500	28.00	5.00	4.702	❍
4.800	2.500	28.00	5.00	4.802	❍
4.900	2.500	28.00	5.00	4.902	❍
5.000	2.500	28.00	5.00	5.002	❍
5.100	2.000	28.00	5.00	5.101	❍
5.200	2.000	28.00	5.00	5.201	❍
5.200	2.500	28.00	5.00	5.202	❍
5.400	2.000	28.00	5.00	5.401	❍
5.400	2.500	28.00	5.00	5.402	❍
5.500	2.000	28.00	5.00	5.501	❍
5.600	2.000	28.00	5.00	5.601	❍
5.600	2.500	28.00	5.00	5.602	❍
5.700	2.500	28.00	5.00	5.702	❍
5.800	2.000	28.00	5.00	5.801	❍
5.900	2.000	28.00	5.00	5.901	❍
6.100	2.500	28.00	5.00	6.102	❍
6.300	2.500	28.00	5.00	6.302	❍
6.400	2.500	28.00	5.00	6.402	❍
6.500	2.500	28.00	5.00	6.502	❍
6.800	2.500	28.00	5.00	6.802	❍
6.900	2.500	28.00	5.00	6.902	❍
7.000	2.500	28.00	5.00	7.002	❍

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

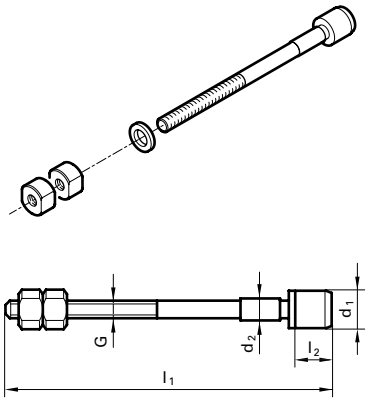
Guhring no.	**1616**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
3.200	1	3.000	M 3	60.00	7.00	3.200	○
3.300	1	3.000	M 3	60.00	7.00	3.300	○
3.400	1	3.000	M 3	60.00	7.00	3.400	○
3.600	1	3.000	M 3	60.00	7.00	3.600	○
3.800	1	3.000	M 3	60.00	7.00	3.800	○
3.900	1	3.000	M 3	60.00	7.00	3.900	○
4.000	1	3.000	M 3	60.00	7.00	4.000	○
4.100	1	3.000	M 3	60.00	7.00	4.100	○
4.100	2	4.000	M 4	71.00	10.00	4.101	○
4.300	1	3.000	M 3	60.00	7.00	4.300	○
4.300	2	4.000	M 4	71.00	10.00	4.301	○
4.400	2	4.000	M 4	71.00	10.00	4.401	○
4.600	2	4.000	M 4	71.00	10.00	4.601	○
4.700	2	4.000	M 4	71.00	10.00	4.701	○
4.800	2	4.000	M 4	71.00	10.00	4.801	○
5.000	1	3.000	M 3	60.00	7.00	5.000	○
5.100	1	3.000	M 3	60.00	7.00	5.100	○
5.200	1	3.000	M 3	60.00	7.00	5.200	○
5.200	3	5.000	M 5	81.00	10.00	5.202	○
5.300	1	3.000	M 3	60.00	7.00	5.300	○
5.300	3	5.000	M 5	81.00	10.00	5.302	○
5.400	1	3.000	M 3	60.00	7.00	5.400	○
5.400	2	4.000	M 4	71.00	10.00	5.401	○
5.400	3	5.000	M 5	81.00	10.00	5.402	○
5.500	1	3.000	M 3	60.00	7.00	5.500	○
5.500	2	4.000	M 4	71.00	10.00	5.501	○
5.600	2	4.000	M 4	71.00	10.00	5.601	○
5.600	3	5.000	M 5	81.00	10.00	5.602	○
5.700	2	4.000	M 4	71.00	10.00	5.701	○
5.700	3	5.000	M 5	81.00	10.00	5.702	○
5.800	1	3.000	M 3	60.00	7.00	5.800	○
5.800	2	4.000	M 4	71.00	10.00	5.801	○
5.900	3	5.000	M 5	81.00	10.00	5.902	○
6.000	4	6.000	M 6	88.00	12.00	6.003	○
6.100	1	3.000	M 3	60.00	7.00	6.100	○
6.100	2	4.000	M 4	71.00	10.00	6.101	○
6.100	3	5.000	M 5	81.00	10.00	6.102	○
6.100	4	6.000	M 6	88.00	12.00	6.103	○
6.200	3	5.000	M 5	81.00	10.00	6.202	○

