

# FRACTIONAL HSS DRILLS

Fractional Size	Decimal Equivalent	General Purpose 118° Point	Heavy Duty 135° Split Point	Cobalt 135° Split Point	Fast Spiral 118° Point	Slow Spiral 118° Point	Half Round 118° Point
1/64	.015625	1.90	—	*3.05	—	—	5.16
1/32	.03125	1.15	—	*2.42	1.85	—	3.89
3/64	.046875	1.15	—	*1.81	1.52	—	3.82
1/16	.0625	1.10	—	1.65	1.50	1.74	3.96
5/64	.078125	1.11	—	1.65	1.52	1.74	3.96
3/32	.09375	1.11	—	1.65	1.52	1.74	3.96
7/64	.109375	1.17	—	1.74	1.53	1.74	4.20
1/8	.1250	1.14	1.46	2.11	1.49	1.78	4.28
9/64	.140625	1.26	1.54	2.13	1.53	1.78	4.74
5/32	.15625	1.28	1.55	2.39	1.60	2.13	4.83
11/64	.171875	1.39	1.68	2.51	1.94	2.40	5.14
3/16	.1875	1.55	1.85	2.81	2.15	2.50	5.68
13/64	.203125	1.71	2.06	3.38	2.45	2.84	6.46
7/32	.21875	1.90	2.37	3.70	2.69	3.32	7.00
15/64	.234375	2.06	2.62	3.94	3.04	3.63	7.62
1/4	.2500	2.16	2.67	4.17	2.90	3.63	10.72
17/64	.265625	2.63	3.20	4.75	3.91	4.39	12.29
9/32	.28125	2.71	3.26	4.99	3.90	4.84	13.84
19/64	.296875	3.14	3.93	6.07	4.51	5.42	15.38
5/16	.3125	3.47	4.16	6.47	4.64	5.91	16.91
21/64	.328125	3.86	4.73	7.15	5.38	6.25	18.72
11/32	.34375	4.30	5.13	7.84	5.72	7.01	20.51
23/64	.359375	4.85	6.03	9.02	7.11	9.18	22.32
3/8	.3750	4.91	5.82	8.94	6.89	8.36	24.10
25/64	.390625	5.66	6.90	10.25	8.26	10.17	26.17
13/32	.40625	5.81	6.93	10.70	8.05	9.61	28.24
27/64	.421875	6.47	7.90	11.82	9.61	11.93	30.31
7/16	.4375	6.71	7.99	12.09	9.45	11.14	32.37
29/64	.453125	7.51	9.36	14.51	10.35	13.96	34.62
15/32	.46875	7.98	9.66	14.78	10.63	13.66	36.86
31/64	.484375	8.37	10.21	15.22	11.66	15.70	39.10
1/2	.5000	8.35	10.13	15.07	11.28	14.26	41.33

\* NOT SPLIT POINT

- ALSO AVAILABLE :**
- LETTER SIZES
  - PARABOLIC FLUTE
  - STRAIGHT FLUTE
  - CARBIDE TIPPED
  - TAPER SHANKS
  - SUPERFLUTE
  - TYPE A
  - TYPE C
  - DECIMAL SIZES
  - METRIC SIZES
  - TAPER LENGTHS
  - TYPE M
  - AUTOMOTIVE
  - BRITE OR BLACK FINISH
  - TYPE B

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NO PACKAGE QUANTITY**

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# WIRE SIZE HSS DRILLS



General Purpose



Slow Spiral



Fast Spiral



Half Round

Wire Size	Decimal Equivalent	General Purpose 118° Point	Heavy Duty 135° Split Point	Cobalt 135° Split Point	Fast Spiral 118° Point	Slow Spiral 118° Point	Half Round 118° Point
1	.2280	2.30	2.85	4.49	2.99	3.97	6.81
2	.2210	2.31	2.85	4.49	3.08	3.97	6.81
3	.2130	2.09	2.55	4.21	2.90	3.81	6.25
4	.2090	2.11	2.62	4.21	2.90	3.81	6.25
5	.2055	2.11	2.55	4.21	2.90	3.81	6.25
6	.2040	2.11	2.62	4.21	2.90	3.81	6.25
7	.2010	1.83	2.24	3.27	2.37	3.27	5.52
8	.1990	1.86	2.28	3.27	2.43	3.27	5.52
9	.1960	1.86	2.28	3.27	2.37	3.27	5.52
10	.1935	1.83	2.24	3.27	2.37	3.27	5.52
11	.1910	1.71	2.08	3.27	2.25	3.04	5.52
12	.1890	1.73	2.11	3.27	2.38	3.04	5.52
13	.1850	1.69	2.06	3.14	2.23	2.84	5.00
14	.1820	1.69	2.11	3.14	2.23	2.84	5.00
15	.1800	1.69	2.11	3.14	2.17	2.84	5.00
16	.1770	1.69	2.11	2.93	2.17	2.84	5.00
17	.1730	1.69	2.06	2.87	2.23	2.84	5.00
18	.1695	1.41	1.74	2.62	1.93	2.51	4.70
19	.1660	1.39	1.69	2.54	1.87	2.51	4.70
20	.1610	1.39	1.69	2.54	1.87	2.51	4.70
21	.1590	1.28	1.56	2.53	1.72	2.43	4.70
22	.1570	1.29	1.65	2.53	1.78	2.43	4.70
23	.1540	1.29	1.55	2.53	1.65	2.43	4.62
24	.1520	1.29	1.59	2.53	1.57	2.36	4.62
25	.1495	1.22	1.53	2.30	1.57	2.36	4.62
26	.1470	1.23	1.53	2.28	1.57	2.24	4.62
27	.1440	1.22	1.53	2.28	1.57	2.24	4.62
28	.1405	1.13	1.39	2.14	1.53	2.24	4.18
29	.1360	1.12	1.37	2.08	1.46	1.87	4.18
30	.1285	1.12		1.94	1.46	1.87	4.18
31	.1200	1.11		1.93	1.49	1.87	4.09
32	.1160	1.11		1.89	1.49	1.87	4.09
33	.1130	1.11		1.81	1.53	1.87	4.09
34	.1110	1.11		1.81	1.53	1.87	4.09
35	.1100	1.11		1.81	1.49	1.87	4.09
36	.1065	1.10		1.79	1.53	1.87	3.87
37	.1040	1.11		1.79	1.49	1.87	3.87
38	.1015	1.11		1.67	1.49	1.87	3.87
39	.0995	1.11		1.67	1.49	1.87	3.87
40	.0980	1.10		1.67	1.46	1.87	3.87

