Stub length drills

Series no. **329**

Tool material **HSCO**

Surface >Ø 2.36

~3xD Cutting depth | DIN 1897 Standard | GV 120 Type | 130° Point angle | h8 Tolerance on Ø | Web Thinning | Cyl Shank form | R Cutting direction

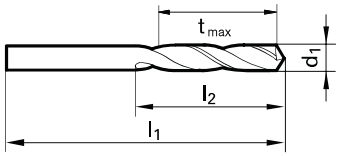
P	Steel	●
M	Stainless steel	●
K	Cast iron	●
N	Aluminum	○
S	Titanium alloys	●
H	Hardened steel	○

●=Optimal
○=Limited

web thinning ≥ Ø 1.000 • relieved cone • Co-alloyed high speed steel • increased wear resistance

acid resist./stainless steels • spring steels • austenitic stainless steels • Hastelloy, Inconel, Nimonic

$t_{max} = l_2\text{-}1.5 \times d_1$



Speeds and feeds information on pg. 491

Shank diameter = cut diameter

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.0157	1/64	0.40	19.00	1.90	2.50	9003290004000
0.0197		0.50	20.00	2.25	3.00	9003290005000
0.0201	#76	0.51	20.00	2.24	3.00	9003290005100
0.0217		0.55	21.00	2.68	3.50	9003290005500
0.0224	#74	0.57	21.00	2.65	3.50	9003290005700
0.0236		0.60	21.00	2.60	3.50	9003290006000
0.0240	#73	0.61	22.00	3.09	4.00	9003290006100
0.0252	#72	0.64	22.00	3.04	4.00	9003290006400
0.0256		0.65	22.00	3.03	4.00	9003290006500
0.0276		0.70	23.00	3.45	4.50	9003290007000
0.0287		0.73	23.00	3.41	4.50	9003290007300
0.0291	#69	0.74	23.00	3.39	4.50	9003290007400
0.0295		0.75	23.00	3.38	4.50	9003290007500
0.0311	1/32 #68	0.79	24.00	3.82	5.00	9003290007900
0.0315		0.80	24.00	3.80	5.00	9003290008000
0.0319	#67	0.81	24.00	3.79	5.00	9003290008100
0.0323		0.82	24.00	3.77	5.00	9003290008200
0.0331	#66	0.84	24.00	3.74	5.00	9003290008400
0.0335		0.85	24.00	3.73	5.00	9003290008500
0.0343		0.87	25.00	4.20	5.50	9003290008700
0.0354		0.90	25.00	4.15	5.50	9003290009000
0.0358	#64	0.91	25.00	4.14	5.50	9003290009100
0.0370	#63	0.94	25.00	4.09	5.50	9003290009400
0.0374		0.95	25.00	4.08	5.50	9003290009500
0.0382	#62	0.97	26.00	4.55	6.00	9003290009700
0.0390	#61	0.99	26.00	4.52	6.00	9003290009900
0.0394		1.00	26.00	4.50	6.00	9003290010000
0.0402	#60	1.02	26.00	4.47	6.00	9003290010200
0.0413		1.05	26.00	4.43	6.00	9003290010500
0.0417		1.06	26.00	4.41	6.00	9003290010600
0.0421	#58	1.07	28.00	5.40	7.00	9003290010700
0.0429	#57	1.09	28.00	5.37	7.00	9003290010900
0.0433		1.10	28.00	5.35	7.00	9003290011000
0.0453		1.15	28.00	5.28	7.00	9003290011500
0.0465	#56	1.18	28.00	5.23	7.00	9003290011800
0.0469	3/64	1.19	30.00	6.22	8.00	9003290011900
0.0472		1.20	30.00	6.20	8.00	9003290012000
0.0484		1.23	30.00	6.16	8.00	9003290012300
0.0492		1.25	30.00	6.13	8.00	9003290012500
0.0504		1.28	30.00	6.08	8.00	9003290012800
0.0512		1.30	30.00	6.05	8.00	9003290013000
0.0520	#55	1.32	30.00	6.02	8.00	9003290013200
0.0524		1.33	32.00	7.01	9.00	9003290013300
0.0531		1.35	32.00	6.98	9.00	9003290013500
0.0551	#54	1.40	32.00	6.90	9.00	9003290014000

