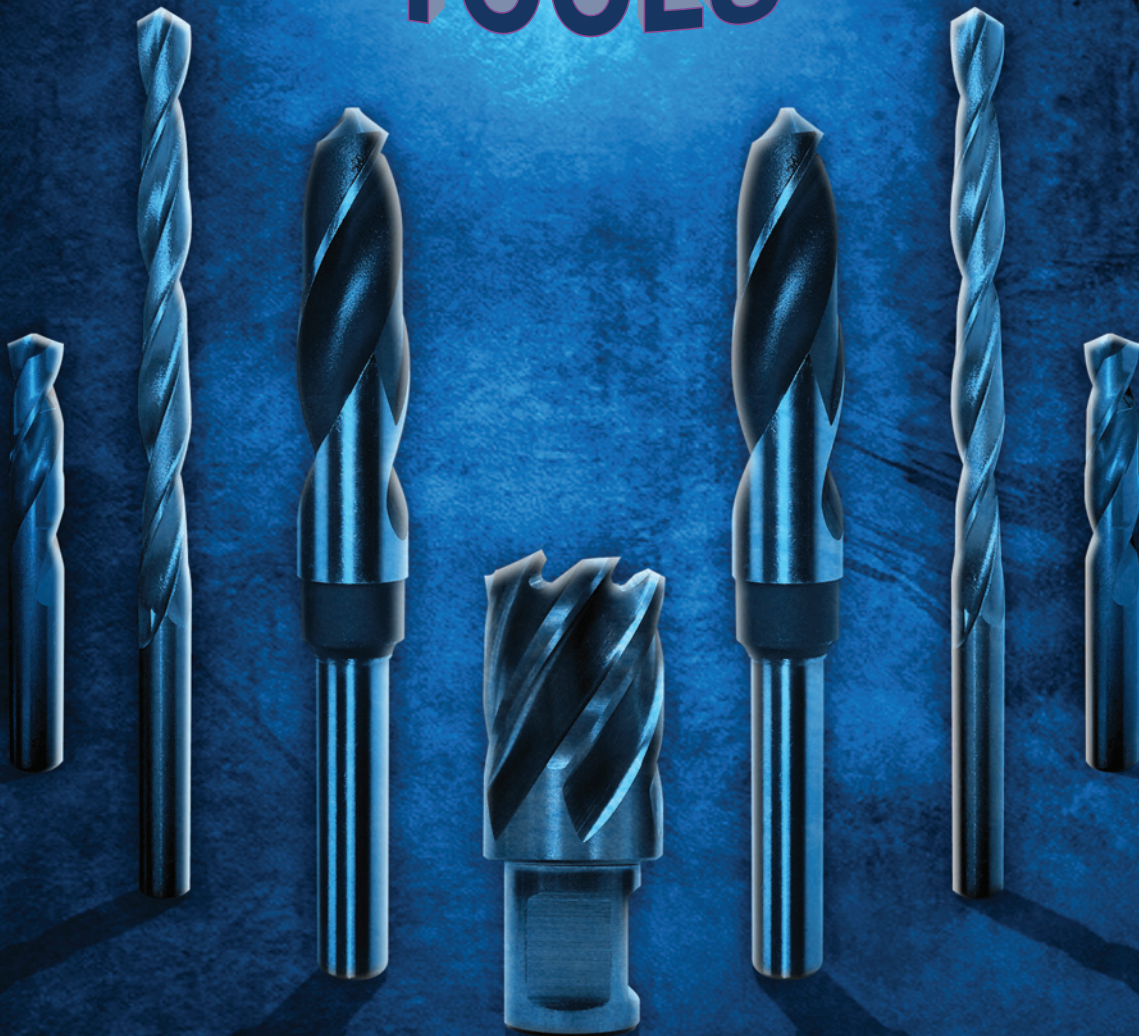


ICS  **Cutting Tools, Inc.**

**METAL
CUTTING
TOOLS**



ICS CUTTING TOOLS, INC
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[HEAVY DUTY]

High Speed Steel

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[SPECIAL PURPOSE]

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[GENERAL PURPOSE]

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[SPECIAL PURPOSE]

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[GENERAL PURPOSE]

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[HEAVY DUTY]

High Speed Steel

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SCREW MACHINE LENGTH DRILLS


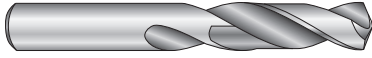



ICS USA

HEAVY DUTY

135° SPLIT POINT*

NAS 907 TYPE C SPECIFICATIONS

Screw Machine Length Drills were developed for screw machine operations where regular length drills were too long. The short length design reduces breakage and runout. They are now used in portable drilling where short, rigid drills are a requirement, and are especially suitable for N/C drilling applications. Also known as Short Length Drills or Stub Length Drills.

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	NAS SPECS
SMR	 OXIDE FINISH	For drilling in hard steel, stainless steel, titanium and other hard materials.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web	C
SMP	 BRIGHT POLISHED FINISH	For drilling stainless steel and aluminum. Often used where oxide could potentially contaminate the weld around edge of the hole. Saves on clean-up time and machining costs.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web	C
SMGF	 GOLD OXIDE FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. Designed as an alternative to black oxide. Gold oxide film reduces friction between the tool and the work. Does not smear metal.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web	C
SMG	 OXIDE FINISH	For use primarily in screw machine operations, and for general purpose drilling in mild steel and low alloys.	M2	118° Std. Pt. Std. Spiral Hvy. Duty Web	-
SMT	 GOLD TITANIUM FINISH	The combination of titanium nitride coating with the heavy duty design enhances chip flow, finished hole quality and up to 700% more drill life. Super hard RC-80 cutting edge.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web	C

*SMG are general purpose 118° standard point.

(NAS) National Aerospace Standard

Fractional Sizes (Straight Shank) 3/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL			TiN COAT
				OXIDE FINISH	BRIGHT FINISH	GOLD FINISH	GOLD FINISH
				135° SPLIT PT	135° SPLIT PT	135° SPLIT PT	135° SPLIT PT
				SMR	SMP	SMGF	SMT
3/64	.0469	5/8	1-3/8	1.44	1.44	1.44	2.84
1/16	.0625	5/8	1-5/8	0.94	0.94	0.94	2.52
5/64	.0781	11/16	1-11/16	0.94	0.94	0.94	2.52
3/32	.0938	3/4	1-3/4	0.98	0.98	0.98	2.60
7/64	.1094	13/16	1-13/16	0.98	0.98	0.98	2.60
1/8	.1250	7/8	1-7/8	1.04	1.04	1.04	2.84
9/64	.1406	15/16	1-15/16	1.26	1.26	1.26	2.88
5/32	.1562	1	2-1/16	1.34	1.34	1.34	3.12
11/64	.1719	1-1/16	2-1/8	1.42	1.42	1.42	3.04
3/16	.1875	1-1/8	2-3/16	1.54	1.54	1.54	3.14
13/64	.2031	1-3/16	2-1/4	1.70	1.70	1.70	5.22
7/32	.2188	1-1/4	2-3/8	1.92	1.92	1.92	5.34
15/64	.2344	1-5/16	2-7/16	1.96	1.96	1.96	5.60
1/4	.2500	1-3/8	2-1/2	2.02	2.02	2.02	5.68
17/64	.2656	1-7/16	2-5/8	2.82	2.82	2.82	8.78
9/32	.2812	1-1/2	2-11/16	2.98	2.98	2.98	8.90
19/64	.2969	1-9/16	2-3/4	3.22	3.22	3.22	9.26
5/16	.3125	1-5/8	2-13/16	3.38	3.38	3.38	9.56
21/64	.3281	1-11/16	2-15/16	3.80	3.80	3.80	9.94
11/32	.3438	1-11/16	3	4.06	4.06	4.06	10.36
23/64	.3594	1-3/4	3-1/16	4.30	4.30	4.30	14.58
3/8	.3750	1-13/16	3-1/8	4.68	4.68	4.68	14.74
25/64	.3906	1-7/8	3-1/4	5.02	5.02	5.02	15.40
13/32	.4062	1-15/16	3-5/16	5.46	5.46	5.46	18.00
27/64	.4219	2	3-3/8	5.82	5.82	5.82	18.62
7/16	.4375	2-1/16	3-7/16	6.36	6.36	6.36	18.90
29/64	.4531	2-1/8	3-9/16	7.00	7.00	7.00	19.64
15/32	.4688	2-1/8	3-5/8	7.44	7.44	7.44	20.10
31/64	.4844	2-3/16	3-11/16	8.14	8.14	8.14	20.52
1/2	.5000	2-1/4	3-3/4	8.14	8.14	8.14	21.06

PACKAGING

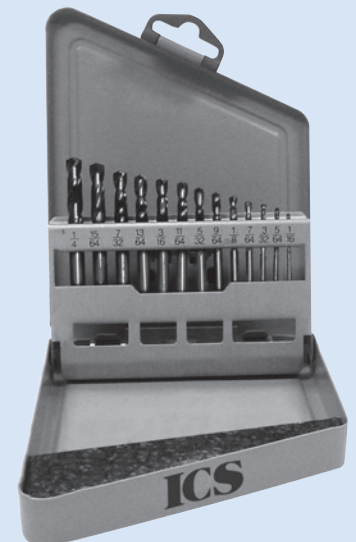
1/64 to 17/64 - 12 Drills/Envelope
9/32 to 1/2 - 6 Drills/Envelope
33/64 to 3/4 - 1 Drill/Tube

ORDERING NOTE

To complete your order we may substitute or interchange black or bright drills unless you have specified "no substitutions".

DRILL SETS

A variety of Screw Machine Length Drill Sets can found on page 5.



(Sizes continued on next page)

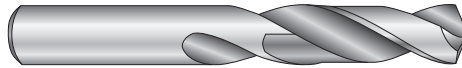
HIGH SPEED STEEL SCREW MACHINE LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT*

NAS 907 TYPE C SPECIFICATIONS



Fractional Sizes 33/64" to 2" Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL		
				STRAIGHT SHANK BLACK OXIDE 135° SPLIT PT	3/8" REDUCED SHANK BLACK OXIDE 135° SPLIT PT	STRAIGHT SHANK BLACK OXIDE 118° STANDARD PT
				SMR	SMTS	SMG
33/64	.5156	2-3/8	3-7/8	27.10	34.16	21.52
17/32	.5312	2-3/8	3-7/8	28.08	35.14	22.52
35/64	.5469	2-1/2	4	28.96	36.02	23.42
9/16	.5625	2-1/2	4	28.96	36.02	23.42
37/64	.5781	2-5/8	4-1/8	32.42	39.48	26.88
19/32	.5938	2-5/8	4-1/8	32.42	39.48	26.88
39/64	.6094	2-3/4	4-1/4	33.66	40.72	28.12
5/8	.6250	2-3/4	4-1/4	32.54	39.60	26.98
41/64	.6406	2-7/8	4-1/2	36.64	43.70	31.10
21/32	.6562	2-7/8	4-1/2	36.64	46.62	31.10
43/64	.6719	2-7/8	4-5/8	40.04	47.08	34.46
11/16	.6875	2-7/8	4-5/8	40.04	47.08	34.46
45/64	.7031	3	4-3/4	42.98	50.02	37.40
23/32	.7188	3	4-3/4	42.98	50.02	37.40
47/64	.7344	3-1/8	5	45.76	52.82	40.22
3/4	.7500	3-1/8	5	49.78	58.58	39.40
49/64	.7656	3-1/4	5-1/8	53.48	62.30	43.10
25/32	.7812	3-1/4	5-1/8	53.48	62.30	43.10
51/64	.7969	3-3/8	5-1/4	56.42	65.24	46.04
13/16	.8125	3-3/8	5-1/4	55.72	64.54	45.34
53/64	.8281	3-1/2	5-3/8	58.38	67.20	48.02
27/32	.8438	3-1/2	5-3/8	58.38	67.20	48.02
55/64	.8594	3-1/2	5-1/2	60.10	68.92	49.74
7/8	.8750	3-1/2	5-1/2	59.72	68.54	49.36
57/64	.8906	3-5/8	5-5/8	62.02	70.84	51.64
29/32	.9062	3-5/8	5-5/8	62.02	70.84	51.64
59/64	.9219	3-3/4	5-3/4	67.30	76.12	56.94
15/16	.9375	3-3/4	5-3/4	67.30	76.12	56.94
61/64	.9531	3-7/8	5-7/8	67.34	76.12	62.16
31/32	.9688	3-7/8	5-7/8	67.34	76.12	62.16
63/64	.9844	4	6	74.58	83.40	65.56
1	1.0000	4	6	74.58	83.40	64.62
1-1/16	1.0625	4	6-1/4	-	94.04	79.34
1-1/8	1.1250	4	6-3/8	-	106.04	91.32
1-3/16	1.1875	4-1/4	6-5/8	-	-	93.26
1-1/4	1.2500	4-3/8	6-3/4	-	118.90	104.20
1-5/16	1.3125	4-3/8	7	-	-	140.00
1-3/8	1.3750	4-1/2	7-1/8	-	-	149.24
1-7/16	1.4375	4-3/4	7-3/8	-	-	160.18
1-1/2	1.5000	4-7/8	7-1/2	-	-	168.76
1-9/16	1.5625	4-7/8	7-3/4	-	-	190.64
1-5/8	1.6250	4-7/8	7-3/4	-	-	210.86
1-11/16	1.6875	5-1/8	8	-	-	244.50
1-3/4	1.7500	5-1/8	8	-	-	253.32
1-13/16	1.8125	5-3/8	8-1/4	-	-	277.90
1-7/8	1.8750	5-3/8	8-1/4	-	-	285.78
1-15/16	1.9375	5-5/8	8-1/2	-	-	303.04
2	2.0000	5-5/8	8-1/2	-	-	317.42

*SMG are 118° standard point.

DRILL SIZE	SHANK DIAMETER
UP TO 1"	SAME AS DRILL SIZE
1-1/16 - 1-1/4	1"
1-5/16 - 1-1/2	1-1/4"
1-9/16 - 2	1-1/2"

HIGH SPEED STEEL

1/4" SHANK SCREW MACHINE LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

NAS 907 TYPE C SPECIFICATIONS



Fractional Sizes (Reduced Shank) 17/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				OXIDE FINISH	BRIGHT FINISH
				135° SPLIT PT	135° SPLIT PT
17/64	.2656	1-7/16	2-5/8	5.68	5.68
*9/32	.2812	1-1/2	2-11/16	5.68	5.68
19/64	.2969	1-9/16	2-3/4	6.14	6.14
*5/16	.3125	1-5/8	2-13/16	6.14	6.14
21/64	.3281	1-11/16	2-15/16	6.82	6.82
11/32	.3438	1-11/16	3	6.82	6.82
23/64	.3594	1-3/4	3-1/16	7.48	7.48
*3/8	.3750	1-13/16	3-1/8	7.48	7.48

*Available with 4" Overall Length. Item No. MLDHQS (Page 34)

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				OXIDE FINISH	BRIGHT FINISH
				135° SPLIT PT	135° SPLIT PT
25/64	.3906	1-7/8	3-1/4	8.30	8.30
*13/32	.4062	1-15/16	3-5/16	8.30	8.30
27/64	.4219	2	3-3/8	9.26	9.26
*7/16	.4375	2-1/16	3-7/16	9.26	9.26
29/64	.4531	2-1/8	3-9/16	10.52	10.52
*15/32	.4688	2-1/8	3-5/8	10.52	10.52
31/64	.4844	2-3/16	3-11/16	11.08	11.08
*1/2	.5000	2-1/4	3-3/4	11.08	11.08

PACKAGING - All Sizes - 6 Drills/Envelope

HIGH SPEED STEEL

3/8" SHANK SCREW MACHINE LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

NAS 907 TYPE C SPECIFICATIONS



Fractional Sizes (Reduced Shank) 25/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				OXIDE FINISH	BRIGHT FINISH
				135° SPLIT PT	135° SPLIT PT
25/64	.3906	1-7/8	3-1/4	8.30	8.30
13/32	.4062	1-15/16	3-5/16	8.30	8.30
27/64	.4219	2	3-3/8	9.26	9.26
7/16	.4375	2-1/16	3-7/16	9.26	9.26

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				OXIDE FINISH	BRIGHT FINISH
				135° SPLIT PT	135° SPLIT PT
29/64	.4531	2-1/8	3-9/16	10.52	10.52
15/32	.4688	2-1/8	3-5/8	10.52	10.52
31/64	.4844	2-3/16	3-11/16	11.08	11.08
1/2	.5000	2-1/4	3-3/4	11.08	11.08

NOTE: Reduced shank drills are used for drilling holes larger than the capacity of a 1/4", 3/8", or 1/2" drill chuck. Reduced shank drills should only be used for light to medium duty drilling applications as they do not have the torque strength of a straight shank drill. Reduced shank is not as hard as the body of the drill to allow more flex and less breakage.

Quick Reference for Heavy Duty Reduced Shank Drills

DRILL TYPE	DRILL SETS	STUB LENGTH	JOBBER LENGTH	SILVER & DEMING	EXTRA LENGTH
High Speed Steel	60-67	11, 12	30, 34-35, 37, 40-42, 46	69-70, 71-72, 76	105-106, 110
Cobalt	60, 62-63, 65	-	42, 45	73-74, 77	-
TiN Coated	-	-	34, 37	-	-

FACT

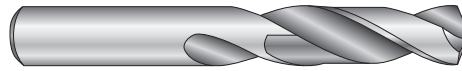
ICS Cutting Tools offers, as a standard, the broadest range of Heavy Duty Reduced Shank Drills in the world.

HIGH SPEED STEEL SCREW MACHINE LENGTH DRILLS

ICS USA

HEAVY DUTY
NAS 907 TYPE C SPECIFICATIONS

135° SPLIT POINT



Wire Gauge Sizes (Straight Shank) #1 to #60 Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL			PRICE	TIN COATED	
				BLACK OXIDE	BRIGHT FINISH	GOLD FINISH		GOLD FINISH	PRICE
1	.2280	1-5/16	2-7/16	SMR#01	SMP#01	SMGF#01	2.12	SMT#01	5.44
2	.2210	1-5/16	2-7/16	SMR#02	SMP#02	SMGF#02	2.12	SMT#02	5.44
3	.2130	1-1/4	2-3/8	SMR#03	SMP#03	SMGF#03	2.02	SMT#03	5.34
4	.2090	1-1/4	2-3/8	SMR#04	SMP#04	SMGF#04	2.02	SMT#04	5.34
5	.2055	1-1/4	2-3/8	SMR#05	SMP#05	SMGF#05	2.02	SMT#05	5.34
6	.2040	1-1/4	2-3/8	SMR#06	SMP#06	SMGF#06	2.02	SMT#06	5.34
7	.2010	1-3/16	2-1/4	SMR#07	SMP#07	SMGF#07	1.88	SMT#07	5.18
8	.1990	1-3/16	2-1/4	SMR#08	SMP#08	SMGF#08	1.88	SMT#08	5.18
9	.1960	1-3/16	2-1/4	SMR#09	SMP#09	SMGF#09	1.88	SMT#09	5.18
10	.1935	1-3/16	2-1/4	SMR#10	SMP#10	SMGF#10	1.72	SMT#10	5.04
11	.1910	1-3/16	2-1/4	SMR#11	SMP#11	SMGF#11	1.72	SMT#11	5.04
12	.1890	1-3/16	2-1/4	SMR#12	SMP#12	SMGF#12	1.72	SMT#12	5.04
13	.1850	1-1/8	2-3/16	SMR#13	SMP#13	SMGF#13	1.72	SMT#13	5.04
14	.1820	1-1/8	2-3/16	SMR#14	SMP#14	SMGF#14	1.72	SMT#14	3.40
15	.1800	1-1/8	2-3/16	SMR#15	SMP#15	SMGF#15	1.72	SMT#15	3.40
16	.1770	1-1/8	2-3/16	SMR#16	SMP#16	SMGF#16	1.72	SMT#16	3.40
17	.1730	1-1/8	2-3/16	SMR#17	SMP#17	SMGF#17	1.56	SMT#17	3.22
18	.1695	1-1/16	2-1/8	SMR#18	SMP#18	SMGF#18	1.56	SMT#18	3.22
19	.1660	1-1/16	2-1/8	SMR#19	SMP#19	SMGF#19	1.56	SMT#19	3.22
20	.1610	1-1/16	2-1/8	SMR#20	SMP#20	SMGF#20	1.56	SMT#20	3.22
21	.1590	1-1/16	2-1/8	SMR#21	SMP#21	SMGF#21	1.56	SMT#21	3.22
22	.1570	1-1/16	2-1/8	SMR#22	SMP#22	SMGF#22	1.56	SMT#22	3.22
23	.1549	1	2-1/16	SMR#23	SMP#23	SMGF#23	1.44	SMT#23	3.08
24	.1520	1	2-1/16	SMR#24	SMP#24	SMGF#24	1.44	SMT#24	3.08
25	.1490	1	2-1/16	SMR#25	SMP#25	SMGF#25	1.26	SMT#25	2.90
26	.1470	1	2-1/16	SMR#26	SMP#26	SMGF#26	1.26	SMT#26	2.90
27	.1440	1	2-1/16	SMR#27	SMP#27	SMGF#27	1.26	SMT#27	2.90
28	.1405	15/16	1-15/16	SMR#28	SMP#28	SMGF#28	1.26	SMT#28	2.90
29	.1360	15/16	1-15/16	SMR#29	SMP#29	SMGF#29	1.26	SMT#29	2.90
30	.1285	15/16	1-15/16	SMR#30	SMP#30	SMGF#30	1.12	SMT#30	2.78
31	.1200	7/8	1-7/8	SMR#31	SMP#31	SMGF#31	1.06	SMT#31	2.72
32	.1160	7/8	1-7/8	SMR#32	SMP#32	SMGF#32	1.06	SMT#32	2.72
33	.1130	7/8	1-7/8	SMR#33	SMP#33	SMGF#33	1.06	SMT#33	2.72
34	.1110	7/8	1-7/8	SMR#34	SMP#34	SMGF#34	1.06	SMT#34	2.72
35	.1100	7/8	1-7/8	SMR#35	SMP#35	SMGF#35	1.06	SMT#35	2.72
36	.1055	13/16	1-13/16	SMR#36	SMP#36	SMGF#36	1.06	SMT#36	2.72
37	.1040	13/16	1-13/16	SMR#37	SMP#37	SMGF#37	1.06	SMT#37	2.72
38	.1010	13/16	1-13/16	SMR#38	SMP#38	SMGF#38	1.06	SMT#38	2.72
39	.0995	13/16	1-13/16	SMR#39	SMP#39	SMGF#39	1.06	SMT#39	2.72
40	.0980	13/16	1-13/16	SMR#40	SMP#40	SMGF#40	1.06	SMT#40	2.72
41	.0960	13/16	1-13/16	SMR#41	SMP#41	SMGF#41	1.06	SMT#41	2.72
42	.0935	3/4	1-3/4	SMR#42	SMP#42	SMGF#42	1.06	SMT#42	2.72
43	.0890	3/4	1-3/4	SMR#43	SMP#43	SMGF#43	1.06	SMT#43	2.72
44	.0860	3/4	1-3/4	SMR#44	SMP#44	SMGF#44	1.06	SMT#44	2.72
45	.0820	3/4	1-3/4	SMR#45	SMP#45	SMGF#45	1.06	SMT#45	2.72
46	.0810	3/4	1-3/4	SMR#46	SMP#46	SMGF#46	1.06	SMT#46	2.72
47	.0785	3/4	1-3/4	SMR#47	SMP#47	SMGF#47	1.06	SMT#47	2.72
48	.0760	11/16	1-11/16	SMR#48	SMP#48	SMGF#48	1.06	SMT#48	2.72
49	.0730	11/16	1-11/16	SMR#49	SMP#49	SMGF#49	1.06	SMT#49	2.72
50	.0700	11/16	1-11/16	SMR#50	SMP#50	SMGF#50	1.06	SMT#50	2.72
51	.0670	11/16	1-11/16	SMR#51	SMP#51	SMGF#51	1.06	SMT#51	2.72
52	.0635	11/16	1-11/16	SMR#52	SMP#52	SMGF#52	1.06	SMT#52	2.72
53	.0595	5/8	1-5/8	SMR#53	SMP#53	SMGF#53	1.06	SMT#53	2.72
54	.0550	5/8	1-5/8	SMR#54	SMP#54	SMGF#54	1.06	SMT#54	2.72
55	.0520	5/8	1-5/8	SMR#55	SMP#55	SMGF#55	1.06	SMT#55	2.72
56	.0465	1/2	1-3/8	SMR#56	SMP#56	SMGF#56	1.14	SMT#56	2.80
57	.0430	1/2	1-3/8	SMR#57	SMP#57	SMGF#57	1.14	SMT#57	2.80
58	.0420	1/2	1-3/8	SMR#58	SMP#58	SMGF#58	1.14	SMT#58	2.80
59	.0410	1/2	1-3/8	SMR#59	SMP#59	SMGF#59	1.14	SMT#59	2.80
60	.0400	1/2	1-3/8	SMR#60	SMP#60	SMGF#60	1.14	SMT#60	2.80

Screw Machine Length Drill Sets are available on page 5.

PACKAGING #1-#60 • 12 Drills/Envelope

NOTE: Add 15% for orders accepted in less than standard packaging.

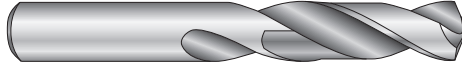
HIGH SPEED STEEL
SCREW MACHINE LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

NAS 907 TYPE C SPECIFICATIONS



Letter Sizes (Straight Shank) "A" to "Z" Dia.


SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL		PRICE
				BLACK OXIDE	BRIGHT FINISH	
A	.234	1-5/16	2-7/16	SMR"A"	SMP"A"	3.38
B	.238	1-3/8	2-1/2	SMR"B"	SMP"B"	3.38
C	.242	1-3/8	2-1/2	SMR"C"	SMP"C"	3.38
D	.246	1-3/8	2-1/2	SMR"D"	SMP"D"	3.38
E	.250	1-3/8	2-1/2	SMR"E"	SMP"E"	2.74
F	.257	1-7/16	2-5/8	SMR"F"	SMP"F"	3.70
G	.261	1-7/16	2-5/8	SMR"G"	SMP"G"	3.92
H	.266	1-1/2	2-11/16	SMR"H"	SMP"H"	3.92
I	.272	1-1/2	2-11/16	SMR"I"	SMP"I"	3.92
J	.277	1-1/2	2-11/16	SMR"J"	SMP"J"	4.24
K	.281	1-1/2	2-11/16	SMR"K"	SMP"K"	4.56
L	.290	1-9/16	2-3/4	SMR"L"	SMP"L"	4.54
M	.295	1-9/16	2-3/4	SMR"M"	SMP"M"	4.96
N	.302	1-5/8	2-13/16	SMR"N"	SMP"N"	4.96
O	.316	1-11/16	2-15/16	SMR"O"	SMP"O"	5.06
P	.323	1-11/16	2-15/16	SMR"P"	SMP"P"	5.62
Q	.332	1-11/16	3	SMR"Q"	SMP"Q"	5.62
R	.339	1-11/16	3	SMR"R"	SMP"R"	5.74
S	.348	1-3/4	3-1/16	SMR"S"	SMP"S"	6.52
T	.358	1-3/4	3-1/16	SMR"T"	SMP"T"	7.52
U	.368	1-13/16	3-1/8	SMR"U"	SMP"U"	7.52
V	.377	1-7/8	3-1/4	SMR"V"	SMP"V"	7.94
W	.386	1-7/8	3-1/4	SMR"W"	SMP"W"	8.34
X	.397	1-15/16	3-5/16	SMR"X"	SMP"X"	9.70
Y	.404	1-15/16	3-5/16	SMR"Y"	SMP"Y"	11.52
Z	.413	2	3-3/8	SMR"Z"	SMP"Z"	11.52

A to M - 12 Drills/Envelope

N to Z - 6 Drills/Envelope

HIGH SPEED STEEL
SCREW MACHINE LENGTH [STUB] DRILL SETS

METAL INDEX


DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
 (13 PC PICTURED)	13 PC DRILL SETS Sizes 1/16 to 1/4 by 64ths	Bright Finish Stub Drills 135° S/Pt Black Finish Stub Drills 135° S/Pt Titanium Nitride Coated Stub Drills 135° S/Pt	DS-SMP-13 22.34 DS-SMR-13 22.34 DS-SMT-13 47.04
	15 PC DRILL SETS Sizes 1/16 to 1/2 by 32nds	Black Finish Stub Drills 135° S/Pt	DS-SMR-15 74.56
	29 PC DRILL SETS Sizes 1/16 to 1/2 by 64ths	Bright Finish Stub Drills 135° S/Pt	DS-SMP-29 108.20
		Black Finish Stub Drills 135° S/Pt	DS-SMR-29 110.54
		Titanium Nitride Coated Stub Drills 135° S/Pt	DS-SMT-29 268.14
		Gold Finish Stub Drills 135° S/Pt	DS-SMGF-29 128.72
60 PC DRILL SETS Wire Gauge Sizes 1 to 60	Bright Finish Stub Drills 135° S/Pt	DS-SMP-60 88.20	
	Black Finish Stub Drills 135° S/Pt	DS-SMR-60 88.20	
25 PC DRILL SETS Metric Sizes 1.00mm to 13.00mm by 0.50mm	Black Finish Stub Drills 135° S/Pt	DS-SMM-25 180.40	

LEFT HAND SCREW MACHINE LENGTH DRILLS

ICS USA

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
SML	 BRIGHT POLISHED FINISH	For portable or machine drilling where left hand rotation is required. Also used to drill out broken screws and bolts.	M2	118° Point Std. Spiral Hvy. Duty Web

Fractional Sizes (Straight Shank) 3/64" to 1/2" Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
3/64	.0469	5/8	1-5/8	SML003	2.92
1/16	.0625	5/8	1-5/8	SML004	2.92
5/64	.0781	11/16	1-11/16	SML005	2.92
3/32	.0938	3/4	1-3/4	SML006	2.92
7/64	.1094	13/16	1-13/16	SML007	2.92
1/8	.1250	7/8	1-7/8	SML008	2.92
9/64	.1406	15/16	1-15/16	SML009	2.92
5/32	.1562	1	2-1/16	SML010	3.40
11/64	.1719	1-1/16	2-1/8	SML011	3.76
3/16	.1875	1-1/8	2-3/16	SML012	4.18
13/64	.2031	1-3/16	2-1/4	SML013	4.70
7/32	.2188	1-1/4	2-3/8	SML014	5.52
15/64	.2344	1-5/16	2-7/16	SML015	5.80
1/4	.2500	1-3/8	2-1/2	SML016	6.04
17/64	.2656	1-7/16	2-5/8	SML017	7.42
9/32	.2812	1-1/2	2-11/16	SML018	8.16
19/64	.2969	1-9/16	2-3/4	SML019	8.80
5/16	.3125	1-5/8	2-13/16	SML020	8.80
21/64	.3281	1-11/16	2-15/16	SML021	9.96
11/32	.3438	1-11/16	3	SML022	11.50
23/64	.3594	1-3/4	3-1/16	SML023	13.22
3/8	.3750	1-13/16	3-1/8	SML024	14.10
25/64	.3906	1-7/8	3-1/4	SML025	15.54
13/32	.4062	1-15/16	3-5/16	SML026	16.14
27/64	.4219	2	3-3/8	SML027	17.70
7/16	.4375	2-1/16	3-7/16	SML028	18.50
29/64	.4531	2-1/8	3-9/16	SML029	21.40
15/32	.4688	2-1/8	3-5/8	SML030	23.02
31/64	.4844	2-3/16	3-11/16	SML031	23.66
1/2	.5000	2-1/4	3-3/4	SML032	23.66

PACKAGING

3/64 to 17/64 - 12 Drills/Envelope

9/32 to 1/2 - 6 Drills/Envelope

HIGH SPEED STEEL METRIC SCREW MACHINE LENGTH DRILLS

ICS **WIS** **GENERAL PURPOSE** **135° SPLIT POINT**

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	NAS* SPECS
SMM	 OXIDE FINISH	For drilling in hard steel, stainless steel, titanium and other hard materials.	M2	135° Split Pt. Std. Spiral Hvy. Duty Web	C

Metric Sizes (Straight Shank) 1.00mm to 13.00mm Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
*1.00	.0394	1/4	1-1/32	SMM01.00	2.08
1.50	.0591	11/32	1-1/4	SMM01.50	2.08
2.00	.0781	15/32	1-1/2	SMM02.00	2.08
2.50	.0984	9/16	1-11/16	SMM02.50	2.08
3.00	.1181	5/8	1-13/16	SMM03.00	2.08
3.50	.1378	25/32	2-1/16	SMM03.50	2.06
4.00	.1575	7/8	2-5/32	SMM04.00	2.28
4.50	.1772	15/16	2-9/32	SMM04.50	2.78
5.00	.1969	1-1/32	2-7/16	SMM05.00	2.78
5.50	.2165	1-1/8	2-19/32	SMM05.50	3.58
6.00	.2362	1-1/8	2-19/32	SMM06.00	3.98
6.50	.2560	1-7/32	2-3/4	SMM06.50	4.44
7.00	.2756	1-5/16	2-29/32	SMM07.00	5.00

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
7.50	.2953	1-5/16	2-29/32	SMM07.50	5.94
8.00	.3150	1-7/16	3-1/8	SMM08.00	5.94
8.50	.3346	1-7/16	3-1/8	SMM08.50	6.60
9.00	.3543	1-9/16	3-5/16	SMM09.00	7.48
9.50	.3740	1-9/16	3-5/16	SMM09.50	9.32
10.00	.3937	1-11/16	3-1/2	SMM10.00	9.32
10.50	.4137	1-11/16	3-1/2	SMM10.50	10.12
11.00	.4331	1-27/32	3-3/4	SMM11.00	10.36
11.50	.4528	1-27/32	3-3/4	SMM11.50	12.24
12.00	.4724	2	4	SMM12.00	13.44
12.50	.4921	2	4	SMM12.50	13.44
13.00	.5118	2	4	SMM13.00	13.44

*Not Split Point

HIGH SPEED STEEL DOUBLE END (STUB) DRILLS

ICS **USA** **HEAVY DUTY** **135° SPLIT POINT**



Double End Stub Drills are fluted and split pointed on both ends and have a solid center shank for chucking. They will drill twice as many holes as a single end drill for only a fraction more in cost. When one end gets dull or breaks, it can be quickly reversed in drill chuck to reduce changeover time, overall costs, and inventory.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL			TiN COAT
				OXIDE FINISH	BRIGHT FINISH	GOLD FINISH	GOLD FINISH
				135° SPLIT PT	135° SPLIT PT	135° SPLIT PT	135° SPLIT PT
				DED	DEDP	DEDF	DEDT
1/16	.0625	9/16	2	2.00	2.00	-	-
3/32	.0938	9/16	2	2.00	2.00	-	-
7/64	.1094	9/16	2	1.68	1.68	-	-
1/8	.1250	9/16	2	1.44	1.44	1.48	2.36
9/64	.1406	9/16	2	1.68	1.68	2.26	-
5/32	.1562	9/16	2-1/16	1.94	1.94	2.36	-
11/64	.1719	9/16	2-1/16	2.20	2.20	-	-
3/16	.1879	9/16	2-3/16	2.20	2.20	2.60	-
13/64	.2031	9/16	2-3/16	2.94	2.94	3.20	-
7/32	.2188	9/16	2-3/8	2.84	2.84	3.20	-
1/4	.2500	9/16	2-1/2	3.22	3.22	3.54	-
9/32	.2812	9/16	2-1/2	7.96	-	-	-
5/16	.3125	9/16	2-13/16	8.62	8.62	-	-
#11	.1910	9/16	2-1/4	3.68	3.68	-	7.84
#20	.1610	9/16	2-1/8	3.04	3.04	-	-
#30	.1285	9/16	2	-	1.44	1.48	2.48

NOW AVAILABLE

4

OPTIONS TO IMPROVE PERFORMANCE

- Black Oxide Finish** for hard steels and other tough materials.
- Bright Polished Finish** for stainless steels and aluminum.
- Gold (Premium) Finish** for hard steels, stainless steels and other tough metals.
- TiN Coated** for long tool life and harder materials. Run at higher speeds for maximum productivity, often used in air drills.

SHEET METAL SCREW MACHINE LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

Sheet Metal (Body) Drills were designed for sheet metal, tubing, and thin section work. They are considerably more durable than regular screw machine length drills and last longer with less breakage. They are also used to successfully drill holes in stainless steel and other work hardening alloys. The 135° split point prevents walking and begins cutting immediately upon contact. They are sometimes referred to as Skin Drills.

SINGLE END (BODY) DRILLS



SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/8	.1250	9/16	2	SED008	1.44
1/8A	.1250	9/16	3	SED008A	1.54
9/64	.1406	9/16	2	SED009	1.46
5/32	.1562	9/16	2	SED010	1.54
3/16	.1875	9/16	2	SED012	1.76
13/64	.2031	9/16	2-1/2	SED013	2.12
7/32	.2188	9/16	2-1/2	SED014	2.12
15/64	.2344	9/16	2-1/2	SED015	2.50
1/4	.2500	9/16	2-1/2	SED016	2.50
9/32	.2812	9/16	3	SED018	3.12
5/16	.3125	3/4	3	SED020	3.68
3/8	.3750	1	3	SED024	5.74
7/16	.4375	1	3	SED028	7.56
1/2	.5000	1	3	SED032	9.66
#13	.1850	9/16	2	SED#13	1.76
#20	.1610	9/16	2	SED#20	1.76
#21	.1590	9/16	2	SED#21	1.76
#25	.1495	9/16	2	SED#25	1.76
#27	.1440	9/16	2	SED#27	1.54
#29	.1360	9/16	2	SED#29	1.54
#29A	.1360	9/16	3	SED#29A	1.62
#30	.1285	9/16	2	SED#30	1.44
#30A	.1285	9/16	3	SED#30A	1.54
#40	.0980	9/16	2	SED#40	1.44

RIVET (PUNCH) DRILLS



SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#30	.1285	1/2	1-1/4	RPD#30	1.22

PACKAGING

All Sizes - 12 Drills/Envelope
Less than standard package - add 15%.

NOTE

SPECIAL SIZE SHEET METAL DRILLS
CAN BE MADE TO YOUR REQUIREMENTS

SHEET METAL SCREW MACHINE LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Extra Length Sheeters Drills are used in the erection and assembly of corrugated metal buildings and other sheet metal applications. The 135° long sweep split point ensures easy centering and less breakage in hand held drilling operations. They are sometimes referred to as Corrugated Construction Drills.

Wire Gauge Sizes (Straight Shank) #1 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#1	.228	1-1/4	2-1/4	SEDL#1X216	2.68
#1	.228	1-1/4	3	SEDL#1X300	3.18
#1	.228	1-1/4	4-1/2	SEDL#1X432	4.70

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#1	.228	1-1/4	6	SEDL#1X600	7.34
#1	.228	1-1/4	7-1/4	SEDL#1X716	7.34
#1	.228	1-1/4	12	SEDL#1X12	8.76

COBALT SCREW MACHINE LENGTH DRILLS

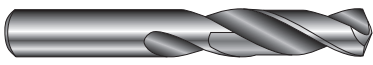
MET-9

ICS USA

HEAVY DUTY

135° SPLIT POINT

NAS 907 TYPE F SPECIFICATIONS

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	NAS* SPECS
SMC	 GOLD COBALT FINISH	For drilling in tough alloys, stainless steel, titanium inconel and other work hardening metals.	M42 Cobalt	135° Split Pt. Std. Spiral Hvy. Duty Web	F

* (NAS) NATIONAL AEROSPACE STANDARD

Fractional Sizes (Straight Shank) 3/64" to 1" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
3/64	.0469	5/8	1-5/8	SMC003	2.82
1/16	.0625	5/8	1-5/8	SMC004	2.06
5/64	.0781	11/16	1-11/16	SMC005	2.06
3/32	.0938	3/4	1-3/4	SMC006	2.06
7/64	.1094	13/16	1-13/16	SMC007	2.50
1/8	.1250	7/8	1-7/8	SMC008	2.50
9/64	.1406	15/16	1-15/16	SMC009	2.66
5/32	.1562	1	2-1/16	SMC010	2.80
11/64	.1719	1-1/16	2-1/8	SMC011	3.24
3/16	.1875	1-1/8	2-3/16	SMC012	3.42
13/64	.2031	1-3/16	2-1/4	SMC013	4.12
7/32	.2188	1-1/4	2-3/8	SMC014	4.68
15/64	.2344	1-5/16	2-7/16	SMC015	4.84
1/4	.2500	1-3/8	2-1/2	SMC016	4.90
17/64	.2656	1-7/16	2-5/8	SMC017	5.78
9/32	.2812	1-1/2	2-11/16	SMC018	6.48
19/64	.2969	1-9/16	2-3/4	SMC019	7.50
5/16	.3125	1-5/8	2-13/16	SMC020	7.90
21/64	.3281	1-11/16	2-15/16	SMC021	8.90
11/32	.3438	1-11/16	3	SMC022	9.66
23/64	.3594	1-3/4	3-1/16	SMC023	11.12
3/8	.3750	1-13/16	3-1/8	SMC024	11.12
25/64	.3906	1-7/8	3-1/4	SMC025	12.70
13/32	.4062	1-15/16	3-5/16	SMC026	13.12
27/64	.4219	2	3-3/8	SMC027	14.54
7/16	.4375	2-1/16	3-7/16	SMC028	14.96
29/64	.4531	2-1/8	3-9/16	SMC029	17.90
15/32	.4688	2-1/8	3-5/8	SMC030	17.90
31/64	.4844	2-3/16	3-11/16	SMC031	17.90
1/2	.5000	2-1/4	3-3/4	SMC032	17.90
33/64	.5156	2-3/8	3-7/8	SMC033	53.20

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
17/32	.5312	2-3/8	3-7/8	SMC034	53.66
35/64	.5469	2-1/2	4	SMC035	57.76
9/16	.5625	2-1/2	4	SMC036	55.74
37/64	.5781	2-5/8	4-1/8	SMC037	66.18
19/32	.5938	2-5/8	4-1/8	SMC038	63.82
39/64	.6094	2-3/4	4-1/4	SMC039	66.86
5/8	.6250	2-3/4	4-1/4	SMC040	64.50
41/64	.6406	2-7/8	4-1/2	SMC041	76.80
21/32	.6562	2-7/8	4-1/2	SMC042	74.06
43/64	.6719	2-7/8	4-5/8	SMC043	85.06
11/16	.6875	2-7/8	4-5/8	SMC044	82.04
45/64	.7031	3	4-3/4	SMC045	92.36
23/32	.7188	3	4-3/4	SMC046	89.04
47/64	.7344	3-1/8	5	SMC047	97.46
3/4	.7500	3-1/8	5	SMC048	94.00
49/64	.7656	3-1/4	5-1/8	SMC049	103.82
25/32	.7812	3-1/4	5-1/8	SMC050	103.82
51/64	.7969	3-3/8	5-1/4	SMC051	110.10
13/16	.8125	3-3/8	5-1/4	SMC052	110.10
53/64	.8281	3-1/2	5-3/8	SMC053	117.98
27/32	.8438	3-1/2	5-3/8	SMC054	117.98
55/64	.8594	3-1/2	5-1/2	SMC055	120.64
7/8	.8750	3-1/2	5-1/2	SMC056	120.64
57/64	.8906	3-5/8	5-5/8	SMC057	125.46
29/32	.9062	3-5/8	5-5/8	SMC058	125.46
59/64	.9219	3-3/4	5-3/4	SMC059	138.26
15/16	.9375	3-3/4	5-3/4	SMC060	138.26
61/64	.9531	3-7/8	5-7/8	SMC061	150.22
31/32	.9688	3-7/8	5-7/8	SMC062	150.22
63/64	.9844	4	6	SMC063	157.14
1	1.0000	4	6	SMC100	157.14

HIGH SPEED STEEL

COBALT SCREW MACHINE LENGTH DRILL SETS

METAL INDEX

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
29 PC DRILL SETS Sizes 1/16 to 1/2 by 64ths	Cobalt Stub Drills - 135° Split Point	DS-SMC-29	239.90

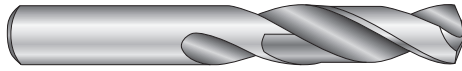
COBALT SCREW MACHINE LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

NAS 907 TYPE F SPECIFICATIONS



Wire Gauge Sizes (Straight Shank) #1 to #60 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1	.2280	1-5/16	2-7/16	SMC#01	5.78
2	.2210	1-5/16	2-7/16	SMC#02	5.78
3	.2130	1-1/4	2-3/8	SMC#03	5.78
4	.2090	1-1/4	2-3/8	SMC#04	5.12
5	.2055	1-1/4	2-3/8	SMC#05	5.12
6	.2040	1-1/4	2-3/8	SMC#06	5.12
7	.2010	1-3/16	2-1/4	SMC#07	4.02
8	.1990	1-3/16	2-1/4	SMC#08	4.02
9	.1960	1-3/16	2-1/4	SMC#09	4.02
10	.1935	1-3/16	2-1/4	SMC#10	4.02
11	.1910	1-3/16	2-1/4	SMC#11	3.96
12	.1890	1-3/16	2-1/4	SMC#12	3.96
13	.1850	1-1/8	2-3/16	SMC#13	3.82
14	.1820	1-1/8	2-3/16	SMC#14	3.82
15	.1800	1-1/8	2-3/16	SMC#15	3.82
16	.1770	1-1/8	2-3/16	SMC#16	3.82
17	.1730	1-1/8	2-3/16	SMC#17	3.72
18	.1695	1-1/16	2-1/8	SMC#18	3.18
19	.1660	1-1/16	2-1/8	SMC#19	2.94
20	.1610	1-1/16	2-1/8	SMC#20	2.94
21	.1590	1-1/16	2-1/8	SMC#21	2.94
22	.1570	1-1/16	2-1/8	SMC#22	2.94
23	.1549	1	2-1/16	SMC#23	2.94
24	.1520	1	2-1/16	SMC#24	2.94
25	.1490	1	2-1/16	SMC#25	2.80
26	.1470	1	2-1/16	SMC#26	2.80
27	.1440	1	2-1/16	SMC#27	2.80
28	.1405	15/16	1-15/16	SMC#28	2.54
29	.1360	15/16	1-15/16	SMC#29	2.54
30	.1285	15/16	1-15/16	SMC#30	2.28

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
31	.1200	7/8	1-7/8	SMC#31	2.28
32	.1160	7/8	1-7/8	SMC#32	2.28
33	.1130	7/8	1-7/8	SMC#33	2.32
34	.1110	7/8	1-7/8	SMC#34	2.32
35	.1100	7/8	1-7/8	SMC#35	2.32
36	.1055	13/16	1-13/16	SMC#36	2.32
37	.1040	13/16	1-13/16	SMC#37	2.32
38	.1010	13/16	1-13/16	SMC#38	2.12
39	.0995	13/16	1-13/16	SMC#39	2.12
40	.0980	13/16	1-13/16	SMC#40	2.12
41	.0960	13/16	1-13/16	SMC#41	2.12
42	.0935	3/4	1-3/4	SMC#42	2.12
43	.0890	3/4	1-3/4	SMC#43	2.12
44	.0860	3/4	1-3/4	SMC#44	2.12
45	.0820	3/4	1-3/4	SMC#45	2.12
46	.0810	3/4	1-3/4	SMC#46	2.12
47	.0785	3/4	1-3/4	SMC#47	2.12
48	.0760	11/16	1-11/16	SMC#48	2.12
49	.0730	11/16	1-11/16	SMC#49	2.12
50	.0700	11/16	1-11/16	SMC#50	2.12
51	.0670	11/16	1-11/16	SMC#51	2.12
52	.0635	11/16	1-11/16	SMC#52	2.12
53	.0595	5/8	1-5/8	SMC#53	2.12
54	.0550	5/8	1-5/8	SMC#54	2.12
55	.0520	5/8	1-5/8	SMC#55	2.12
56	.0465	1/2	1-3/8	SMC#56	2.12
57	.0430	1/2	1-3/8	SMC#57	2.12
58	.0420	1/2	1-3/8	SMC#58	2.26
59	.0410	1/2	1-3/8	SMC#59	2.26
60	.0400	1/2	1-3/8	SMC#60	2.26

PACKAGING

#1 to #60 - 12 Drills/Envelope

Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
A	.234	1-5/16	2-7/16	SMC"A"	5.86
B	.238	1-3/8	2-1/2	SMC"B"	6.24
C	.242	1-3/8	2-1/2	SMC"C"	6.24
D	.246	1-3/8	2-1/2	SMC"D"	6.24
E	.250	1-3/8	2-1/2	SMC"E"	4.90
F	.257	1-7/16	2-5/8	SMC"F"	6.62
G	.261	1-7/16	2-5/8	SMC"G"	6.62
H	.266	1-1/2	2-11/16	SMC"H"	7.00
I	.272	1-1/2	2-11/16	SMC"I"	7.00
J	.277	1-1/2	2-11/16	SMC"J"	7.00
K	.281	1-1/2	2-11/16	SMC"K"	7.00
L	.290	1-9/16	2-3/4	SMC"L"	8.32
M	.295	1-9/16	2-3/4	SMC"M"	8.32

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
N	.302	1-5/8	2-13/16	SMC"N"	8.92
O	.316	1-11/16	2-15/16	SMC"O"	9.90
P	.323	1-11/16	2-15/16	SMC"P"	9.90
Q	.332	1-11/16	3	SMC"Q"	10.70
R	.339	1-11/16	3	SMC"R"	10.70
S	.348	1-3/4	3-1/16	SMC"S"	12.02
T	.358	1-3/4	3-1/16	SMC"T"	13.32
U	.368	1-13/16	3-1/8	SMC"U"	13.32
V	.377	1-7/8	3-1/4	SMC"V"	14.76
W	.386	1-7/8	3-1/4	SMC"W"	14.76
X	.397	1-15/16	3-5/16	SMC"X"	14.76
Y	.404	1-15/16	3-5/16	SMC"Y"	16.94
Z	.413	2	3-3/8	SMC"Z"	16.94

PACKAGING

A to M - 12 Drills/Envelope

N to Z - 6 Drills/Envelope



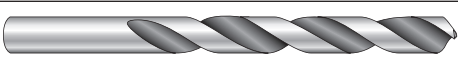

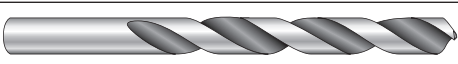
HIGH SPEED STEEL JOBBER LENGTH DRILLS

MET-11

ICS USA

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	SHANK
JDR	 OXIDE FINISH	For general purpose and production machine drilling in ferrous or non-ferrous metals. Thicker web construction for extended drill life. Relief ground and twist fluted for maximum strength and rigidity.	M2	118° POINT. Std. Spiral Thicker Web	Str. 1/4 3/8
JDG	 OXIDE FINISH	For portable or machine drilling in ferrous or non-ferrous metals. Ground oxide finish flutes retain lubricants and ease chip welding when drilling cast iron, steel, etc.	M1, M2 M7, M50	118° Point Std. Spiral Std. Web	Str. 1/4 3/8 1/2
JDP	 BRIGHT POLISHED FINISH	For portable or machine drilling in ferrous or non-ferrous metals. Polished ground flutes reduce loading when drilling soft materials like aluminum, brass, etc.	M1, M2 M7, M50	118° Point Std. Spiral Std. Web	Str. 1/4 3/8 1/2
JDT	 GOLD TITANIUM COATED	For high production drilling of ferrous and non-ferrous metals. TiN coating extends life of drill up to 700%.	M1, M2 M7, M50	118° Point Std. Spiral Std. Web	Str. 1/4 3/8 1/2
JDZ	 SILVER-GOLD ZIRCONIUM FINISH	For machining cast iron, brass, and aluminum die castings. Out performs TiN in many applications. Zirconium is harder than TiN and remains stable at higher cutting temperatures.	M1, M2 M7, M50	118° Point Std. Spiral Std. Web	Str.

Fractional Sizes (Straight Shank) 1/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL			TiN COAT	ZrN COAT
				OXIDE FINISH 118° PT	OXIDE FINISH 118° PT	BRIGHT FINISH 118° PT	GOLD FINISH 118° PT	SILVER/GOLD 118° PT
				JDR	JDG	JDP	JDT	JDZ
1/64	.0156	3/16	3/4	1.56	1.64	1.64	-	-
1/32	.0313	1/2	1-3/8	1.12	1.18	1.18	-	-
3/64	.0469	3/4	1-3/4	1.08	1.14	1.14	2.82	3.50
1/16	.0625	7/8	1-7/8	0.78	0.82	0.82	2.48	3.18
5/64	.0781	1	2	0.78	0.82	0.82	2.48	3.18
3/32	.0938	1-1/4	2-1/4	0.82	0.84	0.84	2.50	3.20
7/64	.1094	1-1/2	2-5/8	0.88	0.90	0.90	2.58	3.26
1/8	.1250	1-5/8	2-3/4	0.90	1.04	1.04	2.62	3.30
9/64	.1406	1-3/4	2-7/8	0.98	1.04	1.04	2.70	3.38
5/32	.1562	2	3-1/8	1.04	1.08	1.08	2.74	3.42
11/64	.1719	2-1/8	3-1/4	1.14	1.22	1.22	2.88	3.58
3/16	.1875	2-5/16	3-1/2	1.30	1.36	1.36	3.04	3.72
13/64	.2031	2-7/16	3-5/8	1.46	1.52	1.52	4.82	6.14
7/32	.2188	2-1/2	3-3/4	1.62	1.70	1.70	5.00	6.32
15/64	.2344	2-5/8	3-7/8	1.70	1.82	1.82	5.08	6.40
1/4	.2500	2-3/4	4	1.84	1.92	1.92	5.22	6.54
17/64	.2656	2-7/8	4-1/8	2.44	2.58	2.58	9.46	12.18
9/32	.2812	2-15/16	4-1/4	2.60	2.74	2.74	9.60	12.34
19/64	.2969	3-1/16	4-3/8	2.90	3.08	3.08	9.94	12.66
5/16	.3125	3-3/16	4-1/2	3.18	3.32	3.32	10.18	12.92
21/64	.3281	3-5/16	4-5/8	3.20	3.36	3.36	10.24	12.94
11/32	.3438	3-7/16	4-3/4	3.92	4.12	4.12	11.00	13.72
23/64	.3594	3-1/2	4-7/8	4.38	4.60	4.60	12.92	16.26
3/8	.3750	3-5/8	5	4.54	4.78	4.78	13.08	16.42
25/64	.3906	3-3/4	5-1/8	4.80	5.04	5.04	16.14	20.52
13/32	.4062	3-7/8	5-1/4	4.98	5.24	5.24	16.32	20.72
27/64	.4219	3-15/16	5-3/8	5.72	6.02	6.02	17.10	21.48
7/16	.4375	4-1/16	5-1/2	5.78	6.08	6.08	17.16	21.56
29/64	.4531	4-3/16	5-5/8	6.52	6.86	6.86	17.94	22.32
15/32	.4688	4-5/16	5-3/4	6.86	7.20	7.20	18.30	22.68
31/64	.4844	4-3/8	5-7/8	7.30	7.64	7.64	18.74	23.12
1/2	.5000	4-1/2	6	7.36	7.74	7.74	18.80	23.20

PACKAGING

1/64 to 17/64 - 12 Drills/Envelope
9/32 to 1/2 - 6 Drills/Envelope
33/64 to 3/4 - 1 Drill/Tube

ORDERING NOTE

To complete your order we may substitute or interchange black or bright drills unless you have specified "no substitutions". Orders accepted in less than package quantity are subject to a 15% surcharge.

DRILL SETS

A variety of Jobber Length Drill Sets can be found on pages 53 to 59.



HIGH SPEED STEEL JOBBER LENGTH DRILLS

ICS **WIS**

GENERAL PURPOSE

118° POINT



Fractional Sizes (Straight Shank) 33/64" to 1" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				OXIDE FINISH 118° POINT	TIN COAT GOLD FINISH 118° POINT
				JDG	JDT
33/64	.5156	4-13/16	6-5/8	16.38	32.24
17/32	.5312	4-13/16	6-5/8	16.38	32.24
35/64	.5469	4-13/16	6-5/8	18.40	34.16
9/16	.5625	4-13/16	6-5/8	18.40	34.16
37/64	.5781	4-13/16	6-5/8	19.30	35.02
19/32	.5938	5-3/16	7-1/8	20.38	36.04
39/64	.6094	5-3/16	7-1/8	22.10	37.68
5/8	.6250	5-3/16	7-1/8	22.10	37.68
41/64	.6406	5-3/16	7-1/8	23.66	40.18
21/32	.6562	5-3/16	7-1/8	23.66	40.18
43/64	.6719	5-5/8	7-5/8	26.88	43.26

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				OXIDE FINISH 118° POINT	TIN COAT GOLD FINISH 118° POINT
				JDG	JDT
11/16	.6875	5-5/8	7-5/8	26.88	43.26
45/64	.7031	5-5/8	7-5/8	30.88	45.62
23/32	.7188	5-5/8	7-5/8	30.88	45.62
47/64	.7344	5-5/8	7-5/8	33.08	47.08
3/4	.7500	5-5/8	7-5/8	33.08	47.08
49/64	.7656	6	8-1/8	34.44	62.16
25/32	.7812	6	8-1/8	34.44	62.16
13/16	.8125	6-1/8	8-3/8	47.46	74.56
7/8	.8750	6-1/8	8-3/8	51.88	78.76
15/16	.9375	6-1/8	8-3/8	59.52	86.02
1	1.0000	6-3/8	9	68.42	94.52

HIGH SPEED STEEL 1/4" SHANK JOBBER LENGTH DRILLS

ICS **USA**

GENERAL PURPOSE

118° POINT



Fractional Sizes (Reduced Shank) 17/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	HIGH SPEED STEEL		
		OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
		JDRQS	JDGQS	JDPQS
17/64	.2656	3.84	4.22	4.22
9/32	.2812	3.84	4.22	4.22
19/64	.2969	4.38	4.56	4.56
5/16	.3125	4.60	4.82	4.82
21/64	.3281	5.38	5.66	5.66
11/32	.3438	5.38	5.66	5.66
23/64	.3594	5.74	6.08	6.08
3/8	.3750	5.74	6.24	6.24

SIZE	DEC. EQUIV.	HIGH SPEED STEEL		
		OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
		JDRQS	JDGQS	JDPQS
25/64	.3906	6.12	6.66	6.66
13/32	.4062	6.48	6.72	6.72
27/64	.4219	6.96	7.62	7.62
7/16	.4375	6.96	7.72	7.72
29/64	.4531	7.92	8.34	8.34
15/32	.4688	7.92	8.82	8.82
31/64	.4844	8.60	9.28	9.28
1/2	.5000	8.90	9.34	9.34

HIGH SPEED STEEL 1/4" SHANK (4" LENGTH) JOBBER DRILLS

ICS **USA**

GENERAL PURPOSE

118° POINT



Fractional Sizes (Reduced Shank) 9/32" to 1/2" Dia.

SIZE	DEC. EQUIV.	HIGH SPEED STEEL	
		OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
		MLDQS	MLDPQS
9/32	.2812	4.60	4.60
5/16	.3125	5.08	5.08
11/32	.3438	6.04	6.04
3/8	.3750	6.62	6.62

SIZE	DEC. EQUIV.	HIGH SPEED STEEL	
		OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
		MLDQS	MLDPQS
13/32	.4062	7.12	7.12
7/16	.4375	8.00	8.00
15/32	.4688	9.16	9.16
1/2	.5000	9.78	9.78

NOTE: 1/4" x 4" Long Jobber Drills are also known as Universal Length Drills, Metal Working Drills, or Mechanics Length Drills.

HIGH SPEED STEEL 3/8" SHANK JOBBER LENGTH DRILLS

ICS USA

GENERAL PURPOSE

118° POINT



Fractional Sizes (Reduced Shank) 25/64" to 3/4" Dia.

SIZE	DEC. EQUIV.	HIGH SPEED STEEL					
		OXIDE FINISH	PRICE	OXIDE FINISH	PRICE	BRIGHT FINISH	PRICE
25/64	.3906	JDGTS025	6.34	JDRTS025	5.82	JDPTS025	6.34
13/32	.4062	JDGTS026	6.40	JDRTS026	6.16	JDPTS026	6.40
27/64	.4219	JDGTS027	7.26	JDRTS027	6.62	JDPTS027	7.26
7/16	.4375	JDGTS028	7.34	JDRTS028	6.62	JDPTS028	7.34
29/64	.4531	JDGTS029	7.94	JDRTS029	7.54	JDPTS029	7.94
15/32	.4688	JDGTS030	8.40	JDRTS030	7.54	JDPTS030	8.40
31/64	.4844	JDGTS031	8.84	JDRTS031	8.18	JDPTS031	8.84
1/2	.5000	JDGTS032	8.90	JDRTS032	8.48	JDPTS032	8.90
33/64	.5156	JDGTS033	17.10	JDRTS033	17.10		
17/32	.5312	JDGTS034	17.10	JDRTS034	17.10		
35/64	.5469	JDGTS035	18.92	JDRTS035	18.92		
9/16	.5625	JDGTS036	18.92	JDRTS036	18.92		
37/64	.5781	JDGTS037	19.74				
19/32	.5931	JDGTS038	20.72				
39/64	.6094	JDGTS039	22.28				
5/8	.6250	JDGTS040	22.28				
41/64	.6406	JDGTS041	23.68				
21/32	.6562	JDGTS042	23.68				
43/64	.6719	JDGTS043	26.62				
11/16	.6875	JDGTS044	26.62				
45/64	.7031	JDGTS045	28.86				
23/32	.7188	JDGTS046	28.86				
47/64	.7344	JDGTS047	30.24				
3/4	.7500	JDGTS048	30.24				

HIGH SPEED STEEL 1/2" SHANK JOBBER LENGTH DRILLS

ICS WIS

GENERAL PURPOSE

118° POINT



Fractional Sizes (Reduced Shank) 33/64" to 1" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
33/64	.5156	4-13/16	6-5/8	JDGRS033	17.10
17/32	.5312	4-13/16	6-5/8	JDGRS034	17.10
35/64	.5469	4-13/16	6-5/8	JDGRS035	18.92
9/16	.5625	4-13/16	6-5/8	JDGRS036	18.92
37/64	.5781	4-13/16	6-5/8	JDGRS037	19.74
19/32	.5938	5-3/16	7-1/8	JDGRS038	20.72
39/64	.6094	5-3/16	7-1/8	JDGRS039	22.28
5/8	.6250	5-3/16	7-1/8	JDGRS040	22.28
41/64	.6406	5-3/16	7-1/8	JDGRS041	23.68
21/32	.6562	5-3/16	7-1/8	JDGRS042	23.68
43/64	.6719	5-5/8	7-5/8	JDGRS043	26.62

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
11/16	.6875	5-5/8	7-5/8	JDGRS044	26.62
45/64	.7031	5-5/8	7-5/8	JDGRS045	28.86
23/32	.7188	5-5/8	7-5/8	JDGRS046	28.86
47/64	.7344	5-5/8	7-5/8	JDGRS047	30.24
3/4	.7500	5-5/8	7-5/8	JDGRS048	30.24
49/64	.7656	6	8-1/8	JDGRS049	33.48
25/32	.7812	6	8-1/8	JDGRS050	33.48
13/16	.8125	6-1/8	8-3/8	JDGRS052	45.84
7/8	.8750	6-1/8	8-3/8	JDGRS056	49.84
15/16	.9375	6-1/8	8-3/8	JDGRS060	56.78
1	1.0000	6-3/8	9	JDGRS100	64.86

NOTE

Reduced shank drills are used for drilling holes larger than the capacity of a 1/4, 3/8, or 1/2" drill chuck. A reduced shank drill should only be used for light to medium duty drilling applications as they do not have the torque strength of a straight shank drill. The shank is not as hard as the body of the drill to allow more flex and less breakage.

HIGH SPEED STEEL JOBBER LENGTH DRILLS

ICS USA

GENERAL PURPOSE

SPLIT POINT



Wire Gauge Sizes (Straight Shank) #1 to #52 Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL			TIN COAT
				OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT	GOLD FINISH 118° POINT
				JDR	JDG	JDP	JDT
1	.2280	2-5/8	3-7/8	2.30	2.40	2.40	5.56
2	.2210	2-5/8	3-7/8	2.30	2.40	2.40	5.56
3	.2130	2-1/2	3-3/4	2.30	2.40	2.40	5.56
4	.2090	2-1/2	3-3/4	2.30	2.40	2.40	5.56
5	.2055	2-1/2	3-3/4	2.30	2.40	2.40	5.56
6	.2040	2-1/2	3-3/4	2.30	2.40	2.40	5.56
7	.2010	2-7/16	3-5/8	1.78	1.86	1.86	5.02
8	.1990	2-7/16	3-5/8	1.78	1.86	1.86	5.02
9	.1960	2-7/16	3-5/8	1.78	1.86	1.86	5.02
10	.1935	2-7/16	3-5/8	1.78	1.86	1.86	5.02
11	.1910	2-5/16	3-1/2	1.78	1.86	1.86	5.02
12	.1890	2-5/16	3-1/2	1.78	1.86	1.86	5.02
13	.1850	2-5/16	3-1/2	1.66	1.78	1.78	4.92
14	.1820	2-3/16	3-3/8	1.66	1.78	1.78	3.34
15	.1800	2-3/16	3-3/8	1.66	1.78	1.78	3.34
16	.1770	2-3/16	3-3/8	1.66	1.78	1.78	3.34
17	.1730	2-3/16	3-3/8	1.66	1.78	1.78	3.34
18	.1695	2-1/8	3-1/4	1.44	1.52	1.52	3.08
19	.1660	2-1/8	3-1/4	1.44	1.52	1.52	3.08
20	.1610	2-1/8	3-1/4	1.44	1.52	1.52	3.08
21	.1590	2-1/8	3-1/4	1.28	1.36	1.36	4.52
22	.1570	2	3-1/8	1.28	1.36	1.36	4.52
23	.1540	2	3-1/8	1.28	1.36	1.36	4.52
24	.1520	2	3-1/8	1.28	1.36	1.36	4.52
25	.1495	1-7/8	3	1.18	1.36	1.36	2.80
26	.1470	1-7/8	3	1.18	1.36	1.36	2.80
27	.1440	1-7/8	3	1.18	1.36	1.36	2.80
28	.1405	1-3/4	2-7/8	1.08	1.16	1.16	2.72
29	.1360	1-3/4	2-7/8	1.08	1.16	1.16	2.72
30	.1285	1-5/8	2-3/4	1.08	1.16	1.16	2.72
31	.1200	1-5/8	2-3/4	.98	1.00	1.00	2.58
32	.1160	1-5/8	2-3/4	.98	1.00	1.00	2.58
33	.1130	1-1/2	2-5/8	.98	1.00	1.00	2.58
34	.1110	1-1/2	2-5/8	.98	1.00	1.00	2.58
35	.1100	1-1/2	2-5/8	.98	1.00	1.00	2.58
36	.1065	1-7/16	2-1/2	.98	1.00	1.00	2.58
37	.1040	1-7/16	2-1/2	.98	1.00	1.00	2.58
38	.1015	1-7/16	2-1/2	.98	1.00	1.00	2.58
39	.0995	1-3/8	2-3/8	.98	1.00	1.00	2.58
40	.0980	1-3/8	2-3/8	.98	1.00	1.00	2.58
41	.0960	1-3/8	2-3/8	.98	1.00	1.00	2.58
42	.0935	1-1/4	2-1/4	.98	1.00	1.00	2.58
43	.0890	1-1/4	2-1/4	.98	1.00	1.00	2.58
44	.0860	1-1/8	2-1/8	.98	1.00	1.00	2.58
45	.0820	1-1/8	2-1/8	.98	1.00	1.00	2.58
46	.0810	1-1/8	2-1/8	.98	1.00	1.00	2.58
47	.0785	1	2	.98	1.00	1.00	2.58
48	.0760	1	2	.98	1.00	1.00	2.58
49	.0730	1	2	.98	1.00	1.00	2.58
50	.0700	1	2	.98	1.00	1.00	2.58
51	.0670	1	2	.98	1.00	1.00	2.58
52	.0635	7/8	1-7/8	.98	1.00	1.00	2.58

PACKAGING

#1 - 80 — 12 Drills/Envelope

HIGH SPEED STEEL JOBBER LENGTH DRILLS

MET-15

ICS USA

GENERAL PURPOSE

118° POINT



Wire Gauge Sizes (Straight Shank) #53 to #80 Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL			TIN COATED
				OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT	GOLD FINISH 118° POINT
				JDR	JDG	JDP	JDT
53	.0595	7/8	1-7/8	.98	1.02	1.02	2.58
54	.0550	7/8	1-7/8	.98	1.02	1.02	2.58
55	.0520	7/8	1-7/8	.98	1.02	1.02	2.58
56	.0465	3/4	1-3/4	.98	1.02	1.02	2.58
57	.0430	3/4	1-3/4	1.16	1.22	1.22	2.78
58	.0420	11/16	1-5/8	1.16	1.22	1.22	2.78
59	.0410	11/16	1-5/8	1.16	1.22	1.22	2.78
60	.0400	11/16	1-5/8	1.16	1.22	1.22	2.78
61	.0390	11/16	1-5/8	1.16	1.22	1.22	2.78
62	.0380	5/8	1-1/2	1.16	1.22	1.22	2.78
63	.0370	5/8	1-1/2	1.16	1.22	1.22	2.78
64	.0360	5/8	1-1/2	1.16	1.22	1.22	2.78
65	.0350	5/8	1-1/2	1.16	1.22	1.22	2.78
66	.0330	1/2	1-3/8	1.16	1.22	1.22	2.78
67	.0320	1/2	1-3/8	1.16	1.22	1.22	2.78
68	.0310	1/2	1-3/8	1.16	1.22	1.22	2.78
69	.0292	1/2	1-3/8	1.48	1.56	1.56	3.12
70	.0280	3/8	1-1/4	1.48	1.56	1.56	3.12
71	.0260	3/8	1-1/4	1.48	1.56	1.56	3.12
72	.0250	5/16	1-1/8	1.48	1.56	1.56	3.12
73	.0240	5/16	1-1/8	1.48	1.56	1.56	3.12
74	.0225	1/4	1-1/8	1.48	1.56	1.56	3.12
75	.0210	1/4	1-1/8	1.64	1.76	1.76	3.32
76	.0200	3/16	7/8	1.64	1.76	1.76	3.32
77	.0180	3/16	7/8	1.64	1.76	1.76	3.32
78	.0160	3/16	7/8	1.64	1.76	1.76	3.32
79	.0145	3/16	3/4	1.64	1.76	1.76	3.32
80	.0135	3/16	3/4	1.64	1.76	1.76	3.32

MINIATURE DRILLS

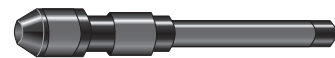
GENERAL PURPOSE



Wire Gauge Sizes (Straight Shank) #81 to #97 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS
				BRIGHT FINISH 118° POINT
				JDP
81	.0130	.104	3/4	2.74
82	.0125	.100	3/4	2.74
83	.0120	.096	3/4	3.14
84	.0115	.092	3/4	3.14
85	.0110	.088	3/4	3.14
86	.0105	.084	3/4	3.52
87	.0100	.080	3/4	3.52
88	.0095	.076	3/4	4.42
89	.0091	.073	3/4	4.42
90	.0087	.070	3/4	4.42
91	.0083	.066	3/4	4.42
92	.0079	.063	3/4	4.42
93	.0075	.060	3/4	4.42
94	.0071	.057	3/4	5.58
95	.0067	.054	3/4	5.58
96	.0063	.051	3/4	6.16
97	.0059	.047	3/4	6.16

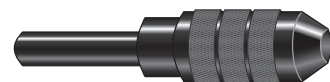
MICRO PIN VISES



Precision pin vises for holding small tools.
4 pc set - capacity: .0 to .040, .030 to .062,
.050 to .125, .115 to .187.

ITEM NO.	DESCRIPTION	PRICE
MPV	MICRO PIN VISE 4 PC SET	22.16

MICRO PIN CHUCKS



A handy adapter chuck for holding small drills.
3 collets - capacity: 0 to 1/32,
1/32 to 1/16, 1/16 to 3/32.

ITEM NO.	DESCRIPTION	PRICE
MPC	MICRO PIN CHUCK	17.90

HIGH SPEED STEEL JOBBER LENGTH DRILLS

ICS **WIS**

GENERAL PURPOSE

118° POINT



Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL			TIN COATED	PACKAGE QUANTITY
				OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT	GOLD FINISH 118° POINT	
				JDR	JDG	JDP	JDT	
A	.234	2-5/8	3-7/8	2.52	2.70	2.70	5.98	12
B	.238	2-3/4	4	2.52	2.70	2.70	5.98	12
C	.242	2-3/4	4	2.52	2.70	2.70	5.98	12
D	.246	2-3/4	4	2.52	2.70	2.70	5.98	12
E	.250	2-3/4	4	2.52	2.70	2.70	5.98	12
F	.257	2-7/8	4-1/8	3.14	3.32	3.32	9.26	12
G	.261	2-7/8	4-1/8	3.14	3.32	3.32	9.26	12
H	.266	2-7/8	4-1/8	3.14	3.32	3.32	9.26	12
I	.272	2-7/8	4-1/8	3.14	3.32	3.32	9.26	12
J	.277	2-7/8	4-1/8	3.62	3.84	3.84	9.74	12
K	.281	2-15/16	4-1/4	3.62	3.84	3.84	9.74	12
L	.290	2-15/16	4-1/4	4.04	4.28	4.28	10.18	12
M	.295	3-1/16	4-3/8	4.24	4.50	4.50	10.44	12
N	.302	3-1/16	4-3/8	4.24	4.50	4.50	10.44	6
O	.316	3-3/16	4-1/2	4.38	4.64	4.64	10.54	6
P	.323	3-5/16	4-5/8	4.90	5.22	5.22	11.12	6
Q	.332	3-7/16	4-3/4	4.90	5.22	5.22	11.12	6
R	.339	3-7/16	4-3/4	4.90	5.22	5.22	11.12	6
S	.348	3-1/2	4-7/8	5.30	5.64	5.64	17.40	6
T	.358	3-1/2	4-7/8	5.66	6.02	6.02	17.78	6
U	.368	3-5/8	5	6.14	7.20	7.20	18.30	6
V	.377	3-5/8	5	6.34	6.74	6.74	18.50	6
W	.386	3-3/4	5-1/8	6.78	7.20	7.20	18.96	6
X	.397	3-3/4	5-1/8	7.38	7.84	7.84	19.60	6
Y	.404	3-7/8	5-1/4	7.80	8.30	8.30	20.06	6
Z	.413	3-7/8	5-1/4	8.42	8.98	8.98	20.74	6

HIGH SPEED STEEL 3/8" SHANK JOBBER LENGTH DRILLS

ICS **WIS**

GENERAL PURPOSE

118° POINT



Letter Sizes (Straight Shank) "W" to "Z" Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL			PACKAGE QUANTITY
				OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT	
				JDRTS	JDGTS	JDPTS	
W	.386	3-3/4	5-1/8	8.40	8.82	8.82	6
X	.397	3-3/4	5-1/8	9.00	9.48	9.48	6
Y	.404	3-7/8	5-1/4	9.42	9.92	9.92	6
Z	.413	3-7/8	5-1/4	10.06	10.58	10.58	6

Quick Reference for General/Special Purpose Letter Size Drills

DRILL TYPE	DRILL SETS	STUB LENGTH	JOBBER LENGTH	REDUCED SHANK	TAPER LENGTH	TAPER SHANK	EXTRA LENGTH
PAGE NO. OF ITEMS AVAILABLE							
High Speed Steel	65	14	25, 49-58	25	79, 87	98	112
Cobalt	65	19	-	-	83	-	112
TiN Coated	65	-	25	-	-	-	-
Carbide Tipped	-	-	53	-	-	-	-
Solid Carbide	-	-	54	-	-	-	-



HIGH SPEED STEEL METRIC JOBBER LENGTH DRILLS

MET-17

ICS WIS

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL	TECHNICAL	
			SPECS	DATA	SHANK
JDM	 OXIDE FINISH	For general purpose and production machine drilling in ferrous or non-ferrous metals. Thicker web construction for extended drill life. Relief ground and twist fluted for maximum strength and rigidity.	M2	118° Point Std. Spiral Thicker Web	Str. 3/8 1/2
JDMP	 BRIGHT POLISHED FINISH	For portable or machine drilling in ferrous or non-ferrous metals. Polished ground flutes reduce loading when drilling soft materials like aluminum, brass, etc.	M2	118° Point Std. Spiral Thicker Web	Str. 3/8 1/2

Metric Sizes (Straight Shank) .30mm to 5.40mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118°POINT	BRIGHT FINISH 118°POINT
				JDM	JDMP
.30	.0118	3	19	2.26	
.32	.0126	4	19	1.90	
.35	.0138	4	19	1.90	
.38	.0150	4	19	1.90	
.40	.0157	5	20	1.76	
.42	.0165	5	20	1.76	
.45	.0177	5	20	1.76	
.48	.0189	5	20	1.76	
.50	.0197	6	22	1.62	
.52	.0204	6	22	1.62	
.55	.0217	7	24	1.62	
.58	.0228	7	24	1.62	
.60	.0236	7	24	1.62	
.62	.0244	8	26	1.62	
.65	.0256	8	26	1.62	
.68	.0267	9	28	1.54	
.70	.0276	9	28	1.54	
.72	.0283	9	28	1.54	
.75	.0295	9	28	1.54	
.78	.0307	10	30	1.44	
.80	.0315	10	30	1.44	
.82	.0322	10	30	1.44	
.85	.0335	10	30	1.44	
.88	.0346	11	32	1.44	
.90	.0354	11	32	1.44	
.92	.0362	11	32	1.44	
.95	.0374	11	32	1.44	
.98	.0385	12	34	1.18	
1.00	.0394	12	34	1.18	1.28
1.05	.0413	12	34	1.18	
1.10	.0433	14	36	1.18	
1.15	.0452	14	36	1.18	
1.20	.0472	16	38	1.18	1.28
1.25	.0492	16	38	1.18	
1.30	.0512	16	38	1.18	
1.35	.0531	18	40	1.18	
1.40	.0551	18	40	1.18	
1.45	.0570	18	40	1.18	
1.50	.0591	18	40	1.18	1.28
1.55	.0610	20	43	1.18	
1.60	.0630	20	43	1.18	
1.65	.0650	20	43	1.18	
1.70	.0669	20	43	1.18	
1.75	.0689	22	46	1.18	
1.80	.0709	22	46	1.18	
1.85	.0728	22	46	1.18	
1.90	.0748	22	46	1.18	
1.95	.0767	24	49	1.18	
2.00	.0787	24	49	1.18	1.28
2.05	.0807	24	49	1.18	

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118°POINT	BRIGHT FINISH 118°POINT
				JDM	JDMP
2.10	.0827	24	49	1.18	
2.15	.0846	27	53	1.18	
2.20	.0866	27	53	1.18	1.28
2.25	.0886	27	53	1.18	
2.30	.0906	27	53	1.18	
2.35	.0925	27	53	1.18	
2.40	.0945	30	57	1.18	1.28
2.45	.0964	30	57	1.18	
2.50	.0984	30	57	1.18	1.28
2.55	.1003	30	57	1.18	
2.60	.1024	30	57	1.18	
2.65	.1043	30	57	1.18	
2.70	.1063	33	61	1.30	
2.75	.1083	33	61	1.30	
2.80	.1102	33	61	1.30	1.54
2.85	.1122	33	61	1.30	
2.90	.1142	33	61	1.30	
2.95	.1161	33	61	1.30	
3.00	.1181	33	61	1.30	1.54
3.10	.1220	36	65	1.30	
3.15	.1240	36	65	1.30	
3.20	.1260	36	65	1.30	1.54
3.25	.1280	36	65	1.30	1.54
3.30	.1299	36	65	1.44	1.54
3.40	.1339	39	70	1.44	
3.50	.1378	39	70	1.44	1.66
3.55	.1397	39	70	1.44	
3.60	.1417	39	70	1.44	
3.70	.1457	39	70	1.44	1.66
3.75	.1476	39	70	1.54	1.90
3.80	.1496	43	75	1.54	
3.90	.1536	43	75	1.54	
4.00	.1575	43	75	1.54	1.90
4.10	.1614	43	75	1.54	
4.20	.1654	43	75	1.54	1.90
4.25	.1673	43	75	1.72	1.90
4.30	.1693	47	80	1.72	
4.40	.1732	47	80	1.72	
4.50	.1772	47	80	1.72	1.90
4.60	.1811	47	80	1.72	
4.70	.1850	47	80	1.72	
4.75	.1870	47	80	2.02	1.90
4.80	.1890	52	86	2.02	2.20
4.90	.1929	52	86	2.02	
5.00	.1969	52	86	2.02	2.20
5.10	.2008	52	86	2.02	
5.20	.2047	52	86	2.02	2.20
5.25	.2067	52	86	2.02	
5.30	.2087	52	86	2.02	
5.40	.2126	57	93	2.68	

* Metric Bright Polished drills (JDMP) below 3.00mm are not split point.

