Being the best through innovation

SOLID CARBIDE & HSSCo8

NC SPOTTING DRILLS

- For Centering and Chamfering of Holes

NC SPOTTING DRILLS

RECOMMENDED CUTTING CONDITIONS

D5321, D5322 SERIES CARBIDE, NC SPOTTING DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter								
				METRIC	-	-	-	-	-	-	-	-
				FRACTIONAL	1/8	3/16	1/4	5/16	3/8	1/2	5/8	5/8
				DECIMAL	.1250	.1875	.2500	.3125	.3750	.5000	.6250	.6250
P	1	Non-alloy steel	247	RPM	7960	4790	3980	2980	2390	1890	1490	1490
				FEED	.0016 - .0024	.0024 - .0035	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0051 - .0075	.0051 - .0075
	2		230	RPM	7430	4460	3710	2790	2230	1760	1390	1390
				FEED	.0016 - .0024	.0024 - .0035	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0051 - .0075	.0051 - .0075
	3		214	RPM	6900	4150	3450	2590	2070	1630	1290	1290
				FEED	.0012 - .002	.0018 - .003	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0043 - .0067
	6	Low alloy steel	230	RPM	7430	4460	3710	2790	2230	1760	1390	1390
				FEED	.0016 - .0024	.0024 - .0035	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0051 - .0075	.0051 - .0075
	7		181	RPM	5840	3510	2920	2190	1750	1380	1090	1090
				FEED	.0012 -.0020	.0018 - .0030	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0043 - .0067
M	12	Stainless steel	115	RPM	3710	2230	1860	1390	1110	880	700	700
				FEED	.0016 - .0024	.0024 - .0035	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0051 - .0075	.0051 - .0075
K	15	Grey cast iron	296	RPM	9550	5740	4770	3580	2860	2260	1790	1790
				FEED	.0020 - .0028	.0028 - .0039	.0031 - .0043	.0039 - .0051	.0047 - .0063	.0059 - .0079	.0071 - .0094	.0071 - .0094
	16		230	RPM	7430	4460	3710	2790	2230	1760	1390	1390
				FEED	.0012 -. 0020	.0018 - .0030	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0043 - .0067
	17	Nodular cast iron	296	RPM	9550	5740	4770	3580	2860	2260	1790	1790
				FEED	.0020 - .0028	.0028 - .0039	.0031 - .0043	.0039 - .0051	.0047 - .0063	.0059 - .0079	.0071 - .0094	.0071 - .0094
	19	Malleable cast iron	197	RPM	6370	3820	3180	2390	1910	1510	1190	1190
				FEED	.0020 - .0028	.0028 - .0039	.0031 - .0043	.0039 - .0051	.0047 - .0063	.0059 - .0079	.0071 - .0094	.0071 - .0094
N	21	Aluminum-wrought alloy	543	RPM	17510	10530	8750	6570	5250	4150	3280	3280
				FEED	.0024 - .0035	.0035 - .0047	.0039 - .0051	.0047 - .0059	.0059 - .0075	.0071 - .0091	.0083 - .0106	.0083 - .0106
	22		428	RPM	13790	8300	6900	5170	4140	3270	2590	2590
				FEED	.0024 - .0035	.0035 - .0047	.0039 - .0051	.0047 - .0059	.0059 - .0075	.0071 - .0091	.0083 - .0106	.0083 - .0106
	23	Aluminum-cast, alloyed	362	RPM	11670	7020	5840	4380	3500	2770	2190	2190
				FEED	.0024 - .0035	.0035 - .0047	.0039 - .0051	.0047 - .0059	.0059 - .0075	.0071 - .0091	.0083 - .0106	.0083 - .0106
S	36	Titanium Alloys	115	RPM	3710	2230	1860	1390	1110	880	700	700
				FEED	.0012 -.0020	.0018 - .0030	.0020 - .0031	.0028 - .0039	.0031 - .0047	.0035 - .0055	.0043 - .0067	.0043 - .0067

NC SPOTTING DRILLS

RECOMMENDED CUTTING CONDITIONS

D2N90 SERIES — HSSCo8, NC-SPOTTING DRILLS

SFM = ft/min.
RPM = rev./min.
FEED = inch/rev.

