

Y/G NC-SPOTTING DRILLS

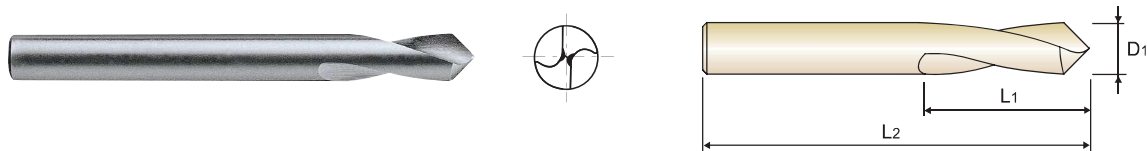
D2306 SERIES
D2321 SERIES

HSSCo8, NC-SPOTTING DRILLS 90°

- HSSCo8, NC-ANBOHRER 90°
- Forets HSSCo8 à pointer NC 90°
- PUNTE A CENTRARE NC 90°, HSSCo8

► **Application** : For more precise centering work on NC/CNC Machines.
The large diameter of the tool permits chamfering work after centering continuously.

► **Verwendung** : Für positionsgenaueres und schnelles Anbohren mit NC/CNC-Maschinen und Bearbeitungszentren, die Ausführung mit Spitzenwinkel 90° ermöglicht sowohl ein Zentrieren, als auch das Vorbohren für einen nächstgrößeren Durchmesser.



NC
HSS Co8
h6
h6
90°
P.305-306

LONG LENGTH

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2306030	3.0	12	46
D2306040	4.0	12	55
D2306050	5.0	15	60
D2306060	6.0	20	66
D2306080	8.0	25	79
D2306100	10.0	25	89
D2306120	12.0	30	102
D2306160	16.0	35	115
D2306200	20.0	40	131

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2321030	3.0	12	80
D2321040	4.0	12	100
D2321050	5.0	15	120
D2321060	6.0	20	140
D2321080	8.0	25	140
D2321100	10.0	25	170
D2321120	12.0	30	170
D2321160	16.0	35	200
D2321200	20.0	40	200

► TiN, TiCN and TiAlN are available on your request.

ISO	P										M				K					
	Non-alloy steel					Low alloy steel					High alloyed steel, and tool steel				Stainless steel		Grey cast iron		Nodular cast iron	
Material Description	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VDI 3323	13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25	130	230	
HRc	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
HB	⊙	⊙	⊙			⊙	○				○				⊙	○	○			
Recommended																				

ISO	N										S							H			
	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys							Titanium Alloys		Hardened steel	Chilled Cast Iron
Material Description	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
VDI 3323	15	30	25	38	34	15	30	25	38	34	15	30	25	38	34	400 Rm	1050 Rm	550	630	400	550
HRc	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
HB	○	○	○																		
Recommended																					

⊙ : Excellent ○ : Good



NC-SPOTTING DRILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

D5306, D5307, D5320 SERIES

CARBIDE, NC-SPOTTING DRILLS

RPM = rev./min.
FEED = mm/rev.