NOTE: Metric Jobber Length Drills are manufactured to metric ISO/DIN 338RN, BSS 328 specifications.

HIGH SPEED STEEL METRIC JOBBER LENGTH DRILLS

ICS **WIS**

GENERAL PURPOSE

118° POINT



Metric Sizes (Straight Shank) 5.50mm to 16.50mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118°POINT	BRIGHT FINISH 118°POINT
				JDM	JDMP
5.50	.2165	57	93	2.68	2.82
5.60	.2205	57	93	2.68	
5.70	.2244	57	93	2.68	
5.75	.2264	57	93	2.84	
5.80	.2283	57	93	2.84	
5.90	.2323	57	93	2.84	
6.00	.2362	57	93	2.84	2.82
6.10	.2402	63	101	2.90	
6.20	.2441	63	101	2.90	
6.25	.2461	63	101	2.90	
6.30	.2480	63	101	2.90	
6.40	.2520	63	101	2.90	
6.50	.2559	63	101	2.90	2.94
6.60	.2598	63	101	2.90	2.94
6.70	.2638	63	101	2.90	2.94
6.75	.2657	69	109	3.50	
6.80	.2677	69	109	3.50	4.10
6.90	.2717	69	109	3.50	
7.00	.2756	69	109	3.50	3.66
7.10	.2795	69	109	3.50	
7.20	.2835	69	109	3.50	
7.25	.2854	69	109	3.50	
7.30	.2874	69	109	3.50	
7.40	.2913	69	109	3.50	
7.50	.2953	69	109	3.50	3.66
7.60	.2992	75	117	3.50	
7.70	.3031	75	117	4.28	
7.75	.3051	75	117	4.48	
7.80	.3071	75	117	4.28	
7.90	.3110	75	117	4.28	
8.00	.3150	75	117	4.28	5.02
8.10	.3189	75	117	4.28	
8.20	.3228	75	117	4.28	
8.25	.3248	75	117	4.28	
8.30	.3268	75	117	4.28	
8.40	.3307	75	117	4.28	
8.50	.3346	75	117	4.28	4.52
8.60	.3386	81	125	5.30	
8.70	.3425	81	125	5.30	
8.75	.3445	81	125	5.88	
8.80	.3465	81	125	5.30	
8.90	.3504	81	125	5.30	
9.00	.3543	81	125	5.30	5.44
9.10	.3583	81	125	6.36	
9.20	.3622	81	125	6.36	
9.25	.3642	81	125	6.36	
9.30	.3661	81	125	6.36	
9.40	.3701	81	125	6.36	
9.50	.3740	81	125	5.78	6.48
9.60	.3780	87	133	7.18	
9.70	.3819	87	133	6.60	7.34
9.75	.3839	87	133	7.54	
9.80	.3858	87	133	7.54	
9.90	.3898	87	133	7.54	
10.00	.3937	87	133	6.60	7.34
10.10	.3976	87	133	6.60	

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118°POINT	BRIGHT FINISH 118°POINT
				JDM	JDMP
10.20	.4016	87	133	6.60	7.34
10.25	.4035	87	133	8.24	
10.30	.4055	87	133	8.24	
10.40	.4094	87	133	8.24	
10.50	.4134	87	133	7.64	8.36
10.60	.4173	87	133	7.64	
10.70	.4213	94	142	9.08	
10.75	.4232	94	142	9.94	
10.80	.4252	94	142	9.08	
10.90	.4291	94	142	9.08	
11.00	.4331	94	142	8.66	10.02
11.10	.4370	94	142	9.08	
11.20	.4409	94	142	9.08	
11.25	.4429	94	142	10.00	
11.30	.4449	94	142	10.00	
11.40	.4488	94	142	10.00	
11.50	.4528	94	142	9.54	11.08
11.60	.4567	94	142	9.54	
11.70	.4606	94	142	10.58	
11.75	.4626	94	142	12.28	
11.80	.4646	94	142	10.58	
11.90	.4685	101	151	12.28	
12.00	.4724	101	151	11.18	12.36
12.10	.4764	101	151	12.28	
12.20	.4803	101	151	11.18	
12.25	.4823	101	151	12.28	
12.30	.4848	101	151	11.18	
12.40	.4882	101	151	12.28	
12.50	.4921	101	151	11.18	12.36
12.60	.4961	101	151	12.28	
12.70	.5000	101	151	11.18	
12.75	.5020	101	151	13.52	
12.80	.5039	101	151	13.52	
12.90	.5079	101	151	13.52	
13.00	.5118	101	151	13.52	12.36
13.10	.5157	101	151	16.46	
13.20	.5197	101	151	16.46	
13.30	.5236	108	160	16.46	
13.40	.5276	108	160	16.46	
13.50	.5315	108	160	16.46	15.42
13.60	.5354	108	160	16.46	
13.70	.5390	108	160	16.46	
13.75	.5413	108	160	18.72	
13.80	.5433	108	160	18.72	
13.90	.5472	108	160	18.72	
14.00	.5512	108	160	18.72	19.88
14.25	.5610	114	169	18.72	
14.50	.5709	114	169	18.72	17.66
14.75	.5807	114	169	20.00	
15.00	.5906	114	169	20.00	19.08
15.25	.6004	120	178	22.34	
15.50	.6102	120	178	22.34	21.76
15.75	.6201	120	178	22.34	
16.00	.6299	120	178	22.34	21.76
16.25	.6398	125	184	23.88	
16.50	.6496	125	184	23.88	23.66

NOTE: Metric Jobber Length Drills are manufactured to metric ISO/DIN 338RN, BSS 328 specifications.

HIGH SPEED STEEL METRIC JOBBER LENGTH DRILLS

ICS WIS

GENERAL PURPOSE

118° POINT



Metric Sizes (Straight Shank) 16.75mm to 20.00mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
				JDM	JDMP
16.75	.6594	125	184	23.88	-
17.00	.6693	125	184	23.88	23.88
17.25	.6791	130	191	26.24	-
17.50	.6890	130	191	26.24	26.24
17.75	.6988	130	191	27.54	-
18.00	.7087	130	191	27.54	27.54
18.25	.7185	135	198	29.88	-

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
				JDM	JDMP
18.50	.7283	135	198	29.88	29.88
18.75	.7382	135	198	29.88	-
19.00	.7480	135	198	29.88	29.88
19.25	.7579	140	205	33.06	-
19.50	.7677	140	205	33.06	33.06
19.75	.7776	140	205	33.06	-
20.00	.7874	140	205	33.06	33.06

METRIC (3/8" SHANK) JOBBER LENGTH DRILLS

ICS WIS

GENERAL PURPOSE

118° POINT



Metric Sizes (Reduced Shank) 10.00mm to 20.00mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
				JDMTS	JDMPTS
10.00	.3937	87	133	8.72	8.72
10.50	.4134	87	133	9.78	9.78
11.00	.4331	94	142	10.76	10.76
11.50	.4528	94	142	11.66	11.66
12.00	.4724	101	151	13.30	13.30
12.50	.4921	101	151	13.30	13.30
13.00	.5118	101	151	15.64	15.64
13.50	.5315	108	160	18.82	18.82
14.00	.5512	108	160	21.06	21.06
14.50	.5709	114	169	21.06	21.06
15.00	.5906	114	169	22.34	22.34

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
				JDMTS	JDMPTS
15.50	.6102	120	178	24.70	24.70
16.00	.6299	120	178	24.70	24.70
16.50	.6496	125	184	26.24	26.24
17.00	.6693	125	184	26.24	26.24
17.50	.6890	130	191	29.18	29.18
18.00	.7087	130	191	30.48	30.48
18.50	.7283	135	198	32.82	32.82
19.00	.7480	135	198	32.82	32.82
19.50	.7677	140	205	36.00	36.00
20.00	.7874	140	205	36.00	36.00

METRIC (1/2" SHANK) JOBBER LENGTH DRILLS

ICS WIS

GENERAL PURPOSE

118° POINT



Metric Sizes (Reduced Shank) 13.00mm to 20.00mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
				JDMRS	JDMPRS
13.00	.5118	101	151	15.88	15.88
13.10	.5157	101	151	18.82	-
13.20	.5197	101	151	18.82	-
13.30	.5236	108	160	18.82	-
13.40	.5276	108	160	18.82	-
13.50	.5315	108	160	18.82	18.82
13.60	.5354	108	160	18.82	-
13.70	.5390	108	160	18.82	-
13.75	.5413	108	160	21.06	-
13.80	.5433	108	160	21.06	-
13.90	.5472	108	160	21.06	-
14.00	.5512	108	160	21.06	21.06
14.25	.5610	114	169	21.06	-
14.50	.5709	114	169	21.06	21.06
14.75	.5807	114	169	22.34	-
15.00	.5906	114	169	22.34	22.34
15.25	.6004	120	178	24.70	-
15.50	.6102	120	178	24.70	24.70

SIZE mm	DEC. EQUIV.	FLUTE LENGTH mm	OVERALL LENGTH mm	HIGH SPEED STEEL	
				OXIDE FINISH 118° POINT	BRIGHT FINISH 118° POINT
				JDMRS	JDMPRS
15.75	.6201	120	178	24.70	-
16.00	.6299	120	178	24.70	24.70
16.25	.6398	125	184	26.24	-
16.50	.6496	125	184	26.24	26.24
16.75	.6594	125	184	26.24	-
17.00	.6693	125	184	26.24	26.24
17.25	.6791	130	191	29.18	-
17.50	.6890	130	191	29.18	29.18
17.75	.6996	130	191	32.82	-
18.00	.7087	130	191	32.82	32.82
18.25	.7185	135	198	32.82	-
18.50	.7283	135	198	32.82	32.82
18.75	.7382	135	198	32.82	-
19.00	.7480	135	198	32.82	32.82
19.25	.7579	140	205	36.00	-
19.50	.7677	140	205	36.00	36.00
19.75	.7776	140	205	36.00	-
20.00	.7874	140	205	36.00	36.00

NOTE: Metric Jobber Length Drills are manufactured to metric ISO/DIN 338RN, BSS 328 specifications.

HIGH SPEED STEEL 1/4" HEX SHANK DRILLS

ICS USA

GENERAL PURPOSE

118° POINT



Hex Shank Drills are designed for use in cordless screwdrivers, handheld drills, and impact tools. Hex shank has a recessed snap-in ring to lock drills into drill chuck. For general purpose drilling.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/16	.0625	7/8	2-9/16	QHSD004	2.50
5/64	.0781	1	2-5/8	QHSD005	2.54
3/32	.0938	1-3/16	2-3/4	QHSD006	2.70
7/64	.1094	1-1/4	2-7/8	QHSD007	2.76
1/8	.1250	1-5/16	3	QHSD008	2.88
9/64	.1406	1-7/16	3-1/16	QHSD009	2.98
5/32	.1562	1-1/2	3-3/16	QHSD010	3.20
3/16	.1875	1-5/8	3-3/8	QHSD012	3.60

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
7/32	.2188	1-3/4	3-3/4	QHSD014	4.50
1/4	.2500	2	3-13/16	QHSD016	5.00
9/32	.2812	2-15/16	4-1/4	QHSD018	6.00
5/16	.3125	3-3/16	4-1/2	QHSD020	6.54
3/8	.3750	3-5/8	5	QHSD024	8.70
7/16	.4375	4-1/16	5-1/2	QHSD028	10.00
1/2	.5000	4-1/2	6	QHSD032	12.40

HIGH SPEED STEEL 1/4" HEX SHANK DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



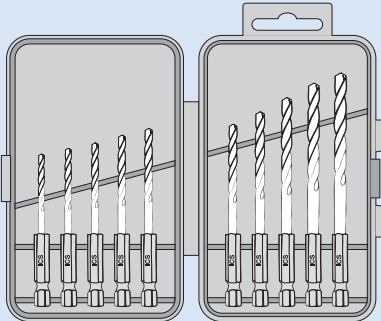
Hex Shank Drills are designed for use in cordless screwdrivers, handheld drills, and impact tools. Hex shank has a recessed snap-in ring to lock drills into drill chuck.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/16	.0625	7/8	2-9/16	QHSDHB004	3.20
5/64	.0781	1	2-5/8	QHSDHB005	3.20
3/32	.0938	1-3/16	2-3/4	QHSDHB006	3.20
7/64	.1094	1-1/4	2-7/8	QHSDHB007	3.00
1/8	.1250	1-5/16	3	QHSDHB008	3.00
9/64	.1406	1-7/16	3-1/16	QHSDHB009	3.00
5/32	.1562	1-1/2	3-3/16	QHSDHB010	3.20
3/16	.1875	1-5/8	3-3/8	QHSDHB012	4.00

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
7/32	.2188	1-3/4	3-3/4	QHSDHB014	4.86
1/4	.2500	2	3-13/16	QHSDHB016	5.30
9/32	.2812	2-15/16	4-1/4	QHSDHB018	6.36
5/16	.3125	3-3/16	4-1/2	QHSDHB020	6.84
3/8	.3750	3-5/8	5	QHSDHB024	8.96
7/16	.4375	4-1/16	5-1/2	QHSDHB028	10.30
1/2	.5000	4-1/2	6	QHSDHB032	12.70

1/4" HEX SHANK DRILL SETS

PLASTIC INDEX

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
10 PC DRILL SETS Sizes 1/16 to 5/32 by 64ths 3/16 to 1/4 by 32nds  (Wt. .40 lbs.)	1/4" Hex Shank Drills - 118° Standard Point	DS-QHSD-10	39.32
	1/4" Hex Shank Drills - 135° Split Point	DS-QHSDH-10	43.84


HIGH SPEED STEEL JOBBER LENGTH DRILLS

MET-21

ICS WIS

HEAVY DUTY

118° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	SHANK STYLE
JDHA	 BRIGHT FINISH	For portable or machine drilling in mild steels, aluminum, and magnesium alloys. Mfr. to NAS 907-A specs.	M2,M7	118° Split Pt. Std. Spiral Hvy. Duty Web	Str. 3/8

Fractional Sizes (Straight Shank) 1/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/16	.0625	7/8	1-7/8	JDHA004	1.06
5/64	.0781	1	2	JDHA005	1.06
3/32	.0938	1-1/4	2-1/4	JDHA006	1.06
7/64	.1094	1-1/2	2-5/8	JDHA007	1.06
1/8	.1250	1-5/8	2-3/4	JDHA008	1.10
9/64	.1406	1-3/4	2-7/8	JDHA009	1.18
5/32	.1562	2	3-1/8	JDHA010	1.44
11/64	.1719	2-1/8	3-1/4	JDHA011	1.50
3/16	.1875	2-5/16	3-1/2	JDHA012	1.72
13/64	.2031	2-7/16	3-5/8	JDHA013	2.02
7/32	.2188	2-1/2	3-3/4	JDHA014	2.14
15/64	.2344	2-5/8	3-7/8	JDHA015	2.30
1/4	.2500	2-3/4	4	JDHA016	2.40
17/64	.2656	2-7/8	4-1/8	JDHA017	2.94
9/32	.2812	2-15/16	4-1/4	JDHA018	3.12

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
19/64	.2969	3-1/16	4-3/8	JDHA019	3.60
5/16	.3125	3-3/16	4-1/2	JDHA020	3.80
21/64	.3281	3-5/16	4-5/8	JDHA021	4.08
11/32	.3438	3-7/16	4-3/4	JDHA022	4.82
23/64	.3594	3-1/2	4-7/8	JDHA023	5.36
3/8	.3750	3-5/8	5	JDHA024	5.56
25/64	.3906	3-3/4	5-1/8	JDHA025	6.14
13/32	.4062	3-7/8	5-1/4	JDHA026	6.44
27/64	.4219	3-15/16	5-3/8	JDHA027	6.86
7/16	.4375	4-1/16	5-1/2	JDHA028	7.72
29/64	.4531	4-3/16	5-5/8	JDHA029	8.48
15/32	.4688	4-5/16	5-3/4	JDHA030	9.02
31/64	.4844	4-3/8	5-7/8	JDHA031	9.26
1/2	.5000	4-1/2	6	JDHA032	9.64

HIGH SPEED STEEL 3/8" SHANK JOBBER LENGTH DRILLS

ICS WIS

HEAVY DUTY

118° SPLIT POINT



Fractional Sizes (Reduced Shank) 25/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
25/64	.3906	3-3/4	5-1/8	JDHATS025	8.48
13/32	.4062	3-7/8	5-1/4	JDHATS026	8.78
27/64	.4219	3-15/16	5-3/8	JDHATS027	9.20
7/16	.4375	4-1/16	5-1/2	JDHATS028	10.06

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
29/64	.4531	4-3/16	5-5/8	JDHATS025	10.84
15/32	.4688	4-5/16	5-3/4	JDHATS026	11.36
31/64	.4844	4-3/8	5-7/8	JDHATS027	11.62
1/2	.5000	4-1/2	6	JDHATS028	12.00

NOTE

Heavy Duty Type "A" Jobber Drills are designed for use on mild steels and soft metals.

DRILL SETS

Heavy Duty Jobber Length Drill Sets on pages 53-59

HIGH SPEED STEEL JOBBER LENGTH DRILLS

ICS WIS

HEAVY DUTY

118° SPLIT POINT



Wire Gauge Sizes (Straight Shank) #1 to #60 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1	.2280	2-5/8	3-7/8	JDHA#01	2.88
2	.2210	2-5/8	3-7/8	JDHA#02	2.88
3	.2130	2-1/2	3-3/4	JDHA#03	2.88
4	.2090	2-1/2	3-3/4	JDHA#04	2.88
5	.2055	2-1/2	3-3/4	JDHA#05	2.88
6	.2040	2-1/2	3-3/4	JDHA#06	2.88
7	.2010	2-7/16	3-5/8	JDHA#07	2.24
8	.1990	2-7/16	3-5/8	JDHA#08	2.24
9	.1960	2-7/16	3-5/8	JDHA#09	2.46
10	.1935	2-7/16	3-5/8	JDHA#10	2.46
11	.1910	2-5/16	3-1/2	JDHA#11	2.46
12	.1890	2-5/16	3-1/2	JDHA#12	2.46
13	.1850	2-5/16	3-1/2	JDHA#13	2.08
14	.1820	2-3/16	3-3/8	JDHA#14	2.08
15	.1800	2-3/16	3-3/8	JDHA#15	2.08
16	.1770	2-3/16	3-3/8	JDHA#16	2.08
17	.1730	2-3/16	3-3/8	JDHA#17	1.94
18	.1695	2-1/8	3-1/4	JDHA#18	1.76
19	.1660	2-1/8	3-1/4	JDHA#19	1.76
20	.1610	2-1/8	3-1/4	JDHA#20	1.76
21	.1590	2-1/8	3-1/4	JDHA#21	1.60
22	.1570	2	3-1/8	JDHA#22	1.60
23	.1540	2	3-1/8	JDHA#23	1.60
24	.1520	2	3-1/8	JDHA#24	1.60
25	.1495	1-7/8	3	JDHA#25	1.48
26	.1470	1-7/8	3	JDHA#26	1.52
27	.1440	1-7/8	3	JDHA#27	1.48
28	.1405	1-3/4	2-7/8	JDHA#28	1.44
29	.1360	1-3/4	2-7/8	JDHA#29	1.44
30	.1285	1-5/8	2-3/4	JDHA#30	1.44

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
31	.1200	1-5/8	2-3/4	JDHA#31	1.22
32	.1160	1-5/8	2-3/4	JDHA#32	1.22
33	.1130	1-1/2	2-5/8	JDHA#33	1.22
34	.1110	1-1/2	2-5/8	JDHA#34	1.22
35	.1100	1-1/2	2-5/8	JDHA#35	1.22
36	.1065	1-7/16	2-1/2	JDHA#36	1.22
37	.1040	1-7/16	2-1/2	JDHA#37	1.22
38	.1015	1-7/16	2-1/2	JDHA#38	1.22
39	.0995	1-3/8	2-3/8	JDHA#39	1.22
40	.0980	1-3/8	2-3/8	JDHA#40	1.22
41	.0960	1-3/8	2-3/8	JDHA#41	1.16
42	.0935	1-1/4	2-1/4	JDHA#42	1.16
43	.0890	1-1/4	2-1/4	JDHA#43	1.16
44	.0860	1-1/8	2-1/8	JDHA#44	1.16
45	.0820	1-1/8	2-1/8	JDHA#45	1.16
46	.0810	1-1/8	2-1/8	JDHA#46	1.16
47	.0785	1	2	JDHA#47	1.16
48	.0760	1	2	JDHA#48	1.16
49	.0730	1	2	JDHA#49	1.16
50	.0700	1	2	JDHA#50	1.16
51	.0670	1	2	JDHA#51	1.16
52	.0635	7/8	1-7/8	JDHA#52	1.16
53	.0595	7/8	1-7/8	JDHA#53	1.16
54	.0550	7/8	1-7/8	JDHA#54	1.16
55	.0520	7/8	1-7/8	JDHA#55	1.16
56	.0465	3/4	1-3/4	JDHA#56	1.52
57	.0430	3/4	1-3/4	JDHA#57	1.52
58	.0420	11/16	1-5/8	JDHA#58	1.52
59	.0410	11/16	1-5/8	JDHA#59	1.52
60	.0400	11/16	1-5/8	JDHA#60	1.52

Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
A	.2340	2-5/8	3-7/8	JDHA"A"	3.00
B	.2380	2-3/4	4	JDHA"B"	3.00
C	.2420	2-3/4	4	JDHA"C"	3.00
D	.2460	2-3/4	4	JDHA"D"	3.00
E	.2500	2-3/4	4	JDHA"E"	3.10
F	.2570	2-7/8	4-1/8	JDHA"F"	3.50
G	.2610	2-7/8	4-1/8	JDHA"G"	3.50
H	.2660	2-7/8	4-1/8	JDHA"H"	3.60
I	.2720	2-7/8	4-1/8	JDHA"I"	3.60
J	.2770	2-7/8	4-1/8	JDHA"J"	3.88
K	.2810	2-15/16	4-1/4	JDHA"K"	4.20
L	.2900	2-15/16	4-1/4	JDHA"L"	4.20
M	.2950	3-1/16	4-3/8	JDHA"M"	4.82

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
N	.3020	3-1/16	4-3/8	JDHA"N"	4.82
O	.3160	3-3/16	4-1/2	JDHA"O"	4.82
P	.3230	3-5/16	4-5/8	JDHA"P"	5.18
Q	.3320	3-7/16	4-3/4	JDHA"Q"	5.18
R	.3390	3-7/16	4-3/4	JDHA"R"	5.40
S	.3480	3-1/2	4-7/8	JDHA"S"	5.68
T	.3580	3-1/2	4-7/8	JDHA"T"	6.22
U	.3680	3-5/8	5	JDHA"U"	6.44
V	.3770	3-5/8	5	JDHA"V"	6.44
W	.3860	3-3/4	5-1/8	JDHA"W"	7.12
X	.3970	3-3/4	5-1/8	JDHA"X"	8.34
Y	.4040	3-7/8	5-1/4	JDHA"Y"	9.54
Z	.4130	3-7/8	5-1/4	JDHA"Z"	9.74

DOUBLE MARGIN JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

118° SPLIT POINT




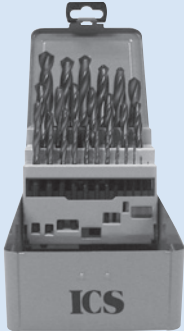
Double Margin Jobber Drills are designed for drilling close tolerance holes. Their use often eliminates reaming. They are manufactured with two margins on each land. One on the leading edge and one on the heel. This gives four guide points for straighter and more accurate holes.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/8	.1250	1-5/8	2-3/4	JDDMHA008	2.10
9/64	.1406	1-3/4	2-7/8	JDDMHA009	2.34
5/32	.1562	2	3-1/8	JDDMHA010	2.42
11/64	.1719	2-1/8	3-1/4	JDDMHA011	2.60
3/16	.1875	2-5/16	3-1/2	JDDMHA012	2.80
13/64	.2031	2-7/16	3-5/8	JDDMHA013	3.28
7/32	.2188	2-1/2	3-3/4	JDDMHA014	3.44
15/64	.2344	2-5/8	3-7/8	JDDMHA015	3.70
1/4	.2500	2-3/4	4	JDDMHA016	3.84
17/64	.2656	2-7/8	4-1/8	JDDMHA017	4.90
9/32	.2812	2-15/16	4-1/4	JDDMHA018	5.28
19/64	.2969	3-1/16	4-3/8	JDDMHA019	5.88
5/16	.3125	3-3/16	4-1/2	JDDMHA020	6.18

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
21/64	.3281	3-5/16	4-5/8	JDDMHA021	6.82
11/32	.3438	3-7/16	4-3/4	JDDMHA022	7.56
23/64	.3594	3-1/2	4-7/8	JDDMHA023	8.40
3/8	.3750	3-5/8	5	JDDMHA024	8.92
25/64	.3906	3-3/4	5-1/8	JDDMHA025	9.86
13/32	.4062	3-7/8	5-1/4	JDDMHA026	10.28
27/64	.4219	3-15/16	5-3/8	JDDMHA027	11.28
7/16	.4375	4-1/16	5-1/2	JDDMHA028	11.90
29/64	.4531	4-3/16	5-5/8	JDDMHA029	13.20
15/32	.4688	4-5/16	5-3/4	JDDMHA030	14.26
31/64	.4844	4-3/8	5-7/8	JDDMHA031	14.80
1/2	.5000	4-1/2	6	JDDMHA032	15.12

DOUBLE MARGIN JOBBER LENGTH DRILL SETS

METAL INDEX






DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
 <p>Sizes 1/8 to 1/2 by 16ths (Wt. 1.40 lbs.)</p>	Bright Finish Double Margin Jobber Drill 118° S/P	DS-JDDMHA-7	65.92
 <p>Sizes 1/8 to 1/2 by 64ths (Wt. 3.30 lbs.)</p>	Bright Finish Double Margin Jobber Drill 118° S/P	DS-JDDMHA-25	184.12

HIGH SPEED STEEL JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
JDHB	 OXIDE FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. Mfr. to NAS 907-B specs.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web
JDHP	 BRIGHT POLISHED FINISH	This drill was specifically designed for welders who need to drill stainless steel and aluminum without the fear of oxide contaminating their weld. Saves on cleanup time and machining cost.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web
JDHGF	 GOLD FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. Mfr. to NAS 907-B specs. Designed as an alternative to black oxide. Gold oxide film reduces friction between the tool and the work. Does not smear metal.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web
JDHDF	 BLACK/GOLD FINISH	This drill was designed for drilling work hardening 300 series stainless steels (except 303). Special thin web will penetrate work hardening stainless fast enough to cut beneath the chip which is hardening from deformation.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web
JDHT	 GOLD TITANIUM FINISH	This combination of titanium nitride coating with the heavy duty design enhances chip flow, finished hole quality and up to 700% more drill life.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web

Fractional Sizes (Straight Shank) 1/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL				TIN COAT
				OXIDE FINISH	BRIGHT FINISH	GOLD FINISH	BLACK/GOLD	GOLD COATED
				135° S/P	135° S/P	135° S/P	135° S/P	135° S/P
				JDHB	JDHP	JDHGF	JDHDF	JDHT
*1/64	.0156	3/16	3/4	1.90	1.90	-	-	-
*1/32	.0313	1/2	1-3/8	1.68	1.68	-	-	-
*3/64	.0469	3/4	1-3/4	1.44	1.44	-	-	-
1/16	.0625	7/8	1-7/8	1.06	1.06	1.12	1.12	2.72
5/64	.0781	1	2	1.06	1.06	1.12	1.12	2.72
3/32	.0938	1-1/4	2-1/4	1.06	1.06	1.12	1.12	2.72
7/64	.1094	1-1/2	2-5/8	1.06	1.06	1.12	1.12	2.72
1/8	.1250	1-5/8	2-3/4	1.10	1.10	1.16	1.16	2.78
9/64	.1406	1-3/4	2-7/8	1.18	1.18	1.22	1.26	2.86
5/32	.1562	2	3-1/8	1.48	1.48	1.50	1.56	3.14
11/64	.1719	2-1/8	3-1/4	1.60	1.60	1.64	1.68	3.26
3/16	.1875	2-5/16	3-1/2	1.72	1.72	1.76	1.84	3.40
13/64	.2031	2-7/16	3-5/8	2.02	2.02	2.06	2.12	5.30
7/32	.2188	2-1/2	3-3/4	2.14	2.14	2.20	2.28	5.44
15/64	.2344	2-5/8	3-7/8	2.30	2.30	2.34	2.42	5.60
1/4	.2500	2-3/4	4	2.40	2.40	2.44	2.52	5.68
17/64	.2656	2-7/8	4-1/8	3.10	3.10	3.18	3.26	9.96
9/32	.2812	2-15/16	4-1/4	3.36	3.36	3.42	3.54	10.24
19/64	.2969	3-1/16	4-3/8	3.72	3.72	3.80	3.96	10.58
5/16	.3125	3-3/16	4-1/2	3.86	3.86	3.98	4.08	10.74
21/64	.3281	3-5/16	4-5/8	4.26	4.26	4.38	4.50	11.14
11/32	.3438	3-7/16	4-3/4	4.82	4.82	4.90	5.06	11.68
23/64	.3594	3-1/2	4-7/8	5.36	5.36	5.46	5.64	13.68
3/8	.3750	3-5/8	5	5.56	5.56	5.68	5.86	13.88
25/64	.3906	3-3/4	5-1/8	6.14	6.14	6.26	6.46	17.20
13/32	.4062	3-7/8	5-1/4	6.44	6.44	6.58	6.78	17.52
27/64	.4219	3-15/16	5-3/8	6.86	6.86	7.00	7.22	17.94
7/16	.4375	4-1/16	5-1/2	7.72	7.72	7.88	8.12	18.78
29/64	.4531	4-3/16	5-5/8	8.48	8.48	8.68	8.92	19.56
15/32	.4688	4-5/16	5-3/4	9.02	9.02	9.20	9.50	20.10
31/64	.4844	4-3/8	5-7/8	9.26	9.26	9.46	9.74	20.34
1/2	.5000	4-1/2	6	9.64	9.64	9.86	10.14	20.72

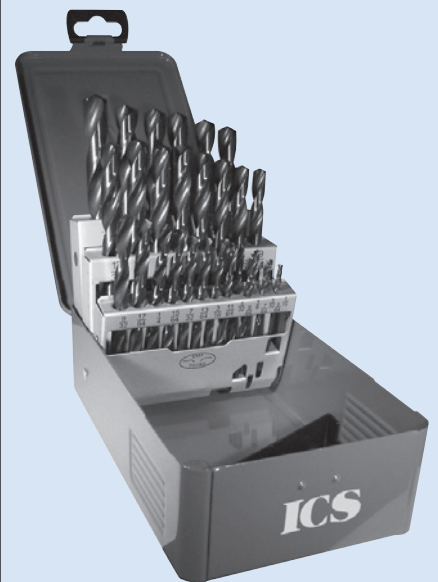
PACKAGING
1/64 to 17/64 - 12 Drills/Envelope 9/32 to 1/2 - 6 Drills/Envelope 33/64 to 3/4 - 1 Drill/Tube

ORDERING NOTE

To complete your order we may substitute or interchange black or bright drills unless you have specified "no substitutions".
Orders accepted in less than package quantity are subject to a 15% surcharge.

DRILL SETS

A variety of Jobber Length Drill Sets can be found on pages 53 to 60.



*Not Split Point

(Sizes continued on next page)

HIGH SPEED STEEL
JOBBER LENGTH DRILLS

ICS WIS

HEAVY DUTY

135° SPLIT POINT



Fractional Sizes (Straight Shank) 33/64" to 1" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TIN COAT
				OXIDE FINISH	BRIGHT FINISH	GOLD FINISH
				135° S/P	135° S/P	135° S/P
				JDHB	JDHT	
33/64	.5156	4-13/16	6-5/8	22.98	36.06	
17/32	.5312	4-13/16	6-5/8	24.04	37.16	
35/64	.5469	4-13/16	6-5/8	25.36	38.46	
9/16	.5625	4-13/16	6-5/8	26.26	39.36	
37/64	.5781	4-13/16	6-5/8	26.34	39.44	
19/32	.5938	5-3/16	7-1/8	26.90	39.98	
39/64	.6094	5-3/16	7-1/8	28.98	42.08	
5/8	.6250	5-3/16	7-1/8	28.98	42.08	
41/64	.6406	5-3/16	7-1/8	30.90	44.00	
21/32	.6562	5-3/16	7-1/8	30.90	44.00	
43/64	.6719	5-5/8	7-5/8	33.96	47.04	

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TIN COAT
				OXIDE FINISH	BRIGHT FINISH	GOLD FINISH
				135° S/P	135° S/P	135° S/P
				JDHB	JDHT	
11/16	.6875	5-5/8	7-5/8	33.96	47.04	
45/64	.7031	5-5/8	7-5/8	37.20	50.30	
23/32	.7188	5-5/8	7-5/8	37.20	50.30	
47/64	.7344	5-5/8	7-5/8	41.72	54.82	
3/4	.7500	5-5/8	7-5/8	41.72	54.82	
49/64	.7656	6	8-1/8	53.16	66.24	
25/32	.7812	6	8-1/8	53.16	66.24	
13/16	.8125	6-1/8	8-3/8	55.58	68.68	
7/8	.8750	6-1/8	8-3/8	59.78	72.88	
15/16	.9375	6-1/8	8-3/8	66.82	80.14	
1	1.0000	6-3/8	9	75.54	88.64	

HIGH SPEED STEEL
1/4" SHANK JOBBER LENGTH DRILLS

ICS WIS

HEAVY DUTY

135° SPLIT POINT



Fractional Sizes (Straight Shank) 17/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	HIGH SPEED STEEL		
		OXIDE FINISH	BRIGHT FINISH	GOLD FINISH
		135° S/P	135° S/P	135° S/P
		JDHBQS	JDHPQS	JDHGFQS
17/64	.2656	6.08	6.08	6.22
9/32	.2812	6.08	6.08	6.22
19/64	.2969	6.36	6.36	6.52
5/16	.3125	6.86	6.86	7.00
21/64	.3281	7.52	7.52	7.00
11/32	.3438	7.80	7.80	7.96
23/64	.3594	8.38	8.38	8.58
3/8	.3750	8.38	8.38	8.58

SIZE	DEC. EQUIV.	HIGH SPEED STEEL		
		OXIDE FINISH	BRIGHT FINISH	GOLD FINISH
		135° S/P	135° S/P	135° S/P
		JDHBQS	JDHPQS	JDHGFQS
25/64	.3906	8.48	8.48	8.68
13/32	.4062	8.78	8.78	8.98
27/64	.4219	9.20	9.20	8.98
7/16	.4375	10.06	10.06	10.28
29/64	.4531	10.84	10.84	11.08
15/32	.4688	11.36	11.36	11.64
31/64	.4844	11.62	11.62	11.84
1/2	.5000	12.00	12.00	12.24

HIGH SPEED STEEL
1/4" SHANK (4" LENGTH) JOBBER DRILLS

ICS WIS

HEAVY DUTY

135° SPLIT POINT



Fractional Sizes (Reduced Shank) 9/32" to 1/2" Dia.

SIZE	DEC. EQUIV.	HIGH SPEED STEEL	
		OXIDE FINISH	BRIGHT FINISH
		118° POINT	118° POINT
		MLDHQS	MLDHPQS
9/32	.2812	6.08	6.08
5/16	.3125	6.86	6.86
11/32	.3438	7.80	7.80
3/8	.3750	8.38	8.38

SIZE	DEC. EQUIV.	HIGH SPEED STEEL	
		OXIDE FINISH	BRIGHT FINISH
		118° POINT	118° POINT
		MLDHQS	MLDHPQS
13/32	.4062	8.88	8.88
7/16	.4375	10.06	10.06
15/32	.4688	11.36	11.36
1/2	.5000	12.00	12.00

HIGH SPEED STEEL
3/8" JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Fractional Sizes (Reduced Shank) 25/64" to 3/4" Dia.

HIGH SPEED STEEL					
SIZE	DEC. EQUIV.	OXIDE FINISH	OXIDE FINISH	BRIGHT FINISH	BRIGHT FINISH
		135° S/P JDHBTS	135° S/P JDHPTS	135° S/P JDHGFTS	135° S/P JDHDFTS
25/64	.3906	8.48	8.48	8.68	8.80
13/32	.4062	8.78	8.78	8.98	9.14
27/64	.4219	9.20	9.20	9.40	9.58
7/16	.4375	10.06	10.06	10.26	10.46
29/64	.4531	10.84	10.84	11.08	11.28
15/32	.4688	11.36	11.36	11.64	12.10
31/64	.4844	11.62	11.62	11.84	12.10
1/2	.5000	12.00	12.00	12.24	12.50
33/64	.5156	25.34	-	-	-
17/32	.5312	26.40	-	-	-
35/64	.5469	27.70	-	-	-
9/16	.5625	28.60	-	-	-

HSS		
SIZE	DEC. EQUIV.	OXIDE FINISH
		135° S/P JDHBTS
37/64	.5781	28.70
19/32	.5931	29.26
39/64	.6094	31.34
5/8	.6250	31.34
41/64	.6406	33.24
21/32	.6562	33.24
43/64	.6719	36.32
11/16	.6875	36.32
45/64	.7031	39.54
23/32	.7188	39.54
47/64	.7344	44.06
3/4	.7500	44.06

HIGH SPEED STEEL
1/2" SHANK JOBBER LENGTH DRILL SETS

ICS WIS

HEAVY DUTY

135° SPLIT POINT



Fractional Sizes (Reduced Shank) 33/64" to 1" Dia.

HSS				
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	OXIDE FINISH
				135° S/P JDHBRS
33/64	.5156	4-13/16	6-5/8	25.34
17/32	.5312	4-13/16	6-5/8	26.40
35/64	.5469	4-13/16	6-5/8	27.70
9/16	.5625	4-13/16	6-5/8	28.50
37/64	.5781	4-13/16	6-5/8	28.70
19/32	.5938	5-3/16	7-1/8	29.26
39/64	.6094	5-3/16	7-1/8	31.34
5/8	.6250	5-3/16	7-1/8	31.34
41/64	.6406	5-3/16	7-1/8	33.24
21/32	.6562	5-3/16	7-1/8	33.24
43/64	.6719	5-5/8	7-5/8	36.32

HSS				
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	OXIDE FINISH
				135° S/P JDHBRS
11/16	.6875	5-5/8	7-5/8	36.32
45/64	.7031	5-5/8	7-5/8	39.54
23/32	.7188	5-5/8	7-5/8	39.54
47/64	.7344	5-5/8	7-5/8	44.06
3/4	.7500	5-5/8	7-5/8	44.06
49/64	.7656	6	8-1/8	56.10
25/32	.7812	6	8-1/8	56.10
13/16	.8125	6-1/8	8-3/8	58.52
7/8	.8750	6-1/8	8-3/8	62.72
15/16	.9375	6-1/8	8-3/8	69.98
1	1.0000	6-3/8	9	78.48

NOTE

Reduced shank drills are used for drilling holes larger than the capacity of a 1/4, 3/8, or 1/2" drill chuck. A reduced shank drill should only be used for light to medium duty drilling applications as they do not have the torque strength of a straight shank drill. The shank is not as hard as the body of the drill to allow more flex and less breakage.

Quick Reference for Heavy Duty Reduced Shank Drills

DRILL TYPE	DRILL SETS	STUB LENGTH	JOBBER LENGTH	SILVER & DEMING	EXTRA LENGTH
High Speed Steel	60-67	11, 12	30, 34-35, 37, 40-42, 46	69-70, 71-72, 76	105-106, 110
Cobalt	60, 62-63, 65	-	42, 45	73-74, 77	-
TiN Coated	-	-	34, 37	-	-

HIGH SPEED STEEL JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Wire Gauge Sizes (Straight Shank) #1 to #60 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL				TIN COATED
				OXIDE FINISH	BRIGHT FINISH	GOLD FINISH	BLACK/GOLD	GOLD FINISH
				135° S/P	135° S/P	135° S/P	135° S/P	135° S/P
				JDHB	JDHP	JDHGF	JDHDF	JDHT
1	.2280	2-5/8	3-7/8	2.88	2.88	2.94	2.94	7.16
2	.2210	2-5/8	3-7/8	2.88	2.88	2.94	2.94	7.16
3	.2130	2-1/2	3-3/4	2.88	2.88	2.94	2.94	7.16
4	.2090	2-1/2	3-3/4	2.88	2.88	2.94	2.94	7.16
5	.2055	2-1/2	3-3/4	2.88	2.88	2.94	2.94	7.16
6	.2040	2-1/2	3-3/4	2.88	2.88	2.94	2.94	7.16
7	.2010	2-7/16	3-5/8	2.24	2.24	2.28	2.44	4.40
8	.1990	2-7/16	3-5/8	2.24	2.24	2.28	2.44	4.40
9	.1960	2-7/16	3-5/8	2.46	2.46	2.50	2.44	4.62
10	.1935	2-7/16	3-5/8	2.46	2.46	2.50	2.44	4.62
11	.1910	2-5/16	3-1/2	2.46	2.46	2.50	2.44	4.62
12	.1890	2-5/16	3-1/2	2.46	2.46	2.50	2.44	4.62
13	.1850	2-5/16	3-1/2	2.08	2.08	2.12	2.44	4.24
14	.1820	2-3/16	3-3/8	2.08	2.08	2.12	2.18	4.24
15	.1800	2-3/16	3-3/8	2.08	2.08	2.12	2.18	4.24
16	.1770	2-3/16	3-3/8	2.08	2.08	2.12	2.18	4.24
17	.1730	2-3/16	3-3/8	1.94	1.94	2.00	2.04	4.10
18	.1695	2-1/8	3-1/4	1.76	1.76	1.84	2.00	3.96
19	.1660	2-1/8	3-1/4	1.76	1.76	1.84	2.00	3.96
20	.1610	2-1/8	3-1/4	1.76	1.76	1.84	1.96	3.96
21	.1590	2-1/8	3-1/4	1.60	1.60	1.64	1.96	3.76
22	.1570	2	3-1/8	1.60	1.60	1.64	1.90	3.76
23	.1540	2	3-1/8	1.60	1.60	1.64	1.90	3.76
24	.1520	2	3-1/8	1.60	1.60	1.64	1.90	3.76
25	.1495	1-7/8	3	1.48	1.48	1.52	1.62	3.64
26	.1470	1-7/8	3	1.52	1.52	1.56	1.62	3.68
27	.1440	1-7/8	3	1.48	1.48	1.52	1.62	3.64
28	.1405	1-3/4	2-7/8	1.44	1.44	1.48	1.52	3.60
29	.1360	1-3/4	2-7/8	1.44	1.44	1.48	1.52	3.60
30	.1285	1-5/8	2-3/4	1.44	1.44	1.48	1.52	3.60
31	.1200	1-5/8	2-3/4	1.22	1.22	1.24	1.30	3.38
32	.1160	1-5/8	2-3/4	1.22	1.22	1.24	1.30	3.38
33	.1130	1-1/2	2-5/8	1.22	1.22	1.24	1.30	3.38
34	.1110	1-1/2	2-5/8	1.22	1.22	1.24	1.30	3.38
35	.1100	1-1/2	2-5/8	1.22	1.22	1.24	1.30	3.38
36	.1065	1-7/16	2-1/2	1.22	1.22	1.24	1.30	3.38
37	.1040	1-7/16	2-1/2	1.22	1.22	1.24	1.30	3.38
38	.1015	1-7/16	2-1/2	1.22	1.22	1.24	1.30	3.38
39	.0995	1-3/8	2-3/8	1.22	1.22	1.24	1.30	3.38
40	.0980	1-3/8	2-3/8	1.22	1.22	1.24	1.30	3.38
41	.0960	1-3/8	2-3/8	1.16	1.16	1.18	1.30	3.32
42	.0935	1-1/4	2-1/4	1.16	1.16	1.18	1.30	3.32
43	.0890	1-1/4	2-1/4	1.16	1.16	1.18	1.30	3.32
44	.0860	1-1/8	2-1/8	1.16	1.16	1.18	1.30	3.32
45	.0820	1-1/8	2-1/8	1.16	1.16	1.18	1.30	3.32
46	.0810	1-1/8	2-1/8	1.16	1.16	1.18	1.30	3.32
47	.0785	1	2	1.16	1.16	1.18	1.30	3.32
48	.0760	1	2	1.16	1.16	1.18	1.30	3.32
49	.0730	1	2	1.16	1.16	1.18	1.30	3.32
50	.0700	1	2	1.16	1.16	1.18	1.30	3.32
51	.0670	1	2	1.16	1.16	1.18	1.30	3.32
52	.0635	7/8	1-7/8	1.16	1.16	1.18	1.30	3.32
53	.0595	7/8	1-7/8	1.16	1.16	1.18	1.30	3.32
54	.0550	7/8	1-7/8	1.16	1.16	1.18	1.30	3.32
55	.0520	7/8	1-7/8	1.16	1.16	1.18	1.30	3.32
56	.0465	3/4	1-3/4	1.52	1.52	1.54	1.54	3.68
57	.0430	3/4	1-3/4	1.52	1.52	1.54	1.54	3.68
58	.0420	11/16	1-5/8	1.52	1.52	1.54	1.54	3.68
59	.0410	11/16	1-5/8	1.52	1.52	1.54	1.54	3.68
60	.0400	11/16	1-5/8	1.52	1.52	1.54	1.54	3.68



Heavy Duty
Wire Gauge Size
Drill Sets are on
page 57.

PACKAGING
#1 to #60
12 Drills/Envelope

NOTE

Add 15% for orders
accepted in less than
standard packaging.

HIGH SPEED STEEL JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL				TIN COATED	PACKAGE QUANTITY
				OXIDE FINISH	BRIGHT FINISH	GOLD FINISH	BLACK/GOLD	GOLD FINISH	
				135° S/P	135° S/P	135° S/P	135° S/P	135° S/P	
				JDHB	JDHP	JDHGF	JDHDF	JDHT	
A	.234	2-5/8	3-7/8	3.00	3.00	3.08	3.08	6.30	12
B	.238	2-3/4	4	3.00	3.00	3.08	3.08	6.30	12
C	.242	2-3/4	4	3.00	3.00	3.08	3.08	6.30	12
D	.246	2-3/4	4	3.00	3.00	3.08	3.08	6.30	12
E	.250	2-3/4	4	3.10	3.10	3.10	3.10	6.38	12
F	.257	2-7/8	4-1/8	3.50	3.50	3.58	3.58	10.36	12
G	.261	2-7/8	4-1/8	3.50	3.50	3.58	3.58	10.36	12
H	.266	2-7/8	4-1/8	3.60	3.60	3.66	3.66	10.46	12
I	.272	2-7/8	4-1/8	3.60	3.60	3.66	3.66	10.46	12
J	.277	2-7/8	4-1/8	3.88	3.88	3.98	3.98	10.76	12
K	.281	2-15/16	4-1/4	4.20	4.20	4.28	4.28	11.08	12
L	.290	2-15/16	4-1/4	4.20	4.20	4.28	4.28	11.08	12
M	.295	3-1/16	4-3/8	4.82	4.82	4.90	4.90	11.68	12
N	.302	3-1/16	4-3/8	4.82	4.82	4.90	4.90	11.68	6
O	.316	3-3/16	4-1/2	4.82	4.82	4.90	4.90	11.68	6
P	.323	3-5/16	4-5/8	5.18	5.18	5.26	5.26	12.04	6
Q	.332	3-7/16	4-3/4	5.18	5.18	5.26	5.26	12.04	6
R	.339	3-7/16	4-3/4	5.40	5.40	5.52	5.52	12.26	6
S	.348	3-1/2	4-7/8	5.68	5.68	5.80	5.80	14.02	6
T	.358	3-1/2	4-7/8	6.22	6.22	6.34	6.34	14.56	6
U	.368	3-5/8	5	6.44	6.44	6.58	6.58	14.76	6
V	.377	3-5/8	5	6.44	6.44	6.58	6.58	17.52	6
W	.386	3-3/4	5-1/8	7.12	7.12	7.24	7.24	18.20	6
X	.397	3-3/4	5-1/8	8.34	8.34	8.50	8.50	19.40	6
Y	.404	3-7/8	5-1/4	9.54	9.54	9.72	9.72	20.62	6
Z	.413	3-7/8	5-1/4	9.74	9.74	9.96	9.96	20.84	6

HIGH SPEED STEEL 3/8" SHANK JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Letter Sizes (Reduced Shank) "W" to "Z" Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL			TIN COAT	PACKAGE QUANTITY
				OXIDE FINISH	BRIGHT FINISH	GOLD FINISH	GOLD FINISH	
				135° S/P	135° S/P	135° S/P	135° S/P	
				JDHBTS	JDHPTS	JDHGFTS	JDHTTS	
W	.386	3-3/4	5-1/8	9.48	9.48	9.60	20.54	6
X	.397	3-3/4	5-1/8	10.70	10.70	10.86	21.76	6
Y	.404	3-7/8	5-1/4	11.90	11.90	12.08	22.98	6
Z	.413	3-7/8	5-1/4	12.10	12.10	12.32	23.18	6

Quick Reference for Heavy Duty Letter Size Drills



DRILL TYPE	DRILL SETS	STUB LENGTH	JOBBER LENGTH	REDUCED SHANK	TAPER LENGTH	AIRCRAFT EXTENSION
High Speed Steel	58	5	16, 28, 32	28	71	109
Cobalt	58	10	36	36	75	109
TiN Coated	58	-	28	28	-	-

JOBBER LENGTH DRILLS - 3 FLATS ON SHANK

ICS WIS

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL TECHNICAL		
			SPECS	DATA	SHANK
JDHP3F	 OXIDE FINISH	This drill was specifically designed for welders who need to drill stainless steel and aluminum without the fear of oxide contaminating their weld. Saves on cleanup time and machining cost. Flats are ground on three sides of drill shank for positive holding in 3 Jaw Chucks.	M2 M7	135° Split Pt. Std. Spiral Hvy. Duty Web	Straight 3 Flats
JDHT3F	 GOLD TITANIUM COATED	This combination of titanium nitride coating with the heavy duty design enhances chip flow, finished hole quality and up to 700% more drill life. Flats are ground on three sides of drill shank for positive holding in 3 Jaw Chucks.	M2 M7	135° Split Pt. Std. Spiral Hvy. Duty Web	Straight 3 Flats

Fractional Sizes (Straight Shank - no Flats) 1/16" to 11/64" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH 135° S/P		GOLD FINISH 135° S/P	
				JDHP	JDHT		
1/16	.0625	7/8	1-7/8	1.06	2.72		
5/64	.0781	1	2	1.06	2.72		
3/32	.0938	1-1/4	2-1/4	1.06	2.72		
7/64	.1094	1-1/2	2-5/8	1.06	2.72		

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH 135° S/P		GOLD FINISH 135° S/P	
				JDHP	JDHT		
1/8	.1250	1-5/8	2-3/4	1.10	2.78		
9/64	.1406	1-3/4	2-7/8	1.18	2.86		
5/32	.1562	2	3-1/8	1.48	3.14		
11/64	.1719	2-1/8	3-1/4	1.60	3.26		

Fractional Sizes (Straight Shank - 3 Flats) 3/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH 135° S/P		GOLD COAT 135° S/P	
				JDHP3F	JDHT3F		
3/16	.1875	2-5/16	3-1/2	2.14	3.72		
13/64	.2031	2-7/16	3-5/8	2.44	5.62		
7/32	.2188	2-1/2	3-3/4	2.58	5.76		
15/64	.2344	2-5/8	3-7/8	2.74	5.90		
1/4	.2500	2-3/4	4	2.84	5.98		
17/64	.2656	2-7/8	4-1/8	3.58	10.28		
9/32	.2812	2-15/16	4-1/4	3.84	10.54		
19/64	.2969	3-1/16	4-3/8	4.26	10.90		
5/16	.3125	3-3/16	4-1/2	4.40	11.06		
21/64	.3281	3-5/16	4-5/8	4.82	11.44		
11/32	.3438	3-7/16	4-3/4	5.38	12.00		

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH 135° S/P		GOLD COAT 135° S/P	
				JDHP3F	JDHT3F		
23/64	.3594	3-1/2	4-7/8	5.94	14.00		
3/8	.3750	3-5/8	5	6.18	14.20		
25/64	.3906	3-3/4	5-1/8	6.76	17.52		
13/32	.4062	3-7/8	5-1/4	7.10	17.84		
27/64	.4219	3-15/16	5-3/8	7.54	18.26		
7/16	.4375	4-1/16	5-1/2	8.42	19.10		
29/64	.4531	4-3/16	5-5/8	9.24	19.88		
15/32	.4688	4-5/16	5-3/4	9.82	20.42		
31/64	.4844	4-3/8	5-7/8	10.06	20.64		
1/2	.5000	4-1/2	6	10.46	21.02		

NOTE: 29 pc. sets (1/16 - 1/2 by 64ths) can be ordered with 3 flats although sizes 1/16 - 11/64 will not have flats

JOBBER LENGTH DRILLS - 3 FLATS ON SHANK

ICS WIS

HEAVY DUTY

135° SPLIT POINT



Fractional Sizes (3/8" Shank - 3 Flats) 25/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH 135° S/P		GOLD COAT 135° S/P	
				JDHP3FTS	JDHT3FTS		
25/64	.3906	3-3/4	5-1/8	8.38	19.93		
13/32	.4062	3-7/8	5-1/4	8.66	20.18		
27/64	.4219	3-15/16	5-3/8	9.06	20.55		
7/16	.4375	4-1/16	5-1/2	9.88	21.25		




SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH 135° S/P		GOLD COAT 135° S/P	
				JDHP3FTS	JDHT3FTS		
29/64	.4531	4-3/16	5-5/8	10.62	21.93		
15/32	.4688	4-5/16	5-3/4	11.12	22.38		
31/64	.4844	4-3/8	5-7/8	11.36	22.58		
1/2	.5000	4-1/2	6	11.72	23.00		

HIGH SPEED STEEL JOBBER LENGTH DRILLS - 3 FLATS ON SHANK

ICS WIS

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL TECHNICAL		
			SPECS	DATA	SHANK
JDHB3F	 OXIDE FINISH	This drill was specifically designed for welders who need to drill stainless steel and aluminum without the fear of oxide contaminating their weld. Saves on cleanup time and machining cost. Flats are ground on three sides of drill shank for positive holding in 3 Jaw Chucks.	M2 M7	135° Split Pt. Std. Spiral Hvy. Duty Web	Straight 3 Flats
JDHDF3F	 BLACK/GOLD FINISH	This drill was designed for drilling work hardening 300 series stainless steels (except 303). Special thin web will penetrate work hardening stainless fast enough to cut beneath the chip which is hardening from deformation. Flats are ground on three sides of drill shank for positive holding in 3 Jaw Chucks.	M2 M7	135° Split Pt. Std. Spiral Hvy. Duty Web	Straight 3 Flats
JDC3F	 GOLD COBALT FINISH	For portable or machine drilling in stainless steel, titanium, and other work hardening metals. Mfr. to NAS 907-J specs. Flats are ground on three sides of drill shank for positive holding in 3 Jaw Chucks.	M2 M7	135° Split Pt. Std. Spiral Hvy. Duty Web	Straight 3 Flats

Fractional Sizes (Straight Shank - no Flats) 1/16" to 11/64" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		COBALT
				OXIDE FINISH	BLACK/GOLD	COBALT
				135° S/P	135° S/P	135° S/P
				JDHB	JDHDF	JDC
1/16	.0625	7/8	1-7/8	1.06	1.06	1.72
5/64	.0781	1	2	1.06	1.06	1.72
3/32	.0938	1-1/4	2-1/4	1.06	1.06	1.72
7/64	.1094	1-1/2	2-5/8	1.06	1.06	1.92

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		COBALT
				OXIDE FINISH	BLACK/GOLD	COBALT
				135° S/P	135° S/P	135° S/P
				JDHB	JDHDF	JDC
1/8	.1250	1-5/8	2-3/4	1.10	1.10	2.28
9/64	.1406	1-3/4	2-7/8	1.18	1.18	2.32
5/32	.1562	2	3-1/8	1.48	1.48	2.58
11/64	.1719	2-1/8	3-1/4	1.60	1.60	2.82

Fractional Sizes (Straight Shank - 3 Flats) 3/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		COBALT
				OXIDE FINISH	BLACK/GOLD	COBALT
				135° S/P	135° S/P	135° S/P
				JDHB3F	JDHDF3F	JDC3F
3/16	.1875	2-5/16	3-1/2	2.04	2.14	3.40
13/64	.2031	2-7/16	3-5/8	2.36	2.44	4.00
7/32	.2188	2-1/2	3-3/4	2.46	2.58	4.50
15/64	.2344	2-5/8	3-7/8	2.60	2.74	4.98
1/4	.2500	2-3/4	4	2.72	2.84	5.12
17/64	.2656	2-7/8	4-1/8	3.40	3.58	5.84
9/32	.2812	2-15/16	4-1/4	3.68	3.84	6.44
19/64	.2969	3-1/16	4-3/8	4.04	4.26	7.10
5/16	.3125	3-3/16	4-1/2	4.18	4.40	7.48
21/64	.3281	3-5/16	4-5/8	4.58	4.82	8.32
11/32	.3438	3-7/16	4-3/4	5.12	5.38	9.18

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		COBALT
				OXIDE FINISH	BLACK/GOLD	COBALT
				135° S/P	135° S/P	135° S/P
				JDHB3F	JDHDF3F	JDC3F
23/64	.3594	3-1/2	4-7/8	5.68	5.94	10.28
3/8	.3750	3-5/8	5	5.88	6.18	10.44
25/64	.3906	3-3/4	5-1/8	6.46	6.76	11.84
13/32	.4062	3-7/8	5-1/4	6.74	7.10	12.40
27/64	.4219	3-15/16	5-3/8	7.16	7.54	13.62
7/16	.4375	4-1/16	5-1/2	8.02	8.42	13.92
29/64	.4531	4-3/16	5-5/8	8.80	9.24	16.64
15/32	.4688	4-5/16	5-3/4	9.32	9.82	16.92
31/64	.4844	4-3/8	5-7/8	9.58	10.06	18.38
1/2	.5000	4-1/2	6	9.96	10.46	17.70

NOTE: 29 pc. sets (1/16 - 1/2 by 64ths) can be ordered with 3 flats although sizes 1/16 - 11/64 will not have flats

HIGH SPEED STEEL JOBBER LENGTH DRILLS - 3 FLATS ON SHANK

ICS WIS

HEAVY DUTY

135° SPLIT POINT



Fractional Sizes (3/8" Shank - 3 Flats) 25/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		COBALT
				OXIDE FINISH	BLACK/GOLD	COBALT
				135° S/P	135° S/P	135° S/P
				JDHB3FTS	JDHDF3FTS	JDC3FTS
25/64	.3906	3-3/4	5-1/8	8.80	8.90	14.94
13/32	.4062	3-7/8	5-1/4	9.10	9.20	15.52
27/64	.4219	3-15/16	5-3/8	9.52	9.62	16.82
7/16	.4375	4-1/16	5-1/2	10.38	10.48	17.14

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		COBALT
				OXIDE FINISH	BLACK/GOLD	COBALT
				135° S/P	135° S/P	135° S/P
				JDHB3FTS	JDHDF3FTS	JDC3FTS
29/64	.4531	4-3/16	5-5/8	11.16	11.26	20.02
15/32	.4688	4-5/16	5-3/4	11.68	11.78	20.32
31/64	.4844	4-3/8	5-7/8	11.94	12.04	21.86
1/2	.5000	4-1/2	6	12.32	12.42	21.18




HIGH SPEED STEEL JOBBER LENGTH DRILLS

MET-31

ICS USA

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
JDHTC	 Gray Carbonitride Titanium Coated	Used for alloy steels, tool steels, and abrasive materials like cast iron and high silicon aluminum alloys.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web
JDHTA	 Purple Titanium Aluminum Nitride Coated	Used for titanium and nickel alloys, stainless steels, hard abrasive materials, and whenever excessive heat is generated on the cutting edge.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web
JDHZ	 Silver-Gold Zirconium Coated	Used for aluminum alloys, cast iron, high temperature alloys, stainless steels, and non-ferrous metals. Also very effective in glass filled plastics and wood.	M2, M7	135° Split Pt. Std. Spiral Hvy. Duty Web

Fractional Sizes (Straight Shank) 1/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE	ITEM NO.	PRICE	ITEM NO.	PRICE
				TiCN (Gray Finish)		TiAlN (Purple Finish)		ZrN (Silver/Gold)	
1/16	.0625	7/8	1-7/8	JDHTC004	3.40	JDHTA004	3.54	JDHZ004	3.40
5/64	.0781	1	2	JDHTC005	3.40	JDHTA005	3.54	JDHZ005	3.40
3/32	.0938	1-1/4	2-1/4	JDHTC006	3.40	JDHTA006	3.54	JDHZ006	3.40
7/64	.1094	1-1/2	2-5/8	JDHTC007	3.40	JDHTA007	3.54	JDHZ007	3.40
1/8	.1250	1-5/8	2-3/4	JDHTC008	3.44	JDHTA008	3.60	JDHZ008	3.44
9/64	.1406	1-3/4	2-7/8	JDHTC009	3.54	JDHTA009	3.68	JDHZ009	3.54
5/32	.1562	2	3-1/8	JDHTC010	3.82	JDHTA010	3.98	JDHZ010	3.82
11/64	.1719	2-1/8	3-1/4	JDHTC011	3.96	JDHTA011	4.08	JDHZ011	3.96
3/16	.1875	2-5/16	3-1/2	JDHTC012	4.08	JDHTA012	4.22	JDHZ012	4.08
13/64	.2031	2-7/16	3-5/8	JDHTC013	6.62	JDHTA013	6.96	JDHZ013	6.62
7/32	.2188	2-1/2	3-3/4	JDHTC014	6.76	JDHTA014	7.10	JDHZ014	6.76
15/64	.2344	2-5/8	3-7/8	JDHTC015	6.92	JDHTA015	7.22	JDHZ015	6.92
1/4	.2500	2-3/4	4	JDHTC016	7.00	JDHTA016	7.34	JDHZ016	7.00
17/64	.2656	2-7/8	4-1/8	JDHTC017	12.68	JDHTA017	13.38	JDHZ017	12.68
9/32	.2812	2-15/16	4-1/4	JDHTC018	12.94	JDHTA018	13.64	JDHZ018	12.94
19/64	.2969	3-1/16	4-3/8	JDHTC019	13.32	JDHTA019	14.02	JDHZ019	13.32
5/16	.3125	3-3/16	4-1/2	JDHTC020	13.46	JDHTA020	14.16	JDHZ020	13.46
21/64	.3281	3-5/16	4-5/8	JDHTC021	13.86	JDHTA021	14.56	JDHZ021	13.86
11/32	.3438	3-7/16	4-3/4	JDHTC022	14.42	JDHTA022	15.08	JDHZ022	14.42
23/64	.3594	3-1/2	4-7/8	JDHTC023	17.14	JDHTA023	17.84	JDHZ023	17.14
3/8	.3750	3-5/8	5	JDHTC024	17.22	JDHTA024	18.06	JDHZ024	17.22
25/64	.3906	3-3/4	5-1/8	JDHTC025	21.62	JDHTA025	22.72	JDHZ025	21.62
13/32	.4062	3-7/8	5-1/4	JDHTC026	21.90	JDHTA026	23.04	JDHZ026	21.90
27/64	.4219	3-15/16	5-3/8	JDHTC027	22.32	JDHTA027	23.46	JDHZ027	22.32
7/16	.4375	4-1/16	5-1/2	JDHTC028	23.18	JDHTA028	24.30	JDHZ028	23.18
29/64	.4531	4-3/16	5-5/8	JDHTC029	23.96	JDHTA029	25.08	JDHZ029	23.96
15/32	.4688	4-5/16	5-3/4	JDHTC030	24.50	JDHTA030	25.62	JDHZ030	24.50
31/64	.4844	4-3/8	5-7/8	JDHTC031	24.74	JDHTA031	25.86	JDHZ031	24.74
1/2	.5000	4-1/2	6	JDHTC032	25.12	JDHTA032	26.24	JDHZ032	25.12

PACKAGING

1/64 to 17/64 - 12 Drills/Envelope • 9/32 to 1/2 - 6 Drills/Envelope

ORDERING NOTE

Orders accepted in less than package quantity are subject to a 15% surcharge.

DRILL SETS

A variety of Jobber Length Drill Sets can be found on pages 53 to 58.

HIGH SPEED STEEL JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Wire Gauge Sizes (Straight Shank) #1 to #60 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	TICN		
				RED/BRONZE	PURPLE	SILVER/GOLD
				135° S/P	135° S/P	135° S/P
				JDHTC	JDHTA	JDHZ
1	.2280	2-5/8	3-7/8	7.50	7.82	7.50
2	.2210	2-5/8	3-7/8	7.50	7.82	7.50
3	.2130	2-1/2	3-3/4	7.50	7.82	7.50
4	.2090	2-1/2	3-3/4	7.50	7.82	7.50
5	.2055	2-1/2	3-3/4	7.50	7.82	7.50
6	.2040	2-1/2	3-3/4	7.50	7.82	7.50
7	.2010	2-7/16	3-5/8	6.82	7.16	6.82
8	.1990	2-7/16	3-5/8	6.82	7.16	6.82
9	.1960	2-7/16	3-5/8	7.06	7.40	7.06
10	.1935	2-7/16	3-5/8	7.06	7.40	7.06
11	.1910	2-5/16	3-1/2	7.06	7.40	7.06
12	.1890	2-5/16	3-1/2	7.06	7.40	7.06
13	.1850	2-5/16	3-1/2	4.44	4.58	4.44
14	.1820	2-3/16	3-3/8	4.44	4.58	4.44
15	.1800	2-3/16	3-3/8	4.44	4.58	4.44
16	.1770	2-3/16	3-3/8	4.44	4.58	4.44
17	.1730	2-3/16	3-3/8	4.28	4.44	4.28
18	.1695	2-1/8	3-1/4	4.12	4.26	4.12
19	.1660	2-1/8	3-1/4	4.12	4.26	4.12
20	.1610	2-1/8	3-1/4	4.12	4.26	4.12
21	.1590	2-1/8	3-1/4	3.96	4.08	3.96
22	.1570	2	3-1/8	3.96	4.08	3.96
23	.1540	2	3-1/8	3.96	4.08	3.96
24	.1520	2	3-1/8	3.96	4.08	3.96
25	.1495	1-7/8	3	3.82	3.98	3.82
26	.1470	1-7/8	3	3.86	4.02	3.86
27	.1440	1-7/8	3	3.82	3.98	3.82
28	.1405	1-3/4	2-7/8	3.78	3.92	3.78
29	.1360	1-3/4	2-7/8	3.78	3.92	3.78
30	.1285	1-5/8	2-3/4	3.78	3.92	3.78

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	TICN		
				RED/BRONZE	PURPLE	SILVER/GOLD
				135° S/P	135° S/P	135° S/P
				JDHTC	JDHTA	JDHZ
31	.1200	1-5/8	2-3/4	3.58	3.70	3.58
32	.1160	1-5/8	2-3/4	3.58	3.70	3.58
33	.1130	1-1/2	2-5/8	3.58	3.70	3.58
34	.1110	1-1/2	2-5/8	3.58	3.70	3.58
35	.1100	1-1/2	2-5/8	3.58	3.70	3.58
36	.1065	1-7/16	2-1/2	3.58	3.70	3.58
37	.1040	1-7/16	2-1/2	3.58	3.70	3.58
38	.1015	1-7/16	2-1/2	3.58	3.70	3.58
39	.0995	1-3/8	2-3/8	3.58	3.70	3.58
40	.0980	1-3/8	2-3/8	3.58	3.70	3.58
41	.0960	1-3/8	2-3/8	3.52	3.66	3.52
42	.0935	1-1/4	2-1/4	3.52	3.66	3.52
43	.0890	1-1/4	2-1/4	3.52	3.66	3.52
44	.0860	1-1/8	2-1/8	3.52	3.66	3.52
45	.0820	1-1/8	2-1/8	3.52	3.66	3.52
46	.0810	1-1/8	2-1/8	3.52	3.66	3.52
47	.0785	1	2	3.52	3.66	3.52
48	.0760	1	2	3.52	3.66	3.52
49	.0730	1	2	3.52	3.66	3.52
50	.0700	1	2	3.52	3.66	3.52
51	.0670	1	2	3.52	3.66	3.52
52	.0635	7/8	1-7/8	3.52	3.66	3.52
53	.0595	7/8	1-7/8	3.52	3.66	3.52
54	.0550	7/8	1-7/8	3.52	3.66	3.52
55	.0520	7/8	1-7/8	3.52	3.66	3.52
56	.0465	3/4	1-3/4	3.86	4.02	3.86
57	.0430	3/4	1-3/4	3.86	4.02	3.86
58	.0420	11/16	1-5/8	3.86	4.02	3.86
59	.0410	11/16	1-5/8	3.86	4.02	3.86
60	.0400	11/16	1-5/8	3.86	4.02	3.86

Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	TICN		
				RED/BRONZE	PURPLE	SILVER/GOLD
				135° S/P	135° S/P	135° S/P
				JDHTC	JDHTA	JDHZ
A	.2340	2-5/8	3-7/8	7.60	7.94	7.60
B	.2380	2-3/4	4	7.60	7.94	7.60
C	.2420	2-3/4	4	7.60	7.94	7.60
D	.2460	2-3/4	4	7.60	7.94	7.60
E	.2500	2-3/4	4	7.72	7.92	7.72
F	.2570	2-7/8	4-1/8	13.08	13.78	13.08
G	.2610	2-7/8	4-1/8	13.08	13.78	13.08
H	.2660	2-7/8	4-1/8	13.20	13.86	13.20
I	.2720	2-7/8	4-1/8	13.20	13.86	13.20
J	.2770	2-7/8	4-1/8	13.48	14.18	13.48
K	.2810	2-15/16	4-1/4	13.80	14.48	13.80
L	.2900	2-15/16	4-1/4	13.80	14.48	13.80
M	.2950	3-1/16	4-3/8	14.42	15.08	14.42


SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	TICN		
				RED/BRONZE	PURPLE	SILVER/GOLD
				135° S/P	135° S/P	135° S/P
				JDHTC	JDHTA	JDHZ
N	.3020	3-1/16	4-3/8	14.42	15.08	14.42
O	.3160	3-3/16	4-1/2	14.42	15.08	14.42
P	.3230	3-5/16	4-5/8	14.76	15.44	14.76
Q	.3320	3-7/16	4-3/4	14.76	15.44	14.76
R	.3390	3-7/16	4-3/4	15.00	15.68	15.00
S	.3480	3-1/2	4-7/8	17.36	18.16	17.36
T	.3580	3-1/2	4-7/8	17.90	18.72	17.90
U	.3680	3-5/8	5	18.10	18.92	18.10
V	.3770	3-5/8	5	21.90	23.04	21.90
W	.3860	3-3/4	5-1/8	22.60	24.96	22.60
X	.3970	3-3/4	5-1/8	23.82	24.96	23.82
Y	.4040	3-7/8	5-1/4	25.02	26.14	25.02
Z	.4130	3-7/8	5-1/4	25.22	26.36	25.22

HIGH SPEED STEEL LEFT HAND JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	SHANK
JDL	 GOLD FINISH	For portable or machine drilling where left hand rotation is required. Often used to drill out broken studs and screws.	M2 M7	135° Split Pt. Std. Spiral Hvy. Duty Web	Straight 3/8

Fractional Sizes (Straight Shank) 1/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/16	.0625	7/8	1-7/8	JDL004	2.60
5/64	.0781	1	2	JDL005	2.60
3/32	.0938	1-1/4	2-1/4	JDL006	2.60
7/64	.1094	1-1/2	2-5/8	JDL007	2.60
1/8	.1250	1-5/8	2-3/4	JDL008	2.60
9/64	.1406	1-3/4	2-7/8	JDL009	2.60
5/32	.1562	2	3-1/8	JDL010	3.02
11/64	.1719	2-1/8	3-1/4	JDL011	3.32
3/16	.1875	2-5/16	3-1/2	JDL012	3.62
13/64	.2031	2-7/16	3-5/8	JDL013	4.04
7/32	.2188	2-1/2	3-3/4	JDL014	4.64
15/64	.2344	2-5/8	3-7/8	JDL015	4.88
1/4	.2500	2-3/4	4	JDL016	5.00
17/64	.2656	2-7/8	4-1/8	JDL017	6.14
9/32	.2812	2-15/16	4-1/4	JDL018	6.74

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
19/64	.2969	3-1/16	4-3/8	JDL019	7.34
5/16	.3125	3-3/16	4-1/2	JDL020	7.56
21/64	.3281	3-5/16	4-5/8	JDL021	8.18
11/32	.3438	3-7/16	4-3/4	JDL022	9.46
23/64	.3594	3-1/2	4-7/8	JDL023	10.76
3/8	.3750	3-5/8	5	JDL024	11.54
25/64	.3906	3-3/4	5-1/8	JDL025	12.68
13/32	.4062	3-7/8	5-1/4	JDL026	13.18
27/64	.4219	3-15/16	5-3/8	JDL027	14.36
7/16	.4375	4-1/16	5-1/2	JDL028	15.14
29/64	.4531	4-3/16	5-5/8	JDL029	17.38
15/32	.4688	4-5/16	5-3/4	JDL030	18.56
31/64	.4844	4-3/8	5-7/8	JDL031	19.16
1/2	.5000	4-1/2	6	JDL032	19.16

HIGH SPEED STEEL LEFT HAND 3/8" SHANK JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Fractional Sizes (Straight Shank) 25/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
25/64	.3906	3-3/4	5-1/8	JDLTS025	14.56
13/32	.4062	3-7/8	5-1/4	JDLTS026	15.02
27/64	.4219	3-15/16	5-3/8	JDLTS027	16.20
7/16	.4375	4-1/16	5-1/2	JDLTS028	16.96

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
29/64	.4531	4-3/16	5-5/8	JDLTS029	19.14
15/32	.4688	4-5/16	5-3/4	JDLTS030	20.32
31/64	.4844	4-3/8	5-7/8	JDLTS031	20.90
1/2	.5000	4-1/2	6	JDLTS032	20.90

NOTE

Left Hand Jobber Drills are not designed to replace the use of Screw Extractors found in the Threading Tools Catalog.