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

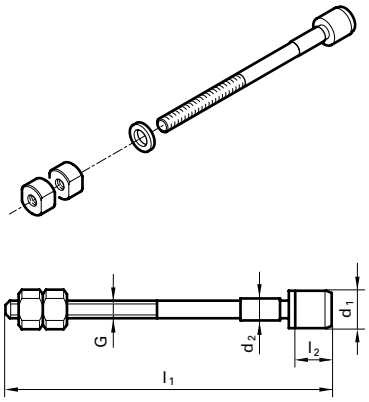
Guhring no.	**1616**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
6.300	1	3.000	M 3	60.00	7.00	6.300	○
6.300	2	4.000	M 4	71.00	10.00	6.301	○
6.300	3	5.000	M 5	81.00	10.00	6.302	○
6.300	4	6.000	M 6	88.00	12.00	6.303	○
6.400	1	3.000	M 3	60.00	7.00	6.400	○
6.400	4	6.000	M 6	88.00	12.00	6.403	○
6.500	2	4.000	M 4	71.00	10.00	6.501	○
6.500	4	6.000	M 6	88.00	12.00	6.503	○
6.600	1	3.000	M 3	60.00	7.00	6.600	○
6.600	3	5.000	M 5	81.00	10.00	6.602	○
6.700	1	3.000	M 3	60.00	7.00	6.700	○
6.900	2	4.000	M 4	71.00	10.00	6.901	○
7.000	3	5.000	M 5	81.00	10.00	7.002	○
7.100	2	4.000	M 4	71.00	10.00	7.101	○
7.100	4	6.000	M 6	88.00	12.00	7.103	○
7.200	1	3.000	M 3	60.00	7.00	7.200	○
7.300	1	3.000	M 3	60.00	7.00	7.300	○
7.400	1	3.000	M 3	60.00	7.00	7.400	○
7.500	3	5.000	M 5	81.00	10.00	7.502	○
7.500	4	6.000	M 6	88.00	12.00	7.503	○
7.600	1	3.000	M 3	60.00	7.00	7.600	○
7.600	2	4.000	M 4	71.00	10.00	7.601	○
7.600	3	5.000	M 5	81.00	10.00	7.602	○
7.600	4	6.000	M 6	88.00	12.00	7.603	○
7.700	1	3.000	M 3	60.00	7.00	7.700	○
7.700	2	4.000	M 4	71.00	10.00	7.701	○
7.800	3	5.000	M 5	81.00	10.00	7.802	○
7.900	1	3.000	M 3	60.00	7.00	7.900	○
8.000	1	3.000	M 3	60.00	7.00	8.000	○
8.000	4	6.000	M 6	88.00	12.00	8.003	○
8.000	5	8.000	M 8	103.00	18.00	8.004	○
8.100	2	4.000	M 4	71.00	10.00	8.101	○
8.100	3	5.000	M 5	81.00	10.00	8.102	○
8.200	3	5.000	M 5	81.00	10.00	8.202	○
8.400	3	5.000	M 5	81.00	10.00	8.402	○
8.500	3	5.000	M 5	81.00	10.00	8.502	○
8.600	1	3.000	M 3	60.00	7.00	8.600	○
8.600	4	6.000	M 6	88.00	12.00	8.603	○
8.700	3	5.000	M 5	81.00	10.00	8.702	○

