

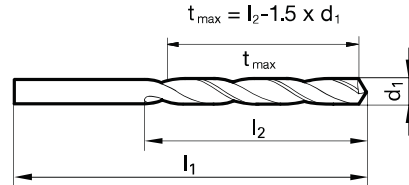
Tool material

M42

Surface

Bronze Oxide

- | | | |
|--------------------------|---|---|
| P Steel | • | web thinning $\geq \varnothing 1.000$ • optimized NAS 907 split point • 8% cobalt-alloyed HSCO high speed steel for maximum tool life, high thermal resistance and hardness |
| M Stainless steel | • | |
| K Cast iron | • | |
| N Aluminum | • | unalloyed and high-alloyed steel materials • cast materials • non-ferrous metals • Titanium and Titanium alloys |
| S Titanium alloys | • | |
| H Hardened steel | ○ | |
- =Optimal
○=Limited



Speeds and feeds information on pg. 527

Shank diameter = cut diameter

AeroX drills are stocked in Germany

Diameter (d ₁)			l ₁ mm	t _{max} mm	l ₂ mm	EDP #
inch	wire/ltr	mm				
0.0394		1.00	34.00	10.50	12.00	9010180010000
0.0433		1.10	36.00	12.35	14.00	9010180011000
0.0472		1.20	38.00	14.20	16.00	9010180012000
0.0512		1.30	38.00	14.05	16.00	9010180013000
0.0551		1.40	40.00	15.90	18.00	9010180014000
0.0591		1.50	40.00	15.75	18.00	9010180015000
0.0626	1/16	1.59	43.00	17.62	20.00	9010180015900
0.0630		1.60	43.00	17.60	20.00	9010180016000
0.0669		1.70	43.00	17.45	20.00	9010180017000
0.0709		1.80	46.00	19.30	22.00	9010180018000
0.0748		1.90	46.00	19.15	22.00	9010180019000
0.0780	5/64	1.98	49.00	21.03	24.00	9010180019800
0.0787		2.00	49.00	21.00	24.00	9010180020000
0.0827		2.10	49.00	20.85	24.00	9010180021000
0.0866		2.20	53.00	23.70	27.00	9010180022000
0.0906		2.30	53.00	23.55	27.00	9010180023000
0.0937	3/32	2.38	57.00	26.43	30.00	9010180023800
0.0945		2.40	57.00	26.40	30.00	9010180024000
0.0984		2.50	57.00	26.25	30.00	9010180025000
0.1024		2.60	57.00	26.10	30.00	9010180026000
0.1063		2.70	61.00	28.95	33.00	9010180027000
0.1094	7/64	2.78	61.00	28.83	33.00	9010180027800
0.1102		2.80	61.00	28.80	33.00	9010180028000
0.1142		2.90	61.00	28.65	33.00	9010180029000
0.1181		3.00	61.00	28.50	33.00	9010180030000
0.1220		3.10	65.00	31.35	36.00	9010180031000
0.1248	1/8	3.17	65.00	31.25	36.00	9010180031700
0.1260		3.20	65.00	31.20	36.00	9010180032000
0.1280		3.25	65.00	31.13	36.00	9010180032500
0.1299		3.30	65.00	31.05	36.00	9010180033000
0.1339		3.40	70.00	33.90	39.00	9010180034000
0.1378		3.50	70.00	33.75	39.00	9010180035000
0.1406	9/64	3.57	70.00	33.65	39.00	9010180035700
0.1417		3.60	70.00	33.60	39.00	9010180036000
0.1457		3.70	70.00	33.45	39.00	9010180037000
0.1496		3.80	75.00	37.30	43.00	9010180038000
0.1535		3.90	75.00	37.15	43.00	9010180039000
0.1563	5/32	3.97	75.00	37.05	43.00	9010180039700
0.1575		4.00	75.00	37.00	43.00	9010180040000
0.1614		4.10	75.00	36.85	43.00	9010180041000
0.1654		4.20	75.00	36.70	43.00	9010180042000
0.1693		4.30	80.00	40.55	47.00	9010180043000

