

RT 100 US



GUHRING
The Tool Company

The Ultimate Drill Family For High Heat Applications

NEW

RT 100 US

The ultimate drill for high heat applications

Increased feed rates -- 3 to 5 times higher than conventional style drills due to these features:

Radius or "wave" cutting edge design

Promotes better cutting edge shearing action and chip formation

Self-centering 140° point geometry

Allows aggressive feed rates, and does not require a spot drilling operation

Rolled heel design

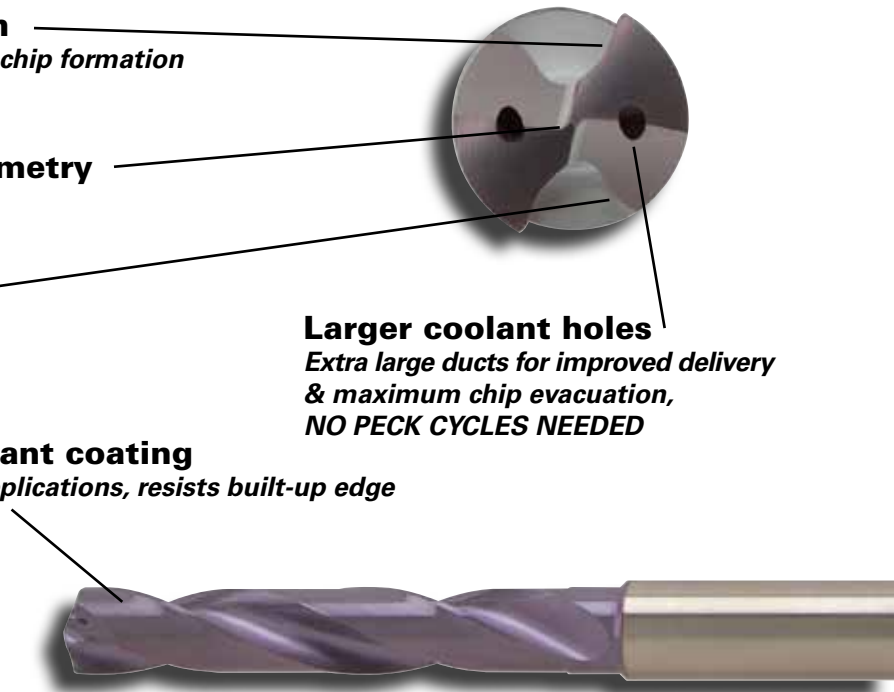
Extra chip space and improved chip evacuation

nano-A® microlayer heat-resistant coating

Improves tool life in high temperature applications, resists built-up edge

Larger coolant holes

Extra large ducts for improved delivery & maximum chip evacuation, NO PECK CYCLES NEEDED



Excellent for use in stainless steels, nickel alloys, or hardened steels
An ideal solution for job shops running a range of heat generating materials

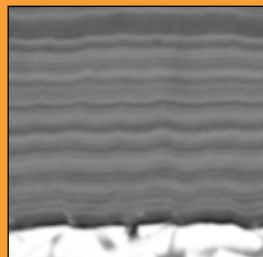
Reconditioning Services by Guhring -

High-performance drills that are too valuable to discard after one use are drills that require high-quality regrinds. Trust Guhring to restore the original point geometry and recoat your carbide drills as well as carbide end mills. Our quick turnaround and in-house coating chambers help to ensure your continued productivity.