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# WIRE SIZE HSS DRILLS

## Typical Uses:

General Purpose:	Cast Iron, Steel, Steel Forgings, Short Runs
Heavy Duty:	Stainless Steel, Tough Alloy Steel
Cobalt:	Titanium, Asbestos, Graphite, High Temperature Alloys, Glass Filled Epoxies, Clay
Fast Spiral:	Aluminum, Magnesium, Copper, Bronze, Soft Steel, Slate, Wood, Die Casting
Slow Spiral:	Brass, Soft Materials
Half Round:	Brass, Copper, Hard Rubber, Soft Woods, Molded Plastics

Wire Size	Decimal Equivalent	General Purpose 118° Point	Heavy Duty 135° Split Point	Cobalt 135° Split Point *	Fast Spiral 118° Point	Slow Spiral 118° Point	Half Round 118° Point
41	.0960	1.11		1.65	1.56	1.90	3.87
42	.0935	1.11		1.62	1.56	1.90	3.87
43	.0890	1.10		1.62	1.47	1.90	3.87
44	.0860	1.10		1.62	1.52	1.90	3.87
45	.0820	1.11		1.62	1.52	1.90	3.87
46	.0810	1.11		1.62	1.52	1.90	3.87
47	.0785	1.11		1.62	1.56	1.90	3.87
48	.0760	1.11		1.62	1.52	1.90	3.87
49	.0730	1.11		1.62	1.56	1.90	3.87
50	.0700	1.11		1.62	1.52	1.90	3.87
51	.0670	1.11		1.62	1.52	1.90	3.87
52	.0635	1.11		1.62	1.52	1.90	3.87
53	.0595	1.11		1.82	1.52	1.86	3.71
54	.0550	1.11		1.82	1.52	1.86	3.71
55	.0520	1.11		1.82	1.47	1.86	3.71
56	.0465	1.11		2.06	1.52	1.86	3.71
57	.0430	1.11		2.06	1.56	1.86	3.71
58	.0420	1.15		2.06	1.56	1.86	3.71
59	.0410	1.15		2.06	1.56	1.86	3.71
60	.0400	1.15		2.06	1.56	1.86	3.71
61	.0390	1.21		2.38	1.80	2.29	3.80
62	.0380	1.21		2.38	1.80	2.29	3.80
63	.0370	1.21		2.38	1.80	2.29	3.80
64	.0360	1.21		2.38	1.80	2.29	3.80
65	.0350	1.21		2.38	1.70	2.29	3.80
66	.0330	1.21		2.51	1.80	2.29	3.80
67	.0320	1.21		2.51	1.70	2.29	3.80
68	.0310	1.21		2.51	1.70	2.29	3.80
69	.0292	1.33		2.84	1.90	2.51	5.01
70	.0280	1.33		2.84	1.90	2.53	5.01
71	.0260	1.65		2.84	2.49	3.31	5.01
72	.0250	1.65		2.84	2.34	3.31	5.01
73	.0240	1.65		2.84	2.34	3.31	5.01
74	.0225	1.65		2.84	2.34	3.31	5.01
75	.0210	1.65		3.14	2.34	3.31	5.01
76	.0200	1.65		3.14	2.34	3.31	5.01
77	.0180	1.65		3.14	2.34	3.31	5.01
78	.0160	1.65		3.14	2.34	3.31	5.01
79	.0145	1.99		3.14	2.74	3.94	5.01
80	.0135	1.99		3.17	2.74	3.94	5.01

\* #53 - #80 NOT SPLIT POINT

- Also available:**
- Extension Drills - Page 22
  - Combination Drill & Countersinks - Page 24

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## EXTENSION DRILLS &amp; LONGBOYS