Diameter (d ₁)			l ₁ mm	t _{max} mm	l ₂ mm	EDP #
inch	wire/ltr	mm				
0.1732		4.40	80.00	40.40	47.00	9010180044000
0.1772		4.50	80.00	40.25	47.00	9010180045000
0.1811		4.60	80.00	40.10	47.00	9010180046000
0.1850		4.70	80.00	39.95	47.00	9010180047000
0.1874	3/16	4.76	86.00	44.86	52.00	9010180047600
0.1890		4.80	86.00	44.80	52.00	9010180048000
0.1909		4.85	86.00	44.73	52.00	9010180048500
0.1929		4.90	86.00	44.65	52.00	9010180049000
0.1969		5.00	86.00	44.50	52.00	9010180050000
0.2008		5.10	86.00	44.35	52.00	9010180051000
0.2031	13/64	5.16	86.00	44.26	52.00	9010180051600
0.2047		5.20	86.00	44.20	52.00	9010180052000
0.2087		5.30	86.00	44.05	52.00	9010180053000
0.2126		5.40	93.00	48.90	57.00	9010180054000
0.2165		5.50	93.00	48.75	57.00	9010180055000
0.2189	7/32	5.56	93.00	48.66	57.00	9010180055600
0.2205		5.60	93.00	48.60	57.00	9010180056000
0.2244		5.70	93.00	48.45	57.00	9010180057000
0.2283		5.80	93.00	48.30	57.00	9010180058000
0.2323		5.90	93.00	48.15	57.00	9010180059000
0.2343	15/64	5.95	93.00	48.08	57.00	9010180059500
0.2362		6.00	93.00	48.00	57.00	9010180060000
0.2402		6.10	101.00	53.85	63.00	9010180061000
0.2441		6.20	101.00	53.70	63.00	9010180062000
0.2480		6.30	101.00	53.55	63.00	9010180063000
0.2500	1/4	6.35	101.00	53.48	63.00	9010180063500
0.2520		6.40	101.00	53.40	63.00	9010180064000
0.2559		6.50	101.00	53.25	63.00	9010180065000
0.2598		6.60	101.00	53.10	63.00	9010180066000
0.2638		6.70	101.00	52.95	63.00	9010180067000
0.2677		6.80	109.00	58.80	69.00	9010180068000
0.2717		6.90	109.00	58.65	69.00	9010180069000
0.2756		7.00	109.00	58.50	69.00	9010180070000
0.2795		7.10	109.00	58.35	69.00	9010180071000
0.2811	9/32	7.14	109.00	58.29	69.00	9010180071400
0.2835		7.20	109.00	58.20	69.00	9010180072000
0.2874		7.30	109.00	58.05	69.00	9010180073000
0.2913		7.40	109.00	57.90	69.00	9010180074000
0.2953		7.50	109.00	57.75	69.00	9010180075000
0.2969	19/64	7.54	117.00	63.69	75.00	9010180075400
0.2992		7.60	117.00	63.60	75.00	9010180076000
0.3031		7.70	117.00	63.45	75.00	9010180077000

Diameter (d ₁)			l ₁ mm	t _{max} mm	l ₂ mm	EDP #
inch	wire/ltr	mm				
0.3071		7.80	117.00	63.30	75.00	9010180078000
0.3110		7.90	117.00	63.15	75.00	9010180079000
0.3125	5/16	7.94	117.00	63.09	75.00	9010180079400
0.3150		8.00	117.00	63.00	75.00	9010180080000
0.3189		8.10	117.00	62.85	75.00	9010180081000
0.3228		8.20	117.00	62.70	75.00	9010180082000
0.3268		8.30	117.00	62.55	75.00	9010180083000
0.3280	21/64	8.33	117.00	62.51	75.00	9010180083300
0.3307		8.40	117.00	62.40	75.00	9010180084000
0.3346		8.50	117.00	62.25	75.00	9010180085000
0.3386		8.60	125.00	68.10	81.00	9010180086000
0.3425		8.70	125.00	67.95	81.00	9010180087000
0.3437	11/32	8.73	125.00	67.91	81.00	9010180087300
0.3465		8.80	125.00	67.80	81.00	9010180088000
0.3504		8.90	125.00	67.65	81.00	9010180089000
0.3543		9.00	125.00	67.50	81.00	9010180090000
0.3583		9.10	125.00	67.35	81.00	9010180091000
0.3594	23/64	9.13	125.00	67.31	81.00	9010180091300
0.3622		9.20	125.00	67.20	81.00	9010180092000
0.3661		9.30	125.00	67.05	81.00	9010180093000
0.3740		9.50	125.00	66.75	81.00	9010180095000
0.3750	3/8	9.52	133.00	72.72	87.00	9010180095200
0.3780		9.60	133.00	72.60	87.00	9010180096000
0.3819		9.70	133.00	72.45	87.00	9010180097000