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.0571		1.45	32.00	6.83	9.00	9003290014500
0.0579		1.47	32.00	6.80	9.00	9003290014700
0.0591		1.50	32.00	6.75	9.00	9003290015000
0.0594	#53	1.51	34.00	7.74	10.00	9003290015100
0.0610		1.55	34.00	7.68	10.00	9003290015500
0.0618		1.57	34.00	7.65	10.00	9003290015700
0.0626	1/16	1.59	34.00	7.62	10.00	9003290015900
0.0630		1.60	34.00	7.60	10.00	9003290016000
0.0634	#52	1.61	34.00	7.59	10.00	9003290016100
0.0650		1.65	34.00	7.53	10.00	9003290016500
0.0669	#51	1.70	34.00	7.45	10.00	9003290017000
0.0681		1.73	36.00	8.41	11.00	9003290017300
0.0689		1.75	36.00	8.38	11.00	9003290017500
0.0701	#50	1.78	36.00	8.33	11.00	9003290017800
0.0709		1.80	36.00	8.30	11.00	9003290018000
0.0717		1.82	36.00	8.27	11.00	9003290018200
0.0728	#49	1.85	36.00	8.23	11.00	9003290018500
0.0748		1.90	36.00	8.15	11.00	9003290019000
0.0760	#48	1.93	38.00	9.11	12.00	9003290019300
0.0768		1.95	38.00	9.08	12.00	9003290019500
0.0776		1.97	38.00	9.05	12.00	9003290019700
0.0780	5/64	1.98	38.00	9.03	12.00	9003290019800
0.0783	#47	1.99	38.00	9.02	12.00	9003290019900
0.0787		2.00	38.00	9.00	12.00	9003290020000
0.0799		2.03	38.00	8.96	12.00	9003290020300
0.0811	#46	2.06	38.00	8.91	12.00	9003290020600
0.0819	#45	2.08	38.00	8.88	12.00	9003290020800
0.0827		2.10	38.00	8.85	12.00	9003290021000
0.0846		2.15	40.00	9.78	13.00	9003290021500
0.0858	#44	2.18	40.00	9.73	13.00	9003290021800
0.0866		2.20	40.00	9.70	13.00	9003290022000
0.0886		2.25	40.00	9.63	13.00	9003290022500
0.0890	#43	2.26	40.00	9.61	13.00	9003290022600
0.0906		2.30	40.00	9.55	13.00	9003290023000
0.0913		2.32	40.00	9.52	13.00	9003290023200
0.0925		2.35	40.00	9.48	13.00	9003290023500
0.0929		2.36	40.00	9.46	13.00	9003290023600
0.0933	#42	2.37	43.00	10.45	14.00	9003290023700
0.0937	3/32	2.38	43.00	10.43	14.00	9003290023800
0.0945		2.40	43.00	10.40	14.00	9003290024000
0.0953		2.42	43.00	10.37	14.00	9003290024200
0.0961	#41	2.44	43.00	10.34	14.00	9003290024400
0.0965		2.45	43.00	10.33	14.00	9003290024500
0.0972		2.47	43.00	10.30	14.00	9003290024700
0.0980	#40	2.49	43.00	10.27	14.00	9003290024900

Stub length drills

Series no. 329

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.0984		2.50	43.00	10.25	14.00	9003290025000
0.0996	#39	2.53	43.00	10.21	14.00	9003290025300
0.1004		2.55	43.00	10.18	14.00	9003290025500
0.1016	#38	2.58	43.00	10.13	14.00	9003290025800
0.1024		2.60	43.00	10.10	14.00	9003290026000
0.1039	#37	2.64	43.00	10.04	14.00	9003290026400
0.1043		2.65	43.00	10.03	14.00	9003290026500
0.1063		2.70	46.00	11.95	16.00	9003290027000
0.1067	#36	2.71	46.00	11.94	16.00	9003290027100
0.1083		2.75	46.00	11.88	16.00	9003290027500
0.1094	7/64	2.78	46.00	11.83	16.00	9003290027800
0.1098	#35	2.79	46.00	11.82	16.00	9003290027900
0.1102		2.80	46.00	11.80	16.00	9003290028000
0.1110	#34	2.82	46.00	11.77	16.00	9003290028200
0.1130	#33	2.87	46.00	11.70	16.00	9003290028700
0.1142		2.90	46.00	11.65	16.00	9003290029000
0.1161	#32	2.95	46.00	11.58	16.00	9003290029500
0.1181		3.00	46.00	11.50	16.00	9003290030000
0.1189		3.02	49.00	13.47	18.00	9003290030200
0.1201	#31	3.05	49.00	13.43	18.00	9003290030500
0.1220		3.10	49.00	13.35	18.00	9003290031000
0.1240		3.15	49.00	13.28	18.00	9003290031500
0.1248	1/8	3.17	49.00	13.25	18.00	9003290031700
0.1260		3.20	49.00	13.20	18.00	9003290032000
0.1280		3.25	49.00	13.13	18.00	9003290032500
0.1283	#30	3.26	49.00	13.11	18.00	9003290032600
0.1299		3.30	49.00	13.05	18.00	9003290033000
0.1339		3.40	52.00	14.90	20.00	9003290034000
0.1358	#29	3.45	52.00	14.83	20.00	9003290034500
0.1378		3.50	52.00	14.75	20.00	9003290035000
0.1398		3.55	52.00	14.68	20.00	9003290035500
0.1406	9/64 #28	3.57	52.00	14.65	20.00	9003290035700
0.1417		3.60	52.00	14.60	20.00	9003290036000
0.1441	#27	3.66	52.00	14.51	20.00	9003290036600
0.1457		3.70	52.00	14.45	20.00	9003290037000
0.1469	#26	3.73	52.00	14.41	20.00	9003290037300
0.1476		3.75	52.00	14.38	20.00	9003290037500
0.1496	#25	3.80	55.00	16.30	22.00	9003290038000
0.1516		3.85	55.00	16.23	22.00	9003290038500
0.1520	#24	3.86	55.00	16.21	22.00	9003290038600
0.1535		3.90	55.00	16.15	22.00	9003290039000
0.1539	#23	3.91	55.00	16.14	22.00	9003290039100
0.1543		3.92	55.00	16.12	22.00	9003290039200
0.1555		3.95	55.00	16.08	22.00	9003290039500
0.1563	5/32	3.97	55.00	16.05	22.00	9003290039700
0.1571	#22	3.99	55.00	16.02	22.00	9003290039900
0.1575		4.00	55.00	16.00	22.00	9003290040000
0.1591	#21	4.04	55.00	15.94	22.00	9003290040400
0.1594		4.05	55.00	15.93	22.00	9003290040500
0.1610	#20	4.09	55.00	15.87	22.00	9003290040900
0.1614		4.10	55.00	15.85	22.00	9003290041000
0.1634		4.15	55.00	15.78	22.00	9003290041500
0.1654		4.20	55.00	15.70	22.00	9003290042000
0.1661	#19	4.22	55.00	15.67	22.00	9003290042200
0.1673		4.25	55.00	15.63	22.00	9003290042500
0.1693	#18	4.30	58.00	17.55	24.00	9003290043000
0.1720	11/64	4.37	58.00	17.45	24.00	9003290043700
0.1728	#17	4.39	58.00	17.42	24.00	9003290043900
0.1732		4.40	58.00	17.40	24.00	9003290044000
0.1752		4.45	58.00	17.33	24.00	9003290044500
0.1772	#16	4.50	58.00	17.25	24.00	9003290045000
0.1799	#15	4.57	58.00	17.15	24.00	9003290045700
0.1811		4.60	58.00	17.10	24.00	9003290046000
0.1819	#14	4.62	58.00	17.07	24.00	9003290046200
0.1831		4.65	58.00	17.03	24.00	9003290046500
0.1850	#13	4.70	58.00	16.95	24.00	9003290047000
0.1870		4.75	58.00	16.88	24.00	9003290047500