DRILLS SETS


**LEFT HAND
JOBBER LENGTH**
Drill Sets on pages 53 - 57.

HIGH SPEED STEEL
METRIC JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	SHANK
JDMHGF	 GOLD FINISH	This drill was specifically designed for welders who need to drill stainless steel and aluminum without the fear of oxide contaminating their weld. Saves on cleanup time and machining cost.	M2 M7	135° Split Pt. Std. Spiral Hvy. Duty Web	Straight 3/8

Metric Sizes (Straight Shank) 1.00mm to 13.00mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
*1.00	.0394	11/16	1-5/8	JDMHGF01.00	1.86
*1.50	.0591	7/8	1-7/8	JDMHGF01.50	1.94
2.00	.0781	1	2-1/8	JDMHGF02.00	1.94
2.50	.0984	1-3/8	2-3/8	JDMHGF02.50	2.10
3.00	.1181	1-5/8	2-3/4	JDMHGF03.00	2.18
3.50	.1378	2	3-1/8	JDMHGF03.50	2.24
4.00	.1575	2	3-1/8	JDMHGF04.00	2.44
4.50	.1772	2-5/16	3-1/2	JDMHGF04.50	2.78
5.00	.1969	2-1/2	3-3/4	JDMHGF05.00	3.02
5.10	.2008	2-1/2	3-3/4	JDMHGF05.10	3.02
5.50	.2165	2-1/2	3-3/4	JDMHGF05.50	3.50
6.00	.2362	2-3/4	4	JDMHGF06.00	4.00
6.50	.2559	2-15/16	4-1/4	JDMHGF06.50	4.00
7.00	.2756	2-15/16	4-1/4	JDMHGF07.00	4.78

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
7.50	.2953	3-3/16	4-1/2	JDMHGF07.50	5.52
7.75	.3051	3-3/16	4-1/2	JDMHGF07.75	6.12
8.00	.3150	3-3/16	4-1/2	JDMHGF08.00	6.76
8.50	.3346	3-7/16	4-3/4	JDMHGF08.50	7.52
9.00	.3543	3-5/8	5	JDMHGF09.00	8.42
9.50	.3740	3-5/8	5	JDMHGF09.50	8.72
9.70	.3819	3-7/8	5-1/4	JDMHGF09.70	9.86
10.00	.3937	3-7/8	5-1/4	JDMHGF10.00	10.14
10.50	.4134	4-1/16	5-1/2	JDMHGF10.50	11.28
11.00	.4331	4-1/16	5-1/2	JDMHGF11.00	11.70
11.50	.4528	4-5/16	5-3/4	JDMHGF11.50	13.08
12.00	.4724	4-5/16	5-3/4	JDMHGF12.00	14.56
12.50	.4921	4-1/2	6	JDMHGF12.50	14.86
13.00	.5118	4-13/16	6-5/8	JDMHGF13.00	14.86

*Not Split Point

HIGH SPEED STEEL
METRIC 3/8" SHANK JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Metric Sizes (Reduced Shank) 10.00mm to 13.00mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
10.00	.3937	3-7/8	5-1/4	JDMHGFTS10.00	12.36
10.50	.4134	4-1/16	5-1/2	JDMHGFTS10.50	13.46
11.00	.4331	4-1/16	5-1/2	JDMHGFTS11.00	13.88
11.50	.4528	4-5/16	5-3/4	JDMHGFTS11.50	15.28

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
12.00	.4724	4-5/16	5-3/4	JDMHGFTS12.00	16.74
12.50	.4921	4-1/2	6	JDMHGFTS12.50	17.06
13.00	.5118	4-13/16	6-5/8	JDMHGFTS13.00	17.06

NOTE

Heavy Duty Metric Jobber Drill Sets are on page 59.


COBALT JOBBER LENGTH DRILLS

MET-35

ICS WIS

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	SHANK
JDC	 GOLD COBALT FINISH	For portable or machine drilling in stainless steel, titanium, and other work hardening metals. Mfr. to NAS 907-J specs.	M42	135° Split Pt. Std. Spiral Hvy. Duty Web	Straight 3/8

Fractional Sizes (Straight Shank) 1/64" to 11/16" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
*1/64	.0156	3/16	3/4	JDC001	4.02
*1/32	.0313	1/2	1-3/8	JDC002	3.20
*3/64	.0469	3/4	1-3/4	JDC003	2.36
1/16	.0625	7/8	1-7/8	JDC004	1.72
5/64	.0781	1	2	JDC005	1.72
3/32	.0938	1-1/4	2-1/4	JDC006	1.72
7/64	.1094	1-1/2	2-5/8	JDC007	1.92
1/8	.1250	1-5/8	2-3/4	JDC008	2.28
9/64	.1406	1-3/4	2-7/8	JDC009	2.32
5/32	.1562	2	3-1/8	JDC010	2.58
11/64	.1719	2-1/8	3-1/4	JDC011	2.82
3/16	.1875	2-5/16	3-1/2	JDC012	3.10
13/64	.2031	2-7/16	3-5/8	JDC013	3.68
7/32	.2188	2-1/2	3-3/4	JDC014	4.18
15/64	.2344	2-5/8	3-7/8	JDC015	4.66
1/4	.2500	2-3/4	4	JDC016	4.82
17/64	.2656	2-7/8	4-1/8	JDC017	5.52
9/32	.2812	2-15/16	4-1/4	JDC018	6.12
19/64	.2969	3-1/16	4-3/8	JDC019	6.78
5/16	.3125	3-3/16	4-1/2	JDC020	7.16
21/64	.3281	3-5/16	4-5/8	JDC021	8.00
11/32	.3438	3-7/16	4-3/4	JDC022	8.76

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
23/64	.3594	3-1/2	4-7/8	JDC023	9.96
3/8	.3750	3-5/8	5	JDC024	10.12
25/64	.3906	3-3/4	5-1/8	JDC025	11.54
13/32	.4062	3-7/8	5-1/4	JDC026	12.08
27/64	.4219	3-15/16	5-3/8	JDC027	13.30
7/16	.4375	4-1/16	5-1/2	JDC028	13.62
29/64	.4531	4-3/16	5-5/8	JDC029	16.32
15/32	.4688	4-5/16	5-3/4	JDC030	16.60
31/64	.4844	4-3/8	5-7/8	JDC031	17.40
1/2	.5000	4-1/2	6	JDC032	17.40
33/64	.5156	4-13/16	6-5/8	JDC033	44.94
17/32	.5312	4-13/16	6-5/8	JDC034	47.26
35/64	.5469	4-13/16	6-5/8	JDC035	51.22
9/16	.5629	4-13/16	6-5/8	JDC036	53.56
37/64	.5781	4-13/16	6-5/8	JDC037	53.76
19/32	.5938	5-3/16	7-1/8	JDC038	55.12
39/64	.6094	5-3/16	7-1/8	JDC039	59.12
5/8	.6250	5-3/16	7-1/8	JDC040	59.12
41/64	.6406	5-3/16	7-1/8	JDC041	63.32
21/32	.6562	5-3/16	7-1/8	JDC042	66.38
43/64	.6719	5-5/8	7-5/8	JDC043	71.76
11/16	.6875	5-5/8	7-5/8	JDC044	71.76

* Not split point

COBALT 3/8" SHANK JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Fractional Sizes (Straight Shank) 25/64" to 11/16" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
25/64	.3906	3-3/4	5-1/8	JDCTS025	14.62
13/32	.4062	3-7/8	5-1/4	JDCTS026	15.20
27/64	.4219	3-15/16	5-3/8	JDCTS027	16.52
7/16	.4375	4-1/16	5-1/2	JDCTS028	16.82
29/64	.4531	4-3/16	5-5/8	JDCTS029	19.70
15/32	.4688	4-5/16	5-3/4	JDCTS030	20.00
31/64	.4844	4-3/8	5-7/8	JDCTS031	20.86
1/2	.5000	4-1/2	6	JDCTS032	20.86
33/64	.5156	4-13/16	6-5/8	JDCTS033	47.04
17/32	.5312	4-13/16	6-5/8	JDCTS034	49.36

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
35/64	.5469	4-13/16	6-5/8	JDCTS035	53.32
9/16	.5629	4-13/16	6-5/8	JDCTS036	55.66
37/64	.5781	4-13/16	6-5/8	JDCTS037	55.86
19/32	.5938	5-3/16	7-1/8	JDCTS038	57.22
39/64	.6094	5-3/16	7-1/8	JDCTS039	61.22
5/8	.6250	5-3/16	7-1/8	JDCTS040	61.22
41/64	.6406	5-3/16	7-1/8	JDCTS041	65.42
21/32	.6562	5-3/16	7-1/8	JDCTS042	68.48
43/64	.6719	5-5/8	7-5/8	JDCTS043	73.86
11/16	.6875	5-5/8	7-5/8	JDCTS044	73.86

COBALT JOBBER LENGTH DRILLS

ICS WIS

HEAVY DUTY

135° SPLIT POINT



Wire Gauge Sizes (Straight Shank) #1 to #80 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1	.2280	2-5/8	3-7/8	JDC#01	5.42
2	.2210	2-5/8	3-7/8	JDC#02	5.44
3	.2130	2-1/2	3-3/4	JDC#03	4.86
4	.2090	2-1/2	3-3/4	JDC#04	5.06
5	.2055	2-1/2	3-3/4	JDC#05	5.06
6	.2040	2-1/2	3-3/4	JDC#06	5.06
7	.2010	2-7/16	3-5/8	JDC#07	3.92
8	.1990	2-7/16	3-5/8	JDC#08	3.98
9	.1960	2-7/16	3-5/8	JDC#09	4.46
10	.1935	2-7/16	3-5/8	JDC#10	3.98
11	.1910	2-5/16	3-1/2	JDC#11	4.18
12	.1890	2-5/16	3-1/2	JDC#12	4.18
13	.1850	2-5/16	3-1/2	JDC#13	3.78
14	.1820	2-3/16	3-3/8	JDC#14	3.92
15	.1800	2-3/16	3-3/8	JDC#15	3.92
16	.1770	2-3/16	3-3/8	JDC#16	3.62
17	.1730	2-3/16	3-3/8	JDC#17	3.58
18	.1695	2-1/8	3-1/4	JDC#18	3.18
19	.1660	2-1/8	3-1/4	JDC#19	3.12
20	.1610	2-1/8	3-1/4	JDC#20	3.02
21	.1590	2-1/8	3-1/4	JDC#21	2.90
22	.1570	2	3-1/8	JDC#22	2.94
23	.1540	2	3-1/8	JDC#23	3.20
24	.1520	2	3-1/8	JDC#24	2.94
25	.1495	1-7/8	3	JDC#25	2.72
26	.1470	1-7/8	3	JDC#26	2.68
27	.1440	1-7/8	3	JDC#27	2.72
28	.1405	1-3/4	2-7/8	JDC#28	2.50
29	.1360	1-3/4	2-7/8	JDC#29	2.50
30	.1285	1-5/8	2-3/4	JDC#30	2.32
31	.1200	1-5/8	2-3/4	JDC#31	2.42
32	.1160	1-5/8	2-3/4	JDC#32	2.32
33	.1130	1-1/2	2-5/8	JDC#33	2.28
34	.1110	1-1/2	2-5/8	JDC#34	2.28
35	.1100	1-1/2	2-5/8	JDC#35	2.28
36	.1065	1-7/16	2-1/2	JDC#36	2.14
37	.1040	1-7/16	2-1/2	JDC#37	2.28
38	.1015	1-7/16	2-1/2	JDC#38	2.06
39	.0995	1-3/8	2-3/8	JDC#39	2.06
40	.0980	1-3/8	2-3/8	JDC#40	2.06

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
41	.0960	1-3/8	2-3/8	JDC#41	2.06
42	.0935	1-1/4	2-1/4	JDC#42	2.02
43	.0890	1-1/4	2-1/4	JDC#43	2.14
44	.0860	1-1/8	2-1/8	JDC#44	2.02
45	.0820	1-1/8	2-1/8	JDC#45	2.02
46	.0810	1-1/8	2-1/8	JDC#46	2.02
47	.0785	1	2	JDC#47	2.02
48	.0760	1	2	JDC#48	2.02
49	.0730	1	2	JDC#49	2.02
50	.0700	1	2	JDC#50	2.02
51	.0670	1	2	JDC#51	2.02
52	.0635	7/8	1-7/8	JDC#52	2.02
53	.0595	7/8	1-7/8	JDC#53	2.14
54	.0550	7/8	1-7/8	JDC#54	2.14
55	.0520	7/8	1-7/8	JDC#55	1.82
56	.0465	3/4	1-3/4	JDC#56	2.14
57	.0430	3/4	1-3/4	JDC#57	2.46
58	.0420	11/16	1-5/8	JDC#58	2.68
59	.0410	11/16	1-5/8	JDC#59	2.72
60	.0400	11/16	1-5/8	JDC#60	3.08
61	.0390	11/16	1-5/8	JDC#61	3.12
62	.0380	5/8	1-1/2	JDC#62	3.12
63	.0370	5/8	1-1/2	JDC#63	3.12
64	.0360	5/8	1-1/2	JDC#64	3.12
65	.0350	5/8	1-1/2	JDC#65	3.12
66	.0330	1/2	1-3/8	JDC#66	3.26
67	.0320	1/2	1-3/8	JDC#67	3.26
68	.0310	1/2	1-3/8	JDC#68	3.26
69	.0292	1/2	1-3/8	JDC#69	3.30
70	.0280	3/8	1-1/4	JDC#70	3.70
71	.0260	3/8	1-1/4	JDC#71	3.70
72	.0250	5/16	1-1/8	JDC#72	3.70
73	.0240	5/16	1-1/8	JDC#73	3.70
74	.0225	1/4	1-1/8	JDC#74	3.70
75	.0210	1/4	1-1/8	JDC#75	4.08
76	.0200	3/16	7/8	JDC#76	4.08
77	.0180	3/16	7/8	JDC#77	4.08
78	.0160	3/16	7/8	JDC#78	4.08
79	.0145	3/16	3/4	JDC#79	4.08
80	.0135	3/16	3/4	JDC#80	4.08

Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
A	.2340	2-5/8	3-7/8	JDC"A"	5.98
B	.2380	2-3/4	4	JDC"B"	6.90
C	.2420	2-3/4	4	JDC"C"	6.90
D	.2460	2-3/4	4	JDC"D"	7.76
E	.2500	2-3/4	4	JDC"E"	4.96
F	.2570	2-7/8	4-1/8	JDC"F"	6.90
G	.2610	2-7/8	4-1/8	JDC"G"	6.90
H	.2660	2-7/8	4-1/8	JDC"H"	7.76
I	.2720	2-7/8	4-1/8	JDC"I"	7.30
J	.2770	2-7/8	4-1/8	JDC"J"	7.76
K	.2810	2-15/16	4-1/4	JDC"K"	7.76
L	.2900	2-15/16	4-1/4	JDC"L"	8.78
M	.2950	3-1/16	4-3/8	JDC"M"	9.32

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
N	.3020	3-1/16	4-3/8	JDC"N"	9.32
O	.3160	3-3/16	4-1/2	JDC"O"	10.30
P	.3230	3-5/16	4-5/8	JDC"P"	10.94
Q	.3320	3-7/16	4-3/4	JDC"Q"	11.34
R	.3390	3-7/16	4-3/4	JDC"R"	11.34
S	.3480	3-1/2	4-7/8	JDC"S"	13.90
T	.3580	3-1/2	4-7/8	JDC"T"	13.90
U	.3680	3-5/8	5	JDC"U"	13.90
V	.3770	3-5/8	5	JDC"V"	15.36
W	.3860	3-3/4	5-1/8	JDC"W"	15.36
X	.3970	3-3/4	5-1/8	JDC"X"	15.36
Y	.4040	3-7/8	5-1/4	JDC"Y"	16.26
Z	.4130	3-7/8	5-1/4	JDC"Z"	17.70


COBALT METRIC JOBBER LENGTH DRILLS

MET-37

ICS USA

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	SHANK
JDCM	 GOLD COBALT FINISH	For portable or machine drilling in stainless steel, titanium, and other work hardening metals. Mfr. to NAS 907-J specs.	M42	135° Split Pt. Std. Spiral Hvy. Duty Web	Straight 3/8

Metric Sizes (Straight Shank) 1.00mm to 8.40mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1.00	.0394	11/16	1-5/8	JDCM01.00	2.72
1.05	.0413	11/16	1-5/8	JDCM01.05	2.72
1.10	.0433	3/4	1-3/4	JDCM01.05	2.72
1.15	.0452	3/4	1-3/4	JDCM01.15	2.72
1.20	.0472	7/8	1-7/8	JDCM01.20	2.72
1.25	.0492	7/8	1-7/8	JDCM01.25	2.72
1.30	.0512	7/8	1-7/8	JDCM01.30	2.72
1.35	.0531	7/8	1-7/8	JDCM01.35	2.72
1.40	.0551	7/8	1-7/8	JDCM01.40	2.72
1.45	.0570	7/8	1-7/8	JDCM01.45	2.72
1.50	.0591	7/8	1-7/8	JDCM01.50	2.72
1.55	.0610	7/8	1-7/8	JDCM01.55	2.72
1.60	.0630	7/8	1-7/8	JDCM01.60	2.72
1.65	.0650	1	2	JDCM01.65	2.72
1.70	.0669	1	2	JDCM01.70	2.72
1.75	.0689	1	2	JDCM01.75	2.72
1.80	.0709	1	2	JDCM01.80	2.72
1.85	.0728	1	2	JDCM01.85	2.72
1.90	.0748	1	2	JDCM01.90	2.72
1.95	.0767	1	2	JDCM01.95	2.72
2.00	.0787	1	2-1/8	JDCM02.00	2.72
2.05	.0807	1-1/8	2-1/8	JDCM02.05	2.72
2.10	.0827	1-1/8	2-1/8	JDCM02.10	2.72
2.15	.0846	1-1/8	2-1/8	JDCM02.15	2.72
2.20	.0866	1-1/4	2-1/4	JDCM02.20	2.72
2.25	.0886	1-1/4	2-1/4	JDCM02.25	2.72
2.30	.0906	1-1/4	2-1/4	JDCM02.30	2.72
2.35	.0925	1-1/4	2-1/4	JDCM02.35	2.72
2.40	.0945	1-3/8	2-3/8	JDCM02.40	2.72
2.45	.0964	1-3/8	2-3/8	JDCM02.45	2.72
2.50	.0984	1-3/8	2-3/8	JDCM02.50	2.72
2.60	.1024	1-7/16	2-1/2	JDCM02.60	2.72
2.65	.1043	1-7/16	2-1/2	JDCM02.65	2.72
2.70	.1063	1-7/16	2-1/2	JDCM02.70	2.72
2.80	.1102	1-1/2	2-5/8	JDCM02.80	3.20
2.90	.1142	1-5/8	2-3/4	JDCM02.90	3.20
3.00	.1181	1-5/8	2-3/4	JDCM03.00	3.20
3.10	.1220	1-5/8	2-3/4	JDCM03.10	3.20
3.20	.1260	1-5/8	2-3/4	JDCM03.20	3.20
3.25	.1280	1-5/8	2-3/4	JDCM03.25	3.20
3.30	.1299	2	3-1/8	JDCM03.30	3.20
3.40	.1339	2	3-1/8	JDCM03.40	3.20
3.50	.1378	2	3-1/8	JDCM03.50	3.20
3.60	.1417	2	3-1/8	JDCM03.60	3.78
3.70	.1457	2	3-1/8	JDCM03.70	3.78
3.75	.1476	2	3-1/8	JDCM03.75	3.78
3.80	.1496	2	3-1/8	JDCM03.80	3.78
3.90	.1536	2	3-1/8	JDCM03.90	3.78

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
4.00	.1575	2	3-1/8	JDCM04.00	4.02
4.10	.1614	2-5/16	3-1/2	JDCM04.10	4.02
4.20	.1654	2-5/16	3-1/2	JDCM04.20	4.02
4.25	.1673	2-5/16	3-1/2	JDCM04.25	4.02
4.30	.1693	2-5/16	3-1/2	JDCM04.30	4.02
4.40	.1732	2-5/16	3-1/2	JDCM04.40	4.38
4.50	.1772	2-5/16	3-1/2	JDCM04.50	4.38
4.60	.1811	2-5/16	3-1/2	JDCM04.60	4.38
4.70	.1850	2-5/16	3-1/2	JDCM04.70	4.38
4.80	.1890	2-5/16	3-1/2	JDCM04.80	4.38
4.90	.1929	2-1/2	3-3/4	JDCM04.90	5.30
5.00	.1969	2-1/2	3-3/4	JDCM05.00	5.30
5.10	.2008	2-1/2	3-3/4	JDCM05.10	5.30
5.20	.2047	2-1/2	3-3/4	JDCM05.20	5.88
5.25	.2067	2-1/2	3-3/4	JDCM05.25	5.88
5.30	.2087	2-1/2	3-3/4	JDCM05.30	5.88
5.40	.2126	2-1/2	3-3/4	JDCM05.40	5.88
5.50	.2165	2-1/2	3-3/4	JDCM05.50	6.24
5.60	.2205	2-1/2	3-3/4	JDCM05.60	6.24
5.70	.2244	2-3/4	4	JDCM05.70	6.24
5.80	.2283	2-3/4	4	JDCM05.80	6.24
5.90	.2323	2-3/4	4	JDCM05.90	6.24
6.00	.2362	2-3/4	4	JDCM06.00	6.60
6.10	.2402	2-3/4	4	JDCM06.10	6.60
6.20	.2441	2-3/4	4	JDCM06.20	6.60
6.30	.2480	2-3/4	4	JDCM06.30	6.60
6.40	.2520	2-3/4	4	JDCM06.40	7.42
6.50	.2560	2-15/16	4-1/4	JDCM06.50	7.42
6.60	.2598	2-15/16	4-1/4	JDCM06.60	7.42
6.70	.2638	2-15/16	4-1/4	JDCM06.70	7.42
6.75	.2657	2-15/16	4-1/4	JDCM06.75	7.78
6.80	.2677	2-15/16	4-1/4	JDCM06.80	7.78
6.90	.2717	2-15/16	4-1/4	JDCM06.90	7.78
7.00	.2756	2-15/16	4-1/4	JDCM07.00	7.78
7.10	.2795	2-15/16	4-1/4	JDCM07.10	7.78
7.20	.2835	2-15/16	4-1/4	JDCM07.20	9.66
7.30	.2874	3-3/16	4-1/2	JDCM07.30	9.66
7.40	.2913	3-3/16	4-1/2	JDCM07.40	9.66
7.50	.2953	3-3/16	4-1/2	JDCM07.50	9.66
7.60	.2992	3-3/16	4-1/2	JDCM07.60	10.26
7.70	.3031	3-3/16	4-1/2	JDCM07.70	10.26
7.80	.3071	3-3/16	4-1/2	JDCM07.80	10.26
7.90	.3110	3-3/16	4-1/2	JDCM07.90	10.26
8.00	.3150	3-3/16	4-1/2	JDCM08.00	11.18
8.10	.3189	3-7/16	4-3/4	JDCM08.10	11.18
8.20	.3228	3-7/16	4-3/4	JDCM08.20	11.18
8.30	.3268	3-7/16	4-3/4	JDCM08.30	11.18
8.40	.3307	3-7/16	4-3/4	JDCM08.40	12.24

(Sizes continued on next page)

COBALT METRIC JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Metric Sizes (Straight Shank) 8.50mm to 13.00mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
8.50	.3346	3-7/16	4-3/4	JDCM08.50	12.24
8.60	.3386	3-7/16	4-3/4	JDCM08.60	12.24
8.70	.3425	3-7/16	4-3/4	JDCM08.70	12.24
8.80	.3465	3-7/16	4-3/4	JDCM08.80	14.12
8.90	.3504	3-5/8	5	JDCM08.90	14.12
9.00	.3543	3-5/8	5	JDCM09.00	14.12
9.10	.3583	3-5/8	5	JDCM09.00	14.12
9.20	.3622	3-5/8	5	JDCM09.20	14.12
9.30	.3661	3-5/8	5	JDCM09.30	14.12
9.40	.3701	3-5/8	5	JDCM09.40	14.12
9.50	.3740	3-5/8	5	JDCM09.50	14.12
9.60	.3780	3-5/8	5	JDCM09.60	16.24
9.70	.3819	3-7/8	5-1/4	JDCM09.70	16.24

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
9.80	.3858	3-7/8	5-1/4	JDCM09.80	16.24
9.90	.3898	3-7/8	5-1/4	JDCM09.90	16.24
10.00	.3957	3-7/8	5-1/4	JDCM10.00	16.74
10.20	.4016	3-7/8	5-1/4	JDCM10.20	17.30
10.50	.4134	3-7/8	5-1/4	JDCM10.50	18.48
10.80	.4252	3-7/8	5-1/4	JDCM10.80	18.48
11.00	.4331	4-1/16	5-1/2	JDCM11.00	18.82
11.20	.4409	4-1/16	5-1/2	JDCM11.20	22.70
11.50	.4528	4-1/16	5-1/2	JDCM11.50	22.70
12.00	.4724	4-5/16	5-3/4	JDCM12.00	23.78
12.50	.4921	4-1/2	6	JDCM12.50	24.12
13.00	.5118	4-13/16	6-5/8	JDCM13.00	31.50

COBALT METRIC 3/8" SHANK JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Metric Sizes (Reduced Shank) 10.00mm to 13.00mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
10.00	.3937	3-7/8	5-1/4	JDCM10.00	19.10
10.50	.4134	4-1/16	5-1/2	JDCM10.50	20.84
11.00	.4331	4-1/16	5-1/2	JDCM11.00	21.18
11.50	.4528	4-5/16	5-3/4	JDCM11.50	25.06

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
12.00	.4724	4-5/16	5-3/4	JDCM12.00	26.12
12.50	.4921	4-1/2	6	JDCM12.50	26.46
13.00	.5118	4-13/16	6-5/8	JDCM13.00	33.86

Quick Reference for Cobalt Drills



DRILL SETS	STUB LENGTH	JOBBER LENGTH	SILVER & DEMING	TAPER LENGTH	TAPER SHANK	EXTRA LENGTH	COMBINED DRILL & CSK
PAGE NO. OF ITEMS AVAILABLE							
53-59	9-10	35-38	65, 69	74-75	95	107-109	112

PARABOLIC FLUTE JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY - HIGH PERFORMANCE

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	SHANK
JDPDFD	 BLACK/GOLD FINISH	For deep hole drilling in a wide range of materials especially aluminum and mild steel. Parabolic flutes ease chip ejection. These drills are also known as Worm Pattern Drills.	M2	135° Split Pt. Spec. Fast Spiral Hvy. Duty Web	Straight 3/8
JDPFT	 GOLD TITANIUM COATED	The combination of titanium nitride coating with the parabolic flute design can increase deep hole drilling efficiency up to 700%.	M2	135° Split Pt. Spec. Fast Spiral Hvy. Duty Web	Straight

Fractional Sizes (Straight Shank) 1/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				BRIGHT FINISH 135°S/P	TiN GOLD FINISH 135°S/P
				JDPDFD	JDPFT
1/16	.0625	7/8	1-7/8	1.90	2.84
5/64	.0781	1	2	2.00	2.94
3/32	.0938	1-1/4	2-1/4	2.10	3.04
7/64	.1094	1-1/2	2-5/8	2.14	3.20
1/8	.1250	1-5/8	2-3/4	2.32	3.26
9/64	.1406	1-3/4	2-7/8	2.26	3.54
5/32	.1562	2	3-1/8	2.52	3.68
11/64	.1719	2-1/8	3-1/4	2.84	3.92
3/16	.1875	2-5/16	3-1/2	3.04	4.06
13/64	.2031	2-7/16	3-5/8	3.46	5.56
7/32	.2188	2-1/2	3-3/4	3.68	5.78
15/64	.2344	2-5/8	3-7/8	4.10	6.10
1/4	.2500	2-3/4	4	4.30	6.30
17/64	.2656	2-7/8	4-1/8	5.26	8.56
9/32	.2812	2-15/16	4-1/4	5.98	9.46

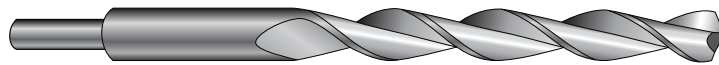
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				BRIGHT FINISH 135°S/P	TiN GOLD FINISH 135°S/P
				JDPDFD	JDPFT
19/64	.2969	3-1/16	4-3/8	6.40	10.30
5/16	.3125	3-3/16	4-1/2	6.72	10.82
21/64	.3281	3-5/16	4-5/8	7.14	11.56
11/32	.3438	3-7/16	4-3/4	7.56	12.28
23/64	.3594	3-1/2	4-7/8	7.78	14.92
3/8	.3750	3-5/8	5	9.24	15.08
25/64	.3906	3-3/4	5-1/8	9.46	16.48
13/32	.4062	3-7/8	5-1/4	10.72	16.70
27/64	.4219	3-15/16	5-3/8	12.28	18.48
7/16	.4375	4-1/16	5-1/2	13.34	18.82
29/64	.4531	4-3/16	5-5/8	15.34	21.10
15/32	.4688	4-5/16	5-3/4	15.54	21.64
31/64	.4844	4-3/8	5-7/8	16.38	22.26
1/2	.5000	4-1/2	6	16.48	22.36

PARABOLIC FLUTE 3/8" SHANK JOBBER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT





Fractional Sizes (Straight Shank) 25/64" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				BRIGHT FINISH 135° S/P	JDPFTS
				25/64	.3906
13/32	.4062	3-7/8	5-1/4	12.60	
27/64	.4219	3-15/16	5-3/8	14.18	
7/16	.4375	4-1/16	5-1/2	15.22	

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				BRIGHT FINISH 135° S/P	JDPFTS
				29/64	.4531
15/32	.4688	4-5/16	5-3/4	17.44	
31/64	.4844	4-3/8	5-7/8	18.28	
1/2	.5000	4-1/2	6	18.38	

HIGH SPEED STEEL
FAST/SLOW SPIRAL JOBBER LENGTH DRILLS

ICS	USA	SPECIAL PURPOSE	118° POINT
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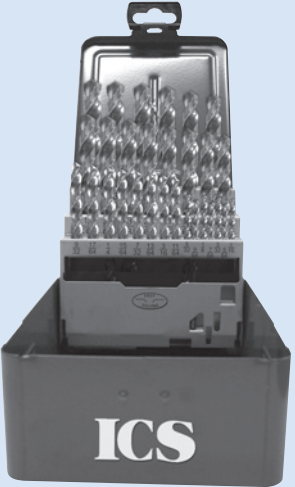
ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
JDF	 BRIGHT POLISHED FINISH	For portable or machine drilling low tensile strength materials such as aluminum, magnesium, copper, zinc, and similar materials producing long stringy swarf. Excellent chip-clearing when drilling deep holes.	M2	118° Point Fast Spiral Std. Web
JDS	 BRIGHT POLISHED FINISH	For portable or machine drilling in brass, copper, and similar alloys. Also for soft copper and aluminum sheet where breakout "snatch" or burr is a problem. Polished ground flutes ease chip ejection.	M2	118° Point Slow Spiral Std. Web

Fractional Sizes (Straight Shank) 1/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				BRIGHT FINISH 118° POINT	
				JDF	JDS
1/16	.0625	7/8	1-7/8	2.12	2.46
5/64	.0781	1	2	2.16	2.46
3/32	.0938	1-1/4	2-1/4	2.16	2.42
7/64	.1094	1-1/2	2-5/8	2.12	2.46
1/8	.1250	1-5/8	2-3/4	2.12	2.42
9/64	.1406	1-3/4	2-7/8	2.12	2.46
5/32	.1562	2	3-1/8	2.32	2.96
11/64	.1719	2-1/8	3-1/4	2.80	3.44
3/16	.1875	2-5/16	3-1/2	3.10	3.42
13/64	.2031	2-7/16	3-5/8	3.56	4.10
7/32	.2188	2-1/2	3-3/4	3.86	4.64
15/64	.2344	2-5/8	3-7/8	4.40	5.24
1/4	.2500	2-3/4	4	4.18	4.90
17/64	.2656	2-7/8	4-1/8	5.66	6.34
9/32	.2812	2-15/16	4-1/4	5.64	6.60

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				BRIGHT FINISH 118° POINT	
				JDF	JDS
19/64	.2969	3-1/16	4-3/8	6.52	7.82
5/16	.3125	3-3/16	4-1/2	6.70	8.12
21/64	.3281	3-5/16	4-5/8	7.78	8.86
11/32	.3438	3-7/16	4-3/4	8.26	9.82
23/64	.3594	3-1/2	4-7/8	10.26	13.24
3/8	.3750	3-5/8	5	9.94	11.70
25/64	.3906	3-3/4	5-1/8	11.92	14.66
13/32	.4062	3-7/8	5-1/4	11.62	13.48
27/64	.4219	3-15/16	5-3/8	13.86	17.20
7/16	.4375	4-1/16	5-1/2	13.64	15.62
29/64	.4531	4-3/16	5-5/8	14.94	20.12
15/32	.4688	4-5/16	5-3/4	15.36	19.18
31/64	.4844	4-3/8	5-7/8	16.82	22.64
1/2	.5000	4-1/2	6	16.26	20.02

HIGH SPEED STEEL
FAST/SLOW SPIRAL JOBBER LENGTH DRILL SETS

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
29 PC DRILL SETS  Sizes 1/16 to 1/2 by 64ths METAL INDEX	Fast Spiral Jobber Drill - 118° Pt Slow Spiral Jobber Drill - 118° Pt	DS-JDF-29 DS-JDS-29	182.20 210.66

FAST/SLOW SPIRAL JOBBER LENGTH DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



Wire Gauge Sizes (Straight Shank) #1 to #80 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				BRIGHT FINISH 118° POINT	
				JDF	JDS
1	.2280	2-5/8	3-7/8	4.34	5.72
2	.2210	2-5/8	3-7/8	4.46	5.72
3	.2130	2-1/2	3-3/4	4.18	5.50
4	.2090	2-1/2	3-3/4	4.18	5.50
5	.2055	2-1/2	3-3/4	4.18	5.50
6	.2040	2-1/2	3-3/4	4.18	5.50
7	.2010	2-7/16	3-5/8	3.40	4.70
8	.1990	2-7/16	3-5/8	3.52	4.70
9	.1960	2-7/16	3-5/8	3.42	4.70
10	.1935	2-7/16	3-5/8	3.42	4.70
11	.1910	2-5/16	3-1/2	3.24	4.40
12	.1890	2-5/16	3-1/2	3.44	4.40
13	.1850	2-5/16	3-1/2	3.24	4.10
14	.1820	2-3/16	3-3/8	3.24	4.10
15	.1800	2-3/16	3-3/8	3.14	4.10
16	.1770	2-3/16	3-3/8	3.14	4.10
17	.1730	2-3/16	3-3/8	3.22	4.10
18	.1695	2-1/8	3-1/4	2.78	3.64
19	.1660	2-1/8	3-1/4	2.72	3.64
20	.1610	2-1/8	3-1/4	2.72	3.64
21	.1590	2-1/8	3-1/4	2.50	3.54
22	.1570	2	3-1/8	2.56	3.54
23	.1540	2	3-1/8	2.40	3.54
24	.1520	2	3-1/8	2.28	3.40
25	.1495	1-7/8	3	2.28	3.40
26	.1470	1-7/8	3	2.28	3.12
27	.1440	1-7/8	3	2.28	3.12
28	.1405	1-3/4	2-7/8	2.20	3.12
29	.1360	1-3/4	2-7/8	2.10	2.72
30	.1285	1-5/8	2-3/4	2.10	2.72
31	.1200	1-5/8	2-3/4	2.16	2.72
32	.1160	1-5/8	2-3/4	2.16	2.72
33	.1130	1-1/2	2-5/8	2.24	2.72
34	.1110	1-1/2	2-5/8	2.24	2.72
35	.1100	1-1/2	2-5/8	2.16	2.72
36	.1065	1-7/16	2-1/2	2.24	2.72
37	.1040	1-7/16	2-1/2	2.16	2.72
38	.1015	1-7/16	2-1/2	2.16	2.72
39	.0995	1-3/8	2-3/8	2.16	2.72
40	.0980	1-3/8	2-3/8	2.10	2.72

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				BRIGHT FINISH 118° POINT	
				JDF	JDS
41	.0960	1-3/8	2-3/8	2.26	2.76
42	.0935	1-1/4	2-1/4	2.26	2.76
43	.0890	1-1/4	2-1/4	2.14	2.76
44	.0860	1-1/8	2-1/8	2.20	2.76
45	.0820	1-1/8	2-1/8	2.20	2.76
46	.0810	1-1/8	2-1/8	2.20	2.76
47	.0785	1	2	2.26	2.76
48	.0760	1	2	2.18	2.76
49	.0730	1	2	2.26	2.76
50	.0700	1	2	2.18	2.76
51	.0670	1	2	2.18	2.76
52	.0635	7/8	1-7/8	2.18	2.76
53	.0595	7/8	1-7/8	2.18	2.68
54	.0550	7/8	1-7/8	2.18	2.68
55	.0520	7/8	1-7/8	2.12	2.68
56	.0465	3/4	1-3/4	2.18	2.68
57	.0430	3/4	1-3/4	2.26	2.68
58	.0420	11/16	1-5/8	2.26	2.68
59	.0410	11/16	1-5/8	2.26	2.68
60	.0400	11/16	1-5/8	2.26	2.68
61	.0390	11/16	1-5/8	2.60	3.32
62	.0380	5/8	1-1/2	2.60	3.32
63	.0370	5/8	1-1/2	2.60	3.32
64	.0360	5/8	1-1/2	2.60	3.32
65	.0350	5/8	1-1/2	2.46	3.32
66	.0330	1/2	1-3/8	2.60	3.32
67	.0320	1/2	1-3/8	2.46	3.32
68	.0310	1/2	1-3/8	2.46	3.32
69	.0292	1/2	1-3/8	2.76	3.66
70	.0280	3/8	1-1/4	2.76	3.66
71	.0260	3/8	1-1/4	3.60	4.80
72	.0250	5/16	1-1/8	3.38	4.80
73	.0240	5/16	1-1/8	3.38	4.80
74	.0225	1/4	1-1/8	3.38	4.80
75	.0210	1/4	1-1/8	3.38	4.80
76	.0200	3/16	7/8	3.38	4.80
77	.0180	3/16	7/8	3.38	4.80
78	.0160	3/16	7/8	3.38	4.80
79	.0145	3/16	3/4	3.96	5.68
80	.0135	3/16	3/4	3.96	5.68

Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				BRIGHT FINISH 118° POINT	
				JDF	JDS
A	.234	2-5/8	3-7/8	4.96	7.08
B	.238	2-3/4	4	4.82	7.08
C	.242	2-3/4	4	4.42	7.08
D	.246	2-3/4	4	4.42	7.08
E	.250	2-3/4	4	4.18	4.90
F	.257	2-7/8	4-1/8	5.14	7.08
G	.261	2-7/8	4-1/8	5.46	7.48
H	.266	2-7/8	4-1/8	6.16	9.90
I	.272	2-7/8	4-1/8	5.34	10.30
J	.277	2-7/8	4-1/8	6.16	10.30
K	.281	2-15/16	4-1/4	7.74	10.30
L	.290	2-15/16	4-1/4	6.68	10.30
M	.295	3-1/16	4-3/8	7.20	11.14


SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				BRIGHT FINISH 118° POINT	
				JDF	JDS
N	.302	3-1/16	4-3/8	6.58	11.14
O	.316	3-3/16	4-1/2	7.10	12.14
P	.323	3-5/16	4-5/8	7.46	12.14
Q	.332	3-7/16	4-3/4	7.46	12.08
R	.339	3-7/16	4-3/4	7.74	13.94
S	.348	3-1/2	4-7/8	8.40	14.60
T	.358	3-1/2	4-7/8	9.84	14.60
U	.368	3-5/8	5	9.84	14.60
V	.377	3-5/8	5	10.36	15.18
W	.386	3-3/4	5-1/8	10.60	17.96
X	.397	3-3/4	5-1/8	12.08	17.96
Y	.404	3-7/8	5-1/4	14.08	20.14
Z	.413	3-7/8	5-1/4	14.66	20.14

HIGH SPEED STEEL AUTOMOTIVE (TANG) JOBBER LENGTH DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	SHANK
JDAT	 OXIDE FINISH	For applications where Automotive Jobber Length Drills with a tanged shank will be used with positive drive split sleeve drivers.	M2	118° Point Std. Spiral Std. Web	TANG

Fractional Sizes (Tanged Shank) 1/8" to 11/16" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/8	.1250	1-5/8	2-3/4	JDAT008	2.00
9/64	.1406	1-3/4	2-7/8	JDAT009	2.00
5/32	.1562	2	3-1/8	JDAT010	2.34
11/64	.1719	2-1/8	3-1/4	JDAT011	2.66
3/16	.1875	2-5/16	3-1/2	JDAT012	3.00
13/64	.2031	2-7/16	3-5/8	JDAT013	3.38
7/32	.2188	2-1/2	3-3/4	JDAT014	3.72
15/64	.2344	2-5/8	3-7/8	JDAT015	4.00
1/4	.2500	2-3/4	4	JDAT016	4.26
17/64	.2656	2-7/8	4-1/8	JDAT017	4.98
9/32	.2812	2-15/16	4-1/4	JDAT018	5.60
19/64	.2969	3-1/16	4-3/8	JDAT019	5.88
5/16	.3125	3-3/16	4-1/2	JDAT020	6.48
21/64	.3281	3-5/16	4-5/8	JDAT021	7.10
11/32	.3438	3-7/16	4-3/4	JDAT022	7.48
23/64	.3594	3-1/2	4-7/8	JDAT023	8.40
3/8	.3750	3-5/8	5	JDAT024	8.90
25/64	.3906	3-3/4	5-1/8	JDAT025	9.68
13/32	.4062	3-7/8	5-1/4	JDAT026	10.12

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
27/64	.4219	3-15/16	5-3/8	JDAT008	11.36
7/16	.4375	4-1/16	5-1/2	JDAT028	11.84
29/64	.4531	4-3/16	5-5/8	JDAT029	13.70
15/32	.4688	4-5/16	5-3/4	JDAT030	14.54
31/64	.4844	4-3/8	5-7/8	JDAT031	15.22
1/2	.5000	4-1/2	6	JDAT032	15.22
33/64	.5156	4-13/16	6-5/8	JDAT033	25.98
17/32	.5312	4-13/16	6-5/8	JDAT034	27.32
35/64	.5469	4-13/16	6-5/8	JDAT035	29.88
9/16	.5625	4-13/16	6-5/8	JDAT036	31.74
37/64	.5781	4-13/16	6-5/8	JDAT037	32.12
19/32	.5938	5-3/16	7-1/8	JDAT038	32.12
39/64	.6094	5-3/16	7-1/8	JDAT039	34.92
5/8	.6250	5-3/16	7-1/8	JDAT040	34.92
41/64	.6406	5-3/16	7-1/8	JDAT041	36.84
21/32	.6562	5-3/16	7-1/8	JDAT042	36.84
43/64	.6719	5-5/8	7-5/8	JDAT043	42.48
11/16	.6875	5-5/8	7-5/8	JDAT044	42.48

PACKAGING

1/8 to 17/64 - 12 Drills/Envelope
 9/32 to 1/2 - 6 Drills/Envelope
 33/64 to 11/16 - 1 Drill/Tube

Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
A	.234	2-5/8	3-7/8	JDAT"A"	4.70
B	.238	2-3/4	4	JDAT"B"	4.70
C	.242	2-3/4	4	JDAT"C"	4.70
D	.246	2-3/4	4	JDAT"D"	4.70
E	.250	2-3/4	4	JDAT"E"	4.26
F	.257	2-7/8	4-1/8	JDAT"F"	5.06
G	.261	2-7/8	4-1/8	JDAT"G"	5.76
H	.266	2-7/8	4-1/8	JDAT"H"	5.76
I	.272	2-7/8	4-1/8	JDAT"I"	5.76
J	.277	2-7/8	4-1/8	JDAT"J"	6.02
K	.281	2-15/16	4-1/4	JDAT"K"	6.78
L	.290	2-15/16	4-1/4	JDAT"L"	6.78
M	.295	3-1/16	4-3/8	JDAT"M"	6.78

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
N	.302	3-1/16	4-3/8	JDAT"N"	7.22
O	.316	3-3/16	4-1/2	JDAT"O"	7.22
P	.323	3-5/16	4-5/8	JDAT"P"	7.64
Q	.332	3-7/16	4-3/4	JDAT"Q"	7.78
R	.339	3-7/16	4-3/4	JDAT"R"	7.78
S	.348	3-1/2	4-7/8	JDAT"S"	9.26
T	.358	3-1/2	4-7/8	JDAT"T"	10.10
U	.368	3-5/8	5	JDAT"U"	10.10
V	.377	3-5/8	5	JDAT"V"	10.84
W	.386	3-3/4	5-1/8	JDAT"W"	10.84
X	.397	3-3/4	5-1/8	JDAT"X"	13.08
Y	.404	3-7/8	5-1/4	JDAT"Y"	13.08
Z	.413	3-7/8	5-1/4	JDAT"Z"	14.08

PACKAGING

A to M - 12 Drills/Envelope

N to Z - 6 Drills/Envelope

HIGH SPEED STEEL AUTOMOTIVE (TANG) JOBBER LENGTH DRILLS

MET-43

ICS USA

SPECIAL PURPOSE

118° POINT



Wire Gauge Sizes (Straight Shank) #1 to #50 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1	.2280	2-5/8	3-7/8	JDAT#01	4.26
2	.2210	2-5/8	3-7/8	JDAT#02	4.26
3	.2130	2-1/2	3-3/4	JDAT#03	3.82
4	.2090	2-1/2	3-3/4	JDAT#04	3.82
5	.2055	2-1/2	3-3/4	JDAT#05	3.82
6	.2040	2-1/2	3-3/4	JDAT#06	3.82
7	.2010	2-7/16	3-5/8	JDAT#07	3.82
8	.1990	2-7/16	3-5/8	JDAT#08	3.38
9	.1960	2-7/16	3-5/8	JDAT#09	3.38
10	.1935	2-7/16	3-5/8	JDAT#10	3.38
11	.1910	2-5/16	3-1/2	JDAT#11	3.00
12	.1890	2-5/16	3-1/2	JDAT#12	3.00
13	.1850	2-5/16	3-1/2	JDAT#13	3.00
14	.1820	2-3/16	3-3/8	JDAT#14	3.00
15	.1800	2-3/16	3-3/8	JDAT#15	3.00
16	.1770	2-3/16	3-3/8	JDAT#16	3.00
17	.1730	2-3/16	3-3/8	JDAT#17	3.00
18	.1695	2-1/8	3-1/4	JDAT#18	2.66
19	.1660	2-1/8	3-1/4	JDAT#19	2.66
20	.1610	2-1/8	3-1/4	JDAT#20	2.66

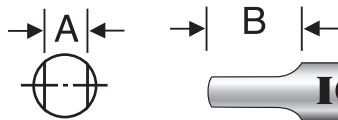
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
21	.1590	2-1/8	3-1/4	JDAT#21	2.66
22	.1570	2	3-1/8	JDAT#22	2.66
23	.1540	2	3-1/8	JDAT#23	2.80
24	.1520	2	3-1/8	JDAT#24	2.24
25	.1495	1-7/8	3	JDAT#25	2.24
26	.1470	1-7/8	3	JDAT#26	2.18
27	.1440	1-7/8	3	JDAT#27	2.18
28	.1405	1-3/4	2-7/8	JDAT#28	2.00
29	.1360	1-3/4	2-7/8	JDAT#29	2.00
30	.1285	1-5/8	2-3/4	JDAT#30	2.00
32	.1160	1-5/8	2-3/4	JDAT#32	2.00
37	.1040	1-7/16	2-1/2	JDAT#37	2.08
43	.0890	1-1/4	2-1/4	JDAT#43	2.08
46	.0810	1-1/8	2-1/8	JDAT#46	2.08
48	.0760	1	2	JDAT#48	2.08
50	.0700	1	2	JDAT#50	2.08

* Prices quoted on request

PACKAGING

1 to #50 - 12 Drills/Envelope

TANG SPECIFICATIONS



All Automotive Drills and other Straight SHANK Drills will be furnished with tapered shanks as follows:

DIMENSIONS OF TANGS

SHANK DIAMETER INCHES	THICKNESS		LENGTH
	A		B
	MIN	MAX	
1/8 through 3/16	.090	.094	9/32
Over 3/16 through 1/4	.118	.122	5/16
Over 1/4 through 5/16	.158	.162	11/32
Over 5/16 through 3/8	.199	.203	3/8
Over 3/8 through 15/32	.239	.243	7/16
Over 15/32 through 9/16	.297	.303	1/2


SHANK DIAMETER INCHES	THICKNESS		LENGTH
	A		B
	MIN	MAX	
Over 9/16 through 21/32	.367	.373	9/16
Over 21/32 through 3/4	.437	.443	5/8
Over 3/4 through 7/8	.508	.514	11/16
Over 7/8 through 1	.601	.609	3/4
Over 1 through 1-3/16	.692	.700	13/16
Over 1-3/16 through 1-3/8	.809	.817	7/8

CARBIDE TIPPED JOBBER LENGTH DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
CTJD	 POLISHED FINISH	For production drilling of cast iron, non-ferrous metals, and non-metals. Does not need rigid set-up like solid carbide.	M1 (Body) CARBIDE TIPPED	118° Point Std. Spiral Std. Web

Fractional Sizes (Tanged Shank) 7/64" to 11/16" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
7/64	.1094	1-1/2	2-5/8	CTJD007	22.94
1/8	.1250	1-5/8	2-3/4	CTJD008	17.12
9/64	.1406	1-3/4	2-7/8	CTJD009	18.50
5/32	.1562	2	3-1/8	CTJD010	18.12
11/64	.1719	2-1/8	3-1/4	CTJD011	19.70
3/16	.1875	2-5/16	3-1/2	CTJD012	19.30
13/64	.2031	2-7/16	3-5/8	CTJD013	21.08
7/32	.2188	2-1/2	3-3/4	CTJD014	21.08
15/64	.2344	2-5/8	3-7/8	CTJD015	22.78
1/4	.2500	2-3/4	4	CTJD016	22.78
17/64	.2656	2-7/8	4-1/8	CTJD017	23.58
9/32	.2812	2-15/16	4-1/4	CTJD018	26.80
19/64	.2969	3-1/16	4-3/8	CTJD019	29.56
5/16	.3125	3-3/16	4-1/2	CTJD020	28.98
21/64	.3281	3-5/16	4-5/8	CTJD021	30.86
11/32	.3438	3-7/16	4-3/4	CTJD022	30.86
23/64	.3594	3-1/2	4-7/8	CTJD023	32.82
3/8	.3750	3-5/8	5	CTJD024	32.82
25/64	.3906	3-3/4	5-1/8	CTJD025	35.64

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
13/32	.4062	3-7/8	5-1/4	CTJD026	35.64
27/64	.4219	3-15/16	5-3/8	CTJD027	38.74
7/16	.4375	4-1/16	5-1/2	CTJD028	38.74
29/64	.4531	4-3/16	5-5/8	CTJD029	44.42
15/32	.4688	4-5/16	5-3/4	CTJD030	44.42
31/64	.4844	4-3/8	5-7/8	CTJD031	48.66
1/2	.5000	4-1/2	6	CTJD032	48.66
33/64	.5156	4-13/16	6-5/8	CTJD033	69.72
17/32	.5312	4-13/16	6-5/8	CTJD034	69.72
35/64	.5469	4-13/16	6-5/8	CTJD035	70.44
9/16	.5625	4-13/16	6-5/8	CTJD036	70.44
37/64	.5781	4-13/16	6-5/8	CTJD037	77.78
19/32	.5938	5-3/16	7-1/8	CTJD038	75.52
39/64	.6094	5-3/16	7-1/8	CTJD039	89.24
5/8	.6250	5-3/16	7-1/8	CTJD040	85.58
41/64	.6406	5-3/16	7-1/8	CTJD041	98.70
21/32	.6562	5-3/16	7-1/8	CTJD042	86.96
43/64	.6719	5-5/8	7-5/8	CTJD043	113.28
11/16	.6875	5-5/8	7-5/8	CTJD044	88.68

Wire Gauge Sizes (Straight Shank) #1 to #40 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1	.2280	2-5/8	3-7/8	CTJD#01	21.60
2	.2210	2-5/8	3-7/8	CTJD#02	22.00
3	.2130	2-1/2	3-3/4	CTJD#03	21.08
4	.2090	2-1/2	3-3/4	CTJD#04	20.94
5	.2055	2-1/2	3-3/4	CTJD#05	21.08
6	.2040	2-1/2	3-3/4	CTJD#06	20.94
7	.2010	2-7/16	3-5/8	CTJD#07	20.48
8	.1990	2-7/16	3-5/8	CTJD#08	20.48
9	.1960	2-7/16	3-5/8	CTJD#09	20.48
10	.1935	2-7/16	3-5/8	CTJD#10	20.08
11	.1910	2-5/16	3-1/2	CTJD#11	20.48
12	.1890	2-5/16	3-1/2	CTJD#12	20.08
13	.1850	2-5/16	3-1/2	CTJD#13	19.30
14	.1820	2-3/16	3-3/8	CTJD#14	19.30
15	.1800	2-3/16	3-3/8	CTJD#15	20.12
16	.1770	2-3/16	3-3/8	CTJD#16	19.30
17	.1730	2-3/16	3-3/8	CTJD#17	19.70
18	.1695	2-1/8	3-1/4	CTJD#18	19.70
19	.1660	2-1/8	3-1/4	CTJD#19	19.70
20	.1610	2-1/8	3-1/4	CTJD#20	19.70

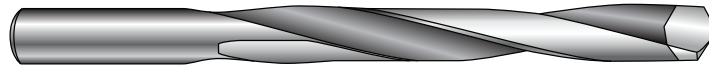
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
21	.1590	2-1/8	3-1/4	CTJD#21	19.30
22	.1570	2	3-1/8	CTJD#22	20.12
23	.1540	2	3-1/8	CTJD#23	18.22
24	.1520	2	3-1/8	CTJD#24	18.68
25	.1495	1-7/8	3	CTJD#25	17.40
26	.1470	1-7/8	3	CTJD#26	17.40
27	.1440	1-7/8	3	CTJD#27	18.68
28	.1405	1-3/4	2-7/8	CTJD#28	18.22
29	.1360	1-3/4	2-7/8	CTJD#29	17.94
30	.1285	1-5/8	2-3/4	CTJD#30	17.50
31	.1200	1-5/8	2-3/4	CTJD#31	16.60
32	.1160	1-5/8	2-3/4	CTJD#32	18.50
33	.1130	1-1/2	2-5/8	CTJD#33	22.94
34	.1110	1-1/2	2-5/8	CTJD#34	22.94
35	.1100	1-1/2	2-5/8	CTJD#35	22.94
36	.1065	1-7/16	2-1/2	CTJD#36	22.94
37	.1040	1-7/16	2-1/2	CTJD#37	22.94
38	.1015	1-7/16	2-1/2	CTJD#38	22.94
39	.0995	1-3/8	2-3/8	CTJD#39	22.94
40	.0980	1-3/8	2-3/8	CTJD#40	22.94

CARBIDE TIPPED JOBBER LENGTH DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	CTJD
A	.234	2-5/8	3-7/8	23.82
B	.238	2-3/4	4	23.82
C	.242	2-3/4	4	23.82
D	.246	2-3/4	4	23.38
E	.250	2-3/4	4	22.78
F	.257	2-7/8	4-1/8	26.88
G	.261	2-7/8	4-1/8	27.44
H	.266	2-7/8	4-1/8	28.06
I	.272	2-7/8	4-1/8	27.44

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	CTJD
J	.277	2-7/8	4-1/8	28.06
K	.281	2-15/16	4-1/4	28.06
L	.290	2-15/16	4-1/4	28.06
M	.295	3-1/16	4-3/8	30.96
N	.302	3-1/16	4-3/8	30.26
O	.316	3-3/16	4-1/2	29.72
P	.323	3-5/16	4-5/8	31.70
Q	.332	3-7/16	4-3/4	32.40
R	.339	3-7/16	4-3/4	31.70

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	CTJD
S	.348	3-1/2	4-7/8	34.24
T	.358	3-1/2	4-7/8	34.92
U	.368	3-5/8	5	33.50
V	.377	3-5/8	5	34.24
W	.386	3-3/4	5-1/8	37.46
X	.397	3-3/4	5-1/8	35.92
Y	.404	3-7/8	5-1/4	37.46
Z	.413	3-7/8	5-1/4	41.46

Metric Sizes (Straight Shank) 3.00mm to 13.00mm Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	CTJDM
3.00	.1181	1-5/8	2-3/4	24.20
3.10	.1220	1-5/8	2-3/4	25.20
3.20	.1260	1-5/8	2-3/4	25.20
3.30	.1299	2	3-1/8	25.20
3.40	.1339	2	3-1/8	25.20
3.50	.1378	2	3-1/8	23.16
3.60	.1417	2	3-1/8	24.20
3.70	.1457	2	3-1/8	24.20
3.80	.1496	2	3-1/8	24.20
3.90	.1536	2	3-1/8	24.20
4.00	.1575	2	3-1/8	22.70
4.10	.1614	2-5/16	3-1/2	21.86
4.20	.1654	2-5/16	3-1/2	23.16
4.30	.1693	2-5/16	3-1/2	23.16
4.40	.1732	2-5/16	3-1/2	23.16
4.50	.1772	2-5/16	3-1/2	24.20
4.60	.1811	2-5/16	3-1/2	26.30
4.70	.1850	2-5/16	3-1/2	19.30
4.80	.1890	2-5/16	3-1/2	20.08
4.90	.1929	2-1/2	3-3/4	26.30
5.00	.1969	2-1/2	3-3/4	25.20
5.10	.2008	2-1/2	3-3/4	27.68
5.20	.2047	2-1/2	3-3/4	27.68
5.30	.2087	2-1/2	3-3/4	27.68
5.40	.2126	2-1/2	3-3/4	27.68
5.50	.2165	2-1/2	3-3/4	26.80
5.60	.2205	2-1/2	3-3/4	28.30
5.70	.2244	2-3/4	4	28.30
5.80	.2283	2-3/4	4	28.30
5.90	.2323	2-3/4	4	28.30
6.00	.2362	2-3/4	4	27.72
6.10	.2402	2-3/4	4	29.32
6.20	.2441	2-3/4	4	29.32
6.30	.2480	2-3/4	4	29.32

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	CTJDM
6.40	.2520	2-3/4	4	29.32
6.50	.2559	2-15/16	4-1/4	28.76
6.60	.2598	2-15/16	4-1/4	30.74
6.70	.2638	2-15/16	4-1/4	30.74
6.80	.2677	2-15/16	4-1/4	31.10
6.90	.2717	2-15/16	4-1/4	31.10
7.00	.2756	2-15/16	4-1/4	30.06
7.10	.2795	2-15/16	4-1/4	31.50
7.20	.2835	2-15/16	4-1/4	31.50
7.30	.2874	3-3/16	4-1/2	31.50
7.40	.2913	3-3/16	4-1/2	31.50
7.50	.2953	3-3/16	4-1/2	31.50
7.60	.2992	3-3/16	4-1/2	33.00
7.70	.3031	3-3/16	4-1/2	33.00
7.80	.3071	3-3/16	4-1/2	33.00
7.90	.3110	3-3/16	4-1/2	33.00
8.00	.3150	3-3/16	4-1/2	32.24
8.10	.3189	3-7/16	4-3/4	35.18
8.20	.3228	3-7/16	4-3/4	35.18
8.30	.3268	3-7/16	4-3/4	35.18
8.40	.3307	3-7/16	4-3/4	35.18
8.50	.3346	3-7/16	4-3/4	33.70
8.60	.3386	3-7/16	4-3/4	35.18
8.70	.3425	3-7/16	4-3/4	35.18
8.80	.3465	3-7/16	4-3/4	35.18
8.90	.3504	3-5/8	5	35.18
9.00	.3543	3-5/8	5	34.44
9.10	.3583	3-5/8	5	38.12
9.20	.3622	3-5/8	5	38.12
9.30	.3661	3-5/8	5	38.12
9.40	.3701	3-5/8	5	38.12
9.50	.3740	3-5/8	5	37.36
9.60	.3780	3-5/8	5	38.74
9.70	.3819	3-7/8	5-1/4	38.74



SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	CTJDM
9.80	.3858	3-7/8	5-1/4	38.74
9.90	.3898	3-7/8	5-1/4	38.74
10.00	.3937	3-7/8	5-1/4	38.74
10.10	.3976	3-7/8	5-1/4	46.16
10.20	.4016	3-7/8	5-1/4	46.16
10.30	.4055	3-7/8	5-1/4	46.16
10.40	.4094	3-7/8	5-1/4	46.16
10.50	.4134	4-1/16	5-1/2	44.62
10.60	.4173	4-1/16	5-1/2	50.56
10.70	.4213	4-1/16	5-1/2	50.56
10.80	.4252	4-1/16	5-1/2	50.56
10.90	.4291	4-1/16	5-1/2	50.56
11.00	.4331	4-1/16	5-1/2	48.34
11.10	.4370	4-1/16	5-1/2	56.38
11.20	.4409	4-1/16	5-1/2	56.38
11.30	.4449	4-5/16	5-3/4	56.38
11.40	.4488	4-5/16	5-3/4	56.38
11.50	.4528	4-5/16	5-3/4	54.22
11.60	.4567	4-5/16	5-3/4	61.54
11.70	.4606	4-5/16	5-3/4	61.54
11.80	.4646	4-5/16	5-3/4	61.54
11.90	.4685	4-5/16	5-3/4	61.54
12.00	.4724	4-5/16	5-3/4	58.66
12.10	.4764	4-1/2	6	63.78
12.20	.4803	4-1/2	6	63.78
12.30	.4848	4-1/2	6	63.78
12.40	.4882	4-1/2	6	63.78
12.50	.4921	4-1/2	6	60.82
12.60	.4961	4-1/2	6	66.00
12.80	.5039	4-1/2	6	66.00
12.90	.5079	4-13/16	6-5/8	66.00
13.00	.5118	4-13/16	6-5/8	62.30

SOLID CARBIDE JOBBER LENGTH DRILLS

ICS USA

SPECIAL PURPOSE

118° & 150° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
SCJD (2 Flute)	 BRIGHT POLISHED FINISH	For precision drilling of cast iron, non-ferrous metals, and non-metals. Needs rigid set-up for best results.	MICRO GRAIN CARBIDE 10% COBALT	Four Facet 118° Point Std. Spiral Std. Web
SCJD3F (3 Flute)	 BRIGHT POLISHED FINISH	For precision (reamer quality) drilling in cast iron, high silicon aluminum, alloy steels and non-ferrous materials. Three flute design removes more material per revolution, tracks straighter in hole, drill at very high feed rates, and does not need to be run on a super rigid set-up like other carbide drills. This self-centering drill is ideal for CNC Machine Center.	MICRO GRAIN CARBIDE 10% COBALT	Self-Centering 150° Point 30° Spiral Heavy Web

Fractional Sizes (Straight Shank) 1/32" to 3/4" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	SOLID CARBIDE	
				BRIGHT FINISH 118° POINT	BRIGHT FINISH 150° POINT
				SCJD	SCJD3F
1/32	.0313	5/16	1-1/4	16.74	-
3/64	.0469	3/4	1-1/2	16.74	-
1/16	.0625	3/4	1-1/2	14.24	-
5/64	.0781	7/8	1-3/4	14.96	-
3/32	.0938	1	1-3/4	16.46	-
7/64	.1094	1-1/4	2	18.70	25.28
1/8	.1250	1-1/4	2	20.00	27.52
9/64	.1406	1-3/8	2-1/2	22.14	32.14
5/32	.1562	1-3/8	2-1/2	24.70	34.02
11/64	.1719	1-5/8	2-3/4	29.28	36.46
3/16	.1875	1-5/8	2-3/4	30.12	40.32
13/64	.2031	1-3/4	3	34.68	48.76
7/32	.2188	1-3/4	3	38.52	50.12
15/64	.2344	2	3-1/4	43.62	53.74
1/4	.2500	2	3-1/4	45.94	54.58
17/64	.2656	2-1/8	3-1/2	51.82	60.14
9/32	.2812	2-1/8	3-1/2	54.16	67.34

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	SOLID CARBIDE	
				BRIGHT FINISH 118° POINT	BRIGHT FINISH 150° POINT
				SCJD	SCJD3F
19/64	.2969	2-3/8	3-3/4	60.62	74.60
5/16	.3125	2-3/8	3-3/4	63.62	78.96
21/64	.3281	2-1/2	4	70.52	86.14
11/32	.3438	2-1/2	4	76.42	95.50
23/64	.3594	2-3/4	4-1/4	87.08	104.26
3/8	.3750	2-3/4	4-1/4	91.82	121.32
25/64	.3906	2-7/8	4-1/2	108.20	127.78
13/32	.4062	2-7/8	4-1/2	117.68	141.80
27/64	.4219	2-7/8	4-1/2	124.72	147.70
7/16	.4375	2-7/8	4-1/2	135.22	154.72
29/64	.4531	3	4-3/4	150.66	162.30
15/32	.4688	3	4-3/4	162.34	169.82
31/64	.4844	3	4-3/4	166.92	177.30
1/2	.5000	3	4-3/4	166.92	183.92
9/16	.5625	3	4-3/4	-	290.90
5/8	.6250	3-1/2	5-3/4	-	355.06
3/4	.7500	4-1/2	5-3/4	-	504.48

Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	SOLID CARBIDE	
				BRIGHT FINISH 118° POINT	BRIGHT FINISH 150° POINT
				SCJD	SCJD3F
A	.234	2	3-1/4	42.40	52.82
B	.238	2	3-1/4	44.20	54.04
C	.242	2	3-1/4	44.54	47.12
D	.246	2	3-1/4	45.18	54.44
E	.250	2	3-1/4	49.12	54.58
F	.257	2	3-1/4	52.08	57.30
G	.261	2-1/8	3-1/2	53.24	58.72
H	.266	2-1/8	3-1/2	53.24	61.32
I	.272	2-1/8	3-1/2	54.16	63.70
J	.277	2-1/8	3-1/2	55.66	65.52
K	.281	2-1/8	3-1/2	56.14	65.24
L	.290	2-1/8	3-1/2	59.28	70.26
M	.295	2-3/8	3-3/4	60.42	71.68

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	SOLID CARBIDE	
				BRIGHT FINISH 118° POINT	BRIGHT FINISH 150° POINT
				SCJD	SCJD3F
N	.302	2-3/8	3-3/4	64.26	76.76
O	.316	2-3/8	3-3/4	67.76	81.84
P	.323	2-3/8	3-3/4	70.20	84.72
Q	.332	2-1/2	4	72.88	89.26
R	.339	2-1/2	4	76.12	93.94
S	.348	2-1/2	4	81.10	99.02
T	.358	2-3/4	4-1/4	83.88	102.50
U	.368	2-3/4	4-1/4	88.06	105.42
V	.377	2-3/4	4-1/4	97.52	113.64
W	.386	2-7/8	4-1/2	104.90	120.72
X	.397	2-7/8	4-1/2	114.62	133.40
Y	.404	2-7/8	4-1/2	118.50	139.00
Z	.413	2-7/8	4-1/2	128.30	144.18

SOLID CARBIDE JOBBER LENGTH DRILLS

MET-47

ICS USA

SPECIAL PURPOSE

118° & 150° POINT



Wire Gauge Sizes (Straight Shank) #1 to #80 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	SOLID CARBIDE	
				BRIGHT FINISH 118° POINT	BRIGHT FINISH 150° POINT
				SCJD	SCJD3F
1	.2280	1-3/4	3	40.48	51.92
2	.2210	1-3/4	3	39.00	51.04
3	.2130	1-3/4	3	37.30	49.74
4	.2090	1-3/4	3	36.44	49.52
5	.2055	1-3/4	3	35.58	49.06
6	.2040	1-3/4	3	35.58	48.96
7	.2010	1-3/4	3	34.68	44.38
8	.1990	1-3/4	3	34.28	43.88
9	.1960	1-3/4	3	33.82	42.68
10	.1935	1-5/8	2-3/4	33.32	42.08
11	.1910	1-5/8	2-3/4	32.98	41.50
12	.1890	1-5/8	2-3/4	32.98	40.92
13	.1850	1-5/8	2-3/4	32.40	39.98
14	.1820	1-5/8	2-3/4	31.72	39.66
15	.1800	1-5/8	2-3/4	31.10	39.30
16	.1770	1-5/8	2-3/4	31.10	38.56
17	.1730	1-5/8	2-3/4	29.66	38.20
18	.1695	1-5/8	2-3/4	27.82	36.18
19	.1660	1-5/8	2-3/4	27.34	35.94
20	.1610	1-3/8	2-1/2	26.18	35.40
21	.1590	1-3/8	2-1/2	26.18	35.14
22	.1570	1-3/8	2-1/2	25.20	34.62
23	.1540	1-3/8	2-1/2	25.20	33.56
24	.1520	1-3/8	2-1/2	24.28	33.06
25	.1495	1-3/8	2-1/2	23.52	32.60
26	.1470	1-3/8	2-1/2	23.52	32.50
27	.1440	1-3/8	2-1/2	23.18	32.26
28	.1405	1-3/8	2-1/2	22.44	31.66
29	.1360	1-3/8	2-1/2	22.44	30.64
30	.1285	1-1/4	2-1/4	21.18	28.54
31	.1200	1-1/4	2-1/4	19.68	27.20
32	.1160	1-1/4	2-1/4	19.92	26.56
33	.1130	1-1/4	2-1/4	19.60	26.24
34	.1110	1-1/4	2-1/4	18.90	25.94
35	.1100	1-1/4	2-1/4	18.90	25.62
36	.1065	1-1/4	2-1/4	18.90	24.98
37	.1040	1-1/4	2-1/4	18.30	-
38	.1015	1-1/4	2-1/4	17.84	-
39	.0995	1-1/4	2-1/4	17.84	-
40	.0980	1	2	17.36	-

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	SOLID CARBIDE	
				BRIGHT FINISH 118° POINT	
				SCJD	
41	.0960	1	2	17.14	
42	.0935	1	2	16.70	
43	.0890	1	2	16.46	
44	.0860	1	2	16.02	
45	.0820	7/8	1-3/4	15.46	
46	.0810	7/8	1-3/4	15.46	
47	.0785	7/8	1-3/4	15.14	
48	.0760	7/8	1-3/4	15.14	
49	.0730	7/8	1-3/4	14.78	
50	.0700	7/8	1-3/4	14.78	
51	.0670	3/4	1-1/2	14.70	
52	.0635	3/4	1-1/2	14.70	
53	.0595	3/4	1-1/2	14.70	
54	.0550	3/4	1-1/2	14.70	
55	.0520	3/4	1-1/2	14.70	
56	.0465	3/4	1-1/2	14.70	
57	.0430	3/4	1-1/2	18.20	
58	.0420	3/4	1-1/2	18.20	
59	.0410	3/4	1-1/2	18.20	
60	.0400	3/4	1-1/2	18.20	
61	.0390	5/8	1-1/2	18.46	
62	.0380	5/8	1-1/2	18.74	
63	.0370	5/8	1-1/2	18.98	
64	.0360	5/8	1-1/2	19.36	
65	.0350	5/8	1-1/2	19.68	
66	.0330	1/2	1-1/4	19.92	
67	.0320	1/2	1-1/4	20.16	
68	.0310	1/2	1-1/4	20.48	
69	.0292	1/2	1-1/4	20.76	
70	.0280	1/2	1-1/4	21.02	
71	.0260	5/16	1	21.40	
72	.0250	5/16	1	21.66	
73	.0240	1/4	7/8	21.92	
74	.0225	1/4	7/8	22.20	
75	.0210	1/4	7/8	22.48	
76	.0200	1/4	7/8	22.94	
77	.0180	3/16	3/4	23.04	
78	.0160	3/16	3/4	23.38	
79	.0145	3/16	3/4	23.66	
80	.0135	3/16	3/4	23.96	



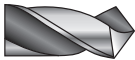
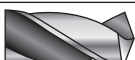

Metric Sizes (Straight Shank) .70mm to 12.00mm Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	SOLID CARBIDE	
				BRIGHT FINISH 118° POINT	BRIGHT FINISH 150° POINT
				SCJDM	SCJDM3F
.70	.0276	1/2	1-1/4	17.74	-
.80	.0315	1/2	1-1/4	17.74	-
.90	.0354	5/8	1-3/8	17.74	-
1.00	.0394	3/4	1-1/2	17.74	-
1.50	.0591	3/4	1-1/2	17.94	-
2.00	.0781	7/8	1-3/4	19.06	-
2.50	.0984	1	2	21.82	-
3.00	.1181	1-1/4	2-1/4	24.44	26.88
3.50	.1378	1-3/8	2-1/2	26.56	31.12
4.00	.1575	1-3/8	2-1/2	32.72	34.86
4.50	.1772	1-5/8	2-3/4	35.00	38.92
5.00	.1969	1-3/4	3	38.74	43.28
5.50	.2165	1-3/4	3	45.92	49.92

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	SOLID CARBIDE	
				BRIGHT FINISH 118° POINT	BRIGHT FINISH 150° POINT
				SCJDM	SCJDM3F
6.00	.2362	2	3-1/4	48.54	53.90
6.50	.2559	2	3-1/4	54.42	55.94
7.00	.2756	2-1/8	3-1/2	59.56	64.60
7.50	.2953	2-3/8	3-3/4	65.06	73.14
8.00	.3150	2-3/8	3-3/4	73.36	81.84
8.50	.3346	2-1/2	4	80.32	90.80
9.00	.3543	2-3/4	4-1/4	91.20	100.74
9.50	.3740	2-3/4	4-1/4	104.12	106.02
10.00	.3937	2-7/8	4-1/2	119.54	130.62
10.50	.4134	2-7/8	4-1/2	133.62	145.34
11.00	.4331	2-7/8	4-1/2	159.04	152.38
11.50	.4528	2-7/8	4-1/2	163.84	158.52
12.00	.4724	3	4-3/4	181.82	173.56

HIGH SPEED STEEL SPECIAL POINT JOBBER LENGTH DRILLS

ICS USA SPECIAL PURPOSE SPECIAL POINT

ITEM NO.	DRILL POINT ILLUSTRATION	CUTTING APPLICATION & FEATURES	STEEL SPECS
JD-FF118P	 Four Facet 118° Point	Four Facet (Pyrcon) Points have a primary cutting lip facet and a secondary heel clearance facet. It is the same geometry used on end mills and is designed for long life and harder metals. The secondary facet is ground to the midway point of the chisel to produce a self-centering point. It is one of the most accurate points for CNC Machine Centers. Note: Use 118° Point for general purpose drilling. Use 135° Point for drilling work hardening metals.	M2
JD-FF135P	 Four Facet 135° Point		M2
JD-HS118P	 Helical "S" 118° Point	Helical Points have an S-shaped chisel which offers exceptional self-centering capability and reduced thrust. It was one of the first drill point geometries developed to save drilling time on CNC Machining Centers. Its four cutting edges will cut so close to actual diameter that reaming can be eliminated or reduced. Drill life is extended because the helical point wears evenly and will drill up to 15 times more holes than a conventional 118° point. Note: Use 118° Point for general purpose drilling. Use 135° Point for drilling work hardening metals.	M2
JD-HS135P	 Helical "S" 135° Point		M2
JD-HFBP	 Helical Flat Bottom Point	Helical Flat Bottom Points have the features of both the helical and flat bottom point. They combine the self-centering point, long life, and the secondary reaming ability of the helical point with the burr-free breakthrough and the flat bottom or blind hole drilling ability of a flat bottom point. It can be used for plastic, wood, or metal.	M2

Fractional Sizes (Straight Shank) 1/16" to 1/2" Dia.

HIGH SPEED STEEL								
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	FOUR FACET 118° POINT	FOUR FACET 135° POINT	HELICAL "S" 118° POINT	HELICAL "S" 135° POINT	HELICAL FLAT BOTTOM POINT
				JD-FF118P	JD-FF135P	JD-HS118P	JD-HS135P	JD-HFBP
1/16	.0625	7/8	1-7/8	3.36	3.36	2.68	2.68	-
5/64	.0781	1	2	3.36	3.36	2.68	2.68	-
3/32	.0938	1-1/4	2-1/4	3.36	3.36	2.68	2.68	-
7/64	.1094	1-1/2	2-5/8	3.36	3.36	2.68	2.68	-
1/8	.1250	1-5/8	2-3/4	3.36	3.36	2.68	2.68	2.68
9/64	.1406	1-3/4	2-7/8	3.50	3.50	2.92	2.92	2.92
5/32	.1562	2	3-1/8	3.78	3.78	3.32	3.32	3.32
11/64	.1719	2-1/8	3-1/4	3.88	3.88	3.66	3.66	3.66
3/16	.1875	2-5/16	3-1/2	4.08	4.08	3.84	3.84	3.84
13/64	.2031	2-7/16	3-5/8	4.78	4.78	4.18	4.18	4.18
7/32	.2188	2-1/2	3-3/4	5.02	5.02	4.44	4.44	4.44
15/64	.2344	2-5/8	3-7/8	5.22	5.22	4.62	4.62	4.62
1/4	.2500	2-3/4	4	5.26	5.26	4.66	4.66	4.66
17/64	.2656	2-7/8	4-1/8	5.88	5.88	5.30	5.30	5.30
9/32	.2812	2-15/16	4-1/4	6.14	6.14	5.54	5.54	5.54
19/64	.2969	3-1/16	4-3/8	6.54	6.54	5.94	5.94	5.94
5/16	.3125	3-3/16	4-1/2	6.72	6.72	6.14	6.14	6.14
21/64	.3281	3-5/16	4-5/8	7.12	7.12	6.54	6.54	6.54
11/32	.3438	3-7/16	4-3/4	7.38	7.38	6.78	6.78	6.78
23/64	.3594	3-1/2	4-7/8	7.80	7.80	7.20	7.20	7.20
3/8	.3750	3-5/8	5	8.20	8.20	7.60	7.60	7.60
25/64	.3906	3-3/4	5-1/8	8.38	8.38	7.80	7.80	7.80
13/32	.4062	3-7/8	5-1/4	9.18	9.18	8.60	8.60	8.60
27/64	.4219	3-15/16	5-3/8	9.70	9.70	9.12	9.12	9.12
7/16	.4375	4-1/16	5-1/2	10.06	10.06	9.48	9.48	9.48
29/64	.4531	4-3/16	5-5/8	10.58	10.58	10.00	10.00	10.00
15/32	.4688	4-5/16	5-3/4	11.24	11.24	10.66	10.66	10.66
31/64	.4844	4-3/8	5-7/8	11.64	11.64	11.06	11.06	11.06
1/2	.5000	4-1/2	6	12.14	12.14	11.56	11.56	11.56

PACKAGING

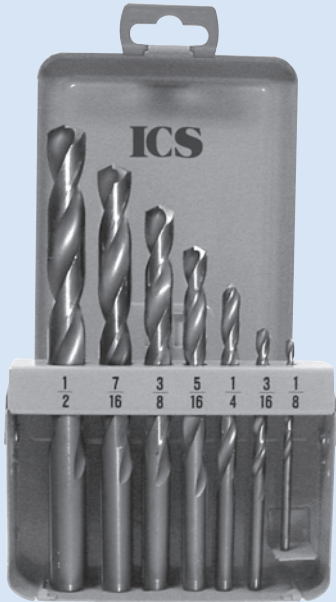
1/64 to 17/64 - 12 Drills/Envelope
9/32 to 1/2 - 6 Drills/Envelope

ORDERING NOTE

Orders accepted in less than package quantity are subject to a 15% surcharge.

DRILL SETS

Special Point Jobber Length Drill Sets can be found on page 58.