Diameter (d ₁)			l ₁ mm	t _{max} mm	l ₂ mm	EDP #
inch	wire/ltr	mm				
0.3858		9.80	133.00	72.30	87.00	9010180098000
0.3898		9.90	133.00	72.15	87.00	9010180099000
0.3906	25/64	9.92	133.00	72.12	87.00	9010180099200
0.3937		10.00	133.00	72.00	87.00	9010180100000
0.3976		10.10	133.00	71.85	87.00	9010180101000
0.4016		10.20	133.00	71.70	87.00	9010180102000
0.4055		10.30	133.00	71.55	87.00	9010180103000
0.4063	13/32	10.32	133.00	71.52	87.00	9010180103200
0.4134		10.50	133.00	71.25	87.00	9010180105000
0.4220	27/64	10.72	142.00	77.92	94.00	9010180107200
0.4252		10.80	142.00	77.80	94.00	9010180108000
0.4331		11.00	142.00	77.50	94.00	9010180110000
0.4374	7/16	11.11	142.00	77.34	94.00	9010180111100
0.4528		11.50	142.00	76.75	94.00	9010180115000
0.4531	29/64	11.51	142.00	76.74	94.00	9010180115100
0.4689	15/32	11.91	151.00	83.14	101.00	9010180119100
0.4724		12.00	151.00	83.00	101.00	9010180120000
0.4803		12.20	151.00	82.70	101.00	9010180122000
0.4843	31/64	12.30	151.00	82.55	101.00	9010180123000
0.4921		12.50	151.00	82.25	101.00	9010180125000
0.5000	1/2	12.70	151.00	81.95	101.00	9010180127000
0.5039		12.80	151.00	81.80	101.00	9010180128000
0.5118		13.00	151.00	81.50	101.00	9010180130000

