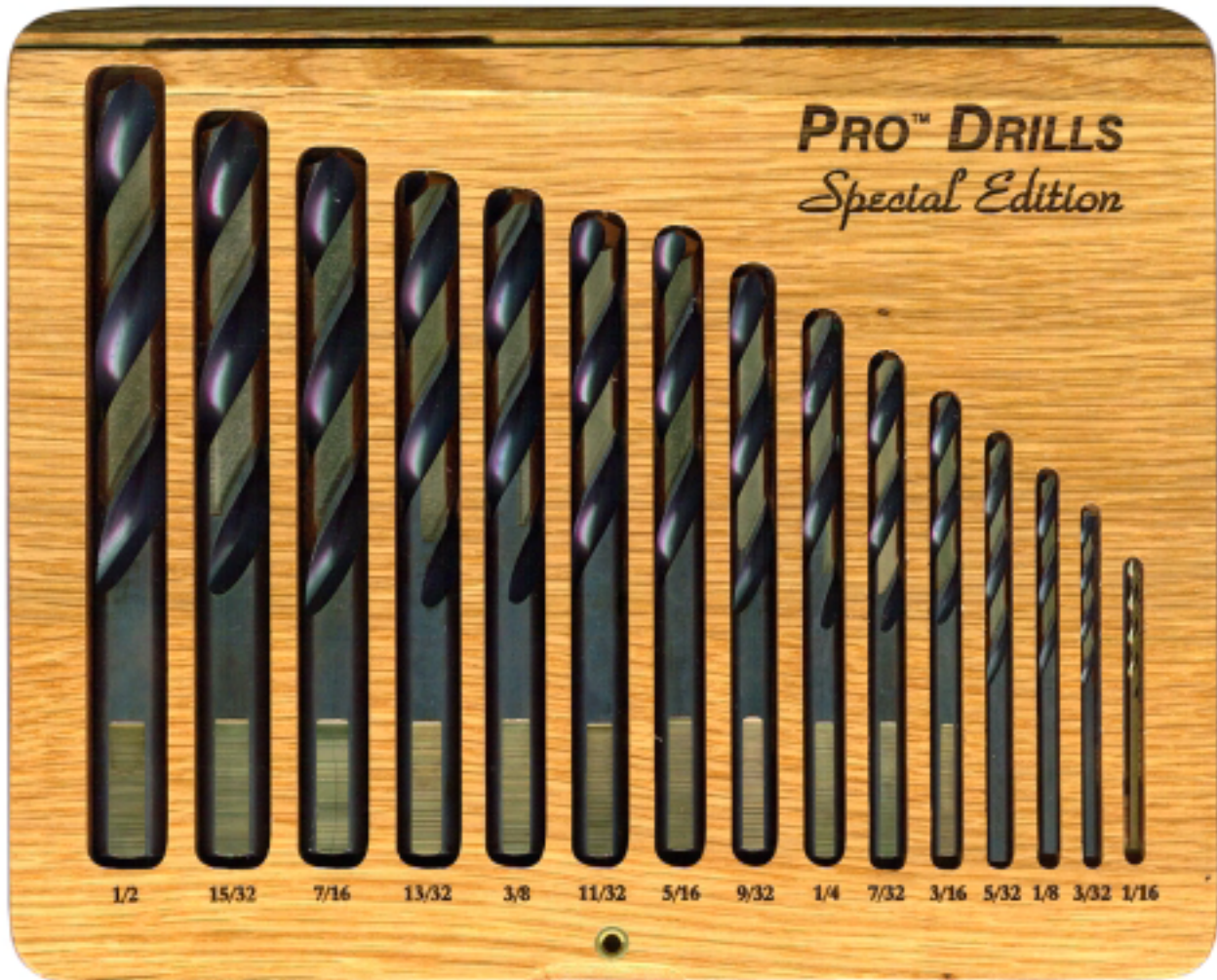


I · N · T · R · O · D · U · C · I · N · G

CIC 2000™ SERIES

"CUTTING TOOLS FOR THE NEW MILLENNIUM"



P/N 61635

INCLUDES:

- **Oak hardwood box with hinged top cover safely stores and protects CIC 200™ Pro™ Drills**
- **15 of the most popular fractional sizes used by professional mechanics**
- **Sizes include 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8", 13/32", 7/16", 15/32" and 1/2"**
- **Dimensions: 7-7/8" long x 6-3/8" wide x 1-1/2" thick**

NOTE: To remove drills from box, press on base of drill with fingertip.

CUTTING TOOL ORGANIZERS

Shooter Taps & Drills



P/N 7786

- 3-Drawer organizer
- 32 taps and drills
- 8 Sizes
- 6-32 to 1/2-13 taps
- #35 to 7/16" drills

Shooter Taps & Drills - Metric



P/N 7788

- 3-Drawer organizer
- Metric sizes
- 20 taps and drills
- 2.5mm x 0.45 to 12mm x 1.75 taps
- 2.05mm to 10.2mm drills

CIC 200™ Pro™ Shooter Taps & Drills



P/N 61603

- 3-Drawer organizer
- 13 CIC 200™ Pro™ Shooter Taps
- 13 CIC 200™ Pro™ Drills
- Taps - 4-40 to 1/2-20
- Drills - #43 to 29/64

CIC 200™ Pro™ Shooter Taps & Drills (With Aligner)



P/N 7805

- 3-Drawer organizer
- 13 CIC 200™ Pro™ Shooter Taps
- 13 CIC 200™ Pro™ Drills
- 4-40 to 1/2-20 taps
- #43 to 29/64 drills
- Tap/ream aligner

CIC 200™ Pro™ Drills Under-Mount Organizer



P/N 7880

- 45 CIC 200™ Pro™ Drills
- Fractional sizes
- Workbench spacesaver
- Built-in lock secures drawer
- 23 most popular sizes
- 1/16" to 1/2"

CIC 200™ Carbide Rotary Files



P/N 61608

- 3-Drawer Organizer
- Solid carbide with 1/4" shank
- 13 CIC 200™ files
- Cylindrical, ball, oval, round tree, tapered radius, cone, etc.

CIC 200™ Carbide Masonry Drills



P/N 61611

- 3-Drawer organizer
- Fractional sizes
- 26 CIC 200™ masonry drills
- 15 most popular sizes
- 1/8" to 3/4"

CIC 150™ 118° Split Point Drills



P/N 61677

- 3-Drawer 50 piece organizer
- Fractional sizes
- 50 CIC 200™ Split Point™ drills
- 1/16" to 1/2" by 64ths

CIC 200™ Quad Point™ Drills



P/N 61695

- 3-Drawer organizer
- Fractional sizes
- 50 CIC 200™ Quad Point™ drills
- 23 sizes
- 1/16" to 1/2" by 64ths

CIC 200™ Quad Point™ Drills - Metric



P/N 61696

- 3-Drawer organizer
- Metric sizes
- 25 CIC 200™ Quad Point™ drills
- 1mm to 13mm

CIC 200™ Quad Point Drills - Number Drill Organizer



P/N 61697

- 5-Drawer organizer
- 75 pieces
- 3 pieces of each size
- 25 popular sizes: #3 to #44

CIC 200™ Pro™ Drill Organizer - BASIC Organizer



P/N 61699

- 3-Drawer organizer
- Fractional sizes
- 45 CIC 200™ Pro™ Drills
- 23 of the most popular sizes
- One 29-piece index for filling

CIC 200™ Pro™ Drill Organizer - MEGA Organizer



P/N 61699M

- 3-Drawer organizer
- Fractional sizes
- 58 CIC 200™ Pro™ Drills
- 29 of the most popular sizes
- Two 29-piece indexes for filling

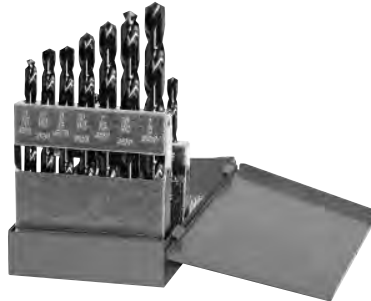
CIC 200™ Pro™ Drill Organizer - STARTER Organizer



P/N 61699S

- 3-Drawer organizer
- Fractional sizes
- 25 CIC 200™ Pro™ Drills
- 13 of the most popular sizes
- One 29-piece index for filling

DRILLS



- Unique Quad Point Drill Designs
- Special Metallurgical Blend of Tool Steels
- Superior Strength
- Longer Life
- Unmatched Performance
- The Finest Drills Available
 - CIC 200™ Pro™
 - CIC 200™ Quad Point
 - CIC 200™ Quad Point Plus
 - Reduced Shank
 - Double End
 - Cobalt Tip
 - Carbide Tip
 - Masonry
 - Reamers
 - Step Drills

CHROMATE DRILLS ARE STRONGER, CUT FASTER, LAST LONGER AND OUTPERFORM ORDINARY DRILLS UP TO 10 TO 1.

Manufactured from the finest and toughest tool steels to exacting specifications. Always use Chromate Drills when speed, accuracy, performance and longevity are important.



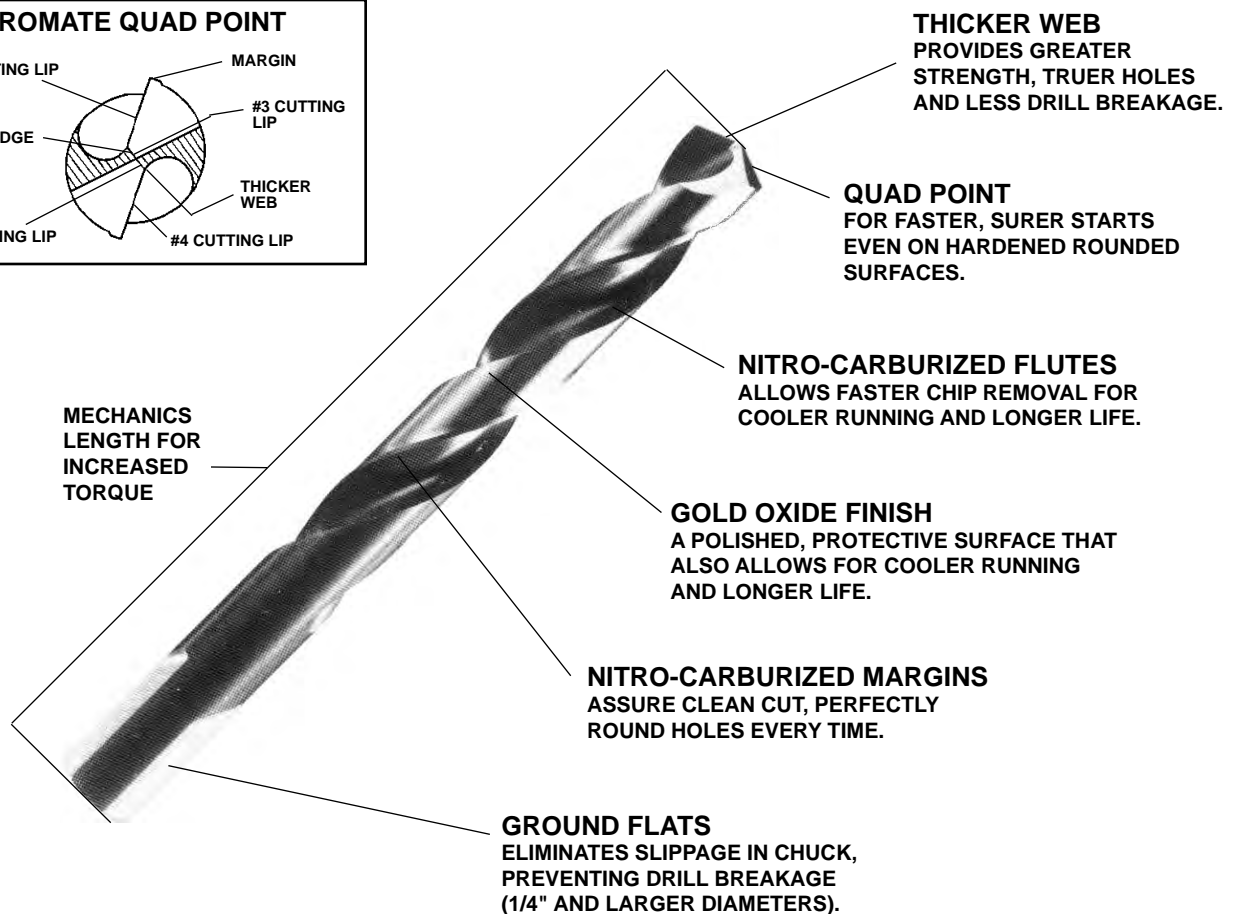
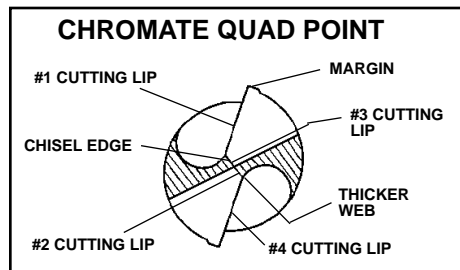
CHROMATE INDUSTRIAL CORP.

EXCEPTIONAL PRODUCTS, SERVICE AND INNOVATIVE SOLUTIONS

CIC 200™ PROFESSIONAL DRILLS

OUTLAST ORDINARY DRILLS UP TO 10 TO 1

Constructed of special tool steels – a metallurgical blend of chromium, vanadium, molybdenum and tungsten alloys. CIC 200 Professional Drills offer superior strength, faster heat dissipation and longer life for quality, reliability and performance that is unequaled by any other drill.



CIC 200™ PRO DRILLS CUT UP TO 55 ROCKWELL "C"

SPECIAL TOOL STEEL

- The toughest of the high molybdenum tool steels. Extremely resistant to breakage.
- Will cut up to 55 Rockwell "C"
- Heat-treated at 2,185°F and then nitro-carburized at 950°F.
- Stays sharp longer.
- Withstands higher temperatures.

SPECIAL DESIGN AND FEATURES

- Triple-flat shank for non-slip chucking.
- Quad point for fast penetration and accurate starting without center punching.
- Heavy duty web design for longer life and less breakage.
- Special mechanics length for less breakage, increased torque and outstanding performance with hand drill.
- Nitro-carburized surface has hardness of approximately 70 Rockwell "C".

CIC 200™ PROFESSIONAL DRILLS (Cont'd.)

MECHANICS LENGTH — FRACTIONAL SIZE DRILLS



DIA.	LENGTH	DEC. EQUIV.	PART	DIA.	LENGTH	DEC. EQUIV.	PART
1/16"	1-7/8"	.0625	F 97104	19/64"	3-7/8"	.2969	C 97119
5/64"	2"	.0781	F 97105	5/16"	4"	.3125	C 97120
3/32"	2-1/4"	.0938	F 97106	21/64"	4-1/16"	.3281	C 97121
7/64"	2-3/8"	.1094	F 97107	11/32"	4-1/8"	.3438	C 97122
1/8"	2-1/2"	.1250	F 97108	23/64"	4-3/16"	.3594	C 97123
9/64"	2-5/8"	.1406	F 97109	3/8"	4-1/4"	.3750	C 97124
5/32"	2-3/4"	.1562	F 97110	25/64"	4-5/16"	.3906	C 97125
11/64"	2-7/8"	.1719	F 97111	13/32"	4-3/8"	.4062	C 97126
3/16"	3"	.1875	F 97112	27/64"	4-7/16"	.4219	C 97127
13/64"	3-1/8"	.2031	F 97113	7/16"	4-1/2"	.4375	C 97128
7/32"	3-1/4"	.2188	D 97114	29/64"	4-5/8"	.4531	C 97129
15/64"	3-3/8"	.2344	D 97115	15/32"	4-3/4"	.4688	C 97130
1/4"	3-1/2"	.2500	D 97116	31/64"	4-7/8"	.4844	C 97131
17/64"	3-5/8"	.2656	D 97117	1/2"	5"	.5000	C 97132
9/32"	3-3/4"	.2812	D 97118	-	-	-	-

FRACTIONAL DRILL ORGANIZER

CIC 200™ PRO™ DRILL ORGANIZERS



- ONE CONVENIENT LOCATION FOR ALL YOUR DRILLS
- THE RIGHT SIZE ALWAYS AVAILABLE
- PROVIDES INSTANT CONTROL OF YOUR INVENTORY
- STORES HUNDREDS OF DRILLS IN ONE PLACE
- ELIMINATES MISPLACED DRILLS
- EASY ACCESS FOR YOUR STAFF

BASIC

- Contains 45 CIC 200™ Pro™ Drills
- 23 of the most popular fractional sizes
- One 29-piece Index for filling

STARTER

- Contains 25 CIC 200™ Pro™ Drills
- 13 of the most popular fractional sizes
- One 29-piece Index for filling

MEGA

- Contains 58 CIC 200™ Pro™ Drills
- 29 of the most popular fractional sizes
- Two (2) 29-piece Indexes for filling

CONTENTS		PART
BASIC	1 each: 13/64, 7/32, 15/64, 17/64, 9/32, 5/16, 21/64, 11/32, 3/8, 25/64, 27/64, 7/16 and 1/2 2 each: 11/64 3 each: 1/16, 5/64, 3/32, 7/64, 9/64, 5/32 and 1/4 4 each: 3/16 5 each: 1/8	A 61699
STARTER	1 each: 9/32, 5/16, 11/32, 3/8, 7/16 and 1/2 2 each: 7/32 and 1/4 3 each: 1/16, 3/32, 1/8, 5/32 and 3/16	A 61699S
MEGA	2 each: 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 11/64, 3/16, 13/64, 7/32, 15/64, 1/4, 17/64, 9/32, 19/64, 5/16, 21/64, 11/32, 23/64, 3/8, 25/64, 13/32, 27/64, 7/16, 29/64, 15/32, 31/64 and 1/2	A 61699M

CIC 200™ PROFESSIONAL DRILLS (Cont'd.)

MECHANICS LENGTH INDEXES AND CADDY



INDEX



CADDY

DRILL INDEXES

DESCRIPTION	PART
13 DRILLS: 1/16 to 1/4 by 64ths	A 61632
15 DRILLS: 1/16 to 1/2 by 32nds	A 61634
21 DRILLS: 1/16 to 3/8 by 64ths	A 61636
29 DRILLS: 1/16 to 1/2 by 64ths	A 61638

DRILL CADDY

29 DRILLS: 1/16 to 1/2 by 64ths	A 61643
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6 PIECE PRO FRACTIONAL ORGANIZER "COMPLETER KIT"



CONTENTS

1 each: 19/64, 23/64, 13/32, 29/64, 15/32 and 31/64

PART

A 61689

3/8" REDUCED SHANK DRILLS

All sizes from 27/64" to 1/2" with shanks machined down to 3/8" for use with standard 3/8" shop drill motors.



DIAMETER	LENGTH	DECIMAL EQUIVALENT	PART
27/64	4-7/16	.4219	c 98027
7/16	4-1/2	.4375	c 98028
29/64	4-5/8	.4531	c 98029
15/32	4-3/4	.4688	c 98030
31/64	4-7/8	.4844	c 98031
1/2	5	.5000	c 98032

3/8" REDUCED SHANK INDEXES

29 PIECE



15 PIECE



DESCRIPTION

29 DRILLS 1/16 to 1/2 by 64ths

PART

A 61685

DESCRIPTION

15 DRILLS 1/16 to 1/2 by 32nds

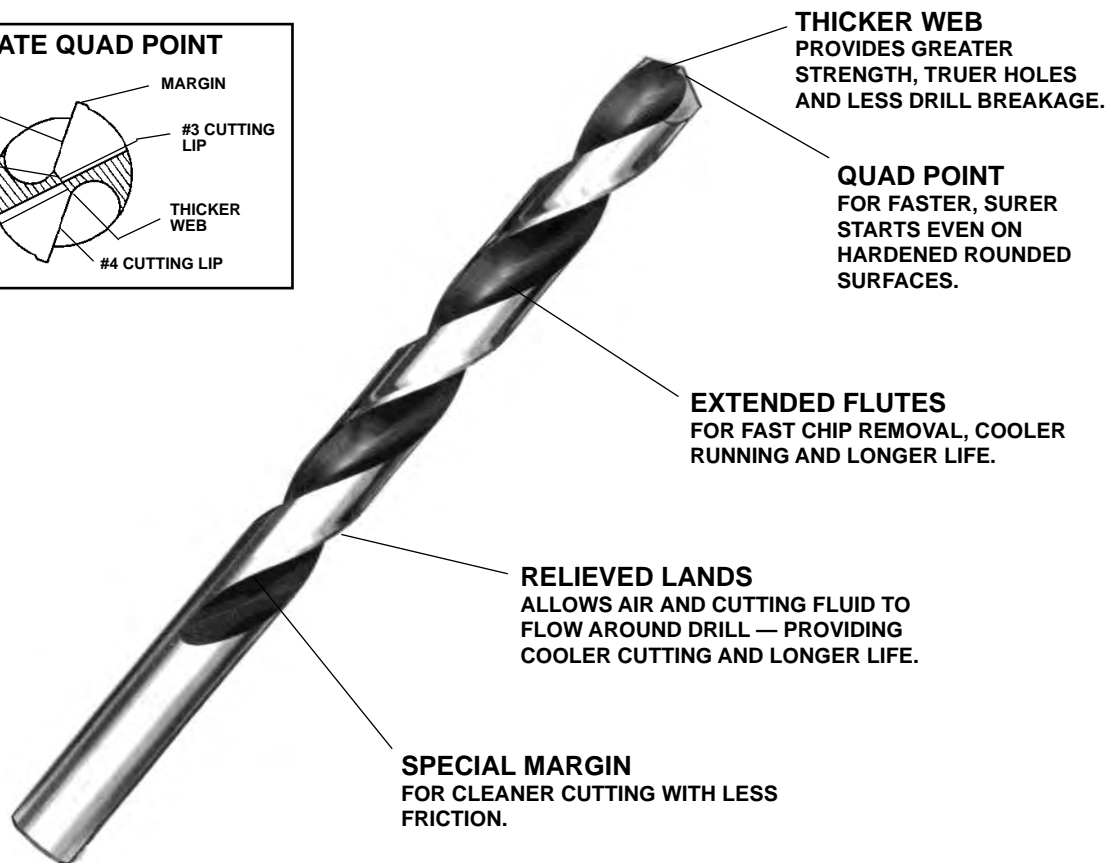
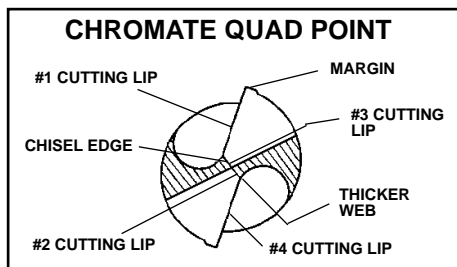
PART

A 61680

CIC 200™ QUAD POINT DRILLS

THE ONE DRILL FOR ALL YOUR CUTTING REQUIREMENTS

Constructed of special tool steel — a metallurgical blend of chromium, vanadium and molybdenum. CIC 200 Quad Point Drills offer superior strength, faster heat dissipation and longer life.



CIC 200™ QUAD POINT DRILLS CUT UP TO 55 ROCKWELL "C"

SPECIAL FEATURES

- **Cuts standard, stainless, tool and exotic steels**
 - **Won't snap or chip weld**
 - **No need to center punch prior to drilling**
 - **Use in drill press or hand drill**
- **Stays sharp longer – outlasting ordinary drills ten to one**

When you purchase a drill you are actually buying holes.
CIC 200™ QUAD POINT DRILLS will outlast ordinary drills up to 10 to 1,
giving you many more holes per drill, thus reducing your per hole cost to a minimum!

LET US SHOW YOU HOW WELL IT WORKS!

CIC 200™ QUAD POINT DRILLS (Cont'd.)

JOBBER AND STUBBY LENGTHS — FRACTIONAL SIZES



DIA.	DEC. EQUIV.	JOBBER		STUBBY		DIA.	DEC. EQUIV.	JOBBER		STUBBY	
		LTH.	PART	LTH.	PART			LTH.	PART	LTH.	PART
1/64	.0156	3/4	J 91001	-	-	17/64	.2656	4-1/8	F 91017	2-5/8	F 81017
1/32	.0312	1-3/8	J 91002	-	-	9/32	.2812	4-1/4	F 91018	2-11/16	F 81018
3/64	.0469	1-3/4	J 91003	-	-	19/64	.2969	4-3/8	F 91019	2-3/4	F 81019
1/16	.0625	1-7/8	J 91004	1-5/8	J 81004	5/16	.3125	4-1/2	F 91020	2-13/16	F 81020
5/64	.0781	2	J 91005	1-11/16	J 81005	21/64	.3281	4-5/8	F 91021	2-15/16	F 81021
3/32	.0938	2-1/4	J 91006	1-3/4	J 81006	11/32	.3438	4-3/4	D 91022	3	D 81022
7/64	.1094	2-5/8	J 91007	1-13/16	J 81007	23/64	.3594	4-7/8	D 91023	3-1/16	D 81023
1/8	.1250	2-3/4	J 91008	1-7/8	J 81008	3/8	.3750	5	D 91024	3-1/8	D 81024
9/64	.1406	2-7/8	J 91009	1-15/16	J 81009	25/64	.3906	5-1/8	D 91025	3-1/4	D 81025
5/32	.1562	3-1/8	J 91010	2-1/16	J 81010	13/32	.4062	5-1/4	D 91026	3-5/16	D 81026
11/64	.1719	3-1/4	J 91011	2-1/8	J 81011	27/64	.4219	5-3/8	C 91027	3-3/8	C 81027
3/16	.1875	3-1/2	J 91012	2-3/16	J 81012	7/16	.4375	5-1/2	C 91028	3-7/16	C 81028
13/64	.2031	3-5/8	J 91013	2-1/4	J 81013	29/64	.4531	5-5/8	C 91029	3-9/16	C 81029
7/32	.2188	3-3/4	J 91014	2-3/8	J 81014	15/32	.4688	5-3/4	C 91030	3-5/8	C 81030
15/64	.2344	3-7/8	F 91015	2-7/16	F 81015	31/64	.4844	5-7/8	C 91031	3-11/16	C 81031
1/4	.2500	4	F 91016	2-1/2	F 81016	1/2	.5000	6	C 91032	3-3/4	C 81032

23

JOBBER LENGTHS — LETTER SIZES

DIA.	DEC. EQUIV.	JOBBER		DIA.	DEC. EQUIV.	JOBBER	
		LENGTH	PART			LENGTH	PART
A	.234	3-7/8	c 10201	N	.302	4-3/8	c 10214
B	.238	4	c 10202	O	.316	4-1/2	c 10215
C	.242	4	c 10203	P	.323	4-5/8	c 10216
D	.246	4	c 10204	Q	.332	4-3/4	c 10217
E	.250	4	c 10205	R	.339	4-3/4	c 10218
F	.257	4-1/8	c 10206	S	.348	4-7/8	c 10219
G	.261	4-1/8	c 10207	T	.358	4-7/8	c 10220
H	.266	4-1/8	c 10208	U	.368	5	c 10221
I	.272	4-1/8	c 10209	V	.377	5	c 10222
J	.277	4-1/8	c 10210	W	.386	5-1/8	c 10223
K	.281	4-1/4	c 10211	X	.397	5-1/8	c 10224
L	.290	4-1/4	c 10212	Y	.404	5-1/4	c 10225
M	.295	4-3/8	c 10213	Z	.413	5-1/4	c 10226

CIC 200™ QUAD POINT DRILLS (Cont'd.)

JOBBER AND STUBBY LENGTHS - NUMBER SIZES



DIA.	DEC. EQUIV.	JOBBER		STUBBY		DIA.	DEC. EQUIV.	JOBBER		STUBBY	
		LTH.	PART	LTH.	PART			LTH.	PART	LTH.	PART
80	.0135	3/4	J 10080	-	-	40	.0980	2-3/8	J 10040	1-13/16	J 80040
79	.0145	3/4	J 10079	-	-	39	.0995	2-3/8	J 10039	1-13/16	J 80039
78	.0160	7/8	J 10078	-	-	38	.1015	2-1/2	J 10038	1-13/16	J 80038
77	.0180	7/8	J 10077	-	-	37	.1040	2-1/2	J 10037	1-13/16	J 80037
76	.0200	7/8	J 10076	-	-	36	.1065	2-1/2	J 10036	1-13/16	J 80036
75	.0210	1	J 10075	-	-	35	.1100	2-5/8	J 10035	1-7/8	J 80035
74	.0225	1	J 10074	-	-	34	.1110	2-5/8	J 10034	1-7/8	J 80034
73	.0240	1-1/8	J 10073	-	-	33	.1130	2-5/8	J 10033	1-7/8	J 80033
72	.0250	1-1/8	J 10072	-	-	32	.1160	2-3/4	J 10032	1-7/8	J 80032
71	.0260	1-1/4	J 10071	-	-	31	.1200	2-3/4	J 10031	1-7/8	J 80031
70	.0280	1-1/4	J 10070	-	-	30	.1285	2-3/4	J 10030	1-15/16	J 80030
69	.0292	1-3/8	J 10069	-	-	29	.1360	2-7/8	J 10029	1-15/16	J 80029
68	.0310	1-3/8	J 10068	-	-	28	.1405	2-7/8	J 10028	1-15/16	J 80028
67	.0320	1-3/8	J 10067	-	-	27	.1440	3	J 10027	2-1/16	J 80027
66	.0330	1-3/8	J 10066	-	-	26	.1470	3	J 10026	2-1/16	J 80026
65	.0350	1-1/2	J 10065	-	-	25	.1495	3	J 10025	2-1/16	J 80025
64	.0360	1-1/2	J 10064	-	-	24	.1520	3-1/8	J 10024	2-1/16	J 80024
63	.0370	1-1/2	J 10063	-	-	23	.1540	3-1/8	J 10023	2-1/16	J 80023
62	.0380	1-1/2	J 10062	-	-	22	.1570	3-1/8	J 10022	2-1/8	J 80022
61	.0390	1-5/8	J 10061	-	-	21	.1590	3-1/4	J 10021	2-1/8	J 80021
60	.0400	1-5/8	J 10060	-	-	20	.1610	3-1/4	J 10020	2-1/8	J 80020
59	.0410	1-5/8	J 10059	-	-	19	.1660	3-1/4	J 10019	2-1/8	J 80019
58	.0420	1-5/8	J 10058	-	-	18	.1695	3-1/4	J 10018	2-1/8	J 80018
57	.0430	1-3/4	J 10057	-	-	17	.1730	3-3/8	J 10017	2-3/16	J 80017
56	.0465	1-3/4	J 10056	-	-	16	.1770	3-3/8	J 10016	2-3/16	J 80016
55	.0520	1-7/8	J 10055	-	-	15	.1800	3-3/8	J 10015	2-3/16	J 80015
54	.0550	1-7/8	J 10054	-	-	14	.1820	3-3/8	J 10014	2-3/16	J 80014
53	.0595	1-7/8	J 10053	-	-	13	.1850	3-1/2	J 10013	2-3/16	J 80013
52	.0635	1-7/8	J 10052	-	-	12	.1890	3-1/2	J 10012	2-1/4	J 80012
51	.0670	2	J 10051	-	-	11	.1910	3-1/2	J 10011	2-1/4	J 80011
50	.0700	2	J 10050	-	-	10	.1935	3-5/8	F 10010	2-1/4	F 80010
49	.0730	2	J 10049	-	-	9	.1960	3-5/8	F 10009	2-1/4	F 80009
48	.0760	2	J 10048	-	-	8	.1990	3-5/8	F 10008	2-1/4	F 80008
47	.0785	2	J 10047	-	-	7	.2010	3-5/8	F 10007	2-1/4	F 80007
46	.0810	2-1/8	J 10046	-	-	6	.2040	3-3/4	F 10006	2-3/8	F 80006
45	.0820	2-1/8	J 10045	-	-	5	.2055	3-3/4	F 10005	2-3/8	F 80005
44	.0860	2-1/8	J 10044	1-3/4	J 80044	4	.2090	3-3/4	F 10004	2-3/8	F 80004
43	.0890	2-1/4	J 10043	1-3/4	J 80043	3	.2130	3-3/4	F 10003	2-3/8	F 80003
42	.0935	2-1/4	J 10042	1-3/4	J 80042	2	.2210	3-7/8	F 10002	2-7/16	F 80002
41	.0960	2-3/8	J 10041	1-13/16	J 80041	1	.2280	3-7/8	F 10001	2-7/16	F 80001

CIC 200™ QUAD POINT DRILLS (Cont'd.)

6" LENGTH - FRACTIONAL SIZES



DIAMETER	DEC. EQUIV.	PART	DIAMETER	DEC. EQUIV.	PART
3/64	.0469	c 82081	5/32	.1562	c 82088
1/16	.0625	c 82082	11/64	.1719	c 82089
5/64	.0781	c 82083	3/16	.1875	c 82090
3/32	.0938	c 82084	13/64	.2031	c 82091
7/64	.1094	c 82085	7/32	.2188	c 82092
1/8	.1250	c 82086	15/64	.2344	c 82093
9/64	.1406	c 82087	1/4	.2500	c 82094

6" LENGTH - NUMBER SIZES



DIAMETER	DEC. EQUIV.	PART	DIAMETER	DEC. EQUIV.	PART
60	.0400	c 82060	30	.1285	c 82030
59	.0410	c 82059	29	.1360	c 82029
58	.0420	c 82058	28	.1405	c 82028
57	.0430	c 82057	27	.1440	c 82027
56	.0465	c 82056	26	.1470	c 82026
55	.0520	c 82055	25	.1495	c 82025
54	.0550	c 82054	24	.1520	c 82024
53	.0595	c 82053	23	.1540	c 82023
52	.0635	c 82052	22	.1570	c 82022
51	.0670	c 82051	21	.1590	c 82021
50	.0700	c 82050	20	.1610	c 82020
49	.0730	c 82049	19	.1660	c 82019
48	.0760	c 82048	18	.1695	c 82018
47	.0785	c 82047	17	.1730	c 82017
46	.0810	c 82046	16	.1770	c 82016
45	.0820	c 82045	15	.1800	c 82015
44	.0860	c 82044	14	.1820	c 82014
43	.0890	c 82043	13	.1850	c 82013
42	.0935	c 82042	12	.1890	c 82012
41	.0960	c 82041	11	.1910	c 82011
40	.0980	c 82040	10	.1935	c 82010
39	.0995	c 82039	9	.1960	c 82009
38	.1015	c 82038	8	.1990	c 82008
37	.1040	c 82037	7	.2010	c 82007
36	.1065	c 82036	6	.2040	c 82006
35	.1100	c 82035	5	.2055	c 82005
34	.1110	c 82034	4	.2090	c 82004
33	.1130	c 82033	3	.2130	c 82003
32	.1160	c 82032	2	.2210	c 82002
31	.1200	c 82031	1	.2280	c 82001

CIC 200™ QUAD POINT DRILLS (Cont'd.)

REDUCED SHANK DRILLS

1/2" SHANK — 6" LENGTH



DIA.	DEC.	PART	DIA.	DEC.	PART	DIA.	DEC.	PART
33/64	.5156	A 91235	3/4	.7500	A 91250	63/64	.9844	A 91265
17/32	.5312	A 91236	49/64	.7656	A 91251	1	1.0000	A 91266
35/64	.5469	A 91237	25/32	.7812	A 91252	1-1/32	1.0312	A 91267
9/16	.5625	A 91238	51/64	.7969	A 91253	1-1/16	1.0625	A 91268
37/64	.5781	A 91239	13/16	.8125	A 91254	1-3/32	1.0938	A 91269
19/32	.5938	A 91240	53/64	.8281	A 91255	1-1/8	1.1250	A 91270
39/64	.6094	A 91241	27/32	.8438	A 91256	1-5/32	1.1562	A 91271
5/8	.6250	A 91242	55/64	.8594	A 91257	1-3/16	1.1875	A 91272
41/64	.6406	A 91243	7/8	.8750	A 91258	1-7/32	1.2188	A 91273
21/32	.6562	A 91244	57/64	.8906	A 91259	1-1/4	1.2500	A 91274
43/64	.6719	A 91245	29/32	.9062	A 91260	1-5/16	1.3125	A 91276
11/16	.6875	A 91246	59/64	.9219	A 91261	1-3/8	1.3750	A 91278
45/64	.7031	A 91247	15/16	.9375	A 91262	1-7/16	1.4375	A 91280
23/32	.7188	A 91248	61/64	.9531	A 91263	1-1/2	1.5000	A 91282
47/64	.7344	A 91249	31/32	.9688	A 91264	-	-	-

1/4 INCH SHANK



DIAMETER	DEC. EQUIV.	JOBBER		STUBBY	
		LENGTH	PART	LENGTH	PART
17/64	.2656	3-1/2	A 91417	2-5/8	A 61401
9/32	.2812	3-19/32	A 91418	2-11/16	A 61404
19/64	.2969	3-23/32	A 91419	2-3/4	A 61408
5/16	.3125	3-27/32	A 91420	2-13/16	A 61412
21/64	.3281	3-15/16	A 91421	2-15/16	A 61416
11/32	.3438	4-1/32	A 91422	3	-
23/64	.3594	4-5/32	A 91423	3-1/16	A 61424
3/8	.3750	4-1/4	A 91424	3-1/8	A 61428
25/64	.3906	4-11/32	A 91425	3-1/4	A 61432
13/32	.4062	4-15/32	A 91426	3-5/16	A 61436
27/64	.4219	4-9/16	A 91427	3-3/8	A 61440
7/16	.4375	4-11/16	A 91428	3-7/16	A 61444
29/64	.4531	4-25/32	A 91429	3-9/16	A 61448
15/32	.4688	4-7/8	A 91430	3-5/8	A 61452
31/64	.4844	5	A 91431	3-11/16	-
1/2	.5000	5-3/32	A 91432	3-3/4	A 61460

CIC 200™ QUAD POINT DRILLS (Cont'd.)

DOUBLE-END

STANDARD



WITH COUNTERSINKS



DRILL ENDS ARE EQUAL DIAMETER.
INCLUDED ANGLE IS 60°.

SIZE	DECIMAL EQUIV.	LENGTH	PART	BODY DIA.	DRILL DIA.	DRILL LENGTH	OVERALL LENGTH	TYPE	PART
3/32	.0937	1-3/4	F 61498	1/8	.025	.040	1-7/32	00	A 61530
7/64	.1093	1-15/16	F 61499	1/8	1/32	3/64	1-7/32	0	A 61531
1/8	.1250	1-15/16	F 61500	1/8	3/64	3/64	1-1/4	1	A 61532
9/64	.1410	2"	F 61503	3/16	5/64	5/64	1-7/8	2	A 61533
5/32	.1562	2-1/8	F 61505	1/4	7/64	7/64	2	3	A 61534
3/16	.1875	2-5/16	F 61510	5/16	1/8	1/8	2-1/8	4	A 61535
7/32	.2188	2-9/16	F 61515	7/16	3/16	3/16	2-3/4	5	A 61536
1/4	.2500	2-5/8	D 61520	1/2	7/32	7/32	3	6	A 61537
#30	.1285	2"	F 61525	5/8	1/4	1/4	3-1/4	7	A 61538
#20	.1610	2-1/8	F 61527	3/4	5/16	5/16	3-1/2	8	A 61539
#11	.1910	2-5/16	D 61528	-	-	-	-	-	-
#10	.1935	2-5/16	D 61529	-	-	-	-	-	-

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12" LENGTH - FRACTIONAL SIZES

9" EXTENDED FLUTES



- 135° SPLIT POINT
- HARDENED FULL LENGTH OF FLUTES
- DEEP DRILLING — UP TO 8"

DIAMETER	PART
1/8	A 11030
5/32	A 11031
3/16	A 11032
7/32	A 11033
1/4	A 11034
9/32	A 11035
5/16	A 11036
3/8	A 11038
7/16	A 11040
1/2	A 11042

STANDARD AIRCRAFT FLUTES



- 135° SPLIT POINT
- SPRING TEMPERED CONSTRUCTION
- DRILLS HARD-TO-REACH AREAS
- HIGH SPEED STEEL

DIAMETER	FLUTE LENGTH	PART
1/8	1-5/8	A 11052
5/32	2	A 11054
3/16	2-5/16	A 11056
7/32	2-1/2	A 11058
1/4	2-3/4	A 11060
9/32	2-15/16	A 11062
5/16	3-3/16	A 11064
3/8	3-5/8	A 11066
7/16	4-1/16	A 11068
1/2	4-1/2	A 11070

CIC 200™ QUAD POINT DRILLS (Cont'd.)

DRILL ORGANIZERS AND DISPENSERS

One convenient location for all your CIC 200™ Quad Point Drills. The right size available every time. Provides instant control of your drill inventory.

50 PIECE FRACTIONAL ORGANIZER



CONTENTS	PART
1 each: 21/64, 11/32, 25/64, 27/64, 7/16 and 1/2	A 61695
2 each: 9/64, 5/32, 11/64, 13/64, 7/32, 15/64, 17/64, 9/32, 5/16 and 3/8	
3 each: 1/16, 5/64, 3/32 and 7/64	
4 each: 1/8, 3/16 and 1/4	

75 PIECE NUMBER ORGANIZER



CONTENTS	PART
3 each: #3, #5, #6, #7, #8, #9, #10, #11, #15, #20, #21, #22, #25, #26, #28, #29, #30, #33, #35, #36, #38, #39, #40, #43 and #44	A 61697

FRACTIONAL ORGANIZER "COMPLETER KIT"



CONTENTS	PART
1 each: 19/64, 23/64, 13/32, 29/64, 15/32 and 31/64	A 6169

MASTER DRILL DISPENSER - COMPLETE



CONTENTS	PART
Total of 115 CIC 200™ Quad Point Drills	A 61654
1 each of 29 fractional sizes: 1/16 through 1/2	
1 each of 60 number sizes: #1 through #60	
1 each of 26 letter sizes: A through Z	

MASTER DRILL DISPENSER - STARTER



CONTENTS	PART
Total of 50 CIC 200™ Quad Point Drills	A 61653
4 each: 1/8, 3/16 and 1/4	
3 each: 1/16, 5/64, 3/32, and 7/64	
2 each: 9/64, 5/32, 11/64, 13/64, 7/32, 15/64, 17/64, 9/32, 5/16 and 3/8	
1 each: 21/64, 11/32, 25/64, 27/64, 7/16, 1/2	

CIC 200™ QUAD POINT DRILLS (Cont'd.)

DRILL INDEXES



INDEX



CADDY

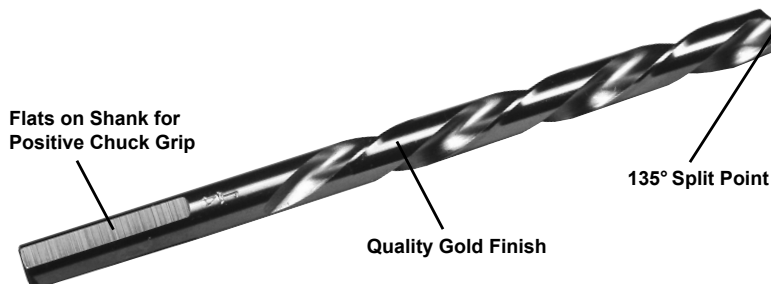
DESCRIPTION	# OF DRILLS	PART	
1/16 to 1/4 by 64ths	13	A	61600
1/16 to 1/2 by 32nds	15	A	61605
1/16 to 3/8 by 64ths	21	A	61610
1/16 to 1/2 by 64ths	29	A	61615
1 to 60 Numbers	60	A	61620
A to Z Letters	26	A	61625
61 to 80 Numbers	20	A	61630
Left Hand Drills 1/8, 3/16, 1/4, 5/16	4	A	61631
Left Hand Drills 1/6 to 1/2 by 32nds	15	A	61633
Stubby Drill Index 1/16 to 1/2 by 64ths	29	A	61678
1/4" REDUCED SHANK INDEXES			
1/16 to 1/2 by 32nds	15	A	61640
1/16 to 3/8 by 64ths	21	A	61645
1/16 to 1/2 by 64ths	29	A	61650
1/16 to 1/2 by 64ths (stubby)	29	A	61678
1/2" REDUCED SHANK INDEXES			
9/16" to 1" by 16ths	8	A	61648
JOBBER LENGTH - DRILL CADDY INDEX			
1/16 to 1/2 by 64ths	29	A	61642

CIC 200™ QUAD POINT PLUS DRILLS

JOBBER LENGTH – FRACTIONAL SIZE DRILLS

FEATURES

- **Stops Chuck Slippage**
Flats on drill shanks allow easy positive chuck grip.*
- **Made of Special Hi-moly Tool Steel**
Tougher than cobalt steel.
- **Substantially Longer Cutting Life**
The nitro-carburized flute has an increased Rockwell hardness.
- **Cuts Harder Materials**
The flatter point takes a smaller chip. More torque is directed to a smaller area. Allows drilling into materials with hardness over 30 on the Rockwell "C" Scale.
- **Stops Drill Walking**
The split point design gives accurate starting. No need for a center punch.
- **Holds Tighter Hole Size**
The split point design is self centering. This limits the normal oversize drilling characteristics.
- **Outstanding Quality Appearance**
A rich gold color sets it apart from commodity cutting tools.
- **Runs Cooler, Uses Less Torque**
135° point takes a smaller chip resulting in less heat. Friction is reduced by the gold surface treatment.
- **Made in U.S.A.**



DIA.	LENGTH	DEC. EQUIV.	PART	
1/16"	1-7/8"	.0625	C	93004
5/64"	2"	.0781	C	93005
3/32"	2-1/4"	.0938	C	93006
7/64"	2-5/8"	.1094	C	93007
1/8"	2-3/4"	.1250	C	93008
9/64"	2-7/8"	.1406	C	93009
5/32"	3-1/8"	.1562	C	93010
11/64"	3-1/4"	.1719	C	93011
3/16"	3-1/2"	.1875	C	93012
13/64"	3-5/8"	.2031	C	93013
7/32"	3-3/4"	.2188	C	93014
15/64"	3-7/8"	.2344	C	93015
1/4"	4"	.2500	C	93016
17/64"	4-1/8"	.2656	C	93017
9/32"	4-1/4"	.2812	C	93018
19/64"	4-3/8"	.2969	A	93019
5/16"	4-1/2"	.3125	A	93020
21/64"	4-5/8"	.3281	A	93021
11/32"	4-3/4"	.3438	A	93022
23/64"	4-7/8"	.3594	A	93023
3/8"	5"	.3750	A	93024
25/64"	5-1/8"	.3906	A	93025
13/32"	5-1/4"	.4062	A	93026
27/64"	5-3/8"	.4219	A	93027
7/16"	5-1/2"	.4375	A	93028
29/64"	5-5/8"	.4531	A	93029
15/32"	5-3/4"	.4688	A	93030
31/64"	5-7/8"	.4844	A	93031
1/2"	6"	.5000	A	93032

Bold type in table indicates 3-flat design (3/16" diameter & larger).

APPLICATIONS

- **Work Hardening Grades of Stainless Steel**
300 series stainless steel
- **Free Machining Grades of Stainless Steel**
400 series and type 303 stainless steel
- **Titanium Alloys**
- **Other High Tensile Strength Materials**

CIC 200™ QUAD POINT PLUS DRILLS

DRILL ORGANIZER

FRACTIONAL SIZES - 1/16" TO 1/2" BY 64^{THS}

- 3-Drawer organizer
- 50 Drills
- Holds 29 Sizes (23 sizes included)
- Sizes labeled on front of each drawer
- One convenient location for your drills
- The right size drill is always available
- Controls your drill inventory
- Can store hundreds of drills in one place
- Eliminates misplaced drills
- Easy access for your staff
- Cabinet: 14-1/2" W x 7-1/4" H x 7-1/4" D

CONTENTS	PART
1 each: 21/64, 11/32, 25/64, 27/64, 7/16 & 1/2	A 61569
2 each: 9/64, 5/32, 11/64, 13/64, 7/32, 15/64, 17/64, 9/32, 5/16 and 3/8	
3 each: 1/16, 5/64, 3/32 and 7/64	
4 each: 1/8, 3/16 and 1/4	

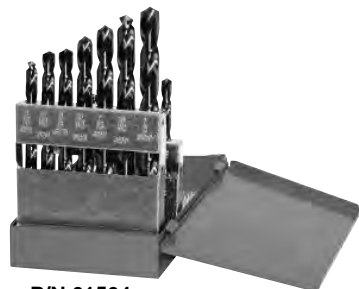


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DRILL INDEXES AND CADDY



P/N 61563



P/N 61564

TYPE	SIZES	# OF DRILLS	P/N
Index	1/16 to 1/4 by 64ths	13	A 61563
Index	1/16 to 1/2 by 32nds	15	A 61564
Index	1/16 to 3/8 by 64ths	21	A 61566
Index	1/16 to 1/2 by 64ths	29	A 61567
Caddy	1/16 to 1/2 by 64ths	29	A 61568



P/N 61566



P/N 61567



P/N 61568

CIC 200™ LEFT HAND DRILLS

REMOVES BROKEN STUDS AND CAP SCREWS

Threads out broken studs or cap screws, saving hours of work retapping or fighting with an E-Z out.

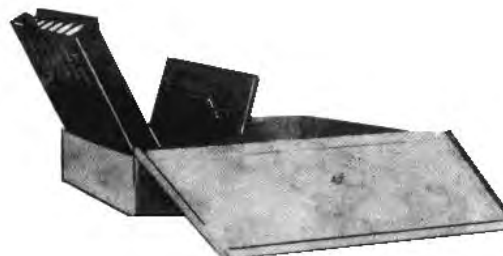
DRILLS



- USE WITH A VSR DRILL MOTOR
- RECOMMENDED RPM: 300-500
- CENTER-PUNCH TO KEEP DRILL IN CENTER OF STUD AND TO AVOID THREAD DAMAGE. THE JARRING ACTION FROM CENTER PUNCHING WILL HELP TO LOOSEN THE BROKEN PIECE.

DIA.	PART	DIA.	PART
1/16	A 11003	9/32	A 11018
5/64	A 11002	19/64	A 11010
3/32	A 11001	5/16	A 11011
7/64	A 11004	11/32	A 11012
1/8	A 11005	3/8	A 11013
5/32	A 11006	13/32	A 11014
3/16	A 11007	7/16	A 11015
7/32	A 11008	15/32	A 11016
1/4	A 11009	1/2	A 11017

LEFT-HAND DRILL INDEXES



CONTENTS	PART
1 each 1/8, 3/16, 1/4 and 5/16	A 61631
5-Piece Index includes: 1 each 1/8, 3/16, 1/4, 11/32 and 7/16	A 61629
15-Piece Index includes: 1 each 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 13/32, 7/16, 15/32 and 1/2	A 61633

TRI-CARB DRILLS

DESIGNED FOR DRILLING HIGHLY ALLOYED FERROUS METALS

- DESIGNED FOR USE ON HEAT-TREATED, HARDENED MATERIAL UP TO 65 RC
- THREE FLUTE GEOMETRY REDUCES CHIPLOAD PER CUTTING EDGE AND INCREASES TOOL LIFE, TORSIONAL STRENGTH AND RIGIDITY
- SUITABLE FOR DRILLING MATERIALS WHICH PRODUCE POWDER LIKE CHIPS SUCH AS CAST IRON
- SUPERIOR HOLE SIZE TOLERANCE, HOLE ROUNDNESS AND SURFACE FINISH
- ACCURATE SELF-CENTERING CAPABILITY ELIMINATES NEED FOR SEPARATE CENTERING
- NOT RECOMMENDED FOR NON-FERROUS MATERIALS

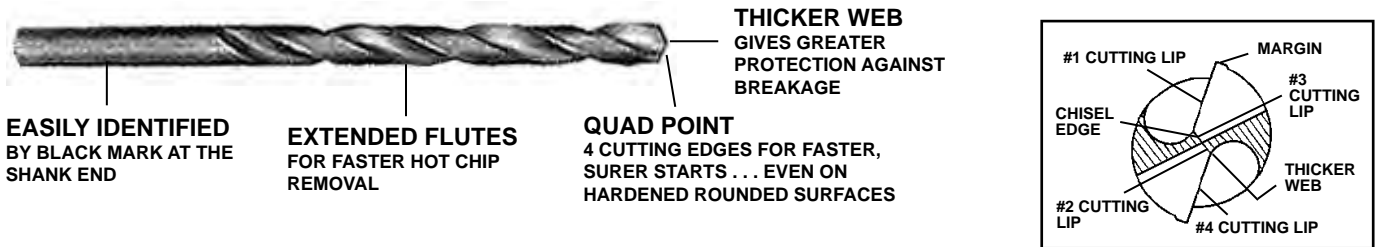


DIA.	OVERALL LENGTH	DEC. EQUIV.	FLUTE LENGTH	PART	DIA.	OVERALL LENGTH	DEC. EQUIV.	FLUTE LENGTH	PART
1/8	1-7/8	.1250	3/4	A 77400	3/8	3-1/8	.3750	1-19/32	A 77408
3/16	2-3/16	.1875	15/16	A 77402	7/16	3-7/16	.4375	1-3/4	A 77410
1/4	2-1/2	.2500	1-3/16	A 77404	1/2	3-3/4	.5000	2	A 77412
5/16	2-13/16	.3125	1-7/16	A 77406	INDEX - Contains one each: 1/8, 3/16, 1/4 & 5/16				A 61652

CIC 200™ SUPER COBALT DRILLS

OUTSTANDING PERFORMANCE – FOR DIFFICULT CUTTING JOBS

An 8% cobalt content drill with excellent resistance to strong abrasives and heat.



CUTS THROUGH:

- WORK HARDENING STAINLESS STEEL • 400 SERIES STAINLESS STEEL • IRON ALLOY STEELS • TITANIUM ALLOYS
- TOOL STEELS • HIGH TEMPERATURE ALLOYS • HIGH ABRASIVE PLASTICS AND FIBERGLASS MATERIALS

JOBBER LENGTH — FRACTIONAL SIZES

DIAMETER	OVERALL LENGTH	FLUTE LENGTH	PART	DIAMETER	OVERALL LENGTH	FLUTE LENGTH	PART
3/64	1-3/4	3/4	A 96203*	9/32	4-1/4	2-15/16	A 96218
1/16	1-3/4	3/4	A 96204	19/64	4-3/8	3-1/16	A 96219
5/64	2	1	A 96205	5/16	4-1/2	3-3/16	A 96220
3/32	2-1/4	1-1/4	A 96206	21/64	4-5/8	3-5/16	A 96221
7/64	2-5/8	1-1/2	A 96207	11/32	4-3/4	3-7/16	A 96222
1/8	2-3/4	1-5/8	A 96208	23/64	4-7/8	3-1/2	A 96223
9/64	2-7/8	1-3/4	A 96209	3/8	5	3-5/8	A 96224
5/32	3-1/8	2	A 96210	25/64	5-1/8	3-3/4	A 96225
11/64	3-1/4	2-1/8	A 96211	13/32	5-1/4	3-7/8	A 96226
3/16	3-1/2	2-5/16	A 96212	27/64	5-3/8	3-15/16	A 96227
13/64	3-5/8	2-7/16	A 96213	7/16	5-1/2	4-1/16	A 96228
7/32	3-3/4	2-1/2	A 96214	29/64	5-5/8	4-3/16	A 96229
15/64	3-7/8	2-5/8	A 96215	15/32	5-3/4	4-5/16	A 96230
1/4	4	2-3/4	A 96216	31/64	5-7/8	4-3/8	A 96231
17/64	4-1/8	2-7/8	A 96217	1/2	6	4-1/2	A 96232

* Size smaller than 1/16 have non-split point.

NOTE: Cobalt is normally a very brittle material – caution should be used when a hand drill motor is in use.

Keep from side thrusting which may result in drill breakage. Always store in proper cabinet to eliminate hitting drills together.



JOBBER LENGTH INDEX

CONTENTS	PART
15 DRILLS – 1/16 to 1/2 by 32nds	A 61692
29 DRILLS – 1/16 to 1/2 by 64ths	A 61690

CIC 200™ CARBIDE TIPPED DRILLS

LONGER TOOL LIFE AND BETTER ABRASION RESISTANCE

- BRIGHT FINISH
- EXCELLENT FOR NONFERROUS APPLICATIONS AND LOW TENSILE STEELS
- HEAVY DUTY CONSTRUCTION FOR INCREASED TOOL STRENGTH
- CAM RELIEVED 118° POINT-GENERAL PURPOSE ANGLE WITH RADIAL RELIEF FOR ACCURATE HOLES



DIAMETER	OVERALL LENGTH	FLUTE LENGTH	PART	DIAMETER	OVERALL LENGTH	FLUTE LENGTH	PART
1/8	2-3/4	1-5/8	A 61360	3/8	5"	3-5/8	A 61376
3/16	3-1/2	2-5/16	A 61364	7/16	5-1/2	4-1/16	A 61380
1/4	4"	2-3/4	A 61368	1/2	6"	4-1/2	A 61384
5/16	4-1/2	3-3/16	A 61372	7-PIECE INDEX			A 61622

CARBIDE TIPPED HARD STEEL BITS

A LONGER CARBIDE TIP PREVENTS CHIPPING

- STRAIGHT FLUTE DESIGN DISSIPATES HEAT QUICKLY
- DRILLS EXTRA TOUGH MATERIALS SUCH AS SAFES, BEARING RACES, DIES, ETC.



SIZE	SHANK DIA.	PART	SIZE	SHANK DIA.	PART
1/8 x 2-3/4	1/8	A 77480	1/4 x 4	1/4	A 77485
5/32 x 3	5/32	A 77481	5/16 x 6	5/16	A 77489
3/16 x 3	3/16	A 77483	3/8 x 6	3/8	A 77491
7/32 x 4	7/32	A 77484	1/2 x 6	1/2	A 77493
POUCH ASSORTMENT - Contains 8 Bits: 1/8, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8 and 1/2					A 61665

CARBIDE TIPPED DRILL BITS

FOR USE WITH CEMENT SCREWS ON BRICK, CEMENT AND CINDER BLOCK



SIZE	USE WITH CEMENT SCREW PART NO.	DRILL PART NO.
5/32 x 3-1/2	9050, 9051, 9064, 9065	A 9086
5/32 x 4-1/2	9052, 9053, 9066, 9067	A 9088
5/32 x 5-1/2	9054, 9055, 9056, 9068, 9069, 9070	A 9090
3/16 x 3-1/2	9057, 9058, 9071, 9072	A 9083
3/16 x 4-1/2	9059, 9060, 9073, 9074	A 9084
3/16 x 5-1/2	9061, 9062, 9063, 9075, 9076, 9077	A 9087

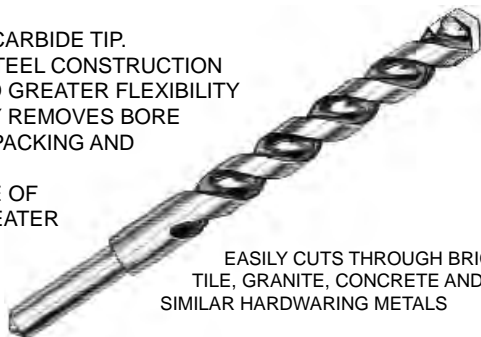
CIC 200™ CARBIDE MASONRY DRILLS

TUNGSTEN CARBIDE TIP

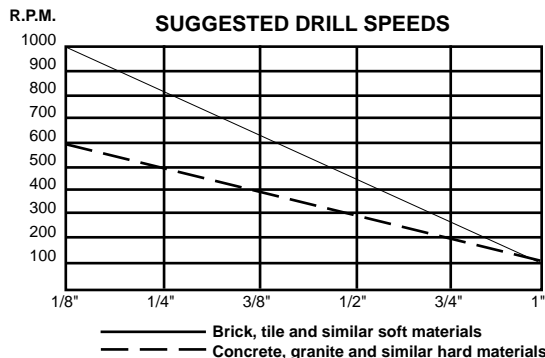
The only drill that will satisfy all your masonry drill needs. A longer lasting, faster cutting drill which can be used with either a 3/8" or 1/2" rotary or percussion drill motor.

FEATURES

- DURABLE TUNGSTEN CARBIDE TIP.
- CHROME VANADIUM STEEL CONSTRUCTION FOR LONGER LIFE AND GREATER FLEXIBILITY
- SPIRAL DESIGN EASILY REMOVES BORE MATERIAL REDUCING PACKING AND HEATING OF DRILL
- SPECIAL CONFLUENCE OF SPIRAL PROVIDES GREATER STRENGTH TO DRILL



EASILY CUTS THROUGH BRICK, TILE, GRANITE, CONCRETE AND SIMILAR HARDWARE METALS



DRILL DIA.	SHANK DIA.	OVERALL LENGTH	PART	DRILL DIA.	SHANK DIA.	OVERALL LENGTH	PART	DRILL DIA.	SHANK DIA.	OVERALL LENGTH	PART
1/8	1/8	3	A 77501	3/8	3/8	4-1/2	A 77598	9/16	3/8	7	A 77550
5/32	5/32	3-1/8	A 77502	3/8	1/4	4-1/2	A 77599	5/8	1/2	6	A 77561
11/64	11/64	3	A 77503	3/8	3/8	6	A 77530	5/8*	3/8	6	A 77563
3/16	3/16	3-1/2	A 77504	3/8	1/4	6	A 77531	5/8	3/8	10	A 77565
3/16	3/16	6	A 77505	3/8	3/8	13	A 77532	5/8	3/8	20	A 77568
13/64	13/64	3	A 77506	3/8	3/8	20	A 77536	5/8	1/2	24	A 77569
7/32	7/32	4	A 77507	3/8	3/8	24	A 77538	3/4	1/2	6	A 77571
15/64	15/64	4	A 77508	7/16	3/8	6	A 77541	3/4*	3/8	6-1/4	A 77572
1/4	1/4	4	A 77509	1/2	1/2	6	A 77545	3/4	1/2	10	A 77573
1/4	1/4	6	A 77510	1/2	3/8	6	A 77546	3/4	3/8	13	A 77574
1/4	1/4	13	A 77511	1/2	1/4	6	A 77547	3/4	1/2	16	A 77575
1/4	1/4	16	A 77512	1/2	3/8	13	A 77549	3/4	1/2	20	A 77576
1/4	1/4	20	A 77513	1/2	1/4	13	A 77562	3/4	3/8	20	A 77577
1/4	1/4	24	A 77514	1/2	3/8	20	A 77555	3/4	1/2	24	A 77578
9/32	1/4	4	A 77516	1/2	3/8	24	A 77558	7/8	1/2	6-1/4	A 77581
9/32	1/4	6	A 77517					7/8	1/2	13	A 77580
5/16	5/16	4-3/4	A 77518					7/8	1/2	20	A 77582
5/16	1/4	4-3/4	A 77519					1	1/2	6-1/4	A 77584
5/16	5/16	6	A 77520					1	1/2	13	A 77585
5/16	5/16	13	A 77522					1	1/2	20	A 77586
5/16	5/16	20	A 77526					1-1/8	1/2	12	A 77589
								1-1/4	1/2	13	A 77590



CARBIDE MASONRY DRILLS POUCH ASSORTMENT - Contains 8 Masonry Drills
 1/8 x 3 x 1/8, 3/16 x 6 x 3/16, 1/4 x 6 x 1/4, 5/16 x 6 x 5/16, 3/8 x 6 x 3/8,
 7/16 x 6-1/4 x 3/8, 1/2 x 6-3/4 x 3/8 and 5/8 x 6 x 3/8

* Ground flats on shank for non-slip chucking.

A 61664

CIC 200™ CARBIDE MASONRY DRILL ORGANIZER



CONTENTS

7 Carbide Masonry Drill "Fractional Sizes" include:
 1/8 x 3 x 1/8, 3/16 x 6 x 3/16, 1/4 x 6 x 1/4, 5/16 x 6 x 5/16,
 3/8 x 6 x 3/8, 1/2 x 6-3/4 x 3/8 and 5/8 x 6 x 3/8

26 Carbide Masonry Drill Fractional Sizes includes 1/8 to 3/4

PART

A 61612

A 61611

CIC 200™ H.D. MASONRY DRILLS

H.D. CARBIDE TIP FOR ROTO HAMMER

For use on all tile, marble, terrazzo, brick, stone, slate, cement and cinder block.

"A" TAPER SHANK DRILLS



DRILL DIA.	OVERALL LENGTH	MAX. DRILL DEPTH	PART	DRILL DIA.	OVERALL LENGTH	MAX. DRILL DEPTH	PART
3/16	3-3/8	1-3/16	A 20401	1/2	12	9	A 20418
3/16	4-3/4	2-9/16	A 20402	1/2	18	15-1/2	A 20419
1/4	4	1-3/4	A 20403	9/16	6	3-1/2	A 20420
1/4	6	4	A 20404	9/16	9	6-1/2	A 20421
9/32	4-1/2	2-3/8	A 20405	9/16	18	15-1/2	A 20422
5/16	4-1/2	2-3/8	A 20406	5/8	9	6-1/2	A 20424
5/16	5-7/8	4	A 20407	5/8	12	9	A 20425
5/16	7	5	A 20408	5/8	18	15-1/2	A 20426
3/8	5-5/16	3	A 20409	11/16	9	6-1/2	A 20428
3/8	9	6-1/2	A 20410	3/4	6	3-1/2	A 20429
3/8	12	9	A 20411	3/4	9	6-1/2	A 20430
3/8	18	15-1/2	A 20412	3/4	12	9	A 20431
7/16	5	3	A 20413	3/4	18	15-1/2	A 20432
7/16	12	9	A 20414	27/32	6	3-1/2	A 20433
1/2	5-1/2	3-3/8	A 20416	7/8	9	6-1/2	A 20434
1/2	9	6-1/2	A 20417	-	-	-	-

"B" TAPER SHANK DRILLS



DRILL DIA.	OVERALL LENGTH	MAX. DRILL DEPTH	PART	DRILL DIA.	OVERALL LENGTH	MAX. DRILL DEPTH	PART
1/2	9	6-1/2	A 20380	3/4	12	9	A 20364
1/2	12	9	A 20352	3/4	18	15-1/2	A 20365
1/2	18	15-1/2	A 20353	3/4	24	21	A 20366
9/16	9	6-1/2	A 20354	27/32	6	3-1/2	A 20367
9/16	18	15-1/2	A 20355	7/8	6	3-1/2	A 20368
5/8	6	3-1/2	A 20356	7/8	9	6-1/2	A 20369
5/8	9	6-1/2	A 20357	7/8	12	9	A 20370
5/8	12	9	A 20358	7/8	18	15-1/2	A 20371
5/8	18	15-1/2	A 20359	1	6	3-1/2	A 20372
11/16	9	6-1/2	A 20360	1	9	6-1/2	A 20373
11/16	18	15-1/2	A 20361	1	12	9	A 20374
3/4	6	3-1/2	A 20362	1	18	15-1/2	A 20375
3/4	9	6-1/2	A 20363	-	-	-	-

H.D. MASONRY DRILLS (Cont'd.)

SDS PLUS HAMMER DRILL BITS

Features

- Made in Germany – world renowned for quality of product
- Versatile slot drive system hammer bits fit most rotary hammers
- Aggressive, durable carbide tip (1) allows easy centering and fast drilling
- Dynamic, chisel shaped bit head (2) ensures swift penetration
- Patented, reinforced flute geometry reduces vibration, transfers more impact energy to the cutting face and quickly channels debris from the hole
- Balance of tip and flute geometry ensure perfectly round holes giving superior anchoring
- Versatile slot drive system hammer bits fit most rotary hammers.
- Vacuum brazed with pure copper at 1900°F.
- Vacuum heat treated tool body to 50RC. BC20 grade carbide.
- Reinforced flutes and chisel shaped carbide tip.

Applications

- Highway rails
- Structural supports
- Pipe mounts
- Electrical mounts
- Bridge construction
- HVAC mounts
- Machinery mounts
- Door and window frames
- Roofing
- Brackets

Drills Materials

- Concrete & stone
- Masonry
- Grout filled block
- Hollow block
- Solid brick
- Hollow brick
- Cement board
- Granite



7-Piece Set P/N 61898

Contains these drill diameters:

- 5/32" X 4" X 6" P/N 77001
- 3/16" X 4" X 6" P/N 77003
- 1/4" X 4" X 6" P/N 77013
- 3/8" X 4" X 6" P/N 77021
- 1/2" X 4" X 6" P/N 77028

Includes Rebar Hammer Bits:

- 1/4" X 4" X 6" P/N 77053
- 3/8" X 4" X 6" P/N 77066

PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH	PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH
A 77000	5/32"	2"	4"	A 77026	7/16"	4"	6"
A 77001	5/32"	4"	6"	A 77027	7/16"	10"	12"
A 77002	3/16"	2"	4"	A 77028	1/2"	4"	6"
A 77003	3/16"	4"	6"	A 77029	1/2"	8"	10"
A 77004	3/16"	6"	8"	A 77030	1/2"	10"	12"
A 77005	3/16"	10"	12"	A 77031	1/2"	16"	18"
A 77006	7/32"	4"	6"	A 77032	1/2"	22"	24"
A 77007	7/32"	6"	8"	A 77033	3/4"	22"	24"
A 77008	7/32"	9"	11"	A 77034	5/8"	22"	24"
A 77010	7/32"	12"	14"	A 77036	5/8"	6"	8"
A 77011	7/32"	14"	16"	A 77039	11/16"	6"	8"
A 77012	1/4"	2"	4"	A 77037	5/8"	10"	12"
A 77013	1/4"	4"	6"	A 77035	9/16"	4"	6"
A 77014	1/4"	6"	8"	A 77038	9/16"	16"	18"
A 77015	1/4"	8"	10"	A 77040	3/4"	6"	8"
A 77016	1/4"	9"	11"	A 77041	3/4"	10"	12"
A 77017	1/4"	12"	14"	A 77042	3/4"	16"	18"
A 77018	1/4"	14"	16"	A 77043	27/32"	6"	8"
A 77019	5/16"	4"	6"	A 77044	7/8"	6"	8"
A 77020	5/16"	10"	12"	A 77045	7/8"	10"	12"
A 77021	3/8"	4"	6"	A 77046	1"	8"	10"
A 77022	3/8"	8"	10"	A 77047	1"	16"	18"
A 77023	3/8"	10"	12"				
A 77024	3/8"	16"	18"				
A 77025	3/8"	22"	24"				

H.D. MASONRY DRILLS (Cont'd.)

SDS PLUS REBAR HAMMER DRILL BITS

Features

- Made in Germany – world renowned for quality of product
- "Solid-Tip" Technology cuts through rebar (1)
- 4 Cutter head cuts faster and lasts longer (2)
- Modern heat treat and brazing processes ensuring proper hardness, toughness, and durability for maximum life
- Centering point for improved positioning
- Shortened conical-shaped dust tracks for fast debris removal (3)
- Reinforced core and special flute for maximum energy transfer and reduced vibration
- Solid tip cross head design with centering tips for strength and easy start up
- "Solid-Tip" technology cuts through rebar
- 4 cutter head cuts faster and lasts longer
- Reinforced flutes and chisel shaped carbide tip

Applications

- Highway rails
- Structural supports
- Pipe mounts
- Electrical mounts
- Bridge construction
- HVAC mounts
- Machinery mounts
- Door and window frames
- Roofing
- Brackets

Drills Materials

- Concrete & stone
- Masonry
- Grout filled block
- Hollow block
- Solid brick
- Hollow brick
- Cement board
- Granite



5-Piece Set P/N 61899

Contains these drill diameters:

- 3/16" x 4" x 6" P/N 77060
- 1/4" x 4" x 6" P/N 77053
- 5/16" x 4" x 6" P/N 77069
- 3/8" x 4" x 6" P/N 77066
- 1/2" x 4" x 6" P/N 77050

PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH	PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH
A 77059	3/16"	2"	4"	A 77074	7/16"	4"	6"
A 77060	3/16"	4"	6"	A 77072	7/16"	10"	12"
A 77061	3/16"	6"	8"	A 77073	7/16"	16"	18"
A 77062	3/16"	8"	10"	A 77050	1/2"	4"	6"
A 77058	3/16"	10"	12"	A 77048	1/2"	10"	12"
A 77052	1/4"	2"	4"	A 77049	1/2"	16"	18"
A 77053	1/4"	4"	6"	A 77078	9/16"	4"	6"
A 77054	1/4"	6"	8"	A 77076	9/16"	10"	12"
A 77055	1/4"	8"	10"	A 77077	9/16"	16"	18"
A 77051	1/4"	10"	12"	A 77070	5/8"	10"	12"
A 77069	5/16"	4"	6"	A 77071	5/8"	16"	18"
A 77067	5/16"	10"	12"	A 77063	3/4"	16"	18"
A 77068	5/16"	16"	18"	A 77075	7/8"	16"	18"
A 77066	3/8"	4"	6"	A 77057	1"	16"	18"
A 77064	3/8"	10"	12"	A 77056	1-1/4"	16"	18"
A 77065	3/8"	16"	18"				

H.D. MASONRY DRILLS (Cont'd.)

SDS MAX HAMMER DRILL BITS – 4 CUTTER CROSS-HEAD

Features

- Made in Germany – world renowned for quality of product
- 4 Cutter head cuts faster and lasts longer
- Unique carbide geometry and centering tips – fast start up and drilling
- Modern heat-treating and brazing process ensures proper combination of product hardness, toughness and durability resulting in maximum life
- BC20 grade of carbide

Applications

- Concrete
- Hard masonry materials
- Pipe, electrical, cable and wiring clearances
- Ceiling and wall cavities

Quick Change Adaptors

Quickly and easily adapt SDS-Max and spline drive roto-hammer power tools to use standard SDS-Plus hammer bits.

- P/N 77104 – SDS-Max to SDS-Plus
- P/N 77105 – Spline to SDS-Plus



4 Cutter SDS-Max / Spline



Reinforced Flutes



Maximum energy transfer from power tool to drill bit tip.



5-Piece Set P/N 8807

Contains these drill diameters:

- 1/2" x 8" x 13" P/N 77079
- 5/8" x 8" x 13" P/N 77083
- 3/4" x 8" x 13" P/N 77087
- 7/8" x 8" x 13" P/N 77090
- 1" x 8" x 13" P/N 77093

PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH	PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH
A 77079	1/2"	8"	13"	A 77093	1"	8"	13"
A 77080	1/2"	16"	21"	A 77094	1"	17"	21"
A 77081	9/16"	8"	13"	A 77095	1"	31"	36"
A 77082	9/16"	16"	21"	A 77096	1-1/8"	10"	15"
A 77083	5/8"	8"	13"	A 77097	1-1/8"	12"	17"
A 77084	5/8"	16"	21"	A 77098	1-1/8"	17"	21"
A 77085	5/8"	31"	36"	A 77099	1-1/4"	10"	15"
A 77086	11/16"	16"	21"	A 77100	1-1/4"	18"	23"
A 77087	3/4"	8"	13"	A 77101	1-1/4"	31"	36"
A 77088	3/4"	17"	21"	A 77102	1-3/8"	18"	23"
A 77089	3/4"	31"	36"	A 77103	1-1/2"	18"	23"
A 77090	7/8"	8"	13"				
A 77091	7/8"	17"	21"				
A 77092	7/8"	31"	36"				

Bold italic text = Non-stock item
Please allow 1 week for delivery.

H.D. MASONRY DRILLS (Cont'd.)

SPLINE SHANK HAMMER DRILL BITS - SINGLE POINT

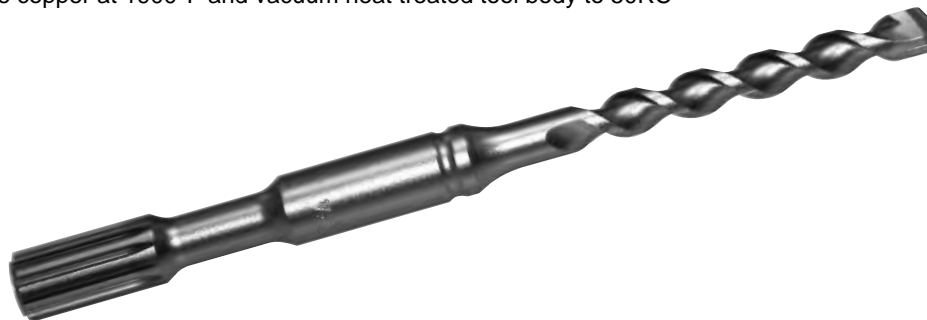
Features

- Made in Germany – world renowned for quality of product
- Splines held to very close tolerances assure perfect fit and improve impact transmission for faster drilling
- Vacuum brazed with pure copper at 1900°F and vacuum heat treated tool body to 50RC
- HL20 grade carbide



Applications

- Concrete
- Hard masonry materials



PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH	PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH
A 77106	3/8"	3"	8"	A 77127	3/4"	11"	16"
A 77107	3/8"	5"	10"	A 77128	3/4"	17"	22"
A 77108	3/8"	8"	13"	A 77129	3/4"	24"	29"
A 77109	3/8"	11"	16"	A 77130	3/4"	31"	36"
A 77110	7/16"	8"	13"	A 77131	7/8"	11"	16"
A 77111	1/2"	5"	10"	A 77132	7/8"	17"	22"
A 77112	1/2"	8"	13"	A 77133	7/8"	31"	36"
A 77113	1/2"	11"	16"	A 77134	1"	11"	16"
A 77114	1/2"	17"	22"	A 77135	1"	17"	22"
A 77115	1/2"	24"	29"	A 77136	1"	31"	36"
A 77116	1/2"	31"	36"	A 77137	1-1/8"	11"	16"
A 77117	9/16"	5"	10"	A 77138	1-1/8"	17"	22"
A 77118	9/16"	8"	13"	A 77139	1-1/4"	11"	16"
A 77119	5/8"	5"	10"	A 77140	1-1/4"	17"	22"
A 77120	5/8"	8"	13"	A 77141	1-1/4"	31"	36"
A 77121	5/8"	11"	16"	A 77142	1-3/8"	11"	16"
A 77122	5/8"	17"	22"	A 77143	1-3/8"	17"	22"
A 77123	5/8"	24"	29"	A 77144	1-1/2"	11"	16"
A 77124	5/8"	31"	36"	A 77145	1-1/2"	17"	22"
A 77125	11/16"	8"	13"	A 77146	1-3/4"	17"	22"
A 77126	3/4"	5"	10"	A 77147	2"	17"	22"

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Please allow 1 week for delivery.

H.D. MASONRY DRILLS (Cont'd.)

SPLINE SHANK HAMMER DRILL BITS – QUAD POINT

Features

- Made in Germany – world renowned for quality of product
- Splines held to very close tolerances assure perfect fit and improve impact transmission for faster drilling
- Vacuum brazed with pure copper at 1900°F
- Vacuum heat treated tool body to 50RC
- HL20 grade carbide

Benefits

- Quad Point Advantages (*over single point versions*)
 - 50% improved bit life
 - Rounder, more accurate holes
 - 60% less vibration
 - 30% less noise
 - Resists rebar hits
 - Extends hammer life
 - Less operator fatigue

Applications

- Concrete
- Hard masonry materials



PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH	PART NUMBER	DRILL DIAMETER	MAX. DRILL DEPTH	OVERALL LENGTH
A 77148	5/8"	5"	10"	A 77160	1"	11"	16"
A 77149	5/8"	11"	16"	A 77161	1"	17"	22"
A 77150	5/8"	17"	22"	A 77162	1"	31"	36"
A 77151	5/8"	24"	29"	A 77163	1-1/8"	11"	16"
A 77152	5/8"	31"	36"	A 77164	1-1/8"	17"	22"
A 77153	3/4"	5"	10"	A 77165	1-1/4"	11"	16"
A 77154	3/4"	11"	16"	A 77166	1-1/4"	17"	22"
A 77155	3/4"	17"	22"	A 77167	1-3/8"	11"	16"
A 77156	3/4"	24"	29"	A 77168	1-3/8"	17"	22"
A 77157	3/4"	31"	36"	A 77169	1-1/2"	17"	22"
A 77158	7/8"	11"	16"	A 77170	1-3/4"	18"	23"
A 77159	7/8"	17"	22"	A 77171	2"	18"	23"

Bold italic text = Non-stock item
Please allow 1 week for delivery.

H.D. MASONRY DRILLS (Cont'd.)

HAMMER CORE BITS – CARBIDE TIPPED/HEAVY WALL

Features

- Made in Germany – World renowned for quality of product
- Used in rotary hammers operating in the rotary hammer mode
- Produce holes significantly larger than the rated power drive
- Heat treated tool steel; core bodies are machined from one single piece of steel
- Teeth set with negative and positive rake to cut concrete and screening
- Tooth edges faced to act as secondary cutter area to reduce snagging
- Pilot Drill/Centering bit is recommended for best results (Pilot Drill/Centering bit is included with core bit)

Benefits

- Cutting the circumference of the hole leaves the center as a solid, so concrete removal is reduced for large size holes
- Cutting tips are put in at irregular intervals to avoid setting up a sympathetic vibration when producing the hole
- Each tooth presents itself to a random & new section of concrete as opposed to the piece previously hit by another tooth
- Multiple teeth assure faster cutting and debris evacuation from cutting path

Applications

- Light to medium hard building materials



Hammer Core Bit shown with SDS Max Adaptor

Pipe Sizes & Types

Bit Diameter	Pipe Sizes	Pipe Types
1-3/4"	1-1/4"	Cu, EMT, 1" Rigid, IMC Sched. 40
2"	1-1/2"	Cu, EMT, Rigid, IMC Sched. 40
2-5/8"	2"	Cu, EMT, Rigid, IMC Sched. 40
3"	2-1/2"	Cu, EMT, Rigid, IMC Sched. 40
3-1/8"	3"	Cu, EMT, Rigid, IMC Sched. 40
4"	3-1/2"	Cu, EMT, Rigid, IMC Sched. 40
5"	4"	Cu, EMT, Rigid, IMC Sched. 40



PART NUMBER	BIT DIAMETER	USABLE LENGTH	CORE TOLERANCE	PART NUMBER	BIT DIAMETER	USABLE LENGTH	CORE TOLERANCE
A 77172	1-3/4"	4"	1.61-1.55	A 77176	3-1/2"	4"	3.58-3.52
A 77173	2"	4"	2.08-2.03	A 77177	4"	4"	4.13-4.07
A 77174	2-5/8"	4"	2.63-2.58	A 77178	5"	4"	5.12-5.06
A 77175	3-1/8"	4"	3.19-3.13				

SHANK ADAPTORS AND EXTENSIONS



DESCRIPTION	OVERALL LENGTH	PART
SDS Max Adaptor	7"	A 77180
Spline Adaptor	7"	A 77181
Extension	11"	A 77182

PILOT DRILL/CENTERING BIT



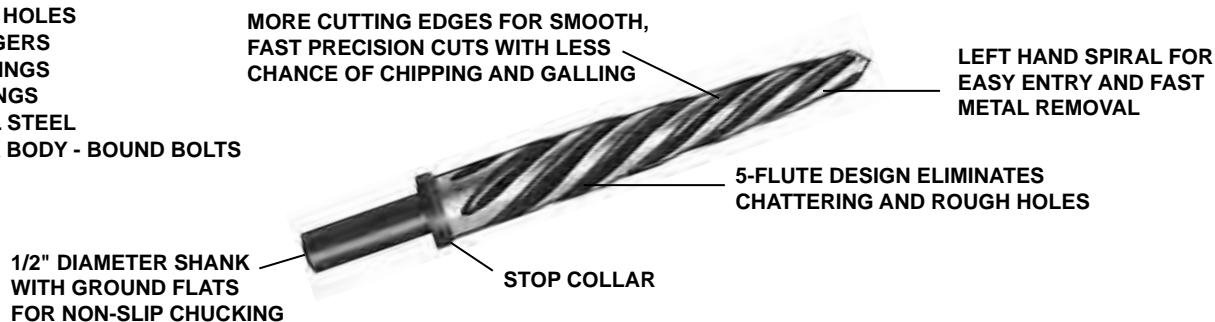
DIAMETER	PART
15/32"	A 77179

CIC 200™ REAMERS

"SPIRAL TAPER" FRAME AND STEEL REAMER

For enlarging, finishing and making precision holes in sheet steel, frames, tubing, alloy and stainless steel sections.

- TRUCK FRAMES
- 5TH WHEEL MOUNTS
- MIS-ALIGNED HOLES
- SPRING HANGERS
- TANK MOUNTINGS
- BOX MOUNTINGS
- STRUCTURAL STEEL
- MACK TRUCK BODY - BOUND BOLTS



SIZE DIAMETER	PILOT DRILL SIZE	DRILL PART	PART	
1/4	3/16	91012	A	91458
5/16	7/32	91014	A	91459
3/8	1/4	91016	A	91460
1/2	5/16	91020	A	91461
5/8	3/8	91024	A	91462
3/4	7/16	91028	A	91463
7/8	1/2	91032	A	91464
1	5/8	91242	A	91465
.653	3/8	91024	A	91470
.776	1/2	91032	A	91475

NOTE: Use Tool Cool II (P/N 74185) for greater cutting power and longer reamer life. Use 1/2" heavy duty drill motor – 4.5 amps minimum. Step reaming is recommended for larger size holes.

TAPER PIN REAMERS

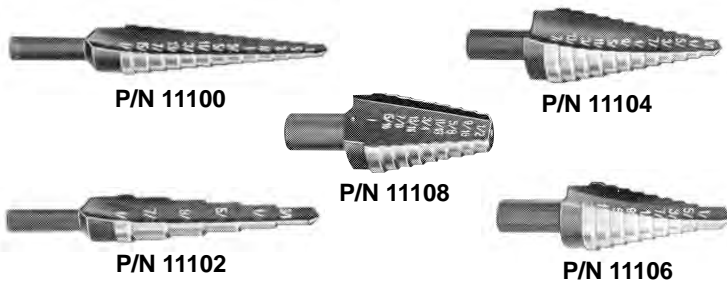
- SLOW SPIRAL – MORE EFFECTIVE CUTTING AND TAPERING OF HOLE
- 1/4" TAPER PER FOOT
- END HAS 45° CHAMFER FOR EASY HOLE ENTRY
- RECOMMENDED FOR USE WITH HAND TAP WRENCHES



SIZE	SMALL END	LARGE END	FLUTE LENGTH	OVERALL LENGTH	PART	
#0	.1287	.1638	1-11/16	2-15/16	A	91486
#1	.1447	.1798	1-11/16	2-15/16	A	91487
#2	.1605	.2008	1-15/16	3-3/16	A	91488
#3	.1813	.2294	2-5/16	3-11/16	A	91489
#4	.2071	.2604	2-9/16	4-1/16	A	91490
#5	.2409	.2994	2-13/16	4-5/16	A	91491
#6	.2773	.3540	3-11/16	5-7/16	A	91492
#7	.3297	.4220	4-7/16	6-5/16	A	91493

CIC 200™ STEP DRILLS

UNIFORMLY DISTRIBUTES THE CUTTING FORCE PROVIDING SMOOTHER, ROUNDER HOLES



- SINGLE RADIAL CONCAVE FLUTE DESIGN
- NON-SKID TIP – PROVIDES FAST, SURE STARTS ON ANY SURFACE
- AUTOMATIC DEBURRING – FINISHES THE TOP SIDE OF THE HOLE SMOOTHLY
- LASER MARKED – FOR EASY READING OF HOLE SIZES RIGHT ON THE BIT

P/N 61672

HOLE SIZE	INCREMENTS	NO. OF HOLES	SHANK SIZE	STEP THICKNESS	PART	
1/8" to 1/2"	in 1/32 increments	13	1/4"	1/8"	B	11100
3/16" to 1/2"	in 1/16 increments	6	1/4"	3/8"	B	11102
1/4" to 3/4"	in 1/16 increments	9	3/8"	1/8"	A	11104
3/16" to 7/8"	in 1/16 increments	12	3/8"	1/8"	A	11106
1/2" to 1"	in 1/16 increments	8	1/2"	1/8"	A	11108
13/16" to 1-3/8"	in 1/16 increments	10	1/2"	1/8"	A	11110
CIC 200 STEP DRILL INDEX – 4 drill set drills holes 1/16" to 7/8"					A	61672

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HEX SHANK MULTI STEP DRILLS

UNIFORMLY DISTRIBUTES THE CUTTING FORCE TO PROVIDE FASTER, CLEANER HOLES

An entire drill set in one cutting tool, and a must for all professional electricians and sheet metal contractors. The 11116 drill, for example, can drill thirteen diameters from 1/8" to 1/2". These drills feature two flutes (and two cutting edges) for fast drilling.

SPEED RECOMMENDATIONS

Diameter	Ferrous	Non-Ferrous
1/2"	400-800	900-2000
3/4"	200-600	500-1500
7/8"	175-500	450-1250
1-1/8"	150-400	400-1000

- Titanium Nitride Coated
- Cuts steel plate, stainless steel, sheet metal, tubing
- 1/4" hex shank for use in quick change adapters
- Step sizes laser marked on tools
- Self starting tip eliminates need for pilot hole drilling
- Perfect for use in battery powered drills because they cut quickly with low power consumption
- Great in cordless impact drivers



P/N 61644
P/N 61646

INCREMENTS	NUMBER OF STEPS	HOLE SIZE RANGE	PART	
in 1/32" increments	13	1/8" to 1/2"	A	11116
in 1/16" increments	9	1/4" to 3/4"	A	11117
in 1/16" increments	12	3/16" to 7/8"	A	11118
in 1/8" increments	13	1/4" to 1-1/8"	A	11119
Hex Shank Multi Step Drill Set – 3 drills and 1 quick change adapter (Includes P/Ns 11116, 11117, 11118)			A	61644
Hex Shank Multi Step Drill Set – 3 drills and 1 quick change adapter (Includes P/Ns 11116, 11118, 11119)			A	61646

CIC 200™ CONE DRILLS

FOR HOLES 1/8" – 1-15/16" (3mm – 50mm)



- DRILLS SHEET METAL, PIPE, MILD STEEL, STAINLESS STEEL, PLEXIGLASS, PLASTIC AND WOOD WITH A WALL THICKNESS OF UP TO 5MM
- HOLE DIAMETER (INCH AND METRIC) IS LASERMARKED IN THE FLUTES
- PATENTED SHANK SYSTEM FEATURES ANTI-ROTATION DESIGN AND ALLOWS EASY TOOL CHANGING WITHIN SECONDS



HOLE SIZE	SHANK	PART	HOLE SIZE	SHANK	PART
1/8" to 9/16" (3-14mm)	1/4	A 11111	1" to 1-5/8" (24-40mm)	3/8	A 11114
1/4" to 13/16" (6-20mm)	5/16	A 11112	1-3/8" to 1-15/16" (36-50mm)	1/2	A 11115
5/8" to 1-3/16" (16-30.5mm)	3/8	A 11113	CONE DRILL INDEX – 3 drill set		A 61627

BEAVER SAW DRILL

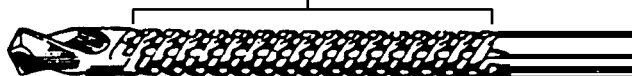
FOR USE IN 1/4" DRILL AND DRILL PRESS

- HIGH SPEED STEEL BIT
- 135° SPLIT POINT
- SELF-CENTERING POINT

THE ORIGINAL SAW DRILL

- DRILLS
- SAWS
- REAMS
- CUTS BRASS, WOOD, METAL, PLASTIC, ALUMINUM AND STAINLESS

2" CUTTING, SAWING AND REAMING SECTION



DESCRIPTION	PART
BEAVER SAW DRILL	A 61579

MULTI-PURPOSE ROTARY BITS

MULTI MATERIAL DRILL BIT

IDEAL FOR CORDLESS DRILLS, CORDED DRILLS AND DRILL PRESSES

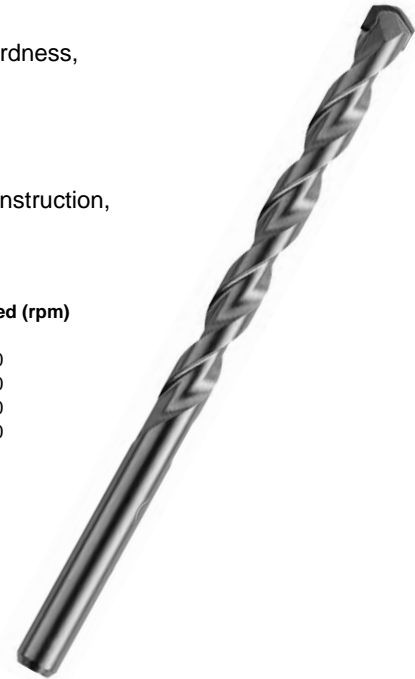
- Perfect balance between tip and flute geometry; allows fast and immediate debris removal, also provides smoother, faster drilling.
- No center punch needed – eliminates “walking”.
- Unique carbide geometry and centering tips for fast start up and drilling.
- Modern heat-treatment and brazing process ensures proper combination of product hardness, toughness and durability resulting in long life.
- BC20 grade of carbide, diamond ground – designed specifically for relevant materials.
- For use in a huge variety of materials and applications.
- For drilling highway rails, structural supports, pipe mounts, electrical mounts, bridge construction, HVAC mounts, machinery mounts, door and window frames, roofing, brackets.

Drills Materials

- Concrete & Stone
- Masonry
- Ceramic Tile
- Marble
- Brick
- Granite
- Plastics & Fiberglass
- Plexiglass
- Glass
- Cast Metals
- Hardened Steel
- Wood



Material Type	Cutting Speed (rpm)
Tile	750
Metals	1,000
Masonry	1,500
Plastics	1,750
Wood	2,000



DRILL DIAMETER	FLUTE LENGTH	OVERALL LENGTH	PART	SETS
1/8"	1-1/4"	2-3/4"	A 47451	P/N 61577 = 5-Pieces P/N 61578 = 7-Pieces (See Below)
5/32"	2"	3-1/4"	A 47452	
3/16"	2"	3-1/4"	A 47453	
3/16"	3-1/2"	6"	A 47449	
1/4"	2-1/4"	4"	A 47454	
1/4"	3-1/2"	6"	A 47450	
5/16"	3"	4-3/4"	A 47455	
3/8"	3"	4-3/4"	A 47456	
1/2"	3-1/2"	6"	A 47457	

5-Piece Set P/N 61577

5 piece set contains these drill diameters:

- 1/8" P/N 47451
- 5/32" P/N 47452
- 3/16" P/N 47453
- 1/4" P/N 47454
- 5/16" P/N 47455



7-Piece Set P/N 61578

7 piece set contains these drill diameters:

- 1/8" P/N 47451
- 5/32" P/N 47452
- 3/16" x 6" P/N 47449
- 1/4" x 6" P/N 47450
- 5/16" P/N 47455
- 3/8" P/N 47456
- 1/2" x 6" P/N 47457



CIC 200™ SMOOTH-BORE™ PLASTIC DRILLS

HI-MOLYBDENUM TOOL STEEL – GOLD FINISH

SMOOTH, CLEAN CHIP-FREE HOLES IN ALL PLASTICS, ACRYLICS, FIBERGLASS & LAMINATES



P/N 61673



- **SPECIAL HI-MOLYBDENUM TOOL STEEL WITH GOLD SURFACE TREATING**
PROVIDES MAXIMUM STRENGTH AND LUBRICITY
- **PRECISION GROUND 60° POINT**
ASSURES SMOOTH, GRADUAL PENETRATION WITHOUT CRACKING OR CHIPPING
- **UNIQUE 0° RAKE ANGLE**
ELIMINATES GRABBING WHEN BREAKING THROUGH PLASTICS, ACRYLICS AND LAMINATES

NOTE: ALL SIZES 1/4" AND OVER HAVE 1/4" SHANKS

SIZE DIAMETER	OVERALL LENGTH	FLUTE LENGTH	PART		INDEX
1/8	2-1/2	1-3/8	G	61480	CIC 200™ SMOOTH BORE™ PLASTIC DRILL INDEX 7 Drill Set: 1/8" to 1/2" by 16ths P/N 61673
5/32	2-7/8	1-3/4	F	61482	
3/16	3-3/16	2	F	61484	
1/4	3-9/16	2-5/16	D	61486	
5/16	3-5/16	1-5/8	D	61488	
3/8	3-5/8	1-15/16	C	61490	
7/16	4	2-3/16	C	61492	
1/2	4-1/4	2-7/16	B	61494	

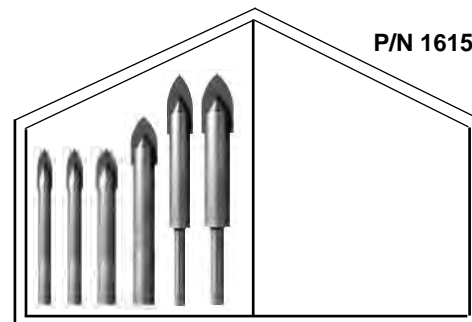
CARBIDE-TIPPED GLASS AND TILE DRILLS

FOR DRILLING GLASS, TILE, MIRRORS, CERAMIC, BRICKS AND MASONRY



P/N 16151

- **SPECIFICALLY ENGINEERED FOR DRILLING**
GLASS, TILE, MIRRORS, CERAMIC, BRICKS AND MASONRY
- **SPEAR POINT**
REDUCES CUTTING PRESSURE FOR CLEANER HOLES



SIZE DIAMETER	OVERALL LENGTH	MIN. ACTUAL DIA. SIZE	PART		INDEX
1/8	2-1/4	.135	c	61570	GLASS AND TILE DRILL INDEX 6 Drill Set: 1/8" to 1/2" P/N 61651
3/16	2-9/32	.197	c	61571	
1/4	2-9/32	.260	c	61572	
5/16	3	.322	c	61573	
3/8	3-7/8	.385	c	61574	
1/2	3-7/8	.515	c	61575	

CIC 200™ COUNTERSINK DRILLS

COUNTERSINK DRILLS

- 6-FLUTE, 82° ANGLE DESIGN ASSURES SMOOTHER, ROUNDER CUTTING
- SELF-CENTERING FOR EASY USE
- RECOMMENDED FOR BOTH MACHINE AND PORTABLE TOOLS
- CHATTER-FREE PERFORMANCE IN COUNTERSINKING, CHAMFERING AND DEBURRING OPERATIONS



BODY DIA.	SHANK DIA.	OVERALL LENGTH	PART	INDEX
1/4"	1/4"	2"	A 62450	CIC 200 COUNTERSINK DRILL INDEX • Holds 1/4" to 5/8" Countersinks P/N 61607
3/8"	1/4"	2"	A 62452	
1/2"	3/8"	2"	A 62454	
5/8"	3/8"	2-1/4"	A 62456	
3/4"	1/2"	2-3/4"	A 62458	
1"	1/2"	2-3/4"	A 62460	

COUNTERSINK DRILLS

- SNAPS INTO QUICK RELEASE CHUCK FOR FAST & EASY CHANGE
- ACCEPTS STANDARD JOBBER SIZE DRILLS
- CAN ADJUST DRILL LENGTH FOR DIFFERENT LENGTH SCREWS
- COUNTERSINK PORTION IS MANUFACTURED FROM STRESS-PROOF STEEL FOR EXTENDED LIFE
- 82° CUTTING ANGLE FOR STANDARD FLAT HEAD SCREWS
- TWO SHARP CUTTING FLUTES WON'T PLUG UP WITH WOOD FIBERS
- DRILL NOT INCLUDED



SELF-CENTERING DRILL BIT AND GUIDE

- ACCURATE DRILLING OF HOLES FOR HINGES, HANDLES AND DRAWER SLIDES
- STANDARD 1/4" HEX SHANK FITS ALL POWER BIT AND QUICK CHANGE CHUCKS FOR FAST, KEYLESS OPERATION
- HIGH SPEED STEEL DRILL BIT



NOTE: CLEAR JAMS EASILY BY TWISTING OFF GUIDE TOP



DRILL SIZE	COUNTERSINK DIAMETER	HEX SIZE	SCREW SIZE	PART
3/32	3/8	1/4	#6	A 62466
7/64	3/8	1/4	#8	A 62467
1/8	3/8	1/4	#10	A 62468
9/64	1/2	1/4	#12	A 62469

DRILL BIT SIZE	SCREW SIZE	PART	REPLACEMENT DRILL
5/64	#2 and #3	A 62462	62462D
7/64	#5 and #6	A 62463	91007
9/64	#8, #9 and #10	A 62464	91009
11/64	#12	A 62465	91011

CIC 200™ SUPER CUT™ SPOTWELD DRILLS

SUPER COBALT HIGH SPEED STEEL - GOLD FINISH

Rugged, high performance drill effectively cuts autobody panel spot welds, rivet heads and screw heads. Also ideal for drilling precision, burr-free holes in sheet metal.

- HIGH HARDNESS COBALT STEEL – PERMITS 30% GREATER DRILLING SPEEDS THAN HIGH SPEED STEEL DRILLS
- ABRASION RESISTANT ALLOY – RESULTS IN EXTREMELY LONG LASTING CUTTING EDGES
- UNIQUE SPUR POINT – REMOVES SPOTWELDS, SCREW HEADS AND RIVET HEADS WITHOUT DAMAGING PANELS BEHIND



DIAMETER	SPOTWELD SIZE	OVERALL LENGTH	DOUBLE/SINGLE END	PART
6.5 MM	1/4	1.75"	Single	C 61540
6.5 MM	1/4	3.62"	Double	A 61545
8.0 MM	5/16	1.75"	Single	B 61550
8.0 MM	5/16	3.62"	Double	A 61555
10.0 MM	3/8	1.75"	Single	A 61560
10.0 MM	3/8	3.62"	Double	A 61565

"BIT KEEPER" AND "BIT BUDDY" SETS

NEATLY STORED IN THE POCKETS OF A BUCKET BOSS® POUCH

Lighter and more versatile than a full tool belt, this pouch is designed to hold the necessities of the job!

- 12 INTERIOR ELASTIC POCKETS STORE BOTH DRILL & SCREWDRIVER BITS
- TRI-FOLD COMPARTMENT OPENS FLAT
- VELCRO® FLAP SECURELY CLOSES AT BOTTOM
- 2 EXTRA LONG POCKETS FOR SPADE BITS OR LARGER TOOLS
- 2" SPRING STEEL CLIPS HOLDS SECURELY TO BELT

"BIT KEEPER" POUCH ONLY – Part #7999



APPLICATIONS:
Use for hundreds of small maintenance jobs such as door hinges/knobs/jambes, light switches, wall anchors, etc.

"BIT KEEPER" SET

CONTENTS	PART
"BIT KEEPER" SET	A 61686
Quad Point Drills: 3/32, 7/64, 1/8, 9/64, 3/16, 1/4 and 5/16 Razor-Back Wood Spade Bits: 3/4 and 1" Snappy Countersinks: 3/32, 7/64, 1/8 and 9/64 1-15/16 Phillips Power Bits: 6-8 and 5-10 Slotted Power Bits w/Finder: 5F-6R and 6F-8R 1" Phillips Insert Bits: 6-8, 8-10 and 12-14 Slotted Insert Bits: 3F-4R, 6F-8R and 10F-12R Mag Nutsetter: 1/4 x 1-3/4 1/8 Hex Socket Key – Short	

ELECTRICIAN'S "BIT KEEPER" SET

CONTENTS	PART
ELECTRICIAN'S "BIT KEEPER" SET	A 61683
AC Sensor Magnetic Bit Holder: 1/4 x 6" Combo Drill & Taps: 8/32, 10-24, 10-32, 1/4-20 Black Beauty Drills: 3/16 x 3-1/2 x 3/16, 1/4 x 4-1/8 x 1/4 and 5/16 x 4-3/4 x 5/16 Mag Nutsetter: 1/4 x 1-3/4, 5/16 x 1-3/4 and 3/8 x 1-3/4 Phillips Power Bits: 1-15/16 5-10 and 6" 8-10 Slotted Power Bit w/Finder: 10F-12R Slotted Insert Bits: 3F-4R, 6F-8R and 10F-12 1" Phillips Insert Bits – 6-8, 8-10 and 12-14	

QUICK CHANGE DRILL BIT "BIT KEEPER" SET

CONTENTS	PART
QUICK CHANGE DRILL BIT "BIT KEEPER" SET	A 61682
#8 Drill and Driver 4-5/16" Screw Guide Hex Shank Drill Bits: 3/32, 7/64, 1/8, 9/64, 5/32, 11/64 and 3/16 Power Groove Countersinks: #6, #10, #12 1-15/16 Phillips Power Bits: 6-8 and 5-10 Quick Change Chuck Adapter 1" Slotted Insert Bits: 3F-4R and 6F-8R 1" Phillips Insert Bits: 6-8, 8-10 and 12-14	

SELF-CENTERING DRILL "BIT KEEPER" SET

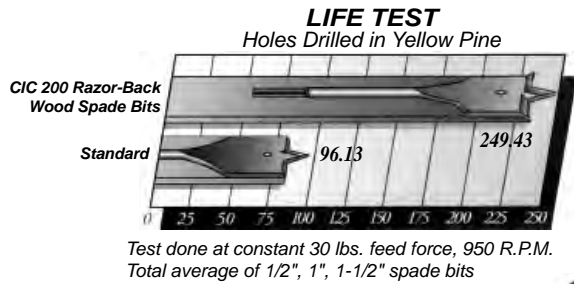
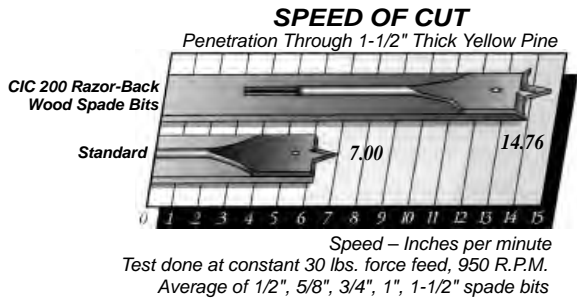
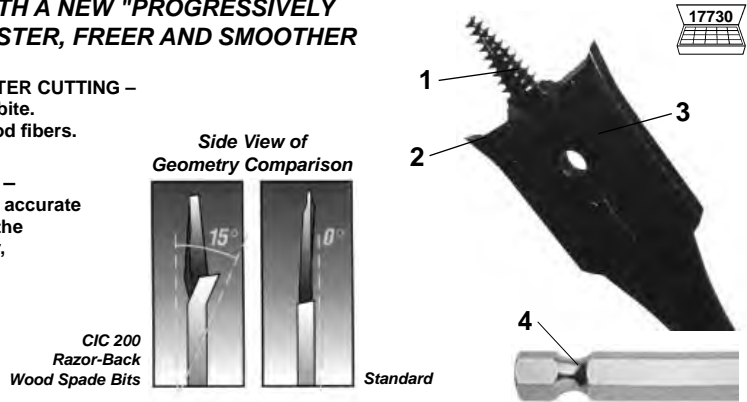
CONTENTS	PART
SELF-CENTERING DRILL "BIT KEEPER" SET	A 61670
1" Phillips Insert Bits: 6-8, 8-10 and 12-14 1-15/16" Phillips Power Bits: 2-4 and 5-10 Carpenter's Pencil (GSA) Razor-Back Wood Spade Bit: 7/8" Magnetic Bit Holder Adapter: 1/4 x 3" Quick Change Chuck Adapter Self Centering Drill Bit and Guide: 5/64, 7/64, 9/64 and 11/64 Slotted Power Bit w/Finder: 5F-6R and 6F-8R Slotted Insert Bits: 3F-4R, 6F-8R and 10F-12R	

CIC 200™ RAZOR-BACK WOOD SPADE BITS

SHARPNESS AND DURABILITY FOR ALL WOOD BORING APPLICATIONS

OUTPERFORMS ALL STANDARD WOOD SPADE BITS WITH A NEW "PROGRESSIVELY ANGLED" GEOMETRY THAT CUTS THROUGH WOOD FASTER, FREER AND SMOOTHER

- CHISEL EDGE DESIGN FOR CLEANER, SMOOTHER HOLES AND FASTER CUTTING** – 15° cutting edge attacks wood at a sharper angle, so it takes a bigger bite. This slicing action digs into the wood instead of scraping away at wood fibers. It even blasts through wood knots that stop standard bits dead.
- ANGLED SPURS MAKE BIGGER CHIPS WITH LESS BINDING** – The spurs, cocked slightly forward of the cutting edge, scribe a clean, accurate hole and guide the bit through the wood. This shearing action allows the chisel edge to knock out bigger chips and run through the work faster, with less effort.
- EXCLUSIVE TEMPERING PROCESS** – Toughens bits to last up to 6 times longer than standard wood bits.
- HEX SHANK** – Fits all drills and 1/4" Quick-Change holders and also prevents spinning in drill chuck or in bit extension.



- QUICK CHANGE EXTENSION ALLOWS FOR FAST AND EASY BIT CHANGES – SAVES TIME & MONEY
- SLIM DIAMETER QUICK CHANGE CHUCK PASSES THROUGH 11/16 AND LARGER HOLES



DIAMETER	PART	DIAMETER	PART	DIAMETER	PART	DIAMETER	PART	
1/4"	F 61580	9/16"	F 61585	7/8"	F 61590	1-3/8"	D 61595	
5/16"	F 61581	5/8"	F 61586	15/16"	F 61591	1-1/2"	D 61596	
3/8"	F 61582	11/16"	F 61587	1"	F 61592	12" Quick Change Extension*	C 61576	
7/16"	F 61583	3/4"	F 61588	1-1/8"	D 61593			
1/2"	F 61584	13/16"	F 61589	1-1/4"	D 61594	*5/8" smallest hole extension fits through		
RAZOR-BACK WOOD SPADE BIT POUCH ASSORTMENT WITH 7 BITS – 1/4", 3/8", 1/2", 5/8", 3/4", 7/8" and 1"							A	61661

FORSTNER BITS

PRECISION-SHARPENED HIGH SPEED STEEL BIT WITH CENTER GUIDE POINT

- PROVIDES SMOOTHER CUTS
- FULLY HARDENED MACHINED BODIES FOR INCREASED STRENGTH, SAFETY AND LIFE
- USED TO DRILL CLEAN ACCURATE, FLAT-BOTTOMED HOLES IN WOOD
- FOR COUNTERBOARD SCREWS, POCKET HOLES, PILOT HOLES AND DECORATIVE EDGES
- USE IN PORTABLE DRILLS AS WELL AS DRILL PRESSES



DIAMETER	PART	DIAMETER	PART	DIAMETER	PART	DIAMETER	PART	
1/4"	A 63500	3/4"	A 63508	1-1/4"	A 63516	1-3/4"	A 63524	
3/8"	A 63502	7/8"	A 63510	1-3/8"	A 63518	1-7/8"	A 63526	
1/2"	A 63504	1"	A 63512	1-1/2"	A 63520	2"	A 63528	
5/8"	A 63506	1-1/8"	A 63514	1-5/8"	A 63522	2-1/8"	A 63530	
7-PIECE FORSTNER BIT SET – 1/4" to 1" x 1/8"							A	61649

CIC 200™ MECHANIC LENGTH HEX SHANK DRILLS

HIGH PERFORMANCE INDUSTRIAL DRILL BITS AND ACCESSORIES

CIC 200™ MECHANIC LENGTH HEX SHANK DRILLS

Features

- Quick Release 1/4" Hex Shank
- 135° split point for fast penetration and accurate starting without center punch.
- Special Hi-Molybdenum tool steel.
- Recommended use in work hardening grades of stainless steel and other hard metal drill applications.

Benefits

- Especially designed for hand held drills and impacters.
- Quick release eases changing of cutting tools.
- Body and clearance are treated for maximum lubricity.



DIAMETER (INCHES)	OVERALL LENGTH	FLUTE LENGTH	PART	
1/16"	2-5/8"	7/8"	C	47429
3/32"	3-1/4"	1-1/4"	C	47430
1/8"	3-1/2"	1-7/16"	C	47431
5/32"	3-1/2"	1-11/16"	C	47432
3/16"	3-3/4"	1-7/8"	C	47433
7/32"	4"	2"	C	47434
1/4"	4-1/4"	2"	C	47435
9/32"	3-13/16"	2-1/4"	C	47436
5/16"	4"	2-1/2"	A	47437
11/32"	4-7/32"	2-5/8"	A	47438
3/8"	4-1/4"	2-11/16"	A	47439
13/32"	4-1/2"	2-13/16"	A	47440
7/16"	4-1/2"	2-15/16"	A	47441
15/32"	4-7/8"	3-1/8"	A	47442
1/2"	5"	3-3/8"	A	47443

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CIC 200™ MECHANIC LENGTH HEX SHANK DRILL INDEXES AND ADAPTER



CIC 200™ 12 PIECE INDEX "HARD PLASTIC CASE" P/N 47444

12 piece set contains these drill diameters:

- 1/16"
- 3/32"
- 1/8"
- 5/32"
- 3/16"
- 7/32"
- 1/4"
- 5/16"
- 3/8"
- 7/16"
- 1/2"
- Quick release adapter

All drills are packed in a rugged plastic case.

CIC 200™ 7 PIECE INDEX "SOFT POUCH" P/N 47445

7 piece set contains these drill diameters:

- 1/16"
- 3/32"
- 1/8"
- 5/32"
- 3/16"
- 7/32"
- 1/4"



CIC 200™ EMPTY SOFT POUCH P/N 47446



QUICK CHANGE ADAPTER P/N 51166

- Dual 1/4" and 3/8" drill and drive chuck
- Industrial quality with minimal runout (wobble)
- Fits all accessory types, all brands
- Fits old and new hex shanks with or without power groove

HEX SHANK DRILL BITS

HIGH PERFORMANCE INDUSTRIAL DRILL BITS AND ACCESSORIES

HEX SHANK DRILL BITS

- HEX SHANK DRILL BITS MAKE DRILL CHANGES FAST AND EASY
- SAVES TIME AND MONEY
- HEX SHANK INCREASES TORQUE AND STOPS BIT FROM SLIPPING IN CHUCK
- INDUSTRIAL-GRADE M7 HIGH SPEED STEEL – FOR DURABILITY
- PRECISION GROUND FLUTES – FOR FASTER, MORE EFFICIENT CHIP REMOVAL
- 135° QUAD POINT – CUTS THE TOUGHEST MATERIALS



1. Pull back on body of the quick change chuck adapter and insert Hex Shank Drill Bit.

2. Drill is locked in place and ready.

DIA.	FLUTE LENGTH	OVERALL LENGTH	HEX SIZE	PART	DIA.	FLUTE LENGTH	OVERALL LENGTH	HEX SIZE	PART
1/16	7/8"	2-1/2"	1/4"	C 47400	5/32	2"	3-3/4"	1/4"	C 47406
5/64	1"	2-5/8"	1/4"	C 47401	11/64	2-1/8"	3-7/8"	1/4"	C 47407
3/32	1-1/4"	2-3/4"	1/4"	C 47402	3/16	2-5/16"	4"	1/4"	C 47408
7/64	1-1/2"	3-1/4"	1/4"	C 47403	7/32	2-1/2"	4-3/8"	1/4"	C 47410
1/8	1-5/8"	3-3/8"	1/4"	C 47404	1/4	2-3/4"	4-5/8"	1/4"	C 47412
9/64	1-3/4"	3-1/2"	1/4"	C 47405	1/4" Quick Change Chuck Adapter			A	83066

DRILL AND DRIVER

- BUILT-IN HEX KEY ALLOWS EASY CHANGE OF COUNTERSINKS AND DRILL BITS ON THE SPOT
- DRILL AND DRIVER COMES IN 4 STANDARD SCREW SIZES – #6, #8, #10 AND #12 TO COVER THE MOST COMMON SCREW INSTALLATIONS
- ONE SIDE HOUSES THE DRILL PLUS COUNTERSINK/COUNTERBORE COMBINATION – ALLOWS FOR DRILLING AND COUNTERSINKING OR COUNTERBORING IN ONE SMOOTH STEP
- THE OPPOSITE SIDE COMES STANDARD WITH THE APPROPRIATE SIZE PHILLIPS INSERT BIT – JUST UNLOCK THE DRILL AND DRIVER BY SLIDING THE BRASS SLEEVE FORWARD AND SLIP IT AROUND TO EXPOSE THE PHILLIPS BIT. LOCK BACK IN PLACE BY SLIDING THE BRASS SLEEVE BACK IN PLACE
- INSERT "DRILL AND DRIVER" INTO QUICK CHANGE ADAPTER OR DIRECTLY INTO DRILL MOTOR



1. Insert "Drill & Driver" into Quick Change adapter or directly into drill motor. Drill and Countersink/Counterbore base material.



2. Push brass collar forward to release "Drill & Driver". Flip around and pull back the brass collar to lock in place with phillips bit now exposed.



3. Drive screw into hole.



COUNTERSINK SIZE	COUNTERSINK DIAMETER	DRILL BIT/PILOT HOLE SIZE	OVERALL LENGTH	PART
#6	5/16"	3/32"	6"	A 62470
#8	5/16"	7/64"	6"	A 62471
#10	3/8"	1/8"	6"	A 62472
#12	3/8"	1/8"	6"	A 62473

POWER GROOVE COUNTERSINK

- DRILL, COUNTERSINK/COUNTERBORE ALL IN ONE
- HEAT TREATED FOR LONGER LIFE
- DRILL BIT FEATURES PRECISION GROUND FLUTES THAT CUT FAST AND STAY SHARP LONGER
- OTHER SIZE HOLDS APPROPRIATE SIZE PHILLIPS INSERT BIT



SIZE	DIA.	DRILL BIT/PILOT HOLE SIZE	PART	DRILL PART	SIZE	DIA.	DRILL BIT/PILOT HOLE SIZE	PART	DRILL PART
#6	5/16"	3/32"	A 62478	A 62478D	#10	3/8"	1/8"	A 62480	A 62480D
#8	5/16"	7/64"	A 62479	A 62479D	#12	3/8"	1/8"	A 62481	A 62480D

CIC 150™ 118° SPLIT POINT DRILLS

JOBBER LENGTH - FRACTIONAL SIZES

• BLACK-OXIDE SURFACE TREATMENT RETAINS LUBRICANTS FOR IMPROVED CHIP FLOW, REDUCED CHIP WELDING AND INCREASED ABRASION RESISTANCE

• FOR USE IN FERROUS MATERIALS SUCH AS STEEL AND IRON



DIA.	DEC. EQUIV.	JOBBER		DIA.	DEC. EQUIV.	JOBBER	
		LENGTH	PART			LENGTH	PART
1/16	.0625	1-7/8	J 91104	19/64	.2969	4-3/8	F 91119
5/64	.0781	2	J 91105	5/16	.3125	4-1/2	F 91120
3/32	.0938	2-1/4	J 91106	21/64	.3281	4-5/8	F 91121
7/64	.1094	2-5/8	J 91107	11/32	.3438	4-3/4	F 91122
1/8	.1250	2-3/4	J 91108	23/64	.3594	4-7/8	F 91123
9/64	.1406	2-7/8	J 91109	3/8	.3750	5	F 91124
5/32	.1562	3-1/8	J 91110	25/64	.3906	5-1/8	F 91125
11/64	.1719	3-1/4	J 91111	13/32	.4062	5-1/4	F 91126
3/16	.1875	3-1/2	J 91112	27/64	.4219	5-3/8	F 91127
13/64	.2031	3-5/8	J 91113	7/16	.4375	5-1/2	F 91128
7/32	.2188	3-3/4	J 91114	29/64	.4531	5-5/8	F 91129
15/64	.2344	3-7/8	J 91115	15/32	.4688	5-3/4	F 91130
1/4	.2500	4	J 91116	31/64	.4844	5-7/8	F 91131
17/64	.2656	4-1/8	F 91117	1/2	.5000	6	F 91132
9/32	.2812	4-1/4	F 91118	-	-	-	-

29 PIECE DRILL INDEX



DESCRIPTION	PART
29-PIECE DRILL INDEX 1/16 to 1/2 by 64ths	A 61679

50 PIECE FRACTIONAL ORGANIZER



CONTENTS	PART
1 each: 21/64, 11/32, 25/64, 27/64, 7/16 and 1/2	A 61677
2 each: 9/64, 5/32, 11/64, 13/64, 7/32, 15/64, 17/64, 9/32, 5/16 and 3/8	
3 each: 1/16, 5/64, 3/32 and 7/64	
4 each: 1/8, 3/16 and 1/4	

HAMMER CHISELS

HIGH PERFORMANCE MASONRY REMOVAL IN ELECTRIC POWER TOOLS

Features and Benefits

- Forged from high quality steel and ground using CNC machinery
- Hardened and tempered under strictly controlled manufacturing process for optimal masonry removal and long tool life
- Oil quenched and shot blasted for additional stress relief
- Anti-rust lacquered in natural finish
- Laser marked shanks ensure positive identification

Applications

- Demolition
- Road construction
- Bridge construction
- Pavement work
- Utility installation
- Variety of maintenance functions








HEADS









- **Bull (moil) Point:** General concrete demolition.
- **Flat Chisels:** General concrete demolition. Available in narrow (1") and wide (2", 3") versions for cutting pavement overlay.
- **Clay Spade:** Clay and other rock-free soil cutting.
- **Asphalt Cutter:** Asphalt, hardpan and compacted soil cutting.
- **Bushing Tool:** Roughing up or concrete surface removal.

SHANKS

- **SDS-Max Chisels:** For large rotary hammers with SDS-Max drive.
- **Spline Shank Chisels:** For large rotary hammers with spline drive.
- **SDS-Plus Chisels:** For SDS-Plus Hammer Drills.

SDS-MAX CHISELS














Description	Size	P/N	Weight (lbs./ea.)	
				
<i>Bull Point</i>	<i>11"</i>	<i>77209</i>	<i>1.07 lb.</i>	<i>A</i>
Bull Point	12"	77210	1.16 lb.	A
Bull Point	16"	77211	1.57 lb.	A
<i>Bull Point</i>	<i>18"</i>	<i>77212</i>	<i>1.82 lb.</i>	<i>A</i>
				
<i>Flat</i>	<i>1" x 11"</i>	<i>77213</i>	<i>1.12 lb.</i>	<i>A</i>
Flat	1" x 12"	77214	1.16 lb.	A
Flat	1" x 16"	77215	1.57 lb.	A
<i>Flat</i>	<i>1" x 18"</i>	<i>77216</i>	<i>1.82 lb.</i>	<i>A</i>
<i>Flat</i>	<i>1" x 24"</i>	<i>77217</i>	<i>1.82 lb.</i>	<i>A</i>
				
Scaler	1-5/8" x 12"	77218	1.26 lb.	A
Scaler	2" x 12"	77219	1.34 lb.	A
Scaler	3" x 12"	77220	1.58 lb.	A
				
<i>Mortar</i>	<i>1-1/8" x 12"</i>	<i>77221</i>	<i>1.16 lb.</i>	<i>A</i>
				
<i>Slotter</i>	<i>1-1/4" x 12"</i>	<i>77222</i>	<i>1.18 lb.</i>	<i>A</i>



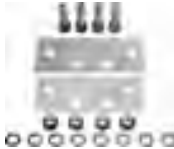
Description	Size	P/N	Weight (lbs./ea.)	
				
<i>Scraper</i>	<i>2" x 12"</i>	<i>77223</i>	<i>1.34 lb.</i>	<i>A</i>
				
<i>Gouge</i>	<i>1" x 12"</i>	<i>77224</i>	<i>1.29 lb.</i>	<i>A</i>
				
<i>Ground Rod Driver</i>	<i>3/4" x 10"</i>	<i>77225</i>	<i>1.17 lb.</i>	<i>A</i>
				
Bushing Tool	1-3/4" x 10"	77226	2.63 lb.	A
				
<i>Bushing Shank</i>	<i>16"</i>	<i>77227</i>	<i>1.75 lb.</i>	<i>A</i>
				
<i>Bushing Head</i>	<i>16 Teeth</i>	<i>77228</i>	<i>0.59 lb.</i>	<i>A</i>
				
<i>Asphalt Cutter</i>	<i>5" x 20"</i>	<i>77229</i>	<i>0.59 lb.</i>	<i>A</i>
				
<i>Clay Spade</i>	<i>4-1/2" x 20"</i>	<i>77230</i>	<i>0.59 lb.</i>	<i>A</i>

Note: ***Bold italic text*** = Non-stock item. Please allow for up to 2 weeks for delivery.

HAMMER CHISELS

HIGH PERFORMANCE MASONRY REMOVAL IN ELECTRIC POWER TOOLS

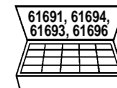
SPLINE SHANK CHISELS					SDS-PLUS CHISELS				
Description	Size	P/N	Weight (lbs./ea.)		Description	Size	P/N	Weight (lbs./ea.)	
									
Bull Point	12"	77231	1.32 lb.	A	Bull Point	10"	77206	0.52 lb.	A
Bull Point	16"	77232	1.90 lb.	A					
Bull Point	18"	77233	2.16 lb.	A					
									
Flat	1" x 12"	77234	1.45 lb.		Flat	3/4" x 10"	77207	0.57 lb.	A
Flat	1" x 16"	77235	1.98 lb.						
Flat	1" x 18"	77236	2.23 lb.						
									
Slotter	1-1/4" x 12"	77237	1.54 lb.		Scaler	1-5/8" x 10"	77208	0.70 lb.	A
									
Clay Spade	4-1/2" x 20"	77238	4.91 lb.						
									
Scaler	1-5/8" x 12"	77239	1.45 lb.						
Scaler	2" x 12"	77240	1.54 lb.						
Scaler	3" x 12"	77241	1.85 lb.						
									
Scraper	2" x 12"	77242	1.54 lb.						
									
Ground Rod Driver	3/4" x 10"	77243	2.48 lb.						
									
Bushing Tool	1-3/4" x 10"	77244	2.69 lb.						
									
Bushing Shank	16"	77245	1.98 lb.						
									
Mortar	1-1/8" x 12"	77246	1.54 lb.						

FLOOR SCRAPERS				
Description	Size	P/N	Weight (lbs./ea.)	
Scraper with Blade & Handle* (shank not included)	2.0mm	77200		
Complete Scrapers				
With 3/4" Hex Shank	16"	77203		
With Spline Shank	16"	77204		
With SDS-Max Shank	16"	77205		
				
Scraper - Replacement Blade	2.0mm	77201	0.86 lb.	A
				
Scraper - Repair Kit	2.0mm	77202	0.44 lb.	A

Note: ***Bold italic text*** = Non-stock item. Please allow for up to 2 weeks for delivery.

CIC 200™ METRIC QUAD POINT DRILLS

JOBBER LENGTH - METRIC SIZES



DIA.		PART	DIA.		PART	DIA.		PART
M1.0	J	68510	M5.5	F	68555	M10.0	c	68600
M1.5	J	68515	M6.0	D	68560	M10.2	c	68602
M2.0	J	68520	M6.2	D	68562	M10.3	c	68603
M2.05	J	68521	M6.5	D	68565	M10.5	c	68605
M2.1	J	68522	M6.7	D	68567	M10.8	c	68608
M2.5	J	68525	M6.8	D	68568	M11.0	c	68611
M2.9	J	68529	M7.0	D	68570	M11.2	c	68612
M3.0	J	68530	M7.2	D	68572	M11.3	c	68613
M3.1	J	68531	M7.5	D	68575	M11.5	c	68615
M3.3	J	68533	M8.0	C	68580	M11.8	c	68618
M3.5	F	68535	M8.2	C	68582	M12.0	c	68620
M4.0	F	68540	M8.3	C	68583	M12.2	c	68622
M4.1	F	68541	M8.5	C	68585	M12.4	c	68624
M4.2	F	68542	M8.7	C	68587	M12.5	c	68625
M4.5	F	68545	M9.0	C	68590	M13.0	c	68630
M5.0	F	68550	M9.3	C	68593	-		-
M5.2	F	68552	M9.5	C	68595	-		-

METRIC DRILL ORGANIZER

One convenient location for all your CIC 200™ Quad Point Metric Drills.
The right size available every time. Provides instant control of your inventory.

25 PIECE



- TOTAL OF 25 MOST POPULAR DRILLS.
- STORES HUNDREDS OF DRILLS IN ONE CONVENIENT LOCATION, ELIMINATING MISPLACED DRILLS.

CONTENTS	PART
1 each: M1.0, M1.5, M2.0, M2.5, M3.0, M3.5, M4.0, M4.5, M5.0, M5.5, M6.0, M6.5, M7.0, M7.5, M8.0, M8.5, M9.0, M9.5, M10.0, M10.5, M11.0, M11.5, M12.0, M12.5 and M13.0	A 61696

CIC 200™ METRIC QUAD POINT DRILLS (Cont'd.)

METRIC DRILL INDEXES

19 PIECE DRILL INDEX



• TOTAL OF 19 MOST POPULAR DRILLS.

CONTENTS

1 each: M1.0, M1.5, M2.0, M2.5, M3.0, M3.5, M4.0, M4.5, M5.0, M5.5, M6.0, M6.5, M7.0, M7.5, M8.0, M8.5, M9.0, M9.5 and M10.0

PART

A 61691

25 PIECE DRILL INDEX



• TOTAL OF 25 MOST POPULAR DRILLS.

CONTENTS

1 each: M1.0, M1.5, M2.0, M2.5, M3.0, M3.5, M4.0, M4.5, M5.0, M5.5, M6.0, M6.5, M7.0, M7.5, M8.0, M8.5, M9.0, M9.5, M10.0, M10.5, M11.0, M11.5, M12.0, M12.5 and M13.0

PART

A 61693

MOST COMMON CAUSES OF DRILL FAILURE

*The CIC 200™ Quad Point is the finest drill available.
It will out-perform almost any drill in use today.*

To get maximum performance from the CIC 200™ Quad Point Drill, practice the following recommendations:

1. Tighten all 3 holes on holding chuck.
2. Operate at the proper speed 500-700 RPMs. Drill will work at speeds up to 1800 RPMs, but is not recommended.
3. Cutting fluids such as Red Lion™ Tool Cool II should always be used. Stay away from tarlow based cutting oils.
4. Proper feed is important, never over-power by forcing high cutting pressures or not enough pressure. When you see a spiral chip, you know you have proper feed and are allowing the drill to work.

By following the above recommendations, you will obtain excellent results and long life from the CIC 200™ Quad Point Drill.

Follow proper operating procedures or a drill may fail.

Below are signs to look for and the probable cause of failure:

Signs	Cause	Recommendations
1. Point black or burnt.	Too high a speed Material too hard Feed too fast No lubrication	Lower RPM Use Tool Cool II Check type of material Less pressure
2. Chipped or broken. Slippaged marks on shank.	Chuck not properly tightened.	Tighten all 3 holes on chuck Replace worn chuck
3. Edges of Drill chipped.	Used for step drilling	Use proper size drill for finished hole size desired

Remember, the CIC 200™ Quad Point Drill is a professional cutting tool, and must always be used that way.

- NEVER:**
1. Step drill or enlarge a hole.
 2. Use it as a reamer.
 3. Use it as a drift punch.
 4. Throw them loosely in tool box. Always place them back in organizer or index.

Proper use and care of the CIC 200™ Quad Point Drill will give you far more "holes per drill" than you have experienced in the past with an ordinary drill.

DRILL FEEDS AND SPEEDS

Different drilling conditions make it impossible to develop any rigid rules for feeds and speeds. The following tables contain guidelines which can be utilized when drilling standard materials. Also, the following "rules of thumb" can be used to determine proper feeds and speeds for drilling ferrous materials.

NOTE: varying conditions can easily require adjustments:

1. Feeds equal .001" per revolution for every 1/16" of drill diameter, plus or minus .001" on the total.
2. Speed equals 80 surface feet per minute in 100 Brinell hardness material, and the speed should be reduced 10 surface feet per minute for each additional 50 points Brinell hardness.
3. Feed and speed rates should be reduced up to 45 to 50% when drilling holes deeper than 4 drill diameters.

RECOMMENDED FEEDS FOR VARIOUS DIAMETER DRILLS	
DIAMETER OF DRILL (INCHES)	FEED INCHES PER REVOLUTION
Under 1/8	.001 to .003
1/8 to 1/4	.002 to .006
1/4 to 1/2	.004 to .010
1/2 to 1	.007 to .015
1 inch and over	.015 to .025

NOTE: It is best to start with a moderate speed and feed, increasing either one, or both, after observing the action and condition of the drill.

RECOMMENDED SPEEDS FOR STANDARD MATERIALS WITH H.S.S. DRILLS	
MATERIAL	RECOMMENDED SPEED (SFM)
Aluminum and its Alloys	200-300
Brass and Bronze (ordinary)	150-300
Bronze (High Tensile)	70-150
Die Castings (Zinc Base)	300-400
Iron — Cast (soft)	75-125
Cast (medium hard)	50-100
Hard Chilled	10-20
Malleable	80-90
Magnesium and its Alloys	250-400
Monel Metal or High-Nickel Steel	30-50
Plastics or Similar Materials	100-300
Steel —	
Mild .2 carbon to .3 carbon	80-110
Steel .4 carbon to .5 carbon	70-80
Tool 1.2 carbon	50-60
Forgings	40-50
Alloy — 300 to 400 Brinell	20-30
High Tensile (Heat Treated)	
35 to 40 Rockwell "C"	30-40
40 to 45 Rockwell "C"	25-35
45 to 50 Rockwell "C"	15-25
50 to 55 Rockwell "C"	7-15
Stainless Steel	
Free Machining Grades	30-80
Work Hardening Grades	15-50
Titanium Alloy Sheet	50-60
Titanium Alloys	
Ti-75A (Commercially Pure)	50-60
RS-120	40-60
Ti-150A	40-50
Ti-140A	30-40
RC-130B	30-40
MST 6A1-4 Va.	20-35
MST 3A1-5 Cr.	10-20

CUTTING SPEED — FEET PER MINUTE					
DRILL SIZE	20	40	60	80	100
	REVOLUTIONS PER MINUTE (x 1000)				
1/64	4.89	9.78	14.78	19.72	24.45
1/16	1.22	2.44	3.70	4.93	6.11
1/8	.61	1.22	1.83	2.44	3.06
3/16	.41	.82	1.23	1.63	2.04
1/4	.30	.61	.92	1.22	1.53
5/16	.24	.49	.74	.98	1.22
3/8	.20	.41	.61	.81	1.02
7/16	.18	.35	.52	.70	.87
1/2	.15	.31	.46	.61	.76
9/16	.14	.27	.41	.54	.68
5/8	.12	.24	.37	.49	.61
11/16	.11	.22	.34	.45	.56
3/4	.10	.20	.31	.41	.51
13/16	.09	.19	.28	.38	.47
7/8	.09	.18	.26	.35	.44
15/16	.08	.16	.25	.33	.41
1	.08	.15	.23	.30	.38

TWIST DRILL TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
BROKEN DRILL	1. Flutes clogged with chips, drill binds in hole (common in deep holes).	<ul style="list-style-type: none"> - Use drill with wider flutes and/or faster helix angle. - Consider polished flutes. - Withdraw drill at regular intervals to clear chips. - If chips are not broken up, consider heavier feeds or a chip breaker design.
	2. Drill binding due to worn outer corners.	<ul style="list-style-type: none"> - Repoint or replace drill. - Check for excessive speed, inadequate or incorrect coolant, excessive run out as drill enters work.
	3. Work insecurely held	<ul style="list-style-type: none"> - Use adequate holding or clamping devices.
	4. Excessive feed.	<ul style="list-style-type: none"> - Reduce feed.
	5. Improper point.	<ul style="list-style-type: none"> - Check for correct lip clearance. - Use proper type of drill and point for the application.
	6. Drill is dull.	<ul style="list-style-type: none"> - Replace before dulling occurs. Check feeds, speed, and No. 5 for premature dulling.
BROKEN TANG	1. Shank or socket damaged.	<ul style="list-style-type: none"> - Repair or replace.
	2. Drill not properly seated in socket.	<ul style="list-style-type: none"> - Check for positive, secure fit.
CHIP NOT BREAKING UP	1. Insufficient feed.	<ul style="list-style-type: none"> - Increase feed.
	2. Improper style of drill and/or point.	<ul style="list-style-type: none"> - Consider use of chip-breaker design drill and/or chip-breaker point grind.
DAMAGED POINT	1. Using hard object to tap drill into socket.	<ul style="list-style-type: none"> - Use soft lead, brass, plastic, etc. hammer.
	2. Dropping, mishandling drill.	<ul style="list-style-type: none"> - Handle with care.
OVERSIZE HOLE	1. Drill point off center.	<ul style="list-style-type: none"> - Repoint accurately or replace with properly pointed drill.
	2. Machine spindle not rigid or not running true	<ul style="list-style-type: none"> - Repair if possible; consider use of bushing.
	3. Work piece loose and/or vibrating.	<ul style="list-style-type: none"> - Tighten and hold securely.
ROUGH HOLE	1. Incorrect point grind and/or dull drill.	<ul style="list-style-type: none"> - Repoint or replace with properly pointed drill.
	2. Excessive feed.	<ul style="list-style-type: none"> - Reduce feed.
	3. Incorrect or insufficient coolant.	<ul style="list-style-type: none"> - Correct and adjust.
POOR TOOL LIFE	1. Coolant not reaching drill point or insufficient or incorrect coolant.	<ul style="list-style-type: none"> - Correct and adjust.
	2. Speed too high and/or feed too low.	<ul style="list-style-type: none"> - Review and adjust.
	3. Wrong type of point and/or drill for application.	<ul style="list-style-type: none"> - Review requirements and conditions.
WEB SPLITS	1. Insufficient lip clearance.	<ul style="list-style-type: none"> - Repoint or replace with properly pointed drill.
	2. Point thinned too much.	<ul style="list-style-type: none"> - Repoint or replace with properly pointed drill.
	3. Excessive feed.	<ul style="list-style-type: none"> - Reduce feed.
CHIPPED LIPS	1. Excessive lip clearance and/or heel relief.	<ul style="list-style-type: none"> - Repoint or replace with properly pointed drill.
BROKEN OUTER CORNERS	1. Insufficient or incorrect coolant..	<ul style="list-style-type: none"> - Correct and adjust.
	2. Excessive speed.	<ul style="list-style-type: none"> - Reduce speed.
	3. Scale, hard spots encountered in material.	<ul style="list-style-type: none"> - No final remedy if this condition is prevalent; lower feeds and speeds may help.

DRILL NOMENCLATURE AND DEFINITIONS

AXIS is the longitudinal centerline through the drill.

BACK TAPER (longitudinal relief) drills are generally made slightly smaller in diameter at the shank end than at the cutting end. This difference is known as back taper.

BODY is the portion of the drill starting at the cutting lips and extending to the shank or neck.

BODY CLEARANCE (radial relief) is the portion of the outer diameter cut away to provide clearance between the land of the drill and the walls of the hole being produced. It is commonly called land clearance. Its purpose is to reduce friction.

CHISEL EDGE is the edge at the end of the web that connects the cutting lips.

CHISEL EDGE ANGLE is the included angle between the chisel edge and the cutting edge or lip, as viewed from the end of the drill.

CLEARANCE DIAMETER is the diameter of the relieved or cleared portion of the land.

DRILLS generally consist of a shank, neck, body and point. In some cases the neck is omitted.

FLUTE LENGTH is measured from the outer corners of the cutting lips to the extreme back end of the flutes.

FLUTES are grooves cut or formed in the body of the drill to provide cutting edges, to permit ejection of chips and to carry coolant to the cutting area. Flutes are most commonly helical, but may be straight.

HELIX ANGLE is the angle of the leading edge of the land to the axis of the drill. The helix angle is the same as the rake angle of the cutting edges at the periphery of the drill. Therefore a straight fluted drill has zero degrees helix.

LAND is that portion of the outside of the drill body not cut away by the flutes.

LIP RELIEF ANGLE is the angle as measured between a line tangent to the surface back of the cutting edge at the periphery and a line at right angles to the axis of the drill.

LIPS are the cutting edges of the drill which extend from the chisel edge to the periphery.

MARGIN is that full diameter portion of the land not cut away to provide clearance.

NECK is the smaller diameter area between the body and the shank of the drill.

OVER-ALL-LENGTH is measured from the extreme end of shank to the outer corners of the cutting lips. It does not, however, include the conical point at either end of the drill.

POINT is the cutting end of the drill, consisting of the ends of the lands and web. It is usually conical in form.

POINT ANGLE is the included angle as measured between the cutting lips.

RAKE ANGLE is the angle between the leading edge of the land and the axis of the drill at the point.

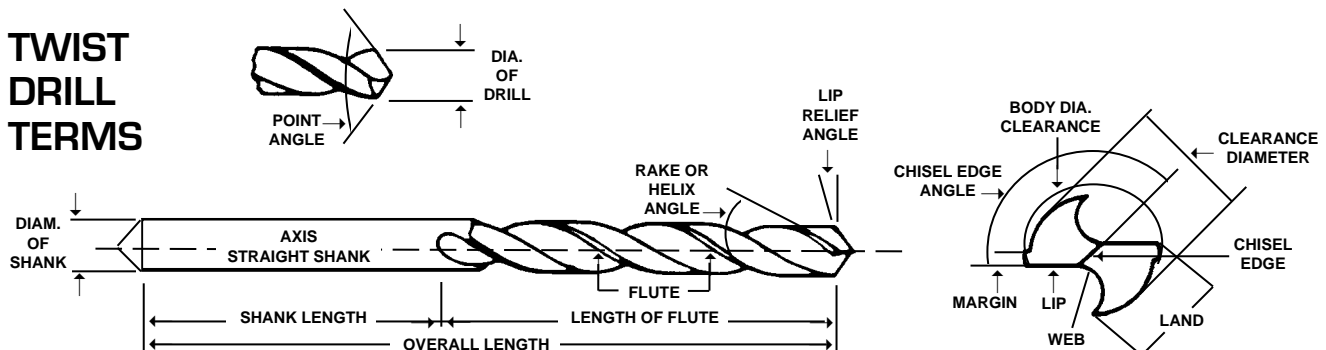
SHANK is the portion of the drill by which it is held and driven.

TANG is the flattened end of the shank, intended to fit into a slot in the drill holder or socket.

WEB is the central part of the body of the drill that connects the lands and at the cutting end, and forms the chisel edge.

WEB THICKNESS is usually considered the thickness at extreme end of the web and is usually the minimum thickness.

WEB THINNING is the reduction of the web thickness at the cutting end to minimize the drilling thrust pressure.

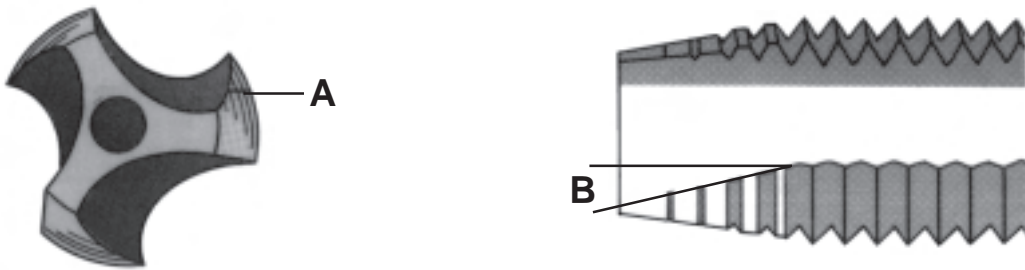


CHROMATE CIC 200™ "SHOOTER" TAPS

It used to be said that 90% of all taps broke before they wore out. Chromate's CIC 200 "Shooter" Tap literally "shoots" the chips out ahead of the tap. This is most important in tapping stringy materials, where the flutes become loaded, causing the tap to break. It makes it possible to use shallower flutes, which means a stronger tap. "Shooter" Taps require less power to drive and are much more economical to use than ordinary hand taps.

SUPERIOR "SHOOTER" TAP DESIGN

The cutting edges **A** at the point of the tap are ground at an angle **B** to the axis for a distance of four or five threads. This angle, in conjunction with the hook on the cutting edge of the land and the special flute form, produces the long curling chips. These chips, instead of passing out or backing in the flutes, are "shot" out ahead of the tap.



THE CHROMATE CIC 200 "SHOOTER" TAPS OFFER THESE THREE ADVANTAGES FOR BETTER THREADING

1. STRONGER: Does not require deep flutes for elimination of chips. Therefore, fewer and shallower flutes are possible, insuring a large cross sectional area. This gives extra strength.

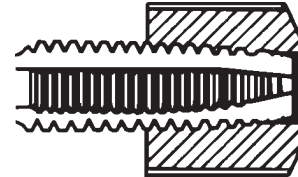
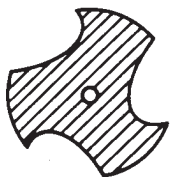
2. LESS POWER NEEDED: The angular cutting edge with hook on the land shears the metal instead of tearing or pulling it off with a scraping action. This shearing action requires much less drive power than is needed for hand taps.

3. ACCURACY: The first few teeth of the "Shooter" Tap do all the cutting. The rest of the threaded section acts as a lead screw, steadying the tap, and ensuring a more accurately tapped hole.

"SHOOTER" TAP

4 FLUTED
HAND TAP

SHEARS INSTEAD
OF SCRAPES



CIC 200™ PRO™ SHOOTER TAP & DRILL ORGANIZER

SIZES EMBOSSED
ON FRONT OF EACH
COMPARTMENT



STORAGE CABINET:
14-1/2" W x 7-1/4" H x 7-1/4" D

- Contains 26 CIC 200 Pro Shooter Taps and Drills
- 13 of the most popular fractional sizes
- Stores hundreds of taps and drills in one place
- Eliminates misplaced taps and drills

P/N 61603

- ONE CONVENIENT LOCATION FOR ALL YOUR TAPS AND DRILLS
- THE RIGHT SIZE ALWAYS AVAILABLE
- CONTROLS YOUR DRILL INVENTORY

QTY.	SIZE	QTY.	SIZE	QTY.	SIZE	QTY.	SIZE
1	4-40 Tap	1	#24 Drill	1	5/16-18 Tap	1	"R" Drill
1	#43 Drill	1	10-32 Tap	1	"H" Drill	1	1/2-13 Tap
1	6-32 Tap	1	#20 Drill	1	5/16-24 Tap	1	7/16 Drill
1	#35 Drill	1	1/4-20 Tap	1	"J" Drill	1	1/2-20 Tap
1	8-32 Tap	1	#6 Drill	1	3/8-16 Tap	1	29/64 Drill
1	#29 Drill	1	1/4-28 Tap	1	"P" Drill		
1	10-24 Tap	1	7/32 Drill	1	3/8-24 Tap		

SAVES TIME, MONEY AND LABOR

TAPS AND DIES



- **CIC 200™** Hex Shank Combo Drill and Taps Provide Quick, Superior Cutting
- **"Pro Shooter" Taps** Provide Perfect Class 2B Fit
- **CIC 200™** Taps Cut With Less Power, Are Stronger And More Accurate Than Conventional Taps
- **High Carbon Steel Dies** Are Heat-Treated For Strength And Durability
- **Premium Quality Tap** And Die Tools

CHROMATE TAPS AND DIES PROVIDE SUPERIOR, PRECISION THREAD CUTTING AND DURABILITY. **Manufactured from the finest alloys and heat-treated for strength and long life, Chromate Taps and Dies will satisfy all your thread cutting needs.**



CHROMATE INDUSTRIAL CORP.

EXCEPTIONAL PRODUCTS, SERVICE AND INNOVATIVE SOLUTIONS

CIC 200™ HEX SHANK COMBO DRILL & TAPS

CIC 200™ HEX SHANK COMBINATION DRILL AND TAPS



APPLICATIONS:

- Construction
- Electrical
- Maintenance
- Industrial
- Automotive
- Farm Implement Equipment

- Create holes and tap in a single operation. No center drilling or punching required.
- Quick change hex shank makes it ideal for use in portable power drills.
- Its taper neck design significantly reduces drill & tap breakage.
- A 135° split point permits holes and threads to be cut at high speeds.
- Available in standard (inch) and metric machine screw tap sizes.
- Durability provided by high molybdenum content high speed steel.
- More holes per drill than ordinary twist drills, especially in cordless power tools.
- Functional black and gold surface treatment holds lubricant for smoother drilling.

SIZE / TPI	HEX SHANK	OVERALL LENGTH	DRILL DIA.	DRILL LENGTH	THREAD LENGTH	PART
6-32	1/4"	2.17"	0.11"	0.31"	0.43"	A 12735
8-32	1/4"	2.45"	0.14"	0.37"	0.50"	A 12736
10-24	1/4"	2.61"	0.15"	0.41"	0.63"	A 12737
10-32	1/4"	2.61"	0.16"	0.41"	0.93"	A 12738
12-24	1/4"	2.70"	0.18"	0.47"	0.66"	A 12739
1/4-20	1/4"	2.89"	0.21"	0.53"	0.78"	A 12740
1/4-28	1/4"	2.89"	0.22"	0.53"	0.78"	A 12741
5/16-18	1/4"	3.20"	0.27"	0.69"	0.94"	A 12742
5/16-24	1/4"	3.20"	0.28"	0.69"	0.94"	A 12743
3/8-16	11/32"	3.45"	0.32"	0.81"	1.06"	A 12744
3/8-24	11/32"	3.45"	0.34"	0.81"	1.06"	A 12745
7/16-14	11/32"	3.83"	0.38"	1.00"	1.25"	A 12746
7/16-20	11/32"	3.83"	0.40"	1.00"	1.25"	A 12747
1/2-13	11/32"	4.07"	0.44"	1.13"	1.38"	A 12748
1/2-20	11/32"	4.07"	0.46"	1.13"	1.38"	A 12749

ACCESSORIES - QUICK CHANGE ADAPTER

- Dual 1/4" and 3/8" drill and drive chuck
- Industrial quality with minimal runout (wobble)
- Fits all accessory types, all brands
- Fits old and new hex shanks with or without power groove



DESCRIPTION	PART
Quick Change Adapter – For 1/4" and 3/8" Hex Shank Tools	A 51166

CIC 200™ HEX SHANK COMBO DRILL & TAPS

CIC 200™ HEX SHANK COMBINATION DRILL AND TAP SETS

Machine Screw

P/N 8844

5 piece set contains these tap diameters:

- 6-32
- 8-32
- 10-24
- 10-32
- 12-24

Packed in a rugged plastic case.



USS

P/N 8845

5 piece set contains these tap diameters:

- 1/4-20
- 5/16-18
- 3/8-16
- 7/16-14
- 1/2-13

Packed in a rugged plastic case.



SAE

P/N 8846

5 piece set contains these tap diameters:

- 1/4-28
- 5/16-24
- 3/8-24
- 7/16-20
- 1/2-20

Packed in a rugged plastic case.



SAE & USS

P/N 8848

10 piece set contains these tap diameters:

- 6-32
- 8-32
- 10-24
- 10-32
- 12-24
- 1/4-20
- 5/16-18
- 3/8-16
- 7/16-14
- 1/2-13

Packed in a rugged plastic case.



- Create holes and tap in a single operation. No center drilling or punching required.
- Quick change hex shank makes it ideal for use in portable power drills.
- Its taper neck design significantly reduces drill & tap breakage.
- A 135° split point permits holes and threads to be cut at high speeds.
- Available in standard (inch) and metric machine screw tap sizes.
- Durability provided by high molybdenum content high speed steel.
- More holes per drill than ordinary twist drills, especially in cordless power tools.
- Functional black and gold surface treatment holds lubricant for smoother drilling.

PRO COMBO DRILL & TAPS

PRO COMBO DRILL AND TAPS



APPLICATIONS:

Construction, Electrical, Maintenance, Industrial, Automotive and Farm Implement Equipment

MATERIALS:

Aluminum, Brass, Bronze, Cast Iron, Steel and Zinc

- TWO OPERATIONS IN ONE SETUP
- PERFORM AT HIGH RPM IN ANY MATERIAL WHERE HIGH SPEED STEEL CUTTING TOOLS ARE USED
- 118° DRILL PILOT IS SPECIFICALLY DESIGNED AND MANUFACTURED TO CLOSE TOLERANCES TO PRODUCE THE PROPER SIZE HOLE FOR TAPPING
- DESIGNED TO OPERATE AT SPEEDS BETWEEN THE NORMAL TAPPING SPEED AND DRILLING SPEED FOR THE SPECIFIED MATERIALS
- CLASS 2B FIT
- H3 TOLERANCES
- **NOTE:** TO ACCOMMODATE TAPPING OPERATION, THE MACHINE MUST BE CAPABLE OF REVERSING TO WITHDRAW THE TAP

SIZE/ TPI	# OF FLUTES	DRILL DIA.	OVERALL LENGTH	DRILL LENGTH	THREAD LENGTH	PART	SIZE/ TPI	# OF FLUTES	DRILL DIA.	OVERALL LENGTH	DRILL LENGTH	THREAD LENGTH	PART
6-32	2	.1085	3-1/4	.250	.716	A 12780	5/16-18	2	.2559	3.7008	.6299	.8268	A 12785
8-32	2	.1378	2.5197	.3150	.4724	A 12781	5/16-24	2	.2717	3.7008	.6299	.8661	A 12772
8-36	2	.1378	2.5197	.3150	.5118	A 12769	3/8-16	2	.3150	4.0945	.7480	.8661	A 12786
10-24	2	.1535	2.8346	.3937	.5906	A 12782	3/8-24	2	.3346	4.0945	.7480	.9449	A 12773
10-32	2	.1535	2.8346	.3937	.5906	A 12783	7/16-14	2	.3622	4.2126	.8661	.9843	A 12777
12-24	2	.1772	3.0315	.4331	.6299	A 12789	7/16-20	2	.3898	4.2126	.8661	.9843	A 12774
12-28	2	.1850	3.0315	.4331	.6693	A 12770	1/2-13	2	.4252	4.4882	.9843	1.1417	A 12788
1/4-20	2	.2008	3.2677	.5118	.7087	A 12784	1/2-20	2	.4527	4.4882	.9843	1.1417	A 12775
1/4-28	2	.2165	3.2677	.5118	.7480	A 12771	5/8-11	2	.5315	5.2756	1.2598	1.2598	A 12778
							5/8-18	2	.5709	5.2756	1.2598	1.2598	A 12776
Small Set: 8-32, 10-24, 10-32 and 12-24						A 61613	SAE Small Set: 8-36, 10-32 and 12-28						A 61667
USS Large Set: 1/4-20, 5/16-18, 3/8-16 and 1/2-13						A 61614	SAE Large Set: 1/4-28, 5/16-24, 3/8-24 and 1/2-20						A 61668
Pro Combo Drill and Tap Pouch Assortment Contains 8 Drills – 8-32, 10-24, 10-32, 12-24, 1/4-20, 5/16-18, 3/8-16 and 1/2-13						A 61662	SAE Pro Combo Drill and Tap Pouch Assortment Contains 8 Drills – 8-36, 10-32, 12-28, 1/4-28, 5/16-24, 3/8-24, 7/16-20 and 1/2-20						A 61669



TITANIUM NITRIDE COATED COMBO DRILL & TAPS

ENGINEERED FOR HIGH PRODUCTION



Features

- Drilling and tapping in one application.
- Ideal for use in multi-spindle heads with reversing capability and in variable speed/reverse magnetic drills when used with tapping heads.
- Tapered neck design reduces drill & tap breakage.
- 118° split point permits holes and threads to be cut at high speeds.
- Produces a class 2B fit. No special holders or collets required.

Application

- Create holes and tap in a single operation
- No center drilling or punching required

Uses

- Food industry plants where stainless is prevalent
- Automotive
- Industrial applications

6 Piece Set

P/N 61666

Includes the following:

- 8-32 P/N 12706
- 10-24 P/N 12708
- 12-24 P/N 12710
- 1/4-20 P/N 12712
- 5/16-18 P/N 12714
- 3/8-16 P/N 12716



P/N		Size TPI	No. of Flutes	Drill Dia.	Overall Length	Drill Length	Tap Length
12700	A	4-40	2	.0910	1-7/8	1/4	3/8
12701	A	4-48	2	.0945	1-7/8	1/4	3/8
12702	A	5-40	2	.1040	1-15/16	9/32	13/32
12703	A	5-44	2	.1060	1-15/16	9/32	13/32
12704	A	6-32	2	.1115	2	5/16	7/16
12705	A	6-40	2	.1170	2	5/16	7/16
12706	A	8-32	2	.1375	2-1/8	3/8	1/2
12707	A	8-36	2	.1405	2-1/8	3/8	1/2
12708	A	10-24	2	.1545	2-3/8	13/32	5/8
12709	A	10-32	2	.1635	2-3/8	13/32	5/8
12710	A	12-24	2	.1805	2-3/8	15/32	21/32
12711	A	12-28	2	.1860	2-3/8	15/32	21/32
12712	A	1/4-20	2	.2080	2-1/2	17/32	25/32
12713	A	1/4-28	2	.2220	2-1/2	17/32	25/32
12714	A	5/16-18	2	.2660	2-27/32	11/16	15/16
12715	A	5/16-24	2	.2770	2-27/32	11/16	15/16
12716	A	3/8-16	2	.3225	3-3/8	13/16	1-1/16
12717	A	3/8-24	2	.3395	3-3/8	13/16	1-1/16
12718	A	7/16-14	2	.3770	3-3/4	1	1-1/4
12719	A	7/16-20	2	.3955	3-3/4	1	1-1/4
12720	A	1/2-13	2	.4350	4-1/16	1-1/8	1-3/8
12721	A	1/2-20	2	.4580	4-1/16	1-1/8	1-3/8

Benefits of Titanium Nitride Coating (TiN)

Thermal and Chemical Diffusion Barrier

Titanium Nitride (TiN) is an extremely fine and dense compound. This non-porosity lends to TiN to act as a chemical and thermal barrier to diffusion and fusion, which prevents the transfer of molecules from the cutting tool to the work-piece, and vice versa. This phenomena is often referred to as "work hardening" and is eliminated by TiN coating.

High Lubricity

The coefficient of friction of TiN is lower than that of hard chrome. This provides free chip flow, reduced heat build-up, reduced adhesion and reduced built-up edge formation and cratering. In addition, the lubricious finish of TiN creates a superior work-piece finish.

Increased Surface Hardness

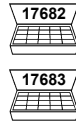
TiN coating measures a hardness in excess of 80 Rockwell C. This hardness protects the cutting edge from abrasion and provides a protective shield against the damaging effects of heat generated at the cutting edge.

Increased Durability

Applying a hard, heat resistant TiN coating to tough impact resistant high-speed steel tools prolongs sharpness. As a result, cutting tools can be run at substantially higher speeds and feed rates, thus increasing productivity

TITANIUM NITRIDE COATED SPIRAL POINT TAPS

THE SPIRAL POINT EJECTS CHIPS FORWARD



Features

• Spiral Point

The spiral point ejects the chips forward. This provides cleaner threads, higher quality threads than standard hand taps. The spiral point enables faster tapping, higher speeds, and thus, higher productivity.

• Necked Design

The recess or “neck” enables cutting fluids to reach the cutting edges and point of the tool, where the hard work is being done. The neck enables deeper tapping.

• Three flutes

These taps all have 3-flutes instead of two flutes on many spiral point taps. This provides for easier starting, and straighter tapping. Misalignment is a common problem with taps and these taps minimize this problem. They are also excellent for tapping stainless steel.

Application

- Permits tapping of high tensile martensitic stainless steels and titanium alloys at high speeds.

Uses

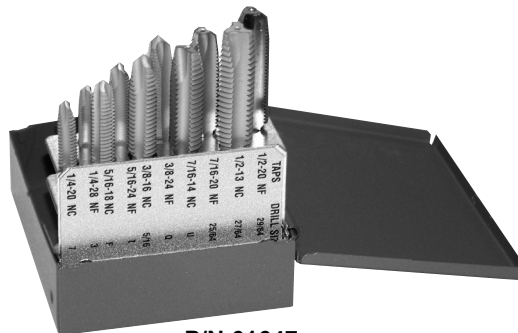
- Food industry plants where stainless is prevalent
- Automotive
- Industrial applications

P/N		Size TPI	Number of Flutes	Number of Threads	Overall Length
12600	A	4-40	3	9/16	2
12601	A	6-32	3	11/16	2
12602	A	6-40	3	11/16	2
12603	A	8-32	3	3/4	2-1/8
12604	A	8-36	3	3/4	2-1/8
12605	A	10-24	3	7/8	2-3/8
12606	A	10-32	3	7/8	2-3/8
12607	A	12-24	3	15/16	2-3/8
12608	A	12-28	3	15/16	2-3/8
12609	A	1/4-20	3	1	2-1/2
12610	A	1/4-28	3	1-1/8	2-3/4
12611	A	5/16-18	3	1-1/8	2-3/4
12612	A	5/16-24	3	1-1/8	2-3/4
12613	A	3/8-16	3	1-1/4	2-15/16
12614	A	3/8-24	3	3/4	2-15/16
12615	A	7/16-14	3	1-7/16	3-5/32
12616	A	7/16-20	3	1-7/16	3-5/32
12617	A	1/2-13	3	1-21/32	3-3/8
12618	A	1/2-20	3	1-21/32	3-3/8
12619	A	5/8-11	3	1-13/16	3-13/16
12620	A	5/8-18	3	3-13/16	3-13/16
12621	A	3/4-10	3	2	4-1/4
12622	A	3/4-16	3	2	4-1/4

10 PIECE SET - METAL INDEX

Includes the following:

- 1/4-20 P/N 12609
- 1/4-28 P/N 12610
- 5/16-18 P/N 12611
- 5/16-24 P/N 12612
- 3/8-16 P/N 12613
- 3/8-24 P/N 12614
- 7/16-14 P/N 12615
- 7/16-20 P/N 12616
- 1/2-13 P/N 12617
- 1/2-20 P/N 12618



P/N 61647

CIC 200™ HI-SPEED STEEL TAPS

"PRO SHOOTER" TAPS

"Pro Shooter" Taps provide the ultimate versatility, precision and durability for tapping mild steel, stainless steel, medium carbon steel and aluminum. Designed to run at higher tapping speeds up to 60 fpm for aluminum and 50 fpm for steel.

- CONSTRUCTED OF CHROMIUM, VANADIUM, MOLYBDENUM AND COBALT ALLOYS
- CUTS MATERIALS UP TO 55 ROCKWELL "C"
- SUPERIOR DESIGN ACTUALLY "SHOOTS" CHIPS OUT AHEAD OF THE TAP



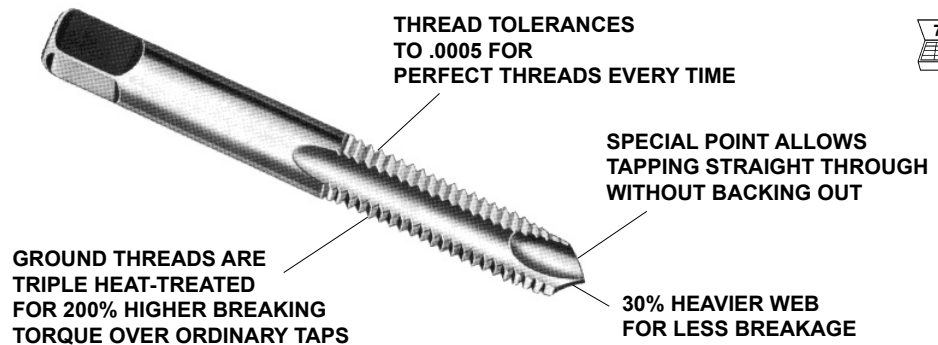
NOTE: See page 24.14 for recommended drill sizes.

CLASS 2B FIT DESIGNED WITH IDEAL PITCH DIAMETER FOR PERFECT CLASS 2B FIT, ELIMINATING CONFUSION OF SELECTING PROPER "H" LIMIT

SIZE	# FLUTES	PART	SIZE	# FLUTES	PART	SIZE	# FLUTES	PART	SIZE	# FLUTES	PART
4-40	2	A 12950	1/4-20	2	A 12960	7/16-14	3	A 12969	5/8-18	3	A 12976
6-32	2	A 12952	1/4-28	2	A 12962	7/16-20	3	A 12971	3/4-10	3	A 12977
8-32	2	A 12954	5/16-18	2	A 12964	1/2-13	3	A 12972	3/4-16	3	A 12978
10-24	2	A 12956	5/16-24	3	A 12966	1/2-20	3	A 12974	7/8-9	3	A 12979
10-32	2	A 12958	3/8-16	3	A 12968	5/8-11	3	A 12975	7/8-14	3	A 12980
12-24	2	A 12959	3/8-24	3	A 12970	-	-	-	-	-	-

STANDARD "SHOOTER" TAPS

- CONSTRUCTED OF CHROMIUM, VANADIUM, MOLYBDENUM AND COBALT ALLOYS.
- CUTS MATERIALS UP TO 55 ROCKWELL "C".
- SUPERIOR DESIGN ACTUALLY "SHOOTS" CHIPS OUT AHEAD OF THE TAP.



SIZE	# FLUTES	PART	SIZE	# FLUTES	PART
2-56	2	A 1574	5/16-24	2	A 1591
4-40	2	A 1582	3/8-16	3	A 1592
5/40	2	A 1581	3/8-24	3	A 1593
6-32	2	A 1583	7/16-14	3	A 1594
8-32	2	A 1584	7/16-20	3	A 1595
10-24	2	A 1585	1/2-13	3	A 1596
10-32	2	A 1586	1/2-20	3	A 1597
12-24	2	A 1587	5/8-11	3	A 1598
1/4-20	2	A 1588	5/8-18	3	A 1600
1/4-28	2	A 1589	3/4-10	3	A 1599
5/16-18	2	A 1590	3/4-16	3	A 1601

CIC 200™ HI-SPEED STEEL TAPS

PLUG, TAPER AND BOTTOMING TAPS



SIZE	PLUG		TAPER		BOTTOMING	
	PART	# FLUTES	PART	# FLUTES	PART	# FLUTES
2-56NC	A 12791	3	A 12790	3	A 12792	3
4-40NC	A 12800	3	A 12801	3	A 12802	3
5-40NC	A 12803	3	A 12804	3	A 12805	3
6-32NC	A 12806	3	A 12807	3	A 12808	3
8-32NC	A 12809	4	A 12810	4	A 12811	4
10-24NC	A 12812	4	A 12813	4	A 12814	4
10-32NF	A 12815	4	A 12816	4	A 12817	4
12-24NC	A 12818	4	A 12819	4	A 12820	4
1/4-20NC	A 12821	4	A 12822	4	A 12823	4
1/4-28NF	A 12824	4	A 12825	4	A 12826	4
5/16-18NC	A 12827	4	A 12828	4	A 12829	4
5/16-24NF	A 12830	4	A 12831	4	A 12832	4
3/8-16NC	A 12833	4	A 12834	4	A 12835	4
3/8-24NF	A 12836	4	A 12837	4	A 12838	4
7/16-14NC	A 12839	4	A 12840	4	A 12841	4
7/16-20NF	A 12842	4	A 12843	4	A 12844	4
1/2-13NC	A 12845	4	A 12846	4	A 12847	4
1/2-20NF	A 12848	4	A 12849	4	A 12850	4
9/16-12NC	A 12851	4	A 12852	4	A 12853	4
9/16-18NF	A 12854	4	A 12855	4	A 12856	4
5/8-11NC	A 12857	4	A 12858	4	A 12859	4
5/8-18NF	A 12860	4	A 12861	4	A 12862	4
3/4-10NC	A 12863	4	A 12864	4	A 12865	4
3/4-16NF	A 12866	4	A 12867	4	A 12868	4
7/8-9NC	A 12869	4	A 12870	4	A 12871	4
7/8-14NF	A 12872	4	A 12873	4	A 12874	4
1-8NC	A 12875	4	A 12876	4	A 12877	4
1-14NF	A 12878	4	A 12879	4	A 12880	4
1-1/8 - 7	A 12750	4	A 12751	4	A 12752	4
1-1/8 - 12	A 12881	4	A 12882	4	A 12883	4
1-1/4 - 7	A 12753	6	A 12754	6	A 12755	6
1-1/4 - 12	A 12793	6	A 12794	6	A 12795	6
1-3/8 - 7	A 12756	6	A 12757	6	A 12758	6
1-3/8 - 12	A 12796	6	A 12797	6	A 12798	6

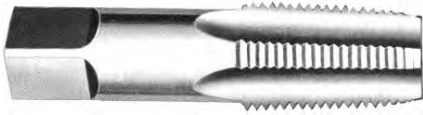
NOTE: See page 24.14 for recommended drill sizes.

NOTE: NUMBERS IN ITALIC ARE NON-STOCK ITEMS. PLEASE ALLOW 2-3 WEEKS FOR DELIVERY.

CIC 200™ HI-SPEED STEEL TAPS

TAPER PIPE TAPS

HIGH SPEED STEEL

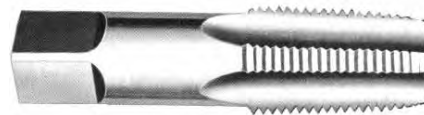


4 FLUTE TO 1/2"; 5 FLUTE 3/4" TO 1-1/4"; 7 FLUTE 1-1/2" TO 2"

SIZE	DRILL	PART	SIZE	DRILL	PART
1/8-27	11/32	A 5091	1-11.5	1-5/32	A 5096
1/4-18	7/16	A 5092	1-1/4-11.5	1-1/2	A 5097
3/8-18	37/64	A 5093	1-1/2-11.5	1-47/64	A 5098
1/2-14	23/32	A 5094	2-11.5	2-7/32	A 5099
3/4-14	59/64	A 5095	-	-	-

NOTE: See page 24.14 for recommended drill sizes.

HIGH CARBON STEEL



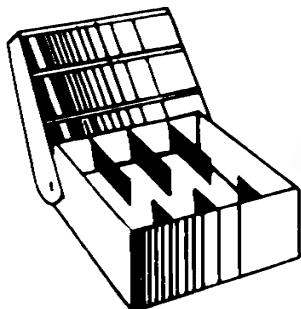
4 FLUTE TO 1/2"; 5 FLUTE 3/4" TO 1-1/4"; 7 FLUTE 1-1/2" TO 2"

SIZE	DRILL	PART	SIZE	DRILL	PART
1/8-27	11/32	A 800	1-11.5	1-5/32	A 805
1/4-18	7/16	A 801	1-1/4-11.5	1-1/2	A 806
3/8-18	37/64	A 802	1-1/2-11.5	1-47/64	A 807
1/2-14	23/32	A 803	2-11.5	2-7/32	A 808
3/4-14	59/64	A 804	-	-	-

CIC 200™ HI-SPEED STEEL TAP SETS

TAPER, PLUG AND BOTTOMING TAP SETS

Sturdy, convenient plastic cases keep taps clean and organized while protecting thread cutting edges from damage.



TAPER



PLUG



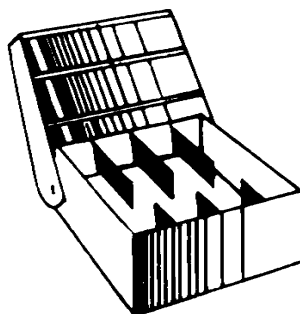
BOTTOMING

EACH SET INCLUDES ONE OF EACH TAPER, PLUG AND BOTTOMING TAPS

SIZE	PART	SIZE	PART
2-56	A 12885	7/16-14	A 12900
4-40	A 12887	7/16-20	A 12901
5-40	A 12888	1/2-13	A 12902
6-32	A 12889	1/2-20	A 12903
8-32	A 12890	9/16-12	A 12904
10-24	A 12891	9/16-18	A 12905
10-32	A 12892	5/8-11	A 12906
12-24	A 12893	5/8-18	A 12907
1/4-20	A 12894	3/4-10	A 12908
1/4-28	A 12895	3/4-16	A 12909
5/16-18	A 12896	7/8-9	A 12910
5/16-24	A 12897	7/8-14	A 12911
3/8-16	A 12898	1-8	A 12912
3/8-24	A 12899	1-14	A 12913

24

BOTTOMING TAP SET



SET CONTENTS

8 TAPS — 6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16 and 1/2-13

PART

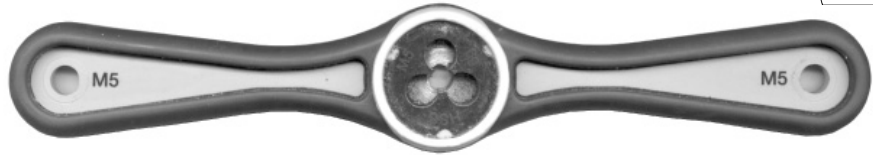
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NOTE: See page 24.14 for recommended drill sizes.

QUICK-CUT DIE & HANDLE

ROUND DIE

- READY TO USE HSS DIE AND HANDLE FOR QUICK REPAIR AND THREADING
- BUILT-IN GUIDE ASSURES ACCURATE STARTING AND NO CROSS THREADING
- CONVENIENT – ONE TOOL DOES IT ALL
- ERGONOMICALLY DESIGNED HANDLE IS COMFORTABLE TO USE
- OVERALL LENGTH IS 8-3/4" WIDE

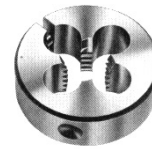
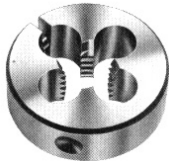


MACHINE SCREW SIZES			FRACTIONAL SIZES					
SIZE		1" O.D.	SIZE	1" O.D.	SIZE	1" O.D.		
6-32 NC	A	30426	1/4-20 NC	A	30421	1/4-28 NF	A	30431
8-32 NC	A	30427	5/16-18 NC	A	30422	5/16-24 NF	A	30432
10-24 NC	A	30428	3/8-16 NC	A	30423	3/8-24 NF	A	30433
10-32 NF	A	30429	7/16-14 NC	A	30424	7/16-20 NF	A	30434
12-24 NC	A	30430	1/2-13 NC	A	30425	1/2-20 NF	A	30435

HIGH CARBON STEEL DIES

ROUND DIES — SPLIT ADJUSTING TYPE

Heat-treated to resist breakage and thread wear. Precise threads are accurately formed for longer tool life. Right-hand threads. Marked with starting side and size.



MACHINE SCREW SIZES			
SIZE	5/8" O.D.	13/16" O.D.	1" O.D.
0-80 NC	-	A 30300	A -
2-56 NC	-	A 30302	A -
4-40 NC	A 30201	A 30301	A 30401
5-40 NC	A 30203	A 30303	A 30403
6-32 NC	-	A 30305	A 30405
8-32 NC	-	A 30307	A 30407
10-24 NC	-	A 30309	A 30409
10-32 NF	-	A 30311	A 30411
12-24 NC	-	-	A 30413

PIPE SIZES			
SIZE	1" O.D.	1-1/2" O.D.	2" O.D.
1/8-27	A 4942	A 4951	-
1/4-18	A 4943	A 4952	-
3/8-18	-	A 4953	-
1/2-14	-	-	A 4901
3/4-14	-	-	A 4902

FRACTIONAL SIZES				
SIZE	1" O.D.	1-1/2" O.D.	2" O.D.	
1/4-20 NC	A 20115	A 20215	A	20315
1/4-28 NF	A 20117	A 20217	A	20317
5/16-18 NC	A 20119	A 20219	A	20319
5/16-24 NF	A 20121	A 20221	A	20321
3/8-16 NC	A 20123	A 20223	A	20323
3/8-24 NF	A 20125	A 20225	A	20325
7/16-14 NC	A 20127	A 20227	A	20327
7/16-20 NF	A 20129	A 20229	A	20329
1/2-13 NC	A 20131	A 20231	A	20331
1/2-20 NF	A 20133	A 20233	A	20333
9/16-12 NC	-	A 20235	A	20335
9/16-18 NF	-	A 20237	A	20337
5/8-11 NC	-	A 20239	-	-
5/8-18 NF	-	A 20241	A	20341
3/4-10 NC	-	A 20243	-	-
3/4-16 NF	-	A 20245	A	20345
7/8-9 NC	-	-	A	20347
7/8-14 NF	-	-	A	20349
1-8 NC	-	-	A	20351

HIGH CARBON STEEL DIES

HEX DIES — SOLID TYPE

Heat-treated to resist breakage and thread wear. Precise threads are accurately formed for longer tool life. Right-hand threads. Marked with starting side and size.

- HIGH CARBON STEEL – IDEAL FOR HAND THREADING APPLICATIONS WHEN CUTTING NEW THREADS OR REPAIRING RUSTED OR DAMAGED THREADS.
- HEX DIE CAN BE USED WITH DIE STOCKS AS WELL AS OPEN-END, SOCKET OR ADJUSTABLE WRENCHES.



MACHINE SCREW SIZES

SIZE		5/8" HEX		1" HEX
4-40 NC	A	40101	A	40201
5-40 NC	A	40103	A	40203
6-32 NC	A	40105	A	40205
8-32 NC	A	40107	A	40207
10-24 NC	A	40109	A	40209
10-32 NF	A	40111	A	40211
12-24 NC	A	40113	A	40213

FRACTIONAL SIZES

SIZE		1" HEX		1-7/16" HEX		1-13/16" HEX
1/4-20 NC	A	50101		-		-
1/4-28 NF	A	50103		-		-
5/16-18 NC	A	50105		-		-
5/16-24 NF	A	50107		-		-
3/8-16 NC	A	50109		-		-
3/8-24 NF	A	50111		-		-
7/16-14 NC	A	50113		-		-
7/16-20 NF	A	50115		-		-
1/2-13 NC	A	50117		-		-
1/2-20 NF	A	50119	A	50219		-
9/16-12 NC		-	A	50221		-
9/16-18 NF		-	A	50223		-
5/8-11 NC		-	A	50225		-
5/8-18 NF		-	A	50227		-
3/4-10 NC		-	A	50229		-
3/4-16 NF		-	A	50231		-
7/8-9		-		-	A	50233
7/8-14		-		-	A	50235
1"-8		-		-	A	50237
1"-14		-		-	A	50239

SOLID HEX PIPE DIES

SIZE		1" HEX		1-7/16" HEX
1/8-27	A	4966	A	4991
1/4-18	A	4967	A	4992

FRACTIONAL RETHREADING DIES

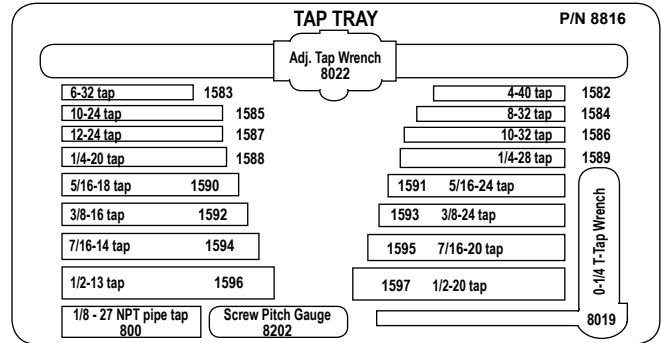
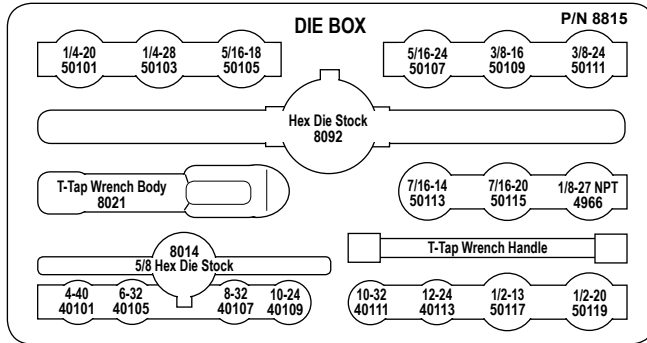
FRACTIONAL RETHREADING DIES ARE DESIGNED
FOR REPAIRING DAMAGED BOLTS AND STUDS

SIZE	W.A.F		PART	SIZE	W.A.F		PART
1/4-20 NC	19/32	A	60101	9/16-12 NC	1-1/16	A	60121
1/4-28 NF	19/32	A	60103	9/16-18 NF	1-1/16	A	60123
5/16-18 NC	11/16	A	60105	5/8-11 NC	1-1/4	A	60125
5/16-24 NF	11/16	A	60107	5/8-18 NF	1-1/4	A	60127
3/8-16 NC	25/32	A	60109	3/4-10 NC	1-7/16	A	60129
3/8-24 NF	25/32	A	60111	3/4-16 NF	1-7/16	A	60131
7/16-14 NC	7/8	A	60113	7/8-9 NC	1-5/8	A	60133
7/16-20 NF	7/8	A	60115	7/8-14 NF	1-5/8	A	60135
1/2-13 NC	1-1/16	A	60117	1-8 NC	1-13/16	A	60137
1/2-20 NF	1-1/16	A	60119	1-14 NF	1-13/16	A	60139

CIC 200™ SHOOTER TAP AND DIE SETS

CIC 200™ SHOOTER TAP AND HEX DIE SET

Forty-one piece set (17 taps and 17 dies) combines the most popular sizes of CIC 200 Shooter Taps and Dies in a sturdy polyethylene case.



CIC 200™ SHOOTER TAP AND HEX DIE SETS		PART
COMPLETE SET CONTAINS: TAPS: 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13 and 1/2-20 Shooter Taps DIES: 4-40, 6-32, 8-32, 10-24, 10-32 and 12-24 Hex Dies (5/8") 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13 and 1/2-20 Hex Dies (1") 1/8-27 Pipe Die 1", 1" and 5/8" Hex Die Stocks, 1/8-27 Pipe Tap, 0-1/4 Tap Wrench, 1/4 to 1/2 Tap Wrench, 0-1/2 Adjustable Tap Wrench and Screw Pitch Gauge		A 8822
DIE BOX SET CONTAINS: DIES: 4-40, 6-32, 8-32, 10-24, 10-32 and 12-24 Hex Dies (5/8") 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13 and 1/2-20 Hex Dies (1") 1/8-27 Pipe Die 1", 1" and 5/8" Hex Die Stocks		A 8815
TAP TRAY SET CONTAINS: TAPS: 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13 and 1/2-20 Shooter Taps 1/8-27 Pipe Tap, 0-1/4 Tap Wrench, 1/4 to 1/2 Tap Wrench, 0-1/2 Adjustable Tap Wrench and Screw Pitch Gauge		A 8816

IMPORTANT: Use Red Lion Tool Cool II P/N 74185 for maximum cooling, smoother cutting and extended tool life.

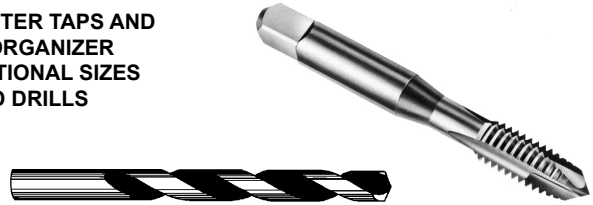
NOTE: See page 24.14 for recommended drill sizes.

CIC 200™ TAP SETS & DRILL SETS

PRO SHOOTER TAP AND DRILL ORGANIZER



- CONTAINS 26 CIC 200™ PRO SHOOTER TAPS AND DRILLS IN A STURDY 3-DRAWER ORGANIZER
- 13 OF THE MOST POPULAR FRACTIONAL SIZES
- STORES HUNDREDS OF TAPS AND DRILLS
- 29 COMPARTMENTS
- 14-1/2"W x 7-1/4"H x 7-1/4"D



CONTENTS

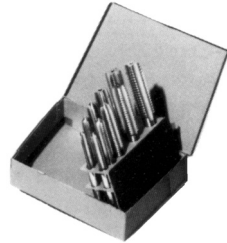
Pro Shooter Taps – 4-40, 6-32, 8-32, 10-24, 10-32, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 1/2-13 and 1/2-20
 Drills – #43, #35, #29, #24, #20, #6, 7/32, "H", "J", "P", "R", 7/16 and 29/64

PART

61603

PRO SHOOTER TAP INDEX

- TEN OF THE MOST POPULAR SIZES OF OUR CIC 200™ PRO SHOOTER TAPS IN A HANDY STEEL INDEX
- IDEAL FOR ALL MAINTENANCE PERSONNEL.
- STURDY STEEL CASE PROVIDES PROTECTION FOR LONGER LIFE AND PROPER ORGANIZATION.
- 10 PIECE INDEX
3-3/8" x 4-5/8" x 1-1/8"



SHOOTER TAP AND DRILL ORGANIZER

- THIRTY-TWO PIECE SET (15 TAPS AND 17 DRILLS) IN A STURDY STEEL 3-DRAWER ORGANIZER
- STORES HUNDREDS OF TAPS AND DRILLS
- 26 COMPARTMENTS
- 14-1/2" x 7-1/4" x 7-1/4"



CONTENTS

PRO SHOOTER TAP INDEX
 10 TAPS – 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13 and 1/2-20

PART

61602

CONTENTS

SHOOTER TAP ORGANIZER
 TAPS – 2 ea. of 6-32, 8-32, 10-24, 10-32 & 5/16-18
 3 ea. of 1/4-20
 1 ea. of 3/8-16 and 1/2-13
 DRILLS – 3 ea. of #35, #29, #23 and #20
 2 ea. of #5
 1 ea. of G, O and 7/16

PART

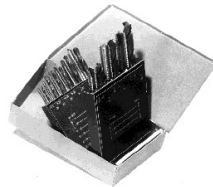
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HIGH SPEED SHOOTER TAP AND DRILL INDEXES

The perfect match – CIC 200™ High Speed Shooter Taps and CIC 200™ Quad Point Drills.

- IDEAL FOR ALL MAINTENANCE PERSONNEL
- STURDY STEEL CASE PROVIDES PROTECTION FOR LONGER LIFE AND PROPER ORGANIZATION
- 18 PIECE INDEX 6-32 TO 1/2-13



- IDEAL FOR ALL MAINTENANCE PERSONNEL
- STURDY STEEL CASE PROVIDES PROTECTION FOR LONGER LIFE AND PROPER ORGANIZATION
- 12 PIECE INDEX 4-40 TO 12-24
- AVAILABLE IN CIC 200™ OR PRO SHOOTER CONFIGURATIONS



DESCRIPTION

PART

HIGH SPEED SHOOTER TAP AND DRILL INDEX 9 TAPS – 6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14 and 1/2-13 9 DRILLS – 35, 29, 23, 20, 5, G, O, 3/8 and 7/16	61601
PRO SHOOTER TAP AND DRILL INDEX 9 TAPS – 6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14 and 1/2-13 9 DRILLS – 35, 29, 24, 20, 6, H, P, 3/8 and 7/16	61621

DESCRIPTION

PART

CIC 200™ SHOOTER TAP AND DRILL INDEX	61688
PRO SHOOTER TAP AND DRILL INDEX	61687
CONTENTS: 6 TAPS – 4-40, 6-32, 8-32, 10-24, 10-32 and 12-24 6 DRILLS – 43, 36, 29, 25, 21 and 16	

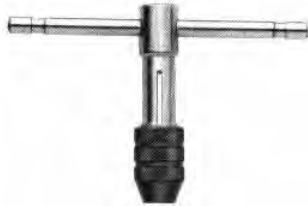
NOTE: See page 24.14 for recommended drill sizes.

TAP AND DIE TOOLS

TAP WRENCHES AND DIE STOCKS

Tap wrenches and die stocks securely hold taps and dies for precise tapping and thread forming.

"T" TAP WRENCHES



SLIDING HANDLE WITH SPRING TENSION

SIZE	PART
0 to 1/4	A 8019
1/4 to 1/2	A 8021

TAP WRENCHES



SIZE	PART
0 to 1/2	A 8022
3/8 to 1	A 8024

RATCHETING TAP WRENCHES



- REVERSIBLE RATCHET TAP WRENCH MAKES ALL TAPPING PROJECTS EASY
- POSITIVE GRIP KNURLED NUT FOR EASY TIGHTENING
- SPRING TENSION SLIDING HANDLE IDEAL FOR TIGHT PLACES AND EXTRA LEVERAGE

SIZE	PART
0 to 1/4	A 8013
1/4 to 1/2	A 8018

DIE STOCKS

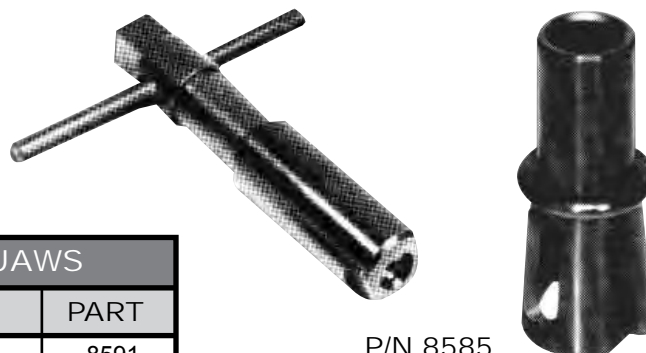


POLISHED HANDLES WITH NON-SLIP GRIP

SIZE	DIE	PART
1	ROUND	A 8015
1-1/2	ROUND	A 8016
2	ROUND	A 8017
5/8"	HEX	A 8014
1	HEX	A 8092

TAP AND REAM ALIGNER (FITS 0-80 TO 1/2" TAPS)

Eliminates up to 85% of unnecessary tap breakage. Fits taps from 0-80 to 1/2".



EXTRA JAWS	
SIZE	PART
A (0-80 / 1/4")	8591
B (1/4" to 1/2")	8593

P/N 8585

FEATURES:

- PERFECT ALIGNMENT — GUIDE AUTOMATICALLY SQUARES UP THE TAP OR REAMER WITH THE SURFACE ON WHICH IT IS SET.
- EASY TO CHANGE — A SLIGHT TURN OF THE T-HANDLE IS SUFFICIENT TO LOOSEN THE TAP OR TO CLAMP IT.
- T-HANDLE — SLIDING ARM PROVIDES EXTRA LEVERAGE FOR LARGE TAPS AND REAMERS.
- ACCURATELY MADE.
- GUIDE — BASE OF GUIDE HAS TWO 120° VEES WHICH ALSO ACCEPTS ROUND PARTS.

TAP DRILL CHART – DRILL SIZES

DESIGNED FOR MAINTENANCE

The following table shows the Theoretical Percentage of Thread obtained from stock sizes of drills. A 60% thread is adequate for most tapped hole requirements. Greater percentages of thread do not materially increase the strength of the tapped hole, except in the case of very short thread engagement or soft materials. When increasing the percentage of thread, you substantially increase the force required to drive the tap with very little increase in holding power.



TAP	DRILL	DEC. EQUIV.	% OF THREAD	TAP	DRILL	DEC. EQUIV.	% OF THREAD
2-56	50	.0700	62	3/8-16	5/16	.3125	72
4-40	43	.0890	65	3/8-16	O	.3160	68
5-40	38	.1015	65	3/8-24	Q	.3320	71
6-32	36	.1065	71	3/8-24	R	.3390	58
6-32	7/64	.1094	64	7/16-14	U	.3680	70
6-32	35	.1100	63	7/16-14	3/8	.3750	62
8-32	29	.1360	62	7/16-20	25/64	.3906	65
10-24	25	.1495	69	1/2-13	27/64	.4219	73
10-24	24	.1520	64	1/2-13	7/16	.4375	58
10-24	23	.1540	61	1/2-20	29/64	.4531	65
10-32	21	.1590	68	9/16-12	31/64	.4844	68
10-32	20	.1610	64	9/16-18	33/64	.5156	58
12-24	16	.1770	66	5/8-11	17/32	.5313	75
12-24	15	.1800	60	5/8-11	35/64	.5469	62
1/4-20	7	.2010	70	5/8-18	37/64	.5781	58
1/4-20	6	.2040	65	3/4-10	21/32	.6563	68
1/4-20	5	.2055	63	3/4-16	11/16	.6875	71
1/4-28	3	.2130	72	7/8-9	49/64	.7656	72
1/4-28	7/32	.2188	59	7/8-9	25/32	.7812	61
5/16-18	F	.2570	72	7/8-14	13/16	.8125	62
5/16-18	G	.2610	66	1-8	7/8	.8750	73
5/16-24	I	.2720	67	1-8	57/64	.8906	64
5/16-24	J	.2770	58	1-14	15/16	.9375	61

METRIC HEX SHANK COMBO DRILL & TAPS

CIC 200™ METRIC HEX SHANK COMBINATION DRILL AND TAPS



- Create holes and tap in a single operation. No center drilling or punching.
- Quick change hex shank makes it ideal for use in portable power drills.
- Its taper neck design significantly reduces drill & tap breakage.
- A 135° split point permits holes and threads to be cut at high speeds.
- Durability provided by high molybdenum content high speed steel.
- More holes per drill than ordinary twist drills, especially in cordless power tools.
- Functional black & gold surface treatment holds lubricant for smoother drilling.

Applications:

- Construction
- Electrical
- Maintenance
- Industrial
- Automotive
- Farm Implement Equipment

6 PIECE METRIC SET

Contains these tap diameters:

- M4x.7
- M5x.8
- M6x1
- M8x1.25
- M10x1.5
- M12x1.75

Packed in a rugged plastic case.



P/N 8847

SIZE / TPI	HEX SHANK	OVERALL LENGTH	DRILL DIA.	DRILL LENGTH	THREAD LENGTH		PART
M4x.7	1/4"	61 mm	3.42 mm	8 mm	13 mm	A	12914
M5x.8	1/4"	65 mm	4.34 mm	10 mm	15 mm	A	12915
M6x1	1/4"	69 mm	5.17 mm	12 mm	17 mm	A	12916
M8x1.25	1/4"	78 mm	6.96 mm	16 mm	22 mm	A	12917
M10x1.5	11/32"	84 mm	8.75 mm	20 mm	24 mm	A	12918
M12x1.75	11/32"	91 mm	10.54 mm	24 mm	27 mm	A	12919

METRIC PRO COMBO DRILL & TAPS

METRIC PRO COMBO DRILL AND TAPS



APPLICATIONS:

Construction, Electrical, Maintenance, Industrial, Automotive and Farm Implement Equipment

MATERIALS:

Aluminum, Brass, Bronze, Cast Iron, Steel and Zinc

- TWO OPERATIONS IN ONE SETUP
- PERFORM AT HIGH RPM IN ANY MATERIAL WHERE HIGH SPEED STEEL CUTTING TOOLS ARE USED
- 118° DRILL PILOT IS SPECIFICALLY DESIGNED AND MANUFACTURED TO CLOSE TOLERANCES TO PRODUCE THE PROPER SIZE HOLE FOR TAPPING
- DESIGNED TO OPERATE AT SPEEDS BETWEEN THE NORMAL TAPPING SPEED AND DRILLING SPEED FOR THE SPECIFIED MATERIALS
- CLASS 2B FIT & H3 TOLERANCES
- **NOTE:** TO ACCOMMODATE TAPPING OPERATION, THE MACHINE MUST BE CAPABLE OF REVERSING TO WITHDRAW THE TAP

SIZE / TPI	NO. OF FLUTES	DRILL DIA.	OVERALL LENGTH	DRILL LENGTH	THREAD LENGTH		PART
4 x 0.7	2	3.3 mm	64.0 mm	8.0 mm	12.0 mm	A	12930
5 x 0.8	2	4.2 mm	68.0 mm	10.0 mm	15.0 mm	A	12931
6 x 1.0	2	5.0 mm	82.0 mm	12.0 mm	18.0 mm	A	12932
8 x 1.25	2	6.8 mm	94.0 mm	16.0 mm	21.0 mm	A	12933
10 x 1.5	2	8.5 mm	105.0 mm	20.0 mm	22.0 mm	A	12934
12 x 1.75	2	10.2 mm	113.0 mm	24.0 mm	29.0 mm	A	12935
14 x 2.0	2	12.0 mm	123.0 mm	28.0 mm	30.0 mm	A	12936
16 x 2.0	2	14.0 mm	134.0 mm	32.0 mm	32.0 mm	A	12937



METRIC PRO COMBO DRILL AND TAP POUCH ASSORTMENT

Contains 5 Drills/Taps – 4mm x 0.7mm, 5mm x 0.8mm, 6mm x 1.0mm, 8mm x 1.25mm and 10mm x 1.5mm

A 61663

CIC 200™ METRIC HI-SPEED STEEL TAPS

METRIC PRO "SHOOTER" TAPS

Metric Pro "Shooter" Taps provide the ultimate versatility, precision and durability for tapping mild steel, stainless steel, medium carbon steel and aluminum. Designed to run at higher tapping speeds up to 60 fpm for aluminum and 50 fpm for steel.

- CONSTRUCTED OF CHROMIUM, VANADIUM, MOLYBDENUM AND COBALT ALLOYS
- CUTS MATERIALS UP TO 55 ROCKWELL "C"
- SUPERIOR DESIGN ACTUALLY "SHOOTS" CHIPS OUT AHEAD OF THE TAP

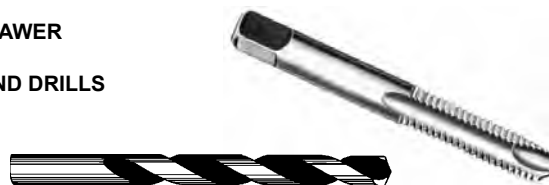


SIZE	# FLUTES	PART	SIZE	# FLUTES	PART	SIZE	# FLUTES	PART
M3 x 0.5	2	A 12941	M6 x 1.0	2	A 12944	M10 x 1.50	3	A 12946
M4 x 0.7	2	A 12942	M8 x 1.25	2	A 12945	M12 x 1.75	3	A 12947
M5 x 0.8	2	A 12943	-	-	-	-	-	-

METRIC SHOOTER TAP AND DRILL ORGANIZER



- 20-PIECE SET IN A STURDY 3-DRAWER ORGANIZER
- STORES HUNDREDS OF TAPS AND DRILLS
- 28 COMPARTMENTS
- 14-1/2" x 7-1/4" x 7-1/4"



CONTENTS

SHOOTER TAPS

2.5mm x 0.45, 3mm x 0.5, 3.5mm x 0.60, 4mm x 0.7, 5mm x 0.8, 6mm x 1.0, 7 x 1.00, 8mm x 1.25, 10mm x 1.5, & 12mm x 1.75

METRIC DRILLS

2.05mm, 2.5mm, 2.9mm, 3.3mm, 4.2mm, 5.0mm, 6.0mm, 6.7mm, 8.5mm and 10.2mm

ORGANIZER ALSO HAS COMPARTMENTS FOR THE FOLLOWING ADDITIONAL SIZES:

SHOOTER TAPS

9 x 1.25, 11 x 1.50, 16mm x 2 and 20mm x 2.5

METRIC DRILLS

8.0mm, 9.5mm, 14.0mm & 17.5mm

PART

7788

CIC 200™ METRIC HI-SPEED STEEL TAPS

SHOOTER AND BOTTOMING TAPS

SHOOTER



SIZE mm	FLUTES	TAP PART	DRILL SIZE	DRILL PART
2.5mm x 0.45	2	A 69001	2.05mm (#46)	J 68521 (10046)
3mm x 0.50	2	A 69002	2.5mm (#38)	J 68525 (10038)
3.5mm x 0.60	2	A 69056	2.90mm (#32)	J 68529 (10032)
4mm x 0.70	2	A 69003	3.3mm (#29)	J 68533 (10029)
4mm x 0.75	2	A 69050	3.3mm (#30)	J 68533 (10030)
5mm x 0.80	2	A 69004	4.2mm (#18)	J 68542 (10018)
5mm x 0.90	2	A 69051	4.0mm (#20)	J 68540 (10020)
6mm x 1.00	2	A 69005	5.0mm (#7)	F 68550 (10007)
7mm x 1.00	2	A 69052	6.0mm (B)	C 68560 (10202)
8mm x 1.00	2	A 69006	7.0mm (J)	C 68570 (10210)
8mm x 1.25	2	A 69007	6.8mm (I)	C 68568 (10209)
9mm x 1.00	3	A 69053	8.0mm (5/16)	F 68580 (91020)
9mm x 1.25	3	A 69054	8.0mm (5/16)	F 68580 (91020)
10mm x 1.25	3	A 69008	8.75mm (S)	C — (10219)
10mm x 1.50	3	A 69009	8.5mm (R)	C 68585 (10218)
11mm x 1.50	3	A 69055	9.5mm (3/8)	D 68595 (91024)
12mm x 1.50	3	A 69010	10.5mm (Z)	C 68605 (10226)
12mm x 1.75	3	A 69011	10.5mm (13/32)	D 68605 (91026)
16mm x 2.00	3	A 69015	14.0mm (9/16)	A — (91238)
20mm x 2.50	3	A 69019	17.5mm (45/64)	A — (91247)

BOTTOMING



SIZE mm	FLUTES	TAP PART	DRILL SIZE	DRILL PART
3mm x 0.50	3	A 69028	2.5mm or #38	J 10038
4mm x 0.70	4	A 69029	3.3mm or #29	J 10029
5mm x 0.80	4	A 69030	4.2mm or #18	J 10018
6mm x 1.00	4	A 69031	5.0mm or #7	F 10007
8mm x 1.25	4	A 69033	6.8mm or I	C 68570
10mm x 1.50	4	A 69035	8.5mm or "R"	C 10218
12mm x 1.75	4	A 69037	10.5mm or 13/32	D 68605
14mm x 1.25	4	A 69039	31/64	—
16mm x 2.00	4	A 69041	9/16	A 91238
18mm x 1.50*	4	A 69043	21/32	—
20mm x 2.50	4	A 69045	45/64	A 91247

*For spark plugs.

PIPE TAP

SIZE	DRILL	PART
1/8 - 28 BSP	8.8mm or 11/32	A 810

METRIC TAPS AND DRILLS

CIC 200™ HIGH SPEED SHOOTER TAP & QUAD POINT DRILL INDEX

The most popular sizes of our CIC 200™ Metric Shooter Taps and Quad Point Drills organized in a sturdy steel case.

18 PIECE INDEX

- IDEAL FOR ALL MAINTENANCE PERSONNEL
- 18-PIECE INDEX 2.5mm - 12mm
- STURDY STEEL CASE PROVIDES FOR LONGER LIFE AND PROPER ORGANIZATION



CONTENTS	PART
9 TAPS — 2.5mm x .45, 3mm x .5, 3.5mm x .6, 4mm x .7, 5mm x .8, 6mm x 1, 8mm x 1.25, 10mm x 1.5 and 12mm x 1.75	A 61684
9 DRILLS — 2.05mm, 2.5mm, 2.9mm, 3.3mm, 4.2mm, 5.0mm, 6.7mm, 8.5mm and 10.2mm	

METRIC QUICK-CUT DIE AND HANDLE

METRIC ROUND DIES

- READY TO USE HSS DIE AND HANDLE FOR QUICK REPAIR AND THREADING
- BUILT-IN GUIDE ASSURES ACCURATE STARTING AND NO CROSS THREADING
- CONVENIENT – ONE TOOL DOES IT ALL
- ERGONOMICALLY DESIGNED HANDLE IS COMFORTABLE TO USE
- OVERALL LENGTH IS 8-3/4" WIDE WITH THE EXCEPTION OF 3MM x 0.50, 4MM x 0.70 AND 5MM x 0.80 WHICH ARE 7" WIDE



METRIC SCREW SIZES

SIZE	1" HEX	SIZE	1" HEX
3mm x 0.50	A 30414	8mm x 1.25	A 30418
4mm x 0.70	A 30415	10mm x 1.50	A 30419
5mm x 0.80	A 30416	12mm x 1.75	A 30420
6mm x 1.00	A 30417	-	-

METRIC HIGH CARBON STEEL DIES

METRIC HEX DIES — SOLID TYPE

Heat-treated to resist breakage and thread wear. Precise threads are accurately formed for longer tool life. Right-hand threads. Marked with starting side and size.

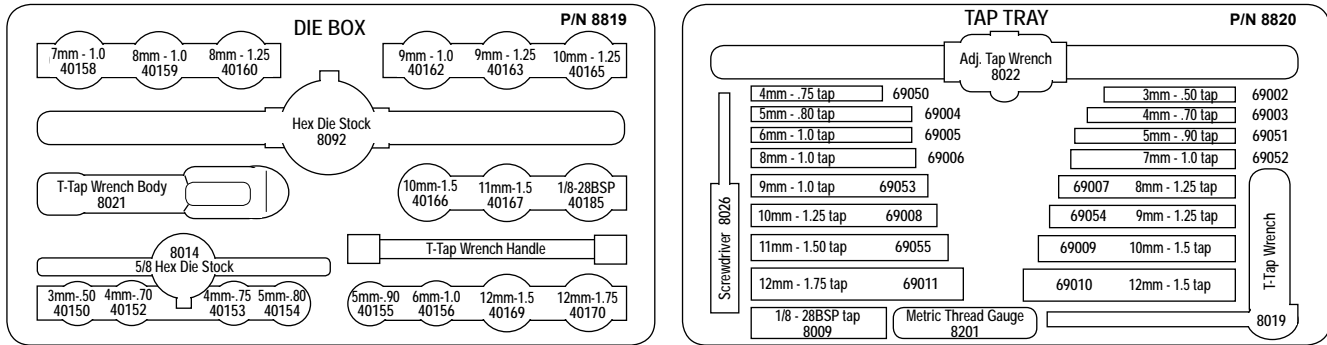


METRIC SCREW SIZES				
SIZE		5/8" HEX	SIZE	1" HEX
3mm x 0.50	A	40150	7mm x 1.00	A 40158
4mm x 0.70	A	40152	8mm x 1.00	A 40159
4mm x 0.75	A	40153	8mm x 1.25	A 40160
5mm x 0.80	A	40154	9mm x 1.00	A 40162
5mm x 0.90	A	40155	9mm x 1.25	A 40163
6mm x 1.00	A	40156	10mm x 1.25	A 40165
—		—	10mm x 1.50	A 40166
—		—	11mm x 1.50	A 40167
—		—	12mm x 1.50	A 40169
—		—	12mm x 1.75	A 40170
PIPE DIES				
SIZE		1" HEX		
1/8 - 28 BSP		A	40185	

CIC 200™ METRIC SHOOTER TAP & DIE SET

METRIC SHOOTER TAP AND HEX DIE SET

Forty-one piece set (17 taps and 17 dies) combines the most popular sizes of CIC 200™ Metric Taps and Dies in a sturdy polyethylene case.



METRIC SHOOTER TAP AND HEX DIE SET

PART

CONTENTS:

TAPS: 3mm-.50, 4mm-.70, 4mm-.75, 5mm-.80, 5mm-.90, 6mm-1.0, 7mm-1.0, 8mm-1.0, 8mm-1.25, 9mm-1.0, 9mm-1.25, 10mm-1.25, 10mm-1.50, 11mm-1.50, 12mm-1.50 and 12mm-1.75

DIES: 3mm-.50, 4mm-.70, 4mm-.75, 5mm-.80, 5mm-.90, 6mm-1.0, 7mm-1.0, 8mm-1.0, 8mm-1.25, 9mm-1.0, 9mm-1.25, 10mm-1.25, 10mm-1.50, 11mm-1.50, 12mm-1.50 and 12mm-1.75

1/8-28 Pipe Tap and Hex Die, 1" and 5/8" Hex Die Stocks, 0-1/4 and 1/4 - 1/2 T-Taps, 0-1/2 Adjustable Tap Wrench, Metric Screw Pitch Gage, 1 Screwdriver

A 8821

END MILLS



- **Single and Double End**
- **Standard and Long Length**
- **Miniature, Hi-Cob Roughing and Ball End Designs**

CHROMATE END MILLS PROVIDE PRECISION CUTTING AND DURABILITY FOR ALL MILLING OPERATIONS. Manufactured from the finest alloys and heat treated for strength and long life, Chromate End Mills will satisfy all your slotting, keying, pocketing and other milling operations.



CHROMATE INDUSTRIAL CORP.

EXCEPTIONAL PRODUCTS, SERVICE AND INNOVATIVE SOLUTIONS

CIC 200™ END MILLS

SINGLE END — STANDARD LENGTH

TYPE 520 - TWO FLUTE

- CENTER CUTTING.
- STANDARD LENGTH, TWO FLUTE, MEDIUM HELIX TOOLS.
- RECOMMENDED FOR SLOTTING OPERATIONS, POCKETS, KEYWAYS AND OTHER GENERAL PURPOSE WORK, INCLUDING PLUNGE MILLING.



TYPE 540 - MULTIPLE FLUTE

- STANDARD LENGTH, MULTIPLE FLUTE, MEDIUM HELIX TOOLS.
- RECOMMENDED FOR FINISHING OPERATIONS FOLLOWING HEAVY ROUGHING CUTS.





MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART	MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	PART
1/8	3/8	3/8	2-5/16	A 62001	1/8	3/8	3/8	2-5/16	4	A 62081
3/16	3/8	7/16	2-5/16	A 62002	3/16	3/8	1/2	2-3/8	4	A 62082
1/4	3/8	1/2	2-5/16	A 62003	1/4	3/8	5/8	2-7/16	4	A 62083
5/16	3/8	9/16	2-5/16	A 62004	5/16	3/8	3/4	2-1/2	4	A 62084
3/8	3/8	9/16	2-5/16	A 62005	3/8	3/8	3/4	2-1/2	4	A 62085
7/16	3/8	13/16	2-1/2	A 62006	7/16	3/8	1	2-11/16	4	A 62086
1/2	3/8	13/16	2-1/2	A 62007	1/2	3/8	1	2-11/16	4	A 62087
1/2	1/2	1	3	A 62008	1/2	1/2	1-1/4	3-1/4	4	A 62088
9/16	1/2	1-1/8	3-1/8	A 62009	9/16	1/2	1-3/8	3-3/8	4	A 62089
5/8	1/2	1-1/8	3-1/8	A 62010	5/8	1/2	1-3/8	3-3/8	4	A 62090
11/16	1/2	1-5/16	3-5/16	A 62011	11/16	1/2	1-5/8	3-5/8	4	A 62091
3/4	1/2	1-5/16	3-5/16	A 62012	3/4	1/2	1-5/8	3-5/8	4	A 62092
5/8	5/8	1-5/16	3-7/16	A 62013	5/8	5/8	1-5/8	3-3/4	4	A 62093
11/16	5/8	1-5/16	3-7/16	A 62014	11/16	5/8	1-5/8	3-3/4	4	A 62094
3/4	5/8	1-5/16	3-7/16	A 62015	3/4	5/8	1-5/8	3-3/4	4	A 62095
13/16	5/8	1-1/2	3-5/8	A 62016	13/16	5/8	1-7/8	4	6	A 62096
7/8	5/8	1-1/2	3-5/8	A 62017	7/8	5/8	1-7/8	4	6	A 62097
15/16	5/8	1-1/2	3-5/8	A 62018	15/16	5/8	1-7/8	4	6	A 62098
1	5/8	1-1/2	3-5/8	A 62019	1	5/8	1-7/8	4	6	A 62099
3/4	3/4	1-5/16	3-9/16	A 62020	3/4	3/4	1-5/8	3-7/8	4	A 62100
7/8	3/4	1-1/2	3-3/4	A 62021	7/8	3/4	1-7/8	4-1/8	4	A 62101
1	3/4	1-1/2	3-3/4	A 62022	1	3/4	1-7/8	4-1/8	4	A 62102
7/8	7/8	1-1/2	3-3/4	A 62023	7/8	7/8	1-7/8	4-1/8	4	A 62103
1	7/8	1-1/2	3-3/4	A 62024	1	7/8	1-7/8	4-1/8	4	A 62104
1-1/8	7/8	1-5/8	3-7/8	A 62025	1-1/8	7/8	2	4-1/4	6	A 62105
1-1/4	7/8	1-5/8	3-7/8	A 62026	1-1/4	7/8	2	4-1/4	6	A 62106
1	1	1-5/8	4-1/8	A 62027	1	1	2	4-1/2	4	A 62107
1-1/8	1	1-5/8	4-1/8	A 62028	1-1/8	1	2	4-1/2	6	A 62108
1-1/4	1	1-5/8	4-1/8	A 62029	1-1/4	1	2	4-1/2	6	A 62109
1-3/8	1	1-5/8	4-1/8	A 62030	1-3/8	1	2	4-1/2	6	A 62110
1-1/2	1	1-5/8	4-1/8	A 62031	1-1/2	1	2	4-1/2	6	A 62111
1-1/4	1-1/4	1-5/8	4-1/8	A 62032	1-1/4	1-1/4	2	4-1/2	6	A 62112
1-1/2	1-1/4	1-5/8	4-1/8	A 62033	1-1/2	1-1/4	2	4-1/2	6	A 62113
1-3/4	1-1/4	1-5/8	4-1/8	A 62034	1-3/4	1-1/4	2	4-1/2	6	A 62114
2	1-1/4	1-5/8	4-1/8	A 62035	2	1-1/4	2	4-1/2	8	A 62115



NOTE: Due to special processing allow 2-3 weeks for delivery

CIC 200™ END MILLS (Cont'd.)

SINGLE END — LONG LENGTH

TYPE 525 - TWO FLUTE					TYPE 546 - FOUR FLUTE					
<ul style="list-style-type: none"> LONG LENGTH, (NON-EXTENSION TYPE), TWO FLUTE, MEDIUM HELIX TOOLS. RECOMMENDED FOR SLOTTING OPERATIONS, POCKETS, KEYWAYS AND OTHER GENERAL PURPOSE WORK, INCLUDING PLUNGE MILLING. LONGER FLUTE LENGTH ALLOWS FOR DEEPER SLOTS AND POCKETS. CENTER CUTTING. 					<ul style="list-style-type: none"> LONG LENGTH, FOUR FLUTE, CENTER CUTTING. RECOMMENDED FOR GENERAL PURPOSE WORK. LONGER FLUTE PROVIDES FOR DEEPER CAVITY MILLING. 					
MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART	MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	PART
3/8	3/8	1-1/4	3-1/4	A 62041	1/4	3/8	1-1/4	3-1/16	4	A 62061
1/2	1/2	2	4	A 62042	5/16	3/8	1-3/8	3-1/8	4	A 62062
5/8	5/8	2	4-1/8	A 62043	3/8	3/8	1-1/2	3-1/4	4	A 62063
3/4	3/4	2-1/4	4-1/2	A 62044	1/2	1/2	2	4	4	A 62064
7/8	7/8	2-1/4	4-3/4	A 62045	5/8	5/8	2-1/2	4-5/8	4	A 62065
1	1	3	5-1/2	A 62046	3/4	3/4	3	5-1/4	4	A 62066
1-1/8	1	3	5-1/2	A 62047	7/8	7/8	3-1/2	5-3/4	4	A 62067
1-1/4	1	3	5-1/2	A 62048	1	1	4	6-1/2	4	A 62068
1-1/4	1-1/4	3	5-1/2	A 62049	1-1/4	1-1/4	4	6-1/2	4	A 62069
1-1/2	1-1/4	3	5-1/2	A 62050	-	-	-	-	-	-
1-3/4	1-1/4	3	5-1/2	A 62051	-	-	-	-	-	-
2	1-1/4	3	5-1/2	A 62052	-	-	-	-	-	-

SINGLE END

TYPE 541 - FOUR FLUTE STANDARD					TYPE 545 - MULTIPLE FLUTE LONG					
<ul style="list-style-type: none"> STANDARD LENGTH, FOUR FLUTE, CENTER CUTTING. RECOMMENDED FOR GENERAL PURPOSE OPERATIONS. 					<ul style="list-style-type: none"> LONG LENGTH, MULTIPLE FLUTE, MEDIUM HELIX TOOLS. RECOMMENDED FOR FINISH MILLING OPERATIONS. DESIGNED FOR WORK ON WIDE SURFACES AND DEEP SLOTS. 					
MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART	MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	PART
1/8	3/8	3/8	2-5/16	A 62121	1/4	3/8	1-1/4	3-1/16	4	A 62141
3/16	3/8	1/2	2-3/8	A 62122	5/16	3/8	1-3/8	3-1/8	4	A 62142
1/4	3/8	5/8	2-7/16	A 62123	3/8	3/8	1-1/2	3-1/4	4	A 62143
5/16	3/8	3/4	2-1/2	A 62124	7/16	1/2	1-3/4	3-3/4	4	A 62144
3/8	3/8	3/4	2-1/2	A 62125	1/2	1/2	2	4	4	A 62145
1/2	1/2	1-1/4	3-1/4	A 62126	5/8	5/8	2-1/2	4-5/8	4	A 62146
5/8	5/8	1-5/8	3-3/4	A 62127	3/4	3/4	3	5-1/4	4	A 62147
11/16	5/8	1-5/8	3-3/4	A 62128	7/8	7/8	3-1/2	5-3/4	4	A 62148
3/4	3/4	1-5/8	3-7/8	A 62129	1	1	4	6-1/2	4	A 62149
7/8	7/8	1-7/8	4-1/8	A 62130	1-1/8	1	4	6-1/2	6	A 62150
1	1	2	4-1/2	A 62131	1-1/4	1	4	6-1/2	6	A 62151
1-1/8	1	2	4-1/2	A 62132	1-1/2	1	4	6-1/2	6	A 62152
1-1/4	1-1/4	2	4-1/2	A 62133	1-1/4	1-1/4	4	6-1/2	6	A 62153
1-1/2	1-1/4	2	4-1/2	A 62134	1-1/2	1-1/4	4	6-1/2	6	A 62154
-	-	-	-	-	1-3/4	1-1/4	4	6-1/2	6	A 62155
-	-	-	-	-	2	1-1/4	4	6-1/2	8	A 62156

NOTE: Due to special processing allow 2-3 weeks for delivery.

CIC 200™ END MILLS (Cont'd.)

DOUBLE END REGULAR LENGTH

TYPE 522 - TWO FLUTE

- DOUBLE-ENDED VERSION OF SERIES 520 SINGLE-END TOOLS.
- RECOMMENDED FOR SLOTTING, KEYING AND GENERAL PURPOSE OPERATIONS.
- CENTER CUTTING.



TYPE 542 - FOUR FLUTE

- DOUBLE-ENDED VERSION OF SERIES 540 SINGLE-END TOOLS.
- RECOMMENDED FOR FINISHING OPERATIONS FOLLOWING ROUGH CUTS.



MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART	MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART
1/8	3/8	3/8	3-1/16	A 62200	1/8	3/8	3/8	3-1/16	A 62231
5-32	3/8	7/16	3-1/8	A 62201	5/32	3/8	7/16	3-1/8	A 62232
3/16	3/8	7/16	3-1/8	A 62202	3/16	3/8	1/2	3-1/4	A 62233
7/32	3/8	1/2	3-1/8	A 62203	7/32	3/8	9/16	3-1/4	A 62234
1/4	3/8	1/2	3-1/8	A 62204	1/4	3/8	5/8	3-3/8	A 62235
9/32	3/8	9/16	3-1/8	A 62205	9/32	3/8	11/16	3-3/8	A 62236
5/16	3/8	9/16	3-1/8	A 62206	5/16	3/8	3/4	3-1/2	A 62237
11/32	3/8	9/16	3-1/8	A 62207	11/32	3/8	3/4	3-1/2	A 62238
3/8	3/8	9/16	3-1/8	A 62208	3/8	3/8	3/4	3-1/2	A 62239
13/32	1/2	13/16	3-3/4	A 62209	13/32	1/2	1	4-1/8	A 62240
7/16	1/2	13/16	3-3/4	A 62210	7/16	1/2	1	4-1/8	A 62241
15/32	1/2	13/16	3-3/4	A 62211	15/32	1/2	1	4-1/8	A 62242
1/2	1/2	13/16	3-3/4	A 62212	1/2	1/2	1	4-1/8	A 62243
9/16	5/8	1-1/8	4-1/2	A 62213	9/16	5/8	1-3/8	5	A 62244
5/8	5/8	1-1/8	4-1/2	A 62214	5/8	5/8	1-3/8	5	A 62245
11/16	3/4	1-5/16	5	A 62215	11/16	3/4	1-5/8	5-5/8	A 62246
3/4	3/4	1-5/16	5	A 62216	3/4	3/4	1-5/8	5-5/8	A 62247
7/8	7/8	1-9/16	5-1/2	A 62217	13/16	7/8	1-7/8	6-1/8	A 62248
1	1	1-5/8	5-7/8	A 62218	7/8	7/8	1-7/8	6-1/8	A 62249
					1	1	1-7/8	6-3/8	A 62250

TYPE 543 - FOUR FLUTE

- CENTER CUTTING.
- DOUBLE-ENDED VERSION OF SERIES 541 SINGLE-END TOOLS.
- RECOMMENDED FOR SLABBING, SHALLOW POCKETING, TRACER MILLING, DIE SINKING AS WELL AS GENERAL PURPOSE OPERATIONS.



MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART
1/8	3/8	3/8	3-1/16	A 62261
3/16	3/8	1/2	3-1/4	A 62262
1/4	3/8	5/8	3-3/8	A 62263
5/16	3/8	3/4	3-1/2	A 62264
3/8	3/8	3/4	3-1/2	A 62265
1/2	1/2	1	4-1/8	A 62266
5/8	5/8	1-3/8	5	A 62267
3/4	3/4	1-5/8	5-5/8	A 62268
7/8	7/8	1-7/8	6-1/8	A 62269
1	1	1-7/8	6-3/8	A 62270

NOTE: Due to special processing allow 2-3 weeks for delivery.

CIC 200™ END MILLS (Cont'd.)

HI-COB ROUGHING

TYPE 490



- GENERAL PURPOSE
- RECOMMENDED FOR USE WHERE HEAVY ROUGHING CUTS ARE TO BE FOLLOWING WITH A FINISHING OPERATION.
- PROVIDE MAXIMUM METAL REMOVAL IN MINIMUM TIME.

MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	NO. OF FLUTES	PART
1/2	1/2	1-1/4	3-1/4	4	A 62161
1/2	1/2	2	4	4	A 62162
5/8	5/8	1-5/8	3-3/4	4	A 62163
5/8	5/8	2-1/2	4-5/8	4	A 62164
3/4	5/8	1-5/8	3-7/8	4	A 62165
3/4	5/8	3	5-1/4	4	A 62166
3/4	3/4	1-5/8	3-7/8	4	A 62167
3/4	3/4	3	5-1/4	4	A 62168
7/8	3/4	1-7/8	4-1/8	4	A 62169
7/8	3/4	3-1/2	5-3/4	4	A 62170
7/8	7/8	1-7/8	4-1/8	4	A 62171
7/8	7/8	3-1/2	5-3/4	4	A 62172
1	3/4	2	4-1/4	4	A 62173
1	1	2	4-1/2	4	A 62174
1	1	4	6-1/2	4	A 62175
1-1/8	1	2	4-1/2	4	A 62176
1-1/4	3/4	4	6-1/4	6	A 62177
1-1/4	1-1/4	2	4-1/2	6	A 62178
1-1/4	1-1/4	3	5-1/2	6	A 62179
1-1/4	1-1/4	4	6-1/2	6	A 62180
1-1/2	3/4	4	6-1/4	6	A 62181
1-1/2	1-1/4	2	4-1/2	6	A 62182
1-1/2	1-1/4	3	5-1/2	6	A 62183
1-1/2	1-1/4	4	6-1/2	6	A 62184
1-1/2	1-1/4	5	7-1/2	6	A 62185
1-3/4	1-1/4	4	6-1/2	6	A 62186
2	1-1/4	2	4-1/2	6 or 8	A 62187
2	1-1/4	4	6-1/2	6 or 8	A 62188
2	2	3	6-3/4	6 or 8	A 62189
2	2	4	7-3/4	6 or 8	A 62190
2	2	6	9-3/4	6 or 8	A 62191
2	2	8	11-3/4	6 or 8	A 62192

NOTE: Due to special processing allow 2-3 weeks for delivery.

CIC 200™ MINIATURE END MILLS

DOUBLE END - TWO FLUTE

TYPE 562 - STUB LENGTH

- TWO FLUTE WITH MEDIUM HIGH HELIX ANGLE.
- RECOMMENDED FOR USE AT HIGHER SPEEDS REQUIRED FOR SMALL DIAMETER END MILLS IN SLOTTING, ENGRAVING, POCKETING AND SIMILAR OPERATIONS.



TYPE 563 - STANDARD LENGTH

- TWO FLUTE WITH MEDIUM HIGH HELIX ANGLE.
- RECOMMENDED FOR USE AT HIGHER SPEEDS REQUIRED FOR SMALL DIAMETER END MILLS IN SLOTTING, ENGRAVING, POCKETING AND SIMILAR OPERATIONS.



MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART		MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART	
1/32	3/16	3/64	2	A	62281	1/32	3/16	3/32	2-1/4	A	62301
3/64	3/16	1/16	2	A	62282	3/64	3/16	9/64	2-1/4	A	62302
1/16	3/16	3/32	2	A	62283	1/16	3/16	3/16	2-1/4	A	62303
5/64	3/16	1/8	2	A	62284	5/64	3/16	15/64	2-1/4	A	62304
3/32	3/16	9/64	2	A	62285	3/32	3/16	9/32	2-1/4	A	62305
7/64	3/16	5/32	2	A	62286	7/64	3/16	21/64	2-1/4	A	62306
1/8	3/16	3/16	2	A	62287	1/8	3/16	3/8	2-1/4	A	62307
9/64	3/16	7/32	2	A	62288	9/64	3/16	13/32	2-1/4	A	62308
5/32	3/16	15/64	2	A	62289	5/32	3/16	7/16	2-1/4	A	62309
11/64	3/16	1/4	2	A	62290	11/64	3/16	1/2	2-1/4	A	62310
3/16	3/16	9/32	2	A	62291	3/16	3/16	1/2	2-1/4	A	62311

DOUBLE END - FOUR FLUTE

TYPE 566 - STUB LENGTH

- FOUR FLUTE WITH MEDIUM HIGH HELIX ANGLE.
- RECOMMENDED FOR USE AT HIGHER SPEEDS IN SLOTTING, ENGRAVING, POCKETING AND SIMILAR OPERATIONS.



TYPE 567 - STANDARD LENGTH

- FOUR FLUTE WITH MEDIUM HIGH HELIX ANGLE.
- RECOMMENDED FOR USE AT HIGHER SPEEDS IN SLOTTING, ENGRAVING, POCKETING AND SIMILAR OPERATIONS.







MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART		MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART	
1/16	3/16	3/32	2	A	62321	1/16	3/16	3/16	2-1/4	A	62331
3/32	3/16	9/64	2	A	62322	3/32	3/16	9/32	2-1/4	A	62332
1/8	3/16	3/16	2	A	62323	1/8	3/16	3/8	2-1/4	A	62333
5/32	3/16	15/64	2	A	62324	5/32	3/16	7/16	2-1/4	A	62334
3/16	3/16	9/32	2	A	62325	3/16	3/16	1/2	2-1/4	A	62335

NOTE: Due to special processing allow 2-3 weeks for delivery.

CIC 200™ BALL END MILLS

STANDARD AND LONG LENGTH

TYPE 521 - STANDARD LENGTH						TYPE 526 - LONG LENGTH						
<ul style="list-style-type: none"> REGULAR LENGTH, TWO FLUTE. RECOMMENDED FOR MILLING FILLETS AND BOTTOM SLOTS WITH A RADIUS AND FOR ROUNDING THE BOTTOM OF BLIND HOLES. EXCELLENT FOR TEMPLATE FOLLOWER APPLICATIONS. CENTER CUTTING. 						<ul style="list-style-type: none"> LONGER VERSION OF SERIES 521, TWO FLUTE. RECOMMENDED FOR SIMILAR OPERATIONS AS THE SERIES 521, ALLOWING FOR WORKING IN DEEPER CAVITIES AND POCKETS. 						
MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART		MILL DIA.	SHANK DIA.	LENGTH SHAFT	LENGTH OF CUT	OVERALL LENGTH	PART	
1/8	3/8	3/8	2-5/16	A	62341	1/8	3/8	13/16	3/8	2-3/8	A	62371
3/16	3/8	1/2	2-3/8	A	62342	3/16	3/8	1-1/8	1/2	2-11/16	A	62372
1/4	3/8	5/8	2-7/16	A	62343	1/4	3/8	1-1/2	5/8	3-1/16	A	62373
5/16	3/8	3/4	2-1/2	A	62344	5/16	3/8	1-3/4	3/4	3-5/16	A	62374
3/8	3/8	3/4	2-1/2	A	62345	3/8	3/8	1-3/4	3/4	3-5/16	A	62375
7/16	1/2	1	3	A	62346	7/16	1/2	1-7/8	1	3-11/16	A	62376
1/2	1/2	1	3	A	62347	1/2	1/2	2-1/4	1	4	A	62377
9/16	1/2	1-1/8	3-1/8	A	62348	5/8	5/8	2-3/4	1-3/8	4-5/8	A	62378
5/8	1/2	1-1/8	3-1/8	A	62349	3/4	3/4	3-3/8	1-5/8	5-3/8	A	62379
3/4	1/2	1-5/16	3-5/16	A	62350	1	1	5	2-1/2	7-1/4	A	62380
5/8	5/8	1-3/8	3-1/2	A	62351	-	-	-	-	-	-	-
3/4	3/4	1-5/8	3-7/8	A	62352	-	-	-	-	-	-	-
7/8	3/4	1-7/8	4-1/8	A	62353	-	-	-	-	-	-	-
7/8	7/8	2	4-1/4	A	62354	-	-	-	-	-	-	-
1	3/4	2-1/4	4-1/2	A	62355	-	-	-	-	-	-	-
1	1	2-1/4	4-3/4	A	62356	-	-	-	-	-	-	-
1-1/8	1	2-1/4	4-3/4	A	62357	-	-	-	-	-	-	-
1-1/4	1-1/4	2-1/2	5	A	62358	-	-	-	-	-	-	-
1-1/2	1-1/4	2-1/2	5	A	62359	-	-	-	-	-	-	-

TYPE 544 - STANDARD LENGTH						TYPE 523 - STANDARD LENGTH					
<ul style="list-style-type: none"> REGULAR LENGTH, FOUR FLUTE, CENTER CUTTING. RECOMMENDED FOR TRACER MILLING, DIE SINKING, FILLET MILLING AND SIMILAR OPERATIONS WHERE A BALL-END MILL IS REQUIRED. CENTER CUTTING. 						<ul style="list-style-type: none"> REGULAR LENGTH, TWO FLUTE, DOUBLE-END MILLS WITH SAME FEATURES AS 521 SERIES. RECOMMENDED FOR MILLING FILLETS AND BOTTOM SLOTS, ROUNDING THE BOTTOM OF BLIND HOLES. 					
MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART		MILL DIA.	SHANK DIA.	LENGTH OF CUT	OVERALL LENGTH	PART	
3/8	3/8	3/4	2-1/2	A	62411	1/8	3/8	3/8	3-1/16	A	62391
1/2	1/2	1-1/4	3-1/4	A	62412	3/16	3/8	7/16	3-1/8	A	62392
5/8	5/8	1-5/8	3-3/4	A	62413	1/4	3/8	1/2	3-1/8	A	62393
3/4	3/4	1-5/8	3-7/8	A	62414	5/16	3/8	9/16	3-1/8	A	62394
7/8	7/8	1-7/8	4-1/8	A	62415	3/8	3/8	9/16	3-1/8	A	62395
1	1	2	4-1/2	A	62416	7/16	1/2	13/16	3-3/4	A	62396
1-1/4	1-1/4	2	4-1/2	A	62417	1/2	1/2	13/16	3-3/4	A	62397
1-1/2	1-1/4	2	4-1/2	A	62418	5/8	5/8	1-8	4-1/2	A	62398
-	-	-	-	-	-	3/4	3/4	1-5/16	5	A	62399
-	-	-	-	-	-	1	1	1-5/8	5-7/8	A	62300

NOTE: Due to special processing allow 2-3 weeks for delivery.

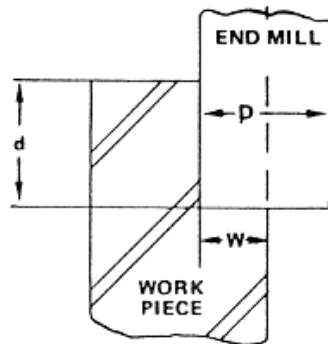


SUGGESTED SPEED AND FEED DATA FOR COBALT HIGH SPEED STEEL END MILL IN VARIOUS APPLICATIONS AND MATERIALS.

Number of Flutes	Heat-Resistant Austenitic Alloys Heat-Resistant Nickel Base Alloys High Strength Stainless Alloys High Strength Titanium Alloys		High Tensile Steel Medium Strength Stainless Steels Medium Strength Titanium Alloys		Medium Tensile Steels Unalloyed Titanium Alloys Heat-Resistant Ferritic Low Alloys		Mild Steel Forging Hard Brass and Bronze Copper		Mild Steels Cast Iron Brass Bronze		Aluminum Aluminum Alloys Plastics Wood	
	2 or More Flutes		2 or More Flutes		2 or More Flutes		2 or More Flutes		2 or More Flutes		2 or More Flutes	
	Diam. of End Mills	Speed 10-20SPM	Feed	Speed 30-40SPM	Feed	Speed 50-60SPM	Feed	Speed 70-90SPM	Feed	Speed 100-120SPM	Feed	Speed 200-400SPM
	RPM	Inch/Min	RPM	Inch/Min	RPM	Inch/Min	RPM	Inch/Min	RPM	Inch/Min	RPM	Inch/Min
1/16"	*	-	1834-2445	3/4"	3057-3668	1-1/4"	4280-5502	4"	6112-7333	3-1/8"	12222Up	5-1/8"
3/32"	*	-	1222-1426	3/4"	2038-2445	1-1/4"	2853-3668	4"	4073-4890	3-1/8"	8146Up	5-1/8"
1/8"	*	-	917-1222	3/4"	1528-1834	1-1/4"	2139-2750	4"	3056-3667	3-1/2"	6112Up	5-1/2"
3/16"	204-407	1/2"	611-815	1-1/4"	1019-1222	1-5/8"	1426-1834	4-3/4"	2037-2445	4"	4074-8148	5-7/8"
1/4"	153-309	1/2"	458-611	1-1/4"	764-917	1-5/8"	1070-1376	5-1/8"	1528-1833	4-3/4"	3056-6112	8"
5/16"	122-244	1/2"	357-489	1-5/8"	611-733	2"	856-978	5-1/2"	1222-1467	5-7/8"	2444-4888	12"
3/8"	102-204	5/8"	306-408	2"	509-611	2"	713-916	5-7/8"	1019-1222	6-5/16"	2038-4076	14"
7/16"	87-175	5/8"	262-349	2"	437-524	2"	611-786	5-7/8"	873-1048	6-5/16"	1746-3492	16"
1/2"	76-153	3/4"	229-305	2-3/8"	382-459	2"	535-688	4-3/4"	764-917	5-7/8"	1528-3056	16"
3/16"	68-137	3/4"	204-272	2-3/8"	340-407	2"	475-611	4"	678-805	5-1/2"	1356-2712	16"
5/8"	61-122	3/4"	184-245	2-3/8"	306-367	2-3/8"	428-552	4"	611-733	5-1/2"	1222-2444	16"
11/16"	55-112	3/4"	167-222	2-3/8"	278-333	2-3/8"	389-500	4"	555-671"	5-1/2"	1110-2220	16"
3/4"	51-102	3/4"	153-203	2"	254-306	2-3/8"	357-458	3-1/2"	509-611	5-1/8"	1018-2036	16"
13/16"	47-95	3/4"	142-190	2"	237-284	2-3/8"	332-427	3-1/2"	491-568	5-1/8"	938-1876	15"
7/8"	44-87	3/4"	131-185	2"	219-262	2-3/8"	306-392	3-1/2"	473-524	4-3/4"	872-1744	14"
15/16"	40-81	3/4"	123-163	2"	205-246	2"	287-366	3-1/8"	427-491	4-3/4"	814-1628	13"
1"	38-76	3/4"	115-153	1-5/8"	191-229	2"	267-344	3-1/8"	382-458	4-3/4"	764-1528	12"
1-1/8"	34-68	3/4"	102-135	1-5/8"	170-204	2"	238-306	2-3/4"	340-407	4-3/4"	680-1360	10"
1-1/4"	31-61	3/4"	92-123	1-1/4"	153-183	2"	214-274	2-3/4"	306-367	4"	612-1224	8-1/2"
1-3/8"	28-56	3/4"	83-111	1-1/4"	139-167	2"	195-250	2-3/8"	278-333	4"	556-1112	7"
1-1/2"	25-51	5/8"	76-102	1-1/4"	127-153	2"	178-229	2-3/8"	255-306	3-1/2"	510-1070	6"
1-5/8"	35	5/8"	70-94	1-1/4"	118-141	1-5/8"	165-212	2"	235-282	3-1/8"	470-940	6"
1-3/4"	32	5/8"	66-88	1-1/4"	109-131	1-5/8"	153-196	2"	218-262	2-3/4"	436-872	5-1/2"
1-7/8"	30	5/8"	62-81	3/4"	102-122	1-1/4"	143-183	1-5/8"	204-244	2-3/4"	408-816	5-1/2"
2"	29	5/8"	57-76	3/4"	96-115	1-1/4"	134-172	1-5/8"	191-229	2-3/8"	382-764	4-3/4"

SUGGESTED SPEED AND FEED DATA FOR COBALT HIGH SPEED STEEL ROUGHING CUT END MILL IN VARIOUS APPLICATIONS AND MATERIALS.

Materials Mill Dia.	Mild Steel Forging Hard Brass Bronze Copper		High Tensile Steel Medium Strength- Stainless Steel, Medium Strength- Titanium Alloys		Medium Tensile Steel Unalloyed Titanium- Alloys, Heat Resistant- Ferritic Low Alloys		Cast Iron Brass Bronze		Aluminum	
	RPM	FEED INCH/MIN.	RPM	FEED INCH/MIN.	RPM	FEED INCH/MIN.	RPM	FEED INCH/MIN.	RPM	FEED INCH/MIN.
1/2	690	3-1/2"	460	1-3/8"	535	2-3/8"	645	4"	2520	17"
5/8	550	4-3/8"	370	1-1/2"	430	2-3/8"	515	4-1/2"	2020	18"
3/4	460	4-5/8"	305	2"	355	2-3/4"	425	5"	1680	16"
7/8	395	4-1/2"	260	2"	305	2-3/4"	365	5"	1440	15"
1	345	4-1/8"	230	1-3/4"	265	2-1/2"	320	4-1/2"	1260	13"
1-1/8	305	4"	200	1-3/4"	235	2-3/8"	285	4-1/8"	1120	12"
1-1/4	275	4-5/8"	180	2-1/8"	215	2-3/4"	255	5"	1000	10"
1-1/2	230	4"	150	2"	175	2-3/4"	215	4-1/8"	840	9"
1-3/4	195	3-3/4"	130	1-3/4"	150	2-1/2"	180	4"	720	8"
2	170	3-3/8"	115	1-3/4"	130	2-3/8"	160	3-1/2"	630	7"

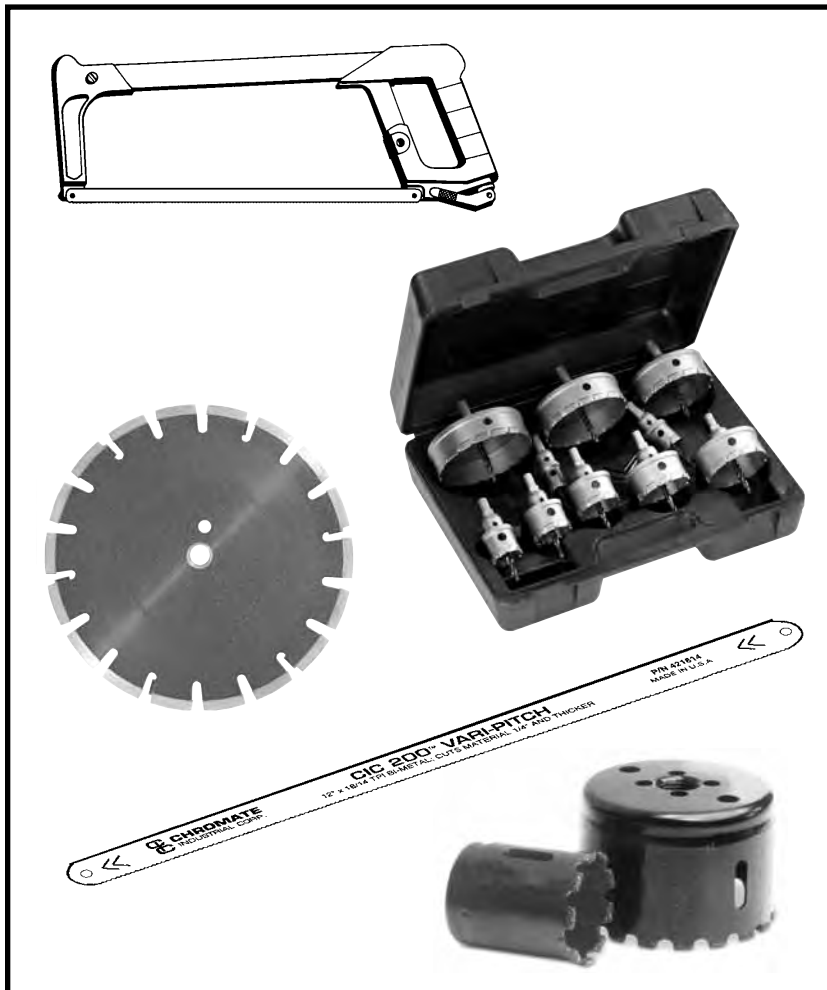


1/2" up to 1-1/8" --- $d = 1.5D$ $W = 0.5D$

1-1/4" up to 2" --- $d = 1.0D$ $W = 0.5D$



SAW BLADES



- Hacksaw Blades
- Reciprocating Saw Blades
- Sabre/Jig Saw Blades
- Band Saw Blades
- Hole Saws
- Carbide Tipped Hole Cutters
- Tough, Wear-Resistant Blades
- Diamond Blades
- Hardened, High-Speed Steel Cutting Edges

CHROMATE SAW BLADES CUT THROUGH HARDER MATERIALS, FASTER AND MORE DURABLY THAN ORDINARY SAW BLADES. Manufactured from the finest alloy steels to exacting specifications. Always use Chromate Saw Blades for maximum speed, accuracy and performance.



CHROMATE INDUSTRIAL CORP.

EXCEPTIONAL PRODUCTS, SERVICE AND INNOVATIVE SOLUTIONS

CIC 200™ BI-METAL HACKSAW BLADES

OUTPERFORMS ORDINARY HACKSAW BLADES

Outperforms ordinary hacksaw blades for cutting common steels, stainless steel, cast iron, aluminum, brass, copper, inconel and others.

VARI-PITCH TOOTH DESIGN

- **SUPER SHARP TOOTH DESIGN –**
ASSURES EASIER STARTING AND FASTER CUTTING
- **HARD ALLOY BACK BEAM –**
PROVIDES MAXIMUM STRENGTH AND RESISTANCE TO BENDING, TWISTING, BINDING AND VIBRATION
- **UNIQUE, HIGH STRENGTH ALLOY TEETH –**
MAINTAINS SHARPNESS AND DURABILITY WHILE CUTTING THE TOUGHEST JOBS
- **FLEXIBLE AND SHATTER-RESISTANT –**
FOR GREATER SAFETY



TEETH PER INCH	LENGTH	MATERIALS	PART
18-14	12"	1/4" and Thicker	421814
24-20	12"	1/16" to 1/4" Thick	422420
32-26	12"	Up to 1/16" Thick	423226

TRI-PITCH TOOTH DESIGN



32 TPI
gets the cut started

24 TPI
allows for more aggressive strokes

18 TPI
completes the cutting stroke

- **LEAD OFF WITH 32 TPI, 24 TPI IN THE MIDDLE AND 18 TPI FINISHES THE CUT –**
DEPENDING ON THE MATERIAL, YOU HAVE THE OPTION OF ISOLATING ONE SECTION OF THE BLADE OR UTILIZING MAXIMUM CUTTING EFFICIENCY WITH ALL THREE

- **SUPER SHARP TOOTH DESIGN –**
ASSURES EASIER STARTING AND FASTER CUTTING
- **HARD ALLOY BACK BEAM –**
PROVIDES MAXIMUM STRENGTH AND RESISTANCE TO BENDING, TWISTING, BINDING AND VIBRATION
- **UNIQUE, HIGH STRENGTH ALLOY TEETH –**
MAINTAINS SHARPNESS AND DURABILITY WHILE CUTTING THE TOUGHEST JOBS
- **FLEXIBLE AND SHATTER-RESISTANT –**
FOR GREATER SAFETY



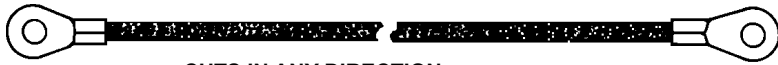
TEETH PER INCH	LENGTH	MATERIALS	PART
18-24-32	12"	1/4" and Thinner	42182432

CIC 200™ TUNGSTEN CARBIDE HACKSAW BLADES

SUPER HARD TUNGSTEN CARBIDE

Super hard tungsten carbide particles permanently bonded to a strong alloy steel allows these blades to cut through the toughest materials.

CIC 200™ TUNGSTEN CARBIDE HACKSAW AND RODSAW BLADES



P/N 22600



- CUTS IN ANY DIRECTION
- CUTS CONTOURS AND ANGLES
- 360° CUTS THROUGH TOUGH MATERIALS



P/N 22700

- STRAIGHT CUTTING THROUGH TOUGH MATERIALS
- VIRTUALLY UNBREAKABLE

CUTS THROUGH:

- | | | | |
|----------------|-----------------------|-------------------|------------------------|
| • CABLES | • CHROME PLATED PARTS | • CHAINS | • RUSTED BOLTS |
| • CAST IRON | • HYDRAULIC HOSES | • HARDENED STEEL | • TITANIUM |
| • CEMENT | • STAINLESS STEEL | • SLATE | • SPRINGS |
| • CERAMIC TILE | • TAIL PIPES | • BRAKE MATERIALS | • MARBLE |
| • BRICK | • VALVE STEMS | • GLASS | • AND MUCH, MUCH MORE! |

DESCRIPTION	LENGTH		PART
ROD SAW BLADE	12"	A	22600
HACKSAW BLADE	12"	A	22700

HACKSAW FRAME

"BLACK MAX" SUPER HEAVY DUTY HIGH TENSION HACKSAW FRAME

- PRECISION CAST ALUMINUM/STEEL FRAME.
- LEVER TENSIONS BLADE TO 60,000 P.S.I. WITH 8 FULL TURNS.
- BLADE WON'T BIND IN TOUGH MATERIALS OR STRUCTURALS.
- CUTS AT 90°, 45° OR FLUSH.
- USE AS JAB SAW OR COMPASS SAW.
- EXTENDS BLADE LIFE AND MINIMIZES BLADE BREAKAGE.



DESCRIPTION	PART
"BLACK MAX" HACKSAW FRAME	A 30386

CIC 200™ POWER HACKSAW BLADES

WELDED EDGE

High speed steel cutting edge welded to alloy back for faster cutting and longer life.



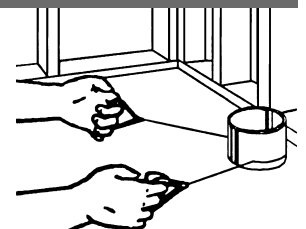
LENGTH	WIDTH	THICKNESS	TEETH PER INCH	WORK THICKNESS	PART
12	1	.050	14	1/8	A 52495
14	1	.050	14	1/8	A 52500
12	1	.050	10	1/2	A 52605
14	1	.050	10	1/2	A 52608
14	1-1/4	.062	10	1/2	A 52610
17	1	.050	10	1/2	A 52612
17	1-1/4	.062	10	1/2	A 52614
14	1-1/4	.062	6/4	5/8	A 52700
14	1-1/2	.075	6/4	5/8	A 52701
18	1-3/4	.088	6/4	5/8	A 52705
21	1-3/4	.088	6/4	5/8	A 52706
14	1-1/4	.062	6	5/8	A 52710
18	1-1/4	.062	6	5/8	A 52725
18	1-1/2	.075	6	5/8	A 52730
18	1-3/4	.088	6	5/8	A 52735
21	1-3/4	.088	6	5/8	A 52740
14	1-1/2	.075	4	7/8	A 52745
18	1-3/4	.088	4	7/8	A 52755
21	1-3/4	.088	4	7/8	A 52760
24	2	.100	4	7/8	A 52765

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PVC CABLE SAW

HEAVY DUTY RUST-PROOF STAINLESS STEEL CABLE

- CONSTRUCTED OF RUST-PROOF STAINLESS STEEL CABLE
- ACTUALLY MELTS THROUGH PVC PIPE IN SECONDS
- CUTS UP TO 4" PLUMBING OR ELECTRICAL PVC
- IDEAL FOR TIGHT SPOTS AND IN-GROUND REPAIRS
- SAW LIFE APPROXIMATELY 60 TO 100 CUTS



DESCRIPTION	PART
PVC CABLE SAW – 26" LENGTH	A 22610

CIC 200™ BI-METAL SAW BLADES

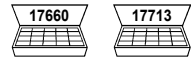
RECIPROCATING SAW BLADES — 1/2" SHANK

Bi-metal construction of high cobalt content, high speed steel teeth welded to shatter-resistant alloy steel back for faster cutting and greater durability. Bi-metal blades reduce breakage and last longer than conventional carbon and all high speed steel blades.

METAL CUTTING

WIDER, THICKER BLADES:

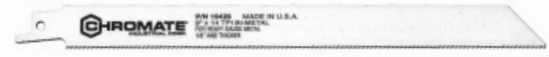
- Provide higher beam strength and greater rigidity allowing more feed pressure for faster cutting with less distortion



TUBE ASSORTMENTS:
17657, Metal Magicians #1
17658, Metal Magicians #2

MATRIX CUTTING EDGE:

- High cobalt content (8%) for better shock and heat resistance — assuring faster cutting, longer life and less tooth strippage



TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
14	4 x 3/4 x .035	Heavy gauge metals 1/8" and thicker. Bar stock and angles.	I 19413
14	6 x 3/4 x .035	Heavy gauge metals 1/8" and thicker. Bar stock and angles.	I 19414
14	9 x 3/4 x .035	Heavy gauge metals 1/8" and thicker. Bar stock and angles.	E 19429
18	4 x 3/4 x .035	Heavy gauge metals 18 gauge to 1/8" thick. Conduit, pipe, channels & tubing.	I 19416
18	6 x 3/4 x .035	Heavy gauge metals 18 gauge to 1/8" thick. Conduit, pipe, channels & tubing.	I 19417
18	8 x 3/4 x .035	Heavy gauge metals 18 gauge to 1/8" thick. Conduit and tubing.	F 19418
18	12 x 3/4 x .035	Heavy gauge metals 18 gauge to 1/8" thick. Conduit, pipe, channels & tubing.	F 19428
24	4 x 3/4 x .035	Metals 18 gauge and under. Trim, tubing and galvanized pipe.	I 19419
24	6 x 3/4 x .035	Metals 18 gauge and under. Trim, tubing and galvanized pipe.	I 19420
18	3 x 1/4 x .035	Scroll cutting in light gauge ferrous and non-ferrous metals, wood and aluminum under 1/8" thick.	I 19426

WOOD CUTTING



TUBE ASSORTMENTS:
17656, Wood Wizards

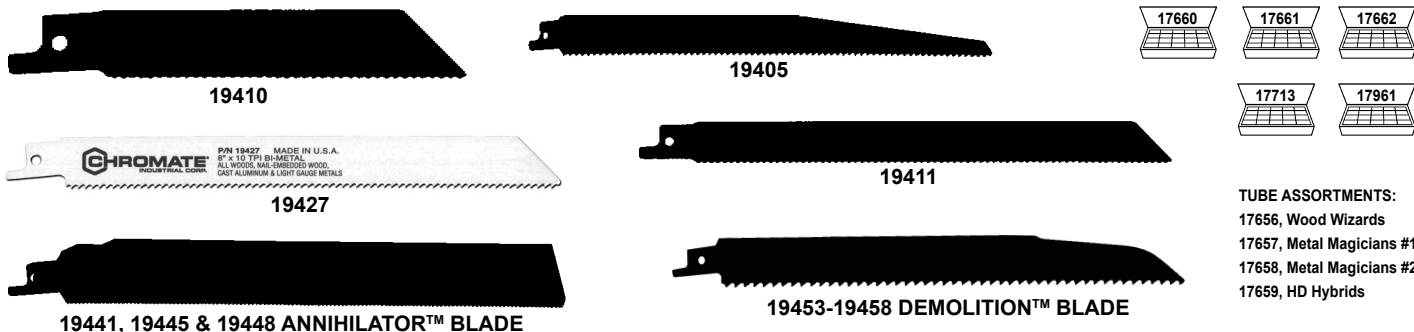


TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
6	6 x 3/4 x .050	Fast cutting in all woods or nail-embedded wood. General roughing in work.	E 19408
6	9 x 3/4 x .050	Fast cutting in all woods or nail-embedded wood. General roughing in work.	E 19424
6	12 x 3/4 x .050	Fast cutting in all woods or nail-embedded wood. General roughing in work.	E 19409
10/14	12 x 3/4 x .050	All woods, plastic, cast aluminum, nail-embedded wood, soil, pipe.	E 19218

CIC 200™ BI-METAL SAW BLADES

RECIPROCATING SAW BLADES — 1/2" SHANK

WOOD AND METAL CUTTING



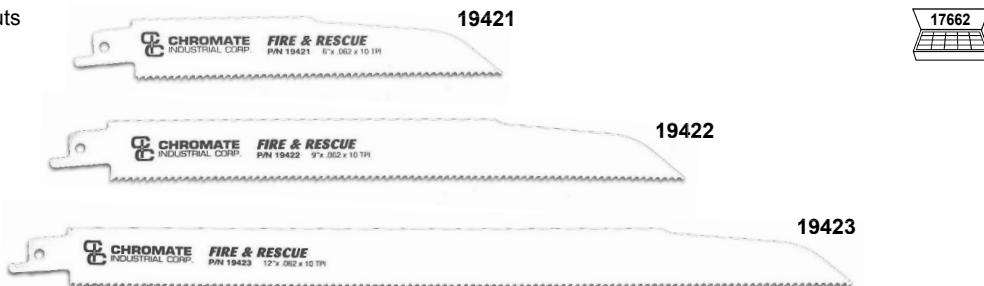
TUBE ASSORTMENTS:
 17656, Wood Wizards
 17657, Metal Magicians #1
 17658, Metal Magicians #2
 17659, HD Hybrids

TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
10/14	6 x 3/4 x .050	All woods, plastic, cast aluminum, nail-embedded wood & soil pipe.	E 19405
10	6 x 3/4 x .035	Wood, nail-embedded wood, compositions, plastic, cast aluminum & non-ferrous metals.	E 19410
10	8 x 3/4 x .035	All woods, nail-embedded wood, cast aluminum & light gauge metals.	E 19427
10/14	8 x 3/4 x .050	All woods, plastic, cast aluminum, nail-embedded wood & soil pipe.	E 19411
14	6 x 1 x .042	For cutting wood, nail-embedded wood and metal (Annihilator™ Blade).	C 19441
14	9 x 1 x .042	For cutting wood, nail-embedded wood and metal (Annihilator™ Blade).	C 19445
14	12 x 1 x .042	For cutting wood, nail-embedded wood and metal (Annihilator™ Blade).	C 19448
5/8	6 x 7/8 x .062	For cutting wood, nail-embedded wood and metal (Demolition™ Blade)	E 19455
6	9 x 7/8 x .062	For cutting wood, nail-embedded wood and metal (Demolition™ Blade).	C 19453
10	9 x 7/8 x .062	For cutting wood, nail-embedded wood and metal (Demolition™ Blade).	C 19454
6	12 x 7/8 x .062	For cutting wood, nail-embedded wood and metal (Demolition™ Blade).	B 19457
10	12 x 7/8 x .062	For cutting wood, nail-embedded wood and metal (Demolition™ Blade).	B 19458

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FIRE AND RESCUE BLADES

- Wavy tooth set reduces pinching during cuts
- Profile designed for plunge cutting
- Smooth, quick and efficient cutting of layered materials
- For professional extrication uses
- Reliable, long lasting cutting edge
- Cuts more smoothly through a variety of materials without binding



TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
10	6 x 7/8 x 0.062	Fast cutting, demolition, nail-embedded wood, composites, plastics, metals	A 19421
10	9 x 7/8 x 0.062	Fast cutting, demolition, nail-embedded wood, composites, plastics, metals	A 19422
10	12 x 7/8 x 0.062	Fast cutting, demolition, nail-embedded wood, composites, plastics, metals	A 19423

CIC 200™ BI-METAL SAW BLADES

RECIPROCATING SAW BLADES — 1/2" SHANK



19477



PLASTER CUTTING

TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
6	6 x 3/4 x .035	Plaster with metal lathe, plaster board, sheet rock and plaster walls. Tooth design cuts on forward and back stroke.	19477

SABRE / JIG SAW BLADES — 1/4" SHANK



19207



19200



19201



19202



19203

METAL CUTTING

TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
18	2-3/4 x 3/8 x .035	Metal under 18 gauge	19202
24	2-3/4 x 3/8 x .035	Ferrous and non-ferrous metal to 1/8" thick	19203

WOOD CUTTING

TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
6	3-5/8 x 3/8 x .035	Wood, fiberboard, coarsecut.	19207
10	3-5/8 x 3/8 x .035	Wood, plywood, hard-board, smooth finish of wood and plastic.	19200

WOOD AND METAL CUTTING

TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
14	3-5/8 x 3/8 x .035	Mild steel, non-ferrous metals, fiberglass, hard rubber and nail-embedded wood.	19201

CIC 200™ BI-METAL SAW BLADES

SABRE / JIG SAW BLADES — BOSCH SHANK



19214



19213



19217



19216



19212

METAL CUTTING

TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
14	3 x 3/8 x .035	Ferrous and non-ferrous metals 1/8" and thicker	E 19212
18	3 x 3/8 x .035	Metals over 18 gauge. Tubing, conduit.	E 19213
24	3 x 3/8 x .035	Thin metals, plastics. Fine cuts under 18 gauge.	E 19216

WOOD CUTTING

TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
6	4 x 5/16 x .050	Wood, fiberboard, roughing work and fast cutting.	E 19214
8	4 x 5/16 x .040	General purpose wood cutting, compositions & plastic.	E 19217

BI-METAL AIR SAW BLADES

PNEUMATIC SABRE SAW BLADES

Bi-metal construction cuts through pipe, mild steel, aluminum, plastic and fiberglass.



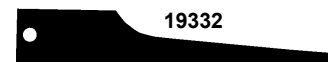
19314



19318



19324



19332

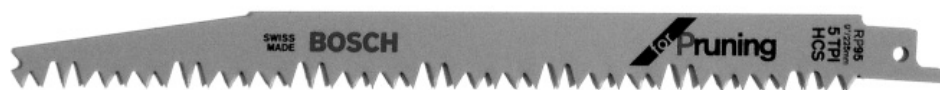
DESCRIPTION	LENGTH	TPI	PART
Bi-Metal Blade	3"	14	E 19314
Bi-Metal Blade	3"	18	E 19318
Bi-Metal Blade	3"	24	E 19324
Bi-Metal Blade	3"	32	E 19332

CIC 200™ STANDARD SAW BLADES

DURABLE CARBON AND HIGH-SPEED STEEL CONSTRUCTION

Milled teeth, set and hardened for maximum performance in metal, wood and other materials.

RECIPROCATING SAW BLADES – 1/2" SHANK



WOOD CUTTING

TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
5	9 x 3/4 x .050	Very fast cutting, roughing-in work in wood, pruning	E 19401

SABRE / JIG SAW BLADES – 1/4" SHANK



19499



19406 "RAZOR-EDGE"



19407 "RAZOR-EDGE"

WOOD CUTTING / SPECIAL PURPOSE

TEETH PER INCH	DIMENSIONS L x W x T	RECOMMENDED USES	PART
10	4 x 5/16 x .050	Reverse teeth for cutting laminated materials from top side to eliminate chipping. Extra-fine cut.	E 19499
10	4 x 5/16 x .050	Softwood, hardwood, plywood, chipboard, plastic up to 2" thick, clean/fast cutting	E 19406
6	4 x 5/16 x .050	Softwood, hardwood, plywood, chipboard, plastic up to 2" thick, clean/fast cutting	E 19407

CIC 200™ TUNGSTEN CARBIDE EDGE SAW BLADES

A CUTTING EDGE OF UNCOMPARABLE ABILITY

Thousands of particles of tungsten carbide (one of the hardest materials known) are permanently bonded to tough alloy steel, forming a cutting edge of unparalleled ability. They will cut through the hardest of steels and most abrasive materials with ease.

RECIPROCATING SAW – 1/2" UNIVERSAL SHANK



DESCRIPTION	LENGTH	GRIT		PART
Standard Blade	4"	Coarse	B	22740
Standard Blade	6"	Coarse	B	22780
Standard Blade	8"	Coarse	A	22782

SABRE/JIG SAW – 1/4" UNIVERSAL SHANK



DESCRIPTION	LENGTH	GRIT		PART
Standard Blade	2-7/8"	Medium	B	22720

SABRE/JIG SAW – BOSCH TYPE SHANK



DESCRIPTION	LENGTH	GRIT		PART
Standard Blade	3"	Medium	B	22800

Sāf-T-Küt™ CARBIDE TIPPED SAW BLADES

RECIPROCATING SAW BLADES – 1/2" SHANK

Designed to safely cut through drywall and plaster without damaging hidden lines within walls. The carbide tipped blades were developed by contractors just like you that were spending time and money fixing mistakes created by old style blades.

- Fits any reciprocating saw
- Cuts through drywall and plaster easily
- Keeps plumbing and electrical lines safe
- Eliminates dust



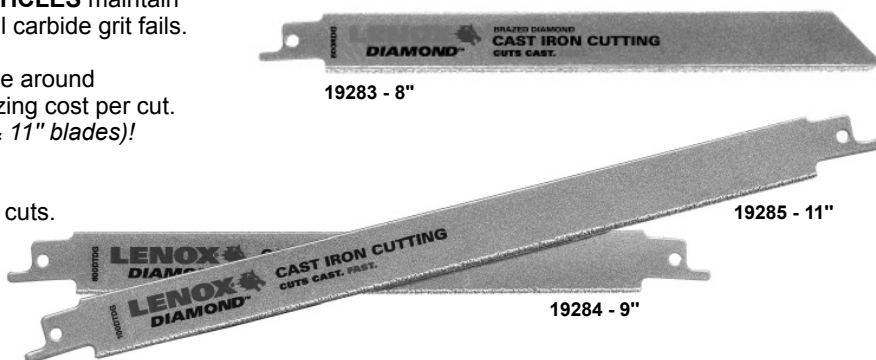
DRYWALL AND PLASTER CUTTING

DESCRIPTION	LENGTH		PART
Specialty Blade	2-1/8"	B	19270

DIAMOND/DOUBLE TANG RECIP SAW BLADES

LENOX DIAMOND & DIAMOND DOUBLE TANG RECIPROCATING SAW BLADES

- **NICKEL ALLOY-BRAZED DIAMOND PARTICLES** maintain sharpness to keep cutting after conventional carbide grit fails.
- **DOUBLE TANG** allows end user to flip blade around reducing amount of wasted grit and maximizing cost per cut. *Extends the life of the blade 6X longer (9" & 11" blades)!*
- **CUTS 3X FASTER***
A narrow kerf design enables thinner, faster cuts.
- **STRAIGHT, CLEAN CUTS**
Unlike bulky snap cutters which crush pipes and leave ragged, uneven cuts, LENOX DIAMOND cuts clean.
- **VERSATILE**
Cuts cast iron, tile, brick and natural stone.



*Speed measured cutting 4" cast iron pipe at maximum speed vs. the leading competitor.

GRIT	DIMENSIONS L x W x T	RECOMMENDED USES	PART
Diamond	8" x 3/4" x .040"	Cuts cast iron, tile, brick and natural stone	A 19283
Diamond	9" x 3/4" x .042"	Cuts cast iron, tile, brick and natural stone	A 19284
Diamond	11" x 3/4" x .042"	Cuts cast iron, tile, brick and natural stone	A 19285

RECIPROCATING SAW ASSORTMENT

FOR ANY STANDARD RECIPROCATING SAW BLADE

Assortment comes with one CIC 200™ Bi-Metal Reciprocating Blade and one 6-18T CIC 200™ Bi-Metal Reciprocating Blade.

RECIPROCATING SAW HANDLE ASSORTMENT

- HANDLE USES ANY STANDARD RECIPROCATING SAW BLADE
- QUICK-TWIST LOCK HOLDS BLADE AND BIT HOLDER IN PLACE QUICKLY AND EASILY
- ERGONOMIC HANDLE WITH ANGLED SETTING FOR ADDED LEVERAGE
- ALSO USES ANY STANDARD 1/4" BIT HOLDER, NUT DRIVER, POWER BIT, ETC.
- HANDLES STORE 6 OF THE MOST POPULAR INSERT BITS: #5 & #6 SLOTTED, #1 & #2 PHILLIPS, AND T15 * T20 TORX BITS
- EASY-LOCK BLADE AND BIT CLAMP TWISTS AND LOCKS THE BLADE OR BITS IN PLACE



DESCRIPTION	PART
RECIPROCATING SAW HANDLE ASSORTMENT (1 each) Reciprocating Saw Handle, Magnetic Bit Holder, #5 & #6 Slotted Insert Bits, #1 & #2 Phillips Insert Bits, T15 & T20 Torx Insert Bits, 6-6T CIC 200™ Bi-Metal Reciprocating Blade and 6-18T CIC 200™ Bi-Metal Reciprocating Blade	A 30385

CIC 200™ SUPER WELD™ BAND SAW BLADES

WELDED-TO-LENGTH

For all difficult cutting applications including stainless, alloy and high carbon heat-treated steels. Bi-metal construction of high speed steel edge welded to spring steel back, custom cut and welded to your machine specifications.

VARI-PITCH — SPECIAL SET



FASTER, SMOOTHER AND QUIETER CUTS WITH INCREASED PROTECTION AGAINST TOOTH STRIPPAGE.

WIDTH	THICKNESS	TEETH/IN.	PART	WIDTH	THICKNESS	TEETH/IN.	PART
1/4	.025	14/10	A 19621	1	.035	8/5	A 19635
1/2	.025	12/8	A 19622	1	.035	6/4	A 19633
1/2	.025	10/6	A 19623	1	.035	4/3	A 19636
3/4	.035	14/10	A 19624	1	.035	3/2	A 19634
3/4	.035	12/8	A 19626	1-1/4	.042	10/6	A 19639
3/4	.035	10/6	A 19627	1-1/4	.042	8/5	A 19644
3/4	.035	8/5	A 19625	1-1/4	.042	6/4	A 19645
3/4	.035	6/4	A 19628	1-1/4	.042	4/3	A 19648
1	.035	14/10	A 19629	1-1/4	.042	3/2	A 19649
1	.035	12/8	A 19631	1-1/2	.050	3/2	A 19654
1	.035	10/6	A 19632	1-1/2	.050	6/4	A 19659

STANDARD TOOTH — RAKER SET



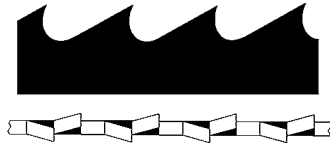
THE MOST POPULAR TOOTH AND SET CONFIGURATIONS FOR MOST GENERAL PURPOSE CUTTING APPLICATIONS.



WIDTH	THICKNESS	TEETH/IN.	PART	WIDTH	THICKNESS	TEETH/IN.	PART
1/4	.025	14	A 19638	3/4	.035	8	A 19655
1/4	.025	10	A 19637	3/4	.035	6	A 19656
3/8	.025	14	A 19643	1	.035	10	A 19653
3/8	.025	10	A 19642	1	.035	8	A 19657
3/8	.025	8	A 19641	1	.035	6	A 19658
1/2	.025	14	A 19647	1	.035	4	A 19662
1/2	.025	10	A 19646	1-1/4	.042	6	A 19666
3/4	.035	14	A 19652	1-1/4	.042	4	A 19669
3/4	.035	10	A 19651	—	—	—	—

CIC 200™ SUPER WELD™ BAND SAW BLADES

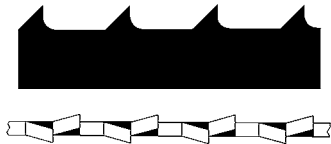
HOOK TOOTH — RAKER SET



DESIGNED FOR HARDER, NON-FERROUS METALS OR LARGER SECTIONS OF MILD STEEL OR WOOD. REMOVES MORE MATERIAL WITH LESS FEED PRESSURE.

WIDTH	THICKNESS	TEETH/IN.	PART	WIDTH	THICKNESS	TEETH/IN.	PART
1/4	.025	6	A 19960	1	.035	4	A 19964
3/8	.025	4	A 19961	1	.035	3	A 19965
1/2	.025	4	A 19962	1-1/4	.042	3	A 19966
3/4	.035	3	A 19963	-	-	-	-

SKIP TOOTH — RAKER SET



RECOMMENDED FOR SOFT OR STRINGY METALS SUCH AS ALUMINUM, MAGNESIUM, COPPER OR WOOD. FACILITATES REMOVAL OF CHIPS. WILL NOT CLOG GULLETS AS WITH STANDARD TOOTH FORMS.

WIDTH	THICKNESS	TEETH PER INCH	PART
1	.035	4	A 19968

VARI-PITCH — SPECIAL SET



FASTER, SMOOTHER AND QUIETER CUTS WITH INCREASED PROTECTION AGAINST TOOTH STRIPPAGE.

WIDTH	THICKNESS	TEETH PER INCH	PART
5/8	.035	14/10	A 19650

PORTABLE BAND SAW BLADES

STANDARD TOOTH — RAKER SET



THE MOST POPULAR TOOTH AND SET CONFIGURATION FOR MOST GENERAL PURPOSE CUTTING OPERATIONS.

LENGTH	WIDTH	TEETH/IN.	PART	LENGTH	WIDTH	TEETH/IN.	PART
44-7/8"	1/2	24	c 19929	53-3/4"	1/2	18	c 19933
44-7/8"	1/2	18	c 19930	53-3/4"	1/2	14	c 19934
44-7/8"	1/2	14	c 19931	53-3/4"	1/2	10	c 19935
44-7/8"	1/2	10	c 19932	54"	1/2	14/10	c 19940
53-3/4"	1/2	24	c 19936	54"	1/2	18/14	c 19945

CARBON HARD BACK BAND SAW BLADES

WELDED-TO-LENGTH

For cutting light structurals, pipe tubing and similar light duty applications. Carbon steel construction. Available welded-to-length or in 100 foot coils.

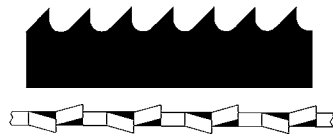
VARI-PITCH — SPECIAL SET



FASTER, SMOOTHER AND QUIETER CUTS WITH INCREASED PROTECTION AGAINST TOOTH STRIPPAGE.

WIDTH	THICK.	TEETH/IN.	PART	100' COILS	WIDTH	THICK.	TEETH/IN.	PART	100' COILS
1/4	.025	14/10	19664		3/4	.032	14/10	19676	T 19616
3/8	.025	14/10	19668	T 19612	3/4	.032	12/8	19677	T 19608
1/2	.025	14/10	19672	T 19614	3/4	.032	10/6	19678	T 19617
1/2	.025	12/8	19673	T 19607	1	.035	12/8	19681	T 19618
1/2	.025	10/6	19674	T 19615	1	.035	10/6	19682	T 19609
					1	.035	6/4	19683	T 19619

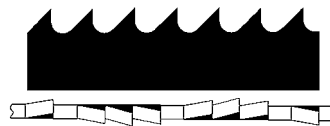
STANDARD TOOTH — RAKER SET



THE MOST POPULAR TOOTH AND SET CONFIGURATIONS FOR MOST GENERAL PURPOSE CUTTING APPLICATIONS.

WIDTH	THICK.	TEETH/IN.	PART	100' COILS	WIDTH	THICK.	TEETH/IN.	PART	100' COILS
1/4	.025	24	19739	—	5/8	.032	14	19751	T 19813
1/4	.025	18	19762	T 19801	5/8	.032	10	19752	T 19814
1/4	.025	14	19741	T 19802	5/8	.032	8	19753	T 19815
1/4	.025	10	19742	T 19803	3/4	.032	14	19767	T 19816
3/8	.025	18	19764	T 19804	3/4	.032	12	19766	T 19817
3/8	.025	14	19743	T 19805	3/4	.032	10	19754	T 19818
3/8	.025	10	19744	T 19806	3/4	.032	8	19755	T 19819
3/8	.025	8	19745	T 19807	3/4	.032	6	19756	T 19820
1/2	.025	24	19746	T 19808	1	.035	14	19769	T 19821
1/2	.025	18	19765	—	1	.035	10	19768	T 19822
1/2	.025	14	19747	T 19810	1	.035	8	19771	T 19823
1/2	.025	10	19748	T 19811	1	.035	6	19772	T 19824
1/2	.025	6	19749	T 19812	—	—	—	—	—

STANDARD TOOTH — WAVY SET



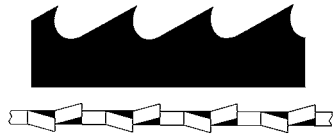
DESIGNED TO BE STRONGER AND MORE DURABLE THAN OTHER TOOTH SETS. HOWEVER, IT PRODUCES A SLOWER, COARSER CUT.

WIDTH	THICK.	TEETH/IN.	PART	100' COILS	WIDTH	THICK.	TEETH/IN.	PART	100' COILS
1/4	.025	32	19711	T 19826	3/4	.032	14	19714	T 19829
1/2	.025	14	19712	T 19827	3/4	.032	10	19715	T 19830
3/4	.032	18	19713	T 19828	-	-	-	-	-

DUE TO SPECIAL PROCESSING ALLOW 2-3 WEEKS FOR DELIVERY OF CUSTOM CUT & WELDED BLADES.

CARBON HARD BACK BAND SAW BLADES

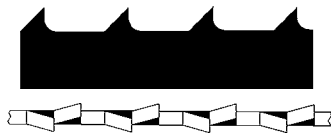
HOOK TOOTH — RAKER SET



DESIGNED FOR HARDER, NON-FERROUS METALS OR LARGER SECTIONS OF MILD STEEL OR WOOD. REMOVES MORE MATERIAL WITH LESS FEED PRESSURE.

WIDTH	THICK.	TEETH/IN.	PART	100' COILS	WIDTH	THICK.	TEETH/IN.	PART	100' COILS
1/4	.025	6	19900	t 19851	1/2	.025	3	19907	t 19858
1/4	.025	4	19901	t 19852	3/4	.032	6	19908	t 19859
3/8	.025	6	19902	t 19853	3/4	.032	3	19909	t 19860
3/8	.025	4	19903	t 19854	1	.035	3	19910	t 19861
1/2	.025	6	19905	t 19856	1	.035	2	19911	t 19862
1/2	.025	4	19906	t 19857	—	—	—	—	—

SKIP TOOTH — RAKER SET

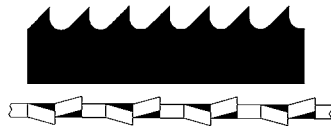


RECOMMENDED FOR SOFT OR STRINGY METALS SUCH AS ALUMINUM, MAGNESIUM, COPPER OR WOOD. FACILITATES REMOVAL OF CHIPS. WILL NOT CLOG GULLETS AS WITH STANDARD TOOTH FORMS.

WIDTH	THICK.	TEETH/IN.	PART	100' COILS	WIDTH	THICK.	TEETH/IN.	PART	100' COILS
1/4	.025	6	19920	t 19840	1/2	.025	4	19924	t 19844
1/4	.025	4	19921	t 19841	1/2	.025	3	19925	t 19845
3/8	.025	3	19923	t 19843	3/4	.032	3	19926	t 19846
—	—	—	—	—	1	.035	3	19927	t 19847

PORTABLE BAND SAW BLADES

STANDARD TOOTH — RAKER SET



THE MOST POPULAR TOOTH AND SET CONFIGURATION FOR MOST GENERAL PURPOSE CUTTING OPERATIONS.

LENGTH	WIDTH	THICKNESS	TEETH/IN.	PART	LENGTH	WIDTH	THICKNESS	TEETH/IN.	PART
44-7/8"	1/2	.020	18	c 19684	54"	1/2	.025	24	c 19688
44-7/8"	1/2	.020	14	c 19685	54"	1/2	.025	18	c 19689
53-3/4"	1/2	.020	18	c 19686	54"	1/2	.025	14	c 19690
53-3/4"	1/2	.020	14	c 19687	54"	1/2	.025	10	c 19691

STANDARD TOOTH — WAVY SET



VARI-PITCH TOOTH — SPECIAL SET



LENGTH	WIDTH	THICKNESS	TEETH/IN.	PART	LENGTH	WIDTH	THICKNESS	TEETH/IN.	PART
54"	1/2	.025	14	c 19679	54"	1/2	.025	14/10	c 19675

BAND SAW SELECTION GUIDE

TOOTH SELECTION

Teeth and gullets both cut the chips and remove them from the work. The different tooth forms affect the way in which the job is performed.

TOOTH FORM



STANDARD TOOTH

STANDARD TOOTH face is perpendicular to the back of the blade. Gullets are rounded which allows good chip curl, and facilitates removal of chips from the kerf (cut). Standard tooth is used in most cutting applications and is available in pitches of from 4 to 32 teeth per inch.



SKIP TOOTH

Although **SKIP TOOTH** faces are perpendicular to the back of the blade in this form also, gullets are longer and flatter. In softer materials this facilitates removal of chips which might clog standard form gullets. Recommended for soft or stringy metals such as aluminum, magnesium, copper or wood.



HOOK TOOTH

HOOK TOOTH has a 10% positive rake, which pulls the blade into the work. This "digging" action allows hook tooth blades to remove more material with less feed pressure. Hook tooth is popular for harder, non-ferrous metals or larger sections of mild steel or wood.



VARIABLE PITCH

VARIABLE PITCH blades offer teeth varying in size, set and gullet depth. This variation brings teeth into the work at constantly changing angles for faster, smoother and quieter cutting. The varying gullet sizes also allow increased protection against tooth strippage when blades are used on a wide range of materials and/or dimensions.

TOOTH PITCH



TOO COARSE

TOO FINE

CORRECT

PITCH is the number of teeth per inch. The rule of thumb is that three teeth minimum must be in contact with the work at all times. After that rule is satisfied, hard and/or small cross sections require finer pitch (more teeth per inch); large sections or softer materials take a coarser pitch.

The right pitch is critical! Too few teeth can destroy the blade by stripping teeth. Too many teeth will cut inefficiently, greatly increasing the time required per cut and reducing the number of cuts from each blade.

SET SELECTION

The teeth of most saw blades are set, or angled, to make a cut wider than the blade body so that the back of the blade can pass through the work without binding.

RAKER SET



A recurring sequence of teeth — one set right, one set left and one not set. Those teeth set to the sides "saw" the work while the straight tooth clears or "rakes" the chips from the work. Raker set is used in the vast majority of band sawing applications.

WAVY SET



Three teeth with varying sets to the right followed by one straight tooth and three teeth with varying sets to the left. Because three teeth share the cutting and the set extends below the gullets, wavy set teeth are less likely to strip than raker set teeth. Offsetting their stronger construction, wavy set blades cut slower and produce a coarser finish than raker set blades.

NOTE: VARI-PITCH blades are specially set to suit each tooth design. Their sets do not necessarily conform to any of the above descriptions.

RADIUS SELECTION CHART

BLADE WIDTH	RADIUS	For maximum strength and rigidity, we recommend using the widest blade possible, depending on the cutting application.
1"	7-1/4"	
3/4"	5-7/16"	
5/8"	3-3/4"	
1/2"	2-1/2"	
3/8"	1-7/16"	
1/4"	5/8"	
3/16"	5/16"	
1/8"	1/8"	

CIRCULAR SAW BLADES

STEEL & FERROUS METAL CIRCULAR SAW BLADES



- Ferrous circular saw blades have been designed with a durable C-6 carbide grade and triple chip tooth grind to ensure a long cutting life in ferrous metals.
- Specially formulated micro grain carbide tips with titanium and tantalum. Lasts longer and leaves a burr free cut with little to no sparks or dust, commonly associated with abrasives.
- They also cut 5 to 10 times faster and last up to 30 times longer than abrasives, this allows fewer blade changes and increased production.
- They can also be used for cutting non-ferrous metals.

Features

- Professional Grade C-6 Carbide
- Laser Cut Expansion Slots
- Triple Chip Grind
- Precision Ground Carbide Tips
- Tensioned & Hardened Steel Plate
- Surface Ground Steel Plate

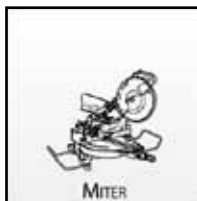
Cuts Ferrous Metals

- Steel studs
- Angle iron
- Pipe
- Rebar
- Channel
- Flat stock
- Conduit

Cuts Non-Ferrous Metals

- Aluminum
- Copper
- Brass

For use with



Note: Blades with more teeth are generally better suited for thinner material. Blades with less teeth are better suited for thicker material.

DIAMETER	TEETH	GRIND	ARBOR	MAX RPM	PART	
7-1/4"	36	TCG	5/8"	5,800	A	19041
8"	48	TCG	5/8"	5,800	A	19042
10"	52	TCG	1" with 5/8" bushing	5,200	A	19051
10"	80	TCG	5/8"	5,200	A	19052
14"	80	TCG	1"	1,800	A	19043
14"	120	TCG	1"	1,800	A	19044

CIRCULAR SAW BLADES

ALUMINUM & NON-FERROUS METAL CIRCULAR SAW BLADES



- Non-ferrous blades have been designed with a negative hook angle, triple chip tooth grind, and precision ground micro grain carbide tips.
- The specially formulated tungsten carbide lasts longer than other carbide grades and leaves burr free cuts in all types of non-ferrous metals.
- The 10" and larger feature copper plugged expansion slots for reduced noise and vibration.
- Smaller diameter blades feature laser cut expansion slots and heat vents for cooler operation.

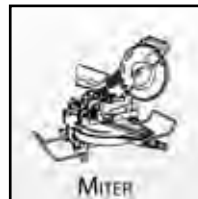
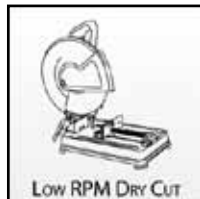
Features

- Professional Grade C-1 Carbide
- Negative Hook Angle
- Copper Plugged Expansion Slots
- Triple Chip Grind
- Tensioned & Hardened Steel Plate
- Surface Ground Steel Plate

Cuts Non-Ferrous Metals

- Aluminum
- Copper
- Brass
- Bronze
- Most plastics

For use with



Warning: Never attempt to cut steel or ferrous metals with these blades. It is highly recommended that you use a liquid lubricant or coolant when cutting non ferrous metals. Proper clamping devices should be employed.

DIAMETER	TEETH	GRIND	ARBOR	KERF	PART	
7-1/4"	60	TCG	5/8"	0.075"	A	19045
10"	100	TCG	5/8"	0.110"	A	19046
12"	120	TCG	1"	0.118"	A	19047

CIRCULAR SAW BLADES

RESCUE AND DEMOLITION CIRCULAR SAW BLADE



- The rescue and demolition blade has been designed with a reinforced shoulder design, heavy duty steel plate, negative hook angle, and fracture resistant carbide tips.
- These blades are very popular with firefighters for rescue operations and general demolition work. Cuts through most building materials.

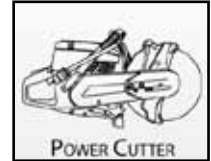
Features

- Professional Grade Carbide
- Negative Hook Angle
- Reinforced Shoulder Design
- Flat Top Grind
- Heavy Duty Steel Plate
- Fracture Resistant Carbide Tips

Cuts

- Roofing
- Shingles
- Thin non-ferrous metals
- Wood with embedded nails
- Most plastics

For use with



Warning: Never use these blades on multi-purpose cutoff saws, including gas powered, unless the saw has a guard that completely covers both the upper and lower half of the blade. This guard must extend to the lowest point of the cutting teeth on the bottom of the blade. Read and follow all instructions that came with your machine. Use with extreme caution and care.

DIAMETER	TEETH	GRIND	ARBOR	KERF	PART	
14"	30	FTG	1" with 7/8" & 20mm bushings	0.134"	A	19048

STACK DADO SETS



- The 16 piece stack dado blade sets are perfect for the woodworker who wants a premium cut at an affordable price. The precision ground C-4 micro grain carbide tips stay sharp longer.
- The high tooth count saws and chippers produce smooth bottom dado cuts ranging from 1/4" to 29/32".
- The full body chippers make for an easier setup and less vibration when compared to other sets that feature wing style chippers.
- Also includes detailed dado setup instructions and a shim set for fine dado adjustments.

Features

- Professional Grade C-4 Carbide
- Full Body Dado Chippers
- Precision Ground Carbide Tips
- Storage/Carrying Case
- Shim Set for Fine Adjustments

Cuts

- Hardwood
- Softwood
- Plywood

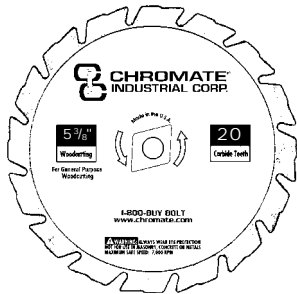
For use with



DIAMETER	DADO SAW TEETH	ARBOR	CHIPPER TEETH	PART	
6"	30	5/8"	5	A	19049
8"	42	5/8"	6	A	19050

CIRCULAR SAW BLADES

FOR WOODCUTTING



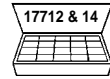
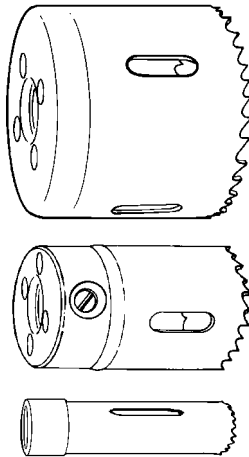
- TOUGH TUNGSTEN CARBIDE TIPS STAY SHARPER LONGER
- THIN KEY FOR FASTER, SMOOTHER CUTS

TEETH PER INCH	SIZE	RECOMMENDED USES	PART
16	5-3/8	For smooth woodcutting	A 19520
24	7-1/4 x 5/8" round arbor hole with diamond knockout	For fast semi-smooth rips, crosscuts and miters	A 19724
40	7-1/4 x 5/8" round arbor hole with diamond knockout	For smooth woodcutting	A 19740
40	10"	For general purpose woodcutting	A 19040

CIC 200™ HOLE SAWS

BI-METAL, VARIABLE PITCH TOOTH DESIGN

CIC 200™ hole saws cut faster and longer – saving time, money and labor.



VARIABLE PITCH TOOTH DESIGN:

- CUTS UP TO 48% FASTER THAN 6 T.P.I.
- CUTS UP TO 30% FASTER THAN STANDARD VARIABLE PITCH HOLE SAWS.
- REDUCED HARMONICS AND SUPERIOR CHIP CLEARANCE REQUIRES LESS FEED PRESSURE AND REDUCES POSSIBILITY OF TEETH DULLING.

M3 HIGH SPEED STEEL CUTTING EDGE:

- MORE WEAR RESISTANT THAN OTHER EDGE MATERIALS FOR LONGER LIFE.
- MORE RESISTANT TO SOFTENING AT HIGH TEMPERATURES — REDUCING POSSIBILITY OF TEETH DULLING AT HIGH RPM'S.

1-3/8" DEPTH:

- CUTS THROUGH 2" DIMENSIONAL LUMBER IN ONE PASS — REDUCING LABOR COSTS AND ELIMINATING NEED FOR DEEP HOLE SAWS.

1/2-20 ARBOR HOLE

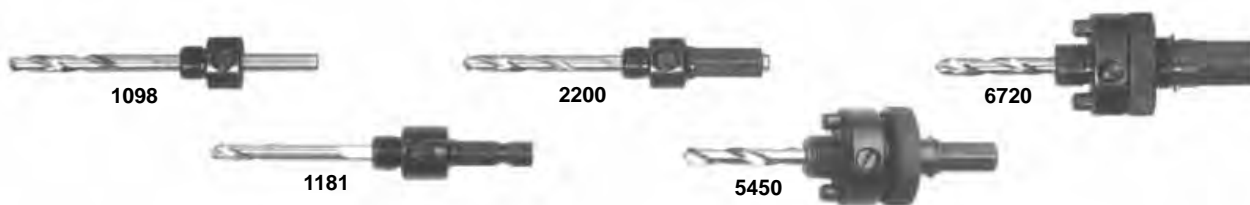
DIAMETER	PIPE ENTRANCE	PART	DIAMETER	PIPE ENTRANCE	PART
9/16 (14mm)	1/4	A 1009	15/16 (24mm)	1/2	A 1015
5/8 (16mm)	1/4	A 1010	1 (25mm)	1/2	A 1016
11/16 (17mm)	1/4	A 1011	1-1/16 (27mm)	1/2	A 1017
3/4 (19mm)	3/8	A 1012	1-1/8 (29mm)	3/4	A 1018
13/16 (21mm)	3/8	A 1013	1-3/16 (30mm)	3/4	A 1019
7/8 (22mm)	1/2	A 1014	-	-	-

5/8-18 ARBOR HOLE

DIAMETER	PIPE ENTRANCE	PART	DIAMETER	PIPE ENTRANCE	PART
1-1/4 (32mm)	3/4	A 1020	2-3/4 (70mm)	2-1/2	A 1044
1-5/16 (33mm)	3/4	A 1021	2-7/8 (73mm)	2-1/2	A 1046
1-3/8 (35mm)	3/4	A 1022	3 (76mm)	2-1/2	A 1048
1-7/16 (37mm)	3/4	A 1023	3-1/8 (79mm)	2-1/2	A 1050
1-1/2 (38mm)	1-1/4	A 1024	3-1/4 (83mm)	3	A 1052
1-9/16 (40mm)	1-1/4	A 1025	3-3/8 (86mm)	3	A 1054
1-5/8 (41mm)	1-1/4	A 1026	3-1/2 (89mm)	3	A 1056
1-11/16 (43mm)	1-1/4	A 1027	3-5/8 (92mm)	3	A 1058
1-3/4 (44mm)	1-1/2	A 1028	3-3/4 (95mm)	3	A 1060
1-13/16 (46mm)	1-1/2	A 1029	3-7/8 (98mm)	3-1/2	A 1062
1-7/8 (48mm)	1-1/2	A 1030	4 (102mm)	3-1/2	A 1064
2 (51mm)	1-1/2	A 1032	4-1/8 (105mm)	3-1/2	A 1066
2-1/16 (52mm)	1-1/2	A 1033	4-1/4 (108mm)	3-1/2	A 1068
2-1/8 (54mm)	1-1/2	A 1034	4-3/8 (111mm)	4	A 1070
2-1/4 (57mm)	2	A 1036	4-1/2 (114mm)	4	A 1072
2-5/16 (59mm)	2	A 1037	4-3/4 (121mm)	4-1/2	A 1076
2-3/8 (60mm)	2	A 1038	5 (127mm)	4-1/2	A 1080
2-1/2 (64mm)	2	A 1040	5-1/2 (140mm)	5	A 1088
2-9/16 (65mm)	2	A 1041	5-3/4 (146mm)	5	A 1092
2-5/8 (67mm)	2-1/2	A 1042	6 (152mm)	5	A 1096

CIC 200™ HOLE SAWS

ARBORS AND ADAPTERS



ARBORS

SHANK TYPE	THREAD SIZE	FITS SAWS		PART
1/4-ROUND	1/2-20	1009-1019	A	1098
3/8-HEX	1/2-20	1009-1019	A	1181
7/16-HEX	1/2-20	1009-1019	A	2200
7/16-HEX W/LOCK PINS	5/8-18	1020-1096	A	5450
5/8-HEX	5/8-18	1020-1096	A	6720

DESCRIPTION	PART
ARBOR ADAPTER (BUSHING) — Use with 1098, 1181, and 2200 for larger size hole saws with 5/8-18 hole size	A 3391
REPLACEMENT PILOT DRILLS — Size 1/4" fits 1098, 2200 and 5450 arbors Size 1/4" fits 1181 arbor	A 3992 A 3994
HIGH-TORQUE BACKUP PLATES Drive plates used between the hole saw and arbor to distribute driving torque when cutting with larger saws Size 3" - 4-1/2" Size 4-1/4" - 6"	A 3981 A 3982
EXTENSION FOR 7/16" ARBORS — For use with 2200 and 5450 arbors / Length 12" — 7/16 Drive	A 3989

HOLE SAW SETS

The most popular hole saws and arbors packed in high-impact polyethylene cases.

	DESCRIPTION	PART
	MECHANICS HOLE SAW SET (7-PIECE) 7/8" (P/N 1014), 1" (P/N 1016), 1-1/8" (P/N 1018), 1-1/4" (P/N 1020) and 1-1/2" (P/N 1024) Hole Saws, 1/4" Round Shank Arbor with 1/2"-20 Threads (P/N 1098) and Arbor Adapter (P/N 3391)	A 8826
	INDUSTRIAL HOLE SAW SET (13-PIECE) 3/4" (P/N 1012), 1-3/4" (P/N 1028), 7/8" (P/N 1014), 1-1/8" (P/N 1018), 1-3/8" (P/N 1022), 1-1/2" (P/N 1024), 2" (P/N 1032), 2-1/8" (P/N 1034), and 2-1/2" (P/N 1040) Hole Saws, 1/4" Round Shank Arbor with 1/2"-20 Threads (P/N 1098), 7/16" Hex Shank Arbor with 1/2"-20 Threads (P/N 2200), 7/16" Hex Arbor w/Lock Pins, 5/8"-18 Threads (P/N 5450), and 12" Long 7/16" Drive Extension (P/N 3989)	A 8829
LARGE INDUSTRIAL HOLE SAW SET (19-PIECE) 3/4" (P/N 1012), 7/8" (P/N 1014), 1-1/8" (P/N 1018), 1-3/8" (P/N 1022), 1-1/2" (P/N 1024), 1-3/4" (P/N 1028), 2" (P/N 1032), 2-1/4" (P/N 1036), 2-1/2" (P/N 1040), 3" (P/N 1048), 3-1/4" (P/N 1052), 3-5/8" (P/N 1058), 3-3/4" (P/N 1060), 4-1/4" (P/N 1068) and 4-1/2" (P/N 1072) Hole Saws, 1/4" Round Shank Arbor with 1/2"-20 Threads (P/N 1098), 7/16" Hex Shank Arbor with 1/2"-20 Threads (P/N 2200), 7/16" Hex Arbor w/Lock Pins, 5/8"-18 Threads (P/N 5450), and 12" Long 7/16" Drive Extension (P/N 3989)	A 8831	

LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

LONG LASTING, FAST CUTTING AND VERSATILE

CUTTING THE HOLE IS PRODUCTIVE.

STRUGGLING TO REMOVE THE PLUG ISN'T.

Bi-Metal Hole Saws cut wood two times faster and last twice as long cutting through metal, compared to the previous generation. The job goes even faster with the revolutionary SPEED SLOT™, which makes plug removal easy.

TRY IT YOURSELF AND BE MORE PRODUCTIVE.



SPEED SLOT™ HOLE SAWS Up to 2X Life

THE SPEED SLOT HOLE SAW OUTPERFORMS ALL COMPETITORS IN WOOD CUTTING, PLUG REMOVAL, AND METAL CUTTING APPLICATIONS.

THE PATENT PENDING SPEED SLOT
Features a staircase design for easy plug removal. The slot is wider than most and is placed lower on the hole saw with multiple leverage points to easily eject the plug with a standard screwdriver.

CUTTING EFFICIENCY

The hole saw is 10 percent taller than the previous model to deliver cleaner cuts through two-by lumber. The SPEED SLOT efficiently removes saw dust and chips while producing a fast cut and preventing the plug from getting stuck in the saw.

UP TO 2X LIFE IN METAL CUTTING

This new hole saw features up to twice the life as our prior model when cutting metal. An enhanced tooth geometry, a thin kerf design, and an advanced coating contribute to the efficiency of the cutting process by removing material faster, therefore generating less heat while cutting.

LENOX 



LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

PART NUMBERS FOR ORDERING

PLUG REMOVAL AS EASY AS 1-2-3
SPEED SLOT™ features a staircase design for easy plug removal.

UP TO 2X LIFE IN METAL CUTTING
Enhanced tooth geometry, a thin kerf design, and an advanced coating contribute to the efficiency of the cutting process.



Bold italic text = Non-stock item
Please allow for up to 2 weeks for delivery.



DIAMETER		P/N	PIPE TAP		PIPE ENTRANCE		SNAP-BACK™ ARBOR	PILOT DRILL
IN	MM		IN	MM	IN	MM		
9/16"	14.3	51700	-	-	-	-	1093	51753
5/8"	15.9	51701	-	-	-	-	1093	51753
11/16"	17.5	51702	-	-	-	-	1093	51753
3/4"	19.1	51703	1/2"	12.7	3/8"	9.5	1093	51753
25/32"	19.8	51712	-	-	-	-	1093	51753
13/16"	21.6	51704	-	-	-	-	1093	51753
7/8"	22.2	51705	3/4"	19.1	1/2"	12.7	1093	51753
15/16"	23.8	51706	-	-	-	-	1093	51753
1"	25.4	51707	-	-	-	-	1093	51753
1-1/16"	27.0	51708	-	-	-	-	1093	51753
1-1/8"	28.6	51709	1"	25.4	3/4"	19.1	1093	51753
1-3/16"	30.2	51710	-	-	-	-	1093	51753
1-1/4"	31.8	51711	-	-	-	-	1095, 1094	51753, 51754
1-5/16"	33.3	51713	-	-	-	-	1095, 1094	51753, 51754
1-3/8"	34.9	51714	-	-	1"	25.4	1095, 1094	51753, 51754
1-7/16"	36.5	51715	-	-	-	-	1095, 1094	51753, 51754
1-1/2"	38.1	51716	1-1/4"	31.8	-	-	1095, 1094	51753, 51754
1-9/16"	39.7	51717	-	-	-	-	1095, 1094	51753, 51754
1-5/8"	41.3	51718	-	-	-	-	1095, 1094	51753, 51754
1-11/16"	42.9	51719	-	-	-	-	1095, 1094	51753, 51754
1-3/4"	44.5	51720	1-1/2"	38.1	1-1/4"	31.8	1095, 1094	51753, 51754
1-13/16"	46.0	51721	-	-	-	-	1095, 1094	51753, 51754
1-7/8"	47.6	51722	-	-	-	-	1095, 1094	51753, 51754
2"	50.8	51723	-	-	1-1/2"	38.1	1095, 1094	51753, 51754
2-1/16"	52.4	51724	-	-	-	-	1095, 1094	51753, 51754
2-1/8"	54.0	51725	-	-	-	-	1095, 1094	51753, 51754
2-1/4"	57.2	51726	2"	50.8	-	-	1095, 1094	51753, 51754
2-3/8"	60.3	51727	-	-	-	-	1095, 1094	51753, 51754
2-1/2"	63.5	51728	-	-	2"	50.8	1095, 1094	51753, 51754
2-9/16"	65.1	51729	-	-	-	-	1095, 1094	51753, 51754
2-5/8"	66.7	51730	2-1/2"	63.5	-	-	1095, 1094	51753, 51754
2-11/16"	68.3	51731	-	-	-	-	1095, 1094	51753, 51754
2-3/4"	69.9	51732	-	-	-	-	1095, 1094	51753, 51754
2-7/8"	73.0	51733	-	-	-	-	1095, 1094	51753, 51754
3"	76.2	51734	-	-	2-1/2"	63.5	1095, 1094	51753, 51754
3-1/8"	79.4	51735	-	-	-	-	1095, 1094	51753, 51754
3-1/4"	82.6	51736	3"	76.2	-	-	1095, 1094	51753, 51754
3-3/8"	85.7	51737	-	-	-	-	1095, 1094	51753, 51754
3-1/2"	88.9	51738	-	-	-	-	1095, 1094	51753, 51754
3-5/8"	92.1	51739	-	-	3"	76.2	1095, 1094	51753, 51754
3-3/4"	95.3	51740	3-1/2"	85.7	-	-	1095, 1094	51753, 51754
3-7/8"	98.4	51741	-	-	-	-	1095, 1094	51753, 51754
4"	101.6	51742	-	-	-	-	1095, 1094	51753, 51754
4-1/8"	104.8	51743	-	-	3-1/2"	85.7	1095, 1094	51753, 51754
4-1/4"	108.0	51744	4"	95.3	-	-	1095, 1094	51753, 51754
4-3/8"	111.1	51745	-	-	-	-	1095, 1094	51753, 51754
4-1/2"	114.3	51746	-	-	-	-	1095, 1094	51753, 51754
4-5/8"	117.5	51747	-	-	4"	95.3	1095, 1094	51753, 51754
4-3/4"	120.7	51748	4-1/2"	108	-	-	1095, 1094	51753, 51754
5"	127.0	51749	-	-	-	-	1095, 1094	51753, 51754
5-1/2"	139.7	51750	-	-	-	-	1095, 1094	51753, 51754
6"	152.4	51751	-	-	-	-	1095, 1094	51753, 51754

LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

RECOMMENDED RPM – METALS

DIAMETER IN	MM	MILD STEEL	TOOL & STAINLESS	CAST IRON	BRASS	ALUMINUM
9/16"	14.3	580	300	400	790	900
5/8"	15.9	550	275	365	730	825
11/16"	17.5	500	250	330	665	750
3/4"	19.1	460	230	300	600	690
25/32"	19.8	425	210	280	560	630
13/16"	20.6	425	210	280	560	630
7/8"	22.2	390	195	260	520	585
15/16"	23.8	370	185	245	495	555
1"	25.4	350	175	235	470	525
1-11/16"	27.0	325	160	215	435	480
1-1/8"	28.6	300	150	200	400	450
1-3/16"	30.2	285	145	190	380	425
1-1/4"	31.8	275	140	180	360	410
1-5/16"	33.3	260	135	175	345	390
1-3/8"	34.9	285	145	190	380	425
1-7/16"	36.5	240	120	160	315	360
1-1/2"	38.1	230	115	150	300	345
1-9/16"	39.7	220	110	145	290	330
1-5/8"	41.3	210	105	140	280	315
1-11/16"	42.9	205	100	135	270	305
1-3/4"	44.5	195	95	130	250	295
1-13/16"	46.0	190	95	125	250	285
1-7/8"	47.6	180	90	120	240	270
2"	50.8	170	85	115	230	255
2-1/16"	52.4	165	80	110	220	245
2-1/8"	54.0	160	80	105	210	240
2-1/4"	57.2	150	75	100	200	225
2-3/8"	60.3	140	70	95	190	220
2-1/2"	63.5	135	65	90	180	205
2-9/16"	65.1	130	65	85	175	200
2-5/8"	66.7	130	65	85	170	195
2-11/16"	68.3	125	60	80	160	185
2-3/4"	69.9	125	60	80	160	185
2-7/8"	73.0	120	60	80	160	180
3"	76.2	115	55	75	150	170
3-1/8"	79.4	110	55	70	140	165
3-1/4"	82.6	105	50	70	140	155
3-3/8"	85.7	100	50	65	130	150
3-1/2"	88.9	95	45	65	130	145
3-5/8"	92.1	95	45	60	120	140
3-3/4"	95.3	90	45	60	120	135
3-7/8"	98.4	85	40	55	110	130
4"	101.6	85	40	55	110	130
4-1/8"	104.8	80	40	55	110	120
4-1/4"	108.0	80	40	55	110	120
4-3/8"	111.1	75	35	50	100	105
4-1/2"	114.3	75	35	50	100	105
4-5/8"	117.5	75	35	50	100	105
4-3/4"	120.7	70	35	45	90	95
5"	127.0	70	35	45	90	95
5-1/2"	139.7	65	30	40	85	90
6"	152.4	65	30	40	85	90

APPLICATIONS

- Wood
- Nail-embedded Wood
- Non-ferrous Metal
- Plastics and Composites
- Metal
- Stainless Steel
- Drywall/Plaster
- Cement board



SIZE RANGE
9/16" – 1-7/16"



SIZE RANGE
1-1/2" – 6"

LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

SNAP-BACK™ ARBORS

FOR SPEED SLOT™ HOLE SAWS*
No Tools. No adaptors. No screwing around.



QUICK CHANGE

Faster and easier to engage/disengage hole saw

PREVENTS THREADS FROM STRIPPING

Drives off pins, not threads

NO TOOLS NEEDED

Prevents hole saw from locking on arbor

NO ADAPTOR REQUIRED

Arbor threads directly into all hole saws

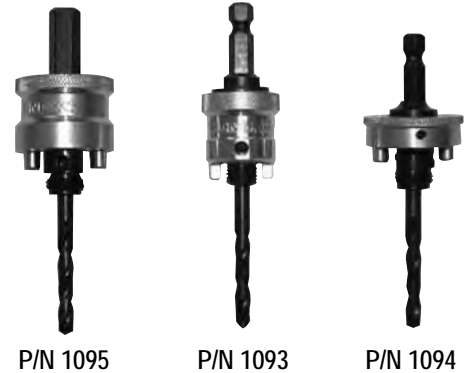
SAFE

No pinch points

FAST

Sleeve does not have to be held back to engage/disengage arbor; no secondary tightening

EASIER PLUG REMOVAL



FITS HOLE SAWS	SIZES		THREAD SIZE	SHANK TYPE	SHANK SIZE		PART
	IN	MM			IN	MM	
51711 – 51751	1-1/4" – 6"	31.8 – 152.4	5/8-18	Hex	1/2" & larger	12.7 & larger	A 1095
51700 – 51710	9/16" – 1-3/16"	14 – 30	1/2-20	Hex	3/8" & larger	9.5 & larger	A 1093
51711 – 51751	1-1/4" – 6"	31.8 – 152.4	5/8-18	Hex	3/8" & larger	9.5 & larger	A 1094

*Snap-Back™ Arbors recommended only for SPEED SLOT™ Hole Saws P/Ns 51700 – 51751.

PILOT DRILLS

FOR SNAP-BACK™ ARBORS
A perfect fit.



ADDED DURABILITY

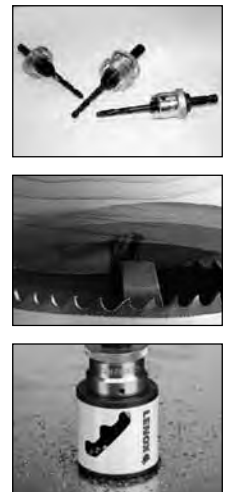
Hardened carbon steel or strength

STARTS ON CONTACT

Split point pilot drill for faster penetration and less walking

FASTER PENETRATION

LESS WALKING



FOR SNAP-BACK™ ARBOR	CHUCK SIZE IN	CHUCK SIZE MM	DIAMETER IN	LENGTH IN	DESCRIPTION	PART
1095	1/4"	6.4	1/4"	4"	Pilot Drill for Snap-Back™ Arbors	A 51754
1093 & 1094	1/4"	6.4	1/4"	3"	Pilot Drill for Snap-Back™ Arbors	A 51753

LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

HOLE SAW KITS – GENERAL PURPOSE KITS

5 PIECE KIT - P/N 8886

Bi-Metal Speed Slot™ Hole Saws and Snap-Back™ Arbor with Pilot Drill.

- **Hole Saw Sizes:**

- 2" (P/N 51723)
- 3" (P/N 51734)
- 3-3/8" (P/N 51737)
- 4-1/8" (P/N 51743)

- **Snap-Back™ Arbor:** P/N 1095

- **Case Size:** 10" H x 14" W

- **Case P/N:** 8886C



9 PIECE KIT - P/N 8887

Bi-Metal Speed Slot™ Hole Saws, Snap-Back™ Arbor with Pilot Drill, and Three Pilot Drills.

- **Hole Saw Sizes:**

- 2-1/8" (P/N 51725)
- 2-9/16" (P/N 51729)
- 3-1/4" (P/N 51736)
- 3-3/4" (P/N 51740)
- 4-3/4" (P/N 51748)

- **Snap-Back™ Arbor:** P/N 1095

- **Pilot Drills:** (3) P/N 51754

- **Case Size:** 10" H x 14" W

- **Case P/N:** 8886C



9 PIECE KIT - P/N 8888

Bi-Metal Speed Slot™ Hole Saws and Two Snap-Back™ Arbors with Pilot Drill.

- **Hole Saw Sizes:**

- 7/8" (P/N 51705)
- 1" (P/N 51707)
- 1-1/4" (P/N 51711)
- 1-3/8" (P/N 51714)
- 1-1/2" (P/N 51716)
- 1-3/4" (P/N 51720)
- 2-1/8" (P/N 51725)

- **Snap-Back™ Arbors:** P/N 1093 and P/N 1094

- **Case Size:** 8" H x 11" W

- **Case P/N:** 8888C



Kits are non-stock items, please allow up to 10 days after receipt of order for delivery.

LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

HOLE SAW KITS – GENERAL PURPOSE KITS

17 PIECE KIT - P/N 8889



Bi-Metal Speed Slot™ Hole Saws, One Snap-Back™ Arbor with Pilot Drill, One Standard Arbor, and Three Pilot Drills.

• **Hole Saw Sizes:**

- 5/8" (P/N 51701)	- 1-3/8" (P/N 51714)
- 3/4" (P/N 51703)	- 1-1/2" (P/N 51716)
- 7/8" (P/N 51705)	- 1-3/4" (P/N 51720)
- 1" (P/N 51707)	- 2" (P/N 51723)
- 1-1/8" (P/N 51709)	- 2-1/2" (P/N 51728)
- 1-1/4" (P/N 51711)	- 3" (P/N 51734)

• **Snap-Back™ Arbor:** P/N 1095

• **Standard Arbor:** P/N 1091

• **Pilot Drills:** (3) P/N 51754

• **Case Size:** 10" H x 14" W • **Case P/N:** 8889C



26 PIECE "BIG DADDY" KIT - P/N 8890

Bi-Metal Speed Slot™ Hole Saws, Two Snap-Back™ Arbors with Pilot Drill, One Standard Arbor, and Two Pilot Drills.

• **Hole Saw Sizes:**

- 3/4" (P/N 51703)	- 2-1/2" (P/N 51728)
- 7/8" (P/N 51705)	- 2-11/16" (P/N 51731)
- 1" (P/N 51707)	- 3" (P/N 51734)
- 1-1/8" (P/N 51709)	- 3-1/4" (P/N 51736)
- 1-3/8" (P/N 51714)	- 3-3/8" (P/N 51737)
- 1-1/2" (P/N 51716)	- 3-5/8" (P/N 51739)
- 1-3/4" (P/N 51720)	- 3-3/4" (P/N 51740)
- 2" (P/N 51723)	- 4-1/8" (P/N 51743)
- 2-1/8" (P/N 51725)	- 4-1/2" (P/N 51746)
- 2-1/4" (P/N 51726)	- 4-3/4" (P/N 51748)

• **Snap-Back™ Arbors:** P/N 1095 and P/N 1093

• **Standard Arbor:** P/N 1091

• **Pilot Drills:** (2) P/N 51754 and (1) P/N 51753

• **Case Size:** 10" H x 14" W • **Case P/N:** 8890C



Kits are non-stock items, please allow up to 10 days after receipt of order for delivery.

LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

HOLE SAW KITS – ELECTRICIAN'S KITS

9 PIECE KIT - P/N 8891

Bi-Metal Speed Slot™ Hole Saws, Two Snap-Back™ Arbors with Pilot Drill, and One Arbor Adapter.

- **Hole Saw Sizes:**
 - 7/8" (P/N 51705) - 1-3/4" (P/N 51720)
 - 1-1/8" (P/N 51709) - 2" (P/N 51723)
 - 1-3/8" (P/N 51714) - 2-1/2" (P/N 51728)
- **Snap-Back™ Arbors:** P/N 1093 and P/N 1095
- **Arbor Adapter:** P/N 1090
- **Case Size:** 8" H x 11" W • **Case P/N:** 8888C

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10 PIECE KIT - P/N 8892

Bi-Metal Speed Slot™ Hole Saws, Two Snap-Back™ Arbors with Pilot Drill, One Pilot Drill and One Arbor Adapter.

- **Hole Saw Sizes:**
 - 7/8" (P/N 51705) - 1-3/4" (P/N 51720)
 - 1-1/8" (P/N 51709) - 2" (P/N 51723)
 - 1-3/8" (P/N 51714) - 2-1/2" (P/N 51728)
- **Snap-Back™ Arbors:** P/N 1093 and P/N 1095
- **Pilot Drill:** P/N 51754
- **Arbor Adapter:** P/N 1090
- **Case Size:** 10" H x 14" W • **Case P/N:** 8892C

17 PIECE KIT - P/N 8893

Bi-Metal Speed Slot™ Hole Saws, Two Snap-Back™ Arbors with Pilot Drill, and Three Pilot Drills.

- **Hole Saw Sizes:**
 - 3/4" (P/N 51703) - 2-1/2" (P/N 51728)
 - 7/8" (P/N 51705) - 2-11/16" (P/N 51731)
 - 1-1/8" (P/N 51709) - 3" (P/N 51736)
 - 1-3/8" (P/N 51714) - 3-5/8" (P/N 51737)
 - 1-3/4" (P/N 51720) - 4-1/8" (P/N 51743)
 - 2" (P/N 51723) - 4-3/4" (P/N 51748)
- **Snap-Back™ Arbor:** P/N 1095 and P/N 1093
- **Pilot Drills:** (2) P/N 51754 and (1) P/N 51753
- **Case Size:** 10" H x 14" W • **Case P/N:** 8890C



Kits are non-stock items, please allow up to 10 days after receipt of order for delivery.

LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

HOLE SAW KITS – PLUMBER'S KITS

9 PIECE KIT - P/N 8894

Bi-Metal Speed Slot™ Hole Saws, Two Snap-Back™ Arbors with Pilot Drill and One Arbor Adapter.

• **Hole Saw Sizes:**

- 3/4" (P/N 51703)
- 7/8" (P/N 51705)
- 1-1/8" (P/N 51709)
- 1-3/8" (P/N 51714)
- 2" (P/N 51723)
- 2-1/2" (P/N 51728)

• **Snap-Back™ Arbors:** P/N 1095 and P/N 1095

• **Arbor Adapter:** P/N 1090

• **Case Size:** 8" H x 11" W • **Case P/N:** 8888C



LENOX 



10 PIECE KIT - P/N 8895

Bi-Metal Speed Slot™ Hole Saws, Two Snap-Back™ Arbors with Pilot Drill, One Pilot Drill and One Arbor Adapter.

• **Hole Saw Sizes:**

- 3/4" (P/N 51703)
- 7/8" (P/N 51705)
- 1-1/8" (P/N 51709)
- 1-1/2" (P/N 51716)
- 1-3/4" (P/N 51720)
- 2-1/4" (P/N 51726)

• **Snap-Back™ Arbors:** P/N 1093 and P/N 1095

• **Pilot Drill:** P/N 51754

• **Arbor Adapter:** P/N 1090

• **Case Size:** 10" H x 14" W • **Case P/N:** 8892C

17 PIECE KIT - P/N 8896

Bi-Metal Speed Slot™ Hole Saws, Two Snap-Back™ Arbors with Pilot Drill, and Three Pilot Drills.

• **Hole Saw Sizes:**

- 3/4" (P/N 51703)
- 7/8" (P/N 51705)
- 1-1/8" (P/N 51709)
- 1-1/2" (P/N 51716)
- 1-3/4" (P/N 51720)
- 2-1/4" (P/N 51726)
- 2-9/16" (P/N 51729)
- 3" (P/N 51736)
- 3-1/2" (P/N 51738)
- 4" (P/N 51742)
- 4-1/4" (P/N 51744)
- 4-1/2" (P/N 51746)

• **Snap-Back™ Arbor:** P/N 1095 and P/N 1093

• **Pilot Drills:** (2) P/N 51754 and (1) P/N 51753

• **Case Size:** 10" H x 14" W • **Case P/N:** 8890C



Kits are non-stock items, please allow up to 10 days after receipt of order for delivery.

LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

HOLE SAW KITS - TRADE KITS

REFRIGERATION KIT

8 PIECES - P/N 8897

Bi-Metal Speed Slot™ Hole Saws and Two Snap-Back™ Arbors with Pilot Drill.

• **Hole Saw Sizes:**

- 5/8" (P/N 51701)
- 7/8" (P/N 51705)
- 1-1/8" (P/N 51709)
- 1-3/8" (P/N 51714)
- 1-5/8" (P/N 51718)
- 2-1/8" (P/N 51725)

• **Snap-Back™ Arbors:** P/N 1093 and P/N 1094

• **Case Size:** 8" H x 11" W

• **Case P/N:** 8888C



LENOX 

WELDER'S KIT

8 PIECES - P/N 8898

Bi-Metal Speed Slot™ Hole Saws, and Two Snap-Back™ Arbors with Pilot Drill.

• **Hole Saw Sizes:**

- 3/4" (P/N 51703)
- 7/8" (P/N 51705)
- 1" (P/N 51707)
- 1-1/4" (P/N 51711)
- 1-1/2" (P/N 51716)
- 2" (P/N 51723)

• **Snap-Back™ Arbors:** P/N 1095 and P/N 1093

• **Case Size:** 8" H x 11" W

• **Case P/N:** 8888C



AUTOMOTIVE KIT

7 PIECES - P/N 8899

Bi-Metal Speed Slot™ Hole Saws, Snap-Back™ Arbor with Pilot Drill and Arbor Adapter.

• **Hole Saw Sizes:**

- 3/4" (P/N 51703)
- 7/8" (P/N 51705)
- 1" (P/N 51707)
- 1-1/8" (P/N 51709)
- 1-1/4" (P/N 51711)

• **Snap-Back™ Arbors:** P/N 1093

• **Arbor Adapter:** P/N 1090

• **Case Size:** 4-11/16" H x 7-1/2" W

• **Case P/N:** 8899C



Kits are non-stock items, please allow up to 10 days after receipt of order for delivery.

LENOX™ BI-METAL SPEED SLOT™ HOLE SAWS

HOLE SAW KITS – MINI TRADE KITS

PLUMBER'S MINI KIT 7 PIECES - P/N 8977

Bi-Metal Speed Slot® Hole Saws and Two Snap-Back® Arbors with Pilot Drill.

- **Hole Saw Sizes:**
 - 1-1/4" - 2"
 - 1-3/8" - 2-1/2"
 - 1-1/2"
- **Snap-Back® Arbors:** P/N 1094 and P/N 1095
- **Case Size:** 9" L x 5" W x 3-3/4" H

LENOX 



ELECTRICIAN'S MINI KIT 8 PIECES - P/N 8978

Bi-Metal Speed Slot® Hole Saws and Two Snap-Back® Arbors with Pilot Drill.

- **Hole Saw Sizes:**
 - 7/8" - 1-3/4"
 - 1-1/8" - 2"
 - 1-3/8" - 2-1/2"
- **Snap-Back® Arbors:** P/N 1094 and P/N 1095
- **Case Size:** 9" L x 5" W x 3-3/4" H

CONTRACTOR'S MINI KIT 7 PIECES - P/N 8979

Bi-Metal Speed Slot® Hole Saws and Two Snap-Back® Arbors with Pilot Drill.

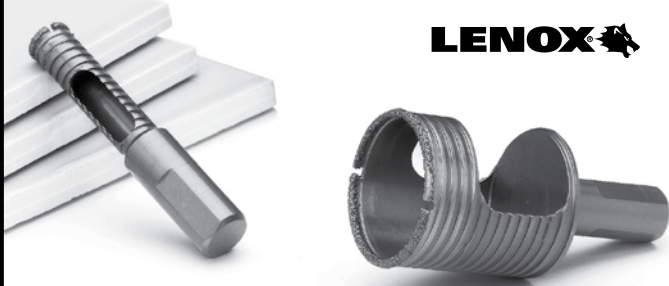
- **Hole Saw Sizes:**
 - 7/8" - 1-1/2"
 - 1-1/8" - 2"
 - 1-3/8"
- **Snap-Back® Arbors:** P/N 1094 and P/N 1095
- **Case Size:** 9" L x 5" W x 3-3/4" H



Kits are non-stock items, please allow up to 10 days after receipt of order for delivery.

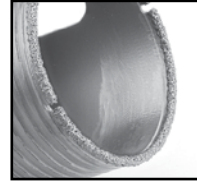
DIAMOND HOLE SAWS

MORE HOLES. LESS TIME.



LENOX

8808 & 8823



FEATURES

- Long lasting – Continuous, brazed edge lasts longer in tile & stone
- Fast, easy cutting – Low torque, little pressure required
- Easier plug removal – Over-sized slot in hole saw for easy plug removal
- No Arbor Required
- More holes in less time

APPLICATIONS

• Porcelain • Ceramic • Slate • Granite • Marble • Glass • Fiberglass • Travertine • Cement board • Laminates

DIAMETER		PIPE TAP		PIPE ENTRANCE		DESCRIPTION	PART
IN	MM	IN	MM	IN	MM		
3/16"	5	–	–	–	–	Diamond Hole Saw, 3/16"	A 51755
1/4"	6	–	–	–	–	Diamond Hole Saw, 1/4"	A 51756
5/16"	8	–	–	–	–	Diamond Hole Saw, 5/16"	A 51757
3/8"	10	–	–	–	–	Diamond Hole Saw, 3/8"	A 51758
1/2"	13	–	–	–	–	Diamond Hole Saw, 1/2"	A 51759
5/8"	15	–	–	–	–	Diamond Hole Saw, 5/8"	A 51760
3/4"	19	3/4"	13	3/8"	10	Diamond Hole Saw, 3/4"	A 51761
1"	25	–	–	–	–	Diamond Hole Saw, 1"	A 51762
1-3/8"	35	–	–	1"	25	Diamond Hole Saw, 1-3/8"	A 51763

9-PIECE PORTA-PAK

SIZES: 3/16" to 1-3/8"

DIAMOND HOLE SAW PORTA-PAK P/N 8808



DESCRIPTION	PART
Diamond Hole Saws / 9-Piece Kit	A 8808

4-PIECE KIT

SIZES: 3/16" to 3/8"



DESCRIPTION	PART
Diamond Hole Saws / 4-Piece Kit	A 8823

CIC 200™ TUNGSTEN CARBIDE GRIT HOLE SAWS

CUTS THROUGH THE MOST DIFFICULT MATERIALS

Incredible, multi-purpose hole saw cuts faster and lasts longer than any conventional hole saw. Cuts easily through extremely tough materials other hole saws barely scratch!



INCREDIBLY FAST AND EASY TO USE!

Cuts through ceramic tile, brick, masonry and fiberglass like butter, leaving a perfectly round, smooth hole without chipping or cracking. Provides a professional look when running conduit, pipe, plumbing or electrical fixtures. An invaluable time, money and labor saver!

APPLICATIONS:

- Ceramic tile
- Brick
- Cement
- Masonry
- Abrasive construction material
- Sandstone
- Fiberglass
- Polyamide
- Laminates
- Composition board
- Plastics
- Wood with glue or nails
- Plywood
- Molded fiberboard
- Plaster
- Drywall

Not for metal-cutting applications

- **TUNGSTEN CARBIDE PARTICLES PERMANENTLY BONDED TO STEEL** — PROVIDES THE SHARPEST, MOST DURABLE CUTTING SURFACE FOR CUTTING EXTREMELY HARD AND ABRASIVE MATERIALS ORDINARY HOLE SAWS CANNOT CUT
- **SELF-SHARPENING** — WHEN A CARBIDE PARTICLE CHIPS, A NEW SHARPER SURFACE IS CREATED
- **2-1/2" CUTTING DEPTH** — DEEPER THAN ANY OTHER COMPETITIVE PRODUCT
- **"BAYONET" STYLE MANDREL** — ALLOWS QUICK CHANGE OF HOLE SAWS AND SECURELY HOLDS ANY ONE OF FIVE DIFFERENT SIZES
- **CARBIDE PILOT DRILL** — EASILY DRILLS THROUGH VIRTUALLY ANY SURFACE AND FITS ANY VARIABLE SPEED HAND DRILL OR DRILL PRESS
- **5 SIZES** — 1-1/4", 2-1/8", 2-5/8", 2-7/8" AND 3-1/4"



TUNGSTEN CARBIDE GRIT HOLE SAWS

DIAMETER	PIPE ENTRANCE	PART		DESCRIPTION	PART	
1-1/4"	3/4	A	1102	Bayonet Mandrel	A	1100
2-1/8"	1-5/8	A	1104	Tungsten Carbide File	A	15575
2-5/8"	2-1/8	A	1106			
2-7/8"	2-3/8	A	1108			
3-1/4"	2-3/4	A	1110			

TOUGH-GRIT™ TUNGSTEN CARBIDE HOLE SAWS

FOR HIGH SHOCK AND HIGH VIBRATION APPLICATIONS

LASTS UP TO 10 TIMES LONGER THAN CONVENTIONAL HOLE SAWS!

- IDEAL FOR CUTTING HARDENED STEEL, CINDER BLOCKS, CERAMIC TILES, MARBLE, CAST IRON PIPE, PATIO TILES, BRICK, FIBERGLASS, HARDWOODS, COMPOSITES, ETC.
- SUPER RESISTANCE TO HEAT, WEAR AND ABRASION WITH SHOCK RESISTANT BACK
- TUNGSTEN CARBIDE GRIT IS BONDED TO ALLOY BACKS WITH A GULLETED, SNAG RESISTANT EDGE
- 1-1/2" CUTTING DEPTH



P/N 8827



13-PIECE TOUGH-GRIT™ TUNGSTEN CARBIDE HOLE SAW KIT

- 3/4", 7/8", 1-1/8", 1-3/8", 1-1/2", 1-3/4", 2", 2-1/4" and 2-1/2" Hole Saws
- 3/8 Hex Arbor for P/N 51012-51019
- 7/16 Hex Arbor for 51020-51096, 1
- 2" Extension and Molded Storage Case

DIAMETER	PIPE ENTRANCE	PART	DIAMETER	PIPE ENTRANCE	PART	DIAMETER	PIPE ENTRANCE	PART
3/4	3/8	A 51012	2"	1-1/2	A 51032	4"	—	A 51064
13/16	—	A 51013	2-1/16	—	A 51033	4-1/8	3-1/2	A 51066
7/8	1/2	A 51014	2-1/8	—	A 51034	4-1/4	—	A 51068
15/16"	—	A 51015	2-1/4	—	A 51036	4-3/8	—	A 51070
1"	—	A 51016	2-5/16	—	A 51037	4-1/2	4"	A 51072
1-1/16	—	A 51017	2-3/8	—	A 51038	4-3/4	—	A 51076
1-1/8	3/4	A 51018	2-1/2	2"	A 51040	5"	—	A 51080
1-3/16	—	A 51019	2-9/16	—	A 51041	5-1/2	—	A 51088
1-1/4	—	A 51020	2-5/8	—	A 51042	5-3/4	—	A 51092
1-5/16	—	A 51021	2-3/4	—	A 51044	6"	—	A 51096
1-3/8	1"	A 51022	2-7/8	—	A 51046	6-3/8	—	A 51097
1-7/16	—	A 51023	3"	2-1/2	A 51048	6-5/8	—	A 51098
1-1/2	—	A 51024	3-1/8	—	A 51050	6-7/8	—	A 51099
1-9/16	—	A 51025	3-1/4	—	A 51052	3/8 Hex Arbor for P/N 51012-51019		A 51100
1-5/8	—	A 51026	3-3/8	—	A 51054			A 51101
1-11/16	—	A 51027	3-1/2	—	A 51056	7/16 Hex Arbor for P/N 51020-51099		A 51101
1-3/4	1-1/4	A 51028	3-5/8	3"	A 51058			A 51102
1-13/16	—	A 51029	3-3/4	—	A 51060	Replacement Drill for 51100		A 51102
1-7/8	—	A 51030	3-7/8	—	A 51062	Replacement Drill for 51101		A 51103

NOTE: NUMBERS IN ITALIC ARE NON-STOCK ITEMS. PLEASE ALLOW 2-3 WEEKS FOR DELIVERY.

DIAMOND HOLE CUTTERS

EXCEPTIONAL PERFORMANCE IN A RANGE OF APPLICATIONS

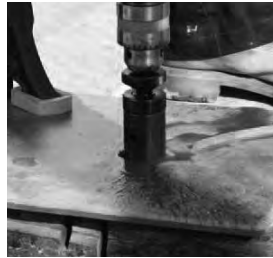
FEATURES

- Available Sizes: 3/4" to 4"
- Tough diamond grit for long life
- Thin kerf segmented edges for fast, smooth hole-cutting
- Suitable for a wide range of users
- Diamond tipped by vacuum brazing for a permanent bond
- Users will enjoy long tool life and consistent, fast penetration
- A complete range of arbor accessories are available



APPLICATIONS

- Hard Tile
- Fiberglass
- Stone
- Cement Board
- Pipes
- Waste Pipes
- Cabling
- Porcelain
- Wood
- Thick Plastic Tubing
- Thin Plastic
- Plexi
- Granite
- Marble
- Slate
- Iron
- Glass
- Laminate Flooring
- Hardie Board



DESCRIPTION	SIZE	PART	
Diamond Hole Cutter	3/4"	A	51770
Diamond Hole Cutter	7/8"	A	51771
Diamond Hole Cutter	1-1/8"	A	51772
Diamond Hole Cutter	1-1/4"	A	51773
Diamond Hole Cutter	1-3/8"	A	51774
Diamond Hole Cutter	1-1/2"	A	51775
Diamond Hole Cutter	1-3/4"	A	51776
Diamond Hole Cutter	2"	A	51777
Diamond Hole Cutter	2-1/4"	A	51778
Diamond Hole Cutter	2-1/2"	A	51779
Diamond Hole Cutter	3"	A	51780
Diamond Hole Cutter	3-1/4"	A	51781
Diamond Hole Cutter	3-11/32"	A	51782
Diamond Hole Cutter	3-1/2"	A	51783
Diamond Hole Cutter	4"	A	51784
Arbor	3/4" to 1-1/8"	A	51785
Arbor	1-1/4" to 4"	A	51786
Pilot Drill	-	A	51787

RAZORQWIK™ CARBIDE TIPPED HOLE CUTTERS

THE ULTIMATE SOLUTION TO DRILLING THICK STEEL

The perfect, portable tool for the professional electrician, plumber, mechanic and general contractor. An extremely productive tool that is a cost effective alternative to bi-metal holesaws.



INCREDIBLY FAST & EASY TO USE!

For cutting pipe, thick steel, steel plate, iron, aluminum, copper, cast iron and stainless steel up to 1" thick. An invaluable time, money and labor saver!



APPLICATIONS

- Junction/Switch Boxes
- Metal Studs
- Electrical Appliances
- Lighting Fixtures
- Auto Body Repair
- Truck/Trailer Frames
- Ductile Pipe
- *Anywhere a standard holesaw just won't cut it!*

- **SPECIAL TUNGSTEN CARBIDE TEETH**
SUPERIOR WEAR AND HEAT RESISTANCE.
CUTS STAINLESS STEEL AND TOUGH ALLOYS



- **ONE-PIECE CONSTRUCTION**
NO ASSEMBLY REQUIRED AND ASSURES
STABLE, ACCURATE DRILLING

- **EJECTOR SPRING AND PILOT DRILL**
(INCLUDED AND ASSEMBLED) –
EJECTS THE SLUG SAVING TIME AND
AGGRAVATION TRYING TO REMOVE SLUGS



- **SAFETY COLLAR STOP**
PREVENTS OVER PENETRATION
FOR SAFER, FASTER OPERATION

RAZORQWIK™ CARBIDE TIPPED HOLE CUTTERS

DIAMETER	STEEL (RPM)	PART	DIAMETER	STEEL (RPM)	PART	DIAMETER	STEEL (RPM)	PART
9/16"	700-1000	A 51109	1-7/16"	300-600	A 51123	2-1/2"	150-300	A 51136
5/8"	700-1000	A 51110	1-1/2"	300-600	A 51124	2-5/8"	150-300	A 51137
11/16"	700-1000	A 51111	1-9/16"	300-600	A 51125	2-3/4"	150-300	A 51138
3/4"	700-1000	A 51112	1-5/8"	200-500	A 51126	3"	150-300	A 51139
13/16"	700-1000	A 51113	1-11/16"	200-500	A 51127	3-1/4"	100-200	A 51140
7/8"	500-800	A 51114	1-3/4"	200-500	A 51128	3-1/2"	100-200	A 51141
15/16"	500-800	A 51115	1-13/16"	200-500	A 51129	3-5/8"	100-200	A 51107
1"	500-800	A 51116	1-7/8"	200-500	A 51130	3-3/4"	100-200	A 51142
1-1/16"	500-800	A 51117	1-15/16"	200-500	A 51131	4"	100-200	A 51143
1-1/8"	500-800	A 51118	2"	200-500	A 51132	4-1/8"	100-200	A 51108
1-3/16"	500-800	A 51119	2-1/8"	200-400	A 51133	4-1/4"	100-200	A 51144
1-1/4"	300-600	A 51120	2-1/4"	200-400	A 51134	4-1/2"	100-200	A 51145
1-5/16"	300-600	A 51121	2-3/8"	150-300	A 51135			
1-3/8"	300-600	A 51122	2-9/16"	150-300	A 51106			

RAZORQWIK™ CARBIDE TIPPED HOLE CUTTER ACCESSORIES

DESCRIPTION	PART
Pilot Drill for Hole Cutters	A 51146
Spring for Carbide Hole Saw	A 51148
Carbide Tipped Pilot Drill	A 51149
Extender – Precision machined tool steel, extends hole cutters by 4" (for 1/2" shank)	A 51104
Extender – Precision machined tool steel, extends hole cutters by 4" (for 3/8" shank)	A 51105

RAZORQWIK™ CARBIDE TIPPED HOLE CUTTERS

RAZORQWIK™ TRADE SETS

The perfect, portable tool for the professional electrician, plumber, mechanic and general contractor. An extremely productive tool that is a cost effective alternative to bi-metal holesaws. For cutting pipe, thick steel, steel plate, iron, aluminum, copper, cast iron and stainless steel up to 1" thick.



MASTER ELECTRICIAN SET P/N 8801

10 piece set contains the following diameters:

- 7/8"
- 1-1/8"
- 1-3/8"
- 1-3/4"
- 2"
- 2-1/2"
- 3"
- 3-5/8"
- 4-1/8"
- 4-1/2"

Packed in a rugged plastic case.



STARTER ELECTRICIAN SET P/N 8802

6 piece set contains the following diameters:

- 7/8"
- 1-1/8"
- 1-3/8"
- 1-3/4"
- 2"
- 2-1/2"

Packed in a rugged plastic case.



PLUMBER SET P/N 8803

6 piece set contains the following diameters:

- 3/4"
- 7/8"
- 1-1/8"
- 1-1/2"
- 1-3/4"
- 2-1/4"

Packed in a rugged plastic case.



MECHANICAL SET P/N 8804

10 piece set contains the following diameters:

- 5/8"
- 3/4"
- 7/8"
- 1"
- 1-1/8"
- 1-1/4"
- 1-3/8"
- 1-1/2"
- 1-3/4"
- 2"

Packed in a rugged plastic case.



DOOR SET P/N 8805

For professional lock installation in steel doors, with a cutting depth of 2", it is perfect for drilling steel door lockset holes.

4 piece set contains the following diameters:

- 7/8"
- 1"
- 1-1/2"
- 2-1/8"

Packed in a rugged plastic case.

RAZORQWIK™ CARBIDE TIPPED HOLE CUTTERS

DOOR LOCK HOLE CUTTERS

For drilling steel door lockset holes. Cuts through steel doors up to 2" thick. Truly an invaluable time, money and labor saver!



RAZORQWIK™ CARBIDE TIPPED DOOR LOCK CUTTERS

DESCRIPTION	DIAMETER	STEEL (RPM)	PART NO.	
Carbide Tipped Door Lock Cutter	1-1/2"		A	51167
Carbide Tipped Door Lock Cutter	2-1/8"		A	51168
Pilot	-	-	A	51169
Screw	-	-	A	51147

RAZORQWIK™ CARBIDE TIPPED HOLE CUTTER KITS



P/N 8839



P/N 8838

	DESCRIPTION	PART	
Standard	4-Piece RazorQwik™ Carbide Tipped Hole Cutter Kit 5/8" (P/N 51110), 3/4" (P/N 51112), 7/8" (P/N 51114) and 1" (P/N 51116) Hole Cutters with 4 Pilot Drills and 4 Ejector Springs Packed in a Steel Case	A	8839
Bolt Sizes	4-Piece RazorQwik™ Carbide Tipped Hole Cutter Kit 11/16" (P/N 51111), 13/16" (P/N 51113), 15/16" (P/N 51115) and 1-1/16" (P/N 51117) Hole Cutters with 4 Pilot Drills and 4 Ejector Springs Packed in a Steel Case	A	8837
Pipe/Conduit	5-Piece RazorQwik™ Carbide Tipped Hole Cutter Kit 7/8" (P/N 51114), 1-1/8" (P/N 51118), 1-3/8" (P/N 51122), 1-3/4" (P/N 51128) and 2" (P/N 51132) Hole Cutters with 5 Pilot Drills and 5 Ejector Springs Packed in a Steel Case	A	8838
	Case Only	A	8838C
	6-Piece RazorQwik™ Carbide Tipