

GUHRING



with **SIRIUS®**-coating

- effective wear protection and longer tool life thanks to **SIRIUS®**-coating
- economically efficient and process reliable drilling in stainless steels
- low feed forces and optimal centering thanks to 130° split point

NOW ALSO IN
DIN 338 (~5XD)

HSCO-VA-Twist drill

GUHRING – YOUR WORLD-WIDE PARTNER

HSCO-VA twist drills with Sirius-coating

- standard range
- Ø 1.00 - 13.00 mm
- DIN 1897 (~3xD) + DIN 338 (~5xD)

Flute

Special flute geometry ensures process reliable chip production and chip evacuation especially with the machining of stainless steels.

130° split point

Optimal 130° split point:

- minimal feed forces
- accurate spotting without centre punching or centering

Tool material

5% cobalt-alloyed high speed steel for long tool life and high heat resistance enable the machining of stainless steels at high temperatures.

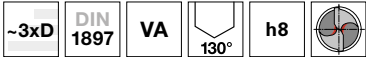


When drilling stainless steels the cutting edges of HSCO-VA twist drills are subjected to extreme stresses. A strong mechanically resistant coating with low friction value prevents damage to the cutting edges. Pre-requisite is a very low chemical interaction with stainless steels.

The tough-hard TiAlN developed coating guarantees a high wear-resistance. The zirconium nitride cover coating significantly improves chip flow as the chemical reaction between coating and workpiece is reduced. Therefore, the SIRIUS® offers optimal features for the machining of stainless steels.

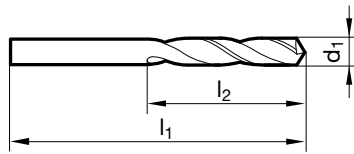


Stub drills



- P** ○ Web thinning ≥ 2.360 mm • optimised split point • Co-alloyed HSS steel
• increased wear-resistance
- M** ●
- K** ○
- N** ○ Stainless-/acid-/heat-resistant austenitic steels (V2A and V4A)
• special alloys
- S** ●
- H** ●

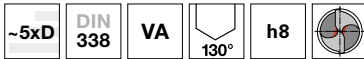
Tool material	HSCo
Surface finish	S
Cutting direction	R
Discount group	139