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.1874	3/16	4.76	62.00	18.86	26.00	9003290047600
0.1890	#12	4.80	62.00	18.80	26.00	9003290048000
0.1909	#11	4.85	62.00	18.73	26.00	9003290048500
0.1929		4.90	62.00	18.65	26.00	9003290049000
0.1937	#10	4.92	62.00	18.62	26.00	9003290049200
0.1949		4.95	62.00	18.58	26.00	9003290049500
0.1961	#9	4.98	62.00	18.53	26.00	9003290049800
0.1969		5.00	62.00	18.50	26.00	9003290050000
0.1992	#8	5.06	62.00	18.41	26.00	9003290050600
0.2008		5.10	62.00	18.35	26.00	9003290051000
0.2012	#7	5.11	62.00	18.34	26.00	9003290051100
0.2028		5.15	62.00	18.28	26.00	9003290051500
0.2031	13/64	5.16	62.00	18.26	26.00	9003290051600
0.2039	#6	5.18	62.00	18.23	26.00	9003290051800
0.2047		5.20	62.00	18.20	26.00	9003290052000
0.2055	#5	5.22	62.00	18.17	26.00	9003290052200
0.2067		5.25	62.00	18.13	26.00	9003290052500
0.2087		5.30	62.00	18.05	26.00	9003290053000
0.2091	#4	5.31	66.00	20.04	28.00	9003290053100
0.2106		5.35	66.00	19.98	28.00	9003290053500
0.2126		5.40	66.00	19.90	28.00	9003290054000
0.2130	#3	5.41	66.00	19.89	28.00	9003290054100
0.2146		5.45	66.00	19.83	28.00	9003290054500
0.2165		5.50	66.00	19.75	28.00	9003290055000
0.2185		5.55	66.00	19.68	28.00	9003290055500
0.2189	7/32	5.56	66.00	19.66	28.00	9003290055600
0.2205		5.60	66.00	19.60	28.00	9003290056000
0.2209	#2	5.61	66.00	19.59	28.00	9003290056100
0.2244		5.70	66.00	19.45	28.00	9003290057000
0.2264		5.75	66.00	19.38	28.00	9003290057500
0.2280	#1	5.79	66.00	19.32	28.00	9003290057900
0.2283		5.80	66.00	19.30	28.00	9003290058000
0.2303		5.85	66.00	19.23	28.00	9003290058500
0.2323		5.90	66.00	19.15	28.00	9003290059000
0.2343	15/64	5.95	66.00	19.08	28.00	9003290059500
0.2362		6.00	66.00	19.00	28.00	9003290060000
0.2378	B	6.04	70.00	21.94	31.00	9003290060400
0.2402		6.10	70.00	21.85	31.00	9003290061000
0.2421	C	6.15	70.00	21.78	31.00	9003290061500
0.2441		6.20	70.00	21.70	31.00	9003290062000
0.2461	D	6.25	70.00	21.63	31.00	9003290062500
0.2480		6.30	70.00	21.55	31.00	9003290063000
0.2488		6.32	70.00	21.52	31.00	9003290063200
0.2500	1/4 E	6.35	70.00	21.48	31.00	9003290063500
0.2520		6.40	70.00	21.40	31.00	9003290064000
0.2539		6.45	70.00	21.33	31.00	9003290064500
0.2559		6.50	70.00	21.25	31.00	9003290065000
0.2571		6.53	70.00	21.21	31.00	9003290065300
0.2598		6.60	70.00	21.10	31.00	9003290066000
0.2610	G	6.63	70.00	21.06	31.00	9003290066300
0.2638		6.70	70.00	20.95	31.00	9003290067000
0.2657	17/64 H	6.75	74.00	23.88	34.00	9003290067500
0.2677		6.80	74.00	23.80	34.00	9003290068000
0.2697		6.85	74.00	23.73	34.00	9003290068500
0.2717	I	6.90	74.00	23.65	34.00	9003290069000
0.2756		7.00	74.00	23.50	34.00	9003290070000
0.2768	J	7.03	74.00	23.46	34.00	9003290070300
0.2776		7.05	74.00	23.43	34.00	9003290070500
0.2795		7.10	74.00	23.35	34.00	9003290071000
0.2811	9/32 K	7.14	74.00	23.29	34.00	9003290071400
0.2835		7.20	74.00	23.20	34.00	9003290072000
0.2854		7.25	74.00	23.13	34.00	9003290072500
0.2874		7.30	74.00	23.05	34.00	9003290073000
0.2902	L	7.37	74.00	22.95	34.00	9003290073700
0.2913		7.40	74.00	22.90	34.00	9003290074000
0.2949	M	7.49	74.00	22.77	34.00	9003290074900
0.2953		7.50	74.00	22.75	34.00	9003290075000

