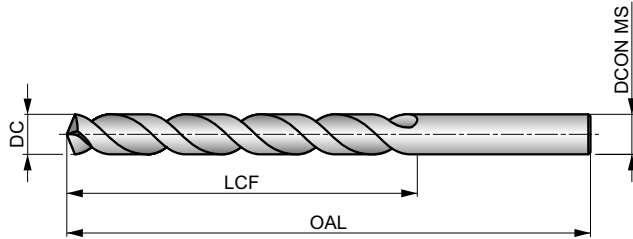


A777

HSS-E (8% Cobalt) Jobber Drill, Bronze Tempered Finish

A top performer, producing accurate sized holes with a quality finish in high strength materials. The 135° split point helps to self-center. The bronze finish is a thin oxide layer formed on the tool surface and is an indication for 8% Cobalt HSS-E Drill.



HSS-E	DIN 338	4xD
135°	Bronze	
λ 20-35°	R	DC h8

Workpiece material group suitability, starting values for cutting speed (m/min) and feed Alpha Code. Tables with feed per revolution can be found starting from page 6.

P1.1 ■ 36 H	P1.2 ■ 40 H	P1.3 ■ 41 H	P2.1 ■ 31 H	P2.2 ■ 27 G	P2.3 ■ 24 E	P3.1 ■ 25 F	P3.2 ■ 20 F	P3.3 ■ 17 E	P4.1 ■ 15 F	P4.2 ■ 13 E	P4.3 ■ 10 D	M1.1 ■ 30 E	M1.2 ■ 26 E
M2.1 ■ 27 E	M2.2 ■ 22 E	M3.1 ■ 13 G	M3.2 ■ 11 G	M3.3 ■ 10 G	M4.1 ■ 15 C	K1.1 ■ 35 H	K1.2 ■ 26 D	K1.3 ■ 19 D	K2.1 ■ 27 E	K2.2 ■ 22 E	K2.3 ■ 18 E	K3.1 ■ 24 E	K3.2 ■ 18 E
K3.3 ■ 15 E	K4.1 ■ 22 E	K4.2 ■ 17 E	K4.3 ■ 12 E	K4.4 ■ 11 E	K4.5 ■ 9 E	K5.1 ■ 25 E	K5.2 ■ 19 E	K5.3 ■ 15 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 46 H	N2.2 ■ 42 H
N2.3 ■ 30 H	N3.1 ■ 68 H	N3.2 ■ 40 F	N3.3 ■ 20 H	S1.1 ■ 28 F	S1.2 ■ 20 D	S1.3 ■ 11 C	S2.1 ■ 9 E	S2.2 ■ 8 B	S3.1 ■ 7 E	S3.2 ■ 6 B	S4.1 ■ 5 E	S4.2 ■ 5 B	

NAS907J. DC ≤ 1.4mm 4 Facet Point.

Products from this series are also available in set. Please see A295.

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A777.3	—	0.30	0.0118	3.0	19.0	0.30
A777.35	—	0.35	0.0138	4.0	19.0	0.35
A777.4	—	0.40	0.0157	5.0	20.0	0.40
A777.45	—	0.45	0.0177	5.0	20.0	0.45
A777.5	—	0.50	0.0197	6.0	22.0	0.50
A777.55	—	0.55	0.0217	7.0	24.0	0.55
A777.6	—	0.60	0.0236	7.0	24.0	0.60
A777.65	—	0.65	0.0256	8.0	26.0	0.65
A777.7	—	0.70	0.0276	9.0	28.0	0.70
A777.8	—	0.80	0.0315	10.0	30.0	0.80
A777.9	—	0.90	0.0354	11.0	32.0	0.90
A777.95	—	0.95	0.0374	11.0	32.0	0.95
A7771.0	—	1.00	0.0394	12.0	34.0	1.00
A7771.1	—	1.10	0.0433	14.0	36.0	1.10
A7771.2	—	1.20	0.0472	16.0	38.0	1.20
A7771.3	—	1.30	0.0512	16.0	38.0	1.30
A7771.4	—	1.40	0.0551	18.0	40.0	1.40
A7771.5	—	1.50	0.0591	18.0	40.0	1.50
A7771/16	1/16	1.59	0.0625	20.0	43.0	1.59
A7771.6	—	1.60	0.0630	20.0	43.0	1.60
A7771.7	—	1.70	0.0669	20.0	43.0	1.70
A7771.8	—	1.80	0.0709	22.0	46.0	1.80
A7771.9	—	1.90	0.0748	22.0	46.0	1.90
A7775/64	5/64	1.98	0.0781	24.0	49.0	1.98

