

3 Flute Drills by ULTRATOOL

Series 540

Three Flute • Jobbers Length
150° Drill Point • 30° RH Helix



Fractional

Diam	LOF	OAL	EDP#	UnCoated Price	Coated Price
1/16	3/4	1-1/2	54004	\$10.30	\$11.40
5/64	7/8	1-3/4	54005	\$10.60	\$11.90
3/32	1"	2"	54006	\$11.10	\$12.50
7/64	1-1/4	2-1/4	54007	\$12.10	\$14.10
1/8	1-1/4	2-1/4	54008	\$12.60	\$14.60
9/64	1-3/8	2-1/2	54009	\$14.30	\$16.80
5/32	1-3/8	2-1/2	54010	\$16.50	\$19.00
11/64	1-5/8	2-3/4	54011	\$18.30	\$20.90
3/16	1-5/8	2-3/4	54012	\$18.40	\$21.00
13/64	1-3/4	3"	54013	\$21.90	\$25.40
7/32	1-3/4	3"	54014	\$24.20	\$27.80
15/64	2"	3-1/4	54015	\$26.10	\$30.80
1/4	2"	3-1/4	54016	\$27.80	\$32.40
17/64	2-1/8	3-1/2	54017	\$32.40	\$37.80
9/32	2-1/8	3-1/2	54018	\$35.50	\$40.80
19/64	2-3/8	3-3/4	54019	\$37.70	\$43.10
5/16	2-3/8	3-3/4	54020	\$40.60	\$46.00
21/64	2-1/2	4"	54021	\$43.70	\$49.60
11/32	2-1/2	4"	54022	\$48.00	\$53.80
23/64	2-3/4	4-1/4	54023	\$53.30	\$62.90
3/8	2-3/4	4-1/4	54024	\$52.60	\$62.20
25/64	2-7/8	4-1/2	54025	\$67.00	\$77.20
13/32	2-7/8	4-1/2	54026	\$71.90	\$82.00
27/64	2-7/8	4-1/2	54027	\$78.80	\$89.00
7/16	2-7/8	4-1/2	54028	\$84.10	\$94.30
29/64	3"	4-3/4	54029	\$92.20	\$104.00
15/32	3"	4-3/4	54030	\$97.30	\$109.10
31/64	3"	4-3/4	54031	\$101.60	\$113.30
1/2	3"	4-3/4	54032	\$97.10	\$108.90
17/32	4"	6"	54034	\$157.60	\$173.00
9/16	4"	6"	54036	\$169.30	\$184.60
19/32	4"	6"	54038	\$194.50	\$211.60
5/8	4"	6"	54040	\$196.60	\$213.70
21/32	4"	6"	54042	\$222.50	\$242.40
11/16	4"	6"	54044	\$226.50	\$246.40
3/4	4"	6"	54048	\$263.90	\$283.80
13/16	4"	6"	54052	\$360.60	\$383.50
7/8	4"	6"	54056	\$382.20	\$405.20
15/16	4"	6"	54060	\$382.20	\$408.40
1"	4"	6"	54064	\$355.20	\$381.30