Go to www.GUHRING.com for further information.



nano-A®



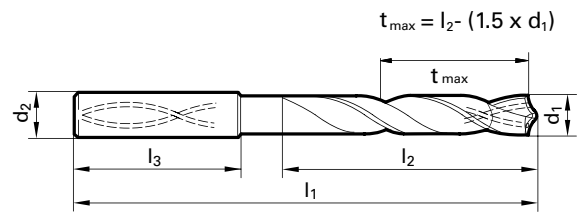
Structure of nano layering - each layer is only a few nanometers thick

Guhring's newest PVD applied coating is nano-A®, a multi-layer coating that combines TiAlN and AlTiN coatings in a micro-layer structure that is harder and more wear resistant. Whereas TiAlN coating has an oxidation temperature of approximately 1470° F, AlTiN's oxidation temperature is approximately 1650° F, and the hardness is increased to 3,800 (HV 0.05). The micro-layer structure of nano-A makes this a better choice for applications where AlTiN would normally be used, such as hard milling steel and materials over 45 HRC; but test results have also shown that nano-A is frequently the best coating for high speed drilling and milling of all grades of stainless steels including 300 and 400 series grades.

Series 5741 (3xD, solid carbide)
Series 5744 (5xD, coolant through)
Series 5746 (7xD, coolant through)