Product	DC	DC	DC	LCF	OAL	DCON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A7772.0	—	2.00	0.0787	24.0	49.0	2.00
A7772.1	—	2.10	0.0827	24.0	49.0	2.10
A7772.2	—	2.20	0.0866	27.0	53.0	2.20
A7772.3	—	2.30	0.0906	27.0	53.0	2.30
A7773/32	3/32	2.38	0.0938	30.0	57.0	2.38
A7772.4	—	2.40	0.0945	30.0	57.0	2.40
A7772.5	—	2.50	0.0984	30.0	57.0	2.50
A7772.6	—	2.60	0.1024	30.0	57.0	2.60
A7772.7	—	2.70	0.1063	33.0	61.0	2.70
A7777/64	7/64	2.78	0.1094	33.0	61.0	2.78
A7772.8	—	2.80	0.1102	33.0	61.0	2.80
A7772.9	—	2.90	0.1142	33.0	61.0	2.90
A7773.0	—	3.00	0.1181	33.0	61.0	3.00
A7773.1	—	3.10	0.1220	36.0	65.0	3.10
A7771/8	1/8	3.18	0.1250	36.0	65.0	3.18
A7773.2	—	3.20	0.1260	36.0	65.0	3.20
A7773.3	—	3.30	0.1299	36.0	65.0	3.30
A7773.4	—	3.40	0.1339	39.0	70.0	3.40
A7773.5	—	3.50	0.1378	39.0	70.0	3.50
A7779/64	9/64	3.57	0.1406	39.0	70.0	3.57
A7773.6	—	3.60	0.1417	39.0	70.0	3.60
A7773.7	—	3.70	0.1457	39.0	70.0	3.70
A7773.8	—	3.80	0.1496	43.0	75.0	3.80
A7773.9	—	3.90	0.1535	43.0	75.0	3.90

Product	DC	DC	DC	LCF	OAL	D CON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A7775/32	5/32	3.97	0.1563	43.0	75.0	3.97
A7774.0	–	4.00	0.1575	43.0	75.0	4.00
A7774.1	–	4.10	0.1614	43.0	75.0	4.10
A7774.2	–	4.20	0.1654	43.0	75.0	4.20
A7774.3	–	4.30	0.1693	47.0	80.0	4.30
A77711/64	11/64	4.37	0.1719	47.0	80.0	4.37
A7774.4	–	4.40	0.1732	47.0	80.0	4.40
A7774.5	–	4.50	0.1772	47.0	80.0	4.50
A7774.6	–	4.60	0.1811	47.0	80.0	4.60
A7774.7	–	4.70	0.1850	47.0	80.0	4.70
A7773/16	3/16	4.76	0.1875	52.0	86.0	4.76
A7774.8	–	4.80	0.1890	52.0	86.0	4.80
A7774.9	–	4.90	0.1929	52.0	86.0	4.90
A7775.0	–	5.00	0.1969	52.0	86.0	5.00
A7775.1	–	5.10	0.2008	52.0	86.0	5.10
A77713/64	13/64	5.16	0.2031	52.0	86.0	5.16
A7775.2	–	5.20	0.2047	52.0	86.0	5.20
A7775.3	–	5.30	0.2087	52.0	86.0	5.30
A7775.4	–	5.40	0.2126	57.0	93.0	5.40
A7775.5	–	5.50	0.2165	57.0	93.0	5.50
A7777/32	7/32	5.56	0.2188	57.0	93.0	5.56
A7775.6	–	5.60	0.2205	57.0	93.0	5.60
A7775.7	–	5.70	0.2244	57.0	93.0	5.70
A7775.8	–	5.80	0.2283	57.0	93.0	5.80
A7775.9	–	5.90	0.2323	57.0	93.0	5.90
A77715/64	15/64	5.95	0.2344	57.0	93.0	5.95
A7776.0	–	6.00	0.2362	57.0	93.0	6.00
A7776.1	–	6.10	0.2402	63.0	101.0	6.10
A7776.2	–	6.20	0.2441	63.0	101.0	6.20
A7776.3	–	6.30	0.2480	63.0	101.0	6.30
A7771/4	1/4	6.35	0.2500	63.0	101.0	6.35
A7776.4	–	6.40	0.2520	63.0	101.0	6.40
A7776.5	–	6.50	0.2559	63.0	101.0	6.50
A7776.6	–	6.60	0.2598	63.0	101.0	6.60
A7776.7	–	6.70	0.2638	63.0	101.0	6.70
A77717/64	17/64	6.75	0.2656	69.0	109.0	6.75
A7776.8	–	6.80	0.2677	69.0	109.0	6.80
A7776.9	–	6.90	0.2717	69.0	109.0	6.90
A7777.0	–	7.00	0.2756	69.0	109.0	7.00
A7777.1	–	7.10	0.2795	69.0	109.0	7.10
A7779/32	9/32	7.14	0.2813	69.0	109.0	7.14
A7777.2	–	7.20	0.2835	69.0	109.0	7.20
A7777.3	–	7.30	0.2874	69.0	109.0	7.30
A7777.4	–	7.40	0.2913	69.0	109.0	7.40
A7777.5	–	7.50	0.2953	69.0	109.0	7.50
A77719/64	19/64	7.54	0.2969	75.0	117.0	7.54
A7777.6	–	7.60	0.2992	75.0	117.0	7.60
A7777.7	–	7.70	0.3031	75.0	117.0	7.70
A7777.8	–	7.80	0.3071	75.0	117.0	7.80
A7777.9	–	7.90	0.3110	75.0	117.0	7.90
A7775/16	5/16	7.94	0.3125	75.0	117.0	7.94
A7778.0	–	8.00	0.3150	75.0	117.0	8.00

