Size	Decimal Equivalent	6" Aircraft Extension 135° Split Point	12" Aircraft Extension 135° Split Point	12" Extended 135° Split Point	8" Longboy 118° Point	12" Longboy 118° Point	18" Longboy 118° Point
1/16	.0625	3.66	8.87	2.72	—	20.47	—
5/64	.078125	3.66	8.87	2.72	—	17.86	—
3/32	.09375	2.81	7.13	2.34	12.88	21.14	—
7/64	.109375	3.03	7.41	2.53	10.87	15.61	—
1/8	.1250	2.97	7.20	2.35	10.13	12.85	40.41
9/64	.140625	3.55	8.03	2.45	9.91	14.04	25.92
5/32	.15625	3.55	7.36	2.63	11.16	14.04	40.41
11/64	.171875	3.88	8.03	2.72	11.40	14.56	25.92
3/16	.1875	3.88	8.03	2.92	11.47	14.56	31.74
13/64	.203125	4.74	10.25	3.10	12.46	15.81	31.74
7/32	.21875	4.74	9.10	3.29	12.48	15.81	31.74
15/64	.234375	5.27	9.87	3.48	12.38	15.81	31.74
1/4	.2500	5.18	9.87	3.78	12.80	16.20	32.86
17/64	.265625	11.84	11.63	4.23	11.87	16.92	35.15
9/32	.28125	12.29	12.39	4.42	13.44	16.92	35.15
19/64	.296875	14.44	14.00	4.80	13.54	17.52	35.15
5/16	.3125	15.67	15.15	5.36	13.78	17.52	35.15
21/64	.328125	17.01	16.07	5.55	17.79	18.63	37.25
11/32	.34375	16.83	16.91	6.03	14.55	18.63	37.25
23/64	.359375	18.90	17.60	6.12	16.43	18.63	37.25
3/8	.3750	19.25	18.36	6.40	14.80	18.63	37.25
25/64	.390625	21.48	19.97	6.79	18.67	20.86	40.53
13/32	.40625	20.72	21.11	7.16	16.79	20.86	40.53
27/64	.421875	23.05	21.88	7.55	23.58	22.10	43.74
7/16	.4375	23.32	23.03	8.10	17.76	22.10	43.74
29/64	.453125	25.56	24.86	8.49	20.33	24.99	49.97
15/32	.46875	26.51	26.01	8.95	19.87	24.99	49.97
31/64	.484375	27.49	26.85	9.32	27.25	24.72	52.07
1/2	.5000	27.97	27.69	9.62	19.94	24.72	52.07

- Aircraft extension drills are one-piece extra-long shafts with the same flute length as jobber length drills.
- 12" extended drills are an economical alternative to aircraft extensions with HSS shafts welded to jobber length drills.
- Longboy drills are fluted over a much longer length for certain deep hole drilling applications.
- Additional lengths up to 24" available - Call for price and delivery

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# DOUBLE END END MILLS



## 3/16 Shank, Stub Length, Double End

Diameter of Cutter	Length of Cut	Length Overall	2 Flute		2 Flute Ball		4 Flute	
			HSS	COBALT	HSS	COBALT	HSS	COBALT
1/32	3/64	2	11.21	12.34	16.34	17.41	—	—
3/64	1/16	2	11.21	12.34	16.34	17.41	—	—
1/16	3/32	2	9.52	11.08	14.93	15.67	9.41	11.33
5/64	1/8	2	9.52	11.13	14.93	15.67	—	—
3/32	9/64	2	9.52	11.13	14.93	15.67	9.41	11.33
7/64	5/32	2	9.52	11.33	14.93	15.73	—	—
1/8	3/16	2	9.52	11.45	14.93	15.79	9.41	11.33
9/64	7/32	2	9.52	11.52	14.93	15.83	—	—
5/32	15/64	2	9.52	11.89	14.93	15.92	9.41	12.08
11/64	1/4	2	9.52	11.89	14.93	15.92	—	—
3/16	9/32	2	9.52	11.89	14.93	16.02	9.41	12.08

## 3/16 Shank, Standard Length, Double-End

Diameter of Cutter	Length of Cut	Length Overall	2 Flute		2 Flute Ball		4 Flute	
			HSS	COBALT	HSS	COBALT	HSS	COBALT
1/32	3/32	2-1/4	11.83	13.30	16.61	17.43	—	—
3/64	9/64	2-1/4	11.83	13.30	16.61	17.43	—	—
1/16	3/16	2-1/4	10.57	11.74	15.82	16.60	11.17	12.05
5/64	15/64	2-1/4	10.57	11.83	15.82	16.60	14.52	15.73
3/32	9/32	2-1/4	10.57	11.93	15.82	16.60	11.17	12.05
7/64	21/64	2-1/4	10.57	11.93	15.82	16.67	14.52	15.73
1/8	3/8	2-1/4	10.57	12.04	15.82	16.67	11.17	12.26
9/64	13/32	2-1/4	10.57	12.61	15.82	16.76	14.52	16.13
5/32	7/16	2-1/4	10.57	12.67	15.82	16.76	11.17	12.77
11/64	1/2	2-1/4	10.57	12.67	15.82	16.76	14.52	16.80
3/16	1/2	2-1/4	10.57	12.67	15.82	16.76	11.17	12.77

## Double End Carbide End Mills, Stub Length

Diameter of Cut	Shank Diameter	Length of Cut	Length Overall	2-FLUTE	4-FLUTE
1/32	1/8	1/16	1-1/2	12.94	12.94
3/64	1/8	1/16	1-1/2	12.94	12.94
1/16	1/8	1/8	1-1/2	12.32	12.32
5/64	1/8	1/8	1-1/2	12.32	12.32
3/32	1/8	3/16	1-1/2	12.32	12.32
7/64	1/8	1/4	1-1/2	12.32	12.32
1/8	1/8	1/4	1-1/2	12.32	12.32
9/64	3/16	5/16	2	16.72	16.72
5/32	3/16	5/16	2	16.72	16.72
11/64	3/16	3/8	2	16.72	16.72
3/16	3/16	3/8	2	16.72	16.72

### ALSO AVAILABLE:

- 4 Flute Ball
- 3 Flute
- 2 Flute Single End
- 4 Flute Single End
- Decimal Sizes .006 - .187
- Metric Sizes
- Single End Carbide
- Ball End Carbide

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# COMBINATION DRILL & COUNTERSINKS