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

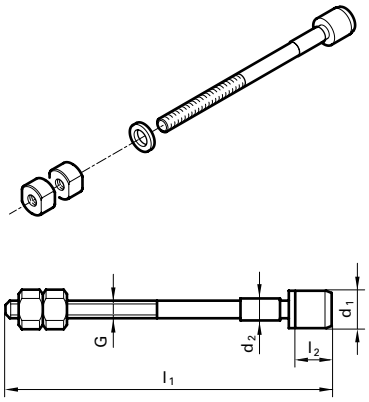
Guhring no.	**1616**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
8.700	4	6.000	M 6	88.00	12.00	8.703	○
8.800	1	3.000	M 3	60.00	7.00	8.800	○
8.800	2	4.000	M 4	71.00	10.00	8.801	○
8.800	4	6.000	M 6	88.00	12.00	8.803	○
9.000	2	4.000	M 4	71.00	10.00	9.001	○
9.000	4	6.000	M 6	88.00	12.00	9.003	○
9.000	5 1/2	9.000	M 9	106.00	20.00	9.005	○
9.200	2	4.000	M 4	71.00	10.00	9.201	○
9.300	2	4.000	M 4	71.00	10.00	9.301	○
9.400	1	3.000	M 3	60.00	7.00	9.400	○
9.400	2	4.000	M 4	71.00	10.00	9.401	○
9.500	3	5.000	M 5	81.00	10.00	9.502	○
9.600	1	3.000	M 3	60.00	7.00	9.600	○
9.700	2	4.000	M 4	71.00	10.00	9.701	○
9.700	3	5.000	M 5	81.00	10.00	9.702	○
9.800	1	3.000	M 3	60.00	7.00	9.800	○
9.800	2	4.000	M 4	71.00	10.00	9.801	○
10.000	1	3.000	M 3	60.00	7.00	10.000	○
10.000	2	4.000	M 4	71.00	10.00	10.001	○
10.000	3	5.000	M 5	81.00	10.00	10.002	○
10.000	4	6.000	M 6	88.00	12.00	10.003	○
10.100	3	5.000	M 5	81.00	10.00	10.102	○
10.200	1	3.000	M 3	60.00	7.00	10.200	○
10.200	2	4.000	M 4	71.00	10.00	10.201	○
10.200	3	5.000	M 5	81.00	10.00	10.202	○
10.300	2	4.000	M 4	71.00	10.00	10.301	○
10.400	2	4.000	M 4	71.00	10.00	10.401	○
10.500	2	4.000	M 4	71.00	10.00	10.501	○
10.500	5	8.000	M 8	103.00	18.00	10.504	○
11.000	4	6.000	M 6	88.00	12.00	11.003	○
11.000	5	8.000	M 8	103.00	18.00	11.004	○
11.000	6	10.000	M10	110.00	20.00	11.006	○
11.100	4	6.000	M 6	88.00	12.00	11.103	○
11.200	4	6.000	M 6	88.00	12.00	11.203	○
11.500	4	6.000	M 6	88.00	12.00	11.503	○
11.500	5	8.000	M 8	103.00	18.00	11.504	○
11.700	4	6.000	M 6	88.00	12.00	11.703	○
12.000	4	6.000	M 6	88.00	12.00	12.003	○
12.300	4	6.000	M 6	88.00	12.00	12.303	○

○ bright ○ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

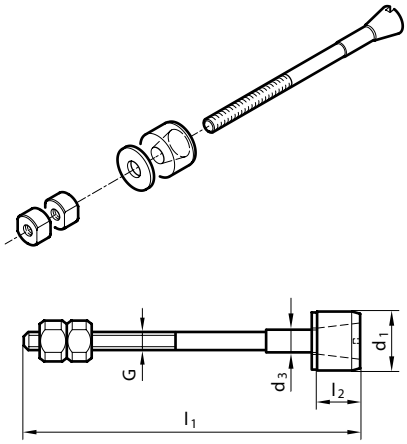
Guhring no.	**1616**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
12.500	4	6.000	M 6	88.00	12.00	12.503	❍
12.500	5	8.000	M 8	103.00	18.00	12.504	❍
12.600	4	6.000	M 6	88.00	12.00	12.603	❍
12.700	4	6.000	M 6	88.00	12.00	12.703	❍
13.000	4	6.000	M 6	88.00	12.00	13.003	❍
13.000	5 1/2	9.000	M 9	106.00	20.00	13.005	❍
13.000	6	10.000	M10	110.00	20.00	13.006	❍
13.500	5	8.000	M 8	103.00	18.00	13.504	❍
13.500	5 1/2	9.000	M 9	106.00	20.00	13.505	❍
14.000	5	8.000	M 8	103.00	18.00	14.004	❍
14.000	5 1/2	9.000	M 9	106.00	20.00	14.005	❍
14.000	6	10.000	M10	110.00	20.00	14.006	❍
15.000	5	8.000	M 8	103.00	18.00	15.004	❍
15.500	5	8.000	M 8	103.00	18.00	15.504	❍
16.000	6	10.000	M10	110.00	20.00	16.006	❍
16.500	5 1/2	9.000	M 9	106.00	20.00	16.505	❍
17.000	5	8.000	M 8	103.00	18.00	17.004	❍
17.000	5 1/2	9.000	M 9	106.00	20.00	17.005	❍
18.000	6	10.000	M10	110.00	20.00	18.006	❍
18.000	7	12.000	M12	124.00	22.00	18.007	❍
19.000	6	10.000	M10	110.00	20.00	19.006	❍
20.000	6	10.000	M10	110.00	20.00	20.006	❍
24.000	7	12.000	M12	124.00	22.00	24.007	❍