Material group	Hardness		SFM	Feed Rate - IPR						
	HRc	Bhn		1/64 in. .5 mm	1/16 in. 1.59 mm	1/8 in. 3.17 mm	1/4 in. 6.35 mm	3/8 in. 9.52 mm	1/2 in. 12.70 mm	5/8 in. 15.87 mm
Common structural steels	-	≤ 150	115	0.0005	0.0007	0.0039	0.0063	0.0098	0.0098	0.0124
	≤ 32	≤ 301	100	0.0004	0.0006	0.0031	0.0049	0.0079	0.0079	0.0098
Free-cutting steels	≤ 25	≤ 255	130	0.0005	0.0007	0.0039	0.0063	0.0098	0.0098	0.0124
	≤ 32	≤ 301	130	0.0004	0.0006	0.0031	0.0049	0.0079	0.0079	0.0098
Unalloyed heat-treatable steels	≤ 20	≤ 220	130	0.0004	0.0006	0.0031	0.0049	0.0079	0.0079	0.0098
	≤ 25	≤ 255	130	0.0004	0.0006	0.0031	0.0049	0.0079	0.0079	0.0098
	≤ 32	≤ 301	115	0.0003	0.0006	0.0025	0.0039	0.0063	0.0063	0.0079
Alloyed heat-treatable steels	≤ 32	≤ 301	65	0.0003	0.0006	0.0025	0.0039	0.0063	0.0063	0.0079
	≤ 43	≤ 402	50	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
Unalloyed case hardened steels	≤ 25	≤ 255	120	0.0005	0.0007	0.0039	0.0063	0.0098	0.0098	0.0124
Alloyed case hardened steels	≤ 32	≤ 301	65	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
	≤ 43	≤ 402	50	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
Nitriding steels	≤ 32	≤ 301	50	0.0003	0.0006	0.0025	0.0039	0.0063	0.0063	0.0079
	≤ 43	≤ 402	40	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
Tool steels	≤ 25	≤ 255	50	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
	≤ 43	≤ 402	40	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
High speed steels	≤ 43	≤ 402	50	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
Spring steels	≤ 38	≤ 354	25	0.0002	0.0003	0.0016	0.0025	0.0039	0.0039	0.0049
Stainless steels, sulphured	≤ 28	≤ 273	60	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
austenitic	≤ 36	≤ 337	45	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
martensitic	≤ 46	≤ 435	50	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
Hardened steels	≤ 48	≤ 460	15	0.0002	0.0002	0.0013	0.0020	0.0031	0.0031	0.0039
	≤ 66	-	-	-	-	-	-	-	-	-
Cast iron	≤ 23	≤ 242	115	0.0005	0.0007	0.0039	0.0063	0.0098	0.0098	0.0124
	≤ 38	≤ 354	100	0.0005	0.0007	0.0039	0.0063	0.0098	0.0098	0.0124
Spheroidal graphite iron and	≤ 23	≤ 242	100	0.0005	0.0007	0.0039	0.0063	0.0098	0.0098	0.0124
malleable cast iron	≤ 38	≤ 354	90	0.0005	0.0007	0.0039	0.0063	0.0098	0.0098	0.0124
Chilled cast iron	≤ 38	≤ 354	35	0.0003	0.0005	0.0020	0.0031	0.0049	0.0049	0.0063
New cast materials GGV	≤ 20	≤ 220	-	-	-	-	-	-	-	-
	≤ 32	≤ 301	-	-	-	-	-	-	-	-
New cast materials ADI	≤ 32	≤ 301	-	-	-	-	-	-	-	-
	≤ 43	≤ 402	-	-	-	-	-	-	-	-
Special alloys	≤ 54	≤ 549	25	0.0002	0.0002	0.0013	0.0020	0.0031	0.0031	0.0039
Ti and Ti-alloys	≤ 25	≤ 255	35	0.0002	0.0003	0.0016	0.0025	0.0039	0.0039	0.0049
	≤ 43	≤ 402	20	0.0002	0.0003	0.0016	0.0025	0.0039	0.0039	0.0049
Aluminium and Al-alloys	-	≤ 120	295	0.0006	0.0008	0.0049	0.0079	0.0124	0.0124	0.0157
Al wrought alloys	-	≤ 200	295	0.0006	0.0008	0.0049	0.0079	0.0124	0.0124	0.0157
Al cast alloys ≤ 10 % Si	-	≤ 180	260	0.0006	0.0008	0.0049	0.0079	0.0124	0.0124	0.0157
≤ 24 % Si	-	≤ 180	230	0.0005	0.0007	0.0039	0.0063	0.0098	0.0098	0.0124
Magnesium alloys	-	≤ 120	230	0.0005	0.0007	0.0039	0.0063	0.0098	0.0098	0.0124
Copper, low-alloyed	-	≤ 150	230	0.0004	0.0006	0.0031	0.0049	0.0079	0.0079	0.0098
Brass, short-chipping	-	≤ 180	195	0.0004	0.0006	0.0031	0.0049	0.0079	0.0079	0.0098
long-chipping	-	≤ 180	130	0.0004	0.0006	0.0031	0.0049	0.0079	0.0079	0.0098
Bronze, short-chipping	-	≤ 180	115	0.0003	0.0006	0.0025	0.0039	0.0063	0.0063	0.0079
	≤ 25	≤ 255	110	0.0003	0.0006	0.0025	0.0039	0.0063	0.0063	0.0079
Bronze, long-chipping	≤ 25	≤ 255	65	0.0003	0.0006	0.0025	0.0039	0.0063	0.0063	0.0079
	≤ 32	≤ 301	50	0.0003	0.0006	0.0025	0.0039	0.0063	0.0063	0.0079
Duroplastics	-	-	65	0.0003	0.0006	0.0025	0.0039	0.0063	0.0063	0.0079
Thermoplastics	-	-	100	0.0004	0.0006	0.0031	0.0049	0.0079	0.0079	0.0098