HIGH SPEED STEEL SPECIAL POINT JOBBER LENGTH DRILLS

MET-49

ICS USA

SPECIAL PURPOSE

SPECIAL POINT

ITEM NO.	DRILL POINT ILLUSTRATION	CUTTING APPLICATION & FEATURES	STEEL SPECS
JD-PP	 Perfect Point®	Perfect Point® Drills have 6 cutting edges and were initially developed by ICS to drill through layers of metal and wood with no metal burr breakthrough or wood grain tears and splinters. It will drill a perfectly round hole in metal, wood, and plastic. They combine the best features of metal and wood cutting drills and can be used to replace over a dozen styles of drill points for cutting.	M2
JD-DAP	 Double Angle Point	Double Angle (Cast Iron) Points have the features of both the conventional 118° point and the low angle 90° point. The secondary 90° point angle reduces wear and chipping to the outside cutting lip corners. This point will improve hole size and finish and may produce 3 times the number of holes before sharpening, compared to a conventional 118° point. It is used primarily for drilling cast iron, abrasive materials and to reduce breakthrough burr in soft materials and mild steel.	M2

Fractional Sizes (Straight Shank) 1/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.		PRICE	
				PERFECT POINT®	DOUBLE ANGLE POINT	ITEM NO.	PRICE
1/16	.0625	7/8	1-7/8	JD-PP004	3.36	JD-DAP004	2.68
5/64	.0781	1	2	JD-PP005	3.36	JD-DAP005	2.68
3/32	.0938	1-1/4	2-1/4	JD-PP006	3.36	JD-DAP006	2.68
7/64	.1094	1-1/2	2-5/8	JD-PP007	3.36	JD-DAP007	2.68
1/8	.1250	1-5/8	2-3/4	JD-PP008	3.36	JD-DAP008	2.68
9/64	.1406	1-3/4	2-7/8	JD-PP009	3.50	JD-DAP009	2.60
5/32	.1562	2	3-1/8	JD-PP010	3.78	JD-DAP010	2.96
11/64	.1719	2-1/8	3-1/4	JD-PP011	3.88	JD-DAP011	3.26
3/16	.1875	2-5/16	3-1/2	JD-PP012	4.08	JD-DAP012	3.42
13/64	.2031	2-7/16	3-5/8	JD-PP013	4.18	JD-DAP013	3.72
7/32	.2188	2-1/2	3-3/4	JD-PP014	4.44	JD-DAP014	3.96
15/64	.2344	2-5/8	3-7/8	JD-PP015	4.62	JD-DAP015	4.12
1/4	.2500	2-3/4	4	JD-PP016	4.66	JD-DAP016	4.16
17/64	.2656	2-7/8	4-1/8	JD-PP017	5.30	JD-DAP017	4.72
9/32	.2812	2-15/16	4-1/4	JD-PP018	5.54	JD-DAP018	4.94
19/64	.2969	3-1/16	4-3/8	JD-PP019	5.94	JD-DAP019	5.30
5/16	.3125	3-3/16	4-1/2	JD-PP020	6.14	JD-DAP020	5.46
21/64	.3281	3-5/16	4-5/8	JD-PP021	6.54	JD-DAP021	5.82
11/32	.3438	3-7/16	4-3/4	JD-PP022	6.78	JD-DAP022	6.06
23/64	.3594	3-1/2	4-7/8	JD-PP023	7.20	JD-DAP023	6.44
3/8	.3750	3-5/8	5	JD-PP024	7.60	JD-DAP024	6.78
25/64	.3906	3-3/4	5-1/8	JD-PP025	7.80	JD-DAP025	6.96
13/32	.4062	3-7/8	5-1/4	JD-PP026	8.60	JD-DAP026	7.66
27/64	.4219	3-15/16	5-3/8	JD-PP027	9.12	JD-DAP027	8.14
7/16	.4375	4-1/16	5-1/2	JD-PP028	9.48	JD-DAP028	8.44
29/64	.4531	4-3/16	5-5/8	JD-PP029	10.00	JD-DAP029	8.92
15/32	.4688	4-5/16	5-3/4	JD-PP030	10.66	JD-DAP030	9.50
31/64	.4844	4-3/8	5-7/8	JD-PP031	11.06	JD-DAP031	9.86
1/2	.5000	4-1/2	6	JD-PP032	11.56	JD-DAP032	10.32

PACKAGING

1/64 to 17/64 - 12 Drills/Envelope • 9/32 to 1/2 - 6 Drills/Envelope

ORDERING NOTE

Orders accepted in less than package quantity are subject to a 15% surcharge.

DRILL SETS

Special Point Jobber Length Drill Sets can be found on pages 58.

HIGH SPEED STEEL GROUND DRILL BLANKS

ICS **WIS**

GENERAL PURPOSE

PARALLEL GROUND



Ground drill blanks are the same length as jobber length drills and hardened (RC 63-65) and parallel ground (no taper) to tolerances shown. All blanks have a bright finish. They are used for the sizing of holes, stock for router bits, and other small tools, and can be used for gauges, drifts, punches, rollers, locating pins and spindles, knockout pins, etc.

Sizes 1/64" to 3/4" Dia. & #1 to #80 Dia.

DEC. SIZE	OVERALL EQUIV.	ITEM LENGTH	ITEM NO.	PRICE
1/64	.0156	3/4	GDB001	1.10
1/32	.0312	1-3/8	GDB002	1.10
3/64	.0469	1-3/4	GDB003	1.14
1/16	.0625	1-7/8	GDB004	1.14
5/64	.0781	2	GDB005	1.14
3/32	.0938	2-1/4	GDB006	1.14
7/64	.1094	2-5/8	GDB007	1.18
1/8	.1250	2-3/4	GDB008	1.18
9/64	.1406	2-7/8	GDB009	1.24
5/32	.1562	3-1/8	GDB010	1.28
11/64	.1719	3-1/4	GDB011	1.28
3/16	.1875	3-1/2	GDB012	1.54
13/64	.2031	3-5/8	GDB013	1.72
7/32	.2188	3-3/4	GDB014	1.88
15/64	.2344	3-7/8	GDB015	2.04
1/4	.2500	4	GDB016	2.12
17/64	.2656	4-1/8	GDB017	2.54
9/32	.2812	4-1/4	GDB018	2.72
19/64	.2969	4-3/8	GDB019	3.04
5/16	.3125	4-1/2	GDB020	3.30
21/64	.3281	4-5/8	GDB021	3.72
11/32	.3438	4-3/4	GDB022	4.04
23/64	.3594	4-7/8	GDB023	4.54
3/8	.3750	5	GDB024	4.70
25/64	.3906	5-1/8	GDB025	5.22
13/32	.4062	5-1/4	GDB026	5.54
27/64	.4219	5-3/8	GDB027	6.14
7/16	.4375	5-1/2	GDB028	6.30
29/64	.4531	5-5/8	GDB029	7.06
15/32	.4688	5-3/4	GDB030	7.32
31/64	.4844	5-7/8	GDB031	8.16
1/2	.5000	6	GDB032	8.16
9/16	.5625	6	GDB036	13.88
5/8	.6250	6	GDB040	16.14
11/16	.6875	6	GDB044	20.54
3/4	.7500	6	GDB048	23.30

DEC. SIZE	OVERALL EQUIV.	ITEM LENGTH	ITEM NO.	PRICE
1	.2280	3-7/8	GDB#01	2.28
2	.2210	3-7/8	GDB#02	2.28
3	.2130	3-3/4	GDB#03	2.08
4	.2090	3-3/4	GDB#04	2.08
5	.2055	3-3/4	GDB#05	2.08
6	.2040	3-3/4	GDB#06	2.08
7	.2010	3-5/8	GDB#07	1.84
8	.1990	3-5/8	GDB#08	1.84
9	.1960	3-5/8	GDB#09	1.88
10	.1935	3-5/8	GDB#10	1.84
11	.1910	3-1/2	GDB#11	1.72
12	.1890	3-1/2	GDB#12	1.72
13	.1850	3-1/2	GDB#13	1.60
14	.1820	3-3/8	GDB#14	1.70
15	.1800	3-3/8	GDB#15	1.68
16	.1770	3-3/8	GDB#16	1.68
17	.1730	3-3/8	GDB#17	1.68
18	.1695	3-1/4	GDB#18	1.46
19	.1660	3-1/4	GDB#19	1.46
20	.1610	3-1/4	GDB#20	1.46
21	.1590	3-1/4	GDB#21	1.28
22	.1570	3-1/8	GDB#22	1.28
23	.1540	3-1/8	GDB#23	1.28
24	.1520	3-1/8	GDB#24	1.28
25	.1495	3	GDB#25	1.24
26	.1470	3	GDB#26	1.24
27	.1440	3	GDB#27	1.18
28	.1405	2-7/8	GDB#28	1.14
29	.1360	2-7/8	GDB#29	1.14
30	.1285	2-3/4	GDB#30	1.14
31	.1200	2-3/4	GDB#31	1.14
32	.1160	2-3/4	GDB#32	1.14
33	.1130	2-5/8	GDB#33	1.14
34	.1110	2-5/8	GDB#34	1.14
35	.1100	2-5/8	GDB#35	1.14
36	.1065	2-1/2	GDB#36	1.14
37	.1040	2-1/2	GDB#37	1.14
38	.1015	2-1/2	GDB#38	1.14
39	.0995	2-3/8	GDB#39	1.14
40	.0980	2-3/8	GDB#40	1.14

DEC. SIZE	OVERALL EQUIV.	ITEM LENGTH	ITEM NO.	PRICE
41	.0960	2-3/8	GDB#41	1.14
42	.0935	2-1/4	GDB#42	1.14
43	.0890	2-1/4	GDB#43	1.14
44	.0860	2-1/8	GDB#44	1.14
45	.0820	2-1/8	GDB#45	1.14
46	.0810	2-1/8	GDB#46	1.14
47	.0785	2	GDB#47	1.14
48	.0760	2	GDB#48	1.14
49	.0730	2	GDB#49	1.14
50	.0700	2	GDB#50	1.14
51	.0670	2	GDB#51	1.14
52	.0635	1-7/8	GDB#52	1.14
53	.0595	1-7/8	GDB#53	1.14
54	.0550	1-7/8	GDB#54	1.14
55	.0520	1-7/8	GDB#55	1.14
56	.0465	1-3/4	GDB#56	1.14
57	.0430	1-3/4	GDB#57	1.14
58	.0420	1-5/8	GDB#58	1.14
59	.0410	1-5/8	GDB#59	1.14
60	.0400	1-5/8	GDB#60	1.14
61	.0390	1-5/8	GDB#61	1.18
62	.0380	1-1/2	GDB#62	1.18
63	.0370	1-1/2	GDB#63	1.18
64	.0360	1-1/2	GDB#64	1.18
65	.0350	1-1/2	GDB#65	1.18
66	.0330	1-3/8	GDB#66	1.18
67	.0320	1-3/8	GDB#67	1.18
68	.0310	1-3/8	GDB#68	1.18
69	.0292	1-3/8	GDB#69	1.18
70	.0280	1-1/4	GDB#70	1.18
71	.0260	1-1/4	GDB#71	1.18
72	.0250	1-1/8	GDB#72	1.18
73	.0240	1-1/8	GDB#73	1.18
74	.0225	1	GDB#74	1.18
75	.0210	1	GDB#75	1.18
76	.0200	7/8	GDB#76	1.18
77	.0180	7/8	GDB#77	1.18
78	.0160	7/8	GDB#78	1.18
79	.0145	3/4	GDB#79	1.18
80	.0135	3/4	GDB#80	1.18

PACKAGING

Sizes 1/64 to 17/64 - 12 Ea./Envelope • 9/32 to 1/2 - 6 Ea./Envelope • 9/16 to 3/4 - 1 Ea./Tube
#1 to #80 - 12 Ea./Envelope

HIGH SPEED STEEL GROUND DRILL BLANKS

ICS WIS

GENERAL PURPOSE

PARALLEL GROUND



Letter Sizes "A" to "Z" Dia.

SIZE	DEC. EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
A	.234	3-7/8	GDB"A"	2.42
B	.238	4	GDB"B"	2.42
C	.242	4	GDB"C"	2.42
D	.246	4	GDB"D"	2.42
E	.250	4	GDB"E"	2.12
F	.257	4-1/8	GDB"F"	2.62
G	.261	4-1/8	GDB"G"	2.86
H	.266	4-1/8	GDB"H"	2.86
I	.272	4-1/8	GDB"I"	3.22
J	.277	4-1/8	GDB"J"	3.04
K	.281	4-1/4	GDB"K"	3.36
L	.290	4-1/4	GDB"L"	3.36
M	.295	4-3/8	GDB"M"	3.60

Sizes A to M - 12 Ea./Envelope

SIZE	DEC. EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
N	.302	4-3/8	GDB"N"	3.60
O	.316	4-1/2	GDB"O"	3.60
P	.323	4-5/8	GDB"P"	4.08
Q	.332	4-3/4	GDB"Q"	4.08
R	.339	4-3/4	GDB"R"	4.30
S	.348	4-7/8	GDB"S"	4.62
T	.358	4-7/8	GDB"T"	5.22
U	.368	5	GDB"U"	5.22
V	.377	5	GDB"V"	5.30
W	.386	5-1/8	GDB"W"	5.56
X	.397	5-1/8	GDB"X"	6.66
Y	.404	5-1/4	GDB"Y"	7.76
Z	.413	5-1/4	GDB"Z"	8.06

Sizes N to Z - 6 Ea./Envelope

HIGH SPEED STEEL GROUND DRILL BLANK SETS

METAL INDEX

ILLUSTRATION	RANGE OF SIZES	NO. OF BLANKS	ITEM NO.	PRICE
	1/16 to 1/4 by 64ths	13	GDBS-13	23.00
	1/16 to 1/2 by 32nds	15	GDBS-15	59.36
	1/16 to 1/2 by 64ths	29	GDBS-29	102.58
	Wire Gauge Sizes: #1 to #60	60	GDBS-60	89.08
	Wire Gauge Sizes: #61 to #80	20	GDBS-20	29.18
	Letter Sizes: A to Z	26	GDBS-26	112.98
	1-60, A-Z, 1/16 - 1/2 by 64ths	115	GDBS-115	332.86

DRILL BLANK TOLERANCES			
DIAMETER		TOLERANCE	
OVER	UP TO	HIGH +	LOW -
#80	1/4	.0000	.0005
1/4	25/64	.0000	.0009
25/64	3/4	.0000	.0010

MANUFACTURING NOTES

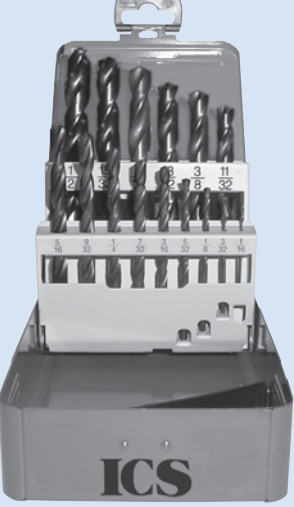
Blanks to tolerances other than listed may be made to special order.

Blanks may be supplied with coned or square ends according to diameter or manufacturing method. If important, please check before ordering.

JOBBER LENGTH DRILL SETS

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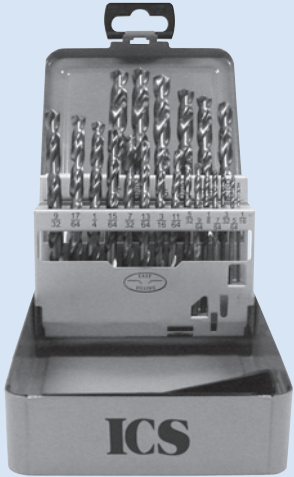
DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
 <p>13 PC DRILL SET</p> <p>Sizes 1/16 to 1/4 by 64ths (Wt. .80 lbs.)</p>	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-13	17.64
	Bright Finish Jobber Drill 118° Pt	DS-JDP-13	18.24
	Black Finish Jobber Drill 118° Pt	DS-JDG-13	18.24
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-13	48.22
	Zirconium Nitride Coated Jobber Drill 118° Pt	DS-JDZ-13	63.56
	HEAVY DUTY - HIGH SPEED STEEL		
	Bright Finish Jobber Drill 118° S/Pt	DS-JDHA-13	23.30
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-13	23.30
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-13	23.30
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-13	23.30
	Black & Gold Dual Finish Jobber Drill 135° S/Pt	DS-JDHDF-13	27.06
	HEAVY DUTY - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 135° S/Pt	DS-JDHT-13	51.04
	HEAVY DUTY - LEFT HAND - HIGH SPEED STEEL		
Gold Finish Left Hand Jobber Drill 135° S/Pt	DS-JDL-13	51.04	
HEAVY DUTY - COBALT			
Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-13	37.64	

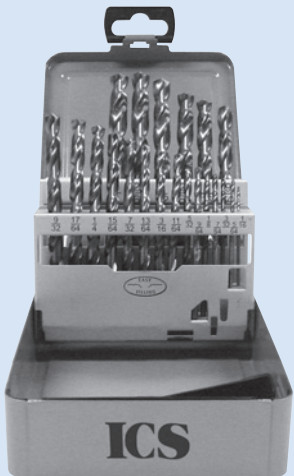
DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
 <p>15 PC DRILL SET</p> <p>Sizes 1/16 to 1/2 by 32nds (Wt. 2.10 lbs.)</p>	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-15	51.74
	Bright Finish Jobber Drill 118° Pt	DS-JDP-15	52.92
	Black Finish Jobber Drill 118° Pt	DS-JDG-15	52.92
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-15	131.72
	Zirconium Nitride Coated Jobber Drill 118° Pt	DS-JDZ-15	211.54
	GENERAL PURPOSE - REDUCED SHANK - HIGH SPEED STEEL		
	Black Finish 1/4" SHANK Roll Fluted Jobber Drill 118° Pt	DS-JDRQS-15	59.98
	Bright Finish 1/4" SHANK Jobber Drill 118° Pt	DS-JDPQS-15	63.82
	Black Finish 1/4" SHANK Jobber Drill 118° Pt	DS-JDGQS-15	63.82
	Black Finish 3/8" SHANK Roll Fluted Jobber Drill 118° Pt	DS-JDRTS-15	57.62
	Bright Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDPTS-15	61.30
	Black Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDGTS-15	61.30
	HEAVY DUTY - HIGH SPEED STEEL		
	Black Finish Jobber Drill 118° S/Pt	DS-JDHA-15	63.50
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-15	63.50
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-15	63.50
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-15	66.86
	Black & Gold Dual Finish Jobber Drill 135° S/Pt	DS-JDHDF-15	72.10
	HEAVY DUTY - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 135° S/Pt	DS-JDHT-15	152.00
	HEAVY DUTY - LEFT HAND - HIGH SPEED STEEL		
	Gold Finish Left Hand Jobber Drill 135° S/Pt	DS-JDL-15	121.98
HEAVY DUTY - COBALT - STRAIGHT SHANK & REDUCED			
Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-15	105.84	
Gold Finish 3/8" SHANK Cobalt Jobber Drill 135° S/Pt	DS-JDCTS-15	132.30	
HEAVY DUTY - REDUCED SHANK - HIGH SPEED STEEL			
Black Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHBQS-15	88.20	
Bright Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHPQS-15	88.20	
Gold Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHGFQS-15	92.86	
Black Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHBTS-15	76.44	
Bright Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHPTS-15	76.44	
Gold Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHGFTS-15	76.44	
Black & Gold Dual Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHDFTS-15	88.20	

JOBBER LENGTH DRILL SETS

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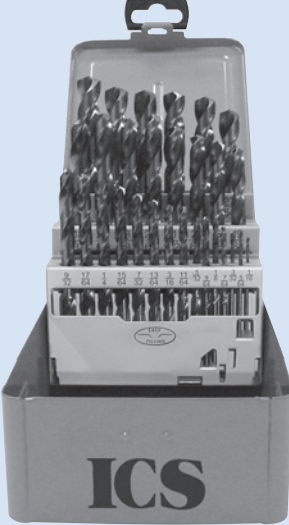
METAL INDEX

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
 <p>21 PC DRILL SET</p> <p>Sizes 1/16 to 3/8 by 64ths (Wt. 1.70 lbs.)</p>	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-21	44.70
	Bright Finish Jobber Drill 118° Pt	DS-JDP-21	47.04
	Black Finish Jobber Drill 118° Pt	DS-JDG-21	47.04
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-21	132.10
	Zirconium Nitride Coated Jobber Drill 118° Pt	DS-JDZ-21	169.90
	HEAVY DUTY - HIGH SPEED STEEL		
	Black Finish Jobber Drill 118° S/Pt	DS-JDHA-21	56.46
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-21	56.46
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-21	56.46
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-21	60.06
	Black & Gold Dual Finish Jobber Drill 135° S/Pt	DS-JDHDF-21	63.50
	HEAVY DUTY - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 135° S/Pt	DS-JDHT-21	138.10
	HEAVY DUTY - LEFT HAND - HIGH SPEED STEEL		
	Gold Finish Left Hand Jobber Drill 135° S/Pt	DS-JDL-21	132.58
	HEAVY DUTY - COBALT		
	Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-21	96.44

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
 <p>21 PC DRILL SET</p> <p>Sizes 1/16 to 1/4 by 64ths 9/32 to 1/2 by 32nds (Wt. 2.40 lbs.)</p>	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-21A	64.68
	Bright Finish Jobber Drill 118° Pt	DS-JDP-21A	68.84
	Black Finish Jobber Drill 118° Pt	DS-JDG-21A	68.84
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-21A	156.26
	GENERAL PURPOSE - REDUCED SHANK - HIGH SPEED STEEL		
	Black Finish 1/4" SHANK Roll Fluted Jobber Drill 118° Pt	DS-JDRQS-21A	70.56
	Bright Finish 1/4" SHANK Jobber Drill 118° Pt	DS-JDPQS-21A	75.06
	Black Finish 1/4" SHANK Jobber Drill 118° Pt	DS-JDQGS-21A	75.06
	Black Finish 1/4" SHANK Mechanics Jobber Drill 118° Pt	DS-MLDQS-21A	87.62
	Bright Finish 1/4" SHANK Mechanics Jobber Drill 118° Pt	DS-MLDPQS-21A	87.62
	HEAVY DUTY - HIGH SPEED STEEL		
	Black Finish Jobber Drill 118° S/Pt	DS-JDHA-21A	75.86
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-21A	75.86
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-21A	75.86
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-21A	80.70
	Black & Gold Dual Finish Jobber Drill 135° S/Pt	DS-JDHDF-21A	85.32
	HEAVY DUTY - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 135° S/Pt	DS-JDHT-21A	189.60
	HEAVY DUTY - LEFT HAND - HIGH SPEED STEEL		
Gold Finish Left Hand Jobber Drill 135° S/Pt	DS-JDL-21A	155.16	
HEAVY DUTY - COBALT			
Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-21A	128.18	
HEAVY DUTY - REDUCED SHANK - HIGH SPEED STEEL			
Black Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHBQS-21A	101.38	
Bright Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHPQS-21A	101.38	
Gold Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHGFQS-21A	106.70	
Black Finish 1/4" SHANK Mechanics Jobber Drill 135° S/Pt	DS-MLDHQS-21A	101.38	
Bright Finish 1/4" SHANK Mechanics Jobber Drill 135° S/Pt	DS-MLDHPQS-21A	101.38	

JOBBER LENGTH DRILL SETS

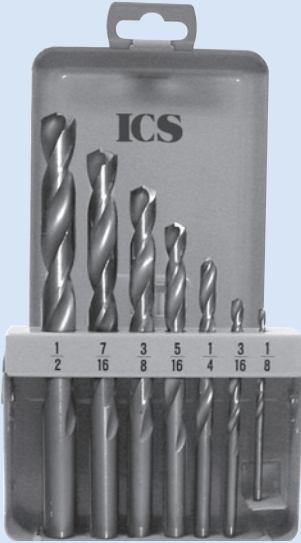
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DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
 <p>29 PC DRILL SET</p> <p>ICS</p> <p>Sizes 1/16 to 1/2 by 64ths (Wt. 3.30 lbs.)</p>	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-29	88.20
	Bright Finish Jobber Drill 118° Pt	DS-JDP-29	90.56
	Black Finish Jobber Drill 118° Pt	DS-JDG-29	90.56
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-29	276.44
	Zirconium Nitride Coated Jobber Drill 118° Pt	DS-JDZ-29	342.74
	GENERAL PURPOSE - REDUCED SHANK - HIGH SPEED STEEL		
	Black Finish 1/4" SHANK Roll Fluted Jobber Drill 118° Pt	DS-JDRQS-29	108.20
	Bright Finish 1/4" SHANK Jobber Drill 118° Pt	DS-JDPQS-129	110.54
	Black Finish 1/4" SHANK Jobber Drill 118° Pt	DS-JDGQS-29	110.54
	Black Finish 3/8" SHANK Roll Fluted Jobber Drill 118° Pt	DS-JDRTS-29	103.50
	Bright Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDPTS-29	105.84
	Black Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDGTS-29	105.84
	HEAVY DUTY - HIGH SPEED STEEL		
	Black Finish Jobber Drill 118° S/Pt	DS-JDHA-29	112.90
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-29	118.12
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-29	112.90
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-29	115.26
	Black & Gold Dual Finish Jobber Drill 135° S/Pt	DS-JDHDF-29	129.36
	HEAVY DUTY - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 135° S/Pt	DS-JDHT-29	291.66
	HEAVY DUTY - LEFT HAND/REDUCED SHANK - HIGH SPEED STEEL		
	Gold Finish Left Hand Jobber Drill 135° S/Pt	DS-JDL-29	248.18
	Gold Finish Left Hand 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDLTS-29	265.10
	HEAVY DUTY - COBALT/REDUCED SHANK		
	Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-29	176.40
	Gold Finish Cobalt 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDCTS-29	211.68
	HEAVY DUTY - REDUCED SHANK - HIGH SPEED STEEL		
Black Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHBQS-29	160.40	
Bright Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHPQS-29	160.40	
Gold Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHGFQS-29	155.86	
Black & Gold Dual Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHDFQS-29	CALL	
Black Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHBTS-29	136.72	
Bright Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHPTS-29	136.72	
Gold Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHGFTS-29	139.50	
Black & Gold Dual Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHDFTS-29	152.88	
SPECIAL PURPOSE - HIGH SPEED STEEL			
Bright Finish Fast Spiral Jobber Drill 118° Pt	DS-JDF-29	182.20	
Bright Finish Slow Spiral Jobber Drill 118° Pt	DS-JDS-29	210.66	
SPECIAL VALUE PACK - HIGH SPEED STEEL			
Black Finish Roll Fluted Jobber Drill 118° Pt and 16' Power Tape (Shrink Wrapped)	DS-JDR-29VP	88.20	
GUARANTEED BEST IMPORT - HIGH SPEED STEEL			
Black Finish Roll Fluted Jobber Drill 118° Pt	DS-IJDR-29	52.92	
PERFECT POINT - HIGH SPEED STEEL			
Bright Finish Jobber Drill - Perfect Point®	DS-JD-PP-29	220.50	

JOBBER LENGTH DRILL SETS

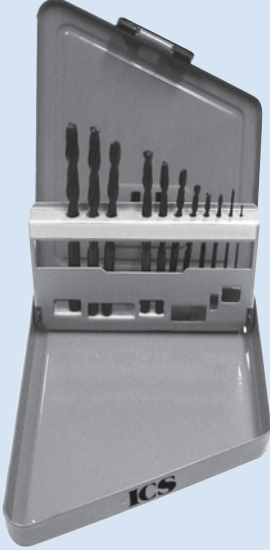
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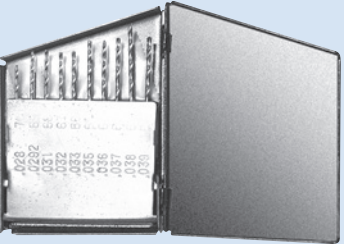
DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
7 PC DRILL SET  <p>Sizes 1/8 to 1/2 by 16ths (Wt. 1.40 lbs.)</p>	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-7	44.04
	Bright Finish Jobber Drill 118° Pt	DS-JDP-07	45.58
	Black Finish Jobber Drill 118° Pt	DS-JDG-07	45.58
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-7	91.00
	Zirconium Nitride Coated Jobber Drill 118° Pt	DS-JDZ-7	91.00
	Titanium Carbonitride Coated Jobber Drill 118° Pt	DS-JDTC-7	135.00
	Titanium Aluminum Nitride Jobber Drill 118° Pt	DS-JDTAL-7	135.00
	GENERAL PURPOSE - REDUCED SHANK - HIGH SPEED STEEL		
	Black Finish 1/4" SHANK Roll Fluted Jobber Drill 118° Pt	DS-JDRQS-7	49.74
	Bright Finish 1/4" SHANK Jobber Drill 118° Pt	DS-JDPQS-7	53.48
	Black Finish 1/4" SHANK Jobber Drill 118° Pt	DS-JDGQS-7	53.48
	Black Finish 3/8" SHANK Roll Fluted Jobber Drill 118° Pt	DS-JDRTS-7	46.94
	Bright Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDPTS-7	49.78
	Black Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDGTS-7	49.78
	HEAVY DUTY - HIGH SPEED STEEL		
	Black Finish Jobber Drill 118° S/Pt	DS-JDHA-7	51.80
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-7	51.80
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-7	51.80
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-7	51.80
	Black & Gold Dual Finish Jobber Drill 135° S/Pt	DS-JDHDF-7	53.76
	HEAVY DUTY - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 135° S/Pt	DS-JDHT-7	97.46
	Zirconium Nitride Coated Jobber Drill 135° S/Pt	DS-JDHZ-7	115.92
	Titanium Carbonitride Coated Jobber Drill 135° S/Pt	DS-JDHTC-7	145.34
	Titanium Aluminum Nitride Coated Jobber Drill 135° S/Pt	DS-JDHTA-7	145.34
	HEAVY DUTY - LEFT HAND/REDUCED SHANK - HIGH SPEED STEEL		
	Gold Finish Left Hand Jobber Drill 135° S/Pt	DS-JDL-7	80.90
	Gold Finish Left Hand 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDLTS-7	85.14
	HEAVY DUTY - COBALT/REDUCED SHANK		
	Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-7	77.76
	Gold Finish Cobalt 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDCTS-7	85.14
	HEAVY DUTY - REDUCED SHANK - HIGH SPEED STEEL		
	Black Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHBQS-7	62.02
	Bright Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHPQS-7	62.02
	Gold Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHGFQS-7	62.02
	Black & Gold Dual Finish 1/4" SHANK Jobber Drill 135° S/Pt	DS-JDHDFQS-7	CALL
	Black Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHBTS-7	56.02
	Bright Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHPTS-7	56.02
	Gold Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHGFTS-7	56.02
	Black & Gold Dual Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHDFTS-7	58.86
	SPECIAL PURPOSE - HIGH SPEED STEEL		
	Bright Finish Fast Spiral Jobber Drill 118° Pt	DS-JDF-7	62.26
	Bright Finish Slow Spiral Jobber Drill 118° Pt	DS-JDS-7	68.52
SPECIAL PURPOSE - CARBIDE TIPPED			
Bright Finish Carbide Tipped Jobber Drill 118° Pt	DS-CTJD-7	225.96	
SPECIAL PURPOSE - SOLID CARBIDE			
Bright Finish Solid Carbide Jobber Drill 118° Pt	DS-SCJD-7	571.18	
SPECIAL POINT - HIGH SPEED STEEL			
Oxide Finish Jobber Drill - Bickford® Point	DS-JD-BP-7	73.76	
Oxide Finish Jobber Drill - Racon® Point	DS-JD-RP-7	64.68	
Oxide Finish Jobber Drill - Six Shooter® Point	DS-JD-SSP-7	64.44	
PERFECT POINT - HIGH SPEED STEEL			
Bright Finish Jobber Drill - Perfect Point®	DS-JD-PP-7	64.66	

JOBBER LENGTH DRILL SETS

METAL INDEX

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
11 PC DRILL SET  Sizes 1/16 to 3/8 by 32nds (Wt. 1.30 lbs.)	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-11	29.40
	Bright Finish Jobber Drill 118° Pt	DS-JDP-11	29.40
	Black Finish Jobber Drill 118° Pt	DS-JDG-11	29.40
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-11	76.10
	HEAVY DUTY - HIGH SPEED STEEL		
	Bright Finish Jobber Drill 118° S/Pt	DS-JDHA-11	35.54
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-11	37.78
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-11	37.78
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-11	38.96
	HEAVY DUTY - LEFT HAND - HIGH SPEED STEEL		
Gold Finish Left Hand Jobber Drill 135° S/Pt	DS-JDL-11	63.18	
HEAVY DUTY - COBALT			
Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-11	56.60	

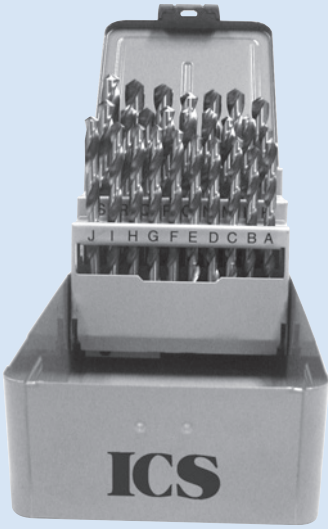
DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
60 PC DRILL SET  Wire Gauge Sizes 1 to 60 (Wt. 1.10 lbs.)	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-60	74.10
	Bright Finish Jobber Drill 118° Pt	DS-JDP-60	78.84
	Black Finish Jobber Drill 118° Pt	DS-JDG-60	78.84
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-60	192.84
	HEAVY DUTY - HIGH SPEED STEEL		
	Bright Finish Jobber Drill 118° S/Pt	DS-JDHA-60	97.60
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-60	97.60
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-60	97.60
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-60	112.22
	Black & Gold Dual Finish Jobber Drill 135° S/Pt	DS-JDHDF-60	112.22
HEAVY DUTY - COBALT			
Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-60	135.24	

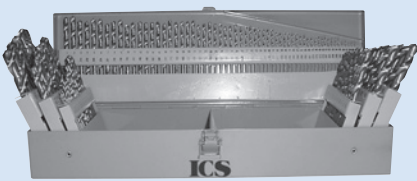
DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
20 PC DRILL SET  Wire Gauge Sizes 61 to 80 (Wt. .060 lbs.)	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-20	29.40
	Bright Finish Jobber Drill 118° Pt	DS-JDP-20	31.30
	Black Finish Jobber Drill 118° Pt	DS-JDG-20	31.30
	HEAVY DUTY - HIGH SPEED STEEL		
Black Finish Jobber Drill 135° Pt	DS-JDHB-20	CALL	
HEAVY DUTY - COBALT			
Gold Finish Cobalt Jobber Drill 135° Pt	DS-JDC-20	71.32	

JOBBER LENGTH DRILL SETS

MET-57

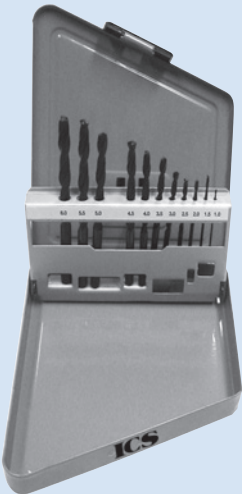
METAL INDEX

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
 <p>26 PC DRILL SET</p> <p>Letter Sizes A to Z (Wt. 2.90 lbs.)</p>	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-26	88.20
	Bright Finish Jobber Drill 118° Pt	DS-JDP-26	99.96
	Black Finish Jobber Drill 118° Pt	DS-JDG-26	99.96
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-26	280.48
	GENERAL PURPOSE - REDUCED SHANK - HIGH SPEED STEEL		
	Black Finish 3/8" SHANK Roll Fluted Jobber Drill 118° Pt	DS-JDRTS-26	108.44
	Bright Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDPTS-26	114.62
	Black Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDGTS-26	114.62
	HEAVY DUTY - HIGH SPEED STEEL		
	Black Finish Jobber Drill 118° S/Pt	DS-JDHA-26	117.60
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-26	117.60
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-26	117.60
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-26	123.48
	HEAVY DUTY - COBALT		
	Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-26	188.16
	HEAVY DUTY - REDUCED SHANK - HIGH SPEED STEEL		
Black Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHBTS-26	139.84	
Bright Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHPTS-26	139.84	
Gold Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHGFTS-26	147.20	

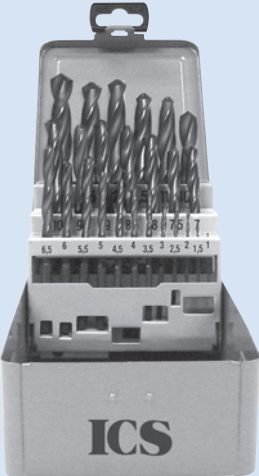
DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
 <p>115 PC DRILL SET</p> <p>Sizes 1/16 to 1/2 by 64ths Wire Gauge Sizes 1 to 60 Letter Sizes A to Z (Wt. 8.20 lbs.)</p>	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDR-115	264.60
	Bright Finish Jobber Drill 118° Pt	DS-JDP-115	264.60
	Black Finish Jobber Drill 118° Pt	DS-JDG-115	282.24
	GENERAL PURPOSE - SPECIAL COATING - HIGH SPEED STEEL		
	Titanium Nitride Coated Jobber Drill 118° Pt	DS-JDT-115	788.52
	GENERAL PURPOSE - REDUCED SHANK - HIGH SPEED STEEL		
	Black Finish 3/8" SHANK Roll Fluted Jobber Drill 118° Pt	DS-JDRTS-115	305.76
	Bright Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDPTS-115	305.76
	Black Finish 3/8" SHANK Jobber Drill 118° Pt	DS-JDGTS-115	305.76
	HEAVY DUTY - HIGH SPEED STEEL		
	Black Finish Jobber Drill 118° S/Pt	DS-JDHA-115	365.32
	Black Finish Jobber Drill 135° S/Pt	DS-JDHB-115	343.40
	Bright Finish Jobber Drill 135° S/Pt	DS-JDHP-115	343.40
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-115	365.32
	HEAVY DUTY - COBALT/REDUCED SHANK		
	Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDC-115	635.04
	Gold Finish Cobalt 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDCTS-115	694.40
HEAVY DUTY - REDUCED SHANK - HIGH SPEED STEEL			
Black Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHBTS-115	391.66	
Bright Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHPTS-115	391.66	
Gold Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDHGFTS-115	412.28	

METRIC JOBBER LENGTH DRILL SETS

METAL INDEX

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
11 PC DRILL SET  Metric Sizes 1.0 to 6.0 by 0.5mm (Wt. .240 lbs.)	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDM-11	21.28
	HEAVY DUTY - HIGH SPEED STEEL		
	Gold Finish Jobber Drill 135° S/Pt	DS-JDMHGF-11	36.98
	HEAVY DUTY - COBALT		
	Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDCM-11	44.56

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
19 PC DRILL SET (Not Illustrated) Metric Sizes 1.0 to 10.0 by 0.5mm (Wt. 1.7845 lbs.)	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDM-19	62.58
	HEAVY DUTY - HIGH SPEED STEEL		
	Gold Finish Jobber Drill 135° S/Pt	DS-JDMHGF-19	92.26
	HEAVY DUTY - COBALT		
	Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDCM-19	126.02

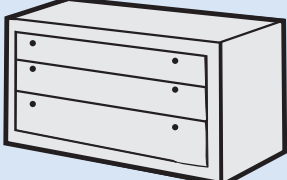
DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
25 PC DRILL SET  Metric Sizes 1.0 to 13.0 by 0.5mm (Wt. 3.3125 lbs.)	GENERAL PURPOSE - HIGH SPEED STEEL		
	Black Finish Roll Fluted Jobber Drill 118° Pt	DS-JDM-25	112.90
	GENERAL PURPOSE - REDUCED SHANK-HSS		
	Black Finish 3/8" Shank Roll Fluted Jobber Drill 118° Pt	DS-JDMTS-25	143.86
	HEAVY DUTY - HIGH SPEED STEEL		
	Gold Finish Jobber Drill 135° S/Pt	DS-JDHGF-25	CALL
	HEAVY DUTY - COBALT		
	Gold Finish Cobalt Jobber Drill 135° S/Pt	DS-JDCM-25	252.36
HEAVY DUTY - REDUCED SHANK - HSS			
Gold Finish 3/8" SHANK Jobber Drill 135° S/Pt	DS-JDMHGFTS-25	191.42	

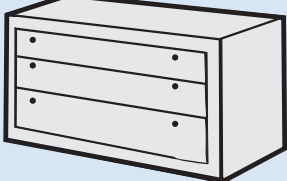
DRILL DISPLAYS & DISPENSERS


MET-59

METAL CASES

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
<p>264 PC DRILL DISPLAY 12 Ea. 1/16 to 9/32 6 Ea. 19/64 to 1/2</p>  <p>Bright Red Display Case With Lock. Size Embossed on Front of Each Bin. SIZE: 14-1/4 x 14 x 12-3/4</p>	<p>Bright Finish Jobber Drills 118° Pt Black Finish Jobber Drills 118° Pt Black Finish Jobber Drills 118° Pt Heavy Duty Jobber Drills 118° S/Pt Heavy Duty Jobber Drills 135° S/Pt Left Hand Jobber Drills 135° S/Pt Cobalt Jobber Drills 135° S/Pt Titanium Nitride Coated Jobber Drills 118° Pt 1/4" SHANK Jobber Drills 118° Pt - Black Finish 3/8" SHANK Jobber Drills 118° Pt - Black Finish Screw Machine Drills 135° S/Pt</p> <p>Display Only (Wt. 14 lbs.)</p>	<p>DCD-JDP-264 DCD-JDG-264 DCD-JDR-264 DCD-JDHA-264 DCD-JDHB-264 DCD-JDL-264 DCD-JDC-264 DCD-JDT-264 DCD-JDGQS-264 DCD-JDGTs-264 DCD-SMR-264</p> <p>DCD-264</p>	<p>CALL FOR PRICE</p>

<p>264 PC DRILL DISPENSER 12 Ea. 1/16 to 9/32 6 Ea. 19/64 to 1/2</p>  <p>Cabinet Has Gray Texture Plastic Finish. Sizes Embossed on Drawer Fronts. SIZE: 7-3/8 x 7-3/4 x 14-5/8</p>	<p>Bright Finish Jobber Drills 118° Pt Black Finish Jobber Drills 118° Pt Black Finish Jobber Drills 118° Pt Heavy Duty Jobber Drills 118° S/Pt Heavy Duty Jobber Drills 135° S/Pt Left Hand Jobber Drills 135° S/Pt Cobalt Jobber Drills 135° S/Pt Titanium Nitride Coated Jobber Drills 118° Pt 1/4" SHANK Jobber Drills 118° Pt - Black Finish 3/8" SHANK Jobber Drills 118° Pt - Black Finish Screw Machine Drills 135° S/Pt</p> <p>Dispenser Only (Wt. 10-1/4 lbs.)</p>	<p>DD-JDP-264 DD-JDG-264 DD-JDR-264 DD-JDHA-264 DD-JDHB-264 DD-JDL-264 DD-JDC-264 DD-JDT-264 DD-JDGQS-264 DD-JDGTs-264 DD-SMR-264</p> <p>D-JD-264</p>	<p>CALL FOR PRICE</p>
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<p>234 PC DRILL DISPENSER 12 Ea. Letter Sizes A to M 6 Ea. Letter Sizes N to Z</p>  <p>Cabinet Has Gray Texture Plastic Finish. Sizes Embossed on Drawer Fronts. SIZE: 7-3/8 x 7-3/4 x 14-5/8</p>	<p>Bright Finish Jobber Drills 118° Pt Black Finish Jobber Drills 118° Pt Heavy Duty Jobber Drills 118° S/Pt Heavy Duty Jobber Drills 135° S/Pt Cobalt Jobber Drills 135° S/Pt Titanium Nitride Coated Jobber Drills 118° Pt</p> <p>Dispenser Only (Wt. 10-1/4 lbs.)</p>	<p>DD-JDP-234 DD-JDG-234 DD-JDHA-234 DD-JDHB-234 DD-JDC-234 DD-JDT-234</p> <p>D-JD-234</p>	<p>CALL FOR PRICE</p>
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<p>720 PC DRILL DISPENSER 12 Ea. Wire Gauge Sizes 1 to 60 6 Ea. Letter Sizes N to Z</p>  <p>Cabinet Has Gray Texture Plastic Finish. Sizes Embossed on Drawer Fronts. SIZE: 7-3/8 x 7-3/4 x 14-5/8</p>	<p>Bright Finish Jobber Drills 118° Pt Black Finish Jobber Drills 118° Pt Black Finish Jobber Drills 118° Pt Heavy Duty Jobber Drills 118° S/Pt Heavy Duty Jobber Drills 135° S/Pt Cobalt Jobber Drills 135° S/Pt Titanium Nitride Coated Jobber Drills 118° Pt Screw Machine Drills 135° S/Pt</p> <p>Dispenser Only (Wt. 10-1/4 lbs.)</p>	<p>DD-JDP-720 DD-JDG-720 DD-JDR-720 DD-JDHA-720 DD-JDHB-720 DD-JDC-720 DD-JDT-720 DD-SMR-720</p> <p>D-JD-720</p>	<p>CALL FOR PRICE</p>
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HIGH SPEED STEEL 1/2" SHANK SILVER & DEMING DRILLS

ICS WIS

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
SND	 OXIDE FINISH	For portable or machine drilling in ferrous or non-ferrous metals. Ground oxide finish flutes retain lubricants and ease chip welding when drilling cast iron, steel, etc.	M2	118° Point Std. Spiral
SND3F	 OXIDE FINISH	Flats are ground on three sides of drill shank for positive holding in 3-Jaw Chucks.	M2	118° Point Std. Spiral
SNDT	 GOLD TITANIUM COATED	Titanium nitride coated Silver & Deming drills will drill 200 to 700% more holes than uncoated tools.	M2	118° Point Std. Spiral

Fractional Sizes (Reduced Shank) 33/64" to 1-1/2" Dia.

SIZE	DEC. EQUIV.	HIGH SPEED STEEL		TIN COATED
		ROUND SHANK 118° PT	3 FLAT SHANK 118° PT	ROUND SHANK 118° PT
		SND	SND3F	SNDT
33/64	.5156	16.38	19.92	36.38
17/32	.5312	16.38	19.92	36.38
35/64	.5469	17.48	21.00	37.46
9/16	.5625	17.48	21.00	37.46
37/64	.5781	18.74	22.26	38.72
19/32	.5938	18.74	22.26	38.72
39/64	.6094	19.60	23.12	39.60
5/8	.6250	19.60	23.12	39.60
41/64	.6406	20.74	24.26	40.72
21/32	.6562	20.74	24.26	40.72
43/64	.6719	21.74	25.26	41.74
11/16	.6875	21.74	25.26	41.74
45/64	.7031	22.78	26.32	42.78
23/32	.7188	22.78	26.32	42.78
47/64	.7344	23.88	27.40	43.88
3/4	.7500	23.88	37.02	43.88
49/64	.7656	25.04	28.56	48.56
25/32	.7812	25.04	28.56	48.56
51/64	.7969	26.10	29.64	49.62
13/16	.8125	26.10	29.64	49.62
53/64	.8281	27.14	30.66	50.66
27/32	.8438	27.14	30.66	50.66
55/64	.8594	28.18	31.72	51.70
7/8	.8750	28.18	31.72	51.70
57/64	.8906	29.32	32.84	52.84
29/32	.9062	29.32	32.84	52.84
59/64	.9219	31.48	35.02	55.00
15/16	.9375	31.48	35.02	55.00
61/64	.9531	33.38	36.90	60.42
31/32	.9688	33.38	36.90	60.42
63/64	.9844	36.76	40.28	63.80
1	1.0000	36.76	40.28	63.80

SIZE	DEC. EQUIV.	HIGH SPEED STEEL		TIN COATED
		ROUND SHANK 118° PT	3 FLAT SHANK 118° PT	ROUND SHANK 118° PT
		SND	SND3F	SNDT
1-1/64	1.0156	43.30	46.84	70.36
1-1/32	1.0312	43.30	46.84	63.80
1-3/64	1.0469	45.56	49.08	72.60
1-1/16	1.0625	45.56	49.08	72.60
1-5/64	1.0781	48.76	52.30	75.82
1-3/32	1.0938	48.76	52.30	75.82
1-7/64	1.1094	49.82	53.34	76.86
1-1/8	1.1250	49.82	53.34	76.86
1-9/64	1.1406	52.78	56.30	86.88
1-5/32	1.1562	52.78	56.30	86.88
1-11/64	1.1719	54.34	57.86	88.44
1-3/16	1.1875	54.34	57.86	88.44
1-13/64	1.2031	55.12	58.66	89.24
1-7/32	1.2188	55.12	58.66	89.24
1-15/64	1.2344	58.48	62.02	92.60
1-1/4	1.2500	58.48	62.02	92.60
1-17/64	1.2656	64.04	67.56	98.14
1-9/32	1.2812	64.04	67.56	98.14
1-19/64	1.2969	65.86	69.38	99.96
1-5/16	1.3125	65.86	69.38	99.96
1-21/64	1.3281	67.60	71.14	101.70
1-11/32	1.3438	67.60	71.14	101.70
1-23/64	1.3594	69.70	73.24	103.80
1-3/8	1.3750	69.70	73.24	103.80
1-25/64	1.3906	77.46	80.98	111.56
1-13/32	1.4062	77.46	80.98	111.56
1-27/64	1.4219	80.32	83.86	114.44
1-7/16	1.4375	80.32	83.86	114.44
1-29/64	1.4531	84.68	88.20	118.78
1-15/32	1.4688	84.68	88.20	118.78
1-31/64	1.4844	87.02	90.56	121.14
1-1/2	1.5000	87.02	90.56	121.14

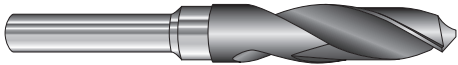

Silver & Deming drills are all purpose drills and are used wherever the maximum chuck capacity is 1/2". They are also called Blacksmith Drills or Prentice Drills (Canada). All S & D Drills are 6" overall length with 3" flute length.

METRIC 1/2" SHANK SILVER & DEMING DRILLS

ICS WIS

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
SNDM	 BLACK & SILVER FINISH	For portable or machine drilling in ferrous or non-ferrous metals. Ground oxide finish flutes retain lubricants and ease chip welding when drilling cast iron, steel, etc.	M2	118° Point Std. Spiral
SNDM3F	 BLACK & SILVER FINISH	Flats are ground on three sides of drill shank for positive holding in 3-Jaw Chucks.	M2	118° Point Std. Spiral

Metric Sizes (Reduced Shank) 13.00mm to 38.00mm Dia.


SIZE mm	DEC. EQUIV.	HIGH SPEED STEEL	
		ROUND SHANK 118° PT	3 FLAT SHANK 118° PT
		SNDM	SNDM3F
13.00	.5118	22.50	27.58
13.50	.5315	22.50	27.58
14.00	.5512	23.80	28.86
14.50	.5709	25.30	30.42
15.00	.5906	25.30	30.42
15.50	.6102	26.34	31.44
16.00	.6299	26.34	31.44
16.50	.6496	28.92	34.00
17.00	.6693	28.92	34.00
17.50	.6890	30.18	35.24
18.00	.7087	30.18	35.24
18.50	.7283	31.48	36.58
19.00	.7480	31.48	36.58
19.50	.7677	34.16	39.24
20.00	.7874	34.16	39.24
20.50	.8071	35.40	40.46
21.00	.8268	35.40	40.46

SIZE mm	DEC. EQUIV.	HIGH SPEED STEEL	
		ROUND SHANK 118° PT	3 FLAT SHANK 118° PT
		SNDM	SNDM3F
21.50	.8465	36.64	41.76
22.00	.8661	36.64	41.76
22.50	.8858	38.02	43.10
23.00	.9055	38.02	43.10
23.50	.9252	42.88	47.94
24.00	.9449	42.88	47.94
24.50	.9646	46.94	52.02
25.00	.9843	46.94	52.02
25.50	1.0039	54.80	59.90
26.00	1.0236	54.80	59.90
26.50	1.0433	57.50	62.56
27.00	1.0630	57.50	62.56
27.50	1.0837	62.60	67.66
28.00	1.1024	62.60	67.66
28.50	1.1220	66.16	71.24
29.00	1.1417	66.16	71.24
29.50	1.1614	68.02	73.08

SIZE mm	DEC. EQUIV.	HIGH SPEED STEEL	
		ROUND SHANK 118° PT	3 FLAT SHANK 118° PT
		SNDM	SNDM3F
30.00	1.1811	68.02	73.08
30.50	1.2008	68.98	74.06
31.00	1.2205	68.98	74.06
31.50	1.2402	73.02	78.08
32.00	1.2598	73.02	78.08
32.50	1.2795	81.86	86.94
33.00	1.2992	81.86	86.94
33.50	1.3189	83.96	89.04
34.00	1.3386	83.96	89.04
34.50	1.3583	86.48	91.56
35.00	1.3780	86.48	91.56
35.50	1.3976	95.76	100.84
36.00	1.4173	95.76	100.84
36.50	1.4370	99.22	104.32
37.00	1.4567	99.22	104.32
37.50	1.4764	118.60	112.36
38.00	1.4961	107.28	112.36

METRIC 1/2" SHANK SILVER & DEMING DRILL SETS

WOOD STAND

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
13 PC DRILL SET 13.0,13.5, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 24.0, 25.0 	Metric S & D Drills 118° Pt Heavy Duty Metric S & D Drills 135° S/Pt	DSW-SNDM-13 DSW-SNDMH-13	CALL FOR PRICE


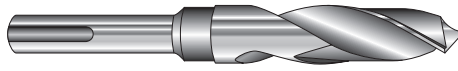
NOTE: Metric 3/8" Shank (Silver & Deming) Drills are available upon request.

METRIC 1/2" SHANK SILVER & DEMING DRILLS

ICS WIS

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
SNDMH	 BLACK & SILVER FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips.	M2	135° Split Point
SNDMH3F	 BLACK & SILVER FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips. Flats are ground on three sides of drill shank for positive holding in 3-Jaw Chucks.	M2	135° Split Point

Metric Sizes (Reduced Shank) 13.00mm to 25.50mm Dia.


SIZE mm	DEC. EQUIV.	HIGH SPEED STEEL	
		ROUND SHANK 135° S/P	3 FLAT SHANK 135° S/P
		SNDMH	SNDMH3F
13.00	.5118	29.16	34.24
13.50	.5315	29.16	34.24
14.00	.5512	30.46	35.52
14.50	.5709	31.96	37.04
15.00	.5906	31.96	37.04
15.50	.6102	33.02	38.10
16.00	.6299	33.02	38.10
16.50	.6496	35.60	40.66
17.00	.6693	35.60	40.66

SIZE mm	DEC. EQUIV.	HIGH SPEED STEEL	
		ROUND SHANK 135° S/P	3 FLAT SHANK 135° S/P
		SNDMH	SNDMH3F
17.50	.6890	36.84	41.92
18.00	.7087	36.84	41.92
18.50	.7283	38.16	43.22
19.00	.7480	38.16	43.22
19.50	.7677	46.58	51.66
20.00	.7874	46.58	51.66
20.50	.8071	47.84	52.90
21.00	.8268	47.84	52.90
21.50	.8465	49.10	54.18

SIZE mm	DEC. EQUIV.	HIGH SPEED STEEL	
		ROUND SHANK 135° S/P	3 FLAT SHANK 135° S/P
		SNDMH	SNDMH3F
22.00	.8661	49.10	54.18
22.50	.8858	50.46	55.54
23.00	.9055	50.46	55.54
23.50	.9252	55.32	60.40
24.00	.9449	55.32	60.40
24.50	.9646	59.40	64.46
25.00	.9843	59.40	64.46
118° SPLIT POINT			
25.50	1.0039	67.24	72.32

METRIC 1/2" SHANK SILVER & DEMING DRILL SETS

METAL INDEX

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
8 PC DRILL SET Sizes 13.0, 14.0, 16.0, 18.0, 20.0, 22.0, 24.0, 25.0 	Metric S & D Drills 118° Pt	DS-SNDM-8	253.76
	Heavy Duty Metric S & D Drills 135° S/Pt	DS-SNDMH-8	317.46

Quick Reference for Metric Drills




DRILL TYPE	DRILL SETS	STUB LENGTH	JOBBER LENGTH	REDUCED SHANK	TAPER LENGTH	TAPER SHANK	EXTRA LENGTH
PAGE NO. OF ITEMS AVAILABLE							
High Speed Steel	59	7	17-19, 34	19, 34, 63	72-73	92-94	97, 99, 109
Cobalt	59	-	37-38	37-38, 65, 69	-	-	-
Carbide Tipped	-	-	46	-	77	-	-
Solid Carbide	-	-	48	-	-	-	-

1/2" SHANK SILVER & DEMING DRILLS

ICS WIS

HEAVY DUTY

SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
SNDHD	 OXIDE FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips. Sizes over 1" are 118° split point.	M2	135° or 118° Split Point
SNDDF	 BLACK & GOLD FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips. Sizes over 1" are 118° split point. Flats are ground on three sides of drill shank for positive holding in 3 Jaw Chucks.	M2, M7	135° or 118° Split Point
SNDHDA	 OXIDE FINISH	For portable or machine drilling in mild steels, aluminum, and magnesium alloys. Mfr. to NAS 907-A specs.	M2	118° Split Point

Fractional Sizes (Straight Shank) 33/64" to 1-1/2" Dia.

HIGH SPEED STEEL				
SIZE	DEC. EQUIV.	ROUND SHANK	3 FLAT SHANK	ROUND SHANK
		135° S/P	135° S/P	118° S/P
		SNDHD	SNDDF	SNDHDA
33/64	.5156	20.24	23.78	-
17/32	.5312	20.24	24.96	-
35/64	.5469	21.72	25.44	-
9/16	.5625	21.72	25.44	-
37/64	.5781	24.08	27.60	-
19/32	.5938	24.08	27.60	-
39/64	.6094	24.70	28.22	-
5/8	.6250	24.70	28.22	-
41/64	.6406	25.48	29.00	-
21/32	.6562	25.48	29.00	-
43/64	.6719	26.12	29.66	CALL FOR PRICE
11/16	.6875	26.12	29.66	CALL FOR PRICE
45/64	.7031	27.50	31.02	-
23/32	.7188	27.50	31.02	-
47/64	.7344	27.54	31.06	-
3/4	.7500	35.42	38.94	-
49/64	.7656	37.76	41.30	-
25/32	.7812	37.76	41.30	-
51/64	.7969	38.54	42.06	-
13/16	.8125	38.54	42.06	-
53/64	.8281	39.26	42.78	-
27/32	.8438	39.26	42.78	-
55/64	.8594	39.94	43.48	-
7/8	.8750	39.94	43.48	-
57/64	.8906	40.66	44.18	-
29/32	.9062	40.66	44.18	-

HIGH SPEED STEEL				
SIZE	DEC. EQUIV.	ROUND SHANK	3 FLAT SHANK	ROUND SHANK
		135° S/P	135° S/P	118° S/P
		SNDHD	SNDDF	SNDHDA
59/64	.9219	41.88	45.40	-
15/16	.9375	41.88	45.40	-
61/64	.9531	44.24	47.76	-
31/32	.9688	44.24	47.76	-
63/64	.9844	46.70	50.24	-
1	1.0000	46.70	50.24	-
118° SPLIT POINT				
1-1/64	1.0156	-	60.82	-
1-1/32	1.0312	57.30	60.82	-
1-3/64	1.0469	57.30	-	-
1-1/16	1.0625	56.42	59.94	CALL FOR PRICE
1-5/64	1.0781	-	-	CALL FOR PRICE
1-3/32	1.0938	67.22	70.76	-
1-7/64	1.1094	67.22	70.76	-
1-1/8	1.1250	62.30	65.82	-
1-9/64	1.1406	68.92	-	-
1-5/32	1.1562	68.92	72.46	-
1-11/64	1.1719	68.92	72.46	-
1-3/16	1.1875	68.92	72.46	-
1-13/64	1.2031	-	-	-
1-7/32	1.2188	70.76	74.28	-
1-15/64	1.2344	-	-	-
1-1/4	1.2500	70.76	74.28	-
1-5/16	1.3125	97.02	100.56	-
1-3/8	1.3750	103.16	106.68	-
1-7/16	1.4375	109.96	113.48	-
1-1/2	1.5000	118.20	121.72	-

NOTE

Silver & Deming Drills are not recommended for enlarging holes. They have a tendency to grab, bind, chip the drill on the cutting edge, or break the drill. If a pilot hole is required, it should not exceed 75% of the required finish hole.



DRILLS SETS

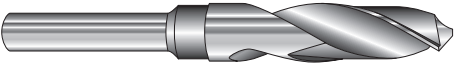
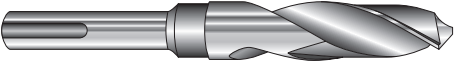
SILVER & DEMING DRILLS SETS on page 66.

HIGH SPEED STEEL
COBALT 1/2" SHANK SILVER & DEMING DRILLS

ICS WIS

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
SNDC	 GOLD COBALT FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips. Sizes over 1" are 118° split point.	M42	135° Split Point or Notched Point
SNDC3F	 GOLD COBALT FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips. Sizes over 1" are 118° split point. Flats are ground on three sides of drill shank for positive holding in 3 Jaw Chucks.	M42	135° Split Point or Notched Point


Fractional Sizes (Reduced Shank) 33/64" to 1-1/2" Dia.

DEC. SIZE	EQUIV.	ITEM NO. ROUND SHANK	PRICE	ITEM NO. 3 FLAT SHANK	PRICE
135° SPLIT POINT					
33/64	.5156	SNDC033	45.76	SNDC3F033	52.82
17/32	.5312	SNDC034	45.76	SNDC3F034	52.82
35/64	.5469	SNDC035	48.70	SNDC3F035	54.58
9/16	.5625	SNDC036	48.70	SNDC3F036	54.58
37/64	.5781	SNDC037	52.28	SNDC3F037	58.16
19/32	.5938	SNDC038	52.28	SNDC3F038	58.16
39/64	.6094	SNDC039	54.76	SNDC3F039	60.64
5/8	.6250	SNDC040	54.76	SNDC3F040	60.64
41/64	.6406	SNDC041	58.44	SNDC3F041	64.32
21/32	.6562	SNDC042	58.44	SNDC3F042	66.74
43/64	.6719	SNDC043	60.70	SNDC3F043	66.58
11/16	.6875	SNDC044	60.70	SNDC3F044	66.58
45/64	.7031	SNDC045	64.36	SNDC3F045	70.26
23/32	.7188	SNDC046	64.36	SNDC3F046	70.26
47/64	.7344	SNDC047	66.98	SNDC3F047	72.86
3/4	.7500	SNDC048	66.98	SNDC3F048	72.86
49/64	.7656	SNDC049	70.52	SNDC3F049	76.40
25/32	.7812	SNDC050	70.52	SNDC3F050	76.40
51/64	.7969	SNDC051	74.10	SNDC3F051	79.98
13/16	.8125	SNDC052	74.10	SNDC3F052	79.98
53/64	.8281	SNDC053	77.34	SNDC3F053	83.22
27/32	.8438	SNDC054	77.34	SNDC3F054	83.22
55/64	.8594	SNDC055	80.28	SNDC3F055	86.16
7/8	.8750	SNDC056	80.28	SNDC3F056	86.16
57/64	.8906	SNDC057	83.86	SNDC3F057	89.74

DEC. SIZE	EQUIV.	ITEM NO. ROUND SHANK	PRICE	ITEM NO. 3 FLAT SHANK	PRICE
135° SPLIT POINT					
29/32	.9062	SNDC058	83.86	SNDC3F058	89.74
59/64	.9219	SNDC059	89.74	SNDC3F059	95.62
15/16	.9375	SNDC060	89.74	SNDC3F060	95.62
61/64	.9531	SNDC061	94.78	SNDC3F061	100.66
31/32	.9688	SNDC062	94.78	SNDC3F062	100.66
63/64	.9844	SNDC063	104.56	SNDC3F063	110.44
1	1.0000	SNDC100	104.56	SNDC3F100	110.44
118° SPLIT POINT					
1-1/32	1.0312	SNDC102	114.72	SNDC3F102	120.60
1-1/16	1.0625	SNDC104	122.68	SNDC3F104	128.56
1-3/32	1.0938	SNDC106	132.40	SNDC3F106	138.28
1-1/8	1.1250	SNDC108	139.52	SNDC3F108	145.40
1-5/32	1.1562	SNDC110	147.72	SNDC3F110	153.60
1-3/16	1.1875	SNDC112	153.06	SNDC3F112	158.94
1-7/32	1.2188	SNDC114	162.82	SNDC3F114	168.70
1-1/4	1.2500	SNDC116	169.48	SNDC3F116	175.36
1-9/32	1.2812	SNDC118	241.68	SNDC3F118	247.56
1-5/16	1.3125	SNDC120	241.68	SNDC3F120	247.56
1-11/32	1.3438	SNDC122	245.20	SNDC3F122	251.08
1-3/8	1.3750	SNDC124	245.20	SNDC3F124	251.08
1-13/32	1.4062	SNDC126	264.96	SNDC3F126	270.84
1-7/16	1.4375	SNDC128	264.96	SNDC3F128	270.84
1-15/32	1.4688	SNDC130	271.42	SNDC3F130	277.32
1-1/2	1.5000	SNDC132	271.48	SNDC3F132	277.32

HIGH SPEED STEEL - COBALT

1/2" SHANK SILVER & DEMING DRILL MERCHANDISERS

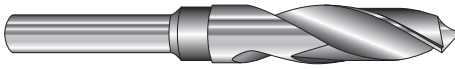

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
8 PC DRILL DISPLAY Sizes 9/16 to 1 by 16ths 	Round Shank S & D Drills 118° Pt.	DM-SND-8	221.60
	3 Flat Shank S & D Drills 118° Pt.	DM-SND3F-8	249.82

METRIC COBALT 1/2" SHANK SILVER & DEMING DRILLS

ICS WIS

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
SNDCM	 BLACK & GOLD FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips. Sizes over 25mm are 118° split point.	Cobalt M42	135° Split Point or Notched Point
SNDCM3F	 BLACK & GOLD FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips. Sizes over 25mm are 118° split point. Flats are ground on three sides of drill shank for positive holding in 3 Jaw Chucks.	Cobalt M42	135° Split Point or Notched Point

Metric Sizes (Reduced Shank) 13.00mm to 38.00mm Dia.

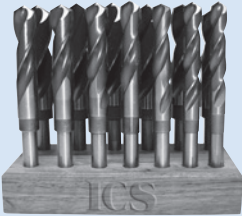
SIZE mm	DEC. EQUIV.	COBALT	
		ROUND SHANK SNDCM	3 FLAT SHANK SNDCM3F
135° SPLIT POINT			
13.00	.5118	37.22	42.26
13.50	.5315	41.34	46.38
14.00	.5512	41.34	46.38
14.50	.5709	46.82	51.86
15.00	.5906	46.82	51.86
15.50	.6102	47.26	52.30
16.00	.6299	51.20	56.24
16.50	.6496	51.20	56.24
17.00	.6693	53.06	58.10
17.50	.6890	59.04	64.08
18.00	.7087	59.04	64.08
18.50	.7283	60.16	65.20
19.00	.7480	60.16	65.20
19.50	.7677	68.62	73.66
20.00	.7874	73.10	78.14
20.50	.8071	73.10	78.14
21.00	.8268	74.24	79.28

SIZE mm	DEC. EQUIV.	COBALT	
		ROUND SHANK SNDCM	3 FLAT SHANK SNDCM3F
135° SPLIT POINT			
21.50	.8465	77.04	82.08
22.00	.8661	77.04	82.08
22.50	.8858	78.44	83.48
23.00	.9055	78.44	83.48
23.50	.9252	84.52	89.56
24.00	.9449	89.80	94.84
24.50	.9646	89.80	94.84
25.00	.9843	92.04	97.08
118° SPLIT POINT			
25.50	1.0039	103.18	108.22
26.00	1.0236	103.18	108.22
26.50	1.0433	103.18	108.22
27.00	1.0630	111.16	116.20
27.50	1.0837	111.16	116.20
28.00	1.1024	111.16	116.20
28.50	1.1220	123.52	128.56
29.00	1.1417	123.52	128.56
29.50	1.1614	123.52	128.56

SIZE mm	DEC. EQUIV.	COBALT	
		ROUND SHANK SNDCM	3 FLAT SHANK SNDCM3F
118° SPLIT POINT			
30.00	1.1811	140.26	145.30
30.50	1.2008	140.26	145.30
31.00	1.2205	140.26	145.30
31.50	1.2402	161.34	166.38
32.00	1.2598	161.34	166.38
32.50	1.2795	161.34	166.38
33.00	1.2992	161.34	166.38
33.50	1.3189	166.52	171.56
34.00	1.3386	166.52	171.56
34.50	1.3583	166.52	171.56
35.00	1.3780	186.38	191.42
35.50	1.3976	186.38	191.42
36.00	1.4173	186.38	191.42
36.50	1.4370	193.94	198.98
37.00	1.4567	193.94	198.98
37.50	1.4764	193.94	198.98
38.00	1.4961	193.94	198.98


METRIC COBALT 1/2" SHANK SILVER & DEMING DRILL SETS

WOOD STAND


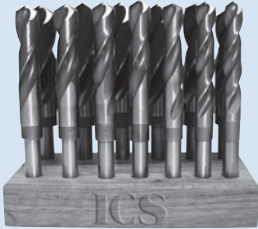
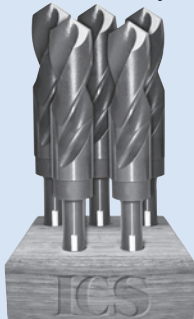
DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
13 PC DRILL SET 13.0,13.5, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 24.0, 25.0 	Heavy Duty Metric Cobalt S & D Drills 135° S/Pt	DSW-SNDCM-13	CALL FOR PRICE

NOTE: Metric 3/8" Shank Cobalt Silver & Deming Drills are available upon request.

1/2" SHANK SILVER & DEMING DRILL SETS**METAL INDEX**

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
8 PC DRILL DISPLAY Sizes 9/16 to 1 by 16ths 	Round SHANK S & D Drills 118° Pt	DS-SND-8	257.64
	3 Flat SHANK S & D Drills 118° Pt	DS-SND3F-8	265.70
	Cobalt S & D Drills 135° S/Pt	DS-SNDC-8	564.62
	Heavy Duty S & D Drills 135° S/Pt	DS-SNDHD-8	328.16
	Heavy Duty S & D Drills 135° Helical Pt	DS-SNDHP-8	281.64
	Titanium Nitride Coated S & D Drills 118° Pt	DS-SNDT-8	415.04

WOOD STAND

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
8 PC DRILL SET Sizes 9/16 to 1 by 16ths 	Round SHANK S & D Drills 118° Pt	DSW-SND-8	246.74
	3 Flat SHANK S & D Drills 118° Pt	DSW-SND3F-8	271.76
	Cobalt S & D Drills 135° S/Pt	DSW-SNDC-8	564.62
	Heavy Duty S & D Drills 135° S/Pt	DSW-SNDHD-8	317.26
	Heavy Duty S & D Drills 135° Helical Pt	DSW-SNDHP-8	288.72
	Titanium Nitride Coated S & D Drills 118° Pt.	DSW-SNDT-8	430.66
13 PC DRILL SET Sizes 17/32 to 3/4 by 32nds 13/16 to 1 by 16ths & 31/32 	Round SHANK S & D Drills 118° Pt	DSW-SND-13	361.68
	3 Flat SHANK S & D Drills 118° Pt	DSW-SND3F-13	410.48
	Cobalt S & D Drills - 135° S/Pt	DSW-SNDC-13	875.76
	Heavy Duty S & D Drills 135° S/Pt	DSW-SNDHD-13	467.34
	Heavy Duty S & D Drills 135° Helical Pt	DSW-SNDHP-13	435.86
	Titanium Nitride Coated S & D Drills 118° Pt	DSW-SNDT-13	664.42
32 PC DRILL SET Sizes 33/64 to 1 by 64ths (NOT ILLUSTRATED)	Round SHANK S & D Drills 118° Pt	DSW-SND-32	888.74
	3 Flat SHANK S & D Drills 118° Pt	DSW-SND3F-32	1008.86
	Cobalt S & D Drills - 135° S/Pt	DSW-SNDC-32	2251.94
	Heavy Duty S & D Drills 135° S/Pt	DSW-SNDHD-32	1168.66
	Heavy Duty S & D Drills 135° Helical Pt	DSW-SNDHP-32	1087.32
	Titanium Nitride Coated S & D Drills 118° Pt	DSW-SNDT-32	1566.08
5 PC DRILL SET Sizes 1 to 1-1/2 by 8ths 	Round SHANK S & D Drills 118° Pt	DSW-SND-5	347.26
	3 Flat SHANK S & D Drills 118° Pt	DSW-SND3F-5	366.04
	Titanium Nitride Coated S & D Drills 118° Pt	DSW-SNDT-5	513.64

HIGH SPEED STEEL


MET-67

1/2" SHANK JUMBO SILVER & DEMING DRILLS

ICS WIS

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
SND	 OXIDE FINISH	For portable or machine drilling in ferrous or non-ferrous metals. Ground oxide finish flutes retain lubricants and ease chip welding when drilling cast iron, steel, etc. All sizes 6" overall length with 3" flute length.	M2	118° Point Std. Spiral

Fractional Sizes (Reduced Shank) 1-9/16" to 2" Dia.

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
*1-9/16	1.5625	SND136	131.72
1-5/8	1.6250	SND140	145.82
1-11/16	1.6875	SND144	164.64
*1-23/32	1.7187	SND146	170.52

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
1-3/4	1.7500	SND148	170.52
*1-25/32	1.7812	SND150	179.94
1-13/16	1.8125	SND152	179.94
1-7/8	1.8750	SND156	190.52

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
*1-29/32	1.9062	SND158	201.10
1-15/16	1.9375	SND160	201.10
2	2.0000	SND200	210.50


HIGH SPEED STEEL

3/4" SHANK SILVER & DEMING DRILLS

ICS WIS

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TQSD	 OXIDE FINISH	For portable or machine drilling in ferrous or non-ferrous metals. Ground oxide finish flutes retain lubricants and ease chip welding when drilling cast iron, steel, etc. All sizes 6" overall length with 3" flute length.	M2	118° Point Std. Spiral

Fractional Sizes (Reduced Shank) 25/32" to 2" Dia.

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
25/32	.7812	TQSD050	-
13/16	.8125	TQSD052	-
27/32	.8438	TQSD054	-
7/8	.8750	TQSD056	CALL FOR PRICE
29/32	.9062	TQSD058	FOR PRICE
15/16	.9375	TQSD060	PRICE
31/32	.9688	TQSD062	-
1	1.0000	TQSD100	-
1-1/16	1.0625	TQSD104	-

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
1-1/8	1.1250	TQSD108	-
1-3/16	1.1875	TQSD112	-
1-1/4	1.2500	TQSD116	-
1-5/16	1.3125	TQSD120	CALL FOR PRICE
1-3/8	1.3750	TQSD124	FOR PRICE
1-7/16	1.4219	TQSD128	PRICE
1-1/2	1.5000	TQSD132	-
1-9/16	1.5625	TQSD136	-
1-5/8	1.6250	TQSD140	-


SIZE	DEC. EQUIV.	ITEM NO.	PRICE
1-11/16	1.6875	TQSD144	-
1-23/32	1.7187	TQSD146	-
1-3/4	1.7500	TQSD148	-
1-25/32	1.7812	TQSD150	CALL FOR PRICE
1-13/16	1.8125	TQSD152	FOR PRICE
1-7/8	1.8750	TQSD156	PRICE
1-29/32	1.9062	TQSD158	-
1-15/16	1.9375	TQSD160	-
2	2.0000	TQSD200	-

Other sizes available upon request.

HIGH SPEED STEEL

3/4" SHANK SILVER & DEMING DRILL SETS

WOOD STAND


ILLUSTRATION	DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
	5 PC DRILL SET 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2	HSS 3/4" S&D Drills	DSW-TQSD-5	CALL
	5 PC DRILL SET 1, 1-1/4, 1-1/2, 1-3/4, 2	HSS 3/4" S&D Drills	DSW-TQSD-5A	CALL

HIGH SPEED STEEL
3/8" SHANK SILVER & DEMING DRILLS

ICS **WIS**

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
RSD	 OXIDE FINISH	For portable or machine drilling in ferrous or non-ferrous metals. Ground oxide finish flutes retain lubricants and ease chip welding when drilling cast iron, steel, etc.	M2	118° Point Std. Spiral

When ordering, specify 3/8" shank with 1/2" step shank (illustrated above) or 3/8" straight shank.

Fractional Sizes (Reduced Shank) 33/64" to 1" Dia.

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
33/64	.5156	RSD033	18.74
17/32	.5312	RSD034	18.74
35/64	.5469	RSD035	19.82
9/16	.5625	RSD036	19.82
37/64	.5781	RSD037	21.08
19/32	.5938	RSD038	21.08
39/64	.6094	RSD039	21.94
5/8	.6250	RSD040	21.94
41/64	.6460	RSD041	23.08
21/32	.6562	RSD042	23.08
43/64	.6719	RSD043	24.10

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
11/16	.6875	RSD044	24.10
45/64	.7031	RSD045	25.14
23/32	.7188	RSD046	25.14
47/64	.7344	RSD047	26.24
3/4	.7500	RSD048	26.24
49/64	.7656	RSD049	27.38
25/32	.7812	RSD050	27.38
51/64	.7969	RSD051	28.46
13/16	.8125	RSD052	28.46
53/64	.8281	RSD053	29.48
27/32	.8438	RSD054	29.48

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
55/64	.8594	RSD055	30.54
7/8	.8750	RSD056	30.54
57/64	.8906	RSD057	31.68
29/32	.9062	RSD058	31.68
59/64	.9219	RSD059	33.84
15/16	.9375	RSD060	33.84
61/64	.9531	RSD061	35.72
31/32	.9688	RSD062	35.72
63/64	.9844	RSD063	39.10
1	1.0000	RSD100	39.10


*All S & D Drills are 6" overall length with 3" flute length.

HIGH SPEED STEEL
3/8" SHANK SILVER & DEMING DRILLS

ICS **WIS**

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
RSDHB	 OXIDE FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips.	M2	135° Split Point

When ordering, specify 3/8" shank with 1/2" step shank (illustrated above) or 3/8" straight shank.

Fractional Sizes (Reduced Shank) 33/64" to 1" Dia.

