

# YG NC-SPOTTING DRILLS

**D2307** SERIES

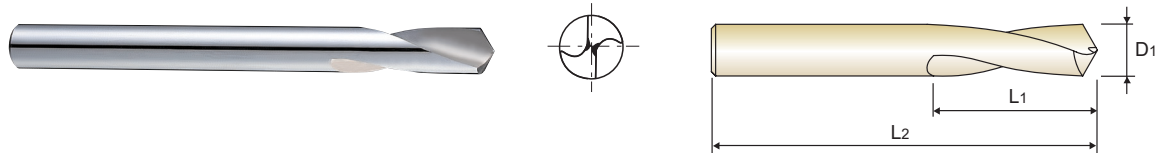
**D2322** SERIES

## HSSCo8, NC-SPOTTING DRILLS 120°

- HSSCo8, NC-ANBOHRER 120°
- Forets HSSCo8 à pointer NC 120°
- PUNTE A CENTRARE NC 120°, 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
120°
P.305-306

### LONG LENGTH

Unit : mm

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2307030	3.0	12	46
D2307040	4.0	12	55
D2307050	5.0	15	60
D2307060	6.0	20	66
D2307080	8.0	25	79
D2307100	10.0	25	89
D2307120	12.0	30	102
D2307160	16.0	35	115
D2307200	20.0	40	131

EDP No.	Drill Diameter	Flute Length	Overall Length
	D1	L1	L2
D2322060	6.0	20	140
D2322080	8.0	25	140
D2322100	10.0	25	170
D2322120	12.0	30	170

► 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		Malleable 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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
HRc	13	25	28	32	30	10	29	32	38	15	35	15	23	10	10	26	3	25		21		
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230		
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	Hardened 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	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
HRc	60	100	75	90	130	110	90	100			200	280	250	350	320	400Rm	1050Rm	550	630	400	550	
HB											15	30	25	38	34			55	60	42	55	
Recommended	○	○	○																			



# 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.

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	
<b>P</b>	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													
<b>M</b>	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													
<b>K</b>	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														
<b>N</b>	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														
<b>S</b>	31	Heat Resistant Super Alloys												
	32													
	33													
	34													
	35													
SPADE DRILLS	36	Titanium Alloys												
	37													
REAMERS	38	Hardened steel												
	39													
COUNTER SINKS	40	Chilled Cast Iron												
	41		Hardened Cast Iron											
COUNTER BORES														

SELECTION GUIDE



SERIES

D5306  
D5307

D5320

D2306  
D2321

POINT ANGLE

90° / 120°

142°

90°

SIZE MIN

D6.0

D3.0

D3.0

SIZE MAX

D20.0

D20.0

D20.0

PAGE

300

301

302

SURFACE TREATMENT

Bright

# SOLID CARBIDE & HSSCo8 NC-SPOTTING DRILLS

For Centering and Chamfering of Holes



Please visit  
[globalyg1.com/mat](http://globalyg1.com/mat)  
for material search

◎ : Excellent ○ : Good

Recommended cutting conditions : P.305

ISO	VDI 3323	Material Description	Composition / Structure / Heat Treatment	HB	HRc	D5306/D5307	D5320	D2306/D2321
P	1	Non-alloy steel	About 0.15% C Annealed	125		◎	◎	◎
	2		About 0.45% C Annealed	190	13	◎	◎	◎
	3		About 0.45% C Quenched & Tempered	250	25	◎	◎	◎
	4		About 0.75% C Annealed	270	28			
	5		About 0.75% C Quenched & Tempered	300	32			
	6	Low alloy steel	Annealed	180	10	◎	◎	◎
	7		Quenched & Tempered	275	29	○	○	○
	8		Quenched & Tempered	300	32			
	9		Quenched & Tempered	350	38			
	10		High alloyed steel, and tool steel	Annealed	200	15		
	11	Quenched & Tempered		325	35			
M	12	Stainless steel	Ferritic / Martensitic Annealed	200	15	○	○	○
	13		Martensitic Quenched & Tempered	240	23			
	14		Austenitic	180	10			
K	15	Grey cast iron	Pearlitic / ferritic	180	10	◎	◎	◎
	16		Pearlitic (Martensitic)	260	26	○	○	○
	17	Nodular cast iron	Ferritic	160	3	○	○	○
	18		Pearlitic	250	25			
	19	Malleable cast iron	Ferritic	130		○	○	○
20	Pearlitic		230	21				
N	21	Aluminum-wrought alloy	Not Curable	60		○	○	○
	22		Curable Hardened	100		○	○	○
	23	Aluminum-cast, alloyed	≤ 12% Si, Not Curable	75		○	○	○
	24		≤ 12% Si, Curable Hardened	90				
	25		> 12% Si, Not Curable	130				
	26	Copper and Copper Alloys (Bronze / Brass)	Cutting Alloys, PB>1%	110				
	27		CuZn, CuSnZn (Brass)	90				
	28		CuSn, lead-free copper and electrolytic copper	100				
	29		Non Metallic Materials	Duroplastic, Fiber Reinforced Plastic Rubber, Wood, etc.				
S	31	Heat Resistant Super Alloys	Fe Based	Annealed	200	15		
	32			Cured	280	30		
	33		Annealed	250	25			
	34		Ni or Co Based	Cured	350	38		
	35			Cast	320	34		
	36	Titanium Alloys	Pure Titanium	400 Rm		○	○	
	37		Alpha + Beta Alloys Hardened	1050 Rm				
H	38	Hardened steel	Hardened	550	55			
	39		Hardened	630	60			
	40	Chilled Cast Iron	Cast	400	42			
	41	Hardened Cast Iron	Hardened	550	55			

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

<b>D2307 D2322</b>	<b>D2320 D2323</b>
<b>120°</b>	<b>142°</b>
D3.0 / D6.0	D3.0 / D6.0
D20.0 / D12.0	D20.0 / D12.0
<b>303</b>	<b>304</b>
<b>Bright</b>	



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