Stub length drills

Series no. 329

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.2969	19/64	7.54	79.00	25.69	37.00	9003290075400
0.2992		7.60	79.00	25.60	37.00	9003290076000
0.3020	N	7.67	79.00	25.50	37.00	9003290076700
0.3031		7.70	79.00	25.45	37.00	9003290077000
0.3051		7.75	79.00	25.38	37.00	9003290077500
0.3071		7.80	79.00	25.30	37.00	9003290078000
0.3110		7.90	79.00	25.15	37.00	9003290079000
0.3126	5/16	7.94	79.00	25.09	37.00	9003290079400
0.3150		8.00	79.00	25.00	37.00	9003290080000
0.3161	O	8.03	79.00	24.96	37.00	9003290080300
0.3189		8.10	79.00	24.85	37.00	9003290081000
0.3209		8.15	79.00	24.78	37.00	9003290081500
0.3228	P	8.20	79.00	24.70	37.00	9003290082000
0.3248		8.25	79.00	24.63	37.00	9003290082500
0.3268		8.30	79.00	24.55	37.00	9003290083000
0.3280	21/64	8.33	79.00	24.51	37.00	9003290083300
0.3307		8.40	79.00	24.40	37.00	9003290084000
0.3319	Q	8.43	79.00	24.36	37.00	9003290084300
0.3346		8.50	79.00	24.25	37.00	9003290085000
0.3366		8.55	84.00	27.18	40.00	9003290085500
0.3386		8.60	84.00	27.10	40.00	9003290086000
0.3390	R	8.61	84.00	27.09	40.00	9003290086100
0.3425		8.70	84.00	26.95	40.00	9003290087000
0.3437	11/32	8.73	84.00	26.91	40.00	9003290087300
0.3445		8.75	84.00	26.88	40.00	9003290087500
0.3465		8.80	84.00	26.80	40.00	9003290088000
0.3480	S	8.84	84.00	26.74	40.00	9003290088400
0.3504		8.90	84.00	26.65	40.00	9003290089000
0.3543		9.00	84.00	26.50	40.00	9003290090000
0.3563		9.05	84.00	26.43	40.00	9003290090500
0.3579	T	9.09	84.00	26.37	40.00	9003290090900
0.3583		9.10	84.00	26.35	40.00	9003290091000
0.3594	23/64	9.13	84.00	26.31	40.00	9003290091300
0.3622		9.20	84.00	26.20	40.00	9003290092000
0.3642		9.25	84.00	26.13	40.00	9003290092500
0.3661		9.30	84.00	26.05	40.00	9003290093000
0.3677	U	9.34	84.00	25.99	40.00	9003290093400
0.3701		9.40	84.00	25.90	40.00	9003290094000
0.3740		9.50	84.00	25.75	40.00	9003290095000
0.3748	3/8	9.52	89.00	28.72	43.00	9003290095200
0.3772	V	9.58	89.00	28.63	43.00	9003290095800
0.3780		9.60	89.00	28.60	43.00	9003290096000
0.3819		9.70	89.00	28.45	43.00	9003290097000
0.3839		9.75	89.00	28.38	43.00	9003290097500
0.3858	W	9.80	89.00	28.30	43.00	9003290098000
0.3898		9.90	89.00	28.15	43.00	9003290099000
0.3906	25/64	9.92	89.00	28.12	43.00	9003290099200
0.3937		10.00	89.00	28.00	43.00	9003290100000
0.3969	X	10.08	89.00	27.88	43.00	9003290100800
0.3976		10.10	89.00	27.85	43.00	9003290101000
0.4016		10.20	89.00	27.70	43.00	9003290102000
0.4039	Y	10.26	89.00	27.61	43.00	9003290102600
0.4055		10.30	89.00	27.55	43.00	9003290103000
0.4063	13/32	10.32	89.00	27.52	43.00	9003290103200
0.4094		10.40	89.00	27.40	43.00	9003290104000
0.4130	Z	10.49	89.00	27.27	43.00	9003290104900
0.4134		10.50	89.00	27.25	43.00	9003290105000
0.4173		10.60	89.00	27.10	43.00	9003290106000
0.4193		10.65	95.00	31.03	47.00	9003290106500
0.4220	27/64	10.72	95.00	30.92	47.00	9003290107200
0.4252		10.80	95.00	30.80	47.00	9003290108000
0.4291		10.90	95.00	30.65	47.00	9003290109000
0.4331		11.00	95.00	30.50	47.00	9003290110000
0.4370		11.10	95.00	30.35	47.00	9003290111000
0.4374	7/16	11.11	95.00	30.34	47.00	9003290111100
0.4409		11.20	95.00	30.20	47.00	9003290112000
0.4429		11.25	95.00	30.13	47.00	9003290112500