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
33/64	.5156	RSDHB033	24.28
17/32	.5312	RSDHB034	24.28
35/64	.5469	RSDHB035	25.38
9/16	.5625	RSDHB036	25.38
37/64	.5781	RSDHB037	26.64
19/32	.5938	RSDHB038	26.64
39/64	.6094	RSDHB039	27.52
5/8	.6250	RSDHB040	27.52
41/64	.6460	RSDHB041	28.64
21/32	.6562	RSDHB042	28.64
43/64	.6719	RSDHB043	29.66

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
11/16	.6875	RSDHB044	29.66
45/64	.7031	RSDHB045	30.68
23/32	.7188	RSDHB046	30.68
47/64	.7344	RSDHB047	31.80
3/4	.7500	RSDHB048	31.80
49/64	.7656	RSDHB049	37.76
25/32	.7812	RSDHB050	37.76
51/64	.7969	RSDHB051	38.82
13/16	.8125	RSDHB052	38.82
53/64	.8281	RSDHB053	39.86
27/32	.8438	RSDHB054	39.86

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
55/64	.8594	RSDHB055	40.92
7/8	.8750	RSDHB056	40.92
57/64	.8906	RSDHB057	42.04
29/32	.9062	RSDHB058	42.04
59/64	.9219	RSDHB059	44.20
15/16	.9375	RSDHB060	44.20
61/64	.9531	RSDHB061	46.10
31/32	.9688	RSDHB062	46.10
63/64	.9844	RSDHB063	49.48
1	1.0000	RSDHB100	49.48


*All S & D Drills are 6" overall length with 3" flute length.

COBALT 3/8" SHANK SILVER & DEMING DRILLS

ICS WIS

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
RSDC	 GOLD COBALT FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips.	M42	135° Split Point or Notched Point

When ordering, specify 3/8" shank with 1/2" step shank (illustrated above) or 3/8" straight shank.


Fractional Sizes (Reduced Shank) 33/64" to 1" Dia.

SIZE	DEC. EQUIV.	ITEM NO.	PRICE	SIZE	DEC. EQUIV.	ITEM NO.	PRICE	SIZE	DEC. EQUIV.	ITEM NO.	PRICE
33/64	.5156	RSDC033	48.34	11/16	.6875	RSDC044	63.28	55/64	.8594	RSDC055	83.58
17/32	.5312	RSDC034	48.34	45/64	.7031	RSDC045	66.96	7/8	.8750	RSDC056	83.58
35/64	.5469	RSDC035	51.28	23/32	.7188	RSDC046	66.96	57/64	.8906	RSDC057	87.16
9/16	.5625	RSDC036	51.28	47/64	.7344	RSDC047	69.56	29/32	.9062	RSDC058	87.16
37/64	.5781	RSDC037	54.86	3/4	.7500	RSDC048	69.56	59/64	.9219	RSDC059	93.04
19/32	.5938	RSDC038	54.86	49/64	.7656	RSDC049	73.82	15/16	.9375	RSDC060	93.04
39/64	.6094	RSDC039	57.34	25/32	.7812	RSDC050	73.82	61/64	.9531	RSDC061	98.08
5/8	.6250	RSDC040	57.34	51/64	.7969	RSDC051	77.38	31/32	.9688	RSDC062	98.08
41/64	.6460	RSDC041	61.04	13/16	.8125	RSDC052	77.38	63/64	.9844	RSDC063	107.86
21/32	.6562	RSDC042	61.04	53/64	.8281	RSDC053	80.64	1	1.0000	RSDC100	107.86
43/64	.6719	RSDC043	63.28	27/32	.8438	RSDC054	80.64				

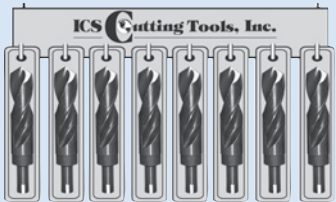
HIGH SPEED STEEL and COBALT

3/8" SHANK SILVER & DEMING DRILL SETS

METAL INDEX

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
8 PC DRILL SET Sizes 9/16 to 1 by 16ths 	General Purpose 3/8 shank S & D Drills - 118° Pt.	DSW-RSD-8	247.46
	Heavy Duty 3/8 shank S & D Drills - 135° Split Pt.	DSW-RSDHB-8	311.16
	Cobalt 3/8 shank S & D Drills - 135° Split Pt.	DSW-RSDC-8	559.60

3/8" SHANK SILVER & DEMING DRILL MERCHANDISER

DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
8 PC DRILL DISPLAY Sizes 9/16 to 1 by 16ths Size: 18 x 12-1/2 	General Purpose - 3/8 shank S & D Drills - 118° Point	DM-RSD-8	252.54


HIGH SPEED STEEL TAPER LENGTH DRILLS

ICS USA

GENERAL PURPOSE

118° POINT

Taper Length Drills are general purpose drills with increased cutting length. They are manufactured with straight shanks of the same diameter as that of the flute diameter. Taper length drills derive their name from having the same flute length as taper shank drills. In Europe these drills are known as Long Series Drills or Long Jobber Drills.

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TLD	 OXIDE FINISH	For general purpose drilling where a longer than jobber length drill is required.	M2	118° Point Std. Spiral Std. Web

Fractional Sizes (Straight Shank) 1/16" to 2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/16	.0625	1-3/4	3	TLD004	2.84
5/64	.0781	2	3-3/4	TLD005	3.10
3/32	.0938	2-1/4	4-1/4	TLD006	3.78
7/64	.1094	2-1/2	4-5/8	TLD007	4.70
1/8	.1250	2-3/4	5-1/8	TLD008	4.84
9/64	.1406	3	5-3/8	TLD009	6.34
5/32	.1562	3	5-3/8	TLD010	5.78
11/64	.1719	3-3/8	5-3/4	TLD011	6.78
3/16	.1875	3-3/8	5-3/4	TLD012	5.86
13/64	.2031	3-5/8	6	TLD013	7.84
7/32	.2188	3-5/8	6	TLD014	8.38
15/64	.2344	3-3/4	6-1/8	TLD015	8.38
1/4	.2500	3-3/4	6-1/8	TLD016	6.90
17/64	.2656	3-7/8	6-1/4	TLD017	8.78
9/32	.2812	3-7/8	6-1/4	TLD018	8.38
19/64	.2969	4	6-3/8	TLD019	9.58
5/16	.3125	4	6-3/8	TLD020	8.38
21/64	.3281	4-1/8	6-1/2	TLD021	9.86
11/32	.3438	4-1/8	6-1/2	TLD022	9.58
23/64	.3594	4-1/4	6-3/4	TLD023	11.30
3/8	.3750	4-1/4	6-3/4	TLD024	11.30
25/64	.3906	4-3/8	7	TLD025	11.86
13/32	.4062	4-3/8	7	TLD026	11.86
27/64	.4219	4-5/8	7-1/4	TLD027	13.02
7/16	.4375	4-5/8	7-1/4	TLD028	13.24
29/64	.4531	4-3/4	7-1/2	TLD029	14.68
15/32	.4688	4-3/4	7-1/2	TLD030	15.58
31/64	.4844	4-3/4	7-3/4	TLD031	17.06
1/2	.5000	4-3/4	7-3/4	TLD032	16.46
33/64	.5156	4-3/4	8	TLD033	27.30
17/32	.5312	4-3/4	8	TLD034	28.80
35/64	.5469	4-7/8	8-1/4	TLD035	30.24
9/16	.5625	4-7/8	8-1/4	TLD036	30.24
37/64	.5781	4-7/8	8-1/4	TLD037	35.18
19/32	.5938	4-7/8	8-3/4	TLD038	35.18
39/64	.6094	4-7/8	8-3/4	TLD039	36.40
5/8	.6250	4-7/8	8-3/4	TLD040	36.40
41/64	.6406	5-1/8	9	TLD041	41.64
21/32	.6562	5-1/8	9	TLD042	41.64
43/64	.6719	5-3/8	9-1/4	TLD043	49.00
11/16	.6875	5-3/8	9-1/4	TLD044	49.58

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
45/64	.7031	5-5/8	9-1/2	TLD045	51.60
23/32	.7188	5-5/8	9-1/2	TLD046	51.60
47/64	.7344	5-7/8	9-3/4	TLD047	55.28
3/4	.7500	5-7/8	9-3/4	TLD048	55.28
49/64	.7656	6	9-7/8	TLD049	60.34
25/32	.7812	6	9-7/8	TLD050	60.34
51/64	.7969	6-1/8	10	TLD051	64.92
13/16	.8125	6-1/8	10	TLD052	64.92
53/64	.8281	6-1/8	10	TLD053	68.22
27/32	.8438	6-1/8	10	TLD054	68.22
55/64	.8594	6-1/8	10	TLD055	71.74
7/8	.8750	6-1/8	10	TLD056	65.86
57/64	.8906	6-1/8	10	TLD057	74.76
29/32	.9062	6-1/8	10	TLD058	74.76
59/64	.9219	6-1/8	10-3/4	TLD059	81.34
15/16	.9375	6-1/8	10-3/4	TLD060	81.34
61/64	.9531	6-3/8	11	TLD061	89.74
31/32	.9688	6-3/8	11	TLD062	89.74
63/64	.9844	6-3/8	11	TLD063	93.54
1	1.0000	6-3/8	11	TLD100	93.54
1-1/32	1.0312	6-1/2	11-1/8	TLD102	112.00
1-1/16	1.0625	6-5/8	11-1/4	TLD004	115.82
1-3/32	1.0938	6-7/8	11-1/2	TLD006	124.26
1-1/8	1.1250	7-1/8	1-3/4	TLD108	139.88
1-5/32	1.1562	7-1/4	11-7/8	TLD110	140.36
1-3/16	1.1875	7-3/8	12	TLD112	151.12
1-7/32	1.2188	7-1/2	12-1/8	TLD114	155.62
1-1/4	1.2500	7-7/8	12-1/2	TLD116	161.88
1-5/16	1.3125	8-5/8	14-1/4	TLD120	193.16
1-3/8	1.3750	8-7/8	14-1/2	TLD124	207.14
1-7/16	1.4375	9-1/8	14-3/4	TLD128	225.74
1-1/2	1.5000	9-3/8	15	TLD132	253.08
1-9/16	1.5625	9-5/8	15-1/4	TLD136	283.16
1-5/8	1.6250	9-7/8	15-5/8	TLD140	319.72
1-11/16	1.6875	10	15-3/4	TLD144	362.68
1-3/4	1.7500	10-1/2	16-1/4	TLD148	385.28
1-13/16	1.8125	10-1/2	16-1/4	TLD152	459.34
1-7/8	1.8750	10-3/4	16-1/2	TLD156	520.58
1-15/16	1.9375	10-3/4	16-5/8	TLD160	520.58
2	2.0000	10-3/4	16-5/8	TLD200	520.58

PACKAGING

1/16 to 1/4 - 12 Drills/Envelope • 17/64 to 3/8 - 6 Drills/Tube • 25/64 to 2" - 1 Drill/Tube

HIGH SPEED STEEL TAPER LENGTH DRILLS

MET-71

ICS USA

GENERAL PURPOSE

118° POINT



Wire Gauge Sizes (Straight Shank) #1 to #60 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1	.2280	3-3/4	6-1/8	TLD#01	10.88
2	.2210	3-3/4	6-1/8	TLD#02	10.88
3	.2130	3-5/8	6	TLD#03	10.50
4	.2090	3-5/8	6	TLD#04	10.50
5	.2055	3-5/8	6	TLD#05	10.50
6	.2040	3-5/8	6	TLD#06	10.50
7	.2010	3-5/8	6	TLD#07	10.50
8	.1990	3-5/8	6	TLD#08	10.50
9	.1960	3-5/8	6	TLD#09	10.50
10	.1935	3-5/8	6	TLD#10	10.50
11	.1910	3-5/8	6	TLD#11	10.50
12	.1890	3-5/8	6	TLD#12	10.50
13	.1850	3-3/8	5-3/4	TLD#13	9.52
14	.1820	3-3/8	5-3/4	TLD#14	9.52
15	.1800	3-3/8	5-3/4	TLD#15	9.52
16	.1770	3-3/8	5-3/4	TLD#16	9.52
17	.1730	3-3/8	5-3/4	TLD#17	9.52
18	.1695	3-3/8	5-3/4	TLD#18	9.52
19	.1660	3-3/8	5-3/4	TLD#19	9.52
20	.1610	3-3/8	5-3/4	TLD#20	9.52
21	.1590	3-3/8	5-3/4	TLD#21	9.52
22	.1570	3-3/8	5-3/4	TLD#22	9.52
23	.1549	3	5-3/8	TLD#23	9.52
24	.1520	3	5-3/8	TLD#24	9.52
25	.1490	3	5-3/8	TLD#25	9.52
26	.1470	3	5-3/8	TLD#26	9.52
27	.1440	3	5-3/8	TLD#27	9.52
28	.1405	3	5-3/8	TLD#28	9.64
29	.1360	3	5-3/8	TLD#29	9.64
30	.1285	3	5-3/8	TLD#30	9.64

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
31	.1200	2-3/4	5-1/8	TLD#31	9.64
32	.1160	2-3/4	5-1/8	TLD#32	9.64
33	.1130	2-3/4	5-1/8	TLD#33	9.64
34	.1110	2-3/4	5-1/8	TLD#34	9.64
35	.1100	2-3/4	5-1/8	TLD#35	9.64
36	.1055	2-1/2	4-5/8	TLD#36	7.00
37	.1040	2-1/2	4-5/8	TLD#37	7.00
38	.1010	2-1/2	4-5/8	TLD#38	7.00
39	.0995	2-1/2	4-5/8	TLD#39	6.14
40	.0980	2-1/2	4-5/8	TLD#40	6.14
41	.0960	2-1/2	4-5/8	TLD#41	6.14
42	.0935	2-1/4	4-1/4	TLD#42	5.22
43	.0890	2-1/4	4-1/4	TLD#43	5.22
44	.0860	2-1/4	4-1/4	TLD#44	5.22
45	.0820	2-1/4	4-1/4	TLD#45	5.22
46	.0810	2-1/4	4-1/4	TLD#46	5.22
47	.0785	2-1/4	4-1/4	TLD#47	5.22
48	.0760	2	3-3/4	TLD#48	4.40
49	.0730	2	3-3/4	TLD#49	4.40
50	.0700	2	3-3/4	TLD#50	4.40
51	.0670	2	3-3/4	TLD#51	4.40
52	.0635	2	3-3/4	TLD#52	4.40
53	.0595	1-3/4	3	TLD#53	4.40
54	.0550	1-3/4	3	TLD#54	4.40
55	.0520	1-3/4	3	TLD#55	4.40
56	.0465	1-1/8	2-1/4	TLD#56	4.40
57	.0430	1-1/8	2-1/4	TLD#57	4.40
58	.0420	1-1/8	2-1/4	TLD#58	4.40
59	.0410	1-1/8	2-1/4	TLD#59	4.40
60	.0400	1-1/8	2-1/4	TLD#60	4.40

Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
A	.234	3-3/4	6-1/8	TLD"A"	12.68
B	.238	3-3/4	6-1/8	TLD"B"	12.68
C	.242	3-3/4	6-1/8	TLD"C"	12.68
D	.246	3-3/4	6-1/8	TLD"D"	12.82
E	.250	3-3/4	6-1/8	TLD"E"	8.70
F	.257	3-7/8	6-1/4	TLD"F"	13.94
G	.261	3-7/8	6-1/4	TLD"G"	13.94
H	.266	3-7/8	6-1/4	TLD"H"	14.46
I	.272	3-7/8	6-1/4	TLD"I"	14.46
J	.277	3-7/8	6-1/4	TLD"J"	14.46
K	.281	3-7/8	6-1/4	TLD"K"	14.46
L	.290	4	6-3/8	TLD"L"	15.48
M	.295	4	6-3/8	TLD"M"	15.48

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
N	.302	4	6-3/8	TLD"N"	15.78
O	.316	4-1/8	6-1/2	TLD"O"	15.78
P	.323	4-1/8	6-1/2	TLD"P"	15.78
Q	.332	4-1/8	6-1/2	TLD"Q"	15.78
R	.339	4-1/8	6-1/2	TLD"R"	16.62
S	.348	4-1/4	6-3/4	TLD"S"	16.62
T	.358	4-1/4	6-3/4	TLD"T"	16.62
U	.368	4-1/4	6-3/4	TLD"U"	17.50
V	.377	4-3/8	7	TLD"V"	17.50
W	.386	4-3/8	7	TLD"W"	17.50
X	.397	4-3/8	7	TLD"X"	18.00
Y	.404	4-3/8	7	TLD"Y"	18.00
Z	.413	4-5/8	7-1/4	TLD"Z"	18.70

PACKAGING


#1 to #60 - 12 Drills/Envelope • A to I - 12 Drills/Envelope • J to Z - 6 Drills/Tube

HIGH SPEED STEEL METRIC TAPER LENGTH DRILLS

ICS WIS

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TLDM	 OXIDE FINISH	For general purpose drilling where a longer than jobber length drill is required.	M2	118° Point Std. Spiral Std. Web

Metric Sizes (Straight Shank) 1.00mm to 14.25mm Dia.

DEC. SIZE	FLUTE EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1.00	.0394	1-1/8	2-1/4	TLDM01.00	3.82
1.05	.0413	1-1/8	2-1/4	TLDM01.05	4.30
1.10	.0433	1-1/8	2-1/4	TLDM01.10	4.16
1.15	.0453	1-1/8	2-1/4	TLDM01.15	4.30
1.20	.0472	1-3/4	3	TLDM01.20	4.50
1.25	.0492	1-3/4	3	TLDM01.25	4.48
1.30	.0512	1-3/4	3	TLDM01.30	4.50
1.35	.0531	1-3/4	3	TLDM01.35	4.68
1.40	.0551	1-3/4	3	TLDM01.40	4.50
1.45	.0571	1-3/4	3	TLDM01.45	4.68
1.50	.0591	1-3/4	3	TLDM01.50	4.12
1.55	.0610	1-3/4	3	TLDM01.55	4.80
1.60	.0630	2	3-3/4	TLDM01.60	5.20
1.65	.0650	2	3-3/4	TLDM01.65	5.40
1.70	.0669	2	3-3/4	TLDM01.70	5.20
1.75	.0689	2	3-3/4	TLDM01.75	5.40
1.80	.0709	2	3-3/4	TLDM01.80	5.20
1.85	.0728	2	3-3/4	TLDM01.85	5.40
1.90	.0748	2	3-3/4	TLDM01.90	5.20
1.95	.0768	2	3-3/4	TLDM01.95	5.40
2.00	.0787	2-1/4	4-1/4	TLDM02.00	5.66
2.05	.0807	2-1/4	4-1/4	TLDM02.05	6.54
2.10	.0827	2-1/4	4-1/4	TLDM02.10	6.28
2.15	.0846	2-1/4	4-1/4	TLDM02.15	6.54
2.20	.0866	2-1/4	4-1/4	TLDM02.20	6.28
2.25	.0886	2-1/4	4-1/4	TLDM02.25	6.54
2.30	.0906	2-1/4	4-1/4	TLDM02.30	6.28
2.35	.0925	2-1/4	4-1/4	TLDM02.35	6.52
2.40	.0945	2-1/2	4-5/8	TLDM02.40	7.84
2.45	.0965	2-1/2	4-5/8	TLDM02.45	8.12
2.50	.0984	2-1/2	4-5/8	TLDM02.50	7.02
2.60	.1024	2-1/2	4-5/8	TLDM02.60	7.84
2.70	.1063	2-1/2	4-5/8	TLDM02.70	7.84
2.80	.1102	2-3/4	5-1/8	TLDM02.80	8.12
2.90	.1142	2-3/4	5-1/8	TLDM02.90	8.12
3.00	.1181	2-3/4	5-1/8	TLDM03.00	7.28
3.10	.1220	2-3/4	5-1/8	TLDM03.10	8.12
3.20	.1260	3	5-3/8	TLDM03.20	8.80
3.30	.1299	3	5-3/8	TLDM03.30	8.80
3.40	.1339	3	5-3/8	TLDM03.40	9.42
3.50	.1378	3	5-3/8	TLDM03.50	8.80
3.60	.1417	3	5-3/8	TLDM03.60	9.82
3.70	.1457	3	5-3/8	TLDM03.70	9.82
3.80	.1496	3	5-3/8	TLDM03.80	9.82
3.90	.1535	3	5-3/8	TLDM03.90	9.82
4.00	.1575	3-3/8	5-3/4	TLDM04.00	8.80
4.10	.1614	3-3/8	5-3/4	TLDM04.10	9.82
4.20	.1654	3-3/8	5-3/4	TLDM04.20	8.80
4.30	.1693	3-3/8	5-3/4	TLDM04.30	9.84
4.40	.1732	3-3/8	5-3/4	TLDM04.40	9.84
4.50	.1772	3-3/8	5-3/4	TLDM04.50	8.80

DEC. SIZE	FLUTE EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
4.60	.1811	3-3/8	5-3/4	TLDM04.60	9.82
4.70	.1850	3-3/8	5-3/4	TLDM04.70	9.82
4.80	.1890	3-5/8	6	TLDM04.80	11.02
4.90	.1929	3-5/8	6	TLDM04.90	11.52
5.00	.1968	3-5/8	6	TLDM05.00	10.30
5.10	.2008	3-5/8	6	TLDM05.10	11.52
5.20	.2047	3-5/8	6	TLDM05.20	11.52
5.30	.2087	3-5/8	6	TLDM05.30	11.52
5.40	.2126	3-5/8	6	TLDM05.40	11.52
5.50	.2165	3-5/8	6	TLDM05.50	10.30
5.60	.2205	3-3/4	6-1/8	TLDM05.60	11.52
5.70	.2244	3-3/4	6-1/8	TLDM05.70	11.52
5.80	.2283	3-3/4	6-1/8	TLDM05.80	11.52
5.90	.2323	3-3/4	6-1/8	TLDM05.90	13.50
6.00	.2362	3-3/4	6-1/8	TLDM06.00	11.00
6.10	.2402	3-3/4	6-1/8	TLDM06.10	11.52
6.20	.2441	3-3/4	6-1/8	TLDM06.20	10.52
6.30	.2480	3-3/4	6-1/8	TLDM06.30	11.16
6.40	.2520	3-7/8	6-1/4	TLDM06.40	12.86
6.50	.2559	3-7/8	6-1/4	TLDM06.50	12.56
6.80	.2677	3-7/8	6-1/4	TLDM06.80	12.86
7.00	.2756	3-7/8	6-1/4	TLDM07.00	12.56
7.20	.2835	4	6-3/8	TLDM07.20	13.02
7.50	.2953	4	6-3/8	TLDM07.50	13.02
7.80	.3071	4	6-3/8	TLDM07.80	14.22
8.00	.3150	4-1/8	6-1/2	TLDM08.00	14.60
8.20	.3228	4-1/8	6-1/2	TLDM08.20	16.30
8.50	.3346	4-1/8	6-1/2	TLDM08.50	14.60
8.80	.3465	4-1/4	6-3/4	TLDM08.80	19.16
9.00	.3543	4-1/4	6-3/4	TLDM09.00	17.18
9.20	.3622	4-1/4	6-3/4	TLDM09.20	19.16
9.50	.3740	4-1/4	6-3/4	TLDM09.50	17.58
9.80	.3858	4-3/8	7	TLDM09.80	20.02
10.00	.3937	4-3/8	7	TLDM10.00	17.92
10.20	.4016	4-3/8	7	TLDM10.20	18.34
10.50	.4134	4-5/8	7-1/4	TLDM10.50	19.34
10.80	.4252	4-5/8	7-1/4	TLDM10.80	22.02
11.00	.4331	4-5/8	7-1/4	TLDM11.00	19.72
11.20	.4409	4-3/4	7-1/2	TLDM11.20	24.44
11.50	.4528	4-3/4	7-1/2	TLDM11.50	21.90
11.80	.4646	4-3/4	7-1/2	TLDM11.80	25.96
12.00	.4724	4-3/4	7-1/2	TLDM12.00	24.24
12.20	.4803	4-3/4	7-1/2	TLDM12.20	27.08
12.50	.4921	4-3/4	7-1/2	TLDM12.50	24.24
12.80	.5039	4-3/4	8	TLDM12.80	36.74
13.00	.5118	4-3/4	8	TLDM13.00	34.34
13.20	.5197	4-3/4	8	TLDM13.20	37.42
13.50	.5315	4-3/4	8	TLDM13.50	38.64
13.80	.5433	4-7/8	8-1/4	TLDM13.80	39.36
14.00	.5512	4-7/8	8-1/4	TLDM14.00	36.12
14.25	.5610	4-7/8	8-1/4	TLDM14.25	39.36

HIGH SPEED STEEL METRIC TAPER LENGTH DRILLS

MET-73

ICS WIS

GENERAL PURPOSE

118° POINT



Metric Sizes (Straight Shank) 14.50mm to 38.00mm Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
14.50	.5709	4-7/8	8-3/4	TLDM14.50	45.18
14.75	.5807	4-7/8	8-3/4	TLDM14.75	45.98
15.00	.5906	4-7/8	8-3/4	TLDM15.00	45.16
15.25	.6004	4-7/8	8-3/4	TLDM15.25	47.60
15.50	.6102	4-7/8	8-3/4	TLDM15.50	46.72
15.75	.6201	4-7/8	8-3/4	TLDM15.75	47.62
16.00	.6299	5-1/8	9	TLDM16.00	53.28
16.25	.6398	5-1/8	9	TLDM16.25	54.26
16.50	.6496	5-1/8	9	TLDM16.50	53.28
16.75	.6594	5-3/8	9-1/4	TLDM16.75	63.72
17.00	.6693	5-3/8	9-1/4	TLDM17.00	62.54
17.25	.6791	5-3/8	9-1/4	TLDM17.25	64.52
17.50	.6890	5-5/8	9-1/2	TLDM17.50	66.78
18.00	.7087	5-5/8	9-1/2	TLDM18.00	66.78
18.50	.7283	5-7/8	9-3/4	TLDM18.50	76.36
19.00	.7480	5-7/8	9-3/4	TLDM19.00	73.16
19.50	.7677	6	9-7/8	TLDM19.50	77.68
20.00	.7874	6-1/8	10	TLDM20.00	83.38
20.50	.8071	6-1/8	10	TLDM20.50	88.60
21.00	.8268	6-1/8	10	TLDM21.00	90.10
21.50	.8465	6-1/8	10	TLDM21.50	96.36
22.00	.8661	6-1/8	10	TLDM22.00	90.70
22.50	.8858	6-1/8	10	TLDM22.50	98.62
23.00	.9055	6-1/8	10	TLDM23.00	98.62
23.50	.9252	6-1/8	10-3/4	TLDM23.50	109.28
24.00	.9449	6-3/8	11	TLDM24.00	118.40
24.50	.9646	6-3/8	11	TLDM24.50	120.58

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
25.00	.9843	6-3/8	11	TLDM25.00	119.24
25.50	1.0039	6-1/2	11-1/8	TLDM25.50	150.44
26.00	1.0236	6-1/2	11-1/8	TLDM26.00	147.74
26.50	1.0433	6-5/8	11-1/4	TLDM26.50	155.64
27.00	1.0630	6-5/8	11-1/4	TLDM27.00	163.90
27.50	1.0827	6-5/8	11-1/2	TLDM27.50	166.94
28.00	1.1024	7-1/8	11-3/4	TLDM28.00	170.14
28.50	1.1220	7-1/8	11-3/4	TLDM28.50	173.30
29.00	1.1417	7-1/4	11-7/8	TLDM29.00	185.14
29.50	1.1614	7-3/8	12	TLDM29.50	203.06
30.00	1.1811	7-3/8	12	TLDM30.00	199.38
30.50	1.2008	7-1/2	12-1/8	TLDM30.50	211.22
31.00	1.2205	7-7/8	12-1/2	TLDM31.00	215.52
31.50	1.2402	7-7/8	12-1/2	TLDM31.50	219.52
32.00	1.2598	8-1/2	14-1/8	TLDM32.00	252.62
32.50	1.2795	8-1/2	14-1/8	TLDM32.50	252.62
33.00	1.2992	8-5/8	14-1/4	TLDM33.00	261.96
33.50	1.3189	8-3/4	14-3/8	TLDM33.50	269.32
34.00	1.3386	8-3/4	14-3/8	TLDM34.00	269.32
34.50	1.3583	8-7/8	14-1/2	TLDM34.50	280.66
35.00	1.3780	9	14-5/8	TLDM35.00	295.64
35.50	1.3976	9	14-5/8	TLDM35.50	295.64
36.00	1.4173	9-1/8	14-3/4	TLDM36.00	305.00
36.50	1.4370	9-1/8	14-3/4	TLDM36.50	305.00
37.00	1.4567	9-1/4	14-7/8	TLDM37.00	331.36
37.50	1.4764	9-3/8	15	TLDM37.50	339.08
38.00	1.4961	9-3/8	15	TLDM38.00	339.08

PACKAGING

1.00mm to 7.00mm - 12 Drills/Envelope • 7.20mm to 13.00mm - 6 Drills/Tube • 13.20mm to 38.00mm - 1 Drill/Tube

HIGH SPEED STEEL TAPER LENGTH DRILL SETS

METAL INDEX

ILLUSTRATION	DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
	16 PC DRILL SET Sizes: 33/64 to 3/4 by 64ths	Taper Length Drill - HSS	DS-TLD-16	651.50
	16 PC DRILL SET Sizes: 49/64 to 1 by 64ths	Taper Length Drill - HSS	DS-TLD-16A	1144.18
	26 PC DRILL SET Letter Sizes: A to Z	Taper Length Drill - HSS	DS-TLD-26	393.96
	29 PC DRILL SET Sizes: 1/16 to 1/2 by 64ths	Taper Length Drill - HSS	DS-TLD-29	340.46
	60 PC DRILL SET Wire Gauge Sizes: 1 to 60	Taper Length Drill - HSS	DS-TLD-16	488.04


HIGH SPEED STEEL COBALT TAPER LENGTH DRILLS

MET-74

ICS USA

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TLDC	 GOLD COBALT FINISH	For portable or machine drilling in stainless steel, titanium, and other work hardening metals.	M42	135° Split Pt. Std. Spiral Hvy. Duty Web

Fractional Sizes (Straight Shank) 1/16" to 1" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/16	.0625	1-3/4	3	TLDC004	6.46
5/64	.0781	2	3-3/4	TLDC005	7.54
3/32	.0938	2-1/4	4-1/4	TLDC006	9.00
7/64	.1094	2-1/2	4-5/8	TLDC007	11.32
1/8	.1250	2-3/4	5-1/8	TLDC008	11.64
9/64	.1406	3	5-3/8	TLDC009	14.18
5/32	.1562	3	5-3/8	TLDC010	14.18
11/64	.1719	3-3/8	5-3/4	TLDC011	14.18
3/16	.1875	3-3/8	5-3/4	TLDC012	14.18
13/64	.2031	3-5/8	6	TLDC013	16.56
7/32	.2188	3-5/8	6	TLDC014	16.56
15/64	.2344	3-3/4	6-1/8	TLDC015	16.56
1/4	.2500	3-3/4	6-1/8	TLDC016	16.56
17/64	.2656	3-7/8	6-1/4	TLDC017	20.04
9/32	.2812	3-7/8	6-1/4	TLDC018	20.04
19/64	.2969	4	6-3/8	TLDC019	20.04
5/16	.3125	4	6-3/8	TLDC020	20.04
21/64	.3281	4-1/8	6-1/2	TLDC021	23.04
11/32	.3438	4-1/8	6-1/2	TLDC022	23.04
23/64	.3594	4-1/4	6-3/4	TLDC023	27.18
3/8	.3750	4-1/4	6-3/4	TLDC024	27.18
25/64	.3906	4-3/8	7	TLDC025	28.22
13/32	.4062	4-3/8	7	TLDC026	28.22
27/64	.4219	4-5/8	7-1/4	TLDC027	30.64
7/16	.4375	4-5/8	7-1/4	TLDC028	31.28
29/64	.4531	4-3/4	7-1/2	TLDC029	34.70
15/32	.4688	4-3/4	7-1/2	TLDC030	36.70
31/64	.4844	4-3/4	7-3/4	TLDC031	38.46
1/2	.5000	4-3/4	7-3/4	TLDC032	38.46
33/64	.5156	4-3/4	8	TLDC033	49.34
17/32	.5312	4-3/4	8	TLDC034	49.34

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
35/64	.5469	4-7/8	8-1/4	TLDC035	53.30
9/16	.5625	4-7/8	8-1/4	TLDC036	53.30
37/64	.5781	4-7/8	8-1/4	TLDC037	62.22
19/32	.5938	4-7/8	8-3/4	TLDC038	62.22
39/64	.6094	4-7/8	8-3/4	TLDC039	62.22
5/8	.6250	4-7/8	8-3/4	TLDC040	62.22
41/64	.6406	5-1/8	9	TLDC041	68.68
21/32	.6562	5-1/8	9	TLDC042	68.68
43/64	.6719	5-3/8	9-1/4	TLDC043	80.30
11/16	.6875	5-3/8	9-1/4	TLDC044	80.30
45/64	.7031	5-5/8	9-1/2	TLDC045	87.88
23/32	.7188	5-5/8	9-1/2	TLDC046	87.88
47/64	.7344	5-7/8	9-3/4	TLDC047	92.90
3/4	.7500	5-7/8	9-3/4	TLDC048	92.90
49/64	.7656	6	9-7/8	TLDC049	109.52
25/32	.7812	6	9-7/8	TLDC050	109.52
51/64	.7969	6-1/8	10	TLDC051	117.74
13/16	.8125	6-1/8	10	TLDC052	117.74
53/64	.8281	6-1/8	10	TLDC053	121.86
27/32	.8438	6-1/8	10	TLDC054	121.86
55/64	.8594	6-1/8	10	TLDC055	128.04
7/8	.8750	6-1/8	10	TLDC056	128.04
57/64	.8906	6-1/8	10	TLDC057	133.38
29/32	.9062	6-1/8	10	TLDC058	133.38
59/64	.9219	6-1/8	10-3/4	TLDC059	145.12
15/16	.9375	6-1/8	10-3/4	TLDC060	145.12
61/64	.9531	6-3/8	11	TLDC061	160.20
31/32	.9688	6-3/8	11	TLDC062	160.20
63/64	.9844	6-3/8	11	TLDC063	166.96
1	1.0000	6-3/8	11	TLDC100	166.96

PACKAGING

1/16 to 1/4 - 12 Drills/Envelope • 17/64 to 3/8 - 6 Drills/Tube • 25/64 to 1" - 1 Drill/Tube

Quick Reference for Cobalt Drills

DRILL SETS	STUB LENGTH	JOBBER LENGTH	SILVER & DEMING	TAPER LENGTH	TAPER SHANK	EXTRA LENGTH	COMBINED DRILL & CSK
PAGE NO. OF ITEMS AVAILABLE							
53-59	9-10	35-38	65, 69	74-75	95	107-109	112

COBALT TAPER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



Wire Gauge Sizes (Straight Shank) #1 to #60 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1	.2280	3-3/4	6-1/8	TLDC#01	22.22
2	.2210	3-3/4	6-1/8	TLDC#02	22.22
3	.2130	3-5/8	6	TLDC#03	22.22
4	.2090	3-5/8	6	TLDC#04	22.22
5	.2055	3-5/8	6	TLDC#05	22.22
6	.2040	3-5/8	6	TLDC#06	22.22
7	.2010	3-5/8	6	TLDC#07	22.22
8	.1990	3-5/8	6	TLDC#08	22.22
9	.1960	3-5/8	6	TLDC#09	22.22
10	.1935	3-5/8	6	TLDC#10	22.22
11	.1910	3-5/8	6	TLDC#11	22.22
12	.1890	3-5/8	6	TLDC#12	22.22
13	.1850	3-3/8	5-3/4	TLDC#13	20.30
14	.1820	3-3/8	5-3/4	TLDC#14	20.30
15	.1800	3-3/8	5-3/4	TLDC#15	20.30
16	.1770	3-3/8	5-3/4	TLDC#16	20.30
17	.1730	3-3/8	5-3/4	TLDC#17	20.30
18	.1695	3-3/8	5-3/4	TLDC#18	20.30
19	.1660	3-3/8	5-3/4	TLDC#19	20.30
20	.1610	3-3/8	5-3/4	TLDC#20	20.30
21	.1590	3-3/8	5-3/4	TLDC#21	20.30
22	.1570	3-3/8	5-3/4	TLDC#22	20.30
23	.1549	3	5-3/8	TLDC#23	20.30
24	.1520	3	5-3/8	TLDC#24	20.30
25	.1490	3	5-3/8	TLDC#25	20.30
26	.1470	3	5-3/8	TLDC#26	20.30
27	.1440	3	5-3/8	TLDC#27	20.30
28	.1405	3	5-3/8	TLDC#28	20.30
29	.1360	3	5-3/8	TLDC#29	20.30
30	.1285	3	5-3/8	TLDC#30	20.30

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
31	.1200	2-3/4	5-1/8	TLDC#31	16.70
32	.1160	2-3/4	5-1/8	TLDC#32	16.70
33	.1130	2-3/4	5-1/8	TLDC#33	16.70
34	.1110	2-3/4	5-1/8	TLDC#34	16.70
35	.1100	2-3/4	5-1/8	TLDC#35	16.70
36	.1055	2-1/2	4-5/8	TLDC#36	16.22
37	.1040	2-1/2	4-5/8	TLDC#37	16.22
38	.1010	2-1/2	4-5/8	TLDC#38	16.22
39	.0995	2-1/2	4-5/8	TLDC#39	16.22
40	.0980	2-1/2	4-5/8	TLDC#40	16.22
41	.0960	2-1/2	4-5/8	TLDC#41	16.22
42	.0935	2-1/4	4-1/4	TLDC#42	16.22
43	.0890	2-1/4	4-1/4	TLDC#43	16.22
44	.0860	2-1/4	4-1/4	TLDC#44	16.22
45	.0820	2-1/4	4-1/4	TLDC#45	16.22
46	.0810	2-1/4	4-1/4	TLDC#46	16.22
47	.0785	2-1/4	4-1/4	TLDC#47	16.22
48	.0760	2	3-3/4	TLDC#48	16.22
49	.0730	2	3-3/4	TLDC#49	16.22
50	.0700	2	3-3/4	TLDC#50	16.22
51	.0670	2	3-3/4	TLDC#51	16.22
52	.0635	2	3-3/4	TLDC#52	16.22
53	.0595	1-3/4	3	TLDC#53	16.22
54	.0550	1-3/4	3	TLDC#54	16.22
55	.0520	1-3/4	3	TLDC#55	16.22
56	.0465	1-1/8	2-1/4	TLDC#56	16.22
57	.0430	1-1/8	2-1/4	TLDC#57	16.22
58	.0420	1-1/8	2-1/4	TLDC#58	16.22
59	.0410	1-1/8	2-1/4	TLDC#59	16.22
60	.0400	1-1/8	2-1/4	TLDC#60	16.22

#53 - #60 are not split point.

Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
A	.234	3-3/4	6-1/8	TLDC"A"	25.26
B	.238	3-3/4	6-1/8	TLDC"B"	25.26
C	.242	3-3/4	6-1/8	TLDC"C"	25.26
D	.246	3-3/4	6-1/8	TLDC"D"	25.26
E	.250	3-3/4	6-1/8	TLDC"E"	19.38
F	.257	3-7/8	6-1/4	TLDC"F"	30.06
G	.261	3-7/8	6-1/4	TLDC"G"	30.06
H	.266	3-7/8	6-1/4	TLDC"H"	30.06
I	.272	3-7/8	6-1/4	TLDC"I"	30.06
J	.277	3-7/8	6-1/4	TLDC"J"	30.06
K	.281	3-7/8	6-1/4	TLDC"K"	30.06
L	.290	4	6-3/8	TLDC"L"	30.06
M	.295	4	6-3/8	TLDC"M"	30.06

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
N	.302	4	6-3/8	TLDC"N"	30.06
O	.316	4-1/8	6-1/2	TLDC"O"	33.04
P	.323	4-1/8	6-1/2	TLDC"P"	33.04
Q	.332	4-1/8	6-1/2	TLDC"Q"	33.04
R	.339	4-1/8	6-1/2	TLDC"R"	33.04
S	.348	4-1/4	6-3/4	TLDC"S"	40.72
T	.358	4-1/4	6-3/4	TLDC"T"	40.72
U	.368	4-1/4	6-3/4	TLDC"U"	40.72
V	.377	4-3/8	7	TLDC"V"	42.10
W	.386	4-3/8	7	TLDC"W"	42.10
X	.397	4-3/8	7	TLDC"X"	42.10
Y	.404	4-3/8	7	TLDC"Y"	42.10
Z	.413	4-5/8	7-1/4	TLDC"Z"	42.10

PACKAGING


#1 to #60 - 12 Drills/Envelope • A to I - 12 Drills/Envelope • J to Z - 6 Drills/Tube

HIGH SPEED STEEL TAPER LENGTH DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TLDHB	 OXIDE FINISH	For deep hole drilling in hard steels, stainless steels and other hard materials. Mfr. to NAS 907-B specs.	M2	135° Split Pt. Std. Spiral Hvy. Duty Web

Fractional Sizes (Straight Shank) 1/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
* 1/16	.0625	1-3/4	3	TLDHB004	4.30
* 5/64	.0781	2	3-3/4	TLDHB005	4.30
3/32	.0938	2-1/4	4-1/4	TLDHB006	5.22
7/64	.1094	2-1/2	4-5/8	TLDHB007	7.06
1/8	.1250	2-3/4	5-1/8	TLDHB008	7.90
9/64	.1406	3	5-3/8	TLDHB009	8.80
5/32	.1562	3	5-3/8	TLDHB010	8.80
11/64	.1719	3-3/8	5-3/4	TLDHB011	9.98
3/16	.1875	3-3/8	5-3/4	TLDHB012	9.98
13/64	.2031	3-5/8	6	TLDHB013	11.08
7/32	.2188	3-5/8	6	TLDHB014	11.08
15/64	.2344	3-3/4	6-1/8	TLDHB015	11.34
1/4	.2500	3-3/4	6-1/8	TLDHB016	11.34
17/64	.2656	3-7/8	6-1/4	TLDHB017	12.22
9/32	.2812	3-7/8	6-1/4	TLDHB018	12.22
19/64	.2969	4	6-3/8	TLDHB019	12.66
5/16	.3125	4	6-3/8	TLDHB020	12.66
21/64	.3281	4-1/8	6-1/2	TLDHB021	13.96
11/32	.3438	4-1/8	6-1/2	TLDHB022	13.96
23/64	.3594	4-1/4	6-3/4	TLDHB023	15.34
3/8	.3750	4-1/4	6-3/4	TLDHB024	15.34
25/64	.3906	4-3/8	7	TLDHB025	18.06
13/32	.4062	4-3/8	7	TLDHB026	18.06
27/64	.4219	4-5/8	7-1/4	TLDHB027	19.70
7/16	.4375	4-5/8	7-1/4	TLDHB028	19.70
29/64	.4531	4-3/4	7-1/2	TLDHB029	23.52
15/32	.4688	4-3/4	7-1/2	TLDHB030	23.52
31/64	.4844	4-3/4	7-3/4	TLDHB031	25.18
1/2	.5000	4-3/4	7-3/4	TLDHB032	25.18

* Not Split Point


CARBIDE TIPPED TAPER LENGTH DRILLS

MET-77

ICS USA

SPECIAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
CTTLD	 BRIGHT POLISHED FINISH	For production drilling of cast iron, non-ferrous metals, and non-metals. Does not need rigid set-up like solid carbide.	M1 (Body) CARBIDE TIPPED	118° Point Std. Spiral Std. Web

Fractional Sizes (Straight Shank) 1/8" to 1" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/8	.1250	2-3/4	5-1/8	CTTLD008	26.80
9/64	.1406	3	5-3/8	CTTLD009	26.80
5/32	.1562	3	5-3/8	CTTLD010	28.24
11/64	.1719	3-3/8	5-3/4	CTTLD011	28.74
3/16	.1875	3-3/8	5-3/4	CTTLD012	28.74
13/64	.2031	3-5/8	6	CTTLD013	30.40
7/32	.2188	3-5/8	6	CTTLD014	30.40
15/64	.2344	3-3/4	6-1/8	CTTLD015	34.94
1/4	.2500	3-3/4	6-1/8	CTTLD016	34.32
17/64	.2656	3-7/8	6-1/4	CTTLD017	39.22
9/32	.2812	3-7/8	6-1/4	CTTLD018	38.50
19/64	.2969	4	6-3/8	CTTLD019	42.32
5/16	.3125	4	6-3/8	CTTLD020	41.54
21/64	.3281	4-1/8	6-1/2	CTTLD021	46.60
11/32	.3438	4-1/8	6-1/2	CTTLD022	45.76
23/64	.3594	4-1/4	6-3/4	CTTLD023	51.14
3/8	.3750	4-1/4	6-3/4	CTTLD024	50.20
25/64	.3906	4-3/8	7	CTTLD025	56.30
13/32	.4062	4-3/8	7	CTTLD026	55.28
27/64	.4219	4-5/8	7-1/4	CTTLD027	64.82
7/16	.4375	4-5/8	7-1/4	CTTLD028	63.64
29/64	.4531	4-3/4	7-1/2	CTTLD029	68.84
15/32	.4688	4-3/4	7-1/2	CTTLD030	67.58
31/64	.4844	4-3/4	7-3/4	CTTLD031	74.98
1/2	.5000	4-3/4	7-3/4	CTTLD032	73.64
33/64	.5156	4-3/4	8	CTTLD033	96.60
17/32	.5312	4-3/4	8	CTTLD034	95.30
35/64	.5469	4-7/8	8-1/4	CTTLD035	99.82
9/16	.5625	4-7/8	8-1/4	CTTLD036	96.24

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
37/64	.5781	4-7/8	8-1/4	CTTLD037	105.34
19/32	.5938	4-7/8	8-3/4	CTTLD038	103.50
39/64	.6094	4-7/8	8-3/4	CTTLD039	121.34
5/8	.6250	4-7/8	8-3/4	CTTLD040	117.02
41/64	.6406	5-1/8	9	CTTLD041	125.88
21/32	.6562	5-1/8	9	CTTLD042	121.38
43/64	.6719	5-3/8	9-1/4	CTTLD043	128.04
11/16	.6875	5-3/8	9-1/4	CTTLD044	123.48
45/64	.7031	5-5/8	9-1/2	CTTLD045	129.46
23/32	.7188	5-5/8	9-1/2	CTTLD046	126.16
47/64	.7344	5-7/8	9-3/4	CTTLD047	131.62
3/4	.7500	5-7/8	9-3/4	CTTLD048	128.94
49/64	.7656	6	9-7/8	CTTLD049	145.00
25/32	.7812	6	9-7/8	CTTLD050	139.60
51/64	.7969	6-1/8	10	CTTLD051	145.62
13/16	.8125	6-1/8	10	CTTLD052	140.26
53/64	.8281	6-1/8	10	CTTLD053	145.62
27/32	.8438	6-1/8	10	CTTLD054	140.26
55/64	.8594	6-1/8	10	CTTLD055	153.80
7/8	.8750	6-1/8	10	CTTLD056	154.88
57/64	.8906	6-1/8	10	CTTLD057	160.40
29/32	.9062	6-1/8	10	CTTLD058	178.84
59/64	.9219	6-1/8	10-3/4	CTTLD059	160.28
15/16	.9375	6-1/8	10-3/4	CTTLD060	163.08
61/64	.9531	6-3/8	11	CTTLD061	168.28
31/32	.9688	6-3/8	11	CTTLD062	190.08
63/64	.9844	6-3/8	11	CTTLD063	172.50
1	1.0000	6-3/8	11	CTTLD100	175.96

Metric Sizes (Straight Shank) 5.00mm to 19.00mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
5.00	.1968	3-5/8	6	CTTLDM05.00	30.54
5.50	.2165	3-5/8	6	CTTLDM05.50	33.98
6.00	.2362	3-3/4	6-1/8	CTTLDM06.00	36.42
6.50	.2559	3-7/8	6-1/4	CTTLDM06.50	38.54
7.00	.2756	3-7/8	6-1/4	CTTLDM07.00	40.46
7.50	.2953	4	6-3/8	CTTLDM07.50	45.30
8.00	.3150	4-1/8	6-1/2	CTTLDM08.00	46.92
8.50	.3346	4-1/8	6-1/2	CTTLDM08.50	48.54
9.00	.3543	4-1/4	6-3/4	CTTLDM09.00	49.36
9.50	.3740	4-1/4	6-3/4	CTTLDM09.50	50.28
10.00	.3937	4-3/8	7	CTTLDM10.00	
10.50	.4134	4-5/8	7-1/4	CTTLDM10.50	68.76
11.00	.4331	4-5/8	7-1/4	CTTLDM11.00	
11.50	.4528	4-3/4	7-1/2	CTTLDM11.50	
12.00	.4724	4-3/4	7-1/2	CTTLDM12.00	73.96


SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
12.50	.4921	4-3/4	7-1/2	CTTLDM12.50	
13.00	.5118	4-3/4	8	CTTLDM13.00	
13.50	.5315	4-3/4	8	CTTLDM13.50	
14.00	.5512	4-7/8	8-1/4	CTTLDM14.00	105.18
14.50	.5709	4-7/8	8-3/4	CTTLDM14.50	
15.00	.5906	4-7/8	8-3/4	CTTLDM15.00	119.72
15.50	.6102	4-7/8	8-3/4	CTTLDM15.50	
16.00	.6299	5-1/8	9	CTTLDM16.00	
16.50	.6496	5-1/8	9	CTTLDM16.50	
17.00	.6693	5-3/8	9-1/4	CTTLDM17.00	
17.50	.6890	5-5/8	9-1/2	CTTLDM17.50	
18.00	.7087	5-5/8	9-1/2	CTTLDM18.00	
18.50	.7283	5-7/8	9-3/4	CTTLDM18.50	
19.00	.7480	5-7/8	9-3/4	CTTLDM19.00	

HIGH SPEED STEEL AUTOMOTIVE (TANG) TAPER LENGTH DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	SHANK SPECS
TLDAT	 OXIDE FINISH	For applications where a longer than jobber length drill is required. The tapered shanks are for use with positive drive split sleeve drivers.	M2	118° Point Std. Spiral Std. Web	TANG

Fractional Sizes (Tanged Shank) 1/8" to 3/4" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/8	.1250	2-3/4	5-1/8	TLDAT008	6.58
9/64	.1406	3	5-3/8	TLDAT009	7.58
5/32	.1562	3	5-3/8	TLDAT010	8.20
11/64	.1719	3-3/8	5-3/8	TLDAT011	8.20
3/16	.1875	3-3/8	5-3/4	TLDAT012	7.94
13/64	.2031	3-5/8	6	TLDAT013	9.18
7/32	.2188	3-5/8	6	TLDAT014	9.66
15/64	.2344	3-3/4	6-1/8	TLDAT015	9.90
1/4	.2500	3-3/4	6-1/8	TLDAT016	10.92
17/64	.2656	3-7/8	6-1/4	TLDAT017	11.76
9/32	.2812	3-7/8	6-1/4	TLDAT018	11.24
19/64	.2969	4	6-3/8	TLDAT019	11.24
5/16	.3125	4	6-3/8	TLDAT020	11.24
21/64	.3281	4-1/8	6-1/2	TLDAT021	13.12
11/32	.3438	4-1/8	6-1/2	TLDAT022	12.86
23/64	.3594	4-1/4	6-3/4	TLDAT023	15.40
3/8	.3750	4-1/4	6-3/4	TLDAT024	15.34
25/64	.3906	4-3/8	7	TLDAT025	16.72
13/32	.4062	4-3/8	7	TLDAT026	16.72
27/64	.4219	4-5/8	7-1/4	TLDAT027	18.58

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
7/16	.4375	4-5/8	7-1/4	TLDAT028	19.12
29/64	.4531	4-3/4	7-1/2	TLDAT029	20.78
15/32	.4688	4-3/4	7-1/2	TLDAT030	22.18
31/64	.4844	4-3/4	7-3/4	TLDAT031	24.36
1/2	.5000	4-3/4	7-3/4	TLDAT032	23.24
33/64	.5156	4-3/4	8	TLDAT033	31.16
17/32	.5312	4-3/4	8	TLDAT034	31.16
35/64	.5469	4-7/8	8-1/4	TLDAT035	32.52
9/16	.5625	4-7/8	8-1/4	TLDAT036	32.52
37/64	.5781	4-7/8	8-1/4	TLDAT037	38.56
19/32	.5938	4-7/8	8-3/4	TLDAT038	38.56
39/64	.6094	4-7/8	8-3/4	TLDAT039	38.56
5/8	.6250	4-7/8	8-3/4	TLDAT040	38.56
41/64	.6406	5-1/8	9	TLDAT041	43.50
21/32	.6562	5-1/8	9	TLDAT042	43.50
43/64	.6719	5-3/8	9-1/4	TLDAT043	46.80
11/16	.6875	5-3/8	9-1/4	TLDAT044	46.80
45/64	.7031	5-5/8	9-1/2	TLDAT045	52.56
23/32	.7188	5-5/8	9-1/2	TLDAT046	56.02
3/4	.7500	5-7/8	9-3/4	TLDAT048	53.56

Wire Gauge Sizes (Tanged Shank) #1 to #30 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1	.2280	3-3/4	6-1/8	TLDAT#01	11.74
2	.2210	3-3/4	6-1/8	TLDAT#02	11.74
3	.2130	3-5/8	6	TLDAT#03	11.32
4	.2090	3-5/8	6	TLDAT#04	11.32
5	.2055	3-5/8	6	TLDAT#05	11.32
6	.2040	3-5/8	6	TLDAT#06	11.32
7	.2010	3-5/8	6	TLDAT#07	11.32
8	.1990	3-5/8	6	TLDAT#08	11.32
9	.1960	3-5/8	6	TLDAT#09	11.32
10	.1935	3-5/8	6	TLDAT#10	11.32
11	.1910	3-5/8	6	TLDAT#11	11.32
12	.1890	3-5/8	6	TLDAT#12	11.32
13	.1850	3-3/8	5-3/4	TLDAT#13	10.24
14	.1820	3-3/8	5-3/4	TLDAT#14	10.24
15	.1800	3-3/8	5-3/4	TLDAT#15	10.24

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
16	.1770	3-3/8	5-3/4	TLDAT#16	10.24
17	.1730	3-3/8	5-3/4	TLDAT#17	10.24
18	.1695	3-3/8	5-3/4	TLDAT#18	10.24
19	.1660	3-3/8	5-3/4	TLDAT#19	10.24
20	.1610	3-3/8	5-3/4	TLDAT#20	10.24
21	.1590	3-3/8	5-3/4	TLDAT#21	10.24
22	.1570	3-3/8	5-3/4	TLDAT#22	10.24
23	.1549	3	5-3/8	TLDAT#23	10.24
24	.1520	3	5-3/8	TLDAT#24	10.24
25	.1490	3	5-3/8	TLDAT#25	10.24
26	.1470	3	5-3/8	TLDAT#26	10.24
27	.1440	3	5-3/8	TLDAT#27	10.24
28	.1405	3	5-3/8	TLDAT#28	10.42
29	.1360	3	5-3/8	TLDAT#29	10.42
30	.1285	3	5-3/8	TLDAT#30	10.42

PACKAGING

1/8 to 1/4 - 12 Drills/Envelope • 17/64 to 3/8 - 6 Drills/Tube • 25/64 to 3/4 - 1 Drill/Tube
#1 to #30 - 12 Drills/Envelope

HIGH SPEED STEEL

MET-79

AUTOMOTIVE (TANG) TAPER LENGTH DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
A	.234	3-3/4	6-1/8	TLDAT"A"	15.12
B	.238	3-3/4	6-1/8	TLDAT"B"	13.22
C	.242	3-3/4	6-1/8	TLDAT"C"	13.22
D	.246	3-3/4	6-1/8	TLDAT"D"	13.22
E	.250	3-3/4	6-1/8	TLDAT"E"	9.32
F	.257	3-7/8	6-1/4	TLDAT"F"	15.62
G	.261	3-7/8	6-1/4	TLDAT"G"	15.62
H	.266	3-7/8	6-1/4	TLDAT"H"	16.12
I	.272	3-7/8	6-1/4	TLDAT"I"	15.12
J	.277	3-7/8	6-1/4	TLDAT"J"	15.12
K	.281	3-7/8	6-1/4	TLDAT"K"	16.06
L	.290	4	6-3/8	TLDAT"L"	16.44
M	.295	4	6-3/8	TLDAT"M"	17.54

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
N	.302	4	6-3/8	TLDAT"N"	16.06
O	.316	4-1/8	6-1/2	TLDAT"O"	17.04
P	.323	4-1/8	6-1/2	TLDAT"P"	17.04
Q	.332	4-1/8	6-1/2	TLDAT"Q"	16.44
R	.339	4-1/8	6-1/2	TLDAT"R"	16.44
S	.348	4-1/4	6-3/4	TLDAT"S"	18.80
T	.358	4-1/4	6-3/4	TLDAT"T"	19.98
U	.368	4-1/4	6-3/4	TLDAT"U"	19.08
V	.377	4-3/8	7	TLDAT"V"	19.70
W	.386	4-3/8	7	TLDAT"W"	20.96
X	.397	4-3/8	7	TLDAT"X"	19.38
Y	.404	4-3/8	7	TLDAT"Y"	20.84
Z	.413	4-5/8	7-1/4	TLDAT"Z"	21.74

PACKAGING

A to I - 12 Drills/Envelope • J to Z - 6 Drills/Tube

HIGH SPEED STEEL

FAST SPIRAL TAPER LENGTH DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TLDF	 BRIGHT POLISHED FINISH	For deep hole drilling low tensile strength materials such as aluminum, magnesium, copper, zinc, and similar materials producing long stringy swarf. Excellent chip-clearing.	M2	118° Point Std. Spiral Std. Web

Fractional Sizes (Straight Shank) 1/16" to 1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/16	.0625	1-3/4	3	TLDF004	4.70
5/64	.0781	2	3-3/4	TLDF005	5.14
3/32	.0938	2-1/4	4-1/4	TLDF006	5.22
7/64	.1094	2-1/2	4-5/8	TLDF007	7.06
1/8	.1250	2-3/4	5-1/8	TLDF008	7.90
9/64	.1406	3	5-3/8	TLDF009	9.34
5/32	.1562	3	5-3/8	TLDF010	9.34
11/64	.1719	3-3/8	5-3/4	TLDF011	10.64
3/16	.1875	3-3/8	5-3/4	TLDF012	10.64
13/64	.2031	3-5/8	6	TLDF013	11.50
7/32	.2188	3-5/8	6	TLDF014	11.50
15/64	.2344	3-3/4	6-1/8	TLDF015	12.48
1/4	.2500	3-3/4	6-1/8	TLDF016	12.48
17/64	.2656	3-7/8	6-1/4	TLDF017	13.02
9/32	.2812	3-7/8	6-1/4	TLDF018	13.02



SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
19/64	.2969	4	6-3/8	TLDF019	13.42
5/16	.3125	4	6-3/8	TLDF020	13.42
21/64	.3281	4-1/8	6-1/2	TLDF021	14.76
11/32	.3438	4-1/8	6-1/2	TLDF022	14.76
23/64	.3594	4-1/4	6-3/4	TLDF023	16.34
3/8	.3750	4-1/4	6-3/4	TLDF024	16.34
25/64	.3906	4-3/8	7	TLDF025	18.06
13/32	.4062	4-3/8	7	TLDF026	18.06
27/64	.4219	4-5/8	7-1/4	TLDF027	20.82
7/16	.4375	4-5/8	7-1/4	TLDF028	20.82
29/64	.4531	4-3/4	7-1/2	TLDF029	23.66
15/32	.4688	4-3/4	7-1/2	TLDF030	23.66
31/64	.4844	4-3/4	7-3/4	TLDF031	25.44
1/2	.5000	4-3/4	7-3/4	TLDF032	25.44

HIGH SPEED STEEL TAPER LENGTH CORE DRILLS

ICS USA

GENERAL PURPOSE

118° CHAMFER

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
CD3FSS (3 Flute)	 OXIDE FINISH	Three flute core drills have more chip clearing than four flute core drills. They are used for deep holes and for holes requiring substantial enlarging.	M2	*90° Point (small sizes) 118° Chamfer Std. Spiral Hvy. Duty Web
CD4FSS (4 Flute)	 OXIDE FINISH	Four flute core drills have a better surface finish than three flute core drills and can be run at higher metal removal rates. They are used for holes requiring light to medium enlarging. Most users find them easier to resharpen and measure.	M2	118° Chamfer Std. Spiral Hvy. Duty Web

Fractional Sizes (Straight Shank) 1/4" to 2" Dia.

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	ITEM NO.	
				3 FLUTE	4 FLUTE
1/4	.2500	3-3/4	6-1/8	CD3FSS016	CD4FSS016
17/64	.2656	3-7/8	6-1/4	CD3FSS017	CD4FSS017
9/32	.2812	3-7/8	6-1/4	CD3FSS018	CD4FSS018
19/64	.2969	4	6-3/8	CD3FSS019	CD4FSS019
5/16	.3125	4	6-3/8	CD3FSS020	CD4FSS020
21/64	.3281	4-1/8	6-1/2	CD3FSS021	CD4FSS021
11/32	.3438	4-1/8	6-1/2	CD3FSS022	CD4FSS022
23/64	.3594	4-1/4	6-3/4	CD3FSS023	CD4FSS023
3/8	.3750	4-1/4	6-3/4	CD3FSS024	CD4FSS024
25/64	.3906	4-3/8	7	CD3FSS025	CD4FSS025
13/32	.4062	4-3/8	7	CD3FSS026	CD4FSS026
27/64	.4219	4-5/8	7-1/4	CD3FSS027	CD4FSS027
7/16	.4375	4-5/8	7-1/4	CD3FSS028	CD4FSS028
29/64	.4531	4-3/4	7-1/2	CD3FSS029	CD4FSS029
15/32	.4688	4-3/4	7-1/2	CD3FSS030	CD4FSS030
31/64	.4844	4-3/4	7-3/4	CD3FSS031	CD4FSS031
1/2	.5000	4-3/4	7-3/4	CD3FSS032	CD4FSS032
33/64	.5156	4-3/4	8	CD3FSS033	CD4FSS033
17/32	.5312	4-3/4	8	CD3FSS034	CD4FSS034
35/64	.5469	4-7/8	8-1/4	CD3FSS035	CD4FSS035
9/16	.5625	4-7/8	8-1/4	CD3FSS036	CD4FSS036
19/32	.5938	4-7/8	8-3/4	CD3FSS038	CD4FSS038
39/64	.6094	4-7/8	8-3/4	CD3FSS039	CD4FSS039
5/8	.6250	4-7/8	8-3/4	CD3FSS040	CD4FSS040
41/64	.6406	5-1/8	9	CD3FSS041	CD4FSS041
21/32	.6562	5-1/8	9	CD3FSS042	CD4FSS042
43/64	.6719	5-3/8	9-1/4	CD3FSS043	CD4FSS043
11/16	.6875	5-3/8	9-1/4	CD3FSS044	CD4FSS044
45/64	.7031	5-5/8	9-1/2	CD3FSS045	CD4FSS045
23/32	.7188	5-5/8	9-1/2	CD3FSS046	CD4FSS046
3/4	.7500	5-7/8	9-3/4	CD3FSS048	CD4FSS048
49/64	.7656	6	9-7/8	CD3FSS049	CD4FSS049
25/32	.7812	6	9-7/8	CD3FSS050	CD4FSS050
51/64	.7969	6-1/8	10	CD3FSS051	CD4FSS051
13/16	.8125	6-1/8	10	CD3FSS052	CD4FSS052
27/32	.8438	6-1/8	10	CD3FSS054	CD4FSS054

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	ITEM NO.	
				3 FLUTE	4 FLUTE
55/64	.8594	6-1/8	10	CD3FSS055	CD4FSS055
7/8	.8750	6-1/8	10	CD3FSS056	CD4FSS056
57/64	.8906	6-1/8	10	CD3FSS057	CD4FSS057
29/32	.9062	6-1/8	10	CD3FSS058	CD4FSS058
59/64	.9219	6-1/8	10-3/4	CD3FSS059	CD4FSS059
15/16	.9375	6-1/8	10-3/4	CD3FSS060	CD4FSS060
61/64	.9531	6-3/8	11	CD3FSS061	CD4FSS061
31/32	.9688	6-3/8	11	CD3FSS062	CD4FSS062
63/64	.9844	6-3/8	11	CD3FSS063	CD4FSS063
1	1.0000	6-3/8	11	CD3FSS100	CD4FSS100
1-1/32	1.0312	6-1/2	11-1/8	CD3FSS102	CD4FSS102
1-1/16	1.0625	6-5/8	11-1/4	CD3FSS104	CD4FSS104
1-3/32	1.0938	6-7/8	11-1/2	CD3FSS106	CD4FSS106
1-1/8	1.1250	7-1/8	11-3/4	CD3FSS108	CD4FSS108
1-9/64	1.1406	7-1/4	11-7/8	CD3FSS109	CD4FSS109
1-5/32	1.1562	7-1/4	11-7/8	CD3FSS110	CD4FSS110
1-11/64	1.1719	7-3/8	12	CD3FSS111	CD4FSS111
1-3/16	1.1875	7-3/8	12	CD3FSS112	CD4FSS112
1-7/32	1.2188	7-1/2	12-1/8	CD3FSS114	CD4FSS114
1-1/4	1.2500	7-7/8	12-1/2	CD3FSS116	CD4FSS116
1-9/32	1.2812	8-1/2	14-1/8	CD3FSS118	CD4FSS118
1-5/16	1.3125	8-5/8	14-1/4	CD3FSS120	CD4FSS120
1-11/32	1.3438	8-3/4	14-3/8	CD3FSS122	CD4FSS122
1-3/8	1.3750	8-7/8	14-1/2	CD3FSS124	CD4FSS124
1-13/32	1.4062	9	14-5/8	CD3FSS126	CD4FSS126
1-7/16	1.4375	9-1/8	14-3/4	CD3FSS128	CD4FSS128
1-15/32	1.4688	9-1/4	14-7/8	CD3FSS130	CD4FSS130
1-1/2	1.5000	9-3/8	15	CD3FSS132	CD4FSS132
1-5/8	1.6250	9-7/8	15-5/8	CD3FSS140	CD4FSS140
1-11/16	1.6875	10	15-3/4	CD3FSS144	CD4FSS144
1-23/32	1.7188	10-1/2	16-1/4	CD3FSS146	CD4FSS146
1-3/4	1.7500	10-1/2	16-1/4	CD3FSS148	CD4FSS148
1-13/16	1.8125	10-1/2	16-1/4	CD3FSS152	CD4FSS152
1-27/32	1.8438	10-3/4	16-1/2	CD3FSS154	CD4FSS154
1-7/8	1.8750	10-3/4	16-1/2	CD3FSS156	CD4FSS156
2	2.0000	10-3/4	16-3/4	CD3FSS200	CD4FSS200

CALL FOR PRICE

NOTE: Core drilling should be executed at approximately the same drilling speeds as would be employed in using a 2 flute drill. Feeds should be intermediate between those recommended for a drill and for a reamer for similar circumstances.

HIGH SPEED STEEL TAPER SHANK CORE DRILLS



MET-81

ICS USA

GENERAL PURPOSE

118° CHAMFER

Core drills are designed to enlarge previously drilled, cored, or punched holes as small as 60% of the tool diameter. Three and four flute core drills have better hole size control than two flute drills and produce a very good surface finish, although not to the standard produced by a reamer. Note: Core drills cannot drill an original hole.

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
CD3FTS (3 Flute)	 OXIDE FINISH	Three flute core drills have more chip clearing than four flute core drills. They are used for deep holes and for holes requiring substantial enlarging.	M2	*90° Point (small sizes) 118° Chamfer Std. Spiral Hvy. Duty Web
CD4FTS (4 Flute)	 OXIDE FINISH	Four flute core drills have a better surface finish than three flute core drills and can be run at higher metal removal rates. They are used for holes requiring light to medium enlarging. Most users find them easier to resharpen and measure.	M2	118° Chamfer Std. Spiral Hvy. Duty Web

Fractional Sizes (Straight Shank) 1/4" to 3" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				OXIDE FINISH 3 FLUTE	OXIDE FINISH 4 FLUTE
				CD3FTS	CD4FTS
#1 MT SHANK					
*1/4	.2500	2-7/8	6-1/8	28.76	-
*9/32	.2812	3	6-1/4	28.96	-
*5/16	.3125	3-1/8	6-3/8	30.84	-
*11/32	.3438	3-1/4	6-1/2	38.16	-
3/8	.3750	3-1/2	6-3/4	38.16	-
13/32	.4062	3-5/8	7	36.54	-
7/16	.4375	3-7/8	7-1/4	38.28	-
15/32	.4688	4-1/8	7-1/2	40.66	-
#2 MT SHANK					
1/2	.5000	4-3/8	8-1/4	52.66	51.34
17/32	.5312	4-5/8	8-1/2	46.20	43.06
9/16	.5625	4-7/8	8-3/4	50.24	46.34
37/64	.5781	4-7/8	8-3/4	54.56	53.24
19/32	.5938	4-7/8	8-3/4	52.50	50.76
5/8	.6250	4-7/8	8-3/4	55.10	53.76
21/32	.6562	5-1/8	9	58.96	57.52
11/16	.6875	5-3/8	9-1/4	63.04	61.52
23/32	.7188	5-5/8	9-1/2	68.18	66.54
3/4	.7500	5-7/8	9-3/4	76.64	70.94
25/32	.7812	6	9-7/8	82.32	77.28
#3 MT SHANK					
13/16	.8125	6-1/8	10-3/4	95.36	87.88
27/32	.8438	6-1/8	10-3/4	96.76	91.86
55/64	.8594	6-1/8	10-3/4	-	97.74
7/8	.8750	6-1/8	10-3/4	103.06	95.74
29/32	.9062	6-1/8	10-3/4	107.30	103.62
15/16	.9375	6-1/8	10-3/4	106.96	103.74
31/32	.9688	6-3/8	11	119.12	116.20
1	1.0000	6-3/8	11	129.02	121.64
1-1/32	1.0312	6-1/2	11-1/8	146.06	130.80
1-1/16	1.0625	6-5/8	11-1/4	148.30	136.10
1-5/64	1.0781	6-7/8	11-1/2	-	158.80
#4 MT SHANK					
1-3/32	1.0938	6-7/8	12-1/2	175.08	152.54
1-1/8	1.1250	7-1/8	12-3/4	174.38	161.90
1-5/32	1.1562	7-1/4	12-7/8	185.58	171.36
1-3/16	1.1875	7-3/8	13	194.86	178.98
1-7/32	1.2188	7-1/2	13-1/8	224.42	191.48
1-1/4	1.2500	7-7/8	13-1/2	224.42	208.08
1-9/32	1.2812	8-1/2	14-1/8	302.02	239.60
1-5/16	1.3125	8-5/8	14-1/4	313.66	249.06

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HIGH SPEED STEEL	
				OXIDE FINISH 3 FLUTE	OXIDE FINISH 4 FLUTE
				CD3FTS	CD4FTS
#4 MT SHANK					
1-11/32	1.3438	8-3/4	14-3/8	333.82	381.18
1-3/8	1.3750	8-7/8	14-1/2	333.82	264.90
1-13/32	1.4062	9	14-5/8	366.22	277.20
1-7/16	1.4375	9-1/8	14-3/4	366.22	290.62
1-15/32	1.4688	9-1/4	14-7/8	395.26	304.64
1-1/2	1.5000	9-3/8	15	395.26	313.76
#5 MT SHANK					
1-17/32	1.5312	9-3/8	16-3/8	438.02	352.78
1-9/16	1.5625	9-5/8	16-5/8	438.02	376.52
1-19/32	1.5938	9-7/8	16-7/8	467.50	527.28
1-39/64	1.6094	10	17	-	417.52
1-5/8	1.6250	10	17	-	428.72
1-21/32	1.6562	10-1/8	17-1/8	-	423.40
1-11/16	1.6875	10-1/8	17-1/8	490.66	439.24
1-23/32	1.7188	10-1/8	17-1/8	-	438.20
1-3/4	1.7500	10-1/8	17-1/8	-	467.10
1-25/32	1.7812	10-1/8	17-1/8	-	486.84
1-13/16	1.8125	10-1/8	17-1/8	-	500.72
1-27/32	1.8438	10-1/8	17-1/8	-	523.40
1-7/8	1.8750	10-3/8	17-3/8	602.62	544.14
1-29/32	1.9062	10-3/8	17-3/8	-	569.52
1-15/16	1.9375	10-3/8	17-3/8	-	580.04
1-31/32	1.9688	10-3/8	17-3/8	632.70	595.34
2	2.0000	10-3/8	17-3/8	-	615.54
2-1/32	2.0312	10-3/8	17-3/8	-	657.68
2-1/16	2.0625	10-1/4	17-3/8	-	657.68
2-1/8	2.1250	10-1/4	17-3/8	-	673.74
2-3/16	2.1875	10-1/4	17-3/8	-	735.06
2-1/4	2.2500	10-1/8	17-3/8	773.70	745.72
2-5/16	2.3125	10-1/8	17-3/8	-	822.68
2-3/8	2.3750	10-1/8	17-3/8	-	838.98
2-7/16	2.4375	11-1/4	18-3/4	-	1028.96
2-1/2	2.5000	11-1/4	18-3/4	-	1050.90
2-9/16	2.5625	11-7/8	19-1/2	-	1128.96
2-5/8	2.6250	11-7/8	19-1/2	-	1192.46
2-11/16	2.6875	12-3/4	20-3/8	-	1293.74
2-3/4	2.7500	12-3/4	20-3/8	1592.74	1327.30
2-13/16	2.8125	13-3/8	21-1/8	-	1584.08
2-7/8	2.8750	13-3/8	21-1/8	-	1598.16
2-15/16	2.9375	14	21-3/4	-	1711.08
3	3.0000	14	21-3/4	-	1792.86

HIGH SPEED STEEL TAPER LENGTH OIL HOLE DRILLS

ICS USA

SPECIAL PURPOSE

PERFECT POINT



Perfect Point® Taper Length Oil Hole Drills are designed for tough jobs when higher feeds and increased speeds of 30% or more are used. They were originally used for high production work on screw machines and turret lathes. Coolants such as air, oil, or vapor mist make oil hole drills adaptable to a wide range of drilling operations. All ICS oil hole drills are compatible with all standard coolant delivery systems. For extra (100-300%) wear, specify titanium nitride coated oil hole drills. The Perfect Point® was specifically designed for high production work in steel drilling machines and will drill twice as many holes as cobalt oil hole drills. Up to 1500 drilled holes per drill is not uncommon.