## PLAIN TYPE COUNTERSINKS

Countersink Size Number	Diameter of Body	Diameter of Drill	Length of Drill	Length Overall Inches	60° R.H. Price Each	82° Angle R.H. Price Each	90° Angle R.H. Price Each
00000	1/8	.010	.010	1¼	8.80	—	33.98
0000	1/8	.015	.015	1¼	8.08	—	33.98
000	1/8	.020	.020	1¼	7.66	—	21.70
00	1/8	.025	.025	1¼	7.66	21.70	21.70
0	1/8	1/32	1/32	1¼	7.66	21.70	21.70
1	1/8	3/64	3/64	1¼	5.18	9.73	9.73
2	3/16	5/64	5/64	1½	5.42	9.96	9.96
3	1/4	7/64	7/64	2	5.64	10.31	10.31
4	5/16	1/8	1/8	2½	5.83	10.70	10.70
4½	3/8	9/64	9/64	2½	8.97	14.67	14.67
5	7/16	3/16	3/16	2¾	9.19	16.32	16.32
6	1/2	7/32	7/32	3	13.87	24.72	24.72
7	5/8	1/4	1/4	3¼	20.02	34.96	34.96
8	3/4	5/16	5/16	3½	27.85	49.04	49.04
9	7/8	11/32	11/32	3¾	52.30	—	—
10	1"	3/8	3/8	3¾	68.66	—	—

## BELL TYPE COUNTERSINKS



Countersink Size Number	Diameter of Body	Diameter of Drill	Length of Drill	Diameter of Bell Inches	Length Overall Inches	HSS RH Price Each	M42 RH Price Each	T15 RH Price Each
11	1/8	3/64	3/64	.100	1¼	6.16	16.06	21.52
12	3/16	1/16	1/16	.150	1½	6.45	16.47	22.03
13	1/4	3/32	3/32	.200	2	6.54	16.92	22.63
14	5/16	7/64	7/64	.250	2½	6.75	17.48	23.11
15	7/16	5/32	5/32	.350	2¾	10.28	27.88	36.53
16	1/2	3/16	3/16	.400	3	15.81	43.10	55.63
17	5/8	7/32	7/32	.500	3¼	23.49	64.14	83.51
18	3/4	1/4	1/4	.600	3½	31.47	89.50	119.00

## LONGBOY COUNTERSINKS (HSS 60° Angle) FOR LONG REACH APPLICATIONS - 3, 4, 5 & 6" OVERALL

Countersink Size Number	Diameter of Body	Diameter of Drill	Length of Drill	3" Price Each	4" Price Each	5" Price Each	6" Price Each
1	1/8	3/64	3/64	13.59	14.18	19.72	25.79
2	3/16	5/64	5/64	—	15.54	19.89	25.90
3	1/4	7/64	7/64	—	16.35	21.54	26.14
4	5/16	1/8	1/8	—	18.14	23.16	26.77
4 1/2	3/8	9/64	9/64	—	20.39	24.10	29.04
5	7/16	3/16	3/16	—	23.82	27.59	30.98
6	1/2	7/32	7/32	—	—	29.64	35.82
7	5/8	1/4	1/4	—	—	—	66.06
8	3/4	5/16	5/16	—	—	—	71.42

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# SINGLE & SIX FLUTE COUNTERSINKS

## SINGLE FLUTE COUNTERSINKS



Tool No.	C/L Angles Available	Body Dia.	Shank Dia.	Shank Length	O/A Length	HSS Price
1/8-SF	30° 41° 45° 50° AND 60°	1/8	1/8	-	1½	6.40
3/16-SF		3/16	3/16	-	1½	6.85
1/4-SF		1/4	1/4	-	2	7.10
5/16-SF		5/16	1/4	7/8	1¾	8.40
3/8-SF		3/8	1/4	7/8	1¾	9.70
1/2-SF		1/2	1/4	1¾	2¾	12.45
5/8-SF		5/8	3/8	1¾	2¾	17.70
3/4-SF		3/4	1/2	1¾	2¾	23.80
1-SF		1	1/2	1¾	2¾	36.50
1¼-SF		1¼	3/4	1¾	3¾	58.55
1½-SF		1½	3/4	1¾	3¾	80.45
1¾-SF		1¾	1	2¾	4¾	108.90
2-SF		2	1	2¾	4¾	137.95
2½-SF		2½	1	2¾	4¾	233.55
3-SF	3	1	2¾	5	350.90	

## SIX FLUTE COUNTERSINKS

DESIGN - Hutchinson Countersinks are designed to take heavy cuts and produce exceptionally smooth seats.

SHEAR-CUT TEETH - Cutting teeth are arranged to give a shearing cut, eliminating "chatter" possibility.

TRUNCATED END-DIMENSIONS- Diameter at small end of 30° countersinks is approximately one third of the body diameter; of 41° and 45° countersinks it is about one-fifth, and of 60° countersinks it is about one-sixth.