Product	DC	DC	DC	LCF	OAL	D CON MS
	[inch]	[mm]	[inch]	[mm]	[mm]	[mm]
A7778.1	–	8.10	0.3189	75.0	117.0	8.10
A7778.2	–	8.20	0.3228	75.0	117.0	8.20
A7778.3	–	8.30	0.3268	75.0	117.0	8.30
A77721/64	21/64	8.33	0.3281	75.0	117.0	8.33
A7778.4	–	8.40	0.3307	75.0	117.0	8.40
A7778.5	–	8.50	0.3346	75.0	117.0	8.50
A7778.6	–	8.60	0.3386	81.0	125.0	8.60
A7778.7	–	8.70	0.3425	81.0	125.0	8.70
A77711/32	11/32	8.73	0.3438	81.0	125.0	8.73
A7778.8	–	8.80	0.3465	81.0	125.0	8.80
A7778.9	–	8.90	0.3504	81.0	125.0	8.90
A7779.0	–	9.00	0.3543	81.0	125.0	9.00
A7779.1	–	9.10	0.3583	81.0	125.0	9.10
A77723/64	23/64	9.13	0.3594	81.0	125.0	9.13
A7779.2	–	9.20	0.3622	81.0	125.0	9.20
A7779.3	–	9.30	0.3661	81.0	125.0	9.30
A7779.4	–	9.40	0.3701	81.0	125.0	9.40
A7779.5	–	9.50	0.3740	81.0	125.0	9.50
A7773/8	3/8	9.52	0.3750	87.0	133.0	9.52
A7779.6	–	9.60	0.3780	87.0	133.0	9.60
A7779.7	–	9.70	0.3819	87.0	133.0	9.70
A7779.8	–	9.80	0.3858	87.0	133.0	9.80
A7779.9	–	9.90	0.3898	87.0	133.0	9.90
A77725/64	25/64	9.92	0.3906	87.0	133.0	9.92
A77710.0	–	10.00	0.3937	87.0	133.0	10.00
A77710.1	–	10.10	0.3976	87.0	133.0	10.10
A77710.2	–	10.20	0.4016	87.0	133.0	10.20
A77713/32	13/32	10.32	0.4063	87.0	133.0	10.32
A77710.5	–	10.50	0.4134	87.0	133.0	10.50
A77727/64	27/64	10.72	0.4219	94.0	142.0	10.72
A77710.8	–	10.80	0.4252	94.0	142.0	10.80
A77711.0	–	11.00	0.4331	94.0	142.0	11.00
A7777/16	7/16	11.11	0.4375	94.0	142.0	11.11
A77711.2	–	11.20	0.4409	94.0	142.0	11.20
A77711.5	–	11.50	0.4528	94.0	142.0	11.50
A77729/64	29/64	11.51	0.4531	94.0	142.0	11.51
A77711.8	–	11.80	0.4646	94.0	142.0	11.80
A77715/32	15/32	11.91	0.4688	101.0	151.0	11.91
A77712.0	–	12.00	0.4724	101.0	151.0	12.00
A77712.2	–	12.20	0.4803	101.0	151.0	12.20
A77731/64	31/64	12.30	0.4844	101.0	151.0	12.30
A77712.5	–	12.50	0.4921	101.0	151.0	12.50
A7771/2	1/2	12.70	0.5000	101.0	151.0	12.70
A77712.8	–	12.80	0.5039	101.0	151.0	12.80
A77713.0	–	13.00	0.5118	101.0	151.0	13.00
A77713.5	–	13.50	0.5315	108.0	160.0	13.50
A77714.0	–	14.00	0.5512	108.0	160.0	14.00
A77714.5	–	14.50	0.5709	114.0	169.0	14.50
A77715.0	–	15.00	0.5906	114.0	169.0	15.00
A77715.5	–	15.50	0.6102	120.0	178.0	15.50
A77716.0	–	16.00	0.6299	120.0	178.0	16.00