ISO	VDI 3323	Material Description	SFM	Drill Diameter								
				METRIC	2.0	3.0	-	4.0	6.0	-	-	8.0
				FRACTIONAL	-	-	1/8	-	-	1/4	5/16	-
				DECIMAL	.0787	.1181	.1250	.1575	.2362	.2500	.3125	.3150
P	1	Non-alloy steel	82	RPM	3980	2650		1990	1330		990	
				FEED	.0008 - .0016	.0016 - .0024		.0020 - .0031	.0028 - .0039		.0031 - .0047	
	2		82	RPM	3980	2650		1990	1330		990	
				FEED	.0008 - .0016	.0016 - .0024		.0020 - .0031	.0028 - .0039		.0031 - .0047	
	3		49	RPM	2390	1590		1190	800		600	
				FEED	.0004 - .0012	.0012 - .0020		.0016 - .0028	.0020 - .0031		.0028 - .0039	
	6	Low alloy steel	66	RPM	3180	2120		1590	1060		800	
				FEED	.0008 - .0016	.0016 - .0024		.0020 - .0031	.0028 - .0039		.0031 - .0047	
	7		49	RPM	2390	1590		1190	800		600	
				FEED	.0004 - .0012	.0012 - .0020		.0016 - .0028	.0020 - .0031		.0028 - .0039	
M	12	Stainless steel	49	RPM	2390	1590		1190	800		600	
				FEED	.0008 - .0016	.0016 - .0024		.0020 - .0031	.0028 - .0039		.0031 - .0047	
K	15	Grey cast iron	99	RPM	4770	3180		2390	1590		1190	
				FEED	.0012 - .0020	.002 0- .0028		.0024 - .0035	.0031 - .0043		.0039 - .0051	
	16		82	RPM	3980	2650		1990	1330		990	
				FEED	.0004 - .0012	.0012 - .0020		.0016 - .0028	.0020 - .0031		.0028 - .0039	
	17	Nodular cast iron	99	RPM	4770	3180		2390	1590		1190	
				FEED	.0012 - .0020	.0020 - .0028		.0024 - .0035	.0031 - .0043		.0039 - .0051	
	19	Malleable cast iron	66	RPM	3180	2120		1590	1060		800	
				FEED	.0012 - .0020	.0020 - .0028		.0024 - .0035	.0031 - .0043		.0039 - .0051	
N	21	Aluminum-wrought alloy	214	RPM	10350	6900		5170	3450		2590	
				FEED	.0016 - .0024	.0024 - .0035		.0031 - .0043	.0039 - .0051		.0047 - .0059	
	22		197	RPM	9550	6370		4770	3180		2390	
				FEED	.0016 - .0024	.0024 - .0035		.0031 - .0043	.0039 - .0051		.0047 - .0059	
	23	Aluminum-cast, alloyed	165	RPM	7960	5310		3980	2650		1990	
				FEED	.0016 - .0024	.0024 - .0035		.0031 - .0043	.0039 - .0051		.0047 - .0059	

ISO	VDI 3323	Material Description	SFM	Drill Diameter								
				METRIC	-	10.0	12.0	-	-	16.0	-	20.0
				FRACTIONAL	3/8	-	-	1/2	5/8	-	3/4	-
				DECIMAL	.3750	.3937	.4724	.5000	.6250	.6299	.7500	.7874
P	1	Non-alloy steel	82	RPM	800	660	630	500	420	400		
				FEED	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075	.0051 - .0075	.0059 - .0083		
	2		82	RPM	800	660	630	500	420	400		
				FEED	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075	.0051 - .0075	.0059 - .0083		
	3		49	RPM	480	400	370	300	250	240		
				FEED	.0031 - .0047	.0035 - .0055	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075		
	6	Low alloy steel	66	RPM	640	530	500	400	340	320		
				FEED	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075	.0051 - .0075	.0059 - .0083		
	7		49	RPM	480	400	370	300	250	240		
				FEED	.0031 - .0047	.0035 - .0055	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075		
M	12	Stainless steel	49	RPM	480	400	370	300	250	240		
				FEED	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075	.0051 - .0075	.0059 - .0083		
K	15	Grey cast iron	99	RPM	950	800	760	600	500	480		
				FEED	.0047 - .0063	.0059 -- .0079	.0059 - .0079	.0071 - .0094	.0071 - .0094	.0087 - .0110		
	16		82	RPM	800	660	630	500	420	400		
				FEED	.0031 - .0047	.0035 - .0055	.0035 - .0055	.0043 - .0067	.0043 - .0067	.0051 - .0075		
	17	Nodular cast iron	99	RPM	950	800	760	600	500	480		
				FEED	.0047 - .0063	.0059 -- .0079	.0059 - .0079	.0071 - .0094	.0071 - .0094	.0087 - .0110		
	19	Malleable cast iron	66	RPM	640	530	500	400	340	320		
				FEED	.0047 - .0063	.0059 -- .0079	.0059 - .0079	.0071 - .0094	.0071 - .0094	.0087 - .0110		
N	21	Aluminum-wrought alloy	214	RPM	2070	1720	1630	1290	1090	1030		
				FEED	.0059 - .0075	.0071 - .0091	.0071 - .0091	.0083 - .0106	.0083 - .0106	.0098 - .0122		
	22		197	RPM	1910	1590	1510	1190	1000	950		
				FEED	.0059 - .0075	.0071 - .0091	.0071 - .0091	.0083 - .0106	.0083 - .0106	.0098 - .0122		
	23	Aluminum-cast, alloyed	165	RPM	1590	1330	1260	990	840	800		
				FEED	.0059 - .0075	.0071 - .0091	.0071 - .0091	.0083 - .0106	.0083 - .0106	.0098 - .0122		