### HIGH SPEED STEEL

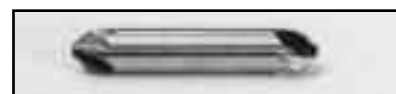
Tool No.	C/L Angles Available	Body Dia.	Shank Dia.	Shank Length	O/A Length	Price Each
CK-1/8	30° 41° 45° 50° AND 60°	1/8	1/8	-	1½	7.05
CK-3/16		3/16	3/16	-	1½	7.55
CK-1/4		1/4	3/16	3/4	1½	7.60
CK-5/16		5/16	1/4	7/8	1¾	9.30
CK-3/8		3/8	1/4	7/8	1¾	10.40
CK-1/2		1/2	3/8	1¾	2¾	13.20
CK-5/8		5/8	3/8	1¾	2¾	18.90
CK-3/4		3/4	1/2	1¾	2¾	25.25
CK-7/8		7/8	1/2	1¾	2¾	33.15
CK-1		1	1/2	1¾	2¾	38.90



### CARBIDE

Tool No.	C/L Angles Available	Body Dia.	Shank Dia.	Shank Length	O/A Length	Price Each
CK-1/8-W	30° 41° 45° 50° AND 60°	1/8	1/8	-	1½	9.30
CK-3/16-W		3/16	3/16	-	2	11.70
CK-1/4-W		1/4	1/4	-	2	15.00
CK-5/16-W		5/16	1/4	2	2¾	22.45
CK-3/8-W		3/8	1/4	2	2¾	29.00
CK-1/2-W		1/2	3/8	2	2¾	40.40
CK-5/8-W		5/8	3/8	2	2¾	55.75
CK-3/4-W		3/4	1/2	2	2¾	67.95
CK-7/8-W		7/8	1/2	2	2¾	99.90
CK-1-W		1	1/2	2	3	115.10

## DOUBLE END Six Flute Countersinks



### HIGH SPEED STEEL

Tool No.	C/L Angles Available	Diameter	O/A Length	Price Each
CK-1/8-DE	30° 41° 45° 50° 60°	1/8	1½	12.00
CK-3/16-DE		3/16	2	13.10
CK-1/4-DE		1/4	2	13.45
CK-3/8-DE		3/8	2½	17.35
CK-1/2-DE		1/2	3	22.70
CK-5/8-DE		5/8	3¾	33.00

### CARBIDE

Tool No.	C/L Angles Available	Diameter	O/A Length	Price Each
CK-1/8-W-DE	30° 41° 45° 50° 60°	1/8	1½	14.60
CK-3/16-W-DE		3/16	2	21.00
CK-1/4-W-DE		1/4	2	28.70
CK-3/8-W-DE		3/8	2½	46.45
CK-1/2-W-DE		1/2	3	64.35
CK-5/8-W-DE		5/8	3¾	89.20

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[www.hssblanks.com](http://www.hssblanks.com)

## ROTARY FILE SETS – COUNTERSINK SETS



**SET #4E 48.75**  
1/8" Solid Carbide  
1/8" Shank



**SET #16E 189.35**  
1/2" Carbide Head  
1/4" Shank



**SET #14E 187.00**  
3/8" Carbide 6 flutes  
1/2" Carbide 8 flutes



**SET #8E 95.35**  
1/4" Solid Carbide  
1/4" Shank

All rotary file sets furnished in convenient cases.  
Individual rotary files also available.

### SIX FLUTE CHATTERLESS COUNTERSINK SETS

**Set #27** - Chatterless Countersink Set containing 1/4, 3/8, 1/2 and 3/4 inch diameter cutters. Specify Center Line Angle desired.

High Speed Steel

**\$56.45**

**Set #27W** - Chatterless Countersink Set containing a 1/4, 3/8, 1/2, and 3/4 inch Carbide Countersink. Specify Center Line Angle desired.

Carbide

**\$152.35**

**Set #29** - Chatterless Countersink Set containing 1/4, 3/8, 1/2, 5/8, 3/4 and 1 inch diameter cutters. Specify Center Line Angle desired.

High Speed Steel

**\$114.20**



C/L ANGLES AVAILABLE:  
30°, 41°, 45°, 50° and 60°



### SINGLE FLUTE COUNTERSINK SETS

**Set #35** - Contains a 1/4, 1/2, 3/4, 1 and 1 1/4 inch diameter HSS Single Flute Countersink. Specify Center Line Angle desired.

High Speed Steel

**\$143.60**

**Set #36W** - Contains a 1/4, 3/8, 1/2, 5/8 and 3/4 inch diameter Carbide Single Flute Countersink. Specify Center Line Angle desired.

Carbide

**\$323.70**

**Set #37** - Contains a 1/4, 3/8, 1/2, 5/8, 3/4, 1, 1 1/4, 1 1/2, 1 3/4 and 2 inch HSS Single Flute Countersink. Specify Center Line Angle desired

High Speed Steel

**\$492.90**

FOR INDIVIDUAL COUNTERSINKS, SEE PAGE 25

**WILLIAM T. HUTCHINSON CO.**

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# HSS CHUCKING REAMERS

**SERIES 700 - Straight Flute**  
**SERIES 700C - Straight Flute Cobalt**



**SERIES 740 - Right Hand Spiral Flute**



**High Speed Steel - Straight Shank - Right Hand Cut**  
**Fractional - Wire Gage - Letter - Over & Under - Dowel Pin - Metric**

Size	Decimal	Price		
		700	740	700C
1/32	.0312	10.44	12.78	13.85
67	.0320	11.21	—	14.23
66	.0330	11.21	—	14.23
65	.0350	11.21	—	14.23
64	.0360	11.21	—	14.23
63	.0370	11.21	—	14.23
62	.0380	11.21	—	14.23
61	.0390	11.21	—	14.23
1mm	.0394	11.21	14.54	—
60	.0400	11.21	14.54	14.23
59	.0410	11.21	14.54	14.23
58	.0420	11.21	14.54	14.23
57	.0430	11.21	14.54	14.23
56	.0465	11.21	14.54	14.23
3/64	.0469	11.21	14.54	14.23
55	.0520	11.21	14.54	14.23
54	.0550	11.21	14.54	14.23
1.5mm	.0591	11.21	14.54	—
53	.0595	11.21	14.54	14.23
1/16	.0625	9.79	14.34	13.85
52	.0635	11.21	14.54	13.85
51	.0670	9.01	14.54	13.85
50	.0700	9.01	12.06	12.01
49	.0730	9.01	12.06	12.01
48	.0760	9.01	12.06	12.01
5/64	.0781	9.01	12.06	12.01
47	.0785	9.01	12.06	12.01
2mm	.0787	9.01	12.06	—
46	.0810	9.01	12.06	12.01
45	.0820	9.01	12.06	12.01
44	.0860	9.01	12.06	12.01
43	.0890	9.01	12.06	12.01
42	.0935	9.01	12.06	12.01
3/32	.0937	9.01	12.06	10.97
41	.0960	9.01	12.06	12.01
40	.0980	9.01	12.06	12.01
2.5mm	.0984	9.01	12.06	—