HSS DRILLS – ICONS OVERVIEW






















General Icons

	Primary use		Possible use
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Application Angle

	60° Countersink Centre Drill		Radius Countersink Centre Drill		Pre-Drill with 90° Chamfer (for tapping)
	Drill Point 118°		Spot Drill Point 90°/120°		Spot Drill Point 150°
	Drill Point 120°		Spot-weld Drill Point 180°		Spot Drill Point 90°
	Drill Point 122°		Step-drill (for fasteners) 180° Counterbore		Spot Drill Point 120°
	Drill Point 130°		Step-drill (for fasteners) 90° Counterbore		
	Drill Point 135°		Drill Point 140°		

Basic Standard Group (BSG)

	BS 328 – Drills and Reamers Standards		DIN 1899 – Micro Drill Standards		DIN 8037 – Carbide Tipped Drill Standards
	DIN 1869 / 1 – Straight Shank Extra Long Drill Standards		DIN 333A – Centre Drill Standards		DIN 8374 – Subland Drill Standards
	DIN 1869 / 2 – Straight Shank Extra Long Drill Standards		DIN 333R – Straight Shank Countersink Standards		DIN 8376 – Step Drill Standards
	DIN 1869 / 3 – Straight Shank Extra Long Drill Standards		DIN 338 – Straight Shank Drill Standards		DIN 8377 – Subland Drill Standards
	DIN 1870 (1) – Morse Taper Shank Extra Long Drill Standards		DIN 340 – Taper Length Drill Standards		DIN/ANSI Standards
	DIN 1870 (2) – Morse Taper Shank Extra Long Drill Standards		DIN 341 – Morse Taper Shank Long Drill Standards		Dormer Standards
	DIN 1897 – Stub Drill Standards		DIN 345 – Morse Taper Shank Drill Standards		NAS907 – Aerospace Drill Standards

Coating

	Aluminium Chromium Nitride (with smoothing process)		Bronze Tempered (Bronze Oxide) Surface Treatment		Titanium Aluminium Nitride (with smoothing process)
	Bright (uncoated)		Combination Bright and Steam Tempered		Titanium Aluminium Nitride Coating
	Bright and TiN (Tip Coating)		Steam Tempered (Steam Oxide) Surface Treatment		Titanium Nitride Coating

HSS DRILLS – ICONS OVERVIEW

Coolant Supply Property (CSP)



Through Tool Coolant

Cutting Direction



Left Hand Rotation / Cutting



Right Hand Rotation / Cutting

Cutting Diameter Tolerance Zone Class (TDC)

DC h8 h8 – Industry Standard Tool Tolerance Zone (based on diameter range)

DC h7 h7 – Industry Standard Tool Tolerance Zone (based on diameter range)

DC m7 m7 – Industry Standard Tool Tolerance Zone (based on diameter range)

DC h6 h6 – Industry Standard Tool Tolerance Zone (based on diameter range)

Material Code (BMC)

HM Hard Material (Solid Carbide)

HSS HM High Speed Steel (tool body) with Solid Carbide (cutting tool material)