Fractional Sizes (Straight Shank) 15/64" to 2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TIN COAT	
				OXIDE FINISH PERFECT PT.	OXIDE FINISH PERFECT PT.	OXIDE FINISH PERFECT PT.	OXIDE FINISH PERFECT PT.
				OHD-SS	OHD-SST	OHD-SS	OHD-SST
15/64	.2344	3-3/8	5-3/4	219.32	-	-	-
1/4	.2500	3-3/4	6-1/8	219.32	-	-	-
9/32	.2812	4	6-3/8	219.32	-	-	-
19/64	.2969	4	6-3/8	219.32	-	-	-
5/16	.3125	4	6-3/8	219.32	-	-	-
21/64	.3281	4-1/8	6-1/2	219.32	-	-	-
11/32	.3438	4-1/8	6-1/2	219.32	-	-	-
23/64	.3594	4-1/4	6-3/4	219.32	-	-	-
3/8	.3750	4-1/4	6-3/4	218.32	-	-	-
25/64	.3906	4-3/8	7	222.40	-	-	-
13/32	.4062	4-3/8	7	222.40	-	-	-
27/64	.4219	4-5/8	7-1/4	230.54	-	-	-
7/16	.4375	4-5/8	7-1/4	230.54	-	-	-
29/64	.4531	4-7/8	7-1/2	235.38	-	-	-
15/32	.4688	4-7/8	7-1/2	235.38	-	-	-
31/64	.4844	5	7-3/4	238.38	-	-	-
1/2	.5000	5	7-3/4	238.38	255.42	-	-
33/64	.5156	5-1/4	8	238.38	270.12	-	-
17/32	.5312	5-1/4	8	238.38	270.12	-	-
35/64	.5469	5-3/8	8-1/4	247.56	275.78	-	-
9/16	.5625	5-3/8	8-1/4	247.56	275.78	-	-
37/64	.5781	5-5/8	8-1/2	250.34	278.56	-	-
19/32	.5938	5-5/8	8-1/2	250.34	278.56	-	-
39/64	.6094	5-3/4	8-3/4	262.42	290.64	-	-
5/8	.6250	5-3/4	8-3/4	262.42	290.64	-	-
41/64	.6406	5-7/8	9	262.42	299.46	-	-
21/32	.6562	5-7/8	9	262.42	299.46	-	-
43/64	.6719	6	9-1/4	268.38	305.42	-	-
11/16	.6875	6	9-1/4	268.38	305.42	-	-
45/64	.7031	6-3/16	9-1/2	275.36	312.40	-	-
23/32	.7188	6-3/16	9-1/2	275.36	312.40	-	-
47/64	.7344	6-3/8	9-3/4	294.42	331.46	-	-
3/4	.7500	6-3/8	9-3/4	294.42	331.46	-	-
49/64	.7656	6-1/2	9-7/8	299.46	353.56	-	-
25/32	.7812	6-1/2	9-7/8	299.46	353.56	-	-
51/64	.7969	6-5/8	10	306.48	360.58	-	-
13/16	.8125	6-5/8	10	306.48	360.58	-	-
53/64	.8281	6-3/4	10-1/4	312.54	366.64	-	-
27/32	.8438	6-3/4	10-1/4	312.54	366.64	-	-
55/64	.8594	7	10-1/2	338.36	392.46	-	-
7/8	.8750	7	10-1/2	338.36	392.46	-	-
57/64	.8906	7	10-5/8	362.50	416.60	-	-

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TIN COAT	
				OXIDE FINISH PERFECT PT.	OXIDE FINISH PERFECT PT.	OXIDE FINISH PERFECT PT.	OXIDE FINISH PERFECT PT.
				OHD-SS	OHD-SST	OHD-SS	OHD-SST
29/32	.9062	7	10-5/8	362.50	416.60	-	-
59/64	.9219	7	10-3/4	387.58	441.68	-	-
15/16	.9375	7	10-3/4	387.58	441.68	-	-
61/64	.9531	7-1/8	10-7/8	406.50	460.60	-	-
31/32	.9688	7-1/8	10-7/8	406.50	460.60	-	-
63/64	.9844	7-3/16	11	426.66	480.76	-	-
1	1.0000	7-3/16	11	426.66	480.76	-	-
1-1/64	1.0156	7-5/16	11-1/8	450.56	521.12	-	-
1-1/32	1.0312	7-5/16	11-1/8	450.56	521.12	-	-
1-3/64	1.0469	7-3/8	11-1/4	468.78	539.34	-	-
1-1/16	1.0625	7-3/8	11-1/4	468.78	539.34	-	-
1-5/64	1.0781	7-5/8	11-1/2	487.72	558.30	-	-
1-3/32	1.0938	7-5/8	11-1/2	487.72	558.30	-	-
1-7/64	1.1094	7-7/8	11-3/4	512.64	583.20	-	-
1-1/8	1.1250	7-7/8	11-3/4	512.64	583.20	-	-
1-9/64	1.1406	8	11-7/8	537.80	608.36	-	-
1-5/32	1.1562	8	11-7/8	537.80	608.36	-	-
1-11/64	1.1719	8-1/8	12	562.84	633.40	-	-
1-3/16	1.1875	8-1/8	12	562.84	633.40	-	-
1-13/64	1.2031	8-1/8	12-1/8	587.80	658.36	-	-
1-7/32	1.2188	8-1/8	12-1/8	627.00	658.36	-	-
1-15/64	1.2344	8-1/2	12-1/2	611.88	682.44	-	-
1-1/4	1.2500	8-1/2	12-1/2	611.88	682.44	-	-
1-17/64	1.2656	9-1/4	14-1/8	651.28	792.40	-	-
1-9/32	1.2812	9-1/4	14-1/8	651.28	792.40	-	-
1-19/64	1.2969	9-1/4	14-1/4	678.92	820.04	-	-
1-5/16	1.3125	9-1/4	14-1/4	678.92	820.04	-	-
1-21/64	1.3281	9-1/2	14-3/8	722.66	863.78	-	-
1-11/32	1.3438	9-1/2	14-3/8	722.66	863.78	-	-
1-23/64	1.3594	9-1/2	14-1/2	762.16	903.28	-	-
1-3/8	1.3750	9-1/2	14-1/2	762.16	903.28	-	-
1-13/32	1.4062	9-1/2	14-5/8	853.24	994.36	-	-
1-7/16	1.4375	9-1/8	14-3/4	853.24	994.36	-	-
1-15/32	1.4688	9-1/8	14-7/8	923.20	1064.32	-	-
1-1/2	1.5000	9-5/8	15	923.20	1064.32	-	-
1-9/16	1.5625	9-5/8	15-1/4	1023.40	1164.52	-	-
1-5/8	1.6250	9-7/8	15-5/8	1107.66	1248.76	-	-
1-11/16	1.6875	10	15-3/4	1258.22	1399.34	-	-
1-3/4	1.7500	10-1/2	16-1/4	1329.16	1470.28	-	-
1-13/16	1.8125	10-1/2	16-1/4	1340.02	1551.70	-	-
1-7/8	1.8750	10-3/4	16-1/2	1473.64	1614.76	-	-
1-15/16	1.9375	10-3/4	16-5/8	1582.62	1723.74	-	-
2	2.0000	10-3/4	16-5/8	1662.14	1803.26	-	-

STRAIGHT SHANK END TAPPED WITH A PIPE THREAD
 1/2 to 3/4 - 1/8 Taper Pipe Tap
 49/64 to 1-1/4 - 1/4 Taper Pipe Tap
 1-17/64 to 2 - 3/8 Taper Pipe Tap

SPECIAL SIZE OIL HOLE DRILLS CAN BE MADE TO YOUR REQUIREMENTS. LEFT HAND, COBALT, AND SLOW HELIX OIL HOLE DRILLS ARE ALSO AVAILABLE.

HIGH SPEED STEEL TAPER SHANK OIL HOLE DRILLS

ICS USA

SPECIAL PURPOSE

PERFECT POINT



Perfect Point® Taper Shank Oil Hole Drills are designed for hole drilling and where heavy feed conditions are required. Coolant flow virtually eliminates chip packing and other problems common to deep hole drilling applications. The Perfect Point® was specifically designed for high production work in steel drilling machines and will drill twice as many holes as cobalt oil hole drills. Up to 1500 drilled holes per drill is not uncommon.

Fractional Sizes (Regular MT Shanks) 3/8" to 2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				OXIDE FINISH PERFECT PT.	OXIDE FINISH PERFECT PT.
				OHD-TS	OHD-TST
#2 MT SHANK					
3/8	.3750	3-1/2	7-5/8	375.92	-
25/64	.3906	3-5/8	8	375.92	CALL FOR PRICE
13/32	.4062	3-5/8	8	375.92	FOR PRICE
27/64	.4219	3-7/8	8-1/8	375.92	-
7/16	.4375	3-7/8	8-3/8	375.92	-
29/64	.4531	4-1/8	8-3/4	375.92	-
#3 MT SHANK					
15/32	.4688	4-1/8	8-3/4	352.36	-
31/64	.4844	4-3/8	9	352.36	-
1/2	.5000	4-3/8	9	352.36	-
33/64	.5156	4-5/8	9-1/4	352.36	-
17/32	.5312	4-5/8	9-1/4	352.36	-
35/64	.5469	4-7/8	9-1/2	352.36	-
9/16	.5625	4-7/8	9-1/2	315.32	-
37/64	.5781	4-7/8	9-1/2	352.36	-
19/32	.5938	4-7/8	9-1/2	315.32	-
39/64	.6094	4-7/8	9-1/2	315.32	-
5/8	.6250	4-7/8	9-1/2	315.32	-
41/64	.6406	5-1/8	9-3/4	315.32	-
21/32	.6562	5-1/8	9-3/4	315.32	-
43/64	.6719	5-3/8	10	320.24	-
11/16	.6875	5-3/8	10	320.24	CALL FOR PRICE
45/64	.7031	5-5/8	10-1/4	324.64	FOR PRICE
23/32	.7188	5-5/8	10-1/4	324.64	PRICE
47/64	.7344	5-7/8	10-1/2	324.64	-
3/4	.7500	5-7/8	10-1/2	324.64	-
49/64	.7656	6	10-5/8	327.82	-
25/32	.7812	6	10-5/8	327.82	-
51/64	.7969	6-1/8	10-3/4	327.82	-
13/16	.8125	6-1/8	10-3/4	327.82	-
53/64	.8281	6-1/8	10-3/4	356.74	-
27/32	.8438	6-1/8	10-3/4	356.74	-
55/64	.8594	6-1/8	10-3/4	356.74	-
7/8	.8750	6-1/8	10-3/4	356.74	-
57/64	.8906	6-1/8	10-3/4	357.80	-
29/32	.9062	6-1/8	10-3/4	357.80	-
59/64	.9219	6-1/8	10-3/4	357.80	-
15/16	.9375	6-1/8	10-3/4	357.80	-
61/64	.9531	6-3/8	11	421.88	-
31/32	.9688	6-3/8	11	421.88	-
63/64	.9844	6-3/8	11	421.88	-

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				OXIDE FINISH PERFECT PT.	OXIDE FINISH PERFECT PT.
				OHD-TS	OHD-TST
#3 MT SHANK					
1	1.0000	6-3/8	11	421.88	-
1-1/64	1.0156	6-1/2	11-1/8	457.00	CALL FOR PRICE
1-1/32	1.0312	6-1/2	11-1/8	457.00	FOR PRICE
1-3/64	1.0469	6-5/8	11-1/4	457.00	-
1-1/16	1.0625	6-5/8	11-1/4	457.00	-
#4 MT SHANK					
1-5/64	1.0781	6-7/8	12-1/2	539.84	-
1-3/32	1.0938	6-7/8	12-1/2	539.84	-
1-7/64	1.1094	7-1/8	12-3/4	590.46	-
1-1/8	1.1250	7-1/8	12-3/4	590.46	-
1-9/64	1.1406	7-1/4	12-7/8	590.46	-
1-5/32	1.1562	7-1/4	12-7/8	590.46	-
1-11/64	1.1719	7-3/8	13	594.10	-
1-3/16	1.1875	7-3/8	13	594.10	-
1-13/64	1.2031	7-1/2	13-1/8	676.06	-
1-7/32	1.2188	7-1/2	13-1/8	676.06	-
1-15/64	1.2344	7-7/8	13-1/2	676.06	-
1-1/4	1.2500	7-7/8	13-1/2	676.06	-
1-17/64	1.2656	8-1/2	14-1/8	821.78	CALL FOR PRICE
1-9/32	1.2812	8-1/2	14-1/8	821.78	FOR PRICE
1-19/64	1.2969	8-5/8	14-1/4	982.24	-
1-5/16	1.3125	8-5/8	14-1/4	884.14	-
1-21/64	1.3281	8-3/4	14-3/8	884.14	-
1-11/32	1.3437	8-3/4	14-3/8	884.14	-
1-23/64	1.3594	8-7/8	14-1/2	978.66	-
1-3/8	1.3750	8-7/8	14-1/2	978.66	-
1-13/32	1.4062	9	14-5/8	978.66	-
1-7/16	1.4375	9-1/8	14-3/4	978.66	-
1-15/32	1.4688	9-1/4	14-7/8	1021.62	-
1-1/2	1.5000	9-3/8	15	1021.62	-
1-9/16	1.5625	9-5/8	15-1/4	1070.18	-
1-5/8	1.6250	10	15-5/8	1150.98	-
1-11/16	1.6875	10-1/8	15-3/4	1352.90	-
1-3/4	1.7500	10-1/8	16	1393.30	-
#5 MT SHANK					
1-13/16	1.8125	10-1/8	17-1/8	1453.84	-
1-7/8	1.8750	10-3/8	17-3/8	1534.64	CALL FOR PRICE
1-15/16	1.9375	10-3/8	17-3/8	1625.48	FOR PRICE
2	2.0000	10-3/8	17-3/8	1665.88	-

PACKAGING: 1Drill/Plastic Tube

Special size oil hole drills can be made to your requirements. Left hand, cobalt, and slow helix oil hole drills are also available.

EXTRA LENGTH TAPER SHANK OIL HOLE DRILLS

ICS USA

SPECIAL PURPOSE

PERFECT POINT



Perfect Point® Extra Length Taper Shank Oil Hole Drills are designed for hole drilling and where heavy feed conditions are required. Coolant flow virtually eliminates chip packing and other problems common to deep hole drilling applications. The Perfect Point® was specifically designed for high production work in steel drilling machines and will drill twice as many holes as cobalt oil hole drills. Up to 1500 drilled holes per drill is not uncommon.

Fractional Sizes (Regular MT Shanks) 31/64" to 1-1/4" Dia.

HIGH SPEED STEEL				
SIZE	DEC. EQUIV.	10-1/2" OAL	12-1/2" OAL	14-1/2" OAL
		6" FLUTE	8" FLUTE	10" FLUTE
OHD-10L OHD-12L OHD-14L				
#3 MT SHANK				
31/64	.4844	361.00	-	-
1/2	.5000	361.00	377.36	448.96
33/64	.5156	361.00	377.36	448.96
17/32	.5312	361.00	377.36	448.96
9/16	.5625	448.96	377.36	448.96
19/32	.5938	448.96	377.36	448.96
5/8	.6250	448.96	377.36	448.96
41/64	.6406	448.96	377.36	448.96
21/32	.6562	448.96	377.36	448.96
11/16	.6875	448.96	377.36	448.96
23/32	.7188	448.96	377.36	448.96
47/64	.7344	448.96	377.36	448.96
3/4	.7500	448.96	377.36	448.96
49/64	.7656	466.64	396.22	582.38

HIGH SPEED STEEL				
SIZE	DEC. EQUIV.	10-1/2" OAL	12-1/2" OAL	14-1/2" OAL
		6" FLUTE	8" FLUTE	10" FLUTE
OHD-10L OHD-12L OHD-14L				
#3 MT SHANK				
25/32	.7812	465.88	396.22	465.88
13/16	.8125	-	396.22	465.88
27/32	.8438	-	406.32	479.22
7/8	.8750	479.22	411.50	479.22
29/32	.9062	-	411.50	488.18
15/16	.9375	488.18	411.50	488.18
31/32	.9688	506.62	433.36	506.62
63/64	.9844	548.60	471.12	548.60
1	1.0000	548.60	471.12	548.60
1-1/32	1.0312	-	488.30	567.28
1-1/16	1.0625	567.28	-	707.94
#4 MT SHANK				
1-1/8	1.1250	711.48	-	711.48
1-3/16	1.1875	763.22	-	763.22
1-1/4	1.2500	846.50	-	846.50

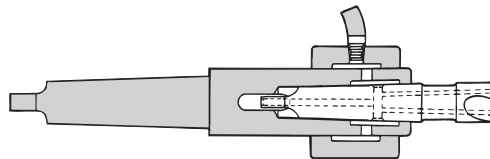
31/64 to 1-1/16 have #3 MT Shank. 1-1/8 to 1-1/4 have #4 MT Shank.

COOLANT INDUCOR SOCKET

ICS USA

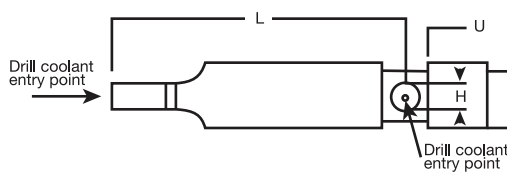
ADAPTER

SIDE SHANK FEED



Coolant Inducor Sockets are for adapting taper shank oil hole drills to morse taper coolant fed adapters. Oil is fed through the side of shank via internal oil holes within adapter. Adapter is designed with a slip ring to which the oil line can be connected when drill is rotating.

MORSE TAPER			
ITEM NO.	HOLE & SHANK SIZE	OVERALL LENGTH	PRICE EACH
CIS#2	2	6-7/8	211.74
CIS#3	3	8-1/2	258.94
CIS#4	4	10-1/2	654.46
CIS#5	5	13-3/4	1106.88



SPECIFICATIONS			
TAPER	L	H	U
MTS #2	2-3/16	5/32	3/8
MTS #3	2-7/32	5/32	1/2
MTS #4	3-5/8	7/32	5/8
MTS #5	4-3/4	9/32	3/4

NOTE: When side shank feed is used, set screw must remain in end of tang to block off tang end oil feed hole. To use tang end feed, simply remove set screw and insert into end feed holder. Side shank feed hole does not need to be blocked when using tang end feed.

HIGH SPEED STEEL MORSE TAPER EXTENSION SOCKETS

ICS USA

ADAPTERS

GROUND FINISH



HARDENED TANG ONLY
(Ground Externally)



INSIDE HOLE



OUTSIDE TAPER



HARDENED THROUGHOUT
(Ground Externally & Internally)

Morse Taper Extension Sockets are designed to adapt morse taper shank tools to larger or smaller morse taper holders. They can also be used to extend the length of taper shank tools. The concentricity between external and internal tapers is within .002". This tool is also referred to as a Fitted Socket.

SIZE	INSIDE HOLE TAPER	OUTSIDE TAPER SHANK	OVERALL LENGTH	HIGH SPEED STEEL	
				HARD TANG	HARD/GROUND
				MTES	MTESH
1 TO 2	1	2	6-3/4	29.14	39.98
1 TO 3	1	3	7-1/2	35.42	58.80
1 TO 4	1	4	8-3/4	42.46	58.80
1 TO 5	1	5	10	66.70	58.80
2 TO 1	2	1	6-1/4	33.88	39.98
2 TO 2	2	2	7-1/2	33.88	39.98
2 TO 3	2	3	8	33.88	47.04
2 TO 4	2	4	9-1/4	44.58	58.80
2 TO 5	2	5	10-3/4	61.74	101.86
3 TO 2	3	2	8-1/4	42.10	58.80
3 TO 3	3	3	9	42.10	58.80
3 TO 4	3	4	10	42.10	58.80

SIZE	INSIDE HOLE TAPER	OUTSIDE TAPER SHANK	OVERALL LENGTH	HIGH SPEED STEEL	
				HARD TANG	HARD/GROUND
				MTES	MTESH
3 TO 5	3	5	11-1/2	65.98	101.86
4 TO 2	4	2	8-1/2	64.58	70.56
4 TO 3	4	3	10-5/8	64.58	94.08
4 TO 4	4	4	11-5/8	64.58	94.08
4 TO 5	4	5	12-1/2	80.68	164.64
4 TO 6	4	6	14	184.04	235.20
5 TO 3	5	3	10-1/2	144.24	164.64
5 TO 4	5	4	13-1/8	144.24	164.64
5 TO 5	5	5	14-1/2	151.02	169.34
5 TO 6	5	6	16	184.04	275.18
6 TO 5	6	5	16	352.80	411.60

HIGH SPEED STEEL MORSE TAPER SLEEVES

ICS USA

ADAPTERS

GROUND FINISH



HARDENED TANG ONLY
(Ground Externally)



INSIDE HOLE



OUTSIDE TAPER



HARDENED THROUGHOUT
(Ground Externally & Internally)

Morse Taper Sleeves are designed to adapt morse taper shank tools to larger morse taper holders. The concentricity between external and internal tapers is within .001". They are sometimes referred to as Shell Sockets, Reduction Sleeves, Drill Sleeves or Drill Sockets.

SIZE	INSIDE HOLE TAPER	OUTSIDE TAPER SHANK	OVERALL LENGTH	HIGH SPEED STEEL	
				HARD TANG	HARD/GROUND
				MTS	MTSH
1 TO 2	1	2	3-5/8	15.06	24.60
1 TO 3	1	3	3-7/8	17.06	32.32
1 TO 4	1	4	4-7/8	26.46	52.00
1 TO 5	1	5	6-1/8	47.04	79.38
2 TO 3	2	3	4-3/8	17.06	32.34
2 TO 4	2	4	5	22.94	55.86

SIZE	INSIDE HOLE TAPER	OUTSIDE TAPER SHANK	OVERALL LENGTH	HIGH SPEED STEEL	
				HARD TANG	HARD/GROUND
				MTS	MTSH
2 TO 5	2	5	6-1/8	47.04	79.38
3 TO 4	3	4	5-1/2	26.72	56.00
3 TO 5	3	5	6-1/8	47.04	79.38
4 TO 5	4	5	6-3/4	60.56	79.38
4 TO 6	4	6	8-5/8	115.84	211.68
5 TO 6	5	6	8-5/8	125.84	211.68

MORSE TAPER ADAPTERS



Morse Taper Adapters are designed to adapt drills with 1/2" chucks for use with #2, 3, or 4 morse taper drills, reamers, countersinks, etc...

INSIDE HOLE TAPER	SHANK DIAMETER	OVERALL LENGTH	ITEM NO	PRICE
2	1/2	5-3/4	MTA#2	39.64
3	1/2	6-1/2	MTA#3	46.34
4	1/2	7-7/8	MTA#4	65.96

MORSE TAPER SOLID SOCKETS HARDENED AND GROUND THROUGHOUT



Morse Taper Solid Sockets are designed for adapting morse taper shank tools to machines with straight holes such as turret lathes, etc.

SIZE	INSIDE HOLE TAPER	SHANK DIAMETER	OVERALL LENGTH	ITEM NO.	PRICE
1	1	1	3-1/2	MTSS#01	25.84
2	1	1-1/4	3-1/2	MTSS#02	31.68
3	1	1-1/2	3-1/2	MTSS#03	29.60
4	2	1	4	MTSS#04	29.60
5	2	1-1/4	4	MTSS#05	32.48
6	2	1-1/2	4	MTSS#06	34.48
7	2	1-3/4	4	MTSS#07	37.68
8	2	2	4	MTSS#08	39.56
9	3	1-1/4	4-3/4	MTSS#09	39.56
10	3	1-1/2	4-3/4	MTSS#10	42.68
11	3	1-3/4	4-3/4	MTSS#11	46.66
12	3	2	4-3/4	MTSS#12	50.86
13	4	1-1/2	6	MTSS#13	50.86
14	4	1-3/4	6	MTSS#14	55.38
15	4	2	6	MTSS#15	58.96
16	5	2-1/4	7-3/8	MTSS#16	71.58
17	5	2-1/2	7-3/8	MTSS#17	84.00
18	6	3-1/4	10-1/8	MTSS#18	139.98
19	6	3-1/2	10-1/8	MTSS#19	139.98



HIGH SPEED STEEL TAPER SHANK DRILLS

MET-87

ICS USA

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TSD-R	 OXIDE FINISH	Taper Shank Drills have a tapered conical shank to fit directly into the tapered holes of drill press spindles, driving sleeves or sockets. They are designed for general purpose drilling in ferrous or non-ferrous metals.	M2	118° Point Std. Spiral Std. Web
TSD-T	 GOLD TITANIUM COATED	Titanium Nitride Coated Taper Shank Drills are designed for high production drilling of ferrous and non-ferrous metals. Titanium Nitride Coating enhances chip flow, finished hole quality and extends life of drill up to 700%.	M2	118° Point Std. Spiral Std. Web

Fractional Sizes (Regular MT Shanks) 1/8" to 1-1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH		GOLD FINISH	
				118° PT	118° PT	118° PT	118° PT
				TSD-R	TSD-T		
#1 MT SHANK							
1/8	.1250	1-7/8	5-1/8	14.02	-		
9/64	.1406	2-1/8	5-3/8	14.02	-		
5/32	.1562	2-1/8	5-3/8	14.02	-		
11/64	.1719	2-1/8	5-3/4	14.02	-		
3/16	.1875	2-1/2	5-3/4	11.48	-		
13/64	.2031	2-3/4	6	12.24	-		
7/32	.2188	2-3/4	6	12.24	-		
15/64	.2344	2-7/8	6-1/8	13.52	-		
1/4	.2500	2-7/8	6-1/8	13.08	-		
17/64	.2656	3	6-1/4	13.52	-		
9/32	.2812	3	6-1/4	17.58	-		
19/64	.2969	3-1/8	6-3/8	17.58	-		
5/16	.3125	3-1/8	6-3/8	14.22	-		
21/64	.3281	3-1/4	6-1/2	19.18	-		
11/32	.3438	3-1/4	6-1/2	20.36	-		
23/64	.3594	3-1/2	6-3/4	22.24	-		
3/8	.3750	3-1/2	6-3/4	22.24	-		
25/64	.3906	3-5/8	7	23.16	-		
13/32	.4062	3-5/8	7	22.24	-		
27/64	.4219	3-7/8	7-1/4	23.70	-		
7/16	.4375	3-7/8	7-1/4	24.26	-		
29/64	.4531	4-1/8	7-1/2	26.46	-		
15/32	.4688	4-1/8	7-1/2	27.64	-		
#2 MT SHANK							
31/64	.4844	4-3/8	8-1/4	30.66	70.86		
1/2	.5000	4-3/8	8-1/4	29.12	69.68		
33/64	.5156	4-5/8	8-1/2	33.42	73.08		
17/32	.5312	4-5/8	8-1/2	32.86	72.56		
35/64	.5469	4-7/8	8-3/4	36.46	75.68		
9/16	.5625	4-7/8	8-3/4	35.62	75.02		
37/64	.5781	4-7/8	8-3/4	38.66	77.56		
19/32	.5937	4-7/8	8-3/4	38.12	77.00		
39/64	.6094	4-7/8	8-3/4	40.32	79.02		
5/8	.6250	4-7/8	8-3/4	38.82	77.86		
41/64	.6406	5-1/8	9	44.46	82.48		
21/32	.6562	5-1/8	9	43.06	81.28		
43/64	.6719	5-3/8	9-1/4	47.94	85.20		
11/16	.6875	5-3/8	9-1/4	45.40	83.16		
45/64	.7031	5-5/8	9-1/2	49.72	86.92		
23/32	.7187	5-5/8	9-1/2	48.08	85.44		
47/64	.7344	5-7/8	9-3/4	53.18	89.44		
3/4	.7500	5-7/8	9-3/4	53.18	89.44		
49/64	.7656	6	9-7/8	62.68	97.74		
25/32	.7812	6	9-7/8	62.68	97.46		

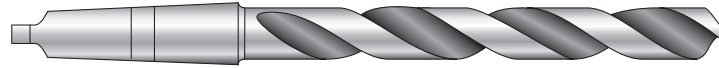
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH		GOLD FINISH	
				118° PT	118° PT	118° PT	118° PT
				TSD-R	TSD-T		
#3 MT SHANK							
51/64	.7969	6-1/8	10-3/4	67.40	125.30		
13/16	.8125	6-1/8	10-3/4	63.82	121.80		
53/64	.8281	6-1/8	10-3/4	71.12	127.72		
27/32	.8437	6-1/8	10-3/4	68.88	125.82		
55/64	.8594	6-1/8	10-3/4	73.58	129.84		
7/8	.8750	6-1/8	10-3/4	71.12	127.72		
57/64	.8906	6-1/8	10-3/4	75.24	131.22		
29/32	.9062	6-1/8	10-3/4	75.24	132.62		
59/64	.9219	6-1/8	10-3/4	76.68	133.40		
15/16	.9375	6-1/8	10-3/4	71.12	129.30		
61/64	.9531	6-3/8	11	78.06	135.20		
31/32	.9687	6-3/8	11	78.06	134.76		
63/64	.9844	6-3/8	11	82.24	139.40		
1	1.0000	6-3/8	11	79.38	136.56		
1-1/64	1.0156	6-1/2	11-1/8	90.56	147.00		
1-1/32	1.0312	6-1/2	11-1/8	89.22	144.10		
1-3/64	1.0469	6-5/8	11-1/4	96.18	151.02		
1-1/16	1.0625	6-5/8	11-1/4	91.98	147.00		
#4 MT SHANK							
1-5/64	1.0781	6-7/8	12-1/2	108.36	171.36		
1-3/32	1.0937	6-7/8	12-1/2	105.92	167.84		
1-7/64	1.1094	7-1/8	12-3/4	115.60	175.16		
1-1/8	1.1250	7-1/8	12-3/4	112.88	172.44		
1-9/64	1.1406	7-1/4	12-7/8	122.56	181.18		
1-5/32	1.1562	7-1/4	12-7/8	117.08	176.04		
1-11/64	1.1719	7-3/8	13	124.08	182.34		
1-3/16	1.1875	7-3/8	13	122.62	181.18		
1-13/64	1.2031	7-1/2	13-1/8	129.24	189.86		
1-7/32	1.2187	7-1/2	13-1/8	131.00	188.16		
1-15/64	1.2344	7-7/8	13-1/2	144.96	200.30		
1-1/4	1.2500	7-7/8	13-1/2	137.96	194.46		
1-17/64	1.2656	8-1/2	14-1/8	164.50	294.48		
1-9/32	1.2812	8-1/2	14-1/8	161.12	293.30		
1-19/64	1.2969	8-5/8	14-1/4	175.58	303.84		
1-5/16	1.3125	8-5/8	14-1/4	167.24	295.52		
1-21/64	1.3281	8-3/4	14-3/8	183.96	309.00		
1-11/32	1.3437	8-3/4	14-3/8	175.58	303.84		
1-23/64	1.3594	8-7/8	14-1/2	186.74	312.46		
1-3/8	1.3750	8-7/8	14-1/2	181.10	306.12		
1-25/64	1.3906	9	14-5/8	192.64	318.34		
1-13/32	1.4062	9	14-5/8	192.62	318.34		
1-27/64	1.4219	9-1/8	14-3/4	197.88	322.82		
1-7/16	1.4375	9-1/8	14-3/4	194.70	318.80		
1-29/64	1.4531	9-1/4	14-7/8	209.06	331.80		
1-15/32	1.4687	9-1/4	14-7/8	206.24	329.98		
1-31/64	1.4844	9-3/8	15	214.62	336.50		
1-1/2	1.5000	9-3/8	15	208.16	331.20		

HIGH SPEED STEEL TAPER SHANK DRILLS

ICS USA

GENERAL PURPOSE

118° POINT



Fractional Sizes (Regular MT Shanks) 1-33/64" to 4" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				OXIDE FINISH 118° PT	TIN COAT GOLD FINISH 118° PT
				TSD-R	TSD-T
#5 MT SHANK					
1-33/64	1.5156	9-3/8	16-3/8	244.74	428.18
1-17/32	1.5312	9-3/8	16-3/8	244.74	428.28
1-35/64	1.5469	9-5/8	16-5/8	256.14	438.56
1-9/16	1.5625	9-5/8	16-5/8	256.14	438.56
1-37/64	1.5781	9-7/8	16-7/8	275.78	455.76
1-19/32	1.5937	9-7/8	16-7/8	275.78	455.76
1-39/64	1.6094	10	17	281.32	461.00
1-5/8	1.6250	10	17	281.32	461.00
1-41/64	1.6406	10-1/8	17-1/8	295.96	473.60
1-21/32	1.6562	10-1/8	17-1/8	295.96	473.60
1-43/64	1.6719	10-1/8	17-1/8	332.70	479.94
1-11/16	1.6875	10-1/8	17-1/8	304.00	479.94
1-45/64	1.7031	10-1/8	17-1/8	332.70	492.90
1-23/32	1.7187	10-1/8	17-1/8	317.88	492.90
1-47/64	1.7344	10-1/8	17-1/8	332.70	498.48
1-3/4	1.7500	10-1/8	17-1/8	326.00	498.48
1-49/64	1.7656	10-1/8	17-1/8	337.58	-
1-25/32	1.7812	10-1/8	17-1/8	337.58	509.34
1-51/64	1.7969	10-1/8	17-1/8	346.00	-
1-13/16	1.8125	10-1/8	17-1/8	346.00	512.14
1-53/64	1.8281	10-1/8	17-1/8	362.90	-
1-27/32	1.8437	10-1/8	17-1/8	362.90	530.08
1-55/64	1.8594	10-3/8	17-3/8	357.24	-
1-7/8	1.8750	10-3/8	17-3/8	357.24	531.32
1-57/64	1.8906	10-3/8	17-3/8	379.74	-
1-29/32	1.9062	10-3/8	17-3/8	379.74	544.22
1-59/64	1.9219	10-3/8	17-3/8	391.02	-
1-15/16	1.9375	10-3/8	17-3/8	391.02	554.36
1-61/64	1.9531	10-3/8	17-3/8	399.48	-
1-31/32	1.9687	10-3/8	17-3/8	399.48	561.70
1-63/64	1.9844	10-3/8	17-3/8	402.20	-
2	2.0000	10-3/8	17-3/8	402.20	564.46
2-1/64	2.0156	10-3/8	17-3/8	424.80	-
2-1/32	2.0312	10-3/8	17-3/8	424.80	-
2-1/16	2.0625	10-1/4	17-3/8	434.64	-
2-3/32	2.0938	10-1/4	17-3/8	453.94	-
2-1/8	2.1250	10-1/4	17-3/8	452.90	-
2-5/32	2.1562	10-1/4	17-3/8	483.92	-
2-3/16	2.1875	10-1/4	17-3/8	492.28	-

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS	
				OXIDE FINISH 118° PT	TIN COAT GOLD FINISH 118° PT
				TSD-R	TSD-T
#5 MT SHANK					
2-7/32	2.1287	10-1/8	17-3/8	509.14	-
2-1/4	2.2500	10-1/8	17-3/8	514.76	-
2-9/32	2.2812	10-1/8	17-3/8	548.50	-
2-5/16	2.3125	10-1/8	17-3/8	548.54	-
2-11/32	2.3438	10-1/8	17-3/8	571.04	-
2-3/8	2.3750	10-1/8	17-3/8	571.04	-
2-13/32	2.4060	11-1/4	18-3/4	720.14	-
2-7/16	2.4375	11-1/4	18-3/4	720.14	-
2-15/32	2.4688	11-1/4	18-3/4	758.52	-
2-1/2	2.5000	11-1/4	18-3/4	742.62	-
2-17/32	2.5312	11-7/8	19-1/2	857.08	-
2-9/16	2.5625	11-7/8	19-1/2	812.92	-
2-19/32	2.5938	11-7/8	19-1/2	872.06	-
2-5/8	2.6250	11-7/8	19-1/2	872.06	-
2-21/32	2.6562	12-3/4	20-3/8	936.68	-
2-11/16	2.6875	12-3/4	20-3/8	936.68	-
2-23/32	2.7188	12-3/4	20-3/8	999.60	-
2-3/4	2.7500	12-3/4	20-3/8	1088.10	-
2-25/32	2.7812	13-3/8	21-1/8	1055.54	-
2-13/16	2.8125	13-3/8	21-1/8	1055.54	-
2-27/32	2.8438	13-3/8	21-1/8	1150.38	-
2-7/8	2.8750	13-3/8	21-1/8	1015.28	-
2-15/16	2.9375	14	21-3/4	1069.10	-
2-31/32	2.9687	14	21-3/4	1093.68	-
3	3.0000	14	21-3/4	1116.74	-
#6 MT SHANK					
3-1/16	3.0625	14-5/8	24-1/2	1744.02	-
3-1/8	3.1250	14-5/8	24-1/2	1743.72	-
3-3/16	3.1875	14-5/8	24-1/2	1751.06	-
3-1/4	3.2500	15-1/2	25-1/2	1751.06	-
3-5/16	3.3125	15-1/2	25-1/2	2061.54	-
3-3/8	3.3750	15-1/2	25-1/2	2203.82	-
3-7/16	3.4325	15-1/2	25-1/2	2348.48	-
3-1/2	3.5000	16-3/8	26-1/2	2544.86	-
3-9/16	3.5625	16-3/8	26-1/2	2871.80	-
3-5/8	3.6250	16-3/8	26-1/2	2871.80	-
3-3/4	3.7500	16-3/8	26-1/2	3522.12	-
3-7/8	3.8750	16-3/8	26-1/2	4057.20	-
4	4.0000	17-1/2	27-1/2	4433.52	-

DRILL DRIFTS

ICS USA

KEYS

DROP FORGED



Drill Drifts are designed to safely eject taper shank tools out of morse taper holders without damage to the tool's tang. They are drop forged and fully hardened. They are sometimes referred to as Center Keys, Drift Keys, or Ejecting Keys.

SIZE	TO EJECT TAPER SHANK	ITEM NO.	PRICE
1	1	DD#1	7.34
2	2	DD#2	8.80

SIZE	TO EJECT TAPER SHANK	ITEM NO.	PRICE
3	3	DD#3	9.80
4	4-5-6	DD#4	15.08


HIGH SPEED STEEL TAPER SHANK (UNDERSIZE SHANK) DRILLS

MET-89

ICS USA

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TSD-US	 OXIDE FINISH	Taper shank drills with shank one size smaller than usual for use in undersize drilling spindles where there is not sufficient room to accommodate an extension socket.	M2	118° Point Std. Spiral Std. Web

Fractional Sizes (Undersize MT Shank) 31/64" to 4" Dia.


SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#1 MT SHANK					
31/64	.4844	4-3/8	7-3/4	TSD-US031	31.42
1/2	.5000	4-3/8	7-3/4	TSD-US032	30.16
33/64	.5156	4-5/8	8	TSD-US033	34.82
17/32	.5312	4-5/8	8	TSD-US034	34.82
35/64	.5469	4-7/8	8-1/4	TSD-US035	37.22
9/16	.5625	4-7/8	8-1/4	TSD-US036	38.06
37/64	.5781	4-7/8	8-1/4	TSD-US037	45.52
#2 MT SHANK					
51/64	.7969	6-1/8	10	TSD-US051	68.16
13/16	.8125	6-1/8	10	TSD-US052	68.16
53/64	.8281	6-1/8	10	TSD-US053	72.52
27/32	.8438	6-1/8	10	TSD-US054	72.52
55/64	.8594	6-1/8	10	TSD-US055	75.64
7/8	.8750	6-1/8	10	TSD-US056	74.98
57/64	.8906	6-1/8	10	TSD-US057	77.98
29/32	.9062	6-1/8	10	TSD-US058	77.98
15/16	.9375	6-1/8	10-1/4	TSD-US060	-
1	1.0000	6-1/4	10-1/8	TSD-US100	81.14
#3 MT SHANK					
1-5/64	1.0781	6-7/8	11-1/2	TSD-US105	120.68
1-3/32	1.0938	6-7/8	11-1/2	TSD-US106	114.96
1-7/64	1.1094	7-1/8	11-3/4	TSD-US107	122.44
1-1/8	1.1250	7-1/8	11-3/4	TSD-US108	119.50
1-9/64	1.1406	7-1/4	11-7/8	TSD-US109	129.96
1-5/32	1.1562	7-1/4	11-7/8	TSD-US110	129.96
1-11/64	1.1719	7-3/8	12	TSD-US111	134.42
1-3/16	1.1875	7-3/8	12	TSD-US112	132.78
1-13/64	1.2031	7-1/2	12-1/8	TSD-US113	144.24
1-7/32	1.2188	7-1/2	12-1/8	TSD-US114	142.60
1-15/64	1.2344	7-7/8	12-1/2	TSD-US115	157.12
1-1/4	1.2500	7-7/8	12-1/2	TSD-US116	156.42
1-5/16	1.3125	8-5/8	13-1/4	TSD-US120	171.70
1-3/8	1.3750	8-7/8	13-1/2	TSD-US124	183.46
1-7/16	1.4375	9-1/8	13-3/4	TSD-US128	197.12
1-1/2	1.5000	9-3/8	14	TSD-US132	219.92
#4 MT SHANK					
1-33/64	1.5156	9-3/8	15	TSD-US133	253.20
1-17/32	1.5312	9-3/8	15	TSD-US134	250.26
1-35/64	1.5469	9-5/8	15-1/4	TSD-US135	269.42
1-9/16	1.5625	9-5/8	15-1/4	TSD-US136	267.88
1-37/64	1.5781	9-7/8	15-1/2	TSD-US137	286.30
1-19/32	1.5938	9-7/8	15-1/2	TSD-US138	286.30
1-39/64	1.6094	10	15-5/8	TSD-US139	297.36
1-5/8	1.6250	10	15-5/8	TSD-US140	292.80

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#4 MT SHANK					
1-41/64	1.6406	10-1/8	15-3/4	TSD-US141	320.46
1-21/32	1.6562	10-1/8	15-3/4	TSD-US142	319.06
1-43/64	1.6719	10-1/8	15-3/4	TSD-US143	332.70
1-11/16	1.6875	10-1/8	15-3/4	TSD-US144	317.46
1-45/64	1.7031	10-1/8	15-3/4	TSD-US145	342.70
1-23/32	1.7188	10-1/8	15-3/4	TSD-US146	326.64
1-47/64	1.7344	10-3/8	16-1/4	TSD-US147	339.82
1-3/4	1.7500	10-3/8	16-1/4	TSD-US148	330.96
1-25/32	1.7812	10-3/8	16-1/4	TSD-US150	350.74
1-13/16	1.8125	10-3/8	16-1/4	TSD-US152	351.30
1-27/32	1.8438	10-3/8	16-1/4	TSD-US154	364.10
1-7/8	1.8750	10-1/2	16-1/2	TSD-US156	379.26
1-57/64	1.8906	10-1/2	16-1/2	TSD-US157	394.44
1-29/32	1.9062	10-1/2	16-1/2	TSD-US158	391.40
1-15/16	1.9375	10-5/8	16-5/8	TSD-US160	401.92
1-31/32	1.9688	10-5/8	16-5/8	TSD-US162	409.40
2	2.0000	10-5/8	16-5/8	TSD-US200	414.32
2-1/32	2.0312	10-3/8	16-1/4	TSD-US202	431.50
2-1/16	2.0625	10-1/4	16-1/4	TSD-US204	433.94
2-3/32	2.0938	10-1/4	16-1/4	TSD-US206	457.46
2-1/8	2.1250	10-1/4	16-1/4	TSD-US208	457.46
2-5/32	2.1562	10-1/4	16-1/4	TSD-US210	488.04
2-3/16	2.1875	10-1/4	16-1/4	TSD-US212	498.62
2-7/32	2.2188	10-1/8	16-1/4	TSD-US214	512.16
2-1/4	2.2500	10-1/8	16-1/8	TSD-US216	517.34
2-5/16	2.3150	10-1/8	16-1/8	TSD-US220	552.08
2-3/8	2.3750	10-1/8	16-1/8	TSD-US224	575.72
2-7/16	2.4375	11-1/4	17-1/4	TSD-US228	727.94
2-1/2	2.5000	11-1/4	17-1/4	TSD-US232	747.70
2-5/8	2.6250	11-7/8	18	TSD-US240	846.72
2-3/4	2.7500	12-3/4	19-1/8	TSD-US248	934.92
#5 MT SHANK					
3-1/16	3.0625	14-1/4	22	TSD-US304	1669.92
3-1/8	3.1250	14-1/4	22	TSD-US308	1744.02
3-3/16	3.1875	14-1/4	22	TSD-US312	1761.66
3-1/4	3.2500	15-1/4	23	TSD-US316	1761.66
3-5/16	3.3125	15-1/4	23	TSD-US320	2058.00
3-3/8	3.3750	15-1/4	23	TSD-US324	2175.60
3-7/16	3.4375	15-1/4	23	TSD-US328	2340.24
3-1/2	3.5000	16-1/4	24	TSD-US332	2528.40
3-5/8	3.6250	16-1/4	24	TSD-US340	2822.40
3-3/4	3.7500	16-1/4	25-5/8	TSD-US348	3422.16
3-7/8	3.8750	16-1/2	29	TSD-US356	3998.40
4	4.0000	16-1/2	29	TSD-US400	

NOTE: Letter and number size taper shank drills are available upon request.

HIGH SPEED STEEL TAPER SHANK (OVERSIZE SHANK) DRILLS

ICS
USA
GENERAL PURPOSE
118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TSD-OS	 OXIDE FINISH	Taper shank drills with shank one size larger than usual provides more torque strength for heavy duty work. They also reduce time to change drill sizes.	M2	118° Point Std. Spiral Std. Web

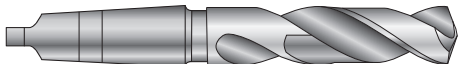
Fractional Sizes (Oversize MT Shank) 3/8" to 1-1/16" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#2 MT SHANK					
3/8	.3750	3-1/2	7-3/8	TSD-OS024	27.70
25/64	.3906	3-5/8	7-1/2	TSD-OS025	27.70
13/32	.4062	3-5/8	7-1/2	TSD-OS026	27.70
27/64	.4219	3-7/8	7-3/4	TSD-OS027	27.70
7/16	.4375	3-7/8	7-3/4	TSD-OS028	29.38
29/64	.4531	4-1/8	8	TSD-OS029	30.12
15/32	.4688	4-1/8	8	TSD-OS030	31.76
#3 MT SHANK					
41/64	.6406	5-1/8	9-3/4	TSD-OS041	52.92
21/32	.6562	5-1/8	9-3/4	TSD-OS042	53.64
43/64	.6719	5-1/8	10	TSD-OS043	56.80

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#3 MT SHANK					
11/16	.6875	5-3/8	10	TSD-OS044	58.70
45/64	.7031	5-5/8	10-1/4	TSD-OS045	71.96
23/32	.7188	5-5/8	10-1/4	TSD-OS046	63.08
47/64	.7344	5-7/8	10-1/2	TSD-OS047	66.58
3/4	.7500	5-7/8	10-1/2	TSD-OS048	67.34
49/64	.7656	6	10-5/8	TSD-OS049	74.02
25/32	.7812	6	10-5/8	TSD-OS050	74.02
#4 MT SHANK					
1	1.0000	6-3/8	12	TSD-OS100	105.78
1-1/32	1.0312	6-1/2	12-1/8	TSD-OS102	116.00
1-1/16	1.0625	6-5/8	12-1/4	TSD-OS104	124.56

STUB LENGTH TAPER SHANK DRILLS

ICS
WIS
GENERAL PURPOSE
118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TSD-S	 OXIDE FINISH	Stub length taper shank drills have short overall length and short flute length. They are ideal for use in boring mills, screw machines, and lathes or where space is limited.	M2	118° Point Std. Spiral Std. Web

Fractional Sizes (Regular MT Shank) 2" to 3-1/2" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#4 MT SHANK					
2	2.0000	5	12	TSD-S200	256.90
2-1/16	2.0625	5	12	TSD-S204	281.56
2-1/8	2.1250	5	12	TSD-S208	281.82
2-3/16	2.1875	5	12	TSD-S212	329.44
2-1/4	2.2500	5	12	TSD-S216	329.88
2-5/16	2.3125	5	12	TSD-S220	352.78
2-3/8	2.3750	5	12	TSD-S224	353.46
2-7/16	2.4375	5	12	TSD-S228	400.88
2-1/2	2.5000	5	12	TSD-S232	403.44
2-5/8	2.6250	5	12	TSD-S240	447.72
#5 MT SHANK					
2	2.0000	5	12	TSD-SR200	256.90
2-1/16	2.0625	5	12	TSD-SR204	281.56
2-1/8	2.1250	5	12	TSD-SR208	281.82
2-3/16	2.1875	5	12	TSD-SR212	329.44

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#5 MT SHANK					
2-1/4	2.2500	5	12	TSD-SR216	329.88
2-5/16	2.3125	5	12	TSD-SR220	352.78
2-3/8	2.3750	5	12	TSD-SR224	353.46
2-7/16	2.4375	5	12	TSD-SR228	400.88
2-1/2	2.5000	5	12	TSD-SR232	403.44
2-9/16	2.5625	5	12	TSD-SR236	403.44
2-5/8	2.6250	5	12	TSD-SR240	447.72
2-11/16	2.6875	5	12	TSD-SR244	447.72
2-3/4	2.7500	5	12	TSD-SR248	518.36
2-13/16	2.8125	5	12	TSD-SR252	518.36
2-7/8	2.8750	5	12	TSD-SR256	588.66
2-15/16	2.9375	5	12	TSD-SR260	588.66
3	3.0000	5	12	TSD-SR300	658.46
3-1/8	3.1250	5	12	TSD-SR308	780.94
3-1/4	3.2500	5	12	TSD-SR316	879.50
3-1/2	3.5000	5	12	TSD-SR332	1156.60

HIGH SPEED STEEL TAPER SHANK DRILLS

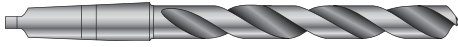
MET-91

ICS

WIS

SPECIAL PURPOSE

PERFECT POINT®

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TSD-PP	 OXIDE FINISH	The Perfect Point® Taper Shank Drill was specifically designed for high production work. Up to 1500 drilled holes per drill is not uncommon.	M2	Perfect Point® Std. Spiral Std. Web

Fractional Sizes (Regular Shank) 7/16" to 1-1/4" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#1 MT SHANK					
7/16	.4375	3-7/8	7-1/4	TSD-PP028	28.96
#2 MT SHANK					
1/2	.5000	4-3/8	8-1/4	TSD-PP032	33.82
9/16	.5625	4-7/8	8-3/4	TSD-PP036	40.32
5/8	.6250	4-7/8	8-3/4	TSD-PP040	43.52
11/16	.6875	5-3/8	9-1/4	TSD-PP044	50.12
3/4	.7500	5-7/8	9-3/4	TSD-PP048	59.06
13/16	.8125	6-1/8	10-3/4	TSD-PP052	72.06
#3 MT SHANK					
7/8	.8750	6-1/8	10-3/4	TSD-PP056	80.52
15/16	.9375	6-1/8	10-3/4	TSD-PP060	80.52
1	1.0000	6-3/8	11	TSD-PP100	88.80
1-1/16	1.0625	6-5/8	11-1/4	TSD-PP104	103.74
#4 MT SHANK					
1-1/8	1.1250	7-1/8	12-3/4	TSD-PP108	124.64
1-3/16	1.1875	7-3/8	13	TSD-PP112	134.38
1-1/4	1.2500	7-7/8	13-1/2	TSD-PP116	149.72



Larger sizes also available. Please inquire for price and delivery.

HIGH SPEED STEEL TAPER SHANK DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TSD-H	 OXIDE FINISH	This drill was designed for drilling work hardening 300 series stainless steels (except 303). Special thin web will penetrate work hardening stainless fast enough to cut beneath the chip which is hardening from deformation.	M2	135° Split Pt. Std. Spiral Special Web
TSD-HT	 GOLD TITANIUM COATED	This combination of titanium nitride coating with the heavy duty design enhances chip flow, finished hole quality and up to 700% more drill life.	M2	135° Split Pt. Std. Spiral Special Web

Fractional Sizes (Regular MT Shank) 1/2" to 1" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH		GOLD FINISH	
				135° S/P	135° S/P	TSD-H	TSD-HT
#2 MT SHANK							
1/2	.5000	4-3/8	8-1/4	34.66	79.70		
33/64	.5156	4-5/8	8-1/2	38.96	83.98		
17/32	.5312	4-5/8	8-1/2	38.42	83.46		
35/64	.5469	4-7/8	8-3/4	42.02	87.08		
9/16	.5625	4-7/8	8-3/4	41.16	86.18		
37/64	.5781	4-7/8	8-3/4	44.20	89.26		
19/32	.5937	4-7/8	8-3/4	43.66	88.66		
39/64	.6094	4-7/8	8-3/4	45.86	90.92		
5/8	.6250	4-7/8	8-3/4	44.38	89.42		
41/64	.6406	5-1/8	9	53.56	98.58		
21/32	.6562	5-1/8	9	48.60	93.64		
43/64	.6719	5-3/8	9-1/4	53.50	98.54		
11/16	.6875	5-3/8	9-1/4	50.96	96.00		
45/64	.7031	5-5/8	9-1/2	55.26	100.30		
23/32	.7187	5-5/8	9-1/2	53.62	98.04		
47/64	.7344	5-7/8	9-3/4	58.72	103.76		

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	HSS		TiN COATED	
				OXIDE FINISH		GOLD FINISH	
				135° S/P	135° S/P	TSD-H	TSD-HT
#3 MT SHANK							
3/4	.7500	5-7/8	9-3/4	63.56	108.58		
49/64	.7656	6	9-7/8	73.06	122.82		
25/32	.7812	6	9-7/8	73.06	116.94		
51/64	.7969	6-1/8	10-3/4	77.76	144.98		
13/16	.8125	6-1/8	10-3/4	74.20	141.78		
53/64	.8281	6-1/8	10-3/4	81.48	149.06		
27/32	.8437	6-1/8	10-3/4	79.26	146.80		
55/64	.8594	6-1/8	10-3/4	83.96	151.50		
7/8	.8750	6-1/8	10-3/4	81.48	149.06		
57/64	.8906	6-1/8	10-3/4	85.62	153.20		
29/32	.9062	6-1/8	10-3/4	85.62	153.18		
59/64	.9219	6-1/8	10-3/4	87.02	154.58		
15/16	.9375	6-1/8	10-3/4	81.48	149.06		
61/64	.9531	6-3/8	11	88.44	155.98		
31/32	.9687	6-3/8	11	88.44	156.00		
63/64	.9844	6-3/8	11	92.62	160.20		
1	1.0000	6-3/8	11	89.76	157.32		

Metric Sizes (Regular MT Shank) 12.50mm to 25.00mm Dia.

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#1 MT SHANK					
12.50	.4921	3-31/32	7-5/32	TSD-MH12.50	43.78
12.80	.5039	3-31/32	7-5/32	TSD-MH12.80	43.78
13.00	.5118	3-31/32	7-5/32	TSD-MH13.00	43.78
13.20	.5197	4-1/4	7-7/16	TSD-MH13.20	48.56
13.50	.5315	4-1/4	7-7/16	TSD-MH13.50	48.56
13.80	.5433	4-1/4	7-7/16	TSD-MH13.80	48.56
14.00	.5512	4-1/4	7-7/16	TSD-MH14.00	48.56
#2 MT SHANK					
14.25	.5610	4-1/2	8-3/8	TSD-MH14.25	52.36
14.50	.5709	4-1/2	8-3/8	TSD-MH14.50	52.36
14.75	.5807	4-1/2	8-3/8	TSD-MH14.75	52.36
15.00	.5906	4-1/2	8-3/8	TSD-MH15.00	52.36
15.25	.6004	4-3/4	8-5/8	TSD-MH15.25	54.66
15.50	.6102	4-3/4	8-5/8	TSD-MH15.50	54.66
15.75	.6201	4-3/4	8-5/8	TSD-MH15.75	56.88
16.00	.6299	4-3/4	8-5/8	TSD-MH16.00	56.88
16.25	.6398	4-3/4	8-3/4	TSD-MH16.25	56.88
16.50	.6496	4-3/4	8-3/4	TSD-MH16.50	58.54
16.75	.6594	4-3/4	8-3/4	TSD-MH16.75	58.54

SIZE mm	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#2 MT SHANK					
17.00	.6693	4-7/8	8-3/4	TSD-MH17.00	58.54
17.25	.6791	5-1/8	9	TSD-MH17.25	63.10
17.50	.6890	5-1/8	9	TSD-MH17.50	63.50
18.00	.7087	5-1/8	9	TSD-MH18.00	63.50
18.50	.7283	5-1/4	9-1/8	TSD-MH18.50	68.40
19.00	.7480	5-1/4	9-1/8	TSD-MH19.00	68.40
19.50	.7677	5-1/2	9-3/8	TSD-MH19.50	84.40
20.00	.7874	5-1/2	9-3/8	TSD-MH20.00	84.40
20.50	.8071	5-3/4	9-5/8	TSD-MH20.50	90.74
21.00	.8268	5-3/4	9-5/8	TSD-MH21.00	90.74
21.50	.8465	5-7/8	9-3/4	TSD-MH21.50	97.10
22.00	.8661	5-7/8	9-3/4	TSD-MH22.00	97.10
22.50	.8858	6-1/8	10	TSD-MH22.50	100.30
#3 MT SHANK					
23.00	.9055	6-1/8	10	TSD-MH23.00	100.30
23.50	.9252	6-1/8	10-7/8	TSD-MH23.50	102.98
24.00	.9449	6-1/4	11	TSD-MH24.00	102.98
24.50	.9646	6-1/4	11	TSD-MH24.50	107.26
25.00	.9843	6-1/4	11	TSD-MH25.00	107.26


HIGH SPEED STEEL METRIC TAPER SHANK DRILLS

MET-93

ICS USA

GENERAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TSD-M	 OXIDE FINISH	Taper Shank Drills have a tapered conical shank to fit directly into the tapered holes of drill press spindles, driving sleeves or sockets. They are designed for general purpose drilling in ferrous or non-ferrous metals.	M2	118° Point Std. Spiral Std. Web

Metric Sizes (Regular Shank) 3.00mm to 22.50mm Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#1 MT SHANK					
3.00	.1181	1-5/16	4-1/2	TSD-M03.0	15.60
3.20	.1260	1-7/16	4-5/8	TSD-M03.2	16.30
3.50	.1378	1-17/32	4-3/4	TSD-M03.5	16.30
3.80	.1496	1-11/16	4-27/32	TSD-M03.8	16.30
4.00	.1575	1-11/16	4-27/32	TSD-M04.0	16.30
4.20	.1654	1-11/16	4-27/32	TSD-M04.2	16.30
4.50	.1772	1-27/32	5-1/32	TSD-M04.5	13.80
4.80	.1890	2-1/16	5-1/4	TSD-M04.8	13.80
5.00	.1969	2-1/16	5-1/4	TSD-M05.0	13.80
5.20	.2047	2-1/16	5-1/4	TSD-M05.2	13.80
5.50	.2165	2-1/4	5-7/16	TSD-M05.5	13.80
5.80	.2283	2-1/4	5-7/16	TSD-M05.8	13.80
6.00	.2362	2-1/4	5-7/16	TSD-M06.0	13.80
6.20	.2441	2-1/2	5-11/16	TSD-M06.2	13.80
6.50	.2559	2-1/2	5-11/16	TSD-M06.5	13.80
6.80	.2677	2-23/32	5-29/32	TSD-M06.8	15.60
7.00	.2756	2-23/32	5-29/32	TSD-M07.0	15.60
7.20	.2835	2-23/32	5-29/32	TSD-M07.2	16.68
7.40	.2913	2-23/32	5-29/32	TSD-M07.4	20.80
7.50	.2953	2-23/32	5-29/32	TSD-M07.5	16.68
7.80	.3071	2-15/16	6-1/8	TSD-M07.8	18.98
8.00	.3150	2-15/16	6-1/8	TSD-M08.0	22.52
8.20	.3228	2-15/16	6-1/8	TSD-M08.2	23.84
8.50	.3346	2-15/16	6-1/8	TSD-M08.5	23.84
8.80	.3465	3-3/16	6-3/8	TSD-M08.8	27.22
9.00	.3543	3-3/16	6-3/8	TSD-M09.0	27.22
9.20	.3622	3-3/16	6-3/8	TSD-M09.2	27.22
9.50	.3740	3-3/16	6-3/8	TSD-M09.5	28.96
9.70	.3819	3-7/16	6-5/8	TSD-M09.7	28.96
9.80	.3858	3-7/16	6-5/8	TSD-M09.8	28.96
10.00	.3937	3-7/16	6-5/8	TSD-M10.0	29.58
10.20	.4016	3-7/16	6-5/8	TSD-M10.2	29.58
10.25	.4075	3-7/16	6-5/8	TSD-M10.25	33.60
10.50	.4134	3-7/16	6-5/8	TSD-M10.5	30.84
10.80	.4252	3-11/16	6-7/8	TSD-M10.8	30.84
11.00	.4331	3-11/16	6-7/8	TSD-M11.0	30.84

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#1 MT SHANK					
11.20	.4409	3-11/16	6-7/8	TSD-M11.2	32.92
11.50	.4528	3-11/16	6-7/8	TSD-M11.5	32.92
11.80	.4646	3-11/16	6-7/8	TSD-M11.8	32.92
12.00	.4724	3-31/32	7-5/32	TSD-M12.0	32.92
12.20	.4803	3-31/32	7-5/32	TSD-M12.2	39.58
12.50	.4921	3-31/32	7-5/32	TSD-M12.5	39.58
12.80	.5039	3-31/32	7-5/32	TSD-M12.8	39.58
13.00	.5118	3-31/32	7-5/32	TSD-M13.0	39.58
13.20	.5197	4-1/4	7-7/16	TSD-M13.2	44.36
13.50	.5315	4-1/4	7-7/16	TSD-M13.5	44.36
13.80	.5433	4-1/4	7-7/16	TSD-M13.8	44.36
14.00	.5512	4-1/4	7-7/16	TSD-M14.0	44.36
#2 MT SHANK					
14.25	.5610	4-1/2	8-3/8	TSD-M14.25	48.16
14.50	.5709	4-1/2	8-3/8	TSD-M14.5	48.16
14.75	.5807	4-1/2	8-3/8	TSD-M14.75	48.16
15.00	.5906	4-1/2	8-3/8	TSD-M15.0	48.16
15.25	.6004	4-3/4	8-5/8	TSD-M15.25	50.46
15.50	.6102	4-3/4	8-5/8	TSD-M15.5	50.46
15.75	.6201	4-3/4	8-5/8	TSD-M15.75	52.68
16.00	.6299	4-3/4	8-5/8	TSD-M16.0	52.68
16.25	.6398	4-7/8	8-3/4	TSD-M16.25	52.68
16.50	.6496	4-7/8	8-3/4	TSD-M16.5	54.34
16.75	.6594	4-7/8	8-3/4	TSD-M16.75	54.34
17.00	.6693	4-7/8	8-3/4	TSD-M17.0	54.34
17.25	.6791	5-1/8	9	TSD-M17.25	58.90
17.50	.6890	5-1/8	9	TSD-M17.5	59.30
18.00	.7087	5-1/8	9	TSD-M18.0	59.30
18.50	.7283	5-1/4	9-1/8	TSD-M18.5	63.16
19.00	.7480	5-1/4	9-1/8	TSD-M19.0	63.16
19.50	.7677	5-1/2	9-3/8	TSD-M19.5	79.14
20.00	.7874	5-1/2	9-3/8	TSD-M20.0	79.14
20.50	.8071	5-3/4	9-5/8	TSD-M20.5	85.48
21.00	.8268	5-3/4	9-5/8	TSD-M21.0	85.48
21.50	.8465	5-7/8	9-3/4	TSD-M21.5	91.86
22.00	.8661	5-7/8	9-3/4	TSD-M22.0	91.86
22.50	.8858	6-1/8	10	TSD-M22.5	95.04

HIGH SPEED STEEL
METRIC TAPER SHANK DRILLS

ICS USA

GENERAL PURPOSE

118° POINT

Metric Sizes (Regular Shank) 23.00mm to 100.00mm Dia.

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
#3 MT SHANK				
23.00	.9055	6-1/8	TSD-M23.0	95.04
23.50	.9252	6-1/8	TSD-M23.5	97.74
24.00	.9449	6-1/4	TSD-M24.0	97.74
24.50	.9646	6-1/4	TSD-M24.5	102.02
25.00	.9843	6-1/4	TSD-M25.0	102.02
25.50	1.0039	6-1/2	TSD-M25.5	107.46
26.00	1.0236	6-1/2	TSD-M26.0	107.46
26.50	1.0433	6-1/2	TSD-M26.5	130.40
27.00	1.0630	6-5/8	TSD-M27.0	130.40
27.50	1.0827	6-5/8	TSD-M27.5	135.20
28.00	1.1024	6-5/8	TSD-M28.0	135.20
28.50	1.1220	6-7/8	TSD-M28.5	145.70
29.00	1.1417	6-7/8	TSD-M29.0	149.50
29.50	1.1614	6-7/8	TSD-M29.5	152.86
30.00	1.1811	6-7/8	TSD-M30.0	152.86
30.50	1.2008	7-1/8	TSD-M30.5	166.36
31.00	1.2205	7-1/8	TSD-M31.0	166.36
31.50	1.2402	7-1/8	TSD-M31.5	190.70
#4 MT SHANK				
32.00	1.2598	7-1/4	TSD-M32.0	190.70
32.50	1.2795	7-1/4	TSD-M32.5	215.34
33.00	1.2992	7-1/4	TSD-M33.0	218.82
33.50	1.3189	7-1/4	TSD-M33.5	224.92
34.00	1.3386	7-1/2	TSD-M34.0	224.92
34.50	1.3583	7-1/2	TSD-M34.5	242.60
35.00	1.3780	7-1/2	TSD-M35.0	242.60
35.50	1.3976	7-1/2	TSD-M35.5	256.50
36.00	1.4173	7-5/8	TSD-M36.0	256.50
36.50	1.4370	7-5/8	TSD-M36.5	274.04
37.00	1.4567	7-5/8	TSD-M37.0	274.04
37.50	1.4764	7-5/8	TSD-M37.5	284.52
38.00	1.4961	7-7/8	TSD-M38.0	284.52
38.50	1.5157	7-7/8	TSD-M38.5	381.24
39.00	1.5354	7-7/8	TSD-M39.0	357.00
39.50	1.5551	7-7/8	TSD-M39.5	381.24
40.00	1.5748	7-7/8	TSD-M40.0	357.00
40.50	1.5945	7-7/8	TSD-M40.5	381.24
41.00	1.6142	8-1/8	TSD-M41.0	381.24
41.50	1.6338	8-1/8	TSD-M41.5	429.96
42.00	1.6535	8-1/8	TSD-M42.0	409.30
42.50	1.6732	8-1/8	TSD-M42.5	478.54

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
#4 MT SHANK				
43.00	1.6929	8-1/4	TSD-M43.0	409.30
43.50	1.7125	8-1/4	TSD-M43.5	478.54
44.00	1.7323	8-1/4	TSD-M44.0	478.54
44.50	1.7519	8-1/4	TSD-M44.5	478.54
45.00	1.7717	8-1/4	TSD-M45.0	478.54
46.00	1.8110	8-1/2	TSD-M46.0	547.48
47.00	1.8504	8-1/2	TSD-M47.0	519.84
48.00	1.8898	8-5/8	TSD-M48.0	534.10
49.00	1.9291	8-5/8	TSD-M49.0	534.10
49.50	1.9488	8-5/8	TSD-M49.5	534.10
50.00	1.9685	8-5/8	TSD-M50.0	534.10
#5 MT SHANK				
51.00	2.0079	8-7/8	TSD-M51.0	623.70
52.00	2.0472	8-7/8	TSD-M52.0	-
54.00	2.1260	9	TSD-M54.0	-
55.00	2.1653	9	TSD-M55.0	754.68
56.00	2.2047	9	TSD-M56.0	-
57.00	2.2441	9-1/4	TSD-M57.0	788.98
58.00	2.2835	9-1/4	TSD-M58.0	-
59.00	2.3228	9-1/4	TSD-M59.0	847.30
60.00	2.3622	9-1/4	TSD-M60.0	1200.62
62.00	2.4409	9-1/2	TSD-M62.0	-
65.00	2.5591	9-5/8	TSD-M65.0	1200.62
66.00	2.5984	9-5/8	TSD-M66.0	1256.80
69.00	2.7165	9-7/8	TSD-M69.0	1509.58
70.00	2.7559	9-7/8	TSD-M70.0	1595.20
72.00	2.8346	10	TSD-M72.0	1657.14
76.00	2.9921	10-1/4	TSD-M76.0	-
80.00	3.1496	10-1/4	TSD-M80.0	-
90.00	3.5433	10-5/8	TSD-M90.0	-
#6 MT SHANK				
81.00	3.1890	10-3/8	TSD-M81.0	-
83.00	3.2677	10-3/8	TSD-M83.0	1806.00
85.00	3.3465	10-3/8	TSD-M85.0	-
88.00	3.4646	10-5/8	TSD-M88.0	-
90.00	3.5433	10-5/8	TSD-M90.0*	-
95.00	3.7402	10-7/8	TSD-M95.0	-
100.00	3.9370	11	TSD-M100.0	-

Please inquire for price and delivery for sizes listed without pricing.


COBALT TAPER SHANK DRILLS

MET-95

ICS USA

HEAVY DUTY

135° SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
TSD-C	 GOLD COBALT FINISH	For drilling in hard steels, stainless steels and other hard materials. The split point is self centering and breaks up chips.	M42	135° Split Point or Notched Point

Fractional Sizes (Regular & Oversize Shanks) 1/4" to 2" Dia.

COBALT				
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	GOLD FINISH 135° S/P TSD-C
#1 MT SHANK				
1/4	.2500	2-7/8	6-1/8	28.34
9/32	.2812	3	6-1/4	31.86
5/16	.3125	3-1/8	6-3/8	31.86
11/32	.3437	3-1/4	6-1/2	37.38
#2 MT SHANK				
3/8	.3750	3-1/2	7-3/8	43.26
13/32	.4062	3-5/8	7-1/2	45.92
7/16	.4375	3-7/8	7-3/4	49.56
15/32	.4687	4-1/8	8	53.06
31/64	.4844	4-3/8	8-1/4	58.60
1/2	.5000	4-3/8	8-1/4	54.92
33/64	.5156	4-5/8	8-1/2	67.16
17/32	.5312	4-5/8	8-1/2	62.38
35/64	.5469	4-7/8	8-3/4	70.26
9/16	.5625	4-7/8	8-3/4	65.24
37/64	.5781	4-7/8	8-3/4	74.56
19/32	.5937	4-7/8	8-3/4	72.56
39/64	.6094	4-7/8	8-3/4	82.18
5/8	.6250	4-7/8	8-3/4	74.22

COBALT				
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	GOLD FINISH 135° S/P TSD-C
#3 MT SHANK				
41/64	.6406	5-1/8	9-3/4	93.98
21/32	.6562	5-1/8	9-3/4	84.90
43/64	.6719	5-3/8	10	100.40
11/16	.6875	5-3/8	10	90.72
45/64	.7031	5-5/8	10-1/4	109.50
23/32	.7187	5-5/8	10-1/4	100.80
47/64	.7344	5-7/8	10-1/2	111.16
3/4	.7500	5-7/8	10-1/2	105.18
49/64	.7656	6	10-5/8	119.12
25/32	.7812	6	10-5/8	110.64
51/64	.7969	6-1/8	10-3/4	126.42
13/16	.8125	6-1/8	10-3/4	114.20
53/64	.8281	6-1/8	10-3/4	147.28
27/32	.8437	6-1/8	10-3/4	135.62
55/64	.8594	6-1/8	10-3/4	147.26
7/8	.8750	6-1/8	10-3/4	135.62
57/64	.8906	6-1/8	10-3/4	147.26
29/32	.9062	6-1/8	10-3/4	133.06
59/64	.9219	6-1/8	10-3/4	173.14
15/16	.9375	6-1/8	10-3/4	156.42


COBALT				
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	GOLD FINISH 135° S/P TSD-C
#3 MT SHANK				
61/64	.9531	6-3/8	11	196.00
31/32	.9687	6-3/8	11	185.50
63/64	.9844	6-3/8	11	190.62
1	1.0000	6-3/8	11	177.00
#4 MT SHANK				
1-1/32	1.0312	6-1/2	12-1/8	237.52
1-1/16	1.0625	6-5/8	12-1/4	226.76
1-3/32	1.0937	6-7/8	12-1/2	259.72
1-1/8	1.1250	7-1/8	12-3/4	248.18
1-5/32	1.1562	7-1/4	12-7/8	294.70
1-3/16	1.1875	7-3/8	13	281.32
1-7/32	1.2187	7-1/2	13-1/8	335.82
1-1/4	1.2500	7-7/8	13-1/2	326.68
1-5/16	1.3125	8-5/8	15-5/8	391.66
1-3/8	1.3750	8-7/8	15-7/8	421.06
1-7/16	1.4375	9-1/8	16-1/8	497.72
1-1/2	1.5000	9-3/8	16-3/8	534.46
1-5/8	1.6250	10	17	628.96
1-3/4	1.7500	10-1/8	17-1/8	787.50
2	2.0000	10-3/8	17-3/8	960.76

CARBIDE TIPPED TAPER SHANK DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
CTTSD	 BRIGHT POLISHED FINISH	For production drilling of cast iron, non-ferrous metals, and non-metals. They are recommended for drilling steel or other ferrous metals.	M1 (Body) CARBIDE TIPPED	118° Std. Spiral Std. Web

Fractional Sizes (Regular MT Shank) 1/4" to 1-1/4" Dia.

CARB. TIPPED				
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	BRIGHT FINISH 118° PT CTTSD
#1 MT SHANK				
1/4	.2500	2-7/8	6-1/8	-
9/32	.2812	3	6-1/4	-
5/16	.3125	3-1/8	6-3/8	-
11/32	.3438	3-1/4	6-1/2	CALL
3/8	.3750	3-1/2	6-3/4	FOR PRICE
13/32	.4062	3-5/8	7	FOR PRICE
7/16	.4375	3-7/8	7-1/4	-
15/32	.4688	4-1/8	7-1/2	-

CARB. TIPPED				
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	BRIGHT FINISH 118° PT CTTSD
#2 MT SHANK				
1/2	.5000	4-3/8	8-1/4	-
17/32	.5312	4-5/8	8-1/2	-
9/16	.5625	4-7/8	8-3/4	-
19/32	.5938	4-7/8	8-3/4	CALL
5/8	.6250	4-7/8	8-3/4	FOR PRICE
21/32	.6562	5-1/8	9	FOR PRICE
11/16	.6875	5-3/8	9-1/4	-
23/32	.7188	5-5/8	9-1/2	-
3/4	.7500	5-7/8	9-3/4	-
25/32	.7812	6	9-7/8	-

CARB. TIPPED				
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	BRIGHT FINISH 118° PT CTTSD
#3 MT SHANK				
13/16	.8125	6-1/8	10-3/4	-
27/32	.8435	6-1/8	10-3/4	-
7/8	.8750	6-1/8	10-3/4	CALL
29/32	.9062	6-1/8	10-3/4	FOR PRICE
15/16	.9375	6-1/8	10-3/4	FOR PRICE
31/32	.9688	6-3/8	11	-
1	1.0000	6-3/8	11	-
#4 MT SHANK				
1-1/16	1.0625	6-5/8	11-1/4	CALL
1-1/8	1.1250	7-1/8	12-3/4	FOR PRICE
1-3/16	1.1875	7-3/8	13	FOR PRICE
1-1/4	1.2500	7-7/8	13-1/2	-

Other sizes available. Please inquire for price and delivery.

HIGH SPEED STEEL EXTRA LENGTH TAPER SHANK DRILLS

ICS USA

GENERAL PURPOSE

118° POINT



High Speed Steel Extra Length Taper Shank Drills with a 118° point are designed for drilling very deep holes in ferrous or non-ferrous metals, or drilling in difficult to reach locations. Extra length taper shank drills are preferred for drilling medium to large diameter deep holes as they can require a huge amount of rotational power on the shank for drilling.

Fractional Sizes (Regular MT Shank) 1/4" to 1" Dia.

SIZE	DEC. EQUIV.	MORSE TAPER NO.	12" OVERALL		15" OVERALL		18" OVERALL		24" OVERALL		30" OVERALL	
			FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT
			TSD-12		TSD-15		TSD-18		TSD-24		TSD-30	
1/4	.2500	1	9	68.46	12	80.56	15	105.26	-	-	-	-
17/64	.2656	1	9	72.32	12	82.32	15	110.54	-	-	-	-
9/32	.2812	1	9	72.32	12	86.14	15	110.54	-	-	-	-
19/64	.2969	1	9	73.86	12	86.14	15	112.86	-	-	-	-
5/16	.3125	1	9	73.86	12	86.14	15	123.48	-	-	-	-
21/64	.3281	1	9	81.68	12	97.62	15	123.48	-	-	-	-
11/32	.3438	1	9	81.68	12	97.62	15	129.96	-	-	-	-
23/64	.3594	1	9	86.38	12	103.50	15	129.96	-	-	-	-
3/8	.3750	1	9	86.38	12	103.50	15	135.54	21	169.88	-	-
25/64	.3906	1	9	89.50	12	107.44	15	135.54	21	169.88	-	-
13/32	.4062	1	9	89.50	12	107.44	15	135.54	21	169.88	-	-
27/64	.4219	1	9	92.68	12	111.38	15	138.60	21	169.88	-	-
7/16	.4375	1	9	92.68	12	111.38	15	138.60	21	174.94	-	-
29/64	.4531	1	9	97.32	12	117.60	15	138.60	21	174.94	-	-
15/32	.4688	1	9	97.32	12	117.60	15	138.60	21	174.94	-	-
31/64	.4844	2	8	107.50	11	120.78	14	131.50	20	174.94	-	-
1/2	.5000	2	8	107.50	11	120.78	14	131.50	20	174.94	-	-
33/64	.5156	2	8	107.50	11	120.78	14	131.50	20	174.94	-	-
17/32	.5312	2	8	107.50	11	120.78	14	131.50	20	174.94	-	-
35/64	.5469	2	8	109.04	11	122.44	14	133.48	20	174.94	-	-
9/16	.5625	2	8	109.04	11	122.44	14	133.48	20	174.94	-	-
37/64	.5781	2	8	110.44	11	124.08	14	135.14	20	185.00	-	-
19/32	.5938	2	8	110.44	11	124.08	14	135.14	20	185.00	-	-
39/64	.6094	2	8	117.60	11	132.56	14	144.66	20	189.92	-	-
5/8	.6250	2	8	117.60	11	132.56	14	144.66	20	189.92	-	-
41/64	.6406	2	8	125.84	11	142.00	14	155.48	20	216.80	-	-
21/32	.6562	2	8	125.84	11	142.00	14	155.48	20	216.80	-	-
43/64	.6719	2	8	137.54	11	155.48	14	170.42	20	222.98	-	-
11/16	.6875	2	8	137.54	11	155.48	14	170.42	20	222.98	-	-
45/64	.7031	2	8	146.32	11	160.82	14	183.36	20	237.46	-	-
23/32	.7188	2	8	146.32	11	160.82	14	183.36	20	250.00	-	-
47/64	.7344	2	8	152.12	11	172.28	14	189.18	20	245.36	-	-
3/4	.7500	2	8	152.12	11	172.28	14	189.18	20	245.36	26	323.40
49/64	.7656	2	8	160.52	11	181.70	14	189.18	20	255.44	-	-
25/32	.7812	2	8	160.52	11	181.70	14	199.44	20	255.44	-	-
51/64	.7969	3	7	160.52	10	173.24	13	212.70	19	287.70	-	-
13/16	.8125	3	7	160.52	10	173.24	13	212.70	19	287.70	25	378.68
53/64	.8281	3	7	160.52	10	174.64	13	213.94	19	320.00	-	-
27/32	.8438	3	7	160.52	10	174.64	13	213.94	19	320.00	-	-
55/64	.8594	3	7	160.52	10	180.82	13	221.58	19	352.80	-	-
7/8	.8750	3	7	160.52	10	180.82	13	221.58	19	352.80	25	431.60
57/64	.8906	3	7	160.52	10	186.92	13	229.32	19	352.80	-	-
29/32	.9062	3	7	160.52	10	186.92	13	229.32	19	352.80	-	-
59/64	.9219	3	7	164.06	10	189.92	13	233.14	19	352.80	-	-
15/16	.9375	3	7	164.06	10	189.92	13	233.14	19	352.80	25	468.06
61/64	.9531	3	-	-	10	192.86	13	236.96	19	392.62	-	-
31/32	.9688	3	7	167.00	10	192.86	13	236.96	19	392.62	-	-
63/64	.9844	3	-	-	10	203.74	13	250.50	19	392.62	-	-
1	1.0000	3	7	175.22	10	203.74	13	250.50	19	392.62	25	755.00

PACKAGING: (All Sizes - 1Drill/Tube)

(Sizes continued on next page)

HIGH SPEED STEEL EXTRA LENGTH TAPER SHANK DRILLS

MET-97

ICS USA

GENERAL PURPOSE

118° POINT



High Speed Steel Extra Length Taper Shank Drills with a 118° point are designed for drilling very deep holes in ferrous or non-ferrous metals, or drilling in difficult to reach locations. Extra length taper shank drills are preferred for drilling medium to large diameter deep holes as they can require a huge amount of rotational power on the shank for drilling.

Fractional Sizes (Regular MT Shank) 1-1/16" to 2" Dia.