Guhring no. **572**

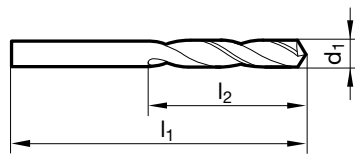
d1	l1	l2	Availability	d1	l1	l2	Availability	d1	l1	l2	Availability
mm	mm	mm		mm	mm	mm		mm	mm	mm	
1.000	26.000	6.000	●	5.100	62.000	26.000	●	9.100	84.000	40.000	●
1.100	28.000	7.000	●	5.200	62.000	26.000	●	9.200	84.000	40.000	●
1.200	30.000	8.000	●	5.300	62.000	26.000	●	9.250	84.000	40.000	●
1.300	30.000	8.000	●	5.400	66.000	28.000	●	9.300	84.000	40.000	●
1.400	32.000	9.000	●	5.500	66.000	28.000	●	9.400	84.000	40.000	●
1.500	32.000	9.000	●	5.550	66.000	28.000	●	9.500	84.000	40.000	●
1.600	34.000	10.000	●	5.600	66.000	28.000	●	9.600	89.000	43.000	●
1.700	34.000	10.000	●	5.700	66.000	28.000	●	9.700	89.000	43.000	●
1.800	36.000	11.000	●	5.800	66.000	28.000	●	9.800	89.000	43.000	●
1.900	36.000	11.000	●	5.900	66.000	28.000	●	9.900	89.000	43.000	●
2.000	38.000	12.000	●	6.000	66.000	28.000	●	10.000	89.000	43.000	●
2.100	38.000	12.000	●	6.100	70.000	31.000	●	10.200	89.000	43.000	●
2.200	40.000	13.000	●	6.200	70.000	31.000	●	10.500	89.000	43.000	●
2.300	40.000	13.000	●	6.300	70.000	31.000	●	11.000	95.000	47.000	●
2.400	43.000	14.000	●	6.400	70.000	31.000	●	11.200	95.000	47.000	●
2.500	43.000	14.000	●	6.500	70.000	31.000	●	11.500	95.000	47.000	●
2.600	43.000	14.000	●	6.600	70.000	31.000	●	11.800	95.000	47.000	●
2.700	46.000	16.000	●	6.700	70.000	31.000	●	12.000	102.000	51.000	●
2.800	46.000	16.000	●	6.800	74.000	34.000	●	12.500	102.000	51.000	●
2.900	46.000	16.000	●	6.900	74.000	34.000	●	13.000	102.000	51.000	●
3.000	46.000	16.000	●	7.000	74.000	34.000	●				
3.100	49.000	18.000	●	7.100	74.000	34.000	●				
3.200	49.000	18.000	●	7.200	74.000	34.000	●				
3.300	49.000	18.000	●	7.300	74.000	34.000	●				
3.400	52.000	20.000	●	7.400	74.000	34.000	●				
3.500	52.000	20.000	●	7.450	74.000	34.000	●				
3.600	52.000	20.000	●	7.500	74.000	34.000	●				
3.700	52.000	20.000	●	7.600	79.000	37.000	●				
3.800	55.000	22.000	●	7.700	79.000	37.000	●				
3.900	55.000	22.000	●	7.800	79.000	37.000	●				
4.000	55.000	22.000	●	7.900	79.000	37.000	●				
4.100	55.000	22.000	●	8.000	79.000	37.000	●				
4.200	55.000	22.000	●	8.100	79.000	37.000	●				
4.300	58.000	24.000	●	8.200	79.000	37.000	●				
4.400	58.000	24.000	●	8.300	79.000	37.000	●				
4.500	58.000	24.000	●	8.400	79.000	37.000	●				
4.600	58.000	24.000	●	8.500	79.000	37.000	●				
4.650	58.000	24.000	●	8.600	84.000	40.000	●				
4.700	58.000	24.000	●	8.700	84.000	40.000	●				
4.800	62.000	26.000	●	8.800	84.000	40.000	●				
4.900	62.000	26.000	●	8.900	84.000	40.000	●				
5.000	62.000	26.000	●	9.000	84.000	40.000	●				

Jobber drills



P	○	Web thinning ≥ 1.000 mm • optimised split point • Co-alloyed HSS steel • increased wear-resistance
M	●	
K	○	
N	○	Stainless-/acid-/heat-resistant austenitic steels (V2A and V4A) • special alloys
S	●	
H		