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.4449		11.30	95.00	30.05	47.00	9003290113000
0.4488		11.40	95.00	29.90	47.00	9003290114000
0.4528		11.50	95.00	29.75	47.00	9003290115000
0.4531	29/64	11.51	95.00	29.74	47.00	9003290115100
0.4567		11.60	95.00	29.60	47.00	9003290116000
0.4606		11.70	95.00	29.45	47.00	9003290117000
0.4646		11.80	95.00	29.30	47.00	9003290118000
0.4689	15/32	11.91	102.00	33.14	51.00	9003290119100
0.4724		12.00	102.00	33.00	51.00	9003290120000
0.4764		12.10	102.00	32.85	51.00	9003290121000
0.4803		12.20	102.00	32.70	51.00	9003290122000
0.4843	31/64	12.30	102.00	32.55	51.00	9003290123000
0.4882		12.40	102.00	32.40	51.00	9003290124000
0.4921		12.50	102.00	32.25	51.00	9003290125000
0.5000	1/2	12.70	102.00	31.95	51.00	9003290127000
0.5039		12.80	102.00	31.80	51.00	9003290128000
0.5079		12.90	102.00	31.65	51.00	9003290129000
0.5118		13.00	102.00	31.50	51.00	9003290130000
0.5157	33/64	13.10	102.00	31.35	51.00	9003290131000
0.5197		13.20	102.00	31.20	51.00	9003290132000
0.5311	17/32	13.49	107.00	33.77	54.00	9003290134900
0.5315		13.50	107.00	33.75	54.00	9003290135000
0.5413		13.75	107.00	33.38	54.00	9003290137500
0.5469	35/64	13.89	107.00	33.17	54.00	9003290138900
0.5512		14.00	107.00	33.00	54.00	9003290140000
0.5551		14.10	111.00	34.85	56.00	9003290141000
0.5626	9/16	14.29	111.00	34.57	56.00	9003290142900
0.5709		14.50	111.00	34.25	56.00	9003290145000
0.5780	37/64	14.68	111.00	33.98	56.00	9003290146800
0.5807		14.75	111.00	33.88	56.00	9003290147500
0.5906		15.00	111.00	33.50	56.00	9003290150000
0.5937	19/32	15.08	115.00	35.38	58.00	9003290150800
0.6004		15.25	115.00	35.13	58.00	9003290152500
0.6094	39/64	15.48	115.00	34.78	58.00	9003290154800
0.6102		15.50	115.00	34.75	58.00	9003290155000
0.6248	5/8	15.87	115.00	34.20	58.00	9003290158700
0.6299		16.00	115.00	34.00	58.00	9003290160000
0.6378		16.20	119.00	35.70	60.00	9003290162000
0.6406	41/64	16.27	119.00	35.60	60.00	9003290162700
0.6496		16.50	119.00	35.25	60.00	9003290165000
0.6563	21/32	16.67	119.00	35.00	60.00	9003290166700
0.6693		17.00	119.00	34.50	60.00	9003290170000
0.6720	43/64	17.07	123.00	36.40	62.00	9003290170700
0.6874	11/16	17.46	123.00	35.81	62.00	9003290174600
0.6890		17.50	123.00	35.75	62.00	9003290175000
0.7031	45/64	17.86	123.00	35.21	62.00	9003290178600
0.7087		18.00	123.00	35.00	62.00	9003290180000
0.7283		18.50	127.00	36.25	64.00	9003290185000
0.7343	47/64	18.65	127.00	36.03	64.00	9003290186500
0.7480		19.00	127.00	35.50	64.00	9003290190000
0.7500	3/4	19.05	131.00	37.43	66.00	9003290190500
0.7657	49/64	19.45	131.00	36.83	66.00	9003290194500
0.7677		19.50	131.00	36.75	66.00	9003290195000
0.7811	25/32	19.84	131.00	36.24	66.00	9003290198400
0.7874		20.00	131.00	36.00	66.00	9003290200000
0.7972		20.25	136.00	37.63	68.00	9003290202500
0.8071		20.50	136.00	37.25	68.00	9003290205000
0.8126	13/16	20.64	136.00	37.04	68.00	9003290206400
0.8268		21.00	136.00	36.50	68.00	9003290210000
0.8465		21.50	141.00	37.75	70.00	9003290215000
0.8661		22.00	141.00	37.00	70.00	9003290220000
0.8740		22.20	141.00	36.70	70.00	9003290222000
0.9055		23.00	146.00	37.50	72.00	9003290230000
0.9449		24.00	151.00	39.00	75.00	9003290240000
0.9646		24.50	151.00	38.25	75.00	9003290245000
0.9843	63/64	25.00	151.00	37.50	75.00	9003290250000
1.0000	1.0000	25.40	156.00	39.90	78.00	9003290254000