SIZE	DEC. EQUIV.	MORSE TAPER NO.	15" OVERALL		18" OVERALL		24" OVERALL		30" OVERALL	
			FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT
			TSD-15		TSD-18		TSD-24		TSD-30	
1-1/16	1.0625	3	10	210.00	13	271.66	19	432.74	25	512.74
1-1/8	1.1250	4	10	230.16	12	274.86	18	453.02	24	862.02
1-3/16	1.1875	4	10	257.54	12	298.60	18	480.70	24	644.46
1-1/4	1.2500	4	9	282.14	12	318.40	18	497.70	24	1017.24
1-5/16	1.3125	4	-	-	12	355.16	18	500.82	24	787.92
1-3/8	1.3750	4	-	-	12	385.62	18	532.90	24	850.26
1-7/16	1.4375	4	-	-	12	392.68	18	548.60	24	882.00
1-1/2	1.5000	4	-	-	12	416.02	18	671.56	24	926.70
1-5/8	1.6250	5	-	-	10	502.74	17	680.62	23	1033.70
1-3/4	1.7500	5	-	-	10	563.66	17	766.12	23	1111.32
1-7/8	1.8750	5	-	-	10	626.06	17	842.44	23	1170.38
2	2.0000	5	-	-	-	-	17	943.74	23	1366.52

Metric Sizes (Regular MT Shank) 6.00mm to 50.00mm Dia.

SIZE mm	DEC. EQUIV.	MORSE TAPER NO.	315mm OAL (12")		400mm OAL (15")		500mm OAL (19-1/2")		630mm OAL (25")	
			FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT	FLUTE LENGTH	OXIDE FINISH 118° POINT
			TSDM-12		TSDM-15		TSDM-19		TSDM-25	
6.00	.2362	1	8	175.14	-	-	-	-	-	-
6.50	.2559	1	-	-	-	-	-	-	-	-
7.00	.2756	1	-	-	-	-	-	-	-	-
7.50	.2953	1	-	-	-	-	-	-	-	-
8.00	.3150	1	8	93.82	12	106.72	16	163.14	-	-
8.50	.3346	1	8	93.82	12	129.28	-	-	-	-
9.00	.3543	1	8	116.90	-	-	-	-	-	-
9.50	.3740	1	-	-	-	-	-	-	-	-
10.00	.3937	1	8	112.66	12	190.02	16	225.14	-	-
11.00	.4331	1	8	118.16	12	212.36	16	254.28	-	-
12.00	.4724	1	8	102.76	12	169.70	16	219.80	-	-
13.00	.5118	1	8	115.52	12	210.34	16	375.46	-	-
14.00	.5512	1	8	129.78	12	181.70	16	242.84	-	-
15.00	.5906	2	8	145.78	12	196.36	16	273.14	-	-
16.00	.6299	2	8	141.04	12	199.72	16	265.44	-	-
17.00	.6693	2	8	146.76	12	213.40	16	290.42	-	-
18.00	.7087	2	8	146.76	12	207.26	16	342.26	21	400.62
19.00	.7480	2	8	155.56	12	303.30	16	351.18	-	-
20.00	.7874	2	8	168.70	12	220.84	16	304.26	21	416.36
21.00	.8268	2	8	185.48	12	254.92	16	391.62	-	-
22.00	.8661	2	8	185.48	12	267.50	16	331.46	21	452.24
23.00	.9055	2	8	219.52	12	513.62	16	547.72	-	-
24.00	.9499	3	-	-	11	323.96	15	394.32	20	468.20
25.00	.9843	3	-	-	11	285.60	15	362.68	20	474.20
26.00	1.0236	3	-	-	11	356.72	15	415.24	20	598.38
27.00	1.0630	3	-	-	11	390.16	15	574.74	-	-
28.00	1.1024	3	-	-	11	370.58	15	440.32	20	653.40
30.00	1.1811	3	-	-	11	370.82	15	464.42	20	578.98
32.00	1.2598	4	-	-	11	537.92	14	498.70	19	664.50
35.00	1.3780	4	-	-	-	-	14	553.46	19	819.82
38.00	1.4961	4	-	-	-	-	14	741.16	19	883.86
40.00	1.5748	4	-	-	-	-	14	645.92	19	958.02
42.00	1.6535	4	-	-	-	-	14	997.58	19	1199.98
45.00	1.7717	4	-	-	-	-	14	883.54	19	1030.14
48.00	1.8898	4	-	-	-	-	14	1158.78	19	1343.46
50.00	1.9685	4	-	-	-	-	14	952.52	19	1114.70

HIGH SPEED STEEL EXTRA LENGTH (LONG BOY) DRILLS

ICS USA

GENERAL PURPOSE

118° POINT



High Speed Steel Straight Shank Extra Length Long Boy Drills with a 118° point are designed for drilling very deep holes in ferrous or non-ferrous metals or drilling in difficult to reach locations. Straight shank extra length drills are preferred for drilling small to medium diameter deep holes as they do not require as much rotational power for drilling that a large deep hole would require. They are also known as Contractor's Long Boy Drills or simply as Long Boy Drills.

Fractional Sizes (Straight Shank) 1/16" to 1-1/4" Dia.

		HIGH SPEED STEEL						
SIZE	DEC. EQUIV.	6" OVERALL LENGTH 4" FLUTE LENGTH	8" OVERALL LENGTH 5" FLUTE LENGTH	9" OVERALL LENGTH 6" FLUTE LENGTH	10" OVERALL LENGTH 7" FLUTE LENGTH	12" OVERALL LENGTH 9" FLUTE LENGTH	18" OVERALL LENGTH 14" FLUTE LENGTH	24" OVERALL LENGTH 18" FLUTE LENGTH
		OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT
		LBD06L	LBD08L	LBD09L	LBD10L	LBD12L	LBD18L	LBD24L
1/16	.0625	10.48	-	-	-	-	-	-
5/64	.0781	9.24	-	-	-	-	-	-
3/32	.0938	8.22	15.60	-	-	-	-	-
7/64	.1094	7.48	15.60	-	-	-	-	-
1/8	.1250	7.00	15.60	-	16.98	17.80	-	-
9/64	.1406	7.00	13.96	-	18.66	19.52	-	-
5/32	.1562	7.00	13.96	-	18.30	19.30	-	-
11/64	.1719	8.58	14.48	-	19.12	20.22	-	-
3/16	.1875	8.14	14.48	-	20.48	20.22	42.50	-
13/64	.2031	-	15.54	-	20.48	21.62	42.50	-
7/32	.2188	-	15.88	-	20.48	21.62	42.50	-
15/64	.2344	-	15.88	-	21.06	22.40	42.50	-
1/4	.2500	-	15.88	-	21.06	22.40	44.04	82.22
17/64	.2656	-	16.44	-	22.18	23.30	47.04	-
9/32	.2812	-	16.44	-	22.18	23.30	47.04	-
19/64	.2969	-	16.82	-	22.70	23.94	47.04	-
5/16	.3125	-	16.82	-	22.70	23.94	47.04	84.58
21/64	.3281	-	17.94	-	24.36	25.62	49.90	-
11/32	.3438	-	17.94	-	24.36	25.62	49.90	-
23/64	.3594	-	18.58	-	24.96	26.12	49.90	-
3/8	.3750	-	18.58	-	24.96	26.12	55.88	108.20
25/64	.3906	-	20.30	-	27.06	28.92	54.18	-
13/32	.4062	-	20.30	-	27.06	28.92	54.18	-
27/64	.4219	-	-	25.64	28.72	32.94	58.36	-
7/16	.4375	-	24.24	25.64	31.06	32.94	58.36	126.42
29/64	.4531	-	26.98	27.06	30.88	34.34	66.78	-
15/32	.4688	-	26.98	-	30.88	34.34	66.78	-
31/64	.4844	-	26.98	28.94	31.58	38.36	69.98	-
1/2	.5000	-	26.98	28.94	31.58	34.10	69.98	117.02
17/32	.5321	-	-	-	-	45.72	79.06	-
9/16	.5625	-	-	-	-	45.72	80.40	156.42
19/32	.5938	-	-	-	-	49.34	83.18	-
5/8	.6250	-	-	-	-	51.60	87.30	170.30
21/32	.6562	-	-	-	-	59.28	96.50	-
11/16	.6875	-	-	-	-	59.28	103.36	198.74
23/32	.7188	-	-	-	-	64.34	112.96	-
3/4	.7500	-	-	-	-	66.80	119.74	229.32
25/32	.7812	-	-	-	-	81.12	133.60	239.90
13/16	.8125	-	-	-	-	86.44	138.70	245.78
7/8	.8750	-	-	-	-	103.74	143.06	264.60
15/16	.9375	-	-	-	-	121.14	150.50	276.36
1	1.0000	-	-	-	-	124.66	159.54	294.00
1-1/8	1.1250	-	-	-	-	-	194.04	315.18
1-3/16	1.1875	-	-	-	-	-	234.68	351.62
1-1/4	1.2500	-	-	-	-	-	281.90	422.78

HIGH SPEED STEEL 1/2" SHANK EXTRA LENGTH (LONG BOY) DRILLS

ICS

WIS

GENERAL PURPOSE

118° POINT



Fractional Sizes (Reduced Shank) 17/32" to 1" Dia.

		HIGH SPEED STEEL		
		12" OVERALL LENGTH 9" FLUTE LENGTH	18" OVERALL LENGTH 14" FLUTE LENGTH	24" OVERALL LENGTH 18" FLUTE LENGTH
		OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT
SIZE	DEC. EQUIV.	LBDRS12L	LBDRS18L	LBDRS24L
17/32	.5321	51.60	87.30	-
9/16	.5625	51.60	88.62	168.18
19/32	.5938	55.22	91.42	-
5/8	.6250	57.48	94.58	182.06
21/32	.6562	61.90	104.74	-
11/16	.6875	65.16	111.60	210.50
23/32	.7188	70.22	121.20	-

		HIGH SPEED STEEL		
		12" OVERALL LENGTH 9" FLUTE LENGTH	18" OVERALL LENGTH 14" FLUTE LENGTH	24" OVERALL LENGTH 18" FLUTE LENGTH
		OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT
SIZE	DEC. EQUIV.	LBDRS12L	LBDRS18L	LBDRS24L
3/4	.7500	72.68	136.52	241.08
25/32	.7812	87.00	141.84	251.66
13/16	.8125	92.32	146.94	257.54
7/8	.8750	109.62	151.28	276.36
15/16	.9375	127.02	158.72	288.12
1	1.0000	130.54	167.78	305.76

HIGH SPEED STEEL METRIC EXTRA LENGTH (LONG BOY) DRILLS

ICS

WIS

GENERAL PURPOSE

118° POINT



High Speed Steel Straight Shank Metric Extra Length Long Boy Drills with a 118° point are designed for drilling very deep metric size holes in ferrous or non-ferrous metals or drilling in difficult to reach locations. Straight shank extra length drills are preferred for drilling small to medium diameter deep metric size holes as they do not require as much rotational power for drilling that a large deep hole would require. They are also known as Metric Contractor's Long Boy Drills or simply as Metric Long Boy Drills.

Metric Sizes (Straight Shank) 1.40mm to 14.00mm Dia.

		HIGH SPEED STEEL				
		160mm OVERALL LENGTH (6") 100mm FLUTE LENGTH (4")	200mm OVERALL LENGTH (8") 150mm FLUTE LENGTH (6")	250mm OVERALL LENGTH (10") 200mm FLUTE LENGTH (8")	315mm OVERALL LENGTH (12") 250mm FLUTE LENGTH (10")	400mm OVERALL LENGTH (15") 300mm FLUTE LENGTH (12")
		OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT	OXIDE FINISH 118° POINT
SIZE	DEC. EQUIV.	LBDM06L	LBDM08L	LBDM10L	LBDM12L	LBDM15L
1.40	.0551	40.50	-	-	-	-
1.50	.0591	20.26	-	-	-	-
1.80	.0709	31.02	-	-	-	-
2.00	.0787	18.74	-	-	-	-
2.20	.0866	25.48	-	-	-	-
2.50	.0984	15.96	-	-	-	-
3.00	.1181	15.38	28.86	36.22	-	-
3.30	.1299	15.20	-	-	-	-
3.50	.1378	14.66	18.42	34.40	-	-
4.00	.1575	15.28	19.06	23.96	45.16	-
4.50	.1772	16.30	20.26	38.08	47.88	-
5.00	.1969	17.20	21.48	26.72	50.66	64.18
5.50	.2165	-	22.72	42.38	53.42	-
6.00	.2362	-	25.80	32.54	40.84	77.66
6.50	.2559	-	27.32	51.26	64.46	-
7.00	.2756	-	28.88	35.94	68.16	-
7.50	.2953	-	32.84	40.84	77.36	-
8.00	.3150	-	-	43.28	54.62	69.08
8.50	.3346	-	-	48.80	92.40	-
9.00	.3543	-	-	51.58	64.76	124.22
9.50	.3740	-	-	57.72	109.26	-
10.00	.3937	-	-	60.80	76.74	146.10
10.50	.4134	-	-	68.16	128.90	164.20
11.00	.4331	-	-	70.60	133.52	170.32
12.00	.4724	-	-	81.64	102.82	196.44
13.00	.5118	-	-	-	124.92	237.86
14.00	.5512	-	-	-	142.42	271.62

HIGH SPEED STEEL EXTRA LENGTH (LONG BOY) DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



High Speed Steel Extra Length (Long Boy) Drills with a heavy duty 135° split point are designed for deep hole drilling in tougher materials or drilling in difficult to reach locations. 135° split point improves penetration rates, reduces location error, and helps maintain accuracy. They are also known as Contractor's Long Boy Drills or simply as Long Boy Drills.

Fractional Sizes (Straight Shank) 1/8" to 1" Dia.

		HIGH SPEED STEEL	
SIZE	DEC. EQUIV.	12" OVERALL LENGTH 9" FLUTE LENGTH	18" OVERALL LENGTH 14" FLUTE LENGTH
		OXIDE FINISH 135° SPLIT POINT	OXIDE FINISH 135° SPLIT POINT
		LBDHB12L	LBDHB18L
1/8	.1250	20.14	-
5/32	.1562	21.66	-
3/16	.1875	22.58	44.86
7/32	.2188	23.96	44.86
1/4	.2500	24.74	46.40
9/32	.2812	25.64	49.40
5/16	.3125	26.30	49.40
11/32	.3438	27.98	52.26
3/8	.3750	28.48	52.26
13/32	.4062	31.28	56.54
7/16	.4375	35.28	60.72
15/32	.4688	41.88	70.32
1/2	.5000	37.64	73.50

		HIGH SPEED STEEL	
SIZE	DEC. EQUIV.	12" OVERALL LENGTH 9" FLUTE LENGTH	18" OVERALL LENGTH 14" FLUTE LENGTH
		OXIDE FINISH 135° SPLIT POINT	OXIDE FINISH 135° SPLIT POINT
		LBDHB12L	LBDHB18L
17/32	.5321	51.26	84.62
9/16	.5625	51.26	85.94
19/32	.5938	54.88	88.72
5/8	.6250	57.14	92.84
21/32	.6562	61.58	102.04
11/16	.6875	64.84	108.92
23/32	.7188	69.90	118.50
3/4	.7500	72.38	125.32
25/32	.7812	91.50	143.98
13/16	.8125	96.82	149.08
7/8	.8750	114.12	153.44
15/16	.9375	131.50	160.78
1	1.0000	135.04	169.92

HIGH SPEED STEEL

1/2" SHANK EXTRA LENGTH (LONG BOY) DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



High Speed Steel 1/2" Shank Extra Length (Long Boy) Drills with a heavy duty 135° split point are designed for deep hole drilling in tougher materials or drilling in difficult to reach locations using any 1/2" or larger 3-jaw chuck drill. They are also used by roofing and framing contractors for drilling beams. 135° split point improves penetration rates, reduces location error, and helps maintain accuracy. They are also known as Contractor's Long Boy Drills or simply as Long Boy Drills.

Fractional Sizes (Straight Shank) 1/8" to 1" Dia.

		HIGH SPEED STEEL	
SIZE	DEC. EQUIV.	12" OVERALL LENGTH 9" FLUTE LENGTH	18" OVERALL LENGTH 14" FLUTE LENGTH
		OXIDE FINISH 135° SPLIT POINT	OXIDE FINISH 135° SPLIT POINT
		LBDHRS12L	LBDHRS18L
17/32	.5321	-	-
9/16	.5625	-	-
19/32	.5938	CALL	CALL
5/8	.6250	FOR	FOR
21/32	.6562	PRICE	PRICE
11/16	.6875	-	-
23/32	.7188	-	-

		HIGH SPEED STEEL	
SIZE	DEC. EQUIV.	12" OVERALL LENGTH 9" FLUTE LENGTH	18" OVERALL LENGTH 14" FLUTE LENGTH
		OXIDE FINISH 135° SPLIT POINT	OXIDE FINISH 135° SPLIT POINT
		LBDHRS12L	LBDHRS18L
3/4	.7500	-	-
25/32	.7812	-	-
13/16	.8125	CALL	CALL
7/8	.8750	FOR	FOR
15/16	.9375	PRICE	PRICE
1	1.0000	-	-

3/8" SHANK EXTRA LENGTH (LONG BOY) DRILLS

ICS USA

HEAVY DUTY

135° SPLIT POINT



High Speed Steel 3/8" Shank Extra Length (Long Boy) Drills with a heavy duty 135° split point are designed for deep hole drilling in tougher materials or drilling in difficult to reach locations using any 3/8" or larger 3-jaw chuck drill. They are also used by roofing and framing contractors for drilling beams. 135° split point improves penetration rates, reduces location error, and helps maintain accuracy. They are also known as Contractor's Long Boy Drills or simply as Long Boy Drills.

Fractional Sizes (Reduced Shank) 13/32" to 1" Dia.

		HIGH SPEED STEEL	
SIZE	DEC. EQUIV.	12" OVERALL LENGTH 9" FLUTE LENGTH	18" OVERALL LENGTH 14" FLUTE LENGTH
		OXIDE FINISH 135° SPLIT POINT	OXIDE FINISH 135° SPLIT POINT
		LBDHBTS12L	LBDHBTS18L
13/32	.4062	-	-
7/16	.4375	-	-
15/32	.4688	-	-
1/2	.5000	CALL	CALL
17/32	.5321	FOR	FOR
9/16	.5625	PRICE	PRICE
19/32	.5938	-	-
5/8	.6250	-	-
21/32	.6562	-	-

		HIGH SPEED STEEL	
SIZE	DEC. EQUIV.	12" OVERALL LENGTH 9" FLUTE LENGTH	18" OVERALL LENGTH 14" FLUTE LENGTH
		OXIDE FINISH 135° SPLIT POINT	OXIDE FINISH 135° SPLIT POINT
		LBDHBTS12L	LBDHBTS18L
11/16	.6875	-	-
23/32	.7188	-	-
3/4	.7500	-	-
25/32	.7812	CALL	CALL
13/16	.8125	FOR	FOR
7/8	.8750	PRICE	PRICE
15/16	.9375	-	-
1	1.0000	-	-

EXTRA LENGTH (LONG BOY) DRILL SETS

METAL/WOOD STANDS

ILLUSTRATION	DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
	6 PC DRILL SET 3/8" Shank 3/8, 7/16, 1/2, 9/16, 5/8, 3/4 Wood Stand	3/8" Shank Heavy Duty 135° S/Pt 12" Long Boy Drills	DSW-LBH12TS-6	338.56
	8 PC DRILL SET 3/8" Shank 3/8, 13/32, 7/16, 15/32, 1/2 9/16, 5/8, 3/4 Wood Stand	3/8" Shank Heavy Duty 135° S/Pt 12" Long Boy Drills	DSW-LBH12TS-8	423.44
	8 PC DRILL SET 1/2" Shank 9/16 to 1" by 16ths Wood Stand	1/2" Shank 12" Long Boy Drills	DSW-LB12RS-8	729.86
		1/2" Shank 18" Long Boy Drills	DSW-LB18RS-8	1071.88
		1/2" Shank Heavy Duty 135° S/Pt 12" Long Boy Drills	DSW-LBH12RS-8	793.56
		1/2" Shank Heavy Duty 135° S/Pt 18" Long Boy Drills	DSW-LBH18RS-8	1135.58
	11 PC DRILL SET Straight Shank 3/16 to 1/2 by 32nds Metal Stand	Straight Shank 18" Long Boy Drills	DSM-LB18-11	583.94
		Straight Shank Heavy Duty 135° S/Pt 18" Long Boy Drills	DSM-LBH18-11	612.16
	13 PC DRILL SET Straight Shank 1/8 to 1/2 by 32nds Metal Stand	Straight Shank 12" Long Boy Drills	DSM-LB12-13	342.18
		Straight Shank Heavy Duty 135° S/Pt 12" Long Boy Drills	DSM-LBH12-13	379.14
	25 PC DRILL SET Straight Shank 1/8 to 1/2 by 64ths Wood Stand	Straight Shank Bright Finish 12" Long Boy Drills	DSW-LB12-25	502.52

HIGH SPEED STEEL
EXTRA LENGTH (VENT) DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



Extra Length Vent Drills are designed for drilling vent holes in rubber tire molds and for drilling very small diameter deep holes in metal. They are sometimes referred to as Small Diameter Long Boy Drills.

Fractional/Wire Gauge Sizes (Straight Shank) 1/16" to #74 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
3/64	.0469	2	3	VD003X200X300	4.20
1/16	.0625	2-1/2	3-1/2	VD004X232X332	4.50
1/16	.0625	3	4	VD004X300X400	4.86
1/16	.0625	3	5	VD004X300X500	5.22
1/16	.0625	4	6	VD004X400X600	6.70
50	.0700	3	4	VD#50X300X400	4.86
50	.0700	3	5	VD#50X300X500	5.22
50	.0700	4	6	VD#50X400X600	6.70
52	.0635	4	5	VD#52X400X500	5.24
54	.0550	4	6	VD#54X400X600	6.70
55	.0520	2-1/4	3	VD#55X216X300	4.20
55	.0520	2-1/2	4-1/2	VD#55X232X432	5.14
55	.0520	3	4	VD#55X300X400	4.86

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
55	.0520	3-1/2	6-1/4	VD#55X332X616	7.00
57	.0430	2	3	VD#57X200X300	4.20
57	.0430	2	5	VD#57X200X500	4.50
57	.0430	3	4	VD#57X300X400	4.86
57	.0430	4	6	VD#57X400X600	6.70
58	.0420	3	4	VD#58X300X400	6.82
60	.0400	3	4	VD#60X300X400	4.86
60	.0400	4	6	VD#60X400X600	6.70
68	.0320	2	6	VD#68X200X600	7.74
69	.0292	2	3	VD#69X200X300	5.06
73	.0240	5/8	1-1/2	VD#73X040X132	4.62
74	.0225	1	2	VD#74X100X200	4.36
74	.0225	1	3	VD#74X100X300	4.70

NOTE: Prices are based on a minimum order of 120 pcs of a size. Lesser quantities quoted upon request.

HIGH SPEED STEEL
BELLHANGER'S EXTENSION DRILLS

ICS USA

SPECIAL PURPOSE

135° SPLIT POINT

FLEXIBLE SHANK



Flexible Shaft Bellhanger Drills are actually a combination fish tape and drill and make wire installation fast and easy. They also can be used to drill holes in places where the shaft cannot reach in a straight line.

SIZE	SHANK	ITEM NO.	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH
			24"	36"	54"	72"
1/4	3/16	BHFS 016 x (Lgth)	-	-	47.78	49.28
3/8	3/16	BHFS 024 x (Lgth)	52.56	54.46	56.66	58.98
1/2	1/4	BHFS 032 x (Lgth)	CALL	CALL	CALL	CALL

TO ORDER: Specify Item No. Prefix and Length of Drill needed, e.g., BHFS016 x 18 would be a 1/4 x 18 Bellhanger Flex Shank Drill.

BELLHANGER'S EXTENSION DRILLS

ICS USA

SPECIAL PURPOSE

FLEXIBLE SHANK



CARBIDE TIPPED

Carbide Tipped Flexible Shaft Bellhanger Drills are actually a combination fish tape and drill and make wire installation fast and easy. They also can be used to drill holes in places where shaft cannot reach in a straight line.

SIZE	SHANK	ITEM NO.	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH
			18"	36"	54"	72"
1/4	3/16	CTBHFS 016 x (Lgth)	-	59.52	61.42	63.40
3/8	3/16	CTBHFS 024 x (Lgth)	58.18	61.14	63.58	65.38
1/2	1/4	CTBHFS 032 x (Lgth)	-	-	65.72	67.90
3/4	1/4	CTBHFS 048 x (Lgth)	-	-	-	80.40

TOOL STEEL

AUGER TIPPED BELLHANGER'S EXTENSION DRILLS

ICS USA

SPECIAL PURPOSE

FLEXIBLE SHANK



AUGER TIPPED

Auger Tipped Flexible Shaft Bellhanger Drills are actually a combination fish tape and drill and make wire installation fast and easy. They also can be used to drill holes in places where shaft cannot reach in a straight line.

SIZE	SHANK	ITEM NO.	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH
			24"	36"	54"	72"
3/8	3/16	BHFSAT 024 x (Lgth)	57.78	61.30	63.60	65.40
1/2	3/16	BHFSAT 032 x (Lgth)	60.56	61.16	66.26	69.32
9/16	1/4	BHFSAT 036 x (Lgth)	-	50.88	58.42	60.88
3/4	1/4	BHFSAT 048 x (Lgth)	-	-	59.80	73.44

HIGH SPEED STEEL

THREADED FLUTE BELLHANGER'S EXTENSION DRILLS

ICS USA

SPECIAL PURPOSE

FLEXIBLE SHANK



THREADED FLUTE

Threaded Flute Flexible Shaft Bellhanger Drills are actually a combination fish tape and drill and make wire installation fast and easy. They also can be used to drill holes in places where shaft cannot reach in a straight line.

SIZE	SHANK	ITEM NO.	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH
			18"	24"	36"	54"	72"
1/4	3/16	BHFSTF 016 x (Lgth)	50.38	50.92	51.82	52.84	53.84
3/8	3/16	BHFSTF 024 x (Lgth)	56.54	58.02	58.76	58.96	59.20
1/2	3/16	BHFSTF 032 x (Lgth)	61.52	58.34	63.02	63.64	64.14
9/16	1/4	BHFSTF 036 x (Lgth)	-	-	-	70.28	72.36

TO ORDER: Specify Item No. Prefix and Length of Drill needed, e.g., BHFS016 x 18 would be a 1/4 x 18 Bellhanger Flex Shank Drill.

SHIP AUGER BELLHANGER'S EXTENSION DRILLS

ICS USA

SPECIAL PURPOSE

FLEXIBLE SHANK



SHIP AUGER

Flexible Shank Ship Auger Bellhanger Drills are designed with a self-feeding screw point to penetrate wood quickly. They are a combination fish tape and drill designed to make wire installation fast and easy. They also can be used to drill holes in places where shaft cannot reach in a straight line. The flexible shank has memory retention and will return to original straightness after being curved to reach drill location.

SIZE	SHANK	36" LENGTH		54" LENGTH		72" LENGTH	
		ITEM NO.	PRICE	ITEM NO.	PRICE	ITEM NO.	PRICE
3/8	3/16	BHFSSA024X36	-	BHFSSA024X54	58.98	BHFSSA024X72	59.22
1/2	1/4	BHFSSA032X36	63.14	BHFSSA032X54	63.14	BHFSSA032X72	64.14
5/8	1/4	BHFSSA040X36	65.80	BHFSSA040X54	66.86	BHFSSA040X72	67.58
3/4	1/4	BHFSSA048X36	68.98	BHFSSA048X54	-	BHFSSA048X72	71.32
1	1/4	BHFSSA100X36	-	BHFSSA100X54	75.96	BHFSSA100X72	78.36

PREMIUM SPRING STEEL

FLEXIBLE SHANK EXTENSIONS

ICS USA

SPECIAL PURPOSE

FLEXIBLE SHANK



Flexible Shaft Extensions are designed to add length to flexible shank drill bits that must drill holes through inaccessible places that cannot be reached in a straight line. They can be connected to one another for extra long reach. Two set screws hold extensions to each other.

SIZE	SHANK	36" LENGTH		54" LENGTH	
		ITEM NO.	PRICE	ITEM NO.	PRICE
3/8	3/16	BHFSX024X36	43.02	BHFSX024X54	44.38
1/2	1/4	BHFSX032X36	45.74	BHFSX032X54	45.74

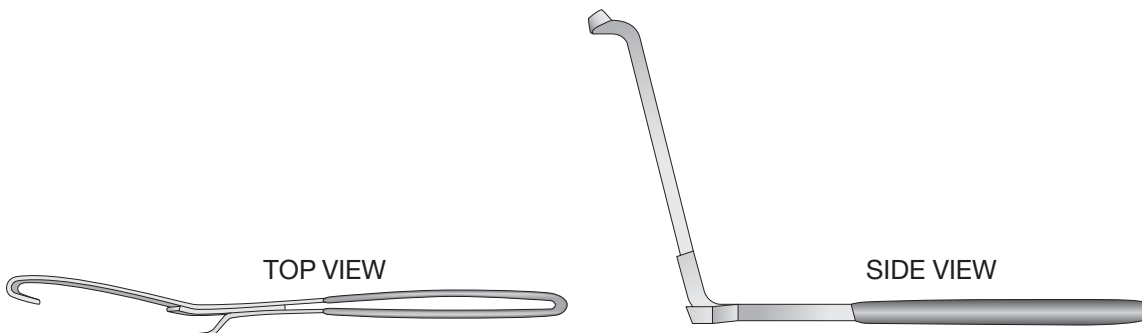
FLEXIBLE SHANK BENDING TOOL

ICS USA

SPECIAL PURPOSE

INSULATED HANDLE

Flexible Shank Bending Tool has an insulated handle and is designed to help operator start and steer a Flexible Shank Bellhanger's Drill while it is concealed inside the wall cavity.



WEIGHT LBS.	ITEM NO.	PRICE
0.45	FSBT	8.80

HIGH SPEED STEEL BELLHANGER'S EXTENSION DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



High Speed Steel Bellhanger's Extension Drills are designed for drilling holes through walls, studs, flooring, door widths and frames so wiring can be threaded through these holes for cable TV, telephone lines, alarm systems, computer networks, and other electrical installations. Drills have a hole in the flute, sometimes called a fish eye, for connecting wire to the drill which is then used to pull or "fish" wire, cable, or pipe through the wall. High speed steel drill point easily drills through nails, sheet metal, etc... They are also used in boat building for drilling long bolt holes in the stem, keel and deadwood as well as drilling holes for drifts in rudder and center boards. These drills are also known as Bellhanger Drill Bits, Installer Bits, Feeler Bits, Fishing Bits, Skylight Drills, Spotlight Drills, Installer's Feeler Bits or Wire Installing Drill Bits.

SIZE	SHANK	ITEM NO.	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH
			12"	18"	24"	30"	42"	48"	60"	72"
3/16	3/16	BH 012 x (Lgth)	6.96	10.16	12.84	16.04	22.48	25.66	32.10	38.50
1/4	1/4	BH 016 x (Lgth)	8.08	11.30	14.50	17.64	24.12	27.32	33.76	40.16
5/16	1/4	BH 020 x (Lgth)	11.44	14.66	17.88	21.06	27.50	30.70	37.12	43.52
3/8	3/8	BH 024 x (Lgth)	13.38	16.60	19.78	23.00	29.40	32.62	39.04	45.44
7/16	3/8	BH 028 x (Lgth)	18.20	21.40	24.60	27.80	34.24	37.42	43.86	50.26
1/2	1/2	BH 032 x (Lgth)	20.26	23.48	26.70	29.88	36.32	40.70	45.94	52.34
9/16	1/2	BH 036 x (Lgth)	23.90	26.44	30.32	33.52	-	-	-	-
5/8	1/2	BH 040 x (Lgth)	24.70	27.98	31.16	34.38	-	-	-	-
11/16	1/2	BH 044 x (Lgth)	26.32	29.54	32.72	35.94	-	-	-	-
3/4	1/2	BH 048 x (Lgth)	28.22	31.44	34.66	37.86	-	-	-	-
1	1/2	BH 100 x (Lgth)	38.22	41.44	44.66	47.86	-	-	-	-

TO ORDER: Specify Item No. Prefix and Length of Drill needed, e.g., BH016 x 18 would be a 1/4" x 18" Bellhanger Drill.

CARBIDE TIPPED BELLHANGER'S EXTENSION DRILLS

ICS USA

SPECIAL PURPOSE

PERCUSSION DRILL POINT



Carbide Tipped Bellhanger's Extension Drills are designed for drilling holes through masonry, concrete block, etc... so wiring can be threaded through these holes for cable TV, telephone lines, alarm systems, computer networks, and other electrical installations. Drills have a hole in the flute, sometimes called a fish eye, for connecting wire to the drill which is then used to pull or "fish" wire, cable, or pipe through the wall. These drills are also known as Bellhanger Drill Bits, Installer Bits, Feeler Bits, Fishing Bits, Skylight Drills, Spotlight Drills, Installer's Feeler Bits or Wire Installing Drill Bits.

SIZE	SHANK	ITEM NO.	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH	OVERALL LENGTH
			13"	18"	24"	30"	42"	48"	72"
1/4	1/4	CTBH 016 x (Lgth)	7.74	13.62	15.06	17.24	23.88	27.40	41.52
5/16	1/4	CTBH 020 x (Lgth)	7.50	14.02	16.06	18.36	26.94	30.48	44.58
3/8	1/4	CTBH 024 x (Lgth)	10.46	15.26	16.72	19.96	28.48	32.00	46.12
1/2	3/8	CTBH 032 x (Lgth)	11.54	18.20	19.96	22.34	34.06	37.60	51.70
5/8	1/2	CTBH 040 x (Lgth)	15.06	21.02	23.30	-	-	-	-
3/4	1/2	CTBH 048 x (Lgth)	22.24	27.54	30.34	-	-	-	-

TO ORDER: Specify Item No. Prefix and Length of Drill needed, e.g., BH016 x 18 would be a 1/4" x 18" Bellhanger Drill.

NOTE: Special size Bellhanger's Extension Drills can be made to your requirements.

HIGH SPEED STEEL METRIC EXTENSION DRILLS

ICS USA

GENERAL PURPOSE

118° POINT



Extension Drills are designed for drilling of holes in inaccessible places which cannot be reached with standard length drills. Various combinations of diameter and overall lengths are available. Extension Drills are sometimes referred to as Spotlight Drills.

Metric Sizes (Straight Shank) 2.50mm to 14.00mm Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
2.50	.0984	1-3/8	12	XDM02.5X12	5.04
3.00	.1181	1-5/8	12	XDM03.0X12	5.42
3.50	.1378	2	12	XDM03.5X12	5.60
4.00	.1575	2	12	XDM04.0X12	6.46
4.50	.1772	2-5/16	12	XDM04.5X12	7.40
5.00	.1969	2-1/2	12	XDM05.0X12	7.54
5.50	.2165	2-1/2	12	XDM05.5X12	8.24
6.00	.2362	2-3/4	12	XDM06.0X12	9.34
6.50	.2560	2-15/16	12	XDM06.5X12	9.98
7.00	.2756	2-15/16	12	XDM07.0X12	10.24
7.50	.2953	3-3/16	12	XDM07.5X12	11.70
8.00	.3150	3-3/16	12	XDM08.0X12	13.42

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
8.50	.3346	3-7/16	12	XDM08.5X12	13.88
9.00	.3543	3-5/8	12	XDM09.0X12	15.30
9.50	.3740	3-5/8	12	XDM09.5X12	16.46
10.00	.3937	3-7/8	12	XDM10.0X12	19.38
10.50	.4134	4-1/16	12	XDM10.5X12	19.76
11.00	.4331	4-1/16	12	XDM11.0X12	20.56
11.50	.4528	4-5/16	12	XDM11.5X12	21.34
12.00	.4724	4-5/16	12	XDM12.0X12	22.68
12.50	.4921	4-1/2	12	XDM12.5X12	22.68
13.00	.5118	4-13/16	12	XDM13.0X12	33.26
13.50	.5315	4-13/16	12	XDM13.5X12	35.06
14.00	.5512	4-13/16	12	XDM14.0X12	36.10

Special size extension drills can be made to your requirements.

CARBIDE TIPPED EXTENSION DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



Carbide Tipped Extension Drills are designed for drilling holes in inaccessible places which cannot be reached with standard length carbide tipped drills. They will drill through cast iron, non-ferrous metals, and non-metals. They are not recommended for drilling steel and other ferrous materials.

Fractional Sizes (Straight Shank) 1/8" to 1/2" Dia.

SIZE	DECIMAL EQUIVALENT	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/8	.1250	1-5/8	12	CTXD12L008	21.90
3/16	.1875	2-5/16	12	CTXD12L012	25.36
1/4	.2500	2-3/4	12	CTXD12L016	29.96
5/16	.3125	3-3/16	12	CTXD12L020	38.32
3/8	.3750	3-5/8	12	CTXD12L024	43.58
7/16	.4375	4-1/16	12	CTXD12L028	51.34
1/2	.5000	4-1/2	12	CTXD12L032	62.84







Special size Carbide Tip Extension Drills can be made to your requirements.

HIGH SPEED STEEL AIRCRAFT EXTENSION DRILLS

ICS USA/WIS

HEAVY DUTY

SPLIT POINT

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA	NAS* SPECS
AC-06B AC-12B AC-18B	 OXIDE FINISH	For portable or machine drilling in hard steels, stainless steels and other hard materials. Mfr. to NAS 907-B specs.	M2, M7	135° Split Pt. (P-3) Std. Spiral Hvy. Duty Web	B
AC-12A	 OXIDE FINISH	For portable or machine drilling in mild steels, aluminum, and magnesium alloys. Mfr. to NAS 907-A specs.	M2, M7	118° Split Pt. (P-5) Std. Spiral Hvy. Duty Web	A
AC-12L <small>(Left Hand)</small>	 GOLD FINISH	For portable or machine drilling where left hand rotation is required. Often used to drill out broken studs and screws.	M2, M7	135° Split Pt. (P-3) Std. Spiral Hvy. Duty Web	B
AC-12S <small>(Stub)</small>	 BRIGHT POLISHED FINISH	For portable drilling where increased rigidity is required. Designed for drilling in hard steels. Screw machine flute length.	M2, M7	135° Split Pt. (P-3) Spec. Fast Spiral Hvy. Duty Web	C
AC-06C AC-12C	 GOLD COBALT FINISH	For portable or machine drilling in stainless steel, titanium, and other work hardening metals. Mfr. to NAS 907-J specs.	M42	135° Split Pt. (P-3) Std. Spiral Hvy. Duty Web	J
AC-06T AC-12T	 GOLD TITANIUM COATED	The combination of titanium nitride coating with the heavy duty design enhances chip flow, finished hole quality and up to 700% more drill life.	M2, M7	135° Split Pt. (P-3) Std. Spiral Hvy. Duty Web	B

*(NAS) National Aerospace Standard

Fractional Sizes (Straight Shank) 3/64" to 3/4" Dia.

		HIGH SPEED STEEL						COBALT		TIN COATED	
SIZE	DEC. EQUIV.	6" LENGTH	12" LENGTH	18" LENGTH	12" LENGTH	12" LENGTH	12" LENGTH	6" LENGTH	12" LENGTH	6" LENGTH	12" LENGTH
		Jobber Flute Length	Jobber Flute Length	Jobber Flute Length	Jobber Flute Length	Left Hand Jobber Flute Length	Screw Machine Flute Length	Jobber Flute Length	Jobber Flute Length	Jobber Flute Length	Jobber Flute Length
		135° Split Point	135° Split Point	135° Split Point	118° Split Point	135° Split Point	135° Split Point	135° Split Point	135° Split Point	135° Split Point	135° Split Point
		AC-06B	AC-12B	AC-18B	AC-12A	AC-12L	AC-12S	AC-06C	AC-12C	AC-06T	AC-12T
3/64	.0469	7.38	14.84	-	-	-	-	-	-	-	-
1/16	.0625	3.70	5.88	9.78	6.20	7.82	6.48	5.52	7.74	5.86	7.56
5/64	.0781	3.60	5.96	9.86	6.30	7.82	6.56	5.48	7.84	5.76	7.62
3/32	.0938	3.50	5.38	9.26	5.66	7.38	5.82	4.68	8.00	5.66	7.04
7/64	.1094	3.36	5.42	9.30	5.72	7.38	5.82	4.68	8.24	5.52	7.10
1/8	.1250	3.22	5.06	8.96	5.36	7.74	5.30	4.68	6.80	5.38	6.74
9/64	.1406	3.60	5.54	9.42	5.84	-	5.82	5.84	7.40	5.76	7.20
5/32	.1562	3.88	6.20	10.08	6.54	8.06	6.48	5.54	8.50	6.06	7.88
11/64	.1719	4.18	6.66	10.54	7.02	8.74	6.96	6.08	9.06	6.34	8.34
3/16	.1875	4.58	7.18	11.08	7.56	9.42	7.48	6.08	10.08	6.74	8.86
13/64	.2031	4.88	7.42	11.30	7.82	9.92	7.74	7.52	10.68	9.16	10.72
7/32	.2188	5.06	8.00	11.90	8.42	10.96	8.38	7.52	12.78	9.34	11.30
15/64	.2344	5.40	8.56	12.44	9.00	11.54	8.76	8.16	12.78	9.68	11.84
1/4	.2500	5.62	9.14	13.02	9.64	12.04	9.16	12.48	13.28	9.90	12.44
17/64	.2656	6.54	10.68	14.56	11.24	13.76	10.68	13.76	16.02	-	17.54
9/32	.2812	7.60	11.36	15.26	12.00	14.76	11.18	17.32	-	18.24	-
19/64	.2969	8.56	12.12	16.00	12.78	15.94	11.92	17.88	-	18.98	-
5/16	.3125	9.42	13.26	17.14	13.94	17.12	13.08	18.14	19.16	17.06	20.12
21/64	.3281	11.00	14.24	18.12	15.00	18.14	14.06	18.80	20.82	-	21.10
11/32	.3438	11.14	14.96	18.82	15.76	20.08	14.78	20.48	22.24	-	21.82
23/64	.3594	11.68	15.88	19.76	16.74	22.00	15.44	22.20	23.86	-	24.22
3/8	.3750	12.42	16.66	20.54	17.56	23.24	16.30	23.72	25.04	21.90	25.00
25/64	.3906	12.86	17.64	21.52	18.58	24.88	17.14	-	26.70	-	28.74
13/32	.4062	13.26	18.78	22.66	19.76	25.96	18.12	-	28.72	-	29.86
27/64	.4219	13.94	19.66	23.52	20.68	27.56	18.96	-	30.48	-	30.72
7/16	.4375	15.72	21.18	25.06	22.30	29.24	20.42	-	32.86	-	32.26
7/16TS	.4375	-	23.52	-	-	-	-	-	-	-	-
29/64	.4531	15.72	22.20	26.06	23.38	32.26	21.26	-	34.78	-	33.26
15/32	.4688	15.72	23.30	27.18	24.54	33.68	22.18	-	36.80	-	34.38
31/64	.4844	15.72	24.30	28.18	25.60	34.76	22.94	-	38.90	-	35.40
1/2	.5000	12.00	24.96	28.82	26.26	34.76	23.60	36.46	40.52	23.06	36.02
1/2TS	.5000	-	27.30	-	-	-	-	-	-	-	-
*9/16	.5629	-	41.02	-	-	-	-	-	87.28	-	55.58
*5/8	.6250	-	44.00	-	-	-	-	-	94.80	-	58.56
*3/4	.7500	-	55.64	-	-	-	-	-	110.46	-	-

Minimum order 12 each (3/64" - 17/64"); 6 each (9/32" - 1/2"). Add 15% for orders accepted in less than standard packaging.
(* 1/2" Shank). 7/16TS and 1/2TS have 3/8" Shank.

HIGH SPEED STEEL AIRCRAFT EXTENSION DRILLS

ICS **WIS**

HEAVY DUTY

SPLIT POINT



Wire Gauge Sizes (Straight Shank) #1 to #52 Dia.

SIZE	DEC. EQUIV.	HIGH SPEED STEEL				COBALT		TIN COATED	
		6" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 118° Split Point	12" LENGTH Screw Machine Flute Length 135° Split Point	6" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 135° Split Point	6" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 135° Split Point
		AC-06B	AC-12B	AC-12A	AC-12S	AC-06C	AC-12C	AC-06T	AC-12T
1	.2280	5.98	8.48	8.48	8.36	8.54	12.84	10.28	11.76
2	.2210	5.98	8.48	8.48	8.36	8.54	12.84	10.28	11.76
3	.2130	5.36	7.96	7.96	7.88	7.52	11.72	9.64	11.26
4	.2090	5.36	7.96	7.96	7.88	7.52	12.08	9.64	11.26
5	.2055	5.36	7.96	7.96	7.88	7.52	12.08	9.64	11.26
6	.2040	5.36	7.96	7.96	7.88	7.52	12.08	9.64	11.26
7	.2010	5.36	7.50	7.50	7.34	7.72	10.12	9.64	10.78
8	.1990	5.26	7.50	7.50	7.34	7.72	10.18	9.32	10.78
9	.1960	5.18	7.50	7.50	7.34	7.42	10.94	9.46	10.78
10	.1935	4.84	7.24	7.24	7.20	6.94	10.18	9.12	10.54
11	.1910	4.48	7.24	7.24	7.20	6.48	10.54	8.76	10.54
12	.1890	4.48	7.24	7.24	7.20	6.48	10.54	8.76	10.54
13	.1850	4.48	7.24	7.24	7.14	6.48	9.96	8.76	10.54
14	.1820	4.48	7.06	7.06	7.06	6.48	11.54	6.64	8.74
15	.1800	4.48	7.06	7.06	7.06	6.48	10.12	6.64	8.74
16	.1770	4.48	7.06	7.06	7.06	6.48	9.72	6.64	8.74
17	.1730	4.48	7.02	7.02	7.02	6.48	9.66	6.64	8.70
18	.1695	4.48	7.02	6.66	6.64	6.48	8.82	6.64	8.34
19	.1660	4.48	7.02	6.66	6.64	6.48	8.78	6.64	8.34
20	.1610	4.06	6.56	6.56	6.58	5.84	8.68	6.22	8.22
21	.1590	4.06	6.56	6.56	6.58	5.84	8.42	6.22	8.22
22	.1570	4.06	6.48	6.48	6.58	5.84	8.96	6.22	8.16
23	.1549	4.06	6.20	6.20	6.16	5.84	9.60	6.22	7.88
24	.1520	4.06	6.20	6.20	6.16	5.84	8.24	6.22	7.88
25	.1490	4.06	5.88	5.88	5.96	5.84	7.90	6.22	7.56
26	.1470	4.06	5.88	5.88	5.96	5.84	7.74	6.22	7.56
27	.1440	4.06	5.88	5.88	5.96	5.84	7.90	6.22	7.56
28	.1405	4.06	5.84	5.84	5.84	5.84	7.54	6.22	7.52
29	.1360	4.06	5.54	5.54	5.52	5.84	7.24	6.22	7.20
30	.1285	3.36	5.48	5.48	5.46	4.76	7.02	5.52	7.16
31	.1200	3.36	5.02	5.02	5.08	4.76	6.82	5.52	6.70
32	.1160	3.36	5.02	5.02	5.08	4.76	6.72	5.52	6.70
33	.1130	3.36	5.02	5.02	5.02	4.76	6.66	5.52	6.70
34	.1110	3.36	5.02	5.02	5.02	4.76	6.66	5.52	6.70
35	.1100	3.36	5.02	5.02	5.02	4.76	6.66	5.52	6.70
36	.1055	3.42	5.38	5.38	5.52	4.94	7.02	5.60	6.70
37	.1040	3.42	5.38	5.38	5.52	4.94	7.14	5.60	6.70
38	.1010	3.42	5.38	5.38	5.52	4.94	6.92	5.60	6.70
39	.0995	3.54	5.38	5.38	5.60	4.94	6.92	5.72	6.70
40	.0980	3.04	5.38	5.38	5.60	4.40	6.92	5.22	6.70
41	.0960	3.04	5.42	5.42	5.72	4.40	6.92	5.22	6.74
42	.0935	3.04	5.42	5.42	5.66	4.68	6.82	5.22	6.74
43	.0890	3.86	5.42	5.42	5.66	5.48	7.54	6.04	6.74
44	.0860	3.86	5.42	5.42	5.66	5.48	6.82	6.04	6.74
45	.0820	3.86	5.42	5.42	5.66	5.48	6.82	6.04	6.74
46	.0810	3.86	5.42	5.42	5.66	5.48	6.82	6.04	6.74
47	.0785	3.86	5.84	5.84	6.08	5.48	7.24	6.04	7.52
48	.0760	3.86	5.84	5.84	6.08	5.48	7.24	6.04	7.52
49	.0730	3.86	5.84	5.84	6.08	5.48	7.24	6.04	7.52
50	.0700	3.86	5.84	5.84	6.08	5.48	7.24	6.04	7.52
51	.0670	3.86	5.84	5.84	6.08	5.48	7.24	6.04	7.52
52	.0635	3.86	5.84	5.84	6.08	5.48	7.24	6.04	7.52

Minimum order 12 each. Add 15% for orders accepted in less than standard packaging.

HIGH SPEED STEEL AIRCRAFT EXTENSION DRILLS

MET-109

ICS WIS

HEAVY DUTY

SPLIT POINT



Letter Sizes (Straight Shank) "A" to "Z" Dia.

SIZE	DEC. EQUIV.	HIGH SPEED STEEL		COBALT
		6" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 135° Split Point
		AC-06B	AC-12B	AC-12C
A	.234	8.34	9.84	16.80
B	.238	8.34	10.00	18.38
C	.242	8.34	10.00	18.38
D	.246	8.34	10.08	19.90
E	.250	6.02	10.14	13.28
F	.257	9.18	11.92	18.72
G	.261	10.72	11.92	18.72
H	.266	10.90	12.10	20.54
I	.272	11.08	12.28	19.68
J	.277	11.18	12.44	20.54
K	.281	11.26	12.50	20.54
L	.290	11.76	13.08	22.76
M	.295	12.14	13.48	23.68

SIZE	DEC. EQUIV.	HIGH SPEED STEEL		COBALT
		6" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 135° Split Point
		AC-06B	AC-12B	AC-12C
N	.302	13.12	14.60	24.60
O	.316	13.84	15.38	26.70
P	.323	14.36	15.96	27.88
Q	.332	14.90	16.56	28.90
R	.339	15.26	16.96	28.90
S	.348	15.80	17.54	33.76
T	.358	16.20	17.98	33.76
U	.368	17.14	19.06	34.04
V	.377	17.68	20.26	36.94
W	.386	18.24	20.26	36.94
X	.397	18.98	21.10	37.28
Y	.404	19.50	21.66	38.90
Z	.413	20.00	22.22	41.72

Metric Sizes (Straight Shank) 2.00mm to 12.50mm Dia.

SIZE mm	DEC. EQUIV.	HSS	COBALT
		12" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 135° Split Point
		AC-12M	AC-12CM
2.00	.0781	6.78	8.32
2.50	.0984	6.48	6.92
3.00	.1181	6.04	6.38
3.50	.1378	6.40	6.72
4.00	.1575	7.30	8.02
4.50	.1772	7.92	8.92
5.00	.1969	8.16	9.24
5.10	.2008	8.16	9.90
5.50	.2165	8.92	10.24
6.00	.2362	10.08	11.74
6.50	.2560	10.96	12.60
7.00	.2756	11.52	13.50

SIZE mm	DEC. EQUIV.	HSS	COBALT
		12" LENGTH Jobber Flute Length 135° Split Point	12" LENGTH Jobber Flute Length 135° Split Point
		AC-12M	AC-12CM
7.50	.2953	12.54	15.58
8.00	.3150	15.04	16.88
8.50	.3346	16.14	18.30
9.00	.3543	17.36	21.86
9.50	.3740	17.94	22.20
9.70	.3819	19.36	23.70
10.00	.3937	20.00	26.88
10.50	.4134	21.42	27.20
11.00	.4331	22.48	27.82
11.50	.4528	24.16	29.32
12.00	.4724	25.88	31.76
12.50	.4921	26.20	31.76

AIRCRAFT DRILL MERCHANDISER

ILLUSTRATION	DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
<p>ICS EXTRA LONG DRILLS</p>	<p>12 PC DRILL DISPLAY 12" AIRCRAFT EXTENSION DRILLS</p> <p>3 Ea. 1/8, 3/16, 1/4 1 Ea. 5/16, 3/8, 1/2</p> <p>Display Size: 12" x 18"</p>	Black Finish Aircraft Drills 135° S/Pt	DM-AC-12B-12	130.14

COBALT AIRCRAFT TYPE "D" DRILLS

ICS WIS

HEAVY DUTY

135° SPLIT POINT



NAS 907 TYPE D SPECIFICATIONS

Cobalt Aircraft Type "D" Jobber Length Drills with screw machine length flute are designed to handle high thrust loads when drilling through high tensile and heat resistant alloy steels. Its heavy web design provides a more rigid tool for accurate holes eliminating vibration and flexing. Ideal for portable drilling.

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
#1	.2280	1-5/16	JDCD#01	4.54
#2	.2210	1-5/16	JDCD#02	4.54
#3	.2130	1-1/4	JDCD#03	4.30
#4	.2090	1-1/4	JDCD#04	4.30
#5	.2055	1-1/4	JDCD#05	4.30
#6	.2040	1-1/4	JDCD#06	4.30
#7	.2010	1-3/16	JDCD#07	3.84
#8	.1990	1-3/16	JDCD#08	3.84
#9	.1960	1-3/16	JDCD#09	3.84
#10	.1935	1-3/16	JDCD#10	3.36
#11	.1910	1-3/16	JDCD#11	3.36
#12	.1890	1-3/16	JDCD#12	3.36
#13	.1850	1-1/8	JDCD#13	3.36
#14	.1820	1-1/8	JDCD#14	3.36
#15	.1800	1-1/8	JDCD#15	3.36
#16	.1770	1-1/8	JDCD#16	3.36
#17	.1730	1-1/8	JDCD#17	3.36
#18	.1695	1-1/16	JDCD#18	2.86
#19	.1660	1-1/16	JDCD#19	2.86
#20	.1610	1-1/16	JDCD#20	2.86

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
#21	.1590	1-1/16	JDCD#21	2.86
#22	.1570	1-1/16	JDCD#22	2.86
#23	.1540	1	JDCD#23	2.62
#24	.1520	1	JDCD#24	2.62
#25	.1495	1	JDCD#25	2.62
#26	.1470	1	JDCD#26	2.16
#27	.1440	1	JDCD#27	2.16
#28	.1405	15/16	JDCD#28	2.16
#29	.1360	15/16	JDCD#29	2.16
#30	.1285	15/16	JDCD#30	1.92
#31	.1200	7/8	JDCD#31	1.92
#32	.1160	7/8	JDCD#32	1.92
#33	.1130	7/8	JDCD#33	1.92
#34	.1110	7/8	JDCD#34	1.92
#35	.1100	7/8	JDCD#35	1.92
#36	.1065	13/16	JDCD#36	1.92
#37	.1040	13/16	JDCD#37	1.86
#38	.1015	13/16	JDCD#38	1.86
#39	.0995	13/16	JDCD#39	1.68
#40	.0980	13/16	JDCD#40	1.68

Other sizes available. Inquire for pricing.

NC SPOTTING DRILLS

ICS WIS

SPECIAL PURPOSE

90°/ 120° POINT



RIGHT HAND CUT

NC Spotting Drills are designed for spotting on NC and CNC machines. They reduce location error and improve size accuracy. A 90° spotting drill one size larger than the following drill allows spotting and chamfering simultaneously. The 120° spotting drill is used to “spot” the same angle as a twist drill to be used for a perfect seat. They are available in long lengths for difficult to reach work.

High Speed Steel

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
90° POINT				
1/4	.2500	3/4	2-1/2 SDR090-016X232	4.58
			4 SDR090-016X400	5.66
			6 SDR090-016X600	7.06
3/8	.3750	1-1/8	3-1/8 SDR090-024X308	10.70
			5 SDR090-024X500	13.50
			7 SDR090-024X700	16.16
1/2	.5000	1-3/8	3-3/4 SDR090-032X348	14.68
			6 SDR090-032X600	50.56
			8 SDR090-032X800	25.36
5/8	.6250	1-5/8	4-3/8 SDR090-040X424	23.12
			7 SDR090-040X700	32.40
			9 SDR090-040X900	41.48
3/4	.7500	1-7/8	5 SDR090-048X500	CALL
			8 SDR090-048X800	CALL
			10 SDR090-048X10.	CALL
1	1.000	2-1/4	6 SDR090-100X600	70.22
			8 SDR090-100X800	74.10
			10 SDR090-100X10.	CALL
120° POINT				
1/4	.2500	3/4	2-1/2 SDR120-016X232	4.58
			4 SDR120-016X400	5.66
			6 SDR120-016X600	7.06
3/8	.3750	1-1/8	3-1/8 SDR120-024X308	10.70
			5 SDR120-024X500	13.50
			7 SDR120-024X700	16.16
1/2	.5000	1-3/8	3-3/4 SDR120-032X348	14.68
			6 SDR120-032X600	20.48
			8 SDR120-032X800	25.36
5/8	.6250	1-5/8	4-3/8 SDR120-040X424	23.12
			7 SDR120-040X700	32.40
			9 SDR120-040X900	41.48
3/4	.7500	1-7/8	5 SDR120-048X500	34.94
			8 SDR120-048X800	49.40
			10 SDR120-048X10.	CALL
1	1.000	2-1/4	6 SDR120-100X600	CALL
			8 SDR120-100X800	CALL
			10 SDR120-100X10.	CALL

TiN Coated

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
90° POINT				
1/4	.2500	3/4	2-1/2 SDT090-016X232	7.88
			4 SDT090-016X400	8.96
			6 SDT090-016X600	11.34
3/8	.3750	1-1/8	3-1/8 SDT090-024X308	16.62
			5 SDT090-024X500	24.60
			7 SDT090-024X700	28.38
1/2	.5000	1-3/8	3-3/4 SDT090-032X348	25.36
			6 SDT090-032X600	31.54
			8 SDT090-032X800	40.64
5/8	.6250	1-5/8	4-3/8 SDT090-040X424	36.78
			7 SDT090-040X700	46.96
			9 SDT090-040X900	66.18
3/4	.7500	1-7/8	5 SDT090-048X500	51.42
			8 SDT090-048X800	69.98
			10 SDT090-048X10.	CALL
1	1.000	2-1/4	6 SDT090-100X600	CALL
			8 SDT090-100X800	CALL
			10 SDT090-100X10.	CALL
120° POINT				
1/4	.2500	3/4	2-1/2 SDT120-016X232	7.88
			4 SDT120-016X400	8.96
			6 SDT120-016X600	11.34
3/8	.3750	1-1/8	3-1/8 SDT120-024X308	16.62
			5 SDT120-024X500	24.60
			7 SDT120-024X700	28.38
1/2	.5000	1-3/8	3-3/4 SDT120-032X348	25.36
			6 SDT120-032X600	31.54
			8 SDT120-032X800	40.64
5/8	.6250	1-5/8	4-3/8 SDT120-040X424	36.78
			7 SDT120-040X700	46.96
			9 SDT120-040X900	66.18
3/4	.7500	1-7/8	5 SDT120-048X500	51.42
			8 SDT120-048X800	69.98
			10 SDT120-048X10.	CALL
1	1.000	2-1/4	6 SDT120-100X600	CALL
			8 SDT120-100X800	CALL
			10 SDT120-100X10.	CALL

HIGH SPEED STEEL COMBINED DRILLS & COUNTERSINKS

ICS **WIS**

GENERAL PURPOSE

118° POINT

PLAIN
TYPE



60°, 82° & 90°
INCLUDED ANGLES

Plain Type Combined Drills & Countersinks are designed to produce accurate center holes in components which require machining between centers. Sizes #0 to #000 are often referred to as Missile & Aircraft Series.

SIZE	BODY DIA.	DRILL DIA.	DRILL LENGTH	OVERALL LENGTH	ITEM NO.		PRICE EACH	PKG. QTY.
					60°			
000	1/8	.020	.020	1-1/4	CDC#000		4.68	10
00	1/8	0.25	.025	1-1/4	CDC#00		4.68	10
0	1/8	1/32	1/32	1-1/4	CDC#0		4.68	10
1	1/8	3/64	3/64	1-1/4	CDC#01		1.76	10
2	3/16	5/64	5/64	1-7/8	CDC#02		1.98	10
3	1/4	7/64	7/64	2	CDC#03		1.98	10
4	5/16	1/8	1/8	2-1/8	CDC#04		2.12	10
4-1/2	3/8	9/64	9/64	2-1/2	CDC#04.5		3.68	10
5	7/16	3/16	3/16	2-3/4	CDC#05		4.82	10
6	1/2	7/32	7/32	3	CDC#06		8.40	5
7	5/8	1/4	1/4	3-1/4	CDC#07		14.90	1
8	3/4	5/16	5/16	3-1/2	CDC#08		20.44	1
9	7/8	11/32	11/32	3-5/8	CDC#09		46.20	1
10	1	3/8	3/8	3-3/4	CDC#10		63.00	1
					82°	90°		
1	1/8	3/64	3/64	1-1/4	CDC082#01	CDC090#01	4.12	10
2	3/16	5/64	5/64	1-7/8	CDC082#02	CDC090#02	5.00	10
3	1/4	7/64	7/64	2	CDC082#03	CDC090#03	5.46	10
4	5/16	1/8	1/8	2-1/8	CDC082#04	CDC090#04	6.60	10
5	7/16	3/16	3/16	2-3/4	CDC082#05	CDC090#05	11.60	10
6	1/2	7/32	7/32	3	CDC082#06	CDC090#06	15.38	5
7	5/8	1/4	1/4	3-1/4	CDC082#07	CDC090#07	25.96	1
8	3/4	5/16	5/16	3-1/2	CDC082#08	CDC090#08	39.82	1

Available with Titanium Nitride (TiN) Coating. Inquire for pricing.

COBALT COMBINED DRILL & COUNTERSINKS

ICS **WIS**

HEAVY DUTY

118° POINT

PLAIN
TYPE



60° INCLUDED
ANGLE

SIZE	BODY DIA.	DRILL DIA.	DRILL LENGTH	OVERALL LENGTH	ITEM NO.	PRICE EACH	PKG. QTY.
1	1/8	3/64	3/64	1-1/4	CDCC#01	8.56	10
2	3/16	5/64	5/64	1-7/8	CDCC#02	8.56	10
3	1/4	7/64	7/64	2	CDCC#03	8.56	10
4	5/16	1/8	1/8	2-1/8	CDCC#04	10.32	10
5	7/16	3/16	3/16	2-3/4	CDCC#05	20.58	10
6	1/2	7/32	7/32	3	CDCC#06	35.54	5
7	5/8	1/4	1/4	3-1/4	CDCC#07	66.18	1
8	3/4	5/16	5/16	3-1/2	CDCC#08	80.62	1

SOLID CARBIDE COMBINED DRILL & COUNTERSINKS

ICS **WIS**

HEAVY DUTY

118° POINT

PLAIN
ANGLE



60° INCLUDED
ANGLE

SIZE	BODY DIA.	DRILL DIA.	DRILL LENGTH	OVERALL LENGTH	ITEM NO.	PRICE EACH	PKG. QTY.
00	1/8	.025	.025	1-1/4	SCDCC#00	25.76	1
0	1/8	1/32	1/32	1-1/4	SCDCC#0	25.76	1
1	1/8	3/64	3/64	1-1/4	SCDCC#01	23.30	1
2	3/16	5/64	5/64	1-7/8	SCDCC#02	26.96	1
3	1/4	7/64	7/64	2	SCDCC#03	38.98	1
4	5/16	1/8	1/8	2-1/8	SCDCC#04	55.64	1
5	7/16	3/16	3/16	2-3/4	SCDCC#05	92.86	1
6	1/2	7/32	7/32	3	SCDCC#06	108.56	1

HIGH SPEED STEEL COMBINED DRILLS & COUNTERSINKS

ICS **WIS**

GENERAL PURPOSE

118° POINT

**BELL
TYPE**



60° & 82°
INCLUDED ANGLES

Bell Type Combined Drills & Countersinks are designed with an additional small 120° chamfer to protect the edges of the 60° hole.

SIZE	BODY DIA.	DRILL DIA.	OVERALL LENGTH	ITEM NO.	PRICE EACH	PKG. QTY.
11	1/8	3/64	1-1/4	CDC#11	3.62	10
12	3/16	1/16	1-7/8	CDC#12	3.62	10
13	1/4	3/32	2	CDC#13	3.62	10
14	5/16	7/64	2-1/8	CDC#14	3.62	10

SIZE	BODY DIA.	DRILL DIA.	OVERALL LENGTH	ITEM NO.	PRICE EACH	PKG. QTY.
15	7/16	5/32	2-3/4	CDC#15	7.06	10
16	1/2	3/16	3	CDC#16	10.54	5
17	5/8	7/32	3-1/4	CDC#17	14.06	5
18	3/4	1/4	3-1/2	CDC#18	18.86	5

HIGH SPEED STEEL LONG LENGTH COMBINED DRILL & COUNTERSINKS

ICS **WIS**

GENERAL PURPOSE

118° POINT

**PLAIN
TYPE**



60° INCLUDED
ANGLE

Long Length Combined Drills & Countersinks are designed to provide access to areas where standard lengths will not reach.

SIZE	BODY DIA.	DRILL DIA.	OVERALL LENGTH	ITEM NO.	PRICE EACH
1	1/8	3/64	3	CDCL#103	13.24
1	1/8	3/64	4	CDCL#104	14.04
1	1/8	3/64	5	CDCL#105	19.38
1	1/8	3/64	6	CDCL#106	25.34
2	3/16	5/64	4	CDCL#204	15.36
2	3/16	5/64	5	CDCL#205	19.38
2	3/16	5/64	6	CDCL#206	25.52
3	1/4	7/64	4	CDCL#304	16.12
3	1/4	7/64	5	CDCL#305	21.14
3	1/4	7/64	6	CDCL#306	25.52
4	5/16	1/8	4	CDCL#404	17.60
4	5/16	1/8	5	CDCL#405	22.72

SIZE	BODY DIA.	DRILL DIA.	OVERALL LENGTH	ITEM NO.	PRICE EACH
4	5/16	1/8	6	CDCL#406	25.98
4-1/2	3/8	9/64	4	CDCL#454	19.38
4-1/2	3/8	9/64	5	CDCL#455	23.10
4-1/2	3/8	9/64	6	CDCL#456	27.68
5	7/16	3/16	4	CDCL#504	21.74
5	7/16	3/16	5	CDCL#505	25.98
5	7/16	3/16	6	CDCL#506	29.36
6	1/2	7/32	5	CDCL#605	27.38
6	1/2	7/32	6	CDCL#606	33.00
7	5/8	1/4	5	CDCL#705	54.16
7	5/8	1/4	6	CDCL#706	61.46
8	3/4	5/16	6	CDCL#806	66.20

COMBINED DRILL & COUNTERSINK SETS

VINYL POUCH

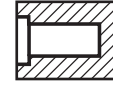
ILLUSTRATION	DESCRIPTION	TYPE OF DRILL	ITEM NO.	PRICE
	5 PC SET Sizes #1 to #5	HSS - Plain - 60° Titanium Nitride Coated - Plain - 60° Cobalt - Plain - 60°	DS-CDC-5 DS-CDCT-5 DS-CDCC-5	21.18 48.80 60.04
	5 PC SET Sizes #11 to #15 (Not Illustrated)	HSS - Bell - 60°	DS-CDC-5B	25.00

HIGH SPEED STEEL
90° ANGLE STEP DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



High Speed Steel 90° Angle Step Drills are designed for drilling and counterboring 90° cap screw clearance holes in one operation, saving machine time and reducing set up time. They can be resharpened or modified for a special length of step and are available in jobber length or taper length drill styles.

For Drilling 90° Holes and Counterboring Cap Screw Clearance Holes

SCREW SIZE	MINOR DIA.	MAJOR DIA.	STEP LENGTH	SHANK DIA.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#4	.136	7/32	3/8	7/32	2-1/2	3-3/4	SDJL90-#04	12.22
#5	.141	#1	3/8	#1	2-5/8	3-7/8	SDJL90-#05	13.06
#6	.150	1/4	1/2	1/4	2-3/4	4	SDJL90-#06	13.88
#8	.178	"L"	1/2	"L"	2-15/16	4-1/4	SDJL90-#08	15.94
#10	.204	"Q"	5/8	"Q"	3-7/16	4-3/4	SDJL90-#10	17.30
1/4	9/32	13/32	11/16	13/32	3-7/8	5-1/4	SDJL90-016	20.06
5/16	11/32	1/2	3/4	1/2	4-1/2	6	SDJL90-020	48.80
3/8	13/32	19/32	7/8	19/32	5-3/16	7-1/8	SDJL90-024	38.18
7/16	15/32	11/16	1	11/16	5-5/8	7-5/8	SDJL90-028	46.18
*1/2	17/32	25/32	1	25/32	3-1/4	5-1/8	SDJL90-032	53.20
*5/8	21/32	31/32	1	31/32	3-7/8	5-7/8	SDJL90-040	66.68

*Shorter than jobber length.

Reduced 1/2" shank available on screw sizes 3/8 to 5/8. (Add \$3.00)

HIGH SPEED STEEL
45° ANGLE STEP DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



High Speed Steel 45° Angle Step Drills are designed for drilling 45° chamfered holes to be tapped in one operation. The chamfered hole ensures alignment of tap threads and should always be used with thread forming taps as they displace metal above the mouth of the hole. They can be resharpened or modified for a special length of step and are available in jobber length or taper length drill styles.

For Drilling 45° Chamfered Holes to be Tapped (to produce approx. 70° thread)

SCREW SIZE	MINOR DIA.	MAJOR DIA.	STEP LENGTH	SHANK DIA.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#4-40	.089	.1285	3/8	.1285	1-5/8	2-3/4	SDJL45-#04-40	12.08
#5-40	.101	9/64	1/2	9/64	1-3/4	2-7/8	SDJL45-#05-40	12.92
#6-32	.109	5/32	1/2	5/32	2	3-1/8	SDJL45-#06-32	12.94
#8-32	.136	3/16	1/2	3/16	2-5/16	3-1/2	SDJL45-#08-32	13.26
#8-36	.136	3/16	1/2	3/16	2-5/16	3-1/2	SDJL45-#08-36	13.44
#10-24	.152	1/4	5/8	1/4	2-3/4	4	SDJL45-#10-24	14.28
#10-32	.161	1/4	5/8	1/4	2-3/4	4	SDJL45-#10-24	14.28
#12-24	.179	9/32	11/16	9/32	2-15/16	4-1/4	SDJL45-#12-24	16.36
1/4-20	.204	21/64	13/16	21/64	3-5/16	4-5/8	SDJL45-016-20	17.56
1/4-28	.218	21/64	13/16	21/64	3-5/16	4-5/8	SDJL45-016-28	17.56
5/16-18	.261	13/32	15/16	13/32	3-7/8	5-1/4	SDJL45-020-18	20.06
5/16-24	.272	13/32	15/16	13/32	3-7/8	5-1/4	SDJL45-020-24	20.06
3/8-16	.316	31/64	1	31/64	4-3/8	5-7/8	SDJL45-024-16	26.52
3/8-24	.339	31/64	1	31/64	4-3/8	5-7/8	SDJL45-024-24	26.52
7/16-14	.375	17/32	1-1/16	17/32	4-13/16	6-5/8	SDJL45-028-14	36.52
7/16-20	.390	17/32	1-1/16	17/32	4-13/16	6-5/8	SDJL45-028-20	36.52
1/2-13	.437	5/8	1-1/16	5/8	5-3/16	7-1/8	SDJL45-032-13	43.24
1/2-20	.452	5/8	1-1/16	5/8	5-3/16	7-1/8	SDJL45-032-20	43.24
5/8-11	.531	3/4	1-1/16	3/4	5-5/8	7-5/8	SDJL45-040-11	46.58

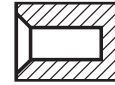
Reduced 1/2" shank available on screw sizes 7/16-14 to 5/8-11. (Add \$3.00)

HIGH SPEED STEEL
82° ANGLE STEP DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



High Speed Steel 82° Angle Step Drills are designed for drilling and countersinking 82° flat head machine screw clearance holes in one operation, saving machine time and reducing set up time. They can be resharpened or modified for a special length of step and are available in jobber length or taper length drill styles.

For Drilling and Countersinking 82° Flat Head Machine Screw Clearance Holes

SCREW SIZE	MINOR DIA.	MAJOR DIA.	STEP LENGTH	SHANK DIA.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
#4	.116	15/64	3/8	15/64	2-5/8	3-7/8	SDJL82-#04	13.76
#5	.128	"F"	3/8	"F"	2-7/8	4-1/8	SDJL82-#05	13.80
#6	.142	9/32	1/2	9/32	2-15/16	4-1/4	SDJL82-#06	14.04
#8	.169	"Q"	1/2	"Q"	3-7/16	4-3/4	SDJL82-#08	17.48
#10	.196	"W"	5/8	"W"	3-3/4	5-1/8	SDJL82-#10	19.42
1/4	.257	1/2	11/16	1/2	4-1/2	6	SDJL82-016	23.66
5/16	.320	5/8	3/4	5/8	5-3/16	7-1/8	SDJL82-020	35.32
* 3/8	.383	3/4	7/8	3/4	3-1/8	5	SDJL82-024	48.02
*7/16	.446	13/16	1	13/16	3-3/8	5-1/4	SDJL82-028	54.58
*1/2	.510	7/8	1	7/8	3-1/2	5-1/2	SDJL82-032	64.56

*Shorter than jobber length.

Reduced 1/2" shank available on screw sizes 5/16 to 1/2. (Add \$3.00)

Reduced 3/8" shank also available on screw sizes 5/16 to 1/2. (Add \$5.00)

STEP DRILL SETS

WOOD STAND

High Speed Steel 6 Piece Step Drill Sets contain #6 to 3/8 screw sizes and are available in 45°, 82°, and 90° step angles in jobber length and taper length drill styles.

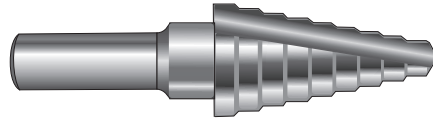
ILLUSTRATION	TYPE OF STEP DRILL	ITEM NO.	PRICE
<p>6 PC STEP DRILL SET #6 to 3/8</p>	Jobber Length 45°	SDJLS45-6	102.58
	Jobber Length 82°	SDJLS82-6	152.30
	Jobber Length 90°	SDJLS90-6	127.66

HIGH SPEED STEEL STEPPED CONE DRILLS

ICS USA

SPECIAL PURPOSE

SELF-STARTING POINT



**TWO
FLUTE**

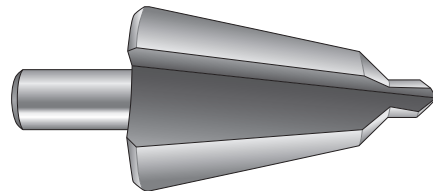
High Speed Steel 2 Flute Stepped Cone Drills are designed for drilling and enlarging perfectly round holes from 1/8" to 1-1/2" diameter in thin materials up to 1/8" thick. No pilot hole is required. Self-starting split point prevents walking. Each hole is automatically deburred by the cutting edge of the next larger size. Ideal for drilling sheet metal, non-ferrous metals, plastics, PVC, laminates, or wood. They are also known as Step Drill Bits or Step Drills.

LARGE							
DIAMETER	SHANK	SIZE RANGE	APPLICATION	HOLES	ITEM NO.	PRICE	
HIGH SPEED STEEL							
1/2A	1/4	1/8 - 1/2 by 32nds	Common Size Holes	13	SCD032A	17.20	
1/2B	1/4	3/16 - 1/2 by 16ths	Common Size Holes	6	SCD032B	18.26	
3/4	3/8	1/4 - 3/4 by 16ths	Medium Size Holes	9	SCD048	25.20	
7/8	3/8	3/16 - 7/8 by 16ths	1/2 Conduit	12	SCD056	33.04	
1	3/8 - 1/2	9/16 - 1 by 16ths	Common Size Holes	8	SCD100	38.08	
1-1/8	3/8	7/16 - 1-1/8 by 16ths	1/2 & 3/4 Conduit	11	SCD108	46.10	
1-3/8	1/2	3/4 - 1-3/8 by 16ths	1" Conduit/Tubing	11	SCD124	58.30	
1-1/2	1/2	1/4 - 1-1/2 by 8ths	Large Holes	11	SCD132	105.00	
HIGH SPEED STEEL							
1/2A	1/4	1/8 - 1/2 by 32nds	Common Size Holes	13	SCDT032A	25.66	
1/2B	1/4	3/16 - 1/2 by 16ths	Common Size Holes	6	SCDT032B	28.00	
3/4	3/8	1/4 - 3/4 by 16ths	Medium Size Holes	9	SCDT048	37.34	
7/8	3/8	3/16 - 7/8 by 16ths	1/2 Conduit	12	SCDT056	46.66	
1	3/8 - 1/2	9/16 - 1 by 16ths	Common Size Holes	8	SCDT100	48.30	
1-1/8	3/8	7/16 - 1-1/8 by 16ths	1/2 & 3/4 Conduit	11	SCDT108	58.34	
1-3/8	1/2	3/4 - 1-3/8 by 16ths	1" Conduit/Tubing	11	SCDT124	65.34	
1-1/2	1/2	1/4 - 1-1/2 by 8ths	Large Holes	11	SCDT132	136.50	

HIGH SPEED STEEL TAPERED CONE DRILLS

ICS WIS

SELF-STARTING POINT



**TWO
FLUTE**

High Speed Steel 2 Flute Tapered Cone Drills are designed to drill burr free holes from 1/8" to 1-1/8" diameter in metal, plastic, PVC, laminates, or wood. A washer can be placed on the cone to act as a simple stop gauge. Ideal for sheet metal and hole enlarging work. Also used for holes for knockout punches and holes for push buttons and indicator lights. They are also known as Sheet and Tube Drills, Conical Drills, Concut Drills, and Sheet Drills.

