



Ratio drills with internal coolant

Series

6498



Tool material

Solid Carbide

Coating



Shank form

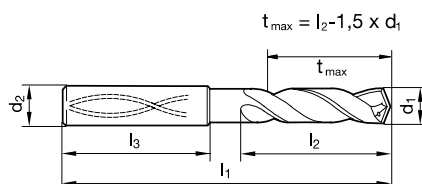
HA



Material		Suitability
P	Steel	●
M	Stainless steel	○
K	Cast iron	○
N	Aluminum	
S	Ni / Ti alloys	○
H	Hardened steel	○
●=Optimal ○=Limited		

relieved cone • main cutting edge form concave
• optimized cutting geometry • maximum performance

structural and case hardened steels • free-cutting steels, heat treatable steels • steels (alloyed/unalloyed) up to 1400 N/mm²



Diameter (d1)			d2 mm	l1 mm	t _{max} mm	l2 mm	l3 mm	EDP #
inch	wire/ltr	mm						
0.1181		3.00	6.00	62.00	15.50	20.00	36.00	9064980030000
0.1220		3.10	6.00	62.00	15.35	20.00	36.00	9064980031000
0.1248	1/8	3.17	6.00	62.00	15.25	20.00	36.00	9064980031700
0.1260		3.20	6.00	62.00	15.20	20.00	36.00	9064980032000
0.1280		3.25	6.00	62.00	15.13	20.00	36.00	9064980032500
0.1299		3.30	6.00	62.00	15.05	20.00	36.00	9064980033000
0.1339		3.40	6.00	62.00	14.90	20.00	36.00	9064980034000
0.1378		3.50	6.00	62.00	14.75	20.00	36.00	9064980035000
0.1406	9/64	3.57	6.00	62.00	14.65	20.00	36.00	9064980035700
0.1417		3.60	6.00	62.00	14.60	20.00	36.00	9064980036000
0.1457		3.70	6.00	62.00	14.45	20.00	36.00	9064980037000
0.1496	#25	3.80	6.00	66.00	18.30	24.00	36.00	9064980038000
0.1535		3.90	6.00	66.00	18.15	24.00	36.00	9064980039000
0.1563	5/32	3.97	6.00	66.00	18.05	24.00	36.00	9064980039700
0.1575		4.00	6.00	66.00	18.00	24.00	36.00	9064980040000
0.1591	#21	4.04	6.00	66.00	17.94	24.00	36.00	9064980040400
0.1614		4.10	6.00	66.00	17.85	24.00	36.00	9064980041000
0.1654		4.20	6.00	66.00	17.70	24.00	36.00	9064980042000
0.1693	#18	4.30	6.00	66.00	17.55	24.00	36.00	9064980043000
0.1720	11/64	4.37	6.00	66.00	17.45	24.00	36.00	9064980043700
0.1732		4.40	6.00	66.00	17.40	24.00	36.00	9064980044000
0.1772	#16	4.50	6.00	66.00	17.25	24.00	36.00	9064980045000
0.1811		4.60	6.00	66.00	17.10	24.00	36.00	9064980046000
0.1831		4.65	6.00	66.00	17.03	24.00	36.00	9064980046500
0.1850	#13	4.70	6.00	66.00	16.95	24.00	36.00	9064980047000
0.1874	3/16	4.76	6.00	66.00	20.86	28.00	36.00	9064980047600
0.1890	#12	4.80	6.00	66.00	20.80	28.00	36.00	9064980048000
0.1929		4.90	6.00	66.00	20.65	28.00	36.00	9064980049000
0.1969		5.00	6.00	66.00	20.50	28.00	36.00	9064980050000
0.2008		5.10	6.00	66.00	20.35	28.00	36.00	9064980051000
0.2012	#7	5.11	6.00	66.00	20.34	28.00	36.00	9064980051100
0.2031	13/64	5.16	6.00	66.00	20.26	28.00	36.00	9064980051600
0.2047		5.20	6.00	66.00	20.20	28.00	36.00	9064980052000
0.2087		5.30	6.00	66.00	20.05	28.00	36.00	9064980053000
0.2126		5.40	6.00	66.00	19.90	28.00	36.00	9064980054000
0.2130	#3	5.41	6.00	66.00	19.89	28.00	36.00	9064980054100