SFR Drill Specifications:
Diameter +.0000/-0.0003
Point Angle ±1°

Series 540 • Wire Gage

Diam	LOF	OAL	EDP#	UnCoated Price	Coated Price
1	1-3/4	3-1/4	54101	\$26.90	\$31.50
2	1-3/4	3"	54102	\$25.60	\$29.20
3	1-3/4	3"	54103	\$24.20	\$27.80
4	1-3/4	3"	54104	\$23.60	\$27.20
5	1-3/4	3"	54105	\$23.10	\$26.70
6	1-3/4	3"	54106	\$22.80	\$26.40
7	1-3/4	3"	54107	\$21.90	\$25.50
8	1-3/4	3"	54108	\$21.60	\$25.20
9	1-3/4	3"	54109	\$21.10	\$24.70
10	1-5/8	2-3/4	54110	\$20.70	\$24.30
11	1-5/8	2-3/4	54111	\$20.50	\$24.10
12	1-5/8	2-3/4	54112	\$20.10	\$23.70
13	1-5/8	2-3/4	54113	\$19.80	\$22.20
14	1-5/8	2-3/4	54114	\$19.60	\$22.10
15	1-5/8	2-3/4	54115	\$19.50	\$22.00
16	1-5/8	2-3/4	54116	\$19.30	\$21.70
17	1-5/8	2-3/4	54117	\$19.00	\$21.50
18	1-5/8	2-3/4	54118	\$18.60	\$21.10
19	1-5/8	2-3/4	54119	\$18.40	\$20.90
20	1-3/8	2-1/2	54120	\$17.80	\$20.30
21	1-3/8	2-1/2	54121	\$17.70	\$20.20
22	1-3/8	2-1/2	54122	\$17.50	\$19.90
23	1-3/8	2-1/2	54123	\$16.90	\$19.40
24	1-3/8	2-1/2	54124	\$16.40	\$18.80
25	1-3/8	2-1/2	54125	\$15.70	\$18.20
26	1-3/8	2-1/2	54126	\$15.40	\$17.90
27	1-3/8	2-1/2	54127	\$15.40	\$17.90
28	1-3/8	2-1/2	54128	\$15.00	\$17.50
29	1-3/8	2-1/2	54129	\$14.70	\$17.20
30	1-3/8	2-1/4	54130	\$13.80	\$16.60
31	1-1/4	2-1/4	54131	\$13.80	\$16.60
32	1-1/4	2-1/4	54132	\$13.20	\$15.50
33	1-1/4	2-1/4	54133	\$13.00	\$15.30
34	1-1/4	2-1/4	54134	\$13.00	\$15.30
35	1-1/4	2-1/4	54135	\$12.70	\$15.00
36	1-1/4	2-1/4	54136	\$12.40	\$14.70
37	1-1/4	2-1/4	54137	\$12.40	\$14.70
38	1-1/4	2-1/4	54138	\$12.40	\$14.70
39	1-1/4	2-1/4	54139	\$12.40	\$14.70
40	1"	2"	54140	\$11.70	\$13.20
41	1"	2"	54141	\$11.70	\$13.20
42	1"	2"	54142	\$11.30	\$12.80
43	1"	2"	54143	\$10.80	\$12.40
44	1"	2"	54144	\$10.80	\$12.40
45	7/8	1-3/4	54145	\$10.80	\$12.40
46	7/8	1-3/4	54146	\$10.80	\$12.40
47	7/8	1-3/4	54147	\$10.80	\$12.40
48	7/8	1-3/4	54148	\$10.70	\$12.20
49	7/8	1-3/4	54149	\$10.70	\$12.20
50	7/8	1-3/4	54150	\$11.00	\$12.20
51	3/4	1-1/2	54151	\$11.00	\$12.20
52	3/4	1-1/2	54152	\$11.00	\$12.20

Series 540 • Letter Sizes

Diam	LOF	OAL	EDP#	UnCoated Price	Coated Price
A	2"	3-1/4	54174	\$28.80	\$32.90
B	2"	3-1/4	54175	\$29.20	\$33.40
C	2"	3-1/4	54176	\$30.00	\$34.10
D	2"	3-1/4	54177	\$30.40	\$34.50
E	2"	3-1/4	54178	\$31.40	\$35.60
F	2"	3-1/2	54179	\$33.60	\$39.00
G	2-1/8	3-1/2	54180	\$33.60	\$39.00
H	2-1/8	3-1/2	54181	\$34.70	\$40.10
I	2-1/8	3-1/2	54182	\$35.50	\$40.90
J	2-1/8	3-1/2	54183	\$36.30	\$41.70
K	2-1/8	3-1/2	54184	\$36.60	\$41.90
L	2-1/8	3-1/2	54185	\$37.90	\$43.30
M	2-3/8	3-3/4	54186	\$38.80	\$44.20
N	2-3/8	3-3/4	54187	\$41.60	\$47.00
O	2-3/8	3-3/4	54188	\$44.00	\$49.90
P	2-3/8	4"	54189	\$44.80	\$50.70
Q	2-1/2	4"	54190	\$48.10	\$54.30
R	2-1/2	4"	54191	\$49.20	\$55.00
S	2-1/2	4"	54192	\$51.70	\$57.60
T	2-3/4	4-1/4	54193	\$54.50	\$64.00
U	2-3/4	4-1/4	54194	\$57.10	\$66.70
V	2-3/4	4-1/4	54195	\$60.10	\$71.30
W	2-7/8	4-1/2	54196	\$60.10	\$71.30
X	2-7/8	4-1/2	54197	\$70.30	\$81.10
Y	2-7/8	4-1/2	54198	\$70.30	\$81.40
Z	2-7/8	4-1/2	54199	\$77.90	\$89.00