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

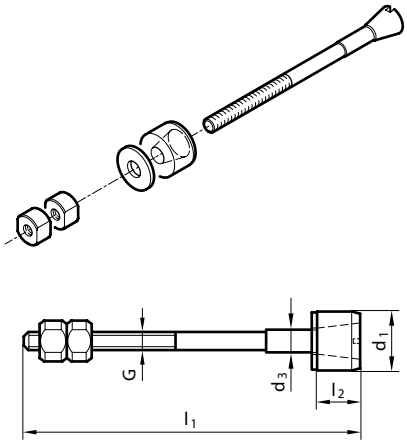
Guhring no.	**1617**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
11.500	2	4.000	M 4	71.00	10.00	11.500	○
12.000	2	4.000	M 4	71.00	10.00	12.000	○
12.000	3	5.000	M 5	81.00	10.00	12.001	○
13.500	2	4.000	M 4	71.00	10.00	13.500	○
13.500	4	6.000	M 6	88.00	12.00	13.502	○
14.000	2	4.000	M 4	71.00	10.00	14.000	○
14.500	3	5.000	M 5	81.00	10.00	14.501	○
15.000	2	4.000	M 4	71.00	10.00	15.000	○
15.500	2	4.000	M 4	71.00	10.00	15.500	○
15.500	3	5.000	M 5	81.00	10.00	15.501	○
17.500	5	8.000	M 8	103.00	18.00	17.503	○
18.500	4	6.000	M 6	88.00	12.00	18.502	○
19.000	3	5.000	M 5	81.00	10.00	19.001	○
20.000	4	6.000	M 6	88.00	12.00	20.002	○
20.000	5	8.000	M 8	103.00	18.00	20.003	○
21.000	3	5.000	M 5	81.00	10.00	21.001	○
21.000	4	6.000	M 6	88.00	12.00	21.002	○
21.000	5 1/2	9.000	M 9	106.00	20.00	21.004	○
22.000	3	5.000	M 5	81.00	10.00	22.001	○
22.000	4	6.000	M 6	88.00	12.00	22.002	○
22.000	5	8.000	M 8	103.00	18.00	22.003	○
22.000	5 1/2	9.000	M 9	106.00	20.00	22.004	○
22.500	4	6.000	M 6	88.00	12.00	22.502	○
22.500	5 1/2	9.000	M 9	106.00	20.00	22.504	○
23.000	4	6.000	M 6	88.00	12.00	23.002	○
24.000	5	8.000	M 8	103.00	18.00	24.003	○
24.500	5	8.000	M 8	103.00	18.00	24.503	○
24.500	5 1/2	9.000	M 9	106.00	20.00	24.504	○
24.500	6	10.000	M10	110.00	20.00	24.505	○
25.000	6	10.000	M10	110.00	20.00	25.005	○
25.500	4	6.000	M 6	88.00	12.00	25.502	○
25.500	5	8.000	M 8	103.00	18.00	25.503	○
25.500	5 1/2	9.000	M 9	106.00	20.00	25.504	○
26.000	6	10.000	M10	110.00	20.00	26.005	○
26.500	4	6.000	M 6	88.00	12.00	26.502	○
28.000	4	6.000	M 6	88.00	12.00	28.002	○
28.000	7	12.000	M12	124.00	22.00	28.006	○
29.500	5	8.000	M 8	103.00	18.00	29.503	○
30.000	5	8.000	M 8	103.00	18.00	30.003	○

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown A TiAlN a TiAlN nanoA A TiAlN SuperA