Diameter (d1)			d2 mm	l1 mm	t _{max} mm	l2 mm	l3 mm	EDP #
inch	wire/ltr	mm						
0.2165	7/32	5.50	6.00	66.00	19.75	28.00	36.00	9064980055000
0.2185		5.55	6.00	66.00	19.68	28.00	36.00	9064980055500
0.2189		5.56	6.00	66.00	19.66	28.00	36.00	9064980055600
0.2205		5.60	6.00	66.00	19.60	28.00	36.00	9064980056000
0.2244		5.70	6.00	66.00	19.45	28.00	36.00	9064980057000
0.2283	15/64	5.80	6.00	66.00	19.30	28.00	36.00	9064980058000
0.2323		5.90	6.00	66.00	19.15	28.00	36.00	9064980059000
0.2343		5.95	6.00	66.00	19.08	28.00	36.00	9064980059500
0.2362		6.00	6.00	66.00	19.00	28.00	36.00	9064980060000
0.2402		6.10	8.00	79.00	24.85	34.00	36.00	9064980061000
0.2441	1/4	6.20	8.00	79.00	24.70	34.00	36.00	9064980062000
0.2480		6.30	8.00	79.00	24.55	34.00	36.00	9064980063000
0.2500		6.35	8.00	79.00	24.48	34.00	36.00	9064980063500
0.2520		6.40	8.00	79.00	24.40	34.00	36.00	9064980064000
0.2559		6.50	8.00	79.00	24.25	34.00	36.00	9064980065000
0.2571	F	6.53	8.00	79.00	24.21	34.00	36.00	9064980065300
0.2579		6.55	8.00	79.00	24.18	34.00	36.00	9064980065500
0.2598		6.60	8.00	79.00	24.10	34.00	36.00	9064980066000
0.2638	17/64	6.70	8.00	79.00	23.95	34.00	36.00	9064980067000
0.2657		6.75	8.00	79.00	23.88	34.00	36.00	9064980067500
0.2677		6.80	8.00	79.00	23.80	34.00	36.00	9064980068000
0.2717	I	6.90	8.00	79.00	23.65	34.00	36.00	9064980069000
0.2756		7.00	8.00	79.00	23.50	34.00	36.00	9064980070000
0.2795		7.10	8.00	79.00	30.35	41.00	36.00	9064980071000
0.2811	9/32	7.14	8.00	79.00	30.29	41.00	36.00	9064980071400
0.2835		7.20	8.00	79.00	30.20	41.00	36.00	9064980072000
0.2874		7.30	8.00	79.00	30.05	41.00	36.00	9064980073000
0.2913	19/64	7.40	8.00	79.00	29.90	41.00	36.00	9064980074000
0.2953		7.50	8.00	79.00	29.75	41.00	36.00	9064980075000
0.2969		7.54	8.00	79.00	29.69	41.00	36.00	9064980075400
0.2972		7.55	8.00	79.00	29.68	41.00	36.00	9064980075500
0.2992		7.60	8.00	79.00	29.60	41.00	36.00	9064980076000
0.3012	5/16	7.65	8.00	79.00	29.53	41.00	36.00	9064980076500
0.3031		7.70	8.00	79.00	29.45	41.00	36.00	9064980077000
0.3071		7.80	8.00	79.00	29.30	41.00	36.00	9064980078000
0.3110		7.90	8.00	79.00	29.15	41.00	36.00	9064980079000
0.3126		7.94	8.00	79.00	29.09	41.00	36.00	9064980079400
0.3150	P	8.00	8.00	79.00	29.00	41.00	36.00	9064980080000
0.3189		8.10	10.00	89.00	34.85	47.00	40.00	9064980081000
0.3228		8.20	10.00	89.00	34.70	47.00	40.00	9064980082000
0.3268		8.30	10.00	89.00	34.55	47.00	40.00	9064980083000
0.3280		8.33	10.00	89.00	34.51	47.00	40.00	9064980083300
0.3307	21/64	8.40	10.00	89.00	34.40	47.00	40.00	9064980084000
0.3346		8.50	10.00	89.00	34.25	47.00	40.00	9064980085000
0.3386		8.60	10.00	89.00	34.10	47.00	40.00	9064980086000
0.3425		8.70	10.00	89.00	33.95	47.00	40.00	9064980087000
0.3437		8.73	10.00	89.00	33.91	47.00	40.00	9064980087300
0.3465	11/32	8.80	10.00	89.00	33.80	47.00	40.00	9064980088000
0.3504		8.90	10.00	89.00	33.65	47.00	40.00	9064980089000
0.3543		9.00	10.00	89.00	33.50	47.00	40.00	9064980090000
0.3583		9.10	10.00	89.00	33.35	47.00	40.00	9064980091000
0.3594		9.13	10.00	89.00	33.31	47.00	40.00	9064980091300
0.3622	23/64	9.20	10.00	89.00	33.20	47.00	40.00	9064980092000
0.3642		9.25	10.00	89.00	33.13	47.00	40.00	9064980092500
0.3661		9.30	10.00	89.00	33.05	47.00	40.00	9064980093000
0.3677		9.34	10.00	89.00	32.99	47.00	40.00	9064980093400
0.3701		9.40	10.00	89.00	32.90	47.00	40.00	9064980094000
0.3740	3/8	9.50	10.00	89.00	32.75	47.00	40.00	9064980095000
0.3748		9.52	10.00	89.00	32.72	47.00	40.00	9064980095200