Series 540 • Metric

SFR Drill Specifications (mm):
Diameter +0.000/-0.008mm
Point Angle ±1°

Diam	LOF	OAL	EDP#	UnCoated Price	Coated Price
1.5mm	19	38	54215	\$9.70	\$11.30
2.0mm	22	44	54220	\$10.00	\$11.80
2.5mm	25	50	54225	\$11.00	\$12.70
3.0mm	32	57	54230	\$12.40	\$14.90
3.5mm	35	63	54235	\$13.80	\$16.80
4.0mm	35	63	54240	\$16.50	\$19.40
4.5mm	41	70	54245	\$18.10	\$21.00
5.0mm	44	76	54250	\$20.20	\$24.20
5.5mm	44	76	54255	\$23.10	\$27.20
6.0mm	50	82	54260	\$26.50	\$31.60
6.5mm	50	82	54265	\$31.20	\$37.60
7.0mm	54	89	54270	\$33.90	\$40.30
7.5mm	60	95	54275	\$36.60	\$43.00
8.0mm	60	95	54280	\$41.70	\$48.60
8.5mm	63	101	54285	\$45.80	\$52.70
9.0mm	70	108	54290	\$49.40	\$60.00
9.5mm	70	108	54295	\$54.80	\$66.90
10.0mm	73	114	54300	\$64.70	\$76.80
10.5mm	73	114	54305	\$75.70	\$87.80
11.0mm	73	114	54310	\$76.50	\$88.70
11.5mm	76	120	54315	\$89.90	\$103.70
12.0mm	76	120	54320	\$99.30	\$113.00
12.5mm	76	120	54325	\$101.20	\$115.00

Application Data for ULTRATOOL® Drills



Drilling speeds and feeds are based upon hole depth of up to 3X diameter. For deeper hole ratios reduce speeds and feeds by 10% to 25%.



Drilling;
Fractional

Material	SFPM	SFPM	1/16"	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"
Steel	UnCoated	SmoothCoat	Feed Rate: Inches Per Rev (IPR)									
1018 / 1020	100 to 250	100 to 300	.0010	.0030	.0050	.0070	.0090	.0100	.0110	.0120	.0140	.0160
4140 / 4340 / P20	60 to 230	60 to 260	.0010	.0030	.0050	.0070	.0090	.0100	.0110	.0120	.0140	.0160
Stainless Steel												
303 / 304 / 316	60 to 150	60 to 200	.0010	.0030	.0050	.0060	.0070	.0080	.0090	.0100	.0120	.0140
410 / 420 / 440C	40 to 100	40 to 150	.0010	.0030	.0050	.0060	.0070	.0080	.0090	.0100	.0120	.0140
15-5/17-4 ≤ 32HRc	75 to 175	75 to 200	.0010	.0015	.0025	.0040	.0050	.0060	.0070	.0080	.0090	.0100
15-5/17-4 ≥ 32HRc	50 to 125	50 to 150	.0005	.0010	.0015	.0025	.0030	.0035	.0038	.0040	.0050	.0060
13-8 / 316L	60 to 150	60 to 200	.0010	.0030	.0050	.0060	.0070	.0080	.0090	.0100	.0120	.0140
Tool Steel												
A2/D2/H13 ≤ 32HRc	60 to 150	60 to 200	.0010	.0015	.0025	.0040	.0050	.0060	.0070	.0080	.0090	.0100
A2/D2/H13 ≥ 32HRc	40 to 100	40 to 150	.0005	.0010	.0015	.0025	.0028	.0030	.0035	.0040	.0050	.0060
Titanium												
6Al-4V	40 to 150	40 to 175	.0005	.0010	.0020	.0025	.0028	.0030	.0035	.0040	.0050	.0060
High Temp Alloys												
Inconel 625	30 to 70	30 to 80	.0010	.0015	.0025	.0040	.0050	.0060	.0070	.0080	.0090	.0100
Inconel 718	30 to 45	30 to 50	.0005	.0010	.0020	.0025	.0028	.0030	.0035	.0040	.0050	.0060
Cast Iron												
Gray Iron ≤ 32HRc	150 to 300	150 to 350	.0010	.0030	.0050	.0070	.0085	.0100	.0110	.0120	.0140	.0160
Ductile Iron	150 to 300	150 to 350	.0010	.0030	.0050	.0070	.0085	.0100	.0110	.0120	.0140	.0160
Non-Ferrous												
6061 T6 Aluminum	250 to 750	250 to 1000	.0010	.0030	.0050	.0070	.0085	.0100	.0110	.0120	.0140	.0160
Copper, Brass, Bronze	150 to 400	150 to 500	.0010	.0030	.0050	.0070	.0085	.0100	.0110	.0120	.0140	.0160
Plastic	250 to 1000	250 to 1000	.0010	.0030	.0050	.0070	.0085	.0100	.0110	.0120	.0140	.0160