Tool material	HSCo
Surface finish	S
Cutting direction	R
Discount group	135



Guhring no. **629**

d1	l1	l2	Availability	d1	l1	l2	Availability	d1	l1	l2	Availability
mm	mm	mm		mm	mm	mm		mm	mm	mm	
1.000	34.000	12.000	●	5.200	86.000	52.000	●	9.400	125.000	81.000	●
1.100	36.000	14.000	●	5.300	86.000	52.000	●	9.500	125.000	81.000	●
1.200	38.000	16.000	●	5.400	93.000	57.000	●	9.600	133.000	87.000	●
1.300	38.000	16.000	●	5.500	93.000	57.000	●	9.700	133.000	87.000	●
1.400	40.000	18.000	●	5.600	93.000	57.000	●	9.800	133.000	87.000	●
1.500	40.000	18.000	●	5.700	93.000	57.000	●	9.900	133.000	87.000	●
1.600	43.000	20.000	●	5.800	93.000	57.000	●	10.000	133.000	87.000	●
1.700	43.000	20.000	●	5.900	93.000	57.000	●	10.200	133.000	87.000	●
1.800	46.000	22.000	●	6.000	93.000	57.000	●	10.500	133.000	87.000	●
1.900	46.000	22.000	●	6.100	101.000	63.000	●	11.000	142.000	94.000	●
2.000	49.000	24.000	●	6.200	101.000	63.000	●	11.200	142.000	94.000	●
2.100	49.000	24.000	●	6.300	101.000	63.000	●	11.500	142.000	94.000	●
2.200	53.000	27.000	●	6.400	101.000	63.000	●	11.800	142.000	94.000	●
2.300	53.000	27.000	●	6.500	101.000	63.000	●	12.000	151.000	101.000	●
2.400	57.000	30.000	●	6.600	101.000	63.000	●	12.500	151.000	101.000	●
2.500	57.000	30.000	●	6.700	101.000	63.000	●	13.000	151.000	101.000	●
2.600	57.000	30.000	●	6.800	109.000	69.000	●				
2.700	61.000	33.000	●	6.900	109.000	69.000	●				
2.800	61.000	33.000	●	7.000	109.000	69.000	●				
2.900	61.000	33.000	●	7.100	109.000	69.000	●				
3.000	61.000	33.000	●	7.200	109.000	69.000	●				
3.100	65.000	36.000	●	7.300	109.000	69.000	●				
3.200	65.000	36.000	●	7.400	109.000	69.000	●				
3.300	65.000	36.000	●	7.500	109.000	69.000	●				
3.400	70.000	39.000	●	7.600	117.000	75.000	●				
3.500	70.000	39.000	●	7.700	117.000	75.000	●				
3.600	70.000	39.000	●	7.800	117.000	75.000	●				
3.700	70.000	39.000	●	7.900	117.000	75.000	●				
3.800	75.000	43.000	●	8.000	117.000	75.000	●				
3.900	75.000	43.000	●	8.100	117.000	75.000	●				
4.000	75.000	43.000	●	8.200	117.000	75.000	●				
4.100	75.000	43.000	●	8.300	117.000	75.000	●				
4.200	75.000	43.000	●	8.400	117.000	75.000	●				
4.300	80.000	47.000	●	8.500	117.000	75.000	●				
4.400	80.000	47.000	●	8.600	125.000	81.000	●				
4.500	80.000	47.000	●	8.700	125.000	81.000	●				
4.600	80.000	47.000	●	8.800	125.000	81.000	●				
4.700	80.000	47.000	●	8.900	125.000	81.000	●				
4.800	86.000	52.000	●	9.000	125.000	81.000	●				
4.900	86.000	52.000	●	9.100	125.000	81.000	●				
5.000	86.000	52.000	●	9.200	125.000	81.000	●				
5.100	86.000	52.000	●	9.300	125.000	81.000	●				



GUHRINGNAVIGATOR

Tools with bold feed column no. are preferred choice.

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

	~3xD	~5xD
Article no.	572	629
Standard/DIN	1897	338
Tool material	HSCo	HSCo
Surface finish	S	S
Type	VA	VA

Drill Ø mm	Feed column no.								
	1	2	3	4	5	6	7	8	9
	f (mm/rev.)								
0.50	0.004	0.006	0.007	0.008	0.010	0.012	0.014	0.016	0.019
1.00	0.006	0.008	0.012	0.014	0.016	0.018	0.020	0.023	0.025
2.00	0.020	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125
2.50	0.025	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160
3.15	0.032	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.160
4.00	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.200
5.00	0.040	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250
6.30	0.050	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315
8.00	0.063	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.315
10.00	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.400
12.50	0.080	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500
16.00	0.100	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630
20.00	0.125	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.630
25.00	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	0.800
31.50	0.160	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000
40.00	0.200	0.250	0.315	0.400	0.500	0.630	0.800	1.000	1.250
50.00	0.250	0.310	0.400	0.500	0.630	0.800	1.000	1.250	1.250
63.00	0.315	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600
80.00	0.400	0.500	0.630	0.800	1.000	1.250	1.600	1.600	2.000