HSS High Speed Steel Tool Material

HSS-E High Speed Cobalt Steel Tool Material

Shank

Cylindrical Shank / Straight Shank

Cylindrical Shank with Tang

Morse Taper Shank

Cylindrical Shank with Flat

DIN 6535 HA Cylindrical Shank

Reduced Cylindrical Shank

Spiral Form

Quick Spiral Flute Design

Standard Spiral Flute Design

Continuously Thinned Web Flute Design

Slow Spiral Flute Design

Quick Spiral Flute Design

VA Special Point Thinning Design

Usable Length Diameter Ratio (ULDR)

1.25xD 1.25xD Usable Tool Depth to Diameter Ratio

2.5xD 2.5xD Usable Tool Depth to Diameter Ratio

5xD 5xD Usable Tool Depth to Diameter Ratio

1.5xD 1.5xD Usable Tool Depth to Diameter Ratio

20xD 20xD Usable Tool Depth to Diameter Ratio

6xD 6xD Usable Tool Depth to Diameter Ratio

10xD 10xD Usable Tool Depth to Diameter Ratio

25xD 25xD Usable Tool Depth to Diameter Ratio

8xD 8xD Usable Tool Depth to Diameter Ratio

15xD 15xD Usable Tool Depth to Diameter Ratio

3xD 3xD Usable Tool Depth to Diameter Ratio

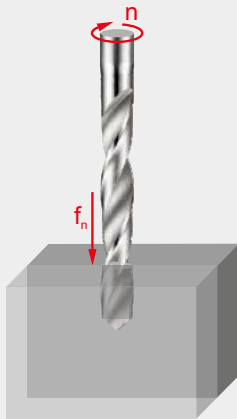
1xD 1xD Usable Tool Depth to Diameter Ratio

4xD 4xD Usable Tool Depth to Diameter Ratio

WMG (WORK MATERIAL GROUP)