Drill Specifications:

Diameter: +.0000 / -.0003

LOC: +.060 / -.090

OAL: +.060 / -.090

Point Angle: ±1°

Helix Angle: ±1°

Note: Series 560 Combined Drill/C'sink:

Body Diameter: +.0000 / -.0003

Drill Diameter: +.003 / -.000

Ultra-Tool® drills feature diameter tolerances 40% tighter than industry standards. Plus, all shanks are SFR (shrink-fit ready).

Try our drills with standard SmoothCoat for a superb leap in lubricity, productivity, and tool life.



Complete range of Brad Point drills with D1 coating!

Application Data for ULTRATOOL® Burrs

Burr Diam	Diam Metric	# Flutes Std Cut	RPM*	Max. RPM
1/16	1.6 mm	6	60,000 - 90,000	100,000
1/8	3.2 mm	12	40,000 - 70,000	80,000
3/16	4.8 mm	15	35,000 - 60,000	70,000
1/4	6.3 mm	16	30,000 - 50,000	60,000
5/16	8.0 mm	18	20,000 - 40,000	52,000
3/8	9.5 mm	20	20,000 - 40,000	52,000
7/16	11.0 mm	22	15,000 - 40,000	50,000
1/2	12.7 mm	24	15,000 - 40,000	45,000
5/8	16.0 mm	28	12,000 - 25,000	30,000
3/4	19.0 mm	30	10,000 - 20,000	24,000
1"	25.4 mm	36	7,500 - 20,000	22,000

*Speeds are for Standard Cut. Reduce by approximately 25% with addition of Dura-Cut. Fine Cut increases flute count approximately 50%. Decrease speed accordingly. Coarse Cut decreases flute count approximately 20%. Increase speed accordingly. Lower listed speeds when cutting harder ferrous materials.

Ultra-Tool® Burrs feature higher hardness and a greater flute count than most competing brands for increased tool life.

Burr heads and solid carbide burrs are manufactured from Ultra-Carb®. Shanks are high speed steel hardened to a rating of 45-48 Rockwell C.



#1 Standard, #2 Fine, #3 Coarse, #4 DuraCut, #5 CoarseDura, #6 FineDura, #7 Fast Mill, #8 Diamond. In the event of extended lead times the next closest cut style within the same pricing category may be substituted to enhance service levels.

Burr Specifications:

Standard cylindrical helix angle: 30° ± 2°

Cutting Diameter: ± .010

Flute Count: ± 1

Shank Diameter: +0 / -.0005, TIR max .002

Brazed Burr TIR: max .005

Taper Angles: ± 1°