Diameter (d1)			d2 mm	l1 mm	t _{max} mm	l2 mm	l3 mm	EDP #
inch	wire/ltr	mm						
0.3760	W	9.55	10.00	89.00	32.68	47.00	40.00	9064980095500
0.3780		9.60	10.00	89.00	32.60	47.00	40.00	9064980096000
0.3819		9.70	10.00	89.00	32.45	47.00	40.00	9064980097000
0.3858		9.80	10.00	89.00	32.30	47.00	40.00	9064980098000
0.3898		9.90	10.00	89.00	32.15	47.00	40.00	9064980099000
0.3906		9.92	10.00	89.00	32.12	47.00	40.00	9064980099200
0.3937	25/64	10.00	10.00	89.00	32.00	47.00	40.00	9064980100000
0.3976	13/32	10.10	12.00	102.00	39.85	55.00	45.00	9064980101000
0.4016		10.20	12.00	102.00	39.70	55.00	45.00	9064980102000
0.4055		10.30	12.00	102.00	39.55	55.00	45.00	9064980103000
0.4063		10.32	12.00	102.00	39.52	55.00	45.00	9064980103200
0.4094	27/64	10.40	12.00	102.00	39.40	55.00	45.00	9064980104000
0.4134		10.50	12.00	102.00	39.25	55.00	45.00	9064980105000
0.4173		10.60	12.00	102.00	39.10	55.00	45.00	9064980106000
0.4213		10.70	12.00	102.00	38.95	55.00	45.00	9064980107000
0.4220	7/16	10.72	12.00	102.00	38.92	55.00	45.00	9064980107200
0.4252		10.80	12.00	102.00	38.80	55.00	45.00	9064980108000
0.4291		10.90	12.00	102.00	38.65	55.00	45.00	9064980109000
0.4331		11.00	12.00	102.00	38.50	55.00	45.00	9064980110000
0.4370	29/64	11.10	12.00	102.00	38.35	55.00	45.00	9064980111000
0.4374		11.11	12.00	102.00	38.34	55.00	45.00	9064980111100
0.4409		11.20	12.00	102.00	38.20	55.00	45.00	9064980112000
0.4449		11.30	12.00	102.00	38.05	55.00	45.00	9064980113000
0.4488	15/32	11.40	12.00	102.00	37.90	55.00	45.00	9064980114000
0.4528		11.50	12.00	102.00	37.75	55.00	45.00	9064980115000
0.4531		11.51	12.00	102.00	37.74	55.00	45.00	9064980115100
0.4547		11.55	12.00	102.00	37.68	55.00	45.00	9064980115500
0.4567	31/64	11.60	12.00	102.00	37.60	55.00	45.00	9064980116000
0.4606		11.70	12.00	102.00	37.45	55.00	45.00	9064980117000
0.4646		11.80	12.00	102.00	37.30	55.00	45.00	9064980118000
0.4685		11.90	12.00	102.00	37.15	55.00	45.00	9064980119000
0.4689	1/2	11.91	12.00	102.00	37.14	55.00	45.00	9064980119100
0.4724		12.00	12.00	102.00	37.00	55.00	45.00	9064980120000
0.4764		12.10	14.00	107.00	41.85	60.00	45.00	9064980121000
0.4803		12.20	14.00	107.00	41.70	60.00	45.00	9064980122000
0.4843	33/64	12.30	14.00	107.00	41.55	60.00	45.00	9064980123000
0.4882		12.40	14.00	107.00	41.40	60.00	45.00	9064980124000
0.4921		12.50	14.00	107.00	41.25	60.00	45.00	9064980125000
0.4961		12.60	14.00	107.00	41.10	60.00	45.00	9064980126000
0.5000	17/32	12.70	14.00	107.00	40.95	60.00	45.00	9064980127000
0.5039		12.80	14.00	107.00	40.80	60.00	45.00	9064980128000
0.5079		12.90	14.00	107.00	40.65	60.00	45.00	9064980129000
0.5118		13.00	14.00	107.00	40.50	60.00	45.00	9064980130000
0.5157	35/64	13.10	14.00	107.00	40.35	60.00	45.00	9064980131000
0.5197		13.20	14.00	107.00	40.20	60.00	45.00	9064980132000
0.5236		13.30	14.00	107.00	40.05	60.00	45.00	9064980133000
0.5276		13.40	14.00	107.00	39.90	60.00	45.00	9064980134000
0.5311	9/16	13.49	14.00	107.00	39.77	60.00	45.00	9064980134900
0.5315		13.50	14.00	107.00	39.75	60.00	45.00	9064980135000
0.5354		13.60	14.00	107.00	39.60	60.00	45.00	9064980136000
0.5394		13.70	14.00	107.00	39.45	60.00	45.00	9064980137000
0.5433	35/64	13.80	14.00	107.00	39.30	60.00	45.00	9064980138000
0.5469		13.89	14.00	107.00	39.17	60.00	45.00	9064980138900
0.5472		13.90	14.00	107.00	39.15	60.00	45.00	9064980139000
0.5512		14.00	14.00	107.00	39.00	60.00	45.00	9064980140000
0.5551	9/16	14.10	16.00	115.00	43.85	65.00	48.00	9064980141000
0.5591		14.20	16.00	115.00	43.70	65.00	48.00	9064980142000
0.5626		14.29	16.00	115.00	43.57	65.00	48.00	9064980142900