Series # 329

Material group	Hardness HRc	Hardness Bhn	SFM	Feed Rate - IPR 1/16 in. 1.590 mm	1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm	1 1/4 in. 31.750 mm	1 1/2 in. 38.100 mm
Common structural steels	- ≤ 32	≤ 150 ≤ 301											
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	95	0.0015	0.0040	0.0065	0.0080	0.0100	0.0100	0.0110	0.0125		
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	95 70	0.0015 0.0012	0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080	0.0100 0.0080	0.0110 0.0090	0.0125 0.0100		
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	65 50	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065	0.0080 0.0065	0.0090 0.0070	0.0100 0.0080		
Unalloyed case hardened steels	≤ 25	≤ 255											
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	55 45	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065	0.0080 0.0065	0.0090 0.0070	0.0100 0.0080		
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	50 35	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065	0.0080 0.0065	0.0090 0.0070	0.0100 0.0080		
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	65 35	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065	0.0080 0.0065	0.0090 0.0070	0.0100 0.0080		
High speed steels	≤ 43	≤ 402	35	0.0010	0.0025	0.0040	0.0050	0.0065	0.0065	0.0070	0.0080		
Spring steels	≤ 38	≤ 354	30	0.0007	0.0020	0.0030	0.0040	0.0050	0.0050	0.0055	0.0065		
Hardened steels	≤ 48 ≤ 66	≤ 460 -											
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	50 35 45	0.0012 0.0010 0.0010	0.0030 0.0025 0.0025	0.0050 0.0040 0.0040	0.0065 0.0050 0.0050	0.0080 0.0065 0.0065	0.0080 0.0065 0.0065	0.0090 0.0070 0.0070	0.0100 0.0080 0.0080		
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	130 95	0.0017 0.0017	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125	0.0125 0.0125	0.0140 0.0140	0.0160 0.0160		
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	115 90	0.0017 0.0017	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125	0.0125 0.0125	0.0140 0.0140	0.0160 0.0160		
Chilled cast iron	≤ 38	≤ 354	30	0.0010	0.0025	0.0040	0.0050	0.0065	0.0065	0.0070	0.0080		
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549	25	0.0005	0.0015	0.0025	0.0030	0.0040	0.0040	0.0045	0.0050		
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402	35 25	0.0007 0.0007	0.0020 0.0020	0.0030 0.0030	0.0040 0.0040	0.0050 0.0050	0.0050 0.0050	0.0055 0.0055	0.0065 0.0065		
Aluminium and Al-alloys	-	≤ 120											
Al wrought alloys	-	≤ 200											
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180											
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150											
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180											
Bronze, short-chipping	- ≤ 25	≤ 180 ≤ 255	130 115	0.0012 0.0012	0.0030 0.0030	0.0050 0.0050	0.0065 0.0065	0.0080 0.0080	0.0080 0.0080	0.0090 0.0090	0.0100 0.0100	0.0125 0.0125	