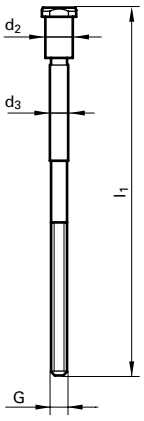
Guhring no.	**1617**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	für KK	d3	G	l1	l2	Code no.	Availability
mm		mm		mm	mm		
30.000	6	10.000	M10	110.00	20.00	30.005	❍
30.500	5	8.000	M 8	103.00	18.00	30.503	❍
31.000	5	8.000	M 8	103.00	18.00	31.003	❍
31.500	5	8.000	M 8	103.00	18.00	31.503	❍
32.000	5 1/2	9.000	M 9	106.00	18.00	32.004	❍
32.500	5	8.000	M 8	103.00	18.00	32.503	❍
33.000	5	8.000	M 8	103.00	18.00	33.003	❍
35.000	7	12.000	M12	124.00	22.00	35.006	❍
35.500	6	10.000	M10	110.00	20.00	35.505	❍
38.000	5 1/2	9.000	M 9	106.00	20.00	38.004	❍
39.000	5	8.000	M 8	103.00	18.00	39.003	❍
42.000	5 1/2	9.000	M 9	106.00	20.00	42.004	❍
50.000	7	12.000	M12	124.00	22.00	50.006	❍
52.000	6	10.000	M10	110.00	20.00	52.005	❍
56.000	7	12.000	M12	124.00	22.00	56.006	❍

C TiCN · Cb Carbo · D Cristall · F FIRE/nanoFIRE · P AlCrN · S TiN · S+ TiN+ · M MolyGlide · Y Signum

Guhring no.	**1647**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



für KK	d2	d3	G	l1	Code no.	Availability
	mm	mm		mm		
1	5.000	3.000	M 3	70.00	3.000	❍
2	6.000	4.000	M 4	85.00	4.000	❍
4	9.000	6.000	M 6	105.00	6.000	❍
4	14.000	6.000	M 6	105.00	6.100	❍
5	16.000	8.000	M8	120.00	8.100	❍
5 1/2	20.000	9.000	M 9	130.00	9.100	❍
6	14.000	10.000	M10	135.00	10.000	❍
6	20.000	10.000	M10	135.00	10.100	❍
7	16.000	12.000	M12	160.00	12.000	❍
7	25.000	12.000	M12	160.00	12.100	❍

Countersinks

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

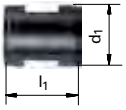
Guhring no.	**1648**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	

d1	für KK	G	l1	Availability
mm			mm	
6.500	1	M 4	35.00	❍
8.000	2	M 5	40.00	❍
10.000	3	M 6	46.00	❍
12.000	4	M 8	52.00	❍
15.000	5	M10	59.00	❍
17.000	5 1/2	M12	61.00	❍
19.000	6	M12	66.00	❍
22.000	7	M14	87.00	❍

Countersinks

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

Guhring no.	**1649**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	

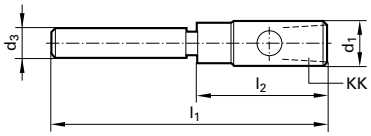


d1	für KK	G	l1	Availability
mm			mm	
6.500	1	M 3	8.00	❍
8.000	2	M 4	9.00	❍
10.000	3	M 5	11.00	❍
12.000	4	M 6	14.00	❍
15.000	5	M 8	14.00	❍
17.000	5 1/2	M 9	19.00	❍
19.000	6	M10	21.00	❍
22.000	7	M12	30.00	❍

Countersinks

○ bright ◐ steam tempered ◒ nitrided lands ● nitrided ● golden brown Ⓐ TiAlN ⓐ TiAlN nanoA Ⓐ TiAlN SuperA

Guhring no.	**1625**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	

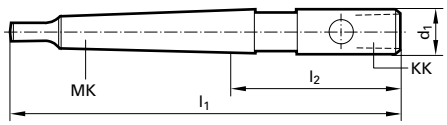


d1	KK	d3	l1	l2	Code no.	Availability
mm		mm	mm	mm		
9.000	0	6.000	59.00	24.00	9.000	❍
12.500	1	8.000	76.00	36.00	12.500	❍
17.000	2	10.000	91.00	41.00	17.000	❍
21.000	3	12.000	109.00	49.00	21.000	❍
28.000	4	14.000	112.00	52.00	28.000	❍
32.000	5	16.000	125.00	65.00	32.000	❍

Countersinks

C TiCN Cb Carbo D Cristall F FIRE/nanoFIRE P AlCrN S TiN S+ TiN+ M MolyGlide Y Signum