Diameter (d1)			d2 mm	l1 mm	t _{max} mm	l2 mm	l3 mm	EDP #
inch	wire/ltr	mm						
0.5630		14.30	16.00	115.00	43.55	65.00	48.00	9064980143000
0.5669		14.40	16.00	115.00	43.40	65.00	48.00	9064980144000
0.5709		14.50	16.00	115.00	43.25	65.00	48.00	9064980145000
0.5748		14.60	16.00	115.00	43.10	65.00	48.00	9064980146000
0.5780	37/64	14.68	16.00	115.00	42.98	65.00	48.00	9064980146800
0.5787		14.70	16.00	115.00	42.95	65.00	48.00	9064980147000
0.5827		14.80	16.00	115.00	42.80	65.00	48.00	9064980148000
0.5866		14.90	16.00	115.00	42.65	65.00	48.00	9064980149000
0.5906		15.00	16.00	115.00	42.50	65.00	48.00	9064980150000
0.5937	19/32	15.08	16.00	115.00	42.38	65.00	48.00	9064980150800
0.5945		15.10	16.00	115.00	42.35	65.00	48.00	9064980151000
0.5984		15.20	16.00	115.00	42.20	65.00	48.00	9064980152000
0.6024		15.30	16.00	115.00	42.05	65.00	48.00	9064980153000
0.6063		15.40	16.00	115.00	41.90	65.00	48.00	9064980154000
0.6094	39/64	15.48	16.00	115.00	41.78	65.00	48.00	9064980154800
0.6102		15.50	16.00	115.00	41.75	65.00	48.00	9064980155000
0.6122		15.55	16.00	115.00	41.68	65.00	48.00	9064980155500
0.6142		15.60	16.00	115.00	41.60	65.00	48.00	9064980156000
0.6181		15.70	16.00	115.00	41.45	65.00	48.00	9064980157000
0.6220		15.80	16.00	115.00	41.30	65.00	48.00	9064980158000
0.6248	5/8	15.87	16.00	115.00	41.20	65.00	48.00	9064980158700
0.6260		15.90	16.00	115.00	41.15	65.00	48.00	9064980159000
0.6299		16.00	16.00	115.00	41.00	65.00	48.00	9064980160000
0.6406	41/64	16.27	18.00	123.00	48.60	73.00	48.00	9064980162700
0.6417		16.30	18.00	123.00	48.55	73.00	48.00	9064980163000
0.6496		16.50	18.00	123.00	48.25	73.00	48.00	9064980165000
0.6563	21/32	16.67	18.00	123.00	48.00	73.00	48.00	9064980166700
0.6575		16.70	18.00	123.00	47.95	73.00	48.00	9064980167000
0.6654		16.90	18.00	123.00	47.65	73.00	48.00	9064980169000
0.6693		17.00	18.00	123.00	47.50	73.00	48.00	9064980170000
0.6720	43/64	17.07	18.00	123.00	47.40	73.00	48.00	9064980170700
0.6874	11/16	17.46	18.00	123.00	46.81	73.00	48.00	9064980174600
0.6890		17.50	18.00	123.00	46.75	73.00	48.00	9064980175000
0.6909		17.55	18.00	123.00	46.68	73.00	48.00	9064980175500
0.6969		17.70	18.00	123.00	46.45	73.00	48.00	9064980177000
0.7031	45/64	17.86	18.00	123.00	46.21	73.00	48.00	9064980178600
0.7087		18.00	18.00	123.00	46.00	73.00	48.00	9064980180000
0.7189	23/32	18.26	20.00	131.00	51.61	79.00	50.00	9064980182600
0.7283		18.50	20.00	131.00	51.25	79.00	50.00	9064980185000
0.7362		18.70	20.00	131.00	50.95	79.00	50.00	9064980187000
0.7441		18.90	20.00	131.00	50.65	79.00	50.00	9064980189000
0.7480		19.00	20.00	131.00	50.50	79.00	50.00	9064980190000
0.7500	3/4	19.05	20.00	131.00	50.43	79.00	50.00	9064980190500
0.7579		19.25	20.00	131.00	50.13	79.00	50.00	9064980192500
0.7598		19.30	20.00	131.00	50.05	79.00	50.00	9064980193000
0.7657		19.45	20.00	131.00	49.83	79.00	50.00	9064980194500
0.7677		19.50	20.00	131.00	49.75	79.00	50.00	9064980195000
0.7697		19.55	20.00	131.00	49.68	79.00	50.00	9064980195500
0.7756		19.70	20.00	131.00	49.45	79.00	50.00	9064980197000
0.7795		19.80	20.00	131.00	49.30	79.00	50.00	9064980198000
0.7811	25/32	19.84	20.00	131.00	49.24	79.00	50.00	9064980198400
0.7874		20.00	20.00	131.00	49.00	79.00	50.00	9064980200000