Size	Decimal	Price		
		700	740	700C
39	.0995	9.01	12.06	12.01
38	.1015	9.01	12.06	12.01
37	.1040	9.01	12.06	12.01
36	.1065	9.01	12.06	12.01
7/64	.1094	9.01	12.06	12.01
35	.1100	9.01	12.06	12.01
34	.1110	9.01	12.06	12.01
33	.1130	9.01	12.06	12.01
32	.1160	9.01	12.06	12.01
3mm	.1181	9.01	12.06	—
31	.1200	9.01	12.06	12.01
—	—	—	—	—
1/8	.1250	7.25	11.04	9.79
.1260	.1260	9.01	12.06	12.01
30	.1285	9.01	14.54	12.01
29	.1360	10.89	14.54	14.10
3.5mm	.1378	10.89	14.54	—
28	.1405	10.89	14.54	14.10
9/64	.1406	10.89	14.54	14.10
27	.1440	10.89	14.54	14.10
26	.1470	10.89	14.54	14.10
25	.1495	10.89	14.54	14.10
24	.1520	10.89	14.54	14.10
23	.1540	10.89	14.54	14.10
5/32	.1562	11.10	14.34	13.85
22	.1570	10.89	14.54	14.10
4mm	.1575	10.89	14.54	—
21	.1590	11.55	14.54	14.10
20	.1610	11.55	14.54	14.10
19	.1660	11.55	14.54	14.10
18	.1695	11.55	14.54	14.10
11/64	.1719	11.55	14.54	14.10
17	.1730	11.55	14.54	14.10
16	.1770	11.55	14.54	14.10
4.5mm	.1772	11.55	15.37	—

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# HSS CHUCKING REAMERS

**SERIES 700 - Straight Flute**  
**SERIES 700C - Straight Flute Cobalt**



**SERIES 740 - Right Hand Spiral Flute**



**High Speed Steel - Straight Shank - Right Hand Cut**  
**Fractional - Wire Gage - Letter - Over & Under - Dowel Pin - Metric**

Size	Decimal	Price			Size	Decimal	Price		
		700	740	700C			700	740	700C
15	.1800	11.25	15.40	15.28	G	.2610	14.05	17.60	18.14
14	.1820	11.55	15.40	15.28	17/64	.2656	15.59	19.95	23.37
13	.1850	11.55	15.40	15.28	H	.2660	15.59	19.95	23.37
—	—	—	—	—	I	.2720	15.59	19.95	23.37
.1865	.1865	11.55	15.40	15.28	7mm	.2756	15.59	19.95	—
—	—	—	—	—	J	.2770	15.59	19.95	23.37
3/16	.1875	10.44	14.54	13.05	K	.2810	15.59	19.95	23.37
.1885	.1885	11.55	15.40	15.28	9/32	.2812	15.15	19.95	23.37
12	.1890	11.55	15.40	15.28	L	.2900	15.59	19.95	23.37
11	.1910	12.95	17.04	17.35	M	.2950	15.59	19.95	23.37
10	.1935	12.95	17.04	17.35	7.5mm	.2953	15.59	20.37	—
9	.1960	12.95	17.04	17.35	19/64	.2969	15.59	19.95	23.37
5mm	.1968	12.95	17.04	—	N	.3020	15.59	19.95	23.37
8	.1990	12.95	17.04	17.35	—	—	—	—	—
7	.2010	12.95	17.04	17.35	.3115	.3115	14.73	19.95	23.37
13/64	.2031	12.95	17.04	17.35	—	—	—	—	—
6	.2040	12.95	17.04	17.35	5/16	.3125	14.05	18.01	22.07
5	.2055	12.95	17.04	17.35	.3135	.3135	14.73	19.95	23.37
4	.2090	12.95	17.04	17.35	8mm	.3150	15.59	19.95	—
3	.2130	12.95	17.04	17.35	O	.3160	15.59	21.36	25.05
5.5mm	.2165	12.95	17.04	—	P	.3230	16.71	21.36	25.05
7/32	.2187	12.95	16.46	16.96	21/64	.3281	16.71	21.36	25.05
2	.2210	13.41	17.04	17.35	Q	.3320	16.71	21.36	25.05
1	.2280	13.41	17.04	17.35	8.5mm	.3346	16.71	21.36	—
A	.2340	13.41	17.04	17.35	R	.3390	16.71	21.36	25.05
15/64	.2344	13.41	17.04	17.35	11/32	.3437	16.71	21.36	25.05
6mm	.2362	14.05	17.60	—	S	.3480	16.71	21.60	25.45
B	.2380	14.05	17.60	18.14	9mm	.3543	18.36	21.60	—
C	.2420	14.05	17.60	18.14	T	.3580	16.71	21.60	25.45
D	.2460	14.05	17.60	18.14	23/64	.3594	16.71	21.60	25.45
—	—	—	—	—	U	.3680	16.71	21.60	25.45
.2490	.2490	12.64	17.60	16.96	—	—	—	—	—
—	—	—	—	—	.3740	.3740	16.02	21.60	25.05
1/4	.2500	11.99	15.80	15.15	9.5mm	.3740	18.36	21.60	—
.2510	.2510	12.64	17.60	16.96	—	—	—	—	—
6.5mm	.2559	14.05	17.60	—	3/8	.3750	15.29	20.39	22.98
F	.2570	14.05	17.60	18.14	.3760	.3760	16.02	21.60	25.05