ISO group	WMG (Work Material Group)		Hardness (HB or HRC)	Ultimate Tensile Strength (MPa)		
P	P1	P1.1	Sulfurized	< 240 HB	≤ 830	
		P1.2	Free machining steel	Sulfurized and phosphorized	< 180 HB	≤ 620
		P1.3	(carbon steels with increased machinability)	Sulfurized/phosphorized and leaded	< 180 HB	≤ 620
	P2	P2.1	Plain carbon steel (steels comprised of mainly iron and carbon)	Containing <0.25 % C	< 180 HB	≤ 620
		P2.2		Containing <0.55 % C	< 240 HB	≤ 830
		P2.3		Containing >0.55 % C	< 300 HB	≤ 1030
	P3	P3.1	Alloy steel (carbon steels with an alloying content ≤ 10%)	Annealed	< 180 HB	≤ 620
		P3.2		Hardened and tempered	180 – 260 HB	> 620 ≤ 900
		P3.3			260 – 360 HB	> 900 ≤ 1240
	P4	P4.1	Tool steel (special alloy steel for tools, dies and molds)	Annealed	< 26 HRC	≤ 900
P4.2		Hardened and tempered		26 – 39 HRC	> 900 ≤ 1240	
P4.3				39 – 45 HRC	> 1240 ≤ 1450	
M	M1	M1.1	Ferritic stainless steel (straight chromium non-hardenable alloys)	< 160 HB	≤ 520	
		M1.2		160 – 220 HB	> 520 ≤ 700	
	M2	M2.1	Martensitic stainless steel (straight chromium hardenable alloys)	Annealed	< 200 HB	≤ 670
		M2.2		Quenched and tempered	200 – 280 HB	> 670 ≤ 950
		M2.3		Precipitation-hardened	280 – 380 HB	> 950 ≤ 1300
	M3	M3.1	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)	< 200 HB	≤ 750	
		M3.2		200 – 260 HB	> 750 ≤ 870	
		M3.3		260 – 300 HB	> 870 ≤ 1040	
	M4	M4.1	Austenitic-ferritic (DUPLEX) or super-austenitic stainless steel	< 300 HB	≤ 990	
		M4.2	Precipitation hardening austenitic stainless steel	300 – 380 HB	≤ 1320	
K	K1	K1.1	Gray iron or Automotive Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	Ferritic or ferritic-pearlitic	< 180 HB	≤ 190
		K1.2		Ferritic-pearlitic or pearlitic	180 – 240 HB	> 190 ≤ 310
		K1.3		Pearlitic	240 – 280 HB	> 310 ≤ 390
	K2	K2.1	Malleable iron (GTS/GTW) (iron-carbon castings with a graphite-free microstructure)	Ferritic	< 160 HB	≤ 400
		K2.2		Ferritic or pearlitic	160 – 200 HB	> 400 ≤ 550
		K2.3		Pearlitic	200 – 240 HB	> 550 ≤ 660
	K3	K3.1	Ductile iron (GGG) (iron-carbon castings with a nodular graphite microstructure)	Ferritic	< 180 HB	≤ 560
		K3.2		Ferritic or pearlitic	180 – 220 HB	> 560 ≤ 680
		K3.3		Pearlitic	220 – 260 HB	> 680 ≤ 800
	K4	K4.1	Austenitic gray iron (ASTM A436) (iron-carbon alloy castings with an austenitic lamellar graphite microstructure)		< 180 HB	≤ 190
		K4.2	Austenitic ductile iron (ASTM A439 or ASTM A571) (iron-carbon alloy castings with an austenitic nodular graphite microstructure)		< 240 HB	≤ 740
					< 280 HB	> 840 ≤ 980
		K4.4	Austempered ductile iron (ASTM A897) (iron-carbon alloy castings with an ausferrite microstructure)		280 – 320 HB	> 980 ≤ 1130
		K4.5		320 – 360 HB	> 1130 ≤ 1280	
	K5	K5.1	Compacted graphite iron CGI (ASTM A842) (iron-carbon castings with a vermicular graphite structure)	Ferritic	< 180 HB	≤ 400
K5.2		Ferritic-pearlitic		180 – 220 HB	> 400 ≤ 450	
K5.3		Pearlitic		220 – 260 HB	> 450 ≤ 500	
N	N1	N1.1	Commercially pure wrought aluminium	< 60 HB	≤ 240	
		N1.2		Half hard tempered	60 – 100 HB	> 240 ≤ 400
		N1.3		Full hard tempered	100 – 150 HB	> 400 ≤ 590
	N2	N2.1	Cast aluminium alloys		< 75 HB	≤ 240
		N2.2		75 – 90 HB	> 240 ≤ 270	
		N2.3		90 – 140 HB	> 270 ≤ 440	
	N3	N3.1	Free-cutting copper-alloys materials with excellent machining properties		–	–
		N3.2	Short-chip copper-alloys with good to moderate machining properties		–	–
		N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties		–	–
	N4	N4.1	Thermoplastic polymers		–	–
		N4.2	Thermosetting polymers		–	–
		N4.3	Reinforced polymers or composites		–	–
	N5	N5.1	Graphite		–	–
	S	S1	S1.1	Titanium or titanium alloys	< 200 HB	≤ 660
			S1.2		200 – 280 HB	> 660 ≤ 950
S1.3			280 – 360 HB		> 950 ≤ 1200	
S2		S2.1	Fe-based high-temperature alloys	< 200 HB	≤ 690	
		S2.2		200 – 280 HB	> 690 ≤ 970	
S3		S3.1	Ni-based high-temperature alloys	< 280 HB	≤ 940	
		S3.2		280 – 360 HB	> 940 ≤ 1200	
S4		S4.1	Co-based high-temperature alloys	< 240 HB	≤ 800	
	S4.2	240 – 320 HB		> 800 ≤ 1070		
H	H1	H1.1	Chilled cast iron	< 440 HB	–	
		H1.2		< 55 HRC	–	
	H2	H2.1	Hardened cast iron	> 55 HRC	–	
		H2.2		< 51 HRC	–	
	H3	H3.1	Hardened steel <55 HRC	51 – 55 HRC	–	
		H3.2		< 55 HRC	–	
H4	H4.1	Hardened steel >55 HRC	55 – 59 HRC	–		
	H4.2		> 59 HRC	–		

DRILLING FEED RATE CHART



Feed per revolution (f_n in mm/rev)
Depending on the working conditions
it might be necessary to adjust these
values $\pm 25\%$.

How to use this table to find the feed per revolution (f_n):

1. Find your Alpha Code on the product page (example: 46J, "J" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per revolution (f_n).