Material group	Material examples Figures in bold = material no. to DIN EN 10 027	Tensile strength Nmm ²	Hardness	V _c m/min	Feed col. no.
Common structural steels	1.0035 S185(St33), 1.0486 P275N(StE285), 1.0345 P235GH(H1), 1.0425 P265GH(H2) 1.0050 E295 (St50-2), 1.0070 E360 (St70-2), 1.8937 P500NH (WStE500)	≤500 ≤1000		38 33	6 5
Free-cutting steels	1.0718 11SMnPb30 (9SMnPb28), 1.0736 11SMn37 (9SMn36) 1.0727 46S20 (45S20), 1.0728 (60S20), 1.0757 46SPb20 (45SPb20)	≤850 ≤1000		44 42	6 5
Unalloyed heat-treatable steels	1.0402 C22, 1.1178 C30E (Ck30) 1.0503 C45, 1.1191 C45E (Ck45) 1.0601 C60, 1.1221 C60E (Ck60)	≤700 ≤850 ≤1000		44 44	5 5
Alloyed heat-treatable steels	1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4	≤1000 ≤1400			
Unalloyed case hard. steels	1.0301 (C10), 1.1121 C10E (Ck10)	≤850		40	6
Alloyed case hardened steels	1.7276 10CrMo11, 1.5125 11MnSi6 1.5752 15NiCr13, 1.7131 16MnCr5, 1.7264 20CrMo5	≤1000 ≤1400			
Nitriding steels	1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	≤1000 ≤1400			
Tool steels	1.1750 C75W, 1.2067 102Cr6, 1.2307 29CrMoV9 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2767 X45NiCrMo4	≤850 ≤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		
Hardened steels	-		≤48 HRC ≤66 HRC		
Stainless steels, sulphured austenitic martensitic	1.4005 X12CrS13, 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X8CrNiS18-9 1.4301 X5CrNi18-10 (V2A), 1.4541 X6CrNiTi18-10, 1.4571 X6CrNiMoTi 17-12-2 (V4A) 1.4057 X20CrNi172 (X17CrNi16-2), 1.4122 X39CrMo17-1, 1.4521 X2CrMoTi18-2	≤900 ≤1100 ≤1500		20 15 18	4 3 3
Cast iron	0.6010 EN-GJL-100 (GG10), 0.6020 EN-GJL-200 (GG20) 0.6025 EN-GJL-250 (GG25), 0.6035 EN-GJL-350 (GG35)		≤240 HB ≤350 HB	30 30	6 6
Spheroidal graphite iron and malleable cast iron	0.7050 EN-GJS-500-7 (GGG50), 0.8035 EN-GJMW-350-4 (GTW35) 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)		≤240 HB ≤350 HB		
Chilled cast iron	-		≤350 HB		
New cast materials GGV	EN-GJV250 (GGV25), EN-GJV350 (GGV35) EN-GJV400 (GGV40), EN-GJV500 (GGV50), SiMo 6		≤220 HB ≤300 HB		
New cast materials ADI	EN-GJS-800-8 (ADI800), EN-GJS-1000-5 (ADI1000) EN-GJS-1200-2 (ADI1200), EN-GJS-1400-1 (ADI1400)	≤1000 ≤1400			
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤2000		8	1
Ti and Ti-alloys	3.7024 Ti99.5, 3.7114 TiAl5Sn2.5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7165 TiAl6V4, 3.7184 TiAl4Mo4Sn2.5, - TiAl8Mo1V1	≤850 ≤1400		12 8	2 2
Aluminium and Al-alloys	3.0255 Al99.5, 3.2315 AlMgSi1, 3.3515 AlMg1	≤400		90	7
Al wrought alloys	3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1.5	≤650		90	7
Al cast alloys ≤ 10 % Si	3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9	≤600		80	7
≤ 24 % Si	3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		70	5
Magnesium alloys	3.5200 MgMn2, 3.5812.05 G-MgAl8Zn1, 3.5612.05 G-MgAl6Zn1	≤400		70	6
Copper, low-alloyed	2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb	≤500		70	5
Brass, short-chipping	2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2	≤600		60	5
long-chipping	2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0.5	≤600		40	5
Bronze, short-chipping	2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0790 CuNi18Zn19Pb	≤600 ≤850		35 33	4 4
Bronze, long-chipping	2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10 2.0980 CuAl11Ni, 2.1247 CuBe2	≤850 ≤1000		20 15	4 4
Duroplastics	Epoxy resin, Resopal, Pertinax, Moltopren	≤150			
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon	≤100		30	4
Kevlar	Kevlar	≤1000			
Glass, carbon concentr. plastics	GFK/CFK	≤1000			



GUHRING

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