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# HSS CHUCKING REAMERS

**SERIES 700 - Straight Flute**  
**SERIES 700C - Straight Flute Cobalt**



**SERIES 740 - Right Hand Spiral Flute**



**High Speed Steel - Straight Shank - Right Hand Cut**  
**Fractional - Wire Gage - Letter - Over & Under - Dowel Pin - Metric**

Size	Decimal	Price			Size	Decimal	Price		
		700	740	700C			700	740	700C
V	.3770	18.45	23.48	30.00	16.5mm	.6496	29.99	44.70	—
W	.3860	18.45	23.48	30.00	21/32	.6562	32.09	40.09	52.84
25/64	.3906	18.14	23.48	33.22	17mm	.6693	33.95	44.70	—
10mm	.3937	18.36	23.48	—	11/16	.6875	32.41	45.01	52.84
X	.3970	19.13	23.48	30.00	17.5mm	.6890	36.46	44.70	—
Y	.4040	19.13	24.35	30.29	18mm	.7087	36.46	45.73	—
13/32	.4062	19.13	24.35	30.29	23/32	.7187	36.15	46.05	59.23
Z	.4130	19.13	24.35	30.29	18.5mm	.7283	37.92	50.73	—
10.5mm	.4134	19.13	24.35	—	19mm	.7480	41.95	53.04	—
27/64	.4219	19.13	24.35	30.29	3/4	.7500	36.15	46.05	59.23
11mm	.4331	19.13	24.35	—	19.5mm	.7677	40.42	49.72	—
—	—	—	—	—	25/32	.7812	39.21	49.93	68.08
.4365	.4365	18.22	24.35	30.29	20mm	.7874	43.50	57.11	—
—	—	—	—	—	20.5mm	.8071	43.50	57.11	—
7/16	.4375	18.22	23.14	28.71	13/16	.8125	39.21	51.15	67.86
.4385	.4385	18.22	24.35	30.29	21mm	.8268	43.50	64.09	—
11.5mm	.4528	20.89	26.48	—	27/32	.8437	45.92	45.92	79.85
29/64	.4531	21.28	26.48	37.83	21.5mm	.8465	50.09	64.09	—
15/32	.4687	20.65	26.48	37.83	22mm	.8661	50.09	64.09	—
12mm	.4724	20.89	26.48	—	7/8	.8750	47.13	60.47	80.90
31/64	.4844	20.89	26.48	37.83	22.5mm	.8858	51.39	64.09	—
12.5mm	.4921	20.89	26.48	—	23mm	.9055	51.39	71.11	—
—	—	—	—	—	29/32	.9062	50.97	65.16	87.91
.4990	.4990	20.20	26.48	37.83	23.5mm	.9252	54.47	71.11	—
—	—	—	—	—	15/16	.9375	50.97	65.16	87.91
1/2	.5000	19.68	25.18	33.93	24mm	.9449	55.13	71.11	—
.5010	.5010	19.79	26.48	37.83	24.5mm	.9646	55.13	76.52	—
13mm	.5118	25.70	—	—	31/32	.9687	57.11	72.97	93.27
17/32	.5312	24.38	32.00	42.15	25mm	.9843	58.43	80.29	—
13.5mm	.5315	25.70	35.27	—	1	1.0000	57.11	73.66	94.20
14mm	.5512	25.70	35.88	—	1-1/16	1.0625	63.69	81.67	104.35
9/16	.5625	24.52	32.00	42.15	1-1/8	1.1250	68.09	88.54	110.87
14.5mm	.5709	25.70	35.88	—	1-3/16	1.1875	79.08	101.63	129.95
15mm	.5906	25.70	37.95	—	1-1/4	1.2500	83.46	108.50	137.63
19/32	.5937	24.52	35.09	45.01	1-5/16	1.3125	98.85	125.61	160.38
15.5mm	.6102	29.99	37.95	—	1-3/8	1.3750	103.23	132.00	168.96
5/8	.6250	28.56	36.51	46.71	1-7/16	1.4375	110.93	141.61	181.32
16mm	.6299	29.99	41.33	—	1-1/2	1.5000	118.60	152.45	195.05