Series 6498 & 5498

Material group	Hardness		SFM	Feed Rate - IPR					
	HRC	BHN		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
Common structural steels	-	≤ 150	655	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
	< 32	< 301	655	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Free-cutting steels	≤ 25	≤ 255	655	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
	< 32	< 301	655	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
Unalloyed heat-treatable steels	≤ 20	≤ 220	590	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
	≤ 25	≤ 255	525	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
	< 32	< 301	425	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
Alloyed heat-treatable steels	≤ 32	≤ 301	395	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
	< 43	< 402	395	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Unalloyed case hardened steels	< 25	< 255	590	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
Alloyed case hardened steels	≤ 32	≤ 301	395	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
	< 43	< 402	360	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Nitriding steels	≤ 32	≤ 301	360	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
	< 43	< 402	330	0.0030	0.0050	0.0080	0.0080	0.0100	0.0125
Tool steels	≤ 25	≤ 255	295	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
	< 43	< 402	215	0.0040	0.0065	0.0100	0.0100	0.0125	0.0155
High speed steels	< 43	< 402	195	0.0030	0.0050	0.0080	0.0080	0.0100	0.0125
Spring steels	< 38	< 354	195	0.0030	0.0050	0.0080	0.0080	0.0100	0.0125
Hardened steels	≤ 48	≤ 460	180	0.0020	0.0030	0.0050	0.0050	0.0065	0.0080
	< 66	-							
Stainless steels, sulphured austenitic martensitic	≤ 28	≤ 273	260	0.0030	0.0050	0.0080	0.0080	0.0100	0.0125
	≤ 36	≤ 337							
	< 46	< 435	195	0.0030	0.0050	0.0080	0.0080	0.0100	0.0125
Cast iron	≤ 23	≤ 242	590	0.0065	0.0125	0.0155	0.0195	0.0250	0.0250
	< 38	< 354	590	0.0065	0.0125	0.0155	0.0195	0.0250	0.0250
Spheroidal graphite iron and malleable cast iron	≤ 23	≤ 242	525	0.0065	0.0125	0.0155	0.0195	0.0250	0.0250
	< 38	< 354	460	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
Chilled cast iron	≤ 38	≤ 354							
New cast materials GGV	≤ 20	≤ 220	460	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
	< 32	< 301	460	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
New cast materials ADI	≤ 32	≤ 301	260	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
	< 43	< 402	260	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Special alloys	< 54	< 549	100	0.0025	0.0040	0.0065	0.0065	0.0080	0.0100
Ti and Ti-alloys	≤ 25	≤ 255	130	0.0025	0.0040	0.0065	0.0065	0.0080	0.0100
	< 43	< 402	115	0.0020	0.0030	0.0050	0.0050	0.0065	0.0080
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	-	≤ 180							
	< 25	< 255							
Bronze, long-chipping	≤ 25	≤ 255							
	< 32	< 301							
Duroplastics									
Thermoplastics									
Reinforced plastics - Kevlar									
Reinforced plastics - GFK / CFK									