Material group	Hardness		SFM	Feed Rate - IPR					
	HRc	Bhn		≤16.000 mm	41/64 - 25/32 in. 16.001 - 20.000 mm	51/64 - 31/32 in. 20.001 - 25.000 mm	63/64 - 1 17/64 in. 25.001 - 31.500 mm	1 1/4 - 1 9/16 in. 31.501 - 40.000 mm	1 37/64 - 1 61/64 in. 40.001 - 50.000 mm
Common structural steels	-	≤ 150	330	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
	≤ 32	≤ 301	280	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200
Free-cutting steels	≤ 25	≤ 255	330	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
	≤ 32	≤ 301	280	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
Unalloyed heat-treatable steels	≤ 20	≤ 220	330	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
	≤ 25	≤ 255	315	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
	≤ 32	≤ 301	280	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200
Alloyed heat-treatable steels	≤ 32	≤ 301	280	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
	≤ 43	≤ 402	230	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200
Unalloyed case hardened steels	≤ 25	≤ 255	330	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
Alloyed case hardened steels	≤ 32	≤ 301	280	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
	≤ 43	≤ 402	185	0.0065	0.0080	0.0100	0.0100	0.0125	0.0160
Nitriding steels	≤ 32	≤ 301	265	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200
	≤ 43	≤ 402	185	0.0065	0.0080	0.0100	0.0100	0.0125	0.0160
Tool steels	≤ 25	≤ 255	135	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200
	≤ 43	≤ 402	115	0.0065	0.0080	0.0100	0.0100	0.0125	0.0160
High speed steels	≤ 43	≤ 402	135	0.0050	0.0065	0.0080	0.0080	0.0100	0.0125
Spring steels	≤ 38	≤ 354	115	0.0040	0.0050	0.0065	0.0065	0.0080	0.0100
Hardened steels	≤ 48	≤ 460	70	0.0040	0.0050	0.0065	0.0065	0.0080	0.0100
	≤ 66	-	-	-	-	-	-	-	-
Stainless steels, sulphured	≤ 28	≤ 273	135	0.0050	0.0065	0.0080	0.0080	0.0100	0.0125
austenitic	≤ 36	≤ 337	100	0.0050	0.0065	0.0080	0.0080	0.0100	0.0125
martensitic	≤ 46	≤ 435	85	0.0050	0.0065	0.0080	0.0080	0.0100	0.0125
Cast iron	≤ 23	≤ 242	520	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
	≤ 38	≤ 354	390	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
Spheroidal graphite iron and	≤ 23	≤ 242	390	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
malleable cast iron	≤ 38	≤ 354	325	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
Chilled cast iron	≤ 38	≤ 354	85	0.0040	0.0050	0.0065	0.0065	0.0080	0.0100
Special alloys	≤ 54	≤ 549	70	0.0040	0.0050	0.0065	0.0065	0.0080	0.0100
Ti and Ti-alloys	≤ 25	≤ 255	100	0.0050	0.0065	0.0080	0.0080	0.0100	0.0125
	≤ 43	≤ 402	85	0.0040	0.0050	0.0065	0.0065	0.0080	0.0100
Aluminium and Al-alloys	-	≤ 120	725	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
Al wrought alloys	-	≤ 200	660	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
Al cast alloys ≤ 10 % Si	-	≤ 180	590	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
≤ 24 % Si	-	≤ 180	490	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
Magnesium alloys	-	≤ 120	655	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
Copper, low-alloyed	-	≤ 150	260	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
Brass, short-chipping	-	≤ 180	685	0.0125	0.0160	0.0200	0.0200	0.0250	0.0315
long-chipping	-	≤ 180	455	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
Bronze, short-chipping	-	≤ 180	260	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
	≤ 25	≤ 255	210	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
Bronze, long-chipping	≤ 25	≤ 255	160	0.0100	0.0125	0.0160	0.0160	0.0200	0.0250
	≤ 32	≤ 301	130	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200
Duroplastics	-	-	260	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200
Thermoplastics	-	-	260	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200
Reinforced plastics - Kevlar	-	-	260	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200
Reinforced plastics - GFK / CFK	-	-	260	0.0080	0.0100	0.0125	0.0125	0.0160	0.0200