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# CAP SCREW COUNTERBORES



## HIGH SPEED STEEL - STRAIGHT SHANK

Size	Description	Style No.	Pilot Dia.	Pilot Length	Flute Dia.	Flute Length	Shank Dia.	Overall Length	Price Each
<b>4</b>	Std.	500	.1120	1/8	.1830	9/16	.1562	3 $\frac{3}{8}$	<b>18.36</b>
	1/64 O/S	400	.1270	1/8	.1990	9/16	.1562	3 $\frac{3}{8}$	<b>18.36</b>
	1/32 O/S	300	.1430	1/8	.2150	9/16	.1562	3 $\frac{3}{8}$	<b>18.36</b>
<b>5</b>	Std.	500	.1250	5/32	.2050	5/8	.1875	4 $\frac{1}{8}$	<b>18.36</b>
	1/64 O/S	400	.1400	5/32	.2210	5/8	.1875	4 $\frac{1}{8}$	<b>18.36</b>
	1/32 O/S	300	.1560	5/32	.2370	5/8	.1875	4 $\frac{1}{8}$	<b>18.36</b>
<b>6</b>	Std.	500	.1380	3/16	.2270	3/4	.2188	4 $\frac{5}{8}$	<b>19.44</b>
	1/64 O/S	400	.1530	3/16	.2430	3/4	.2188	4 $\frac{5}{8}$	<b>19.44</b>
	1/32 O/S	300	.1690	3/16	.2590	3/4	.2188	4 $\frac{5}{8}$	<b>19.44</b>
<b>8</b>	Std.	500	.1640	7/32	.2700	3/4	.2500	5	<b>20.89</b>
	1/64 O/S	400	.1790	7/32	.2860	3/4	.2500	5	<b>20.89</b>
	1/32 O/S	300	.1950	7/32	.3020	3/4	.2500	5	<b>20.89</b>
<b>10</b>	Std.	500	.1900	1/4	.3120	7/8	.2812	5 $\frac{1}{4}$	<b>21.33</b>
	1/64 O/S	400	.2050	1/4	.3280	7/8	.2812	5 $\frac{1}{4}$	<b>21.33</b>
	1/32 O/S	300	.2210	1/4	.3440	7/8	.2812	5 $\frac{1}{4}$	<b>21.33</b>
<b>1/4</b>	Std.	500	.2500	9/32	.3800	1	.3125	5 $\frac{5}{8}$	<b>22.40</b>
	1/64 O/S	400	.2650	9/32	.3960	1	.3125	5 $\frac{5}{8}$	<b>22.40</b>
	1/32 O/S	300	.2810	9/32	.4120	1	.3125	5 $\frac{5}{8}$	<b>22.40</b>
<b>5/16</b>	Std.	500	.3125	5/16	.4740	1	.3750	6 $\frac{1}{8}$	<b>27.90</b>
	1/64 O/S	400	.3280	5/16	.4890	1	.3750	6 $\frac{1}{8}$	<b>27.90</b>
	1/32 O/S	300	.3430	5/16	.5040	1	.3750	6 $\frac{1}{8}$	<b>27.90</b>
<b>3/8</b>	Std.	500	.3750	3/8	.5690	1 $\frac{1}{4}$	.5000	6 $\frac{1}{2}$	<b>30.68</b>
	1/64 O/S	400	.3900	3/8	.5850	1 $\frac{1}{4}$	.5000	6 $\frac{1}{2}$	<b>30.68</b>
	1/32 O/S	300	.4060	3/8	.6010	1 $\frac{1}{4}$	.5000	6 $\frac{1}{2}$	<b>30.68</b>
<b>7/16</b>	Std.	500	.4370	7/16	.6610	1 $\frac{1}{4}$	.5000	7	<b>36.68</b>
	1/64 O/S	400	.4520	7/16	.6760	1 $\frac{1}{4}$	.5000	7	<b>36.68</b>
	1/32 O/S	300	.4680	7/16	.6910	1 $\frac{1}{4}$	.5000	7	<b>36.68</b>
<b>1/2</b>	Std.	500	.5000	1/2	.7550	1 $\frac{1}{2}$	.5000	7 $\frac{1}{2}$	<b>42.09</b>
	1/64 O/S	400	.5150	1/2	.7710	1 $\frac{1}{2}$	.5000	7 $\frac{1}{2}$	<b>42.09</b>
	1/32 O/S	300	.5310	1/2	.7870	1 $\frac{1}{2}$	.5000	7 $\frac{1}{2}$	<b>42.09</b>
<b>5/8</b>	Std.	500	.6250	5/8	.9690	1 $\frac{1}{2}$	.6250	7 $\frac{5}{8}$	<b>68.64</b>
	1/64 O/S	400	.6400	5/8	.9840	1 $\frac{1}{2}$	.6250	7 $\frac{5}{8}$	<b>68.64</b>
	1/32 O/S	300	.6560	5/8	1.0000	1 $\frac{1}{2}$	.6250	7 $\frac{5}{8}$	<b>68.64</b>
<b>3/4</b>	Std.	500	.7500	3/4	1.1560	1 $\frac{5}{8}$	.7500	7 $\frac{3}{4}$	<b>79.94</b>
	1/64 O/S	400	.7650	3/4	1.1720	1 $\frac{5}{8}$	.7500	7 $\frac{3}{4}$	<b>79.94</b>
	1/32 O/S	300	.7810	3/4	1.1880	1 $\frac{5}{8}$	.7500	7 $\frac{3}{4}$	<b>79.94</b>
<b>7/8</b>	Std.	500	.8750	7/8	1.3440	1 $\frac{7}{8}$	.8750	8	<b>97.29</b>
	1/64 O/S	400	.8910	7/8	1.3590	1 $\frac{7}{8}$	.8750	8	<b>97.29</b>
	1/32 O/S	300	.9060	7/8	1.3750	1 $\frac{7}{8}$	.8750	8	<b>97.29</b>
<b>1</b>	Std.	500	1.0000	1	1.5310	2	1	8 $\frac{1}{2}$	<b>123.42</b>
	1/64 O/S	400	1.0150	1	1.5470	2	1	8 $\frac{1}{2}$	<b>123.42</b>
	1/32 O/S	300	1.0310	1	1.5630	2	1	8 $\frac{1}{2}$	<b>123.42</b>

O/S = Oversize

Sets Available On Request

### WILLIAM T. HUTCHINSON CO.

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