



MORSE[®]
CUTTING TOOLS



Solid Carbide Miniature Drills



List No. 5372 Uncoated

Production Drilling in a Wide Range of Materials



List No. 5373 Uncoated List No. 5373T ALTiN Coated

High Performance Drilling in a Wide Range of Materials

High Performance

**Recommended for Production & High Performance
Drilling in a Wide Range of Materials**

Phone: 800.255.1701 Fax: 800.338.4857

www.morsecuttingtools.com

customerservices@morsecuttingtools.com



Miniature Solid Carbide Drills

Solid Carbide - 35° Helix Angle
130° 4-Facet Point
1/8" Shank Dia. - 1-1/2" Overall Length



List No. 5372 Uncoated

TOLERANCES - INCH SIZES

Diameter ≤ .010" +.0000"/-0.0003"
Diameter > .010" +.0000"/-0.0005"
Shank Dia. +.0000"/-0.0002"



Recommended for Production Drilling
in a Wide Range of Materials.

TOLERANCES - METRIC SIZES

Diameter ≤ .25mm +.000mm/-0.008mm
Diameter > .25mm +.000mm/-0.013mm
Shank Dia. +.000mm/-0.005mm

INCH	SIZE WIRE GAGE	METRIC	DEC. EQUIV.	SHANK DIA.	FLUTE LENGTH	OAL	EDP NO.
	#102	.10 mm	.0039	1/8	.065	1-1/2	53835
	#101		.0043	1/8	.065	1-1/2	53836
	#100		.0047	1/8	.065	1-1/2	53837
	#99		.0051	1/8	.065	1-1/2	53838
	#98		.0055	1/8	.065	1-1/2	53839
	#97	.15 mm	.0059	3.175 mm (1/8)	2.50 mm	38 mm	53840
			.0060	1/8	.100	1-1/2	53841
	#96		.0063	1/8	.100	1-1/2	53842
	#95		.0067	1/8	.100	1-1/2	53843
			.0070	1/8	.100	1-1/2	53844
	#94		.0071	1/8	.100	1-1/2	53845
	#93		.0075	1/8	.100	1-1/2	53846
		.20 mm	.0078	3.175 mm (1/8)	3.20 mm	38 mm	53847
	#92		.0079	1/8	.125	1-1/2	53848
			.0080	1/8	.125	1-1/2	53849
	#91		.0083	1/8	.125	1-1/2	53850
	#90		.0087	1/8	.125	1-1/2	53851
			.0090	1/8	.125	1-1/2	53852
	#89		.0091	1/8	.125	1-1/2	53853
	#88		.0095	1/8	.125	1-1/2	53854
		.25 mm	.0098	3.175 mm (1/8)	3.80 mm	38 mm	53855
	#87		.0100	1/8	.150	1-1/2	53856
	#86		.0105	1/8	.150	1-1/2	53857
	#85		.0110	1/8	.150	1-1/2	53858
	#84		.0115	1/8	.150	1-1/2	53859
		.30 mm	.0118	3.175 mm (1/8)	4.80 mm	38 mm	53860
	#83		.0120	1/8	.190	1-1/2	53861
	#82		.0125	1/8	.190	1-1/2	53862
	#81		.0130	1/8	.190	1-1/2	53863
	#80		.0135	1/8	.190	1-1/2	53864
	#80		.0135	1/8	.250	1-1/2	53865
		.35 mm	.0138	3.175 mm (1/8)	4.80 mm	38 mm	53866
		.35 mm	.0138	3.175 mm (1/8)	6.35 mm	38 mm	53867
	#79		.0145	1/8	.190	1-1/2	53868
	#79		.0145	1/8	.250	1-1/2	53869
1/64			.0156	1/8	.190	1-1/2	53870
1/64			.0156	1/8	.250	1-1/2	53871
		.40 mm	.0157	3.175 mm (1/8)	4.80 mm	38 mm	53872
		.40 mm	.0157	3.175 mm (1/8)	6.35 mm	38 mm	53873

(continued)



Miniature Solid Carbide Drills (continued)

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Speeds & Feeds
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INCH	SIZE WIRE GAGE	METRIC	DEC. EQUIV.	SHANK DIA.	FLUTE LENGTH	OAL	EDP NO.
	#78		.0160	1/8	.190	1-1/2	53874
	#78		.0160	1/8	.250	1-1/2	53875
		.45 mm	.0177	3.175 mm (1/8)	4.80 mm	38 mm	53876
		.45 mm	.0177	3.175 mm (1/8)	6.35 mm	38 mm	53877
		.45 mm	.0177	3.175 mm (1/8)	8.13 mm	38 mm	53878
	#77		.0180	1/8	.190	1-1/2	53879
	#77		.0180	1/8	.250	1-1/2	53880
	#77		.0180	1/8	.320	1-1/2	54880
		.50 mm	.0197	3.175 mm (1/8)	4.80 mm	38 mm	54881
		.50 mm	.0197	3.175 mm (1/8)	6.35 mm	38 mm	54882
		.50 mm	.0197	3.175 mm (1/8)	8.13 mm	38 mm	54883
	#76		.0200	1/8	.190	1-1/2	54884
	#76		.0200	1/8	.250	1-1/2	54885
	#76		.0200	1/8	.320	1-1/2	54886
	#75		.0210	1/8	.190	1-1/2	54887
	#75		.0210	1/8	.250	1-1/2	54888
	#75		.0210	1/8	.320	1-1/2	54889
		.55 mm	.0217	3.175 mm (1/8)	4.80 mm	38 mm	54890
		.55 mm	.0217	3.175 mm (1/8)	6.35 mm	38 mm	54891
		.55 mm	.0217	3.175 mm (1/8)	8.13 mm	38 mm	54892
	#74		.0225	1/8	.190	1-1/2	54893
	#74		.0225	1/8	.250	1-1/2	54894
	#74		.0225	1/8	.320	1-1/2	54895
		.60 mm	.0236	3.175 mm (1/8)	4.80 mm	38 mm	54896
		.60 mm	.0236	3.175 mm (1/8)	6.35 mm	38 mm	54897
		.60 mm	.0236	3.175 mm (1/8)	8.13 mm	38 mm	54898
	#73		.0240	1/8	.190	1-1/2	54899
	#73		.0240	1/8	.250	1-1/2	54900
	#73		.0240	1/8	.320	1-1/2	54901
	#72		.0250	1/8	.190	1-1/2	54902
	#72		.0250	1/8	.250	1-1/2	54903
	#72		.0250	1/8	.320	1-1/2	54904
		.65 mm	.0256	3.175 mm (1/8)	4.80 mm	38 mm	54905
		.65 mm	.0256	3.175 mm (1/8)	6.35 mm	38 mm	54906
		.65 mm	.0256	3.175 mm (1/8)	8.13 mm	38 mm	54907
	#71		.0260	1/8	.190	1-1/2	54908
	#71		.0260	1/8	.250	1-1/2	54909
	#71		.0260	1/8	.320	1-1/2	54910
		.70 mm	.0276	3.175 mm (1/8)	6.35 mm	38 mm	54911
		.70 mm	.0276	3.175 mm (1/8)	8.13 mm	38 mm	54912
		.70 mm	.0276	3.175 mm (1/8)	10.16 mm	38 mm	54913
	#70		.0280	1/8	.250	1-1/2	54914
	#70		.0280	1/8	.320	1-1/2	54915
	#70		.0280	1/8	.400	1-1/2	54916
	#69		.0292	1/8	.250	1-1/2	54917
	#69		.0292	1/8	.320	1-1/2	54918
	#69		.0292	1/8	.400	1-1/2	54919
		.75 mm	.0295	3.175 mm (1/8)	6.35 mm	38 mm	54920
		.75 mm	.0295	3.175 mm (1/8)	8.13 mm	38 mm	54921
		.75 mm	.0295	3.175 mm (1/8)	10.16 mm	38 mm	54922

(continued)



Miniature Solid Carbide Drills (continued)

List No. 5372



INCH	SIZE WIRE GAGE	METRIC	DEC. EQUIV.	SHANK DIA.	FLUTE LENGTH	OAL	EDP NO.
1/32 1/32	#68		.0310	1/8	.250	1-1/2	54923
	#68		.0310	1/8	.400	1-1/2	54924
			.0312	1/8	.250	1-1/2	54925
			.0312	1/8	.400	1-1/2	54926
		.80 mm	.0315	3.175 mm (1/8)	6.35 mm	38 mm	54927
		.80 mm	.0315	3.175 mm (1/8)	10.16 mm	38 mm	54928
	#67		.0320	1/8	.250	1-1/2	54929
	#67		.0320	1/8	.400	1-1/2	54930
	#66		.0330	1/8	.250	1-1/2	54931
	#66		.0330	1/8	.400	1-1/2	54932
		.85 mm	.0335	3.175 mm (1/8)	6.35 mm	38 mm	54933
		.85 mm	.0335	3.175 mm (1/8)	10.16 mm	38 mm	54934
	#65		.0350	1/8	.400	1-1/2	54935
		.90 mm	.0354	3.175 mm (1/8)	10.16 mm	38 mm	54936
	#64		.0360	1/8	.400	1-1/2	54937
	#63		.0370	1/8	.400	1-1/2	54938
		.95 mm	.0374	3.175 mm (1/8)	10.16 mm	38 mm	54939
	#62		.0380	1/8	.400	1-1/2	54940
	#61		.0390	1/8	.400	1-1/2	54941
		1.00 mm	.0394	3.175 mm (1/8)	10.16 mm	38 mm	54942
	#60		.0400	1/8	.400	1-1/2	54943
	#59		.0410	1/8	.400	1-1/2	54944
		1.05 mm	.0413	3.175 mm (1/8)	10.16 mm	38 mm	54945
	#58		.0420	1/8	.400	1-1/2	54946
	#57		.0430	1/8	.400	1-1/2	54947
		1.10 mm	.0433	3.175 mm (1/8)	10.16 mm	38 mm	54948
		1.15 mm	.0452	3.175 mm (1/8)	10.16 mm	38 mm	54949
3/64	#56		.0465	1/8	.400	1-1/2	54950
			.0469	1/8	.400	1-1/2	54951
		1.20 mm	.0472	3.175 mm (1/8)	10.16 mm	38 mm	54952
		1.25 mm	.0492	3.175 mm (1/8)	10.16 mm	38 mm	54953
		1.30 mm	.0511	3.175 mm (1/8)	10.16 mm	38 mm	54954
	#55		.0520	1/8	.400	1-1/2	54955
		1.35 mm	.0531	3.175 mm (1/8)	10.16 mm	38 mm	54956
	#54		.0550	1/8	.400	1-1/2	54960
		1.40 mm	.0551	3.175 mm (1/8)	10.16 mm	38 mm	54961
		1.45 mm	.0571	3.175 mm (1/8)	10.16 mm	38 mm	54962
		1.50 mm	.0590	3.175 mm (1/8)	10.16 mm	38 mm	54963
	#53		.0595	1/8	.400	1-1/2	54964
		1.55 mm	.0610	3.175 mm (1/8)	10.16 mm	38 mm	54965
1/16			.0625	1/8	.480	1-1/2	54966
		1.60 mm	.0630	3.175 mm (1/8)	12.19 mm	38 mm	54967
			.0635	1/8	.480	1-1/2	54968
		1.65 mm	.0649	3.175 mm (1/8)	12.19 mm	38 mm	54969
		1.70 mm	.0669	3.175 mm (1/8)	12.19 mm	38 mm	54970
	#51		.0670	1/8	.480	1-1/2	54971
		1.75 mm	.0689	3.175 mm (1/8)	12.19 mm	38 mm	54972
	#50		.0700	1/8	.480	1-1/2	54973
		1.80 mm	.0708	3.175 mm (1/8)	12.19 mm	38 mm	54974

(continued)



Miniature Solid Carbide Drills (continued)

List No. 5372

Speeds & Feeds
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INCH	SIZE WIRE GAGE	METRIC	DEC. EQUIV.	SHANK DIA.	FLUTE LENGTH	OAL	EDP NO.	
	#49	1.85 mm	.0728	3.175 mm (1/8)	12.19 mm	38 mm	54975	
			.0730	1/8	.480	1-1/2	54976	
	#48	1.90 mm	.0748	3.175 mm (1/8)	12.19 mm	38 mm	54977	
			.0760	1/8	.480	1-1/2	54978	
			1.95 mm	.0767	3.175 mm (1/8)	12.19 mm	38 mm	54979
5/64	#47		.0781	1/8	.480	1-1/2	54980	
			.0785	1/8	.480	1-1/2	54981	
		2.00 mm	.0787	3.175 mm (1/8)	12.19 mm	38 mm	54982	
	#46	2.05 mm	.0807	3.175 mm (1/8)	12.19 mm	38 mm	54983	
			.0810	1/8	.480	1-1/2	54984	
	#45		.0820	1/8	.480	1-1/2	54985	
		2.10 mm	.0827	3.175 mm (1/8)	12.19 mm	38 mm	54986	
	#44	2.15 mm	.0846	3.175 mm (1/8)	12.19 mm	38 mm	54987	
			.0860	1/8	.480	1-1/2	54988	
			2.20 mm	.0866	3.175 mm (1/8)	12.19 mm	38 mm	54989
	#43	2.25 mm	.0886	3.175 mm (1/8)	12.19 mm	38 mm	54990	
			.0890	1/8	.480	1-1/2	54991	
	#42	2.30 mm	.0906	3.175 mm (1/8)	12.19 mm	38 mm	54992	
		2.35 mm	.0925	3.175 mm (1/8)	12.19 mm	38 mm	54993	
				.0935	1/8	.480	1-1/2	54994
3/32	#41		.0938	1/8	.480	1-1/2	54995	
		2.40 mm	.0945	3.175 mm (1/8)	12.19 mm	38 mm	54996	
	#40		.0960	1/8	.480	1-1/2	54997	
		2.45 mm	.0965	3.175 mm (1/8)	12.19 mm	38 mm	54998	
				.0980	1/8	.480	1-1/2	54999
	#39	2.50 mm	.0984	3.175 mm (1/8)	12.19 mm	38 mm	55000	
			.0995	1/8	.480	1-1/2	55001	
	#38	2.55 mm	.1004	3.175 mm (1/8)	12.19 mm	38 mm	55002	
			.1015	1/8	.480	1-1/2	55003	
			2.60 mm	.1024	3.175 mm (1/8)	12.19 mm	38 mm	55004
	#37		.1040	1/8	.480	1-1/2	55005	
		2.65 mm	.1043	3.175 mm (1/8)	12.19 mm	38 mm	55006	
	#36	2.70 mm	.1063	3.175 mm (1/8)	12.19 mm	38 mm	55007	
			.1065	1/8	.480	1-1/2	55008	
			2.75 mm	.1083	3.175 mm (1/8)	12.19 mm	38 mm	55009
7/64	#35		.1094	1/8	.480	1-1/2	55010	
			.1100	1/8	.480	1-1/2	55011	
	#34	2.80 mm	.1102	3.175 mm (1/8)	12.19 mm	38 mm	55012	
			.1110	1/8	.480	1-1/2	55013	
			2.85 mm	.1122	3.175 mm (1/8)	12.19 mm	38 mm	55014
	#33		.1130	1/8	.480	1-1/2	55015	
		2.90 mm	.1142	3.175 mm (1/8)	12.19 mm	38 mm	55016	
	#32		.1160	1/8	.480	1-1/2	55017	
		2.95 mm	.1161	3.175 mm (1/8)	12.19 mm	38 mm	55018	
			3.00 mm	.1181	3.175 mm (1/8)	12.19 mm	38 mm	55019
	#31		.1200	1/8	.480	1-1/2	55020	
		3.05 mm	.1201	3.175 mm (1/8)	12.19 mm	38 mm	55021	
		3.10 mm	.1220	3.175 mm (1/8)	12.19 mm	38 mm	55022	
	1/8		3.15 mm	.1240	3.175 mm (1/8)	12.19 mm	38 mm	55023
				.1250	1/8	.480	1-1/2	55024



Miniature Solid Carbide Drills

Speed and Feed Recommendations

List No. 5372

	WORKPIECE MATERIAL	HARDNESS	SURFACE SPEED (SFM)	FEED PER REVOLUTION BY DRILL DIA. (IPR)				
				1/64"	1/32"	1/16"	3/32"	1/8"
ISO P	Free Machining & Low Carbon Steels: 1006, 1008, 1015, 1018, B3: B34 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	≤ 28 Rc	300	.0003	.0006	.0012	.0018	.0023
	Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels: 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137, 4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132, 5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	28 - 38 Rc	225	.0003	.0006	.0012	.0018	.0023
	Tool Steels & Die Steels: O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A 128, D2, D3, D4, D5, D7	28 - 44 Rc	200	.0003	.0006	.0012	.0018	.0023
ISO H	Hardened Steels: A2 / 52100	35 - 45 Rc	50	.0001	.0003	.0005	.0008	.0010
ISO M	Free Machining Stainless Steels:	≤ 28 Rc	175	.0003	.0006	.0012	.0018	.0023
	Austenitic Stainless Steels: 304 / 316	≤ 28 Rc	200	.0003	.0006	.0012	.0018	.0023
	Ferritic / Martensitic Stainless Steels:	≤ 28 Rc	100	.0003	.0006	.0012	.0018	.0023
	Moderately Difficult Stainless Steels: 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	> 28 Rc	75	.0003	.0006	.0012	.0018	.0023
ISO N	Aluminum <10% Si:		450	.0006	.0012	.0020	.0030	.0040
	Aluminum >10% Si:		325	.0006	.0012	.0020	.0030	.0040
	Plastics:		550	.0006	.0012	.0020	.0030	.0040
	Composites / Fiber Reinforced Materials / Circuit Boards:		650	.001-.0015	.0020	.0030	.0040	.0050
ISO K	Cast Iron - Gray CG: ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	≤ 240 HB	400	.0003	.0006	.0012	.0018	.0023
	Cast Iron - Ductile & Malleable CGI: 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	> 240 HB	350	.0003	.0006	.0012	.0018	.0023
ISO S	Titanium: 6Al-4V	≤ 42 Rc	60	.0003	.0006	.0012	.0018	.0023
	High Temp Alloys: Inconel, Hastelloy, Waspeloy, Nickel Based Alloys, Monel	≤ 42 Rc	50	.0001	.0003	.0005	.0008	.0010

Speeds and Feeds are suggested starting points and may be increased or decreased depending on actual material and machining conditions.

NOTE: Information in this chart is for reference only. We will not be held liable for any consequential damages or economic loss due to the use of information contained within this chart.



High Performance Miniature Solid Carbide Drills



List No. 5373 Uncoated
List No. 5373T ALTiN Coated

Solid Carbide - 12° Helix Angle
135° 4-Facet Point (Sizes ≤ 1/32")
135° Web Thinned Point (Sizes > 1/32")

TOLERANCES - INCH SIZES
Diameter +.0000"/-0.0003"
Shank Dia. +.0000"/-0.0002"



Recommended for High Performance
Drilling in a Wide Range of Materials.

TOLERANCES - METRIC SIZES
Diameter +.000mm/-0.008mm
Shank Dia. +.000mm/-0.005mm

High Performance

INCH	SIZE		DEC. EQUIV.	SHANK DIA.	FLUTE LENGTH	OAL	UNCOATED	ALTiN COATED
	WIRE GAGE	METRIC					EDP NO.	EDP NO.
	#102		.0039	1/8	.065	1-1/2	53620	—
		.10 mm	.0039	3.00 mm	1.70 mm	38 mm	53703	—
	#101		.0043	1/8	.065	1-1/2	53621	—
		.11 mm	.0043	3.00 mm	1.70 mm	38 mm	53704	—
	#100		.0047	1/8	.065	1-1/2	53622	—
		.12 mm	.0047	3.00 mm	1.70 mm	38 mm	53705	—
	#99		.0051	1/8	.065	1-1/2	53623	—
		.13 mm	.0051	3.00 mm	1.70 mm	38 mm	53706	—
	#98		.0055	1/8	.065	1-1/2	53624	—
		.14 mm	.0055	3.00 mm	1.70 mm	38 mm	53707	—
	#97		.0059	3.00 mm	2.50 mm	38 mm	53708	—
			.0060	1/8	.100	1-1/2	53625	—
	#96		.0063	1/8	.100	1-1/2	53626	—
		.16 mm	.0063	3.00 mm	2.50 mm	38 mm	53709	—
	#95		.0067	1/8	.100	1-1/2	53627	—
		.17 mm	.0067	3.00 mm	2.50 mm	38 mm	53710	—
			.0070	1/8	.100	1-1/2	53628	—
	#94		.0071	1/8	.100	1-1/2	53629	—
		.18 mm	.0071	3.00 mm	2.50 mm	38 mm	53711	—
	#93		.0075	1/8	.100	1-1/2	53630	—
		.19 mm	.0075	3.00 mm	2.50 mm	38 mm	53712	—
		.20 mm	.0078	3.00 mm	2.50 mm	38 mm	53713	—
	#92		.0079	1/8	.125	1-1/2	53631	—
			.0080	1/8	.125	1-1/2	53632	—
	#91		.0083	1/8	.125	1-1/2	53633	—
		.21 mm	.0083	3.00 mm	2.50 mm	38 mm	53714	—
	#90		.0087	1/8	.125	1-1/2	53634	—
		.22 mm	.0087	3.00 mm	2.50 mm	38 mm	53715	—
			.0090	1/8	.125	1-1/2	53635	—
	#89		.0091	1/8	.125	1-1/2	53636	—
		.23 mm	.0091	3.00 mm	2.50 mm	38 mm	53716	—
		.24 mm	.0094	3.00 mm	2.50 mm	38 mm	53717	—
	#88		.0095	1/8	.125	1-1/2	53637	—
		.25 mm	.0098	3.00 mm	3.20 mm	38 mm	53718	—
	#87		.0100	1/8	.150	1-1/2	53638	—
		.26 mm	.0102	3.00 mm	3.20 mm	38 mm	53719	—
	#86		.0105	1/8	.150	1-1/2	53639	—
		.27 mm	.0106	3.00 mm	3.20 mm	38 mm	53720	—
	#85		.0110	1/8	.150	1-1/2	53640	—
		.28 mm	.0110	3.00 mm	3.20 mm	38 mm	53721	—
		.29 mm	.0114	3.00 mm	3.20 mm	38 mm	53722	—
	#84		.0115	1/8	.150	1-1/2	53641	—
		.30 mm	.0118	3.00 mm	4.80 mm	38 mm	53723	93930
	#83		.0120	1/8	.190	1-1/2	53642	93870
		.31 mm	.0122	3.00 mm	4.80 mm	38 mm	53724	—

(continued)



Speeds & Feeds
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High Performance Miniature Solid Carbide Drills

(continued)

High Performance



List No. 5373 and 5373T

INCH	SIZE		DEC. EQUIV.	SHANK DIA.	FLUTE LENGTH	OAL	UNCOATED	ALTiN COATED
	WIRE GAGE	METRIC					EDP NO.	EDP NO.
	#82		.0125	1/8	.190	1-1/2	53643	93871
			.0126	3.00 mm	4.80 mm	38 mm	53725	—
	#81		.0130	1/8	.190	1-1/2	53644	93872
			.0130	3.00 mm	4.80 mm	38 mm	53726	—
			.0134	3.00 mm	4.80 mm	38 mm	53727	—
	#80		.0135	1/8	.190	1-1/2	53645	93873
			.0138	3.00 mm	4.80 mm	38 mm	53728	93931
			.0142	3.00 mm	4.80 mm	38 mm	53729	—
	#79		.0145	1/8	.190	1-1/2	53646	93874
			.0146	3.00 mm	4.80 mm	38 mm	53730	—
			.0150	3.00 mm	4.80 mm	38 mm	53731	—
1/64	#78		.0154	3.00 mm	4.80 mm	38 mm	53732	—
			.0156	1/8	.190	1-1/2	53647	93875
			.0157	3.00 mm	4.80 mm	38 mm	53733	93932
			.0160	1/8	.190	1-1/2	53648	93876
			.0161	3.00 mm	6.35 mm	38 mm	53734	—
	#77		.0165	3.00 mm	6.35 mm	38 mm	53735	—
			.0169	3.00 mm	6.35 mm	38 mm	53736	—
			.0173	3.00 mm	6.35 mm	38 mm	53737	—
			.0177	3.00 mm	6.35 mm	38 mm	53738	93933
			.0180	1/8	.250	1-1/2	53649	93877
	#76		.0181	3.00 mm	6.35 mm	38 mm	53739	—
			.0185	3.00 mm	6.35 mm	38 mm	53740	—
			.0189	3.00 mm	6.35 mm	38 mm	53741	—
			.0193	3.00 mm	6.35 mm	38 mm	53742	—
			.0197	3.00 mm	6.35 mm	38 mm	53743	93934
	#75		.0200	1/8	.250	1-1/2	53650	93878
			.0201	3.00 mm	6.35 mm	38 mm	53744	—
			.0205	3.00 mm	6.35 mm	38 mm	53745	—
			.0209	3.00 mm	6.35 mm	38 mm	53746	93935
	#74		.0210	1/8	.250	1-1/2	53651	93879
			.0213	3.00 mm	6.35 mm	38 mm	53747	—
			.0217	3.00 mm	6.35 mm	38 mm	53748	93936
			.0220	3.00 mm	6.35 mm	38 mm	53749	—
	#73		.0224	3.00 mm	6.35 mm	38 mm	53750	—
			.0225	1/8	.250	1-1/2	53652	93880
			.0228	3.00 mm	6.35 mm	38 mm	53751	—
			.0232	3.00 mm	6.35 mm	38 mm	53752	—
	#72		.0236	3.00 mm	6.35 mm	38 mm	53753	93937
			.0240	1/8	.250	1-1/2	53653	93881
			.0240	3.00 mm	6.35 mm	38 mm	53754	—
			.0244	3.00 mm	6.35 mm	38 mm	53755	—
	#71		.0248	3.00 mm	6.35 mm	38 mm	53756	—
			.0250	1/8	.250	1-1/2	53654	93882
			.0252	3.00 mm	6.35 mm	38 mm	53757	—
			.0256	3.00 mm	6.35 mm	38 mm	53758	93938
	#70		.0260	1/8	.250	1-1/2	53655	93883
			.0260	3.00 mm	8.13 mm	38 mm	53759	—
			.0264	3.00 mm	8.13 mm	38 mm	53760	—
			.0268	3.00 mm	8.13 mm	38 mm	53761	—
	#70		.0272	3.00 mm	8.13 mm	38 mm	53762	—
			.0276	3.00 mm	8.13 mm	38 mm	53763	93939
			.0280	1/8	.320	1-1/2	53656	93884
			.0280	3.00 mm	8.13 mm	38 mm	53764	—
			.0283	3.00 mm	8.13 mm	38 mm	53765	—
	.0287	3.00 mm	8.13 mm	38 mm	53766	93940		

(continued)



High Performance Miniature Solid Carbide Drills

(continued)

High Performance



List No. 5373 and 5373T

INCH	SIZE		DEC. EQUIV.	SHANK DIA.	FLUTE LENGTH	OAL	UNCOATED	ALTiN COATED	
	WIRE GAGE	METRIC					EDP NO.	EDP NO.	
	#69	.74 mm	.0291	3.00 mm	8.13 mm	38 mm	53767	—	
				.0292	1/8	.320	1-1/2	53657	93885
			.75 mm	.0295	3.00 mm	8.13 mm	38 mm	53768	93941
			.76 mm	.0299	3.00 mm	10.16 mm	38 mm	53769	—
			.77 mm	.0303	3.00 mm	10.16 mm	38 mm	53770	—
1/32	#68	.78 mm	.0307	3.00 mm	10.16 mm	38 mm	53771	—	
			.0310	1/8	.400	1-1/2	53658	93886	
			.79 mm	.0311	3.00 mm	10.16 mm	38 mm	53772	—
			.0312	1/8	.400	1-1/2	53659	93887	
			.80 mm	.0315	3.00 mm	10.16 mm	38 mm	53773	93942
	#67	.81 mm	.0319	3.00 mm	10.16 mm	38 mm	53774	—	
			.0320	1/8	.400	1-1/2	53660	93888	
			.82 mm	.0323	3.00 mm	10.16 mm	38 mm	53775	—
			.83 mm	.0327	3.00 mm	10.16 mm	38 mm	53776	—
			.0330	1/8	.400	1-1/2	53661	93889	
	#66	.84 mm	.0331	3.00 mm	10.16 mm	38 mm	53777	—	
			.0335	3.00 mm	10.16 mm	38 mm	53778	93943	
			.86 mm	.0339	3.00 mm	10.16 mm	38 mm	53779	—
			.87 mm	.0343	3.00 mm	10.16 mm	38 mm	53780	—
			.88 mm	.0346	3.00 mm	10.16 mm	38 mm	53781	—
	#65		.0350	1/8	.400	1-1/2	53662	93890	
			.89 mm	.0350	3.00 mm	10.16 mm	38 mm	53782	—
			.90 mm	.0354	3.00 mm	10.16 mm	38 mm	53783	93944
			.91 mm	.0358	3.00 mm	10.16 mm	38 mm	53784	—
			.0360	1/8	.400	1-1/2	53663	93891	
	#64	.92 mm	.0362	3.00 mm	10.16 mm	38 mm	53785	—	
			.0366	3.00 mm	10.16 mm	38 mm	53786	—	
			.93 mm	.0370	1/8	.400	1-1/2	53664	93892
			.94 mm	.0370	3.00 mm	10.16 mm	38 mm	53787	—
			.95 mm	.0374	3.00 mm	10.16 mm	38 mm	53788	93945
	#63	.96 mm	.0378	3.00 mm	10.16 mm	38 mm	53789	—	
			.0380	1/8	.400	1-1/2	53665	93893	
			.97 mm	.0382	3.00 mm	10.16 mm	38 mm	53790	—
			.98 mm	.0386	3.00 mm	10.16 mm	38 mm	53791	—
			.0390	1/8	.400	1-1/2	53666	93894	
	#62	.99 mm	.0390	3.00 mm	10.16 mm	38 mm	53792	—	
			.0394	3.00 mm	10.16 mm	38 mm	53793	93946	
			.0400	1/8	.400	1-1/2	53667	93895	
			.0410	1/8	.400	1-1/2	53668	93896	
			1.05 mm	.0413	3.00 mm	10.16 mm	38 mm	53794	93947
	#61		.0420	1/8	.400	1-1/2	53669	93897	
			.0430	1/8	.400	1-1/2	53670	93898	
			1.10 mm	.0433	3.00 mm	10.16 mm	38 mm	53795	93948
			1.15 mm	.0452	3.00 mm	10.16 mm	38 mm	53796	93949
			.0465	1/8	.400	1-1/2	53671	93899	
3/64	#58		.0469	1/8	.400	1-1/2	53672	93900	
			1.20 mm	.0472	3.00 mm	10.16 mm	38 mm	53797	93950
			1.25 mm	.0492	3.00 mm	10.16 mm	38 mm	53798	93951
			1.30 mm	.0511	3.00 mm	10.16 mm	38 mm	53799	93952
			.0520	1/8	.400	1-1/2	53673	93901	
	#57	1.35 mm	.0531	3.00 mm	10.16 mm	38 mm	53800	93953	
			.0550	1/8	.400	1-1/2	53674	93902	
			1.40 mm	.0551	3.00 mm	10.16 mm	38 mm	53801	93954
			1.45 mm	.0571	3.00 mm	10.16 mm	38 mm	53802	93955
			1.50 mm	.0590	3.00 mm	10.16 mm	38 mm	53803	93956
	#56		.0595	1/8	.400	1-1/2	53675	93903	

(continued)



Speeds & Feeds
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High Performance Miniature Solid Carbide Drills

(continued)

High Performance



List No. 5373 and 5373T

INCH	SIZE		DEC. EQUIV.	SHANK DIA.	FLUTE LENGTH	OAL	UNCOATED	ALTiN COATED	
	WIRE GAGE	METRIC					EDP NO.	EDP NO.	
1/16	#52	1.55 mm	.0610	3.00 mm	10.16 mm	38 mm	53804	93957	
			.0625	1/8	.480	1-1/2	53676	93904	
		1.60 mm	.0630	3.00 mm	12.19 mm	38 mm	53805	93958	
	#51		.0635	1/8	.480	1-1/2	53677	93905	
		1.65 mm	.0649	3.00 mm	12.19 mm	38 mm	53806	93959	
		1.70 mm	.0669	3.00 mm	12.19 mm	38 mm	53807	93960	
#50		.0670	1/8	.480	1-1/2	53678	93906		
	1.75 mm	.0689	3.00 mm	12.19 mm	38 mm	53808	93961		
		.0700	1/8	.480	1-1/2	53679	93907		
5/64	#49	1.80 mm	.0708	3.00 mm	12.19 mm	38 mm	53809	93962	
			.0728	3.00 mm	12.19 mm	38 mm	53810	93963	
		1.85 mm	.0730	1/8	.480	1-1/2	53680	93908	
	#48		.0748	3.00 mm	12.19 mm	38 mm	53811	93964	
		1.90 mm	.0760	1/8	.480	1-1/2	53681	93909	
			.0767	3.00 mm	12.19 mm	38 mm	53812	93965	
3/32	#47		.0781	1/8	.480	1-1/2	53682	93910	
			.0785	1/8	.480	1-1/2	53683	93911	
		2.00 mm	.0787	3.00 mm	12.19 mm	38 mm	53813	93966	
	#46		.0807	3.00 mm	12.19 mm	38 mm	53814	93967	
		2.05 mm	.0810	1/8	.480	1-1/2	53684	93912	
			.0820	1/8	.480	1-1/2	53685	93913	
	#45		.0827	3.00 mm	12.19 mm	38 mm	53815	93968	
		2.10 mm	.0846	3.00 mm	12.19 mm	38 mm	53816	93969	
		2.15 mm	.0860	1/8	.480	1-1/2	53686	93914	
	#44		.0866	3.00 mm	12.19 mm	38 mm	53817	93970	
		2.20 mm	.0886	3.00 mm	12.19 mm	38 mm	53818	93971	
		2.25 mm	.0890	1/8	.480	1-1/2	53687	93915	
3/32	#43		.0906	3.00 mm	12.19 mm	38 mm	53819	93972	
		2.30 mm	.0925	3.00 mm	12.19 mm	38 mm	53820	93973	
		2.35 mm	.0935	1/8	.480	1-1/2	53688	93916	
	#42		.0938	1/8	.480	1-1/2	53689	93917	
		2.40 mm	.0945	3.00 mm	12.19 mm	38 mm	53821	93974	
			.0960	1/8	.480	1-1/2	53690	93918	
7/64	#41	2.45 mm	.0965	3.00 mm	12.19 mm	38 mm	53822	93975	
			.0980	1/8	.480	1-1/2	53691	93919	
		2.50 mm	.0984	3.00 mm	12.19 mm	38 mm	53823	93976	
	#39		.0995	1/8	.480	1-1/2	53692	93920	
		2.55 mm	.1004	3.00 mm	12.19 mm	38 mm	53824	93977	
			.1015	1/8	.480	1-1/2	53693	93921	
	#38		.1024	3.00 mm	12.19 mm	38 mm	53825	93978	
		2.60 mm	.1040	1/8	.480	1-1/2	53694	93922	
			.1043	3.00 mm	12.19 mm	38 mm	53826	93979	
	7/64	#37	2.70 mm	.1063	3.00 mm	12.19 mm	38 mm	53827	93980
				.1065	1/8	.480	1-1/2	53695	93923
			2.75 mm	.1083	3.00 mm	12.19 mm	38 mm	53828	93981
#36			.1094	1/8	.480	1-1/2	53696	93924	
			.1100	1/8	.480	1-1/2	53697	93925	
		2.80 mm	.1102	3.00 mm	12.19 mm	38 mm	53829	93982	
1/8	#35		.1110	1/8	.480	1-1/2	53698	93926	
		2.85 mm	.1122	3.00 mm	12.19 mm	38 mm	53830	93983	
			.1130	1/8	.480	1-1/2	53699	93927	
	#34		.1142	3.00 mm	12.19 mm	38 mm	53831	93984	
		2.90 mm	.1160	1/8	.480	1-1/2	53700	93928	
			.1161	3.00 mm	12.19 mm	38 mm	53832	93985	
#33		.1181	3.00 mm	12.19 mm	38 mm	53833	93986		
	2.95 mm	.1200	1/8	.480	1-1/2	53701	93929		
	3.00 mm	.1250	1/8	.480	1-1/2	53702	93987		



Speeds & Feeds
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High Performance Miniature Solid Carbide Drills

Speed and Feed Recommendations

List No. 5373 and 5373T

High Performance

	WORKPIECE MATERIAL	HARDNESS	COATING	SURFACE SPEED (SFM)	FEED PER REVOLUTION BY DRILL DIA. (IPR)				
					1/64"	1/32"	1/16"	3/32"	1/8"
ISO P	Free Machining & Low Carbon Steels: 1006, 1008, 1015, 1018, B3: B34 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	≤ 28 Rc	None	300	.0004	.0008	.0015	.0023	.0030
			ALTiN	360					
	Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels: 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137, 4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132, 5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	28 - 38 Rc	None	225	.0004	.0008	.0015	.0023	.0030
			ALTiN	270					
	Tool Steels & Die Steels: O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A 128, D2, D3, D4, D5, D7	28 - 44 Rc	None	200	.0004	.0008	.0015	.0023	.0030
			ALTiN	240					
ISO H	Hardened Steels: A2 / 52100	35 - 55 Rc	None	50	.0002	.0004	.0007	.0011	.0014
			ALTiN	60					
ISO M	Free Machining Stainless Steels:	≤ 28 Rc	None	175	.0004	.0008	.0015	.0023	.0030
			ALTiN	210					
	Austenitic Stainless Steels: 304 / 316	≤ 28 Rc	None	200	.0004	.0008	.0015	.0023	.0030
			ALTiN	240					
	Ferritic / Martensitic Stainless Steels:	≤ 28 Rc	None	100	.0004	.0008	.0015	.0023	.0030
			ALTiN	120					
Moderately Difficult Stainless Steels: 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	> 28 Rc	None	75	.0004	.0008	.0015	.0023	.0030	
		ALTiN	90						
ISO N	Aluminum <10% Si:		None	450	.0005	.0010	.0020	.0030	.0040
			ALTiN	-					
	Aluminum >10% Si:		None	325	.0005	.0010	.0020	.0030	.0040
			ALTiN	-					
	Plastics:		None	550	.0005	.0010	.0020	.0030	.0040
			ALTiN	-					
Composites / Fiber Reinforced Materials / Circuit Boards:		None	650	.0005	.0010	.0020	.0030	.0040	
		ALTiN	-						-
ISO K	Cast Iron - Gray CG: ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	≤ 240 HB	None	400	.0004	.0008	.0015	.0023	.0030
			ALTiN	480					
	Cast Iron - Ductile & Malleable CGI: 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	> 240 HB	None	350	.0004	.0008	.0015	.0023	.0030
			ALTiN	420					
ISO S	Titanium: 6Al-4V	≤ 42 Rc	None	60	.0004	.0008	.0015	.0023	.0030
			ALTiN	70					
	High Temp Alloys: Inconel, Hastelloy, Waspeloy, Nickel Based Alloys, Monel	≤ 42 Rc	None	50	.0002	.0004	.0007	.0011	.0014
			ALTiN	60					

Speeds and Feeds are suggested starting points and may be increased or decreased depending on actual material and machining conditions.

NOTE: Information in this chart is for reference only. We will not be held liable for any consequential damages or economic loss due to the use of information contained within this chart.





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This certifies that the Quality Management System of

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31695 Stephenson Hwy.
Madison Heights, Michigan, 48071-1672, United States

has been assessed by NSF-ISR and found to be in conformance to the following standard(s):

ISO 9001:2015

Scope of Registration:

The design of cutting tools and accessories including distribution services and sales thereof.



Certificate Number: 64541-IS4
Certificate Issue Date: 20-JUN-2018
Registration Date: 20-JUN-2018
Expiration Date *: 19-JUN-2021

Carl Blazik,
Director, Technical
Operations & Business Units,
NSF-ISR, Ltd.

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www.morsecuttingtools.com
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