		\varnothing DC [mm]																		
		0.15	0.50	1.00	2.00	3.00	4.00	5.00	6.00	8.00	10.00	12.00	15.00	16.00	20.00	25.00	30.00	40.00	50.00	100.00
Feed rates	A	0.003	0.006	0.012	0.023	0.029	0.032	0.036	0.042	0.054	0.062	0.069	0.082	0.086	0.110	0.125	0.135	0.155	0.175	0.263
	B	0.004	0.007	0.014	0.028	0.037	0.041	0.046	0.053	0.067	0.080	0.090	0.103	0.108	0.135	0.153	0.165	0.188	0.208	0.312
	C	0.004	0.008	0.015	0.032	0.044	0.050	0.056	0.064	0.080	0.098	0.110	0.125	0.130	0.160	0.180	0.195	0.220	0.240	0.360
	D	0.004	0.008	0.016	0.038	0.053	0.060	0.068	0.078	0.098	0.119	0.130	0.149	0.155	0.188	0.210	0.228	0.253	0.275	0.413
	E	0.004	0.009	0.017	0.043	0.062	0.071	0.080	0.092	0.115	0.140	0.150	0.173	0.180	0.215	0.240	0.260	0.285	0.310	0.465
	F	0.005	0.009	0.018	0.050	0.073	0.084	0.095	0.109	0.138	0.165	0.178	0.202	0.210	0.248	0.275	0.295	0.320	0.343	0.515
	G	0.005	0.010	0.019	0.056	0.084	0.096	0.109	0.126	0.160	0.190	0.205	0.231	0.240	0.280	0.310	0.330	0.355	0.375	0.563
	H	0.005	0.010	0.020	0.066	0.102	0.116	0.130	0.150	0.190	0.228	0.243	0.271	0.280	0.320	0.355	0.375	0.398	0.418	0.627
	I	0.005	0.011	0.021	0.076	0.119	0.134	0.150	0.173	0.220	0.265	0.280	0.310	0.320	0.360	0.400	0.420	0.440	0.460	0.690
	J	0.006	0.012	0.024	0.084	0.135	0.152	0.170	0.197	0.250	0.298	0.315	0.349	0.360	0.405	0.445	0.465	0.485	0.503	0.755
	K	0.007	0.013	0.026	0.092	0.150	0.170	0.190	0.220	0.280	0.330	0.350	0.388	0.400	0.450	0.490	0.510	0.530	0.545	0.818
	L	0.007	0.014	0.028	0.101	0.165	0.186	0.208	0.240	0.305	0.360	0.385	0.419	0.430	0.485	0.525	0.545	0.568	0.588	0.882
	M	0.008	0.015	0.030	0.110	0.180	0.202	0.225	0.260	0.330	0.390	0.420	0.450	0.460	0.520	0.560	0.580	0.605	0.630	0.945
	N	0.008	0.016	0.032	0.119	0.195	0.218	0.242	0.280	0.355	0.420	0.455	0.481	0.490	0.555	0.595	0.615	0.642	0.672	1.008
	S	0.002	0.004	0.008	0.014	0.020	0.025	0.030	0.037	0.050	0.080	0.100	0.123	0.130	0.150	0.170	0.190	0.220	0.240	–
	T	0.004	0.008	0.015	0.028	0.040	0.050	0.060	0.070	0.090	0.110	0.130	0.160	0.170	0.190	0.210	0.230	0.260	0.275	–
	U	0.007	0.013	0.026	0.048	0.070	0.080	0.090	0.107	0.140	0.170	0.200	0.223	0.230	0.240	0.270	0.300	0.360	0.375	–
	V	0.010	0.019	0.038	0.069	0.100	0.115	0.130	0.153	0.200	0.250	0.280	0.310	0.320	0.340	0.400	0.440	0.510	0.530	–
	W	0.012	0.025	0.049	0.089	0.130	0.150	0.170	0.200	0.260	0.330	0.380	0.418	0.430	0.450	0.470	0.490	0.520	0.540	–
	X	0.014	0.028	0.056	0.103	0.150	0.180	0.210	0.250	0.330	0.420	0.480	0.533	0.550	0.580	–	–	–	–	–
Y	0.017	0.034	0.068	0.124	0.180	0.220	0.260	0.317	0.430	0.550	0.700	0.700	0.700	0.740	–	–	–	–	–	
Z	0.024	0.047	0.094	0.172	0.250	0.325	0.400	0.533	0.800	1.000	1.100	1.175	1.200	1.200	–	–	–	–	–	