Diameter (d1)				Series 5741			Series 5744			Series 5746		
Dec. inch	Fract. inch	Wire / letter	mm	I1 mm	I2 mm	EDP Number	I1 mm	I2 mm	EDP Number	I1 mm	I2 mm	EDP Number
0.1181			3.000	62.00	20.00	9057410030000	66.00	28.00	9057440030000	70.00	30.00	9057460030000
0.1220			3.100	62.00	20.00	9057410031000	66.00	28.00	9057440031000	70.00	30.00	9057460031000
0.1248	1/8		3.170	62.00	20.00	9057410031700	66.00	28.00	9057440031700	70.00	30.00	9057460031700
0.1260			3.200	62.00	20.00	9057410032000	66.00	28.00	9057440032000	70.00	30.00	9057460032000
0.1280			3.250	62.00	20.00	9057410032500	66.00	28.00	9057440032500			
0.1299			3.300	62.00	20.00	9057410033000	66.00	28.00	9057440033000	70.00	30.00	9057460033000
0.1339			3.400	62.00	20.00	9057410034000	66.00	28.00	9057440034000	75.00	37.50	9057460034000
0.1378			3.500	62.00	20.00	9057410035000	66.00	28.00	9057440035000	75.00	37.50	9057460035000
0.1406		28	3.570	62.00	20.00	9057410035700	66.00	28.00	9057440035700	75.00	37.50	9057460035700
0.1417			3.600	62.00	20.00	9057410036000	66.00	28.00	9057440036000	75.00	37.50	9057460036000
0.1457			3.700	62.00	20.00	9057410037000	66.00	28.00	9057440037000	75.00	37.50	9057460037000
0.1496		25	3.800	66.00	24.00	9057410038000	74.00	36.00	9057440038000	75.00	37.50	9057460038000
0.1535			3.900	66.00	24.00	9057410039000	74.00	36.00	9057440039000	75.00	37.50	9057460039000
0.1563	5/32		3.970	66.00	24.00	9057410039700	74.00	36.00	9057440039700	75.00	37.50	9057460039700
0.1575			4.000	66.00	24.00	9057410040000	74.00	36.00	9057440040000	75.00	37.50	9057460040000
0.1614			4.100	66.00	24.00	9057410041000	74.00	36.00	9057440041000	75.00	37.50	9057460041000
0.1654			4.200	66.00	24.00	9057410042000	74.00	36.00	9057440042000	75.00	37.50	9057460042000
0.1693		18	4.300	66.00	24.00	9057410043000	74.00	36.00	9057440043000	85.00	45.00	9057460043000
0.1720	11/64		4.370	66.00	24.00	9057410043700	74.00	36.00	9057440043700	85.00	45.00	9057460043700
0.1732			4.400	66.00	24.00	9057410044000	74.00	36.00	9057440044000	85.00	45.00	9057460044000
0.1772		16	4.500	66.00	24.00	9057410045000	74.00	36.00	9057440045000	85.00	45.00	9057460045000
0.1811			4.600	66.00	24.00	9057410046000	74.00	36.00	9057440046000	85.00	45.00	9057460046000
0.1831			4.650	66.00	24.00	9057410046500	74.00	36.00	9057440046500	85.00	45.00	9057460046500
0.1850		13	4.700	66.00	24.00	9057410047000	74.00	36.00	9057440047000	85.00	45.00	9057460047000
0.1874	3/16		4.760	66.00	28.00	9057410047600	82.00	44.00	9057440047600	90.00	50.00	9057460047600
0.1890		12	4.800	66.00	28.00	9057410048000	82.00	44.00	9057440048000	90.00	50.00	9057460048000
0.1929			4.900	66.00	28.00	9057410049000	82.00	44.00	9057440049000	90.00	50.00	9057460049000
0.1969			5.000	66.00	28.00	9057410050000	82.00	44.00	9057440050000	90.00	50.00	9057460050000
0.2008			5.100	66.00	28.00	9057410051000	82.00	44.00	9057440051000	90.00	50.00	9057460051000
0.2031	13/64		5.160	66.00	28.00	9057410051600	82.00	44.00	9057440051600	90.00	50.00	9057460051600
0.2047			5.200	66.00	28.00	9057410052000	82.00	44.00	9057440052000	90.00	50.00	9057460052000