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	95 80	0.0012 0.0012	0.0030 0.0030	0.0050 0.0050	0.0065 0.0065	0.0080 0.0080	0.0080 0.0080	0.0090 0.0090	0.0100 0.0100	0.0125 0.0125	
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK			65	0.0012	0.0030	0.0050	0.0065	0.0080	0.0080	0.0090	0.0100	0.0125	

Series # 336

Material group	Hardness HRc	Hardness Bhn	SFM	Feed Rate - IPR 1/16 in. 1.590 mm	1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm	1 1/4 in. 31.750 mm	1 1/2 in. 38.100 mm
Common structural steels	- ≤ 32	≤ 150 ≤ 301											
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	75	0.0015	0.0040	0.0065	0.0080	0.0100					
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	75 50	0.0015 0.0012	0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080					
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	50 35	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
Unalloyed case hardened steels	≤ 25	≤ 255											
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	45 30	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	35 25	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	50 25	0.0012 0.0010	0.0030 0.0025	0.0050 0.0040	0.0065 0.0050	0.0080 0.0065					
High speed steels	≤ 43	≤ 402	25	0.0010	0.0025	0.0040	0.0050	0.0065					
Spring steels	≤ 38	≤ 354	15	0.0007	0.0020	0.0030	0.0040	0.0050					
Hardened steels	≤ 48 ≤ 66	≤ 460 -											
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	35 25 30	0.0012 0.0005 0.0010	0.0030 0.0015 0.0025	0.0050 0.0025 0.0040	0.0065 0.0030 0.0050	0.0080 0.0040 0.0065					
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	95 75	0.0017 0.0017	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125					
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	75 65	0.0017 0.0017	0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125					
Chilled cast iron	≤ 38	≤ 354											
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549											
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402											
Aluminium and Al-alloys	-	≤ 120											
Al wrought alloys	-	≤ 200											
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180	195 160	0.0020 0.0017	0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125					
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150	95	0.0015	0.0040	0.0065	0.0080	0.0100					
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180	120	0.0015	0.0040	0.0065	0.0080	0.0100					
Bronze, short-chipping	- ≤ 25	≤ 180 ≤ 255											
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	75 65	0.0012 0.0012	0.0030 0.0030	0.0050 0.0050	0.0065 0.0065	0.0080 0.0080					
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK			50	0.0012	0.0030	0.0050	0.0065	0.0080					