LARGE		SIZE			ITEM
DIAMETER	SHANK	RANGE	APPLICATION	NO.	PRICE
HIGH SPEED STEEL					
7/8	3/8	3/8 - 7/8	Auto Body Work, Conduit Holes	TCD056	26.68
1-1/8	3/8	5/8 - 1-1/8	Holes for Knockout Punches	TCD108	41.04
TIN COATED					
7/8	3/8	3/8 - 7/8	Auto Body Work, Conduit Holes	TCDT056	52.58
1-1/8	3/8	5/8 - 1-1/8	Holes for Knockout Punches	TCDT108	78.90

**HIGH SPEED STEEL
PLASTIC & LAMINATE DRILLS**

ICS WIS

SPECIAL PURPOSE

SPECIAL POINT



High Speed Steel Plastic and Laminate Drills are designed with a self-centering flat point for drilling into acrylic plastic sheet and other similar materials. They will drill perfectly round, clean holes without grabbing or cracking the material being drilled.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/8	.1250	1-5/8	2-3/4	PLD008	3.36
5/32	.1562	2	3-1/8	PLD010	3.78
3/16	.1875	2-5/16	3-1/2	PLD012	4.08
1/4	.2500	2-3/4	4	PLD016	4.66
5/16	.3125	3-3/16	4-1/2	PLD020	6.14
3/8	.3750	3-5/8	5	PLD024	7.60
7/16	.4375	4-1/16	5-1/2	PLD028	9.48
1/2	.5000	4-1/2	6	PLD032	11.56
1/4" SHANK					
5/16	.3125	3-3/16	4-1/2	PLDQS020	7.90
3/8	.3750	3-5/8	5	PLDQS024	9.72
7/16	.4375	4-1/16	5-1/2	PLDQS028	11.82
1/2	.5000	4-1/2	6	PLDQS032	13.90
3/8" SHANK					
7/16	.4375	4-1/16	5-1/2	PLDTS028	11.82
1/2	.5000	4-1/2	6	PLDTS032	13.90

Sizes not listed are available upon request.

**HIGH SPEED STEEL
PLASTIC & LAMINATE DRILL SETS**

METAL INDEX

ILLUSTRATION	TYPE OF DRILLS	ITEM NO.	PRICE
<p>7 PC DRILL SET 1/8 to 1/2 by 16ths</p> <p>(Wt. 1.40 lbs.)</p>	Bright Finish Plastic Laminate Drills	DS-PLD-7	64.66
	Bright Finish 1/4" Shank Plastic Laminate Drills	DS-PLDQS-7	73.02
	Bright Finish 3/8" Shank Plastic Laminate Drills	DS-PLDTS-7	69.36

**HIGH SPEED STEEL
PLASTIC & LAMINATE DRILL BITS**

ICS USA

SPECIAL PURPOSE

60° POINT



High Speed Steel Bright Finish Plastic and Laminate Drills Bits are designed with a precision ground sharp 60° angle point for gradual penetration to eliminate edge chipping, chip wrapping, and cracking. Bits are dubbed on cutting edge with a 0° rake angle to self-center and eliminate grabbing. They are used for drilling hard and soft plastics.

Fractional Sizes 1/8" to 9/16" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO. BRIGHT FINISH	PRICE
1/8	.1250	1-5/8	2-3/4	PLB008	4.16
9/64	.1406	1-3/4	2-7/8	PLB009	6.66
5/32	.1562	2	3-1/8	PLB010	4.76
11/64	.1719	2-1/8	3-1/4	PLB011	7.30
3/16	.1875	2-5/16	3-1/2	PLB012	6.24
13/64	.2031	2-7/16	3-5/8	PLB013	8.06
7/32	.2188	2-1/2	3-3/4	PLB014	8.34
15/64	.2344	2-5/8	3-7/8	PLB015	8.34
1/4	.2500	2-3/4	4	PLB016	6.98
17/64	.2656	2-7/8	4-1/8	PLB017	9.56
9/32	.2812	2-15/16	4-1/4	PLB018	10.84
19/64	.2969	3-1/16	4-3/8	PLB019	11.84
5/16	.3125	3-3/16	4-1/2	PLB020	10.24
21/64	.3281	3-5/16	4-5/8	PLB021	13.44
11/32	.3438	3-7/16	4-3/4	PLB022	14.38

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO. BRIGHT FINISH	PRICE
23/64	.3594	3-1/2	4-7/8	PLB023	15.42
3/8	.3750	3-5/8	5	PLB024	13.54
25/64	.3906	3-3/4	5-1/8	PLB025	17.22
13/32	.4062	3-7/8	5-1/4	PLB026	18.44
27/64	.4219	3-15/16	5-3/8	PLB027	19.94
7/16	.4375	4-1/16	5-1/2	PLB028	15.16
29/64	.4531	4-3/16	5-5/8	PLB029	21.14
15/32	.4688	4-5/16	5-3/4	PLB030	22.22
31/64	.4844	4-3/8	5-7/8	PLB031	23.56
1/2	.5000	4-1/2	6	PLB032	18.08
33/64	.5156	4-13/16	6-5/8	PLB033	47.66
17/32	.5312	4-13/16	6-5/8	PLB034	47.66
35/64	.5469	4-13/16	6-5/8	PLB035	49.10
9/16	.5625	4-13/16	6-5/8	PLB036	50.36

Wire Gauge Sizes #1 to #31 Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO. BRIGHT FINISH	PRICE
1	.2280	2-5/8	3-7/8	PLB#01	7.80
2	.2210	2-5/8	3-7/8	PLB#02	7.80
3	.2130	2-1/2	3-3/4	PLB#03	7.80
4	.2090	2-1/2	3-3/4	PLB#04	7.52
5	.2055	2-1/2	3-3/4	PLB#05	7.52
6	.2040	2-1/2	3-3/4	PLB#06	7.52
7	.2010	2-7/16	3-5/8	PLB#07	7.52
8	.1990	2-7/16	3-5/8	PLB#08	7.52
9	.1960	2-7/16	3-5/8	PLB#09	7.30
10	.1935	2-7/16	3-5/8	PLB#10	7.30
11	.1910	2-5/16	3-1/2	PLB#11	7.30
12	.1890	2-5/16	3-1/2	PLB#12	7.30
13	.1850	2-5/16	3-1/2	PLB#13	6.92
14	.1820	2-3/16	3-3/8	PLB#14	6.92
15	.1800	2-3/16	3-3/8	PLB#15	6.82
16	.1770	2-3/16	3-3/8	PLB#16	6.82

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO. BRIGHT FINISH	PRICE
17	.1730	2-3/16	3-3/8	PLB#17	6.82
18	.1695	2-1/8	3-1/4	PLB#18	6.30
19	.1660	2-1/8	3-1/4	PLB#19	6.30
20	.1610	2-1/8	3-1/4	PLB#20	6.30
21	.1590	2-1/8	3-1/4	PLB#21	6.30
22	.1570	2	3-1/8	PLB#22	6.30
23	.1540	2	3-1/8	PLB#23	6.22
24	.1520	2	3-1/8	PLB#24	6.22
25	.1495	1-7/8	3	PLB#25	6.22
26	.1470	1-7/8	3	PLB#26	6.22
27	.1440	1-7/8	3	PLB#27	6.22
28	.1405	1-3/4	2-7/8	PLB#28	6.22
29	.1360	1-3/4	2-7/8	PLB#29	6.08
30	.1285	1-5/8	2-3/4	PLB#30	6.08
31	.1200	1-5/8	2-3/4	PLB#31	5.70

HIGH SPEED STEEL
PLASTIC & LAMINATE DRILL BITS

ICS USA

SPECIAL PURPOSE

60° POINT



High Speed Steel Bright Finish Plastic and Laminate Drills Bits are designed with a precision ground sharp 60° angle point for gradual penetration to eliminate edge chipping, chip wrapping, and cracking. Bits are dubbed on cutting edge with a 0° rake angle to self-center and eliminate grabbing. They are used for drilling hard and soft plastics.

Letter Sizes "A" to "Z" Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
				BRIGHT FINISH	
A	.234	2-5/8	3-7/8	PLB"A"	7.80
B	.238	2-3/4	4	PLB"B"	8.18
C	.242	2-3/4	4	PLB"C"	8.18
D	.246	2-3/4	4	PLB"D"	8.18
E	.250	2-3/4	4	PLB"E"	8.18
F	.257	2-7/8	4-1/8	PLB"F"	8.56
G	.261	2-7/8	4-1/8	PLB"G"	8.78
H	.266	2-7/8	4-1/8	PLB"H"	9.06
I	.272	2-7/8	4-1/8	PLB"I"	9.48
J	.277	2-7/8	4-1/8	PLB"J"	9.62
K	.281	2-15/16	4-1/4	PLB"K"	9.86
L	.290	2-15/16	4-1/4	PLB"L"	5.24
M	.295	3-1/16	4-3/8	PLB"M"	10.80

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
				BRIGHT FINISH	
N	.302	3-1/16	4-3/8	PLB"N"	11.54
O	.316	3-3/16	4-1/2	PLB"O"	11.96
P	.323	3-5/16	4-5/8	PLB"P"	12.22
Q	.332	3-7/16	4-3/4	PLB"Q"	12.56
R	.339	3-7/16	4-3/4	PLB"R"	13.22
S	.348	3-1/2	4-7/8	PLB"S"	13.74
T	.358	3-1/2	4-7/8	PLB"T"	14.10
U	.368	3-5/8	5	PLB"U"	14.70
V	.377	3-5/8	5	PLB"V"	15.64
W	.386	3-3/4	5-1/8	PLB"W"	15.84
X	.397	3-3/4	5-1/8	PLB"X"	16.38
Y	.404	3-7/8	5-1/4	PLB"Y"	16.84
Z	.413	3-7/8	5-1/4	PLB"Z"	18.22

Metric Sizes 3mm to 17.5mm Dia.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
				BRIGHT FINISH	
3.00	0.1181	33	61	PLBM03.0	6.02
3.50	0.1378	39	70	PLBM03.5	5.76
4.00	0.1575	43	75	PLBM04.0	6.54
4.50	0.1772	47	80	PLBM04.5	6.88
5.00	0.1969	52	86	PLBM05.0	7.80
5.50	0.2165	57	93	PLBM05.5	8.44
6.00	0.2362	63	93	PLBM06.0	10.40
6.50	0.2559	63	101	PLBM06.5	10.38
7.00	0.2756	69	109	PLBM07.0	11.84
7.50	0.2953	69	109	PLBM07.5	13.32
8.00	0.3150	75	117	PLBM08.0	14.24
8.50	0.3346	75	117	PLBM08.5	14.74
9.00	0.3543	81	125	PLBM09.0	19.94
9.50	0.3740	81	125	PLBM09.5	18.64
10.00	0.3937	87	133	PLBM10.0	25.94

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
				BRIGHT FINISH	
10.50	0.4134	87	133	PLBM10.5	24.24
11.00	0.4331	94	142	PLBM11.0	25.72
11.50	0.4528	94	142	PLBM11.5	28.56
12.00	0.4724	101	151	PLBM12.0	30.82
12.50	0.4921	101	151	PLBM12.5	30.82
13.00	0.5118	101	151	PLBM13.0	40.28
13.50	0.5315	108	160	PLBM13.5	41.74
14.00	0.5512	108	160	PLBM14.5	53.86
14.50	0.5709	114	169	PLBM14.5	54.76
15.00	0.5906	114	169	PLBM15.0	54.76
15.50	0.6102	120	178	PLBM15.5	60.06
16.00	0.6299	120	178	PLBM16.0	63.80
16.50	0.6496	125	184	PLBM16.5	107.52
17.00	0.6693	125	184	PLBM17.0	66.32
17.50	0.6890	130	191	PLBM17.5	107.10

HIGH SPEED STEEL
PLASTIC & LAMINATE DRILL BIT SET

METAL INDEX

DETAILS	TYPE OF DRILLS	ITEM NO.	PRICE
7 PC DRILL SET 1/8 to 1/2 by 16ths	Bright Finish Plastic Laminate 60° Point Drill Bits	DS-PLB-7	67.96

HIGH SPEED STEEL DIAMOND COATED JOBBER DRILL

ICS **WIS**

SPECIAL POINT

118° POINT



Diamond Coated High Speed Steel Jobber Drills are designed for drilling graphite, FRP, glass, ceramic and other non-metallic materials such as carbon fiber, kevlar, fiber laminates, and glass fiber laminates.

SIZE	DECIMAL EQUIV.	ITEM NO.	PRICE
1/8	.1250	DCJD008	10.50
3/16	.1875	DCJD012	13.12
1/4	.2500	DCJD016	15.76
3/8	.3750	DCJD024	23.74

CARBIDE TIPPED BOWLING BALL DRILLS

ICS **WIS**

SPECIAL PURPOSE

118° POINT



All sizes 6-1/4" overall length with 3-7/8" flute length.

Carbide Tipped Bowling Ball Drills were originally designed to drill out finger holes in bowling balls. They can also be used in many drilling applications using bakelite composites and other similar non-metallic materials. Not intended for hard steel drilling or precision type work.

SIZE	DECIMAL EQUIV.	ITEM NO.	PRICE
7/16	.4375	CTSND028	20.58
1/2	.5000	CTSND032	20.58
9/16	.5625	CTSND036	23.36
5/8	.6250	CTSND040	26.46
21/32	.6562	CTSND042	27.06
11/16	.6875	CTSND044	28.22
23/32	.7188	CTSND046	29.40
3/4	.7500	CTSND048	30.00
25/32	.7812	CTSND050	30.58
13/16	.8125	CTSND052	31.16
27/32	.8438	CTSND054	32.94
7/8	.8750	CTSND056	35.02
29/32	.9062	CTSND058	37.04
15/16	.9375	CTSND060	38.82
61/64	.9531	CTSND061	39.98
31/32	.9688	CTSND062	41.16
63/64	.9844	CTSND063	42.92
1	1.0000	CTSND100	44.42
1-1/64	1.0156	CTSND101	46.46
1-1/32	1.0312	CTSND102	48.22
1-1/16	1.0625	CTSND104	49.40
1-3/32	1.0938	CTSND106	51.74
1-1/8	1.1250	CTSND108	53.86
1-1/4	1.2500	CTSND116	56.46

CARBIDE TIPPED DIE DRILLS

MET-121

ICS USA

SPECIAL PURPOSE

118° POINT



**TWO STRAIGHT
FLUTES**

Carbide Tipped Straight Flute Die Drills are designed for drilling into 48-65 RC hardened steels, such as dies, bearing races, and safes. Often used as a reamer or core drill to produce close diameter holes. Tolerance +.000-.001.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
3/16	.1875	1-1/2	3-1/2	CTDD012	29.74
13/64	.2031	1-3/4	3-3/4	CTDD013	30.66
7/32	.2188	1-3/4	3-3/4	CTDD014	30.66
15/64	.2344	2	4	CTDD015	31.86
1/4	.2500	2	4	CTDD016	31.86
17/64	.2656	2-1/4	4-1/4	CTDD017	33.70
9/32	.2812	2-1/4	4-1/4	CTDD018	33.70
19/64	.2969	2-1/2	4-1/2	CTDD019	35.18
5/16	.3125	2-1/2	4-1/2	CTDD020	35.18
21/64	.3281	2-3/4	4-3/4	CTDD021	38.08
11/32	.3438	2-3/4	4-3/4	CTDD022	50.34
23/64	.3594	3	5	CTDD023	40.48
3/8	.3750	3	5	CTDD024	40.48
25/64	.3906	3	5-1/4	CTDD025	47.18
13/32	.4062	3	5-1/4	CTDD026	47.18
27/64	.4219	3	5-1/2	CTDD027	54.74
7/16	.4375	3	5-1/2	CTDD028	54.74

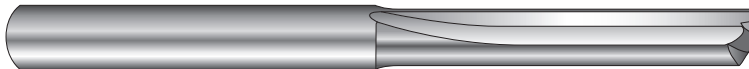
SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
29/64	.4531	3-1/4	5-3/4	CTDD029	60.28
15/32	.4688	3-1/4	5-3/4	CTDD030	60.28
31/64	.4844	3-1/2	6	CTDD031	80.76
1/2	.5000	3-1/2	6	CTDD032	70.44
17/32	.5312	3-1/2	6	CTDD034	80.76
9/16	.5625	3-1/2	6	CTDD036	83.64
19/32	.5938	4	7	CTDD038	88.44
5/8	.6250	4	7	CTDD040	96.10
21/32	.6562	4-1/2	7-1/2	CTDD042	108.12
11/16	.6875	4-1/2	7-1/2	CTDD044	111.14
23/32	.7188	4-3/4	8	CTDD046	116.56
3/4	.7500	4-3/4	8	CTDD048	119.62
13/16	.8125	4-3/4	8	CTDD052	214.40
7/8	.8750	4-3/4	8	CTDD056	218.86
15/16	.9375	4-3/4	8	CTDD060	243.82
1	1.0000	4-3/4	8	CTDD100	258.62

PREMIUM (10% COBALT) MICROGRAIN SOLID CARBIDE DIE DRILLS

ICS USA

SPECIAL PURPOSE

135° FOUR FACET POINT



**TWO STRAIGHT
FLUTES**

Solid Carbide Straight Flute Die Drills are designed for drilling shallow holes in 48-60 RC hardened steels, stainless steels, and high temperature alloys. Drills produce such accurate holes that extra reaming operations can usually be eliminated. Use rigid setups.

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
3/64	.0469	1/2	1-1/2	SCDD003	15.48
1/16	.0625	1/2	1-1/2	SCDD004	15.94
5/64	.0781	1/2	1-1/2	SCDD005	16.72
3/32	.0937	1/2	2	SCDD006	17.00
7/64	.1094	5/8	2	SCDD007	19.96
1/8	.1250	5/8	2	SCDD008	15.40
9/64	.1406	3/4	2	SCDD009	18.40
5/32	.1562	3/4	2-1/2	SCDD010	19.28
11/64	.1719	3/4	2-1/2	SCDD011	24.94
3/16	.1875	3/4	2-1/2	SCDD012	22.84
13/64	.2031	3/4	2-1/2	SCDD013	29.18
7/32	.2188	1	2-1/2	SCDD014	29.12
15/64	.2344	1	2-1/2	SCDD015	31.40
1/4	.2500	1	2-1/2	SCDD016	32.82
17/64	.2655	1	2-1/2	SCDD017	46.44

SIZE	DEC. EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
9/32	.2812	1	2-1/2	SCDD018	49.56
19/64	.2969	1-1/4	3	SCDD019	52.08
5/16	.3125	1-1/4	3	SCDD020	52.08
21/64	.3281	1-1/4	3	SCDD021	56.32
11/32	.3438	1-1/4	3	SCDD022	62.90
23/64	.3594	1-1/4	3	SCDD023	68.38
3/8	.3750	1-1/4	3	SCDD024	74.52
25/64	.3906	1-1/4	3	SCDD025	84.22
13/32	.4062	1-1/4	3	SCDD026	94.08
27/64	.4219	1-1/4	3	SCDD027	103.66
7/16	.4375	1-1/4	3	SCDD028	105.56
29/64	.4531	1-1/4	3	SCDD029	109.80
15/32	.4687	1-1/4	3	SCDD030	109.80
31/64	.4844	1-1/4	3	SCDD031	109.80
1/2	.5000	1-1/4	3	SCDD032	113.14

TOLERANCES

Drill Dia.: +.0000 -.0005"
Shank Dia.: +.0000 -.001"

PREMIUM (10% COBALT) MICROGRAIN SOLID CARBIDE SPADE DRILLS

ICS USA

SPECIAL PURPOSE

118° POINT



Solid Carbide Spade Drills are designed for drilling shallow holes in steels harder than RC 50 and for thin sheet metal applications. Drill diameter tolerances are +.000 -.0005.

DEC. SIZE	EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
1/16	.0625	5/16	1-1/2	SCSD004	13.22
3/32	.0937	7/16	1-1/2	SCSD006	11.84
1/8	.1250	1/2	1-1/2	SCSD008	11.84
5/32	.1562	9/16	2	SCSD010	15.74
3/16	.1875	11/16	2	SCSD012	14.84
7/32	.2188	11/16	2	SCSD014	21.32
1/4	.2500	13/16	2	SCSD016	18.90
9/32	.2812	7/8	2-1/2	SCSD018	27.04

DEC. SIZE	EQUIV.	FLUTE LENGTH	OVERALL LENGTH	ITEM NO.	PRICE
5/16	.3125	7/8	2-1/2	SCSD020	26.36
11/32	.3438	15/16	2-1/2	SCSD022	37.24
3/8	.3750	1-1/8	2-1/2	SCSD024	34.16
13/32	.4062	1-1/8	2-1/2	SCSD026	61.10
7/16	.4375	1-3/16	2-1/2	SCSD028	59.18
15/32	.4687	1-3/16	2-1/2	SCSD030	67.92
1/2	.5000	1-5/16	2-1/2	SCSD032	66.02

CARBIDE TIPPED HARD STEEL DRILLS

ICS USA

HEAVY DUTY

130° POINT



Carbide Tipped Hard Steel Drills are designed for all hardened steel drilling applications, such as dies, bearing races, and safes. Specially tempered high speed steel body with long carbide tip to prevent chipping. Ideal for locksmiths, mechanics, etc. Not intended for precision type work.

DEC. SIZE	EQUIV.	SHANK DIA	OVERALL LENGTH	ITEM NO.	PRICE
1/8	.0625	1/8	2-3/4	CTHSD008X02	10.74
5/32	.0937	5/32	3	CTHSD010X03	12.74
11/64	.1250	11/64	3	CTHSD011X03	13.16
3/16	.1562	3/16	3	CTHSD012X03	11.12
7/32	.1875	7/32	4	CTHSD014X04	14.86
1/4	.2188	1/4	4	CTHSD016X04	13.60
1/4	.2500	1/4	6	CTHSD016X06	14.30
9/32	.2812	9/32	4	CTHSD018X04	15.20
5/16		1/4	4	CTHSD020X04	14.86

DEC. SIZE	EQUIV.	SHANK DIA	OVERALL LENGTH	ITEM NO.	PRICE
5/16	.3125	5/16	6	CTHSD020X06	15.58
3/8	.3438	1/4	4	CTHSD024X04	15.46
3/8	.3750	3/8	6	CTHSD024X06	16.44
13/32	.4062	3/8	6	CTHSD026X06	22.02
7/16	.4375	3/8	6	CTHSD028X06	20.46
1/2	.4687	1/2	6	CTHSD032X06	23.48
9/16	.5000	1/2	6	CTHSD036X06	34.66
5/8		1/2	6	CTHSD040X06	35.32

NOTE: Special sizes quoted upon request.
Carbide Tipped Universal Drills (**CTUD**) for drilling hardened steel & cast iron are also available.

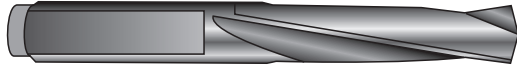
HIGH SPEED STEEL-COBALT RAILROAD BONDING BITS

ICS USA

HEAVY DUTY

SPLIT POINT

High Speed Steel and Cobalt Railroad Bonding Bits are designed for drilling holes for bonding wires in track circuit signal work. Cobalt Bonding Bits are made with a slow helix and a very heavy web for drilling in the head or web of heavy duty rails.



SUPER COBALT - 145° NOTCHED PT.

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
3/8	ROUND	1-3/4	3	RBBC024 14.46
3/8	FLATTED	1-3/4	3	RBBC1F024 16.38



HSS RAIL WEB TYPE - 135° SPLIT PT.

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
3/8	ROUND	1-1/2	3	RBBW024 7.06
3/8	FLATTED	1-1/2	3	RBBW1F024 8.60



HSS RAIL HEAD STYLE - 118° PT.

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
3/8	ROUND	1	3	RBBH 024 6.58
3/8	FLATTED	1	3	RBBH1F024 8.14



HSS UNIVERSAL TYPE - 118° PT.

DEC. SIZE	FLUTE EQUIV.	OVERALL LENGTH	ITEM NO.	PRICE
3/8	ROUND	1-3/4	3	RBBU024 7.06
3/8	FLATTED	1-3/4	3	RBBU1F024 8.60

HIGH SPEED STEEL-NITRIDE RAILROAD TRACK BITS

ICS USA

SPECIAL PURPOSE

135° SPECIAL POINT

High Speed Steel and Nitride Coated Railroad Track Bits were designed for heavy duty portable track repair work in the field and will fit the various machines in common use. They are available in a single end or a cost saving double end style. Both styles are also available with a super hard nitride coating for increased tool life of 50% to 300% depending upon conditions.

SINGLE END



DOUBLE END



OVERALL SIZE	OVERALL LENGTH	HSS ITEM NO.	NITRIDE COAT ITEM NO.	PRICE
5/8	6-1/4	RTB-SE040	RTB-SEN040	-
11/16	6-1/4	RTB-SE044	RTB-SEN044	-
3/4	6-1/4	RTB-SE048	RTB-SEN048	-
13/16	6-1/4	RTB-SE052	RTB-SEN052	-
15/16	6-1/4	RTB-SE060	RTB-SEN060	-
1	6-1/4	RTB-SE100	RTB-SEN100	CALL FOR PRICE
1-1/16	6-1/4	RTB-SE104	RTB-SEN104	CALL FOR PRICE
1-1/8	6-1/4	RTB-SE108	RTB-SEN108	CALL FOR PRICE
1-3/16	6-1/4	RTB-SE112	RTB-SEN112	-
1-1/4	6-1/4	RTB-SE116	RTB-SEN116	-
1-5/16	6-1/4	RTB-SE120	RTB-SEN120	-
1-3/8	6-1/4	RTB-SE124	RTB-SEN124	-
1-7/16	6-1/4	RTB-SE128	RTB-SEN128	-
1-1/2	6-1/4	RTB-SE132	RTB-SEN132	-

OVERALL SIZE	OVERALL LENGTH	HSS ITEM NO.	NITRIDE COAT ITEM NO.	PRICE
5/8	6-1/4	RTB-DE040	RTB-DEN040	-
11/16	6-1/4	RTB-DE044	RTB-DEN044	-
3/4	6-1/4	RTB-DE048	RTB-DEN048	-
13/16	6-1/4	RTB-DE052	RTB-DEN052	-
15/16	6-1/4	RTB-DE060	RTB-DEN060	-
1	6-1/4	RTB-DE100	RTB-DEN100	CALL FOR PRICE
1-1/16	6-1/4	RTB-DE104	RTB-DEN104	CALL FOR PRICE
1-1/8	6-1/4	RTB-DE108	RTB-DEN108	CALL FOR PRICE
1-3/16	6-1/4	RTB-DE112	RTB-DEN112	-
1-1/4	6-1/4	RTB-DE116	RTB-DEN116	-
1-5/16	6-1/4	RTB-DE120	RTB-DEN120	-
1-3/8	6-1/4	RTB-DE124	RTB-DEN124	-
1-7/16	6-1/4	RTB-DE128	RTB-DEN128	-
1-1/2	6-1/4	RTB-DE132	RTB-DEN132	-

DOUBLE END TRACK BIT TIP PROTECTOR

ITEM NO.	ILLUSTRATION	DESCRIPTION	PRICE
RTB-TP		Tip protector is inserted into the drill chuck to protect the drill tip from possible damage when drilling with double end style track bit.	23.52

HIGH SPEED STEEL RAILROAD TIE BORING BITS

ICS USA

SPECIAL PURPOSE

70° or 90° POINT

1/2" ROUND OR
FLATTED SHANK



SINGLE
FLUTE

High Speed Steel Single Flute Railroad Tie Boring Bits are specifically designed for drilling spike holes in railway cross ties. The single flute acts in a screw-like movement, feeding itself into the material for maximum chip removal. The open flute design prevents chip packing and reduces wood burning. Single flute drills are also known as Bobbin Bits.

SIZE	FLUTE LENGTH	OVERALL LENGTH	POINT ANGLE	1/2" ROUND SHANK		1/2" FLATTED SHANK	
				ITEM NO.	PRICE	ITEM NO.	PRICE
9/16	6-3/8	9-3/8	70°	RTB1R036X09-70	-	RTB1F036-09-70	-
9/16	9-5/8	12-1/8	70°	RTB1R036X12-70	-	RTB1F036-12-70	-
5/8	6-3/8	9-3/8	70°	RTB1R040X09-70	CALL	RTB1F040-09-70	CALL
5/8	9-5/8	12-1/8	70°	RTB1R040X12-70	FOR	RTB1F040-12-70	FOR
11/16	6-3/8	9-3/8	70°	RTB1R044X09-70	PRICE	RTB1F044-09-70	PRICE
11/16	9-5/8	12-1/8	70°	RTB1R044X12-70	-	RTB1F044-12-70	-
3/4	6-3/8	9-3/8	70°	RTB1R048X09-70	-	RTB1F048-09-70	-
3/4	9-5/8	12-1/8	70°	RTB1R048X12-70	-	RTB1F048-12-70	-
9/16	6-3/8	9-3/8	90°	RTB1R036X09-90	-	RTB1F036-09-90	-
9/16	9-5/8	12-1/8	90°	RTB1R036X12-90	-	RTB1F036-12-90	-
5/8	6-3/8	9-3/8	90°	RTB1R040X09-90	CALL	RTB1F040-09-90	CALL
5/8	9-5/8	12-1/8	90°	RTB1R040X12-90	FOR	RTB1F040-12-90	FOR
11/16	6-3/8	9-3/8	90°	RTB1R044X09-90	PRICE	RTB1F044-09-90	PRICE
11/16	9-5/8	12-1/8	90°	RTB1R044X12-90	-	RTB1F044-12-90	-
3/4	6-3/8	9-3/8	90°	RTB1R048X09-90	-	RTB1F048-09-90	-
3/4	9-5/8	12-1/8	90°	RTB1R048X12-90	-	RTB1F048-12-90	-

HIGH SPEED STEEL RAILROAD TIE BORING BITS

ICS USA

SPECIAL PURPOSE

70° or 90° POINT

1/2" ROUND OR
FLATTED SHANK



TWO
FLUTE

High Speed Steel Two Flute Railroad Tie Boring Bits are specifically designed for drilling holes in railway cross ties. The double flute design combines ease of penetration with rapid chip removal in deep hole, hardwood drilling.

SIZE	FLUTE LENGTH	OVERALL LENGTH	POINT ANGLE	1/2" ROUND SHANK		1/2" FLATTED SHANK	
				ITEM NO.	PRICE	ITEM NO.	PRICE
9/16	6-3/8	9-3/8	70°	RTB2R036X09-70	-	RTB2F036-09-70	-
9/16	9-5/8	12-1/8	70°	RTB2R036X12-70	-	RTB2F036-12-70	-
5/8	6-3/8	9-3/8	70°	RTB2R040X09-70	CALL	RTB2F040-09-70	CALL
5/8	9-5/8	12-1/8	70°	RTB2R040X12-70	FOR	RTB2F040-12-70	FOR
11/16	6-3/8	9-3/8	70°	RTB2R044X09-70	PRICE	RTB2F044-09-70	PRICE
11/16	9-5/8	12-1/8	70°	RTB2R044X12-70	-	RTB2F044-12-70	-
3/4	6-3/8	9-3/8	70°	RTB2R048X09-70	-	RTB2F048-09-70	-
3/4	9-5/8	12-1/8	70°	RTB2R048X12-70	-	RTB2F048-12-70	-
9/16	6-3/8	9-3/8	90°	RTB2R036X09-90	-	RTB2F036-09-90	-
9/16	9-5/8	12-1/8	90°	RTB2R036X12-90	-	RTB2F036-12-90	-
5/8	6-3/8	9-3/8	90°	RTB2R040X09-90	CALL	RTB2F040-09-90	CALL
5/8	9-5/8	12-1/8	90°	RTB2R040X12-90	FOR	RTB2F040-12-90	FOR
11/16	6-3/8	9-3/8	90°	RTB2R044X09-90	PRICE	RTB2F044-09-90	PRICE
11/16	9-5/8	12-1/8	90°	RTB2R044X12-90	-	RTB2F044-12-90	-
3/4	6-3/8	9-3/8	90°	RTB2R048X09-90	-	RTB2F048-09-90	-
3/4	9-5/8	12-1/8	90°	RTB2R048X12-90	-	RTB2F048-12-90	-





HIGH SPEED STEEL DRYWALL CUTOUT BITS

ICS USA

SPECIAL PURPOSE

60° POINT

Drywall Cutout Bits are used whenever a cutout is required in drywall. Ideal for electrical boxes, door and window openings. Fast cutting down spiral bits will not tear drywall paper. Fits most popular drywall cutout tools.

ITEM NO.	ILLUSTRATION	CUTTING APPLICATION	STEEL SPECS	TECHNICAL DATA
DCB1F	 SINGLE FLUTE STYLE	Heavy Duty open flute design cuts faster than multiple flute design.	M2	60° Point Down Spiral
DCB1FT	 TIN COATED - SINGLE FLUTE STYLE	TiN Coating extends life of drill up to 500%.	M2	60° Point Down Spiral
DCB1FDE	 DOUBLE END - SINGLE FLUTE STYLE	Double End Bits drill twice as many holes as a single end bit.	M2	60° Point Down Spiral
DCB2F	 2 FLUTE STYLE	General use two flute design cuts quickly and smoothly.	M2	60° Point Down Spiral

NOMINAL SIZE	FLUTES	FITS THE FOLLOWING DRYWALL CUTOUT TOOLS	ITEM NO.	PRICE EACH	UNIT PKG.
1/8 x 2-3/8	1	Bosch®, Porter Cable®, Roto Zip®, and most other brands.	DCB1F008	1.02	10/100
1/8 x 2-3/8	1		DCB1FT008	1.60	10/100
1/8 x 3-1/8	1		DCB1FDE008	1.60	10/100
1/8 x 2-3/8	2		DCB2F008	0.94	10/100

CORDLESS SPIRAL SAW KIT

The 18 Volt DC Cordless Spiral Saw was designed for making cutouts in drywall and other building materials for outlet boxes, door and window openings. It is now also used by crafters for wood carving, engraving, etc... This tool is also known as a Cutout Tool or a Drywall Cutout Tool.



Contents of Kit

- 1 Cordless Spiral Saw
- 2 Collets - 1/8" and 1/4"
- 1 Removable Handle
- 1 Wrench
- 1 Battery Charger
- 2 Cutout Bits - 1/8" and 1/4"
- 1 Heavy Duty Carrying Case with storage compartments

RATING	RPM	WEIGHT
18 Volt DC	30,000	6.5 lbs. (with case)

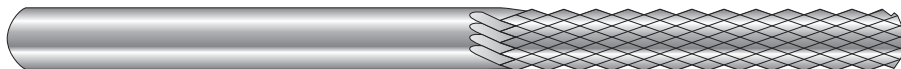
ITEM NO.	PRICE
PT-CSSK-8	82.96

SOLID CARBIDE TILE CUTOUT BITS

ICS USA

SPECIAL PURPOSE

CNC GROUND



Solid Carbide Tile Cutout Bits are used whenever a cutout is required in ceramic wall tile, cement board, plaster, stucco, fiberglass and non-metallic materials. Fits most popular drywall cutout tools. Note: This bit will not cut floor tile.

NOMINAL SIZE	FLUTES	FITS THE FOLLOWING DRYWALL CUTOUT TOOLS	ITEM NO.	PRICE EACH	UNIT PKG.
1/8 x 2	Multiple	Bosch,® Porter Cable,® Roto Zip® and most other brands.	SCTCB008	6.38	10
1/4 x 2	Multiple		SCTCB016	12.28	10

COBALT SPOT WELD DRILLS

ICS USA

SPECIAL PURPOSE

SPECIAL SPUR POINT



SINGLE END



DOUBLE END

Cobalt Spot Weld Drills are designed to cut auto body panel spot welds without damage to the second panel. Cobalt steel maintains its hardness at higher temperatures than high speed steel and is more abrasion resistant thus providing a tough, long wearing cutting edge. The double end design cuts twice as many spotwelds and can be used for difficult to reach spot welds.

SINGLE END

DIAMETER	APPROX. SPOT WELD SIZE IN INCHES	OVERALL LENGTH	FLAT LENGTH IN INCHES	ITEM NO.	PRICE
6.50mm	1/4	1-3/4	NONE	SWDCM06.50	8.40
8.00mm	5/16	1-3/4	NONE	SWDCM08.00	11.02
10.00mm	3/8	1-3/4	NONE	SWDCM10.00	14.70

DOUBLE END

DIAMETER	APPROX. SPOT WELD SIZE IN INCHES	OVERALL LENGTH	FLAT LENGTH IN INCHES	ITEM NO.	PRICE
6.50mm	1/4	3-5/8	NONE	DESWDCM06.50	16.28
8.00mm	5/16	3-5/8	NONE	DESWDCM08.00	19.42
10.00mm	3/8	3-5/8	NONE	DESWDCM10.00	22.06

PREMIUM (10% COBALT) MICROGRAIN SOLID CARBIDE SPOT WELD DRILLS

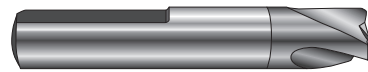
ICS USA

SPECIAL PURPOSE

SPECIAL SPUR POINT



TWO FLUTE



THREE FLUTE

Aluminum Titanium Nitride (AlTiN) Coated Solid Carbide Spot Weld Drills are designed to cut spot welds on European auto body panels made of Boron Steels, Advanced High Strength Steels (AHSS), and Ultra High Strength Steels (UHSS). The AlTiN Coating reduces chip welding, does not need lubrication, and can be operated at 30% faster feeds and speeds. The 2 flute design penetrates spot welds more quickly than the 3 flute. The 3 flute design removes more material per revolution and tracks straighter into the spot weld.

DIAMETER	FLUTE DESIGN	APPROX. SPOT WELD SIZE IN INCHES	OVERALL LENGTH	FLAT LENGTH IN INCHES	ITEM NO.	PRICE
8.00mm	2 FLUTE	5/16	1-3/4	3/4	SCSWDM2F08.0	CALL
8.00mm	3 FLUTE	5/16	1-3/4	3/4	SCSWDM3F08.0	CALL

HIGH SPEED STEEL SPOT WELD CUTTER

ICS WIS

SPECIAL PURPOSE

DOUBLE ENDED CUTTER

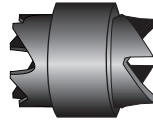
1/4" ARBOR



High Speed Steel Spot Weld Cutters are designed for removing spot welds without pre-drilling or punching. They separate body panels better than a panel cutter. Blades are reversible (twice as many holes may be cut) and are interchangeable with other spot weld cutters.

SIZE	ARBOR	STYLE	ITEM NO.	PRICE EACH
3/8	1/4	Double End	SWCTS024	8.60

HIGH SPEED STEEL SPOT WELD REPLACEMENT CUTTERS



High Speed Steel Spot Weld Replacement Cutter Blades are reversible (twice as many holes may be cut) and are interchangeable with other spot weld cutters. The long lasting high speed steel cutter outlasts tool steel style cutters.

SIZE	ARBOR	STYLE	ITEM NO.	PRICE EACH
3/8	1/4	Double End	SWRC024	6.14

HIGH SPEED STEEL 9 PC SPOT WELD CUTTER SETS

METAL CASE

The High Speed Steel 9 Piece Spot Weld Cutter Sets are designed for the auto body repair trade for removing spot welds on thin sheet metal, aluminum, and other metals.

ILLUSTRATION	TYPE OF STEP DRILL	ITEM NO.	PRICE
<p>9 PC SPOT WELD CUTTER SETS</p>	Each fractional set contains: 1 hex shank 3/8" dia. spot weld cutter 5 extra replacement cutters 2 extra center pins 1 5/16" dia. cobalt spot weld drill	SWCS-HS-9	47.26
	Each metric set contains: 1 hex shank 10mm dia. spot weld cutter 5 extra replacement cutters 2 extra center pins 1 8mm dia. cobalt spot weld drill	SWCS-HS-9M	47.26

HIGH SPEED STEEL THREADED SHANK ADAPTER DRILLS

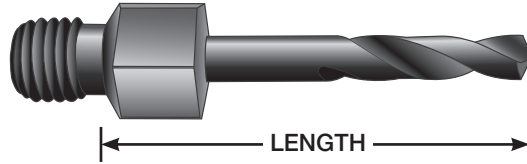
ICS USA

HEAVY DUTY

135° SPLIT POINT

NAS 965, TYPE B SPECIFICATIONS

1/4 - 28
THREAD



Type "B" HSS Threaded Shank Adapter Drills are used for medium duty drilling in low tensile strength materials in confined areas. They are manufactured with true concentricity for more accurate holes. They are often referred to as Snake Drills.

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
STUB LENGTH 1/2" - 5/8"			
#3	.2130	TSADSM#03	5.26
#5	.2055	TSADSM#05	5.14
#10	.1935	TSADSM#10	4.28
#11	.1910	TSADSM#11	4.30
#12	.1890	TSADSM#12	5.04
#13	.1850	TSADSM#13	4.28
#16	.1770	TSADSM#16	4.22
#19	.1660	TSADSM#19	4.20
#20	.1610	TSADSM#20	4.24
#21	.1590	TSADSM#21	4.24
#27	.1440	TSADSM#27	4.24
#30	.1285	TSADSM#30	4.16
#40	.0980	TSADSM#40	4.00
1/8	.1250	TSADSM008	4.10
5/32	.1562	TSADSM010	4.20
3/16	.1875	TSADSM012	4.94
7/32	.2188	TSADSM014	5.26
1/4	.2500	TSADSM016	4.62
"D"	.2460	TSADSM"D"	4.72
"F"	.2570	TSADSM"F"	4.72
SHORT LENGTH 1-1/4"			
#5	.2055	TSADS#05	5.56
#8	.1990	TSADS#08	5.46
#10	.1935	TSADS#10	4.00
#11	.1910	TSADS#11	4.02
#12	.1890	TSADS#12	5.36
#13	.1850	TSADS#13	3.92
#16	.1770	TSADS#16	3.88
#19	.1660	TSADS#19	4.30
#20	.1610	TSADS#20	3.82
#21	.1590	TSADS#21	3.82
#27	.1440	TSADS#27	3.72
#30	.1285	TSADS#30	3.72
#40	.0980	TSADS#40	3.62
3/32	.0938	TSADS006	5.14
7/64	.1094	TSADS007	4.10
1/8	.1250	TSADS008	3.68
9/64	.1406	TSADS009	4.20
5/32	.1562	TSADS010	4.10
11/64	.1719	TSADS011	4.72
3/16	.1875	TSADS012	4.20
7/32	.2188	TSADS014	5.68
1/4	.2500	TSADS016	4.30
5/16	.3125	TSADS020	10.50
"D"	.2460	TSADS"D"	4.72
"F"	.2570	TSADS"F"	4.72

SIZE	DEC. EQUIV.	ITEM NO.	PRICE
LONG LENGTH 2-1/8"			
#3	.2130	TSADL#03	6.10
#5	.2055	TSADL#05	6.10
#8	.1990	TSADL#08	5.98
#10	.1935	TSADL#10	4.58
#11	.1910	TSADL#11	4.56
#12	.1890	TSADL#12	5.46
#13	.1850	TSADL#13	4.50
#16	.1770	TSADL#16	4.54
#19	.1660	TSADL#19	4.84
#20	.1610	TSADL#20	4.36
#21	.1590	TSADL#21	4.36
#27	.1440	TSADL#27	4.26
#30	.1285	TSADL#30	4.30
#40	.0980	TSADL#40	4.20
3/32	.0938	TSADL006	5.46
7/64	.1094	TSADL007	4.20
1/8	.1250	TSADL008	4.22
9/64	.1406	TSADL009	4.52
5/32	.1562	TSADL010	4.42
11/64	.1719	TSADL011	4.94
3/16	.1875	TSADL012	4.20
7/32	.2188	TSADL014	6.20
1/4	.2500	TSADL016	4.84
5/16	.3125	TSADL020	10.50
"D"	.2460	TSADL"D"	5.04
"F"	.2570	TSADL"F"	5.04
EXTRA LONG LENGTH 3"			
#13	.1850	TSADXL#13	8.46
#20	.1610	TSADXL#20	7.10
#30	.1285	TSADXL#30	6.52
3/32	.0938	TSADXL006	7.38
5/32	.1562	TSADXL010	7.76
3/16	.1875	TSADXL012	8.20
5/16	.3125	TSADXL020	16.92
"F"	.2570	TSADXL"F"	9.46

NOTE: Different sizes, lengths and thread sizes are available. Inquire for pricing.

COBALT THREADED SHANK ADAPTER DRILLS

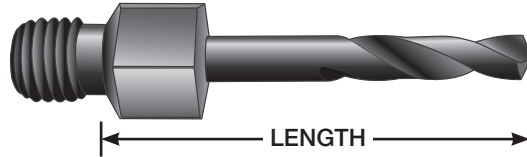
ICS USA

HEAVY DUTY

135° SPLIT POINT

NAS 965, TYPE D SPECIFICATIONS

1/4 - 28
THREAD



Type "D" Cobalt Threaded Shank Adapter Drills are used for heavy duty drilling in hard, tough tensile strength materials in confined areas. They are manufactured with true concentricity for more accurate holes. They are often referred to as Snake Drills.

DEC. SIZE	EQUIV.	ITEM NO.	PRICE	DEC. SIZE	EQUIV.	ITEM NO.	PRICE	DEC. SIZE	EQUIV.	ITEM NO.	PRICE
VERY STUB LENGTH 1/2"				STUB LENGTH 1/2" - 5/8"				LONG LENGTH 2-1/8"			
#2	.2210	TSADCVS#02	6.40	3/32	.0938	TSADCSM006	4.10	#2	.2210	TSADCL#02	5.26
#5	.2055	TSADCVS#05	6.20	1/8	.1250	TSADCSM008	4.30	#3	.2130	TSADCL#03	7.24
#7	.2010	TSADCVS#07	6.20	5/32	.1562	TSADCSM010	4.52	#5	.2055	TSADCL#05	6.10
#8	.1990	TSADCVS#08	6.20	3/16	.1875	TSADCSM012	4.94	#7	.2010	TSADCL#07	5.14
#10	.1935	TSADCVS#10	5.98	7/32	.2188	TSADCSM014	5.26	#8	.1990	TSADCL#08	5.98
#11	.1910	TSADCVS#11	5.98	1/4	.2500	TSADCSM016	5.04	#10	.1935	TSADCL#10	5.04
#13	.1850	TSADCVS#13	5.98	"D"	.2460	TSADCSM"D"	5.04	#11	.1910	TSADCL#11	5.04
#16	.1770	TSADCVS#16	5.88	"F"	.2570	TSADCSM"F"	5.26	#12	.1890	TSADCL#12	6.82
#19	.1660	TSADCVS#19	5.88	SHORT LENGTH 1-1/4"				#13	.1850	TSADCL#13	4.94
#20	.1610	TSADCVS#20	5.88	#2	.2210	TSADCS#02	4.80	#16	.1770	TSADCL#16	4.84
#21	.1590	TSADCVS#21	5.88	#5	.2055	TSADCS#05	5.56	#19	.1660	TSADCL#19	4.58
#27	.1440	TSADCVS#27	5.72	#7	.2010	TSADCS#07	4.70	#20	.1610	TSADCL#20	4.58
#30	.1285	TSADCVS#30	5.64	#8	.1990	TSADCS#08	5.46	#21	.1590	TSADCL#21	4.58
#40	.0980	TSADCVS#40	5.36	#10	.1935	TSADCS#10	4.58	#27	.1440	TSADCL#27	4.52
3/32	.0938	TSADCVS006	5.34	#11	.1910	TSADCS#11	4.58	#30	.1285	TSADCL#30	4.42
1/8	.1250	TSADCVS008	5.62	#12	.1890	TSADCS#12	6.30	#40	.0980	TSADCL#40	4.30
5/32	.1562	TSADCVS010	5.78	#13	.1850	TSADCS#13	4.58	3/32	.0938	TSADCL006	4.28
3/16	.1875	TSADCVS012	5.98	#16	.1770	TSADCS#16	4.44	1/8	.1250	TSADCL008	4.52
1/4	.2500	TSADCVS016	6.52	#19	.1660	TSADCS#19	4.44	9/64	.1406	TSADCL009	4.52
"D"	.2460	TSADCVS"D"	6.52	#20	.1610	TSADCS#20	4.44	5/32	.1562	TSADCL010	4.58
"F"	.2570	TSADCVS"F"	6.82	#21	.1590	TSADCS#21	4.44	11/64	.1719	TSADCL011	4.94
STUB LENGTH 1/2" - 5/8"				#27	.1440	TSADCS#27	4.10	3/16	.1875	TSADCL012	4.94
#2	.2210	TSADCSM#02	4.94	#30	.1285	TSADCS#30	3.78	7/32	.2188	TSADCL014	6.20
#3	.2130	TSADCSM#03	6.10	#40	.0980	TSADCS#40	3.78	1/4	.2500	TSADCL016	5.36
#5	.2055	TSADCSM#05	5.14	3/32	.0938	TSADCS006	3.78	"D"	.2460	TSADCL"D"	5.36
#7	.2010	TSADCSM#07	4.84	1/8	.1250	TSADCS008	3.88	"F"	.2570	TSADCL"F"	5.56
#8	.1990	TSADCSM#08	4.84	9/64	.1406	TSADCS009	4.20	EXTRA LENGTH 3"			
#10	.1935	TSADCSM#10	4.62	5/32	.1562	TSADCS010	4.20	#13	.1850	TSADCXL#13	8.46
#11	.1910	TSADCSM#11	5.88	11/64	.1719	TSADCS011	4.72	#20	.1610	TSADCXL#20	7.10
#12	.1890	TSADCSM#12	5.88	3/16	.1875	TSADCS012	4.62	#30	.1285	TSADCXL#30	6.52
#13	.1850	TSADCSM#13	4.62	7/32	.2188	TSADCS014	5.68	5/32	.1562	TSADCXL010	7.76
#16	.1770	TSADCSM#16	4.52	1/4	.2500	TSADCS016	5.00	3/16	.1875	TSADCXL012	8.20
#19	.1660	TSADCSM#19	4.52	"D"	.2460	TSADCS"D"	4.94	"F"	.2570	TSADCXL"F"	9.46
#20	.1610	TSADCSM#20	4.52	"F"	.2570	TSADCS"F"	5.22				
#21	.1590	TSADCSM#21	4.52								
#27	.1440	TSADCSM#27	4.42								
#30	.1285	TSADCSM#30	4.42								
#40	.0980	TSADCSM#40	4.10								

NOTE: Different sizes, lengths and thread sizes are available. Inquire for pricing.

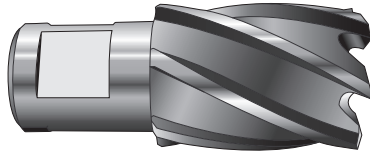
HIGH SPEED STEEL ANNULAR CUTTERS

ICS WIS

SPECIAL PURPOSE

GROUND END TEETH

**TWO FLATS
ON SHANK**



**RIGHT HAND
CUT**

Annular Cutters are designed to be used with magnetic base drills, drill presses, milling machines, etc. to drill large diameter holes quickly and efficiently. They have up to 12 cutting edges to cut around the hole, leaving only a center slug which pops out. Quality burr-free holes can be cut in a single pass, 3-5 times faster than conventional twist drills. They can also cut multiple (overlap) hole configurations as well as curved surfaces and interrupted cuts.

DEPTH OF CUT	SHANK	STEEL SPECS	CUTTING APPLICATION
1", 2", 3", 4"	3/4	M2	For general purpose cutting of steel plate, structural steel, steel pipe, etc.

Fractional Sizes (3/4" Weldon Shank) 7/16" to 4" Dia.

SIZE	DEC. EQUIV.	DEPTH OF CUT			
		1"	2"	3"	4"
		AC1D	AC2D	AC3D	AC4D
7/16	.4375	30.48	36.54	-	-
1/2	.5000	31.70	37.20	-	-
9/16	.5625	32.10	40.06	-	-
5/8	.6250	33.26	43.60	-	-
11/16	.6875	37.14	46.10	-	-
3/4	.7500	40.88	49.08	-	-
13/16	.8125	42.32	52.88	-	-
7/8	.8750	44.76	57.28	-	-
15/16	.9375	47.00	60.24	-	-
1	1.0000	49.78	63.80	-	-
1-1/16	1.0625	54.46	70.94	-	-
1-1/8	1.1250	56.98	75.80	CALL	CALL
1-3/16	1.1875	57.38	78.66	FOR	FOR
1-1/4	1.2500	59.90	81.64	PRICE	PRICE
1-5/16	1.3125	63.74	86.02	-	-
1-3/8	1.3750	82.38	90.54	-	-
1-7/16	1.4375	91.32	108.34	-	-
1-1/2	1.5000	97.40	108.34	-	-
1-9/16	1.5625	108.46	121.76	-	-
1-5/8	1.6250	116.02	127.72	-	-
1-11/16	1.6875	132.56	146.12	-	-
1-3/4	1.7500	132.56	141.96	-	-
1-13/16	1.8125	155.40	163.34	-	-
1-7/8	1.8750	155.02	175.00	-	-
1-15/16	1.9375	163.66	183.76	-	-
2	2.0000	175.66	171.66	-	-
2-1/16	2.0625	205.80	229.26	-	-
2-1/8	2.1250	236.04	257.44	-	-
2-3/16	2.1875	237.82	263.24	-	-

SIZE	DEC. EQUIV.	DEPTH OF CUT			
		1"	2"	3"	4"
		AC1D	AC2D	AC3D	AC4D
2-1/4	2.2500	245.02	270.94	-	-
2-5/16	2.3125	253.26	277.60	-	-
2-3/8	2.3750	258.80	285.38	-	-
2-7/16	2.4375	264.32	293.08	-	-
2-1/2	2.5000	270.94	301.92	-	-
2-9/16	2.5625	276.52	309.70	-	-
2-5/8	2.6250	284.22	315.20	-	-
2-11/16	2.6875	289.78	322.96	-	-
2-3/4	2.7500	CALL	330.68	-	-
2-13/16	2.8125	303.06	337.30	-	-
2-7/8	2.8750	309.70	343.94	-	-
2-15/16	2.9375	316.32	351.72	CALL	CALL
3	3.0000	-	-	FOR	FOR
3-1/16	3.0625	-	-	PRICE	PRICE
3-1/8	3.1250	-	-	-	-
3-3/16	3.1875	-	-	-	-
3-1/4	3.2500	-	-	-	-
3-5/16	3.3125	-	-	-	-
3-3/8	3.3750	CALL	CALL	-	-
3-7/16	3.4375	FOR	FOR	-	-
3-1/2	3.5000	PRICE	PRICE	-	-
3-9/16	3.5625	-	-	-	-
3-5/8	3.6250	-	-	-	-
3-11/16	3.6875	-	-	-	-
3-3/4	3.7500	-	-	-	-
3-13/16	3.8125	-	-	-	-
3-7/8	3.8750	-	-	-	-
3-15/16	3.9375	-	-	-	-
4	4.0000	-	-	-	-

Also available as TiN Coated and TiCN Coated. Inquire for pricing. Pilot pins available on page 132.

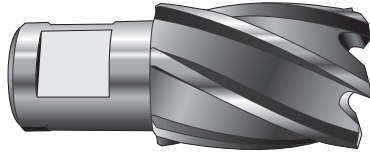
HIGH SPEED STEEL
ANNULAR CUTTERS

ICS WIS

SPECIAL PURPOSE

GROUND END TEETH

TWO FLATS
ON SHANK



RIGHT HAND
CUT

Metric Sizes (3/4" Weldon Shank) 12.00mm to 65.00mm Dia.


SIZE	DEC. EQUIV.	DEPTH OF CUT			
		1"	2"	3"	4"
		ACM1D	ACM2D	ACM3D	ACM4D
12.00	.4724	32.02	44.10	-	-
13.00	.5118	32.02	47.62	-	-
14.00	.5512	35.08	49.36	-	-
15.00	.5906	36.44	52.60	-	-
16.00	.6299	39.28	52.60	-	-
17.00	.6693	40.68	62.00	-	-
18.00	.7087	43.36	64.36	-	-
19.00	.7480	44.82	68.78	-	-
20.00	.7874	45.88	68.78	-	-
21.00	.8268	47.30	76.46	-	-
22.00	.8661	48.70	77.90	-	-
23.00	.9055	53.76	79.34	CALL	CALL
24.00	.9449	53.76	79.80	FOR	FOR
25.00	.9843	56.50	83.68	PRICE	PRICE
26.00	1.0237	57.22	86.10	-	-
27.00	1.0630	58.28	89.26	-	-
28.00	1.1024	58.80	89.36	-	-
29.00	1.1417	62.06	98.12	-	-
30.00	1.1811	67.72	102.28	-	-
31.00	1.2205	69.26	109.66	-	-
32.00	1.2598	73.50	110.38	-	-
33.00	1.2992	85.10	124.10	-	-
34.00	1.3386	95.24	129.84	-	-
35.00	1.3779	102.44	139.92	-	-
36.00	1.4173	113.96	142.80	-	-
37.00	1.4567	115.42	147.16	-	-
38.00	1.4961	121.16	150.02	-	-

SIZE	DEC. EQUIV.	DEPTH OF CUT			
		1"	2"	3"	4"
		ACM1D	ACM2D	ACM3D	ACM4D
39.00	1.5354	124.10	154.36	-	-
40.00	1.5748	126.98	160.16	-	-
41.00	1.6142	130.20	164.44	-	-
42.00	1.6540	141.42	173.10	-	-
43.00	1.6929	150.38	177.46	-	-
44.00	1.7323	150.38	183.20	-	-
45.00	1.7717	156.00	189.00	-	-
46.00	1.8110	156.00	193.28	-	-
47.00	1.8504	163.86	203.44	-	-
48.00	1.8898	163.86	210.66	-	-
49.00	1.9291	175.08	214.94	-	-
50.00	1.9685	179.00	219.28	CALL	CALL
51.00	2.0078	193.28	223.62	FOR	FOR
52.00	2.0472	207.74	246.76	PRICE	PRICE
53.00	2.0866	232.28	253.92	-	-
54.00	2.1259	238.04	262.54	-	-
55.00	2.1653	249.90	269.78	-	-
56.00	2.2047	255.34	276.98	-	-
57.00	2.2440	268.34	290.00	-	-
58.00	2.2834	275.56	300.08	-	-
59.00	2.3228	285.64	311.62	-	-
60.00	2.3622	291.40	320.26	-	-
61.00	2.4015	302.96	327.48	-	-
62.00	2.4409	307.30	333.28	-	-
63.00	2.4803	318.84	341.88	-	-
64.00	2.5196	324.60	350.56	-	-
65.00	2.5590	328.92	357.78	-	-

Also available as TiN Coated and TiCN Coated. Inquire for pricing. Pilot pins available on page 132.


ANNULAR (STRUCTURAL) CUTTER SETS

PLASTIC CASE

ILLUSTRATION	DEPTH OF CUT	STEEL SPECS	ITEM NO.	PRICE
 <p>6 PC ANNULAR CUTTER SET 9/16, 11/16, 13/16, 15/16, 1-1/16 and 1 Pilot Pin</p>	1"	HIGH SPEED STEEL	AC1DS-6	213.00
	2"	HIGH SPEED STEEL	AC2DS-6	272.00
<p>10 PC ANNULAR CUTTER SET (NOT PICTURED) 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 1 and 2 Pilot Pins</p>	1"	HIGH SPEED STEEL	AC1DS-10	360.00

Also available as TiN Coated and TiCN coated.

METAL INDEX

ILLUSTRATION	DEPTH OF CUT	STEEL SPECS	ITEM NO.	PRICE
 <p>7 PC ANNULAR CUTTER SET 7/16, 9/16, 11/16, 13/16, 15/16, 1-1/16 and 1 Pilot Pin</p>	1"	HIGH SPEED STEEL	AC1DS-7	224.60

Also available as TiN Coated and TiCN coated.

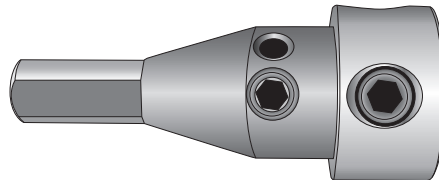
ANNULAR CUTTER PILOT PINS



ICS manufactures a complete range of pilot pins for precise drill location and plug ejection. They are interchangeable with most manufacturers.

DEPTH OF CUT			
1"	2"	3"	4"
ACPP1A	ACPP2A	ACPP3A	ACPP4A
8.34	8.44	13.30	16.50

ANNULAR CUTTER ADAPTERS



ICS Annular Cutter Adapters allow Annular Cutters to be used in various style machines.

ADAPTS 3/4" SHANK TO:	APPLICATION	ITEM NO.	PRICE
1/2" Shank	Adapts Magnetic Drill to use 1/2" Silver and Deming Drills	AARS032	130.44
#2 Morse Taper Shank	Morse Taper Adapters allow Annular Cutters to be used on Milling Machines, Lathes, CNC Machining Center, Drills etc...	AAMT#2	175.00
#3 Morse Taper Shank		AAMT#3	175.00
#4 Morse Taper Shank		AAMT#4	280.00
7/16" Shank Hole Saw	Adapts Magnetic Drills to use Hole Saws	AAH5	150.00

DRILL CHUCK ARBORS

MET-133

ICS USA

ADAPTERS

GROUND FINISH

MORSE TAPER TO JACOBS TAPER



Morse Taper to Jacobs Taper Drill Chuck Arbors are designed to adapt Morse taper tools to Jacobs taper mount chucks.

MORSE TAPER	JACOBS TAPER	ITEM NO.	PRICE
1	1	DCA-MT1JT01	-
1	2	DCA-MT1JT02	-
1	3	DCA-MT1JT03	-
1	6	DCA-MT1JT06	-
1	33	DCA-MT1JT33	-
2	1	DCA-MT2JT01	-
2	2	DCA-MT2JT02	-
2	3	DCA-MT2JT03	-
2	6	DCA-MT2JT06	-
2	33	DCA-MT2JT33	-
3	2	DCA-MT3JT02	-
3	3	DCA-MT3JT03	CALL FOR PRICE
3	4	DCA-MT3JT04	CALL FOR PRICE
3	5	DCA-MT3JT05	CALL FOR PRICE
3	6	DCA-MT3JT06	-
3	33	DCA-MT3JT33	-
4	3	DCA-MT4JT03	-
4	4	DCA-MT4JT04	-
4	5	DCA-MT4JT05	-
4	6	DCA-MT4JT06	-
4	33	DCA-MT4JT33	-
5	3	DCA-MT5JT03	-
5	4	DCA-MT5JT04	-
5	5	DCA-MT5JT05	-
5	6	DCA-MT5JT06	-
5	33	DCA-MT5JT33	-

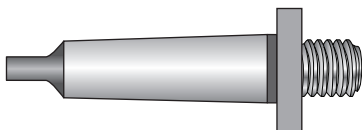
STRAIGHT SHANK TO JACOBS TAPER



Straight Shank to Jacobs Taper Drill Chuck Arbors are designed to adapt straight shank chuck holders to Jacobs taper mount chucks.

MORSE TAPER	JACOBS TAPER	ITEM NO.	PRICE
1	1	DCA-MT1JT01	-
1	2	DCA-MT1JT02	-
1	3	DCA-MT1JT03	-
1	6	DCA-MT1JT06	-
1	33	DCA-MT1JT33	-
2	1	DCA-MT2JT01	-
2	2	DCA-MT2JT02	-
2	3	DCA-MT2JT03	-
2	6	DCA-MT2JT06	-
2	33	DCA-MT2JT33	-
3	2	DCA-MT3JT02	-
3	3	DCA-MT3JT03	CALL FOR PRICE
3	4	DCA-MT3JT04	CALL FOR PRICE
3	5	DCA-MT3JT05	CALL FOR PRICE
3	6	DCA-MT3JT06	-
3	33	DCA-MT3JT33	-
4	3	DCA-MT4JT03	-
4	4	DCA-MT4JT04	-
4	5	DCA-MT4JT05	-
4	6	DCA-MT4JT06	-
4	33	DCA-MT4JT33	-
5	3	DCA-MT5JT03	-
5	4	DCA-MT5JT04	-
5	5	DCA-MT5JT05	-
5	6	DCA-MT5JT06	-
5	33	DCA-MT5JT33	-

MORSE TAPER TO THREADED SHANK



Morse Taper to Threaded Shank Drill Chuck Arbors are designed to adapt Morse taper tools to threaded mount chucks.

MORSE TAPER	JACOBS TAPER	ITEM NO.	PRICE
2	3/8-24	DCA.MT2T024-24	CALL FOR PRICE
2	1/2-20	DCA.MT2T032-20	CALL FOR PRICE
2	5/8-16	DCA.MT2T040-16	CALL FOR PRICE

R-8 SHANK TO JACOBS TAPER



R-8 Shank to Jacobs Taper Drill Chuck Arbors are designed to adapt R-8 shank holders to Jacobs taper mount chucks.

MORSE TAPER	JACOBS TAPER	ITEM NO.	PRICE
8	1	DCA-R8JT01	-
8	2	DCA-R8JT02	CALL FOR PRICE
8	3	DCA-R8JT03	CALL FOR PRICE
8	6	DCA-R8JT06	CALL FOR PRICE
8	33	DCA-R8JT33	-

CHUCK KEYS

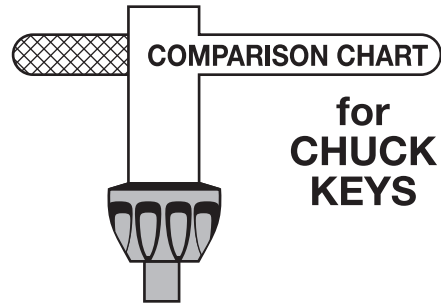
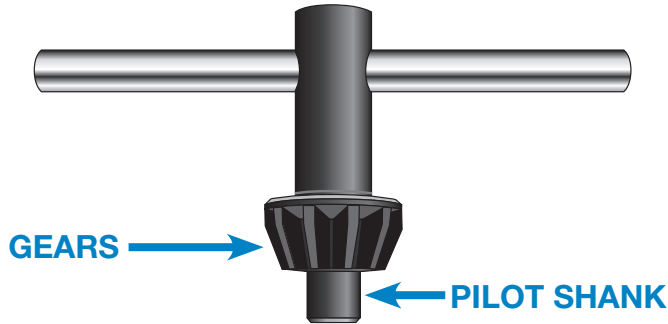
ICS USA

SPECIAL PURPOSE

COLD ROLLED STEEL

ICS Chuck Keys fit virtually all power drills on the market. How-to-choose chart on each package aids in selection of correct key. Packaging is designed to let customer check size for correct fit. All Chuck Keys are engineered to fit Jacobs and Supreme Key operated chucks. Cold rolled steel chuck keys are heat treated for durability and plated to resist corrosion.

CHUCK KEYS (T-HANDLE)



CHUCK SIZE	GEARS	PILOT SHANK	ITEM NO.	PRICE EACH
5/32	11	1/8	CK-TK0	3.54
1/4	11	5/32	CK-TK1	2.42
1/4-3/8	11	1/4	CK-TKG	2.52
3/8	11	1/4	CK-TK2	3.54
3/8	11	7/32	CK-TK7	4.12
1/2	10	1/4	CK-TK32	5.78
1/2	10	11/32	CK-TKR	11.56
1/2-5/8	11	5/16	CK-TK3	7.44
3/8	10	15/64	CK-TK30	4.02
3/8-1/2	10	9/32	CK-TKK	3.54
1/4	11	13/64	CK-TK13	2.52
3/4	12	3/8	CK-TK4	15.74
3/8-1/2	10	9/32	CK-TKKB	2.74

ICS KEY	JACOBS KEY	SUPREME KEY	B & D KEY	MILLER FALLS KEY
CK-TK0	K0	0		
CK-TK1	K1	D1	U-1507	MK1
CK-TKG	KG	DB1	U-1529	MK2
CK-TK2	K2	2		2MK3
CK-TK7	K7	D4		MK3
CK-TK32	K32	D5	U-1508	3MK1
CK-TKR	KR	DB5		3MK1A
CK-TK3	K3	D6		3MK2
CK-TK30	K30	D13	U-1524	2MK1
CK-TKK	KK	DB13	U-1533	2MK2
CK-TK13			70-110	
CK-TK4	K4	9		MK4
CK-TKKB	KK	DB13	U-1533	2MK2

NOTE: If your drill chuck key is not listed it is because WE DO NOT have a cross reference for every chuck manufactured. The best thing to do is measure the diameter of the pilot hole/shank and match that diameter with the drill chuck size you have. For example, if your pilot is 11/32" and your drill chuck is 1/2", you would need a CK-TKR.

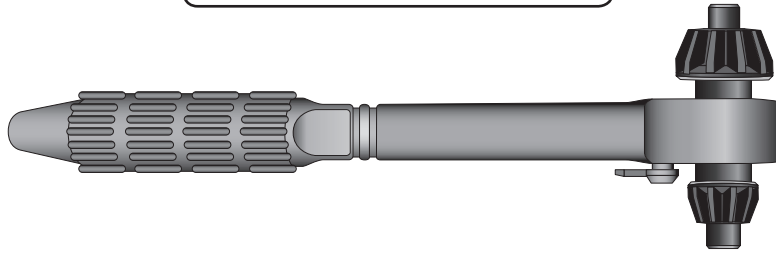
RATCHET CHUCK KEYS

ICS WIS

SPECIAL PURPOSE

FORGED STEEL

HANG-UP HANDLE



DUAL SIZE

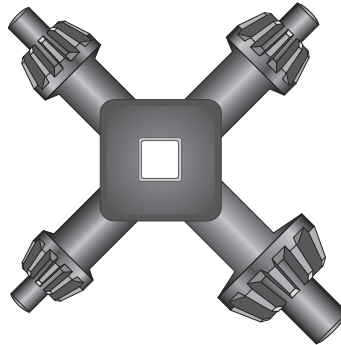
Ratchet Chuck Keys speed and simplify bit changeovers. They fit most popular drill chucks on the market. They ratchet in both directions.

CHUCK SIZE	PILOT SHANKS	ITEM NO.	PRICE
3/8 - 1/2	15/64 - 15/64	CK-R#1	8.36
3/8 - 5/8	15/64 - 5/16	CK-R#2	8.36
1/2 - 5/8	15/64 - 5/16	CK-R#3	8.36

MASTER CHUCK KEYS - ACETYLENE CYLINDER KEY

SPECIAL PURPOSE

ACETYLENE CYLINDER KEY



4 SIZES

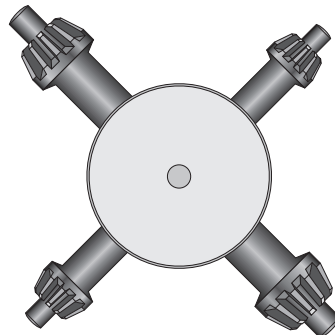
Master Chuck Keys each fit four different size Jacobs key operated chucks. Very useful tool for every shop. Center square is used as an acetylene cylinder key.

FITS JACOBS KEY	ITEM NO.	PRICE
K7, K30, KK, K6	CK-MK#1	23.10
K2, K3, K32, K4	CK-MK#2	26.26

MASTER CHUCK KEYS - MAGNETIC HOLD

SPECIAL PURPOSE

MAGNETIC HOLD



4 SIZES

Master Chuck Keys each fit four different size Jacobs key operated chucks. Very useful tool for every shop. Manufactured with a magnetic hold to attach to a drill press, tool box, etc.

FITS JACOBS KEY	ITEM NO.	PRICE
K7, K30, KK, K6	CK-MKM#1	28.36
K2, K3, K32, K4	CK-MKM#2	31.50

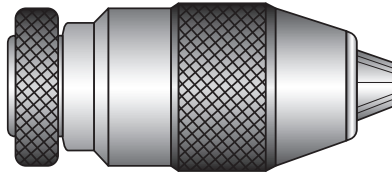
KEYLESS DRILL CHUCKS

ICS WIS

HEAVY DUTY

PRECISION CRAFTED

1/4"
HEX SHANK



Keyless Drill Chucks are high precision, super ball bearing chucks designed for high accuracy use on CNC machining centers in drilling, boring, milling, and counterboring operations. They have a self-tightening feature and can be tightened and released by hand, no key required.

CHUCK MODEL	CAPACITY		TAPERED MOUNT	LENGTH (in.)		DIAMETER (in.)	WEIGHT (lbs.)	ITEM NO.	PRICE
	INCHES	MM		OPEN	CLOSED				
6/J1	0-1/4	0-6	1JT	2.40	2.67	1.34	.85	DC-06/J1	79.98
10/J2	1/64-3/8	.5-10	2JT	3.15	3.27	1.57	1.10	DC-10/J2	83.10
10/J33	1/64-3/8	.5-10	33JT	3.15	3.27	1.57	1.10	DC-10/J33	83.10
13/J2	1/32-1/2	1-13	2JT	3.54	3.70	1.81	1.63	DC-13/J2	98.78
13/J33	1/32-1/2	1-13	33JT	3.54	3.70	1.81	1.63	DC-13/J33	98.78
13/J6	1/32-1/2	1-13	6JT	3.54	3.70	1.81	1.63	DC-13/J6	98.78
16/J3	1/8-5/8	3-16	3JT	4.06	4.25	2.20	3.09	DC-16/J3	120.74
16/J6	1/8-5/8	3-16	6JT	4.33	4.53	2.20	3.31	DC-16/J6	120.74

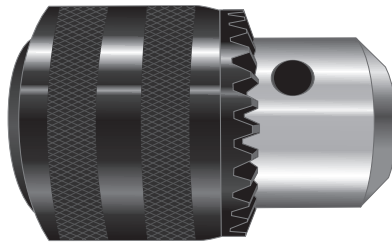
KEY TYPE DRILL CHUCKS

ICS WIS

MEDIUM DUTY

PRECISION CRAFTED

PLAIN BEARING
CHUCK



Key Type (Medium Duty) Drill Chucks are industrial quality chucks designed for high accuracy use on power tools, bench drilling machines, and wood working machinery. All parts are hardened for maximum tool life. Chucks are provided with key.

SIZE	CAPACITY		MOUNT	USES KEY	WEIGHT (lbs.)	ITEM NO.	PRICE
	INCHES	MM					
3/8	0-3/8	0-10	3/8-24	K30	.48	DC-KM10-024	17.24
3/8	0-3/8	0-10	1/2-20	K30	.48	DC-KM10-032	17.24
3/8	0-3/8	0-10	6JT	K3	.48	DC-KM10-06JT	23.52
1/2	1/64-1/2	.5-13	1/2-20	K32	.80	DC-KM13-032	23.52
1/2	1/64-1/2	.5-13	6JT	K3	.80	DC-KM13-06JT	23.52
5/8	1/64-5/8	.5-16	5/8-16	K32	1.30	DC-KM16-040	32.20
3/4	3/16-3/4	4.8-19	3JT	K4	1.50	DC-KM19-048	35.70

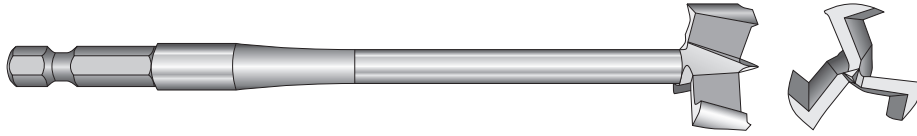
TOOL STEEL MULTI-ANGLE DRILLS

ICS WIS

SPECIAL PURPOSE

DIAMOND STYLE POINT

1/4"
HEX SHANK



TITANIUM (TiN)
NITRIDE COATED

Multi-Angle Drills are designed with 6 cutting edges to drill forward, backward, sideways, straight, or in a curve up to 90°. Used to drill wood, composites, plaster board, plastics, etc... They drill 3X faster than spade bits and holes as smooth as forstner bits.

SIZE	OVERALL LENGTH	ITEM NO.	PRICE
1/4	5	MAD016	4.84
3/8	5	MAD024	5.56
1/2	5	MAD032	5.98
5/8	5	MAD040	6.30
3/4	5	MAD048	6.94

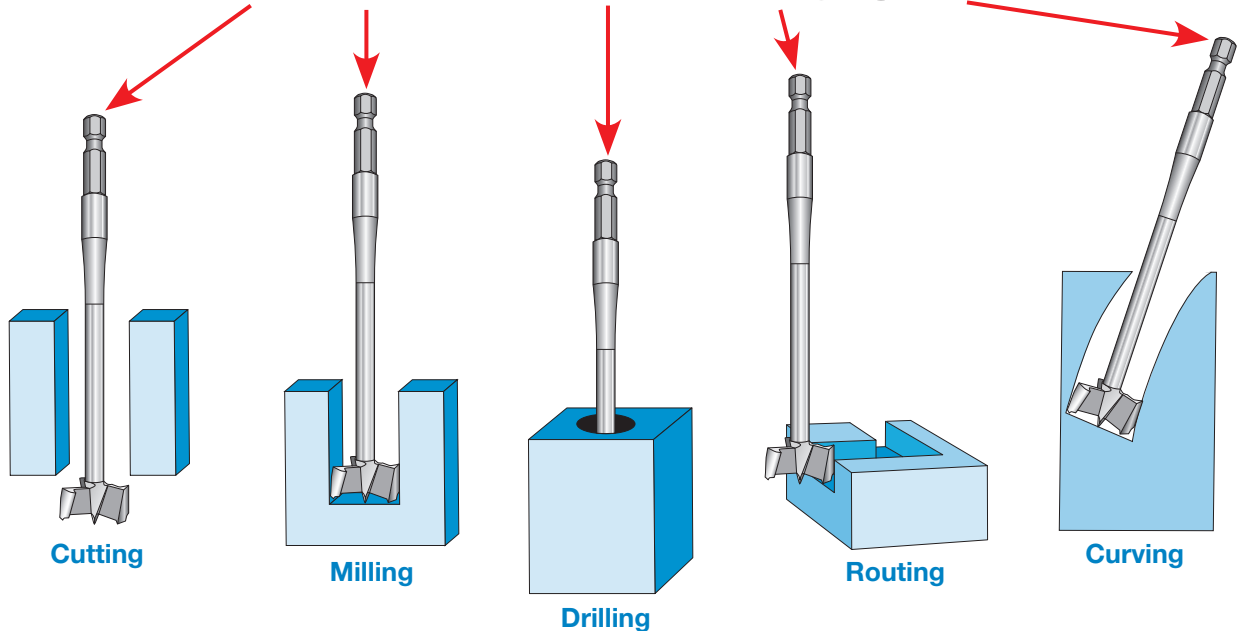
SIZE	OVERALL LENGTH	ITEM NO.	PRICE
13/16	5	MAD052	7.14
7/8	5	MAD056	7.78
1	5	MAD100	8.72
1-1/4	5	MAD116	11.86

TOOL STEEL MULTI-ANGLE DRILL SETS

PLASTIC INDEX

ILLUSTRATION	TYPE OF DRILL INDEX	ITEM NO.	PRICE
	4 pc Set (3/8, 1/2, 3/4, 1")	DS-MAD-4	31.50
	7 pc Set (3/8, 1/2, 5/8, 3/4, 7/8, 1", 1-1/4)	DS-MAD-7	58.80
	9 pc Set (1/4, 3/8, 1/2, 5/8, 3/4, 13/16, 7/8, 1", 1-1/4)	DS-MAD-9	88.20

5 USES IN 1 TOOL



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