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)									
					2.0	3.0	4.0	6.0	8.0	10.0	12.0	16.0	20.0	
P	1	Non-alloy steel	75	RPM FEED	11940 0.02-0.04	7960 0.04-0.06	5970 0.05-0.08	3980 0.07-0.10	2980 0.08-0.12	2390 0.09-0.14	1990 0.11-0.17	1490 0.13-0.19	1190 0.15-0.21	
	2		70	RPM FEED	11140 0.02-0.04	7430 0.04-0.06	5570 0.05-0.08	3710 0.07-0.10	2790 0.08-0.12	2230 0.09-0.14	1860 0.11-0.17	1390 0.13-0.19	1110 0.15-0.21	
	3		65	RPM FEED	10350 0.01-0.03	6900 0.03-0.05	5170 0.04-0.07	3450 0.05-0.08	2590 0.07-0.10	2070 0.08-0.12	1720 0.09-0.14	1290 0.11-0.17	1030 0.13-0.19	
	4													
	5													
	6	Low alloy steel	70	RPM FEED	11140 0.02-0.04	7430 0.04-0.06	5570 0.05-0.08	3710 0.07-0.10	2790 0.08-0.12	2230 0.09-0.14	1860 0.11-0.17	1390 0.13-0.19	1110 0.15-0.21	
	7		55	RPM FEED	8750 0.01-0.03	5840 0.03-0.05	4380 0.04-0.07	2920 0.05-0.08	2190 0.07-0.10	1750 0.08-0.12	1460 0.09-0.14	1090 0.11-0.17	880 0.13-0.19	
	8													
	9													
	10		High alloyed steel, and tool steel											
	11													
M	12	Stainless steel	35	RPM FEED	5570 0.02-0.04	3710 0.04-0.06	2790 0.05-0.08	1860 0.07-0.10	1390 0.08-0.12	1110 0.09-0.14	930 0.11-0.17	700 0.13-0.19	560 0.15-0.21	
	13													
	14													
K	15	Grey cast iron	90	RPM FEED	14320 0.03-0.05	9550 0.05-0.07	7160 0.06-0.09	4770 0.08-0.11	3580 0.10-0.13	2860 0.12-0.16	2390 0.15-0.20	1790 0.18-0.24	1430 0.22-0.28	
	16		70	RPM FEED	11140 0.01-0.03	7430 0.03-0.05	5570 0.04-0.07	3710 0.05-0.08	2790 0.07-0.10	2230 0.08-0.12	1860 0.09-0.14	1390 0.11-0.17	1110 0.13-0.19	
	17	Nodular cast iron	90	RPM FEED	14320 0.03-0.05	9550 0.05-0.07	7160 0.06-0.09	4770 0.08-0.11	3580 0.10-0.13	2860 0.12-0.16	2390 0.15-0.20	1790 0.18-0.24	1430 0.22-0.28	
	18													
	19	Malleable cast iron	60	RPM FEED	9550 0.03-0.05	6370 0.05-0.07	4770 0.06-0.09	3180 0.08-0.11	2390 0.10-0.13	1910 0.12-0.16	1590 0.15-0.2	1190 0.18-0.24	950 0.22-0.28	
	20													
N	21	Aluminum- wrought alloy	165	RPM FEED	26260 0.04-0.06	17510 0.06-0.09	13130 0.08-0.11	8750 0.10-0.13	6570 0.12-0.15	5250 0.15-0.19	4380 0.18-0.23	3280 0.21-0.27	2630 0.25-0.31	
	22		130	RPM FEED	20690 0.04-0.06	13790 0.06-0.09	10350 0.08-0.11	6900 0.10-0.13	5170 0.12-0.15	4140 0.15-0.19	3450 0.18-0.23	2590 0.21-0.27	2070 0.25-0.31	
	23	Aluminum-cast, alloyed	110	RPM FEED	17510 0.04-0.06	11670 0.06-0.09	8750 0.08-0.11	5840 0.10-0.13	4380 0.12-0.15	3500 0.15-0.19	2920 0.18-0.23	2190 0.21-0.27	1750 0.25-0.31	
	24													
	25													
	26													
	27		Copper and Copper Alloys (Bronze / Brass)											
	28													
	29		Non Metallic Materials											
	30													
S	31	Heat Resistant Super Alloys												
	32													
	33													
	34													
	35													
	36	Titanium Alloys	35	RPM FEED	5570 0.01-0.03	3710 0.03-0.05	2790 0.04-0.06	1860 0.05-0.08	1390 0.07-0.10	1110 0.08-0.12	930 0.09-0.14	700 0.11-0.17	560 0.13-0.19	
	37													
H	38	Hardened steel												
	39													
	40	Chilled Cast Iron												
	41	Hardened Cast Iron												



NC-SPOTTING DRILLS

RECOMMENDED CUTTING CONDITIONS EMPFOHLENE SCHNEIDPARAMETER

D2320, D2321, D2322, D2323, D2306, D2307 SERIES

HSSCo8, NC-SPOTTING DRILLS

RPM = rev./min.
FEED = mm/rev.