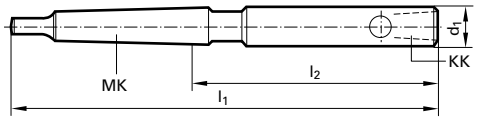
Guhring no.	**1626**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	KK	MK	l1	l2	Code no.	Availability
mm			mm	mm		
12.500	1	1	104.00	42.00	12.500	❍
17.000	2	1	109.00	47.00	17.000	❍
17.001	2	2	124.00	49.00	17.001	❍
21.000	3	1	117.00	55.00	21.000	❍
21.002	3	3	152.00	58.00	21.002	❍
28.000	4	2	135.00	60.00	28.000	❍
28.001	4	3	155.00	61.00	28.001	❍
32.000	5	2	148.00	73.00	32.000	❍
32.001	5	3	168.00	74.00	32.001	❍
32.002	5	4	193.00	75.50	32.002	❍
37.000	5 1/2	3	178.00	84.00	37.000	❍
37.001	5 1/2	4	203.00	85.50	37.001	❍
42.001	6	4	205.00	87.50	42.001	❍

bright | steam tempered | nitrided lands | nitrided | golden brown | TiAlN | TiAlN nanoA | TiAlN SuperA

Guhring no.	**1628**
Standard	**Guhring std.**
Discount group	**104**
Techn. data page	



d1	KK	MK	l1	l2	Code no.	Availability
mm			mm	mm		
12.500	1	1	142.00	80.00	12.500	❍
17.000	2	1	152.00	90.00	17.000	❍
17.001	2	2	167.00	92.00	17.001	❍
21.001	3	2	185.00	110.00	21.001	❍
28.000	4	2	190.00	115.00	28.000	❍
28.001	4	3	210.00	116.00	28.001	❍
32.000	5	3	235.00	141.00	32.000	❍
37.000	5 1/2	3	255.00	161.00	37.000	❍

Countersinks

C TiCN | Cb Carbo | D Cristall | F FIRE/nanoFIRE | P AlCrN | S TiN | S+ TiN+ | M MolyGlide | Y Signum

Grinding HSS-countersinks
max. 1 mm

from quantity	Gross additional charges per item depending on short countersink size, on request				
	0 / 1	2 / 3	4 / 5	5 1/2 / 6	7
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
6	●	●	●	●	●
10	●	●	●	●	●
16	●	●	●	●	●
21	●	●	●	●	●
31	●	●	●	●	●

Grinding HSS-back spotfacers
max. 1 mm

from quantity	Gross additional charges per item depending on short countersink size, on request					
	10-20	>20-36	>36-48	>48-62	>62-80	>80-115
2	●	●	●	●	●	●
3	●	●	●	●	●	●
4	●	●	●	●	●	●
6	●	●	●	●	●	●
10	●	●	●	●	●	●
16	●	●	●	●	●	●
21	●	●	●	●	●	●

Grinding carbide-countersinks
max. 1 mm

from quantity	Gross additional charges per item depending on short countersink size, on request				
	0 / 1	2 / 3	4 / 5	5 1/2 / 6	7
2	●	●	●	●	●
3	●	●	●	●	●
4	●	●	●	●	●
6	●	●	●	●	●
10	●	●	●	●	●
16	●	●	●	●	●
21	●	●	●	●	●
31	●	●	●	●	●

The QS principle encourages requests for inspection records or certificates of conformity to be supplied with ordered tools. We will gladly do this. But as the setting-up of inspection records is particularly time consuming and costly - special marking on a specified number of tools, the provision of measuring records, the entry of measured data in special forms - and we do not wish to incorporate these costs in our overhead costs, we have chosen to charge the prices below in relation to the quantity ordered. Surely you will appreciate this.

inspected number of items / inspection criteria	1	up to 3	up to 5	up to 10	up to 15	up to 20	up to 30	up to 50	up to 100
	net prices for the inspected number of items per inspection criteria								
shank diameter	●	●	●	●	●	●	●	●	●
countersink head diameter	●	●	●	●	●	●	●	●	●
length L 1/2	●	●	●	●	●	●	●	●	●
rake angle	●	●	●	●	●	●	●	●	●
clearance angle	●	●	●	●	●	●	●	●	●
centre cutting geometry	●	●	●	●	●	●	●	●	●
optical	●	●	●	●	●	●	●	●	●
marking of test tools	●	●	●	●	●	●	●	●	●

	net prices for the inspected number of items for all inspection criteria								
	●	●	●	●	●	●	●	●	●
	plus cost of inspection report								
total price	●	●	●	●	●	●	●	●	●