0.2087			5.300	66.00	28.00	9057410053000	82.00	44.00	9057440053000	90.00	50.00	9057460053000
0.2126			5.400	66.00	28.00	9057410054000	82.00	44.00	9057440054000	90.00	50.00	9057460054000
0.2165			5.500	66.00	28.00	9057410055000	82.00	44.00	9057440055000	97.00	57.00	9057460055000
0.2185			5.550	66.00	28.00	9057410055500	82.00	44.00	9057440055500			
0.2189	7/32		5.560	66.00	28.00	9057410055600	82.00	44.00	9057440055600	97.00	57.00	9057460055600
0.2205			5.600	66.00	28.00	9057410056000	82.00	44.00	9057440056000			
0.2244			5.700	66.00	28.00	9057410057000	82.00	44.00	9057440057000	97.00	57.00	9057460057000
0.2283			5.800	66.00	28.00	9057410058000	82.00	44.00	9057440058000	97.00	57.00	9057460058000
0.2323			5.900	66.00	28.00	9057410059000	82.00	44.00	9057440059000	97.00	57.00	9057460059000
0.2343	15/64		5.950	66.00	28.00	9057410059500	82.00	44.00	9057440059500	97.00	57.00	9057460059500
0.2362			6.000	66.00	28.00	9057410060000	82.00	44.00	9057440060000	97.00	57.00	9057460060000
0.2402			6.100	79.00	34.00	9057410061000	91.00	53.00	9057440061000	106.00	66.00	9057460061000
0.2441			6.200	79.00	34.00	9057410062000	91.00	53.00	9057440062000	106.00	66.00	9057460062000
0.2480			6.300	79.00	34.00	9057410063000	91.00	53.00	9057440063000	106.00	66.00	9057460063000
0.2500	1/4	E	6.350	79.00	34.00	9057410063500	91.00	53.00	9057440063500	106.00	66.00	9057460063500
0.2520			6.400	79.00	34.00	9057410064000	91.00	53.00	9057440064000			
0.2559			6.500	79.00	34.00	9057410065000	91.00	53.00	9057440065000	106.00	66.00	9057460065000
0.2571			6.530				91.00	53.00	9057440065300	106.00	66.00	9057460065300
0.2598			6.600	79.00	34.00	9057410066000	91.00	53.00	9057440066000	106.00	66.00	9057460066000
0.2638			6.700	79.00	34.00	9057410067000	91.00	53.00	9057440067000	106.00	66.00	9057460067000
0.2657	17/64	H	6.750	79.00	34.00	9057410067500	91.00	53.00	9057440067500	106.00	66.00	9057460067500
0.2677			6.800	79.00	34.00	9057410068000	91.00	53.00	9057440068000	106.00	66.00	9057460068000
0.2717		I	6.900	79.00	34.00	9057410069000	91.00	53.00	9057440069000	116.00	76.00	9057460069000
0.2756			7.000	79.00	34.00	9057410070000	91.00	53.00	9057440070000	116.00	76.00	9057460070000
0.2795			7.100	79.00	34.00	9057410071000	91.00	53.00	9057440071000	116.00	76.00	9057460071000
0.2811	9/32	K	7.140	79.00	41.00	9057410071400	91.00	53.00	9057440071400	116.00	76.00	9057460071400
0.2835			7.200	79.00	41.00	9057410072000	91.00	53.00	9057440072000	116.00	76.00	9057460072000
0.2874			7.300	79.00	41.00	9057410073000	91.00	53.00	9057440073000	116.00	76.00	9057460073000
0.2913			7.400	79.00	41.00	9057410074000	91.00	53.00	9057440074000	116.00	76.00	9057460074000
0.2953			7.500	79.00	41.00	9057410075000	91.00	53.00	9057440075000	116.00	76.00	9057460075000
0.2969	19/64		7.540	79.00	41.00	9057410075400	91.00	53.00	9057440075400	116.00	76.00	9057460075400
0.2992			7.600	79.00	41.00	9057410076000	91.00	53.00	9057440076000	116.00	76.00	9057460076000
0.3031			7.700	79.00	41.00	9057410077000	91.00	53.00	9057440077000	116.00	76.00	9057460077000
0.3071			7.800	79.00	41.00	9057410078000	91.00	53.00	9057440078000	116.00	76.00	9057460078000



Diameter (d1)				Series 5741			Series 5744			Series 5746		
Dec. inch	Fract. inch	Wire / letter	mm	l1 mm	l2 mm	EDP Number	l1 mm	l2 mm	EDP Number	l1 mm	l2 mm	EDP Number
0.3110			7.900	79.00	41.00	9057410079000	91.00	53.00	9057440079000			
0.3126	5/16		7.940	79.00	41.00	9057410079400	91.00	53.00	9057440079400	116.00	76.00	9057460079400
0.3150			8.000	79.00	41.00	9057410080000	91.00	53.00	9057440080000	116.00	76.00	9057460080000
0.3189			8.100	89.00	47.00	9057410081000	103.00	61.00	9057440081000	131.00	87.00	9057460081000
0.3228		P	8.200	89.00	47.00	9057410082000	103.00	61.00	9057440082000	131.00	87.00	9057460082000
0.3268			8.300	89.00	47.00	9057410083000	103.00	61.00	9057440083000			
0.3280	21/64		8.330	89.00	47.00	9057410083300	103.00	61.00	9057440083300	131.00	87.00	9057460083300
0.3307			8.400	89.00	47.00	9057410084000	103.00	61.00	9057440084000	131.00	87.00	9057460084000
0.3346			8.500	89.00	47.00	9057410085000	103.00	61.00	9057440085000	131.00	87.00	9057460085000
0.3386			8.600	89.00	47.00	9057410086000	103.00	61.00	9057440086000	131.00	87.00	9057460086000
0.3425			8.700	89.00	47.00	9057410087000	103.00	61.00	9057440087000	131.00	87.00	9057460087000
0.3437	11/32		8.730	89.00	47.00	9057410087300	103.00	61.00	9057440087300	131.00	87.00	9057460087300
0.3465			8.800	89.00	47.00	9057410088000	103.00	61.00	9057440088000	131.00	87.00	9057460088000
0.3504			8.900	89.00	47.00	9057410089000	103.00	61.00	9057440089000			
0.3543			9.000	89.00	47.00	9057410090000	103.00	61.00	9057440090000	131.00	87.00	9057460090000
0.3583			9.100	89.00	47.00	9057410091000	103.00	61.00	9057440091000	139.00	95.00	9057460091000
0.3594	23/64		9.130	89.00	47.00	9057410091300	103.00	61.00	9057440091300	139.00	95.00	9057460091300
0.3622			9.200	89.00	47.00	9057410092000	103.00	61.00	9057440092000	139.00	95.00	9057460092000
0.3642			9.250	89.00	47.00	9057410092500	103.00	61.00	9057440092500			
0.3661			9.300	89.00	47.00	9057410093000	103.00	61.00	9057440093000	139.00	95.00	9057460093000
0.3701			9.400	89.00	47.00	9057410094000	103.00	61.00	9057440094000	139.00	95.00	9057460094000
0.3740			9.500	89.00	47.00	9057410095000	103.00	61.00	9057440095000	139.00	95.00	9057460095000
0.3748	3/8		9.520	89.00	47.00	9057410095200	103.00	61.00	9057440095200	139.00	95.00	9057460095200
0.3780			9.600	89.00	47.00	9057410096000	103.00	61.00	9057440096000			
0.3819			9.700	89.00	47.00	9057410097000	103.00	61.00	9057440097000	139.00	95.00	9057460097000
0.3858		W	9.800	89.00	47.00	9057410098000	103.00	61.00	9057440098000	139.00	95.00	9057460098000
0.3898			9.900	89.00	47.00	9057410099000	103.00	61.00	9057440099000	139.00	95.00	9057460099000
0.3906	25/64		9.920	89.00	47.00	9057410099200	103.00	61.00	9057440099200	139.00	95.00	9057460099200
0.3937			10.000	89.00	47.00	9057410100000	103.00	61.00	9057440100000	139.00	95.00	9057460100000
0.3976			10.100	102.00	55.00	9057410101000	118.00	71.00	9057440101000			
0.4016			10.200	102.00	55.00	9057410102000	118.00	71.00	9057440102000	155.00	106.00	9057460102000
0.4055			10.300	102.00	55.00	9057410103000	118.00	71.00	9057440103000	155.00	106.00	9057460103000
0.4063	13/32		10.320	102.00	55.00	9057410103200	118.00	71.00	9057440103200	155.00	106.00	9057460103200
0.4094			10.400	102.00	55.00	9057410104000	118.00	71.00	9057440104000			
0.4134			10.500	102.00	55.00	9057410105000	118.00	71.00	9057440105000	155.00	106.00	9057460105000
0.4173			10.600	102.00	55.00	9057410106000	118.00	71.00	9057440106000			
0.4220	27/64		10.720	102.00	55.00	9057410107200	118.00	71.00	9057440107000	155.00	106.00	9057460107200
0.4252			10.800	102.00	55.00	9057410108000	118.00	71.00	9057440107200	155.00	106.00	9057460108000
0.4291			10.900	102.00	55.00	9057410109000	118.00	71.00	9057440108000			
0.4331			11.000	102.00	55.00	9057410110000	118.00	71.00	9057440109000	155.00	106.00	9057460110000
0.4370			11.100	102.00	55.00	9057410111000	118.00	71.00	9057440110000			
0.4374	7/16		11.110	102.00	55.00	9057410111100	118.00	71.00	9057440111000	163.00	114.00	9057460111100
0.4409			11.200	102.00	55.00	9057410112000	118.00	71.00	9057440111100	163.00	114.00	9057460112000
0.4449			11.300	102.00	55.00	9057410113000	118.00	71.00	9057440112000			
0.4488			11.400	102.00	55.00	9057410114000	118.00	71.00	9057440113000			
0.4528			11.500	102.00	55.00	9057410115000	118.00	71.00	9057440114000	163.00	114.00	9057460115000
0.4531	29/64		11.510	102.00	55.00	9057410115100	118.00	71.00	9057440115000			
0.4567			11.600	102.00	55.00	9057410116000	118.00	71.00	9057440116000			
0.4606			11.700	102.00	55.00	9057410117000	118.00	71.00	9057440117000			
0.4646			11.800	102.00	55.00	9057410118000	118.00	71.00	9057440118000	163.00	114.00	9057460118000
0.4685			11.900	102.00	55.00	9057410119000	118.00	71.00	9057440119000			
0.4689	15/32		11.910	102.00	55.00	9057410119100	118.00	71.00	9057440119100	163.00	114.00	9057460119100
0.4724			12.000	102.00	55.00	9057410120000	118.00	71.00	9057440120000	163.00	114.00	9057460120000
0.4764			12.100	107.00	60.00	9057410121000	124.00	77.00	9057440121000	182.00	133.00	9057460121000
0.4803			12.200	107.00	60.00	9057410122000	124.00	77.00	9057440122000	182.00	133.00	9057460122000
0.4843	31/64		12.300	107.00	60.00	9057410123000	124.00	77.00	9057440123000	182.00	133.00	9057460123000
0.4882			12.400	107.00	60.00	9057410124000	124.00	77.00	9057440124000			
0.4921			12.500	107.00	60.00	9057410125000	124.00	77.00	9057440125000	182.00	133.00	9057460125000
0.4961			12.600	107.00	60.00	9057410126000	124.00	77.00	9057440126000			
0.5000	1/2		12.700	107.00	60.00	9057410127000	124.00	77.00	9057440127000	182.00	133.00	9057460127000

Operating Parameters

Series # 5741

Material group	Hardness	SFM	Feed Rate- IPR			
			1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm
Common structural steels	≤100 Bhn >100-260 Bhn	425 360	0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125
Free-cutting steels	≤24 Rc >24-30 Rc	475 360	0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160
Unalloyed heat-treatable steels	≤16 Rc 16-24 Rc 24-30 Rc	395 360 345	0.0065 0.0065 0.0065	0.0100 0.0100 0.0100	0.0125 0.0125 0.0125	0.0160 0.0160 0.0160
Alloyed heat-treatable steels	24-30 Rc >30-38 Rc	345 330	0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125
Unalloyed case hardened steels	≤230 Bhn	425	0.0080	0.0125	0.0160	0.0200
Alloyed case hardened steels	24-30 Rc >30-38 Rc	395 280	0.0065 0.0040	0.0100 0.0065	0.0125 0.0080	0.0160 0.0100
Nitriding steels	≥24-30 Rc >30-38 Rc	330 295	0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100
Tool steels	≤24 Rc >24-30 Rc	215 180	0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100
High speed steels	≥14-30 Rc	150	0.0030	0.0050	0.0065	0.0080
Spring steels	≤330 Bhn	150	0.0025	0.0040	0.0050	0.0065
Stainless steels, sulphured austenitic martensitic	≤24 Rc ≤24 Rc ≤24 Rc	180 150 150	0.0030 0.0030 0.0025	0.0050 0.0050 0.0040	0.0065 0.0065 0.0050	0.0080 0.0080 0.0065
Hardened steels	≤40-48 Rc >48-60 Rc	150 80	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050
Special alloys	≤38 Rc	80	0.0030	0.0050	0.0065	0.0080
Cast iron	≤240 Bhn <300 Bhn	690 510	0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200
Spheroidal graphite iron and malleable cast iron	≤240 Bhn <300 Bhn	510 410	0.0065 0.0065	0.0100 0.0100	0.0125 0.0125	0.0160 0.0160
Chilled cast iron	≤350 Bhn	115	0.0025	0.0040	0.0050	0.0065
Ti and Ti-alloys	≤24 Rc >24-38 Rc	130 115	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065
Aluminium and Al-alloys	≤120 Bhn	855	0.0100	0.0160	0.0200	0.0245
Al wrought alloys	≤150 Bhn	855	0.0100	0.0160	0.0200	0.0245
Al cast alloys ≤ 10 % Si > 10 % Si	≤200 Bhn ≤200 Bhn	720 590	0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200
Magnesium alloys	≤150 Bhn	855	0.0080	0.0125	0.0160	0.0200
Copper, low-alloyed	≤120 Bhn	360	0.0065	0.0065	0.0100	0.0125
Brass, short-chipping long-chipping	≤200 Bhn ≤200 Bhn	885 590	0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160
Bronze, short-chipping	≤200 Bhn >200-260 Bhn	360 330	0.0065 0.0050	0.0065 0.0050	0.0100 0.0080	0.0125 0.0100
Bronze, long-chipping	≤24 Rc >24-30 Rc	240 215	0.0050 0.0050	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100
Duroplastics	—	•	•	•	•	•
Thermoplastics	—	•	•	•	•	•
Reinforced plastics - Kevlar	—	•	•	•	•	•
Reinforced plastics - GFK / CFK	—	•	•	•	•	•

Series # 5744

Material group	Hardness	SFM	Feed Rate- IPR			
			1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm
Common structural steels	≤100 Bhn >100-260 Bhn	475 395	0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125
Free-cutting steels	≤24 Rc >24-30 Rc	560 475	0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200
Unalloyed heat-treatable steels	≤16 Rc 16-24 Rc 24-30 Rc	425 410 395	0.0080 0.0065 0.0065	0.0125 0.0100 0.0100	0.0160 0.0125 0.0125	0.0200 0.0160 0.0160
Alloyed heat-treatable steels	24-30 Rc >30-38 Rc	395 345	0.0065 0.0065	0.0100 0.0100	0.0125 0.0125	0.0160 0.0160
Unalloyed case hardened steels	≤230 Bhn	475	0.0080	0.0125	0.0160	0.0200
Alloyed case hardened steels	24-30 Rc >30-38 Rc	395 280	0.0065 0.0040	0.0100 0.0065	0.0125 0.0080	0.0160 0.0100
Nitriding steels	≥24-30 Rc >30-38 Rc	350 330	0.0065 0.0040	0.0100 0.0065	0.0125 0.0080	0.0160 0.0100
Tool steels	≤24 Rc >24-30 Rc	240 180	0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100
High speed steels	≥14-30 Rc	195	0.0030	0.0050	0.0065	0.0080
Spring steels	≤330 Bhn	195	0.0025	0.0040	0.0050	0.0065
Stainless steels, sulphured austenitic martensitic	≤24 Rc ≤24 Rc ≤24 Rc	195 180 165	0.0040 0.0040 0.0040	0.0065 0.0065 0.0065	0.0080 0.0080 0.0080	0.0100 0.0100 0.0100
Hardened steels	≤40-48 Rc >48-60 Rc	180 115	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050
Special alloys	≤38 Rc	115	0.0030	0.0050	0.0065	0.0080
Cast iron	≤240 Bhn <300 Bhn	690 525	0.0100 0.0100	0.0160 0.0160	0.0200 0.0200	0.0245 0.0245
Spheroidal graphite iron and malleable cast iron	≤240 Bhn <300 Bhn	450 425	0.0100 0.0080	0.0160 0.0125	0.0200 0.0160	0.0245 0.0200
Chilled cast iron	≤350 Bhn	130	0.0025	0.0040	0.0050	0.0065
Ti and Ti-alloys	≤24 Rc >24-38 Rc	150 130	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065
Aluminium and Al-alloys	≤120 Bhn	1015	0.0080	0.0125	0.0160	0.0200
Al wrought alloys	≤150 Bhn	1015	0.0080	0.0125	0.0160	0.0200
Al cast alloys ≤ 10 % Si > 10 % Si	≤200 Bhn ≤200 Bhn	855 720	0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200
Magnesium alloys	≤150 Bhn	920	0.0080	0.0125	0.0160	0.0200
Copper, low-alloyed	≤120 Bhn	410	0.0065	0.0100	0.0125	0.0160
Brass, short-chipping long-chipping	≤200 Bhn ≤200 Bhn	1065 720	0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160
Bronze, short-chipping	≤200 Bhn >200-260 Bhn	410 345	0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125
Bronze, long-chipping	≤24 Rc >24-30 Rc	295 260	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125
Duroplastics	—	•	•	•	•	•
Thermoplastics	—	•	•	•	•	•
Reinforced plastics - Kevlar	—	•	•	•	•	•
Reinforced plastics - GFK / CFK	—	•	•	•	•	•

Series # 5746

Material group	Hardness	SFM	Feed Rate- IPR			
			1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm
Common structural steels	≤100 Bhn >100-260 Bhn	460 395	0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100
Free-cutting steels	≤24 Rc >24-30 Rc	550 480	0.0065 0.0065	0.0100 0.0100	0.0125 0.0125	0.0160 0.0160
Unalloyed heat-treatable steels	≤16 Rc 16-24 Rc 24-30 Rc	415 400 395	0.0065 0.0050 0.0050	0.0100 0.0080 0.0080	0.0125 0.0100 0.0100	0.0160 0.0125 0.0125
Alloyed heat-treatable steels	24-30 Rc >30-38 Rc	395 335	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125
Unalloyed case hardened steels	≤230 Bhn	465	0.0065	0.0100	0.0125	0.0160
Alloyed case hardened steels	24-30 Rc >30-38 Rc	395 270	0.0050 0.0030	0.0080 0.0050	0.0100 0.0065	0.0125 0.0080
Nitriding steels	≥24-30 Rc >30-38 Rc	340 325	0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100
Tool steels	≤24 Rc >24-30 Rc	230 175	0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080
High speed steels	≥14-30 Rc	195	0.0025	0.0040	0.0050	0.0065
Spring steels	≤330 Bhn	195	0.0020	0.0030	0.0040	0.0050
Stainless steels, sulphured austenitic martensitic	≤24 Rc ≤24 Rc ≤24 Rc	195 175 155	0.0030 0.0030 0.0030	0.0050 0.0050 0.0050	0.0065 0.0065 0.0065	0.0080 0.0080 0.0080
Hardened steels	≤40-48 Rc >48-60 Rc	175 110	0.0020 0.0020	0.0030 0.0030	0.0040 0.0040	0.0050 0.0050
Special alloys	≤38 Rc	110	0.0025	0.0040	0.0050	0.0065
Cast iron	≤240 Bhn <300 Bhn	640 525	0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200
Spheroidal graphite iron and malleable cast iron	≤240 Bhn <300 Bhn	435 415	0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160
Chilled cast iron	≤350 Bhn	130	0.0020	0.0030	0.0040	0.0050
Ti and Ti-alloys	≤24 Rc >24-38 Rc	140 130	0.0020 0.0020	0.0030 0.0030	0.0040 0.0040	0.0050 0.0050
Aluminium and Al-alloys	≤120 Bhn	1000	0.0080	0.0125	0.0160	0.0200
Al wrought alloys	≤150 Bhn	1000	0.0080	0.0125	0.0160	0.0200
Al cast alloys ≤ 10 % Si > 10 % Si	≤200 Bhn ≤200 Bhn	845 710	0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200
Magnesium alloys	≤150 Bhn	900	0.0065	0.0100	0.0125	0.0160
Copper, low-alloyed	≤120 Bhn	400	0.0065	0.0100	0.0125	0.0160
Brass, short-chipping long-chipping	≤200 Bhn ≤200 Bhn	1050 710	0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160
Bronze, short-chipping	≤200 Bhn >200-260 Bhn	410 345	0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125
Bronze, long-chipping	≤24 Rc >24-30 Rc	285 250	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125
Duroplastics	—	•	•	•	•	•
Thermoplastics	—	•	•	•	•	•
Reinforced plastics - Kevlar	—	•	•	•	•	•
Reinforced plastics - GFK / CFK	—	•	•	•	•	•

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