i-ONE DRILLS

i-DREAM DRILLS

DREAM DRILLS -GENERAL

DREAM DRILLS -HIGH FEED

DREAM DRILLS -FLAT BOTTOM

DREAM DRILLS -INOX

DREAM DRILLS -ALU

DREAM DRILLS -CFRP

DREAM DRILLS -MQL

DREAM DRILLS for HIGH HARDENED STEELS

GENERAL CARBIDE DRILLS

MULTI-1 DRILLS

HPD DRILLS

GOLD-P DRILLS

SUPER-GP DRILLS

STRAIGHT SHANK DRILLS

TAPER SHANK DRILLS

NC-SPOTTING DRILLS

CENTER DRILLS

SPADE DRILLS

REAMERS

COUNTER SINKS

COUNTER BORES

TECHNICAL DATA

ISO	VDI 3323	Material Description	Vc (m/min)	Parameter	Drill Diameter (mm)									
					2.0	3.0	4.0	6.0	8.0	10.0	12.0	16.0	20.0	
P	1	Non-alloy steel	25	RPM FEED	3980 0.02-0.04	2650 0.04-0.06	1990 0.05-0.08	1330 0.07-0.10	990 0.08-0.12	800 0.09-0.14	660 0.11-0.17	500 0.13-0.19	400 0.15-0.21	
	2		25	RPM FEED	3980 0.02-0.04	2650 0.04-0.06	1990 0.05-0.08	1330 0.07-0.10	990 0.08-0.12	800 0.09-0.14	660 0.11-0.17	500 0.13-0.19	400 0.15-0.21	
	3		15	RPM FEED	2390 0.01-0.03	1590 0.03-0.05	1190 0.04-0.07	800 0.05-0.08	600 0.07-0.10	480 0.08-0.12	400 0.09-0.14	300 0.11-0.17	240 0.13-0.19	
	4													
	5													
	6	Low alloy steel	20	RPM FEED	3180 0.02-0.04	2120 0.04-0.06	1590 0.05-0.08	1060 0.07-0.10	800 0.08-0.12	640 0.09-0.14	530 0.11-0.17	400 0.13-0.19	320 0.15-0.21	
	7		15	RPM FEED	2390 0.01-0.03	1590 0.03-0.05	1190 0.04-0.07	800 0.05-0.08	600 0.07-0.10	480 0.08-0.12	400 0.09-0.14	300 0.11-0.17	240 0.13-0.19	
	8													
	9													
	10		High alloyed steel, and tool steel											
	11													
M	12	Stainless steel	15	RPM FEED	2390 0.02-0.04	1590 0.04-0.06	1190 0.05-0.08	800 0.07-0.10	600 0.08-0.12	480 0.09-0.14	400 0.11-0.17	300 0.13-0.19	240 0.15-0.21	
	13													
	14													
K	15	Grey cast iron	30	RPM FEED	4770 0.03-0.05	3180 0.05-0.07	2390 0.06-0.09	1590 0.08-0.11	1190 0.10-0.13	950 0.12-0.16	800 0.15-0.20	600 0.18-0.24	480 0.22-0.28	
	16		25	RPM FEED	3980 0.01-0.03	2650 0.03-0.05	1990 0.04-0.07	1330 0.05-0.08	990 0.07-0.10	800 0.08-0.12	660 0.09-0.14	500 0.11-0.17	400 0.13-0.19	
	17	Nodular cast iron	30	RPM FEED	4770 0.03-0.05	3180 0.05-0.07	2390 0.06-0.09	1590 0.08-0.11	1190 0.10-0.13	950 0.12-0.16	800 0.15-0.20	600 0.18-0.24	480 0.22-0.28	
	18													
	19		Malleable cast iron	20	RPM FEED	3180 0.03-0.05	2120 0.05-0.07	1590 0.06-0.09	1060 0.08-0.11	800 0.10-0.13	640 0.12-0.16	530 0.15-0.20	400 0.18-0.24	320 0.22-0.28
20														
N	21	Aluminum-wrought alloy	65	RPM FEED	10350 0.04-0.06	6900 0.06-0.09	5170 0.08-0.11	3450 0.10-0.13	2590 0.12-0.15	2070 0.15-0.19	1720 0.18-0.23	1290 0.21-0.27	1030 0.25-0.31	
	22		60	RPM FEED	9550 0.04-0.06	6370 0.06-0.09	4770 0.08-0.11	3180 0.10-0.13	2390 0.12-0.15	1910 0.15-0.19	1590 0.18-0.23	1190 0.21-0.27	950 0.25-0.31	
	23	Aluminum-cast, alloyed	50	RPM FEED	7960 0.04-0.06	5310 0.06-0.09	3980 0.08-0.11	2650 0.10-0.13	1990 0.12-0.15	1590 0.15-0.19	1330 0.18-0.23	990 0.21-0.27	800 0.25-0.31	
	24													
	25													
	26		Copper and Copper Alloys (Bronze / Brass)											
	27													
	28													
	29		Non Metallic Materials											
	30													
S	31	Heat Resistant Super Alloys												
	32													
	33													
	34													
	35													
H	36	Titanium Alloys												
	37													
H	38	Hardened steel												
	39													
	40		Chilled Cast Iron											
41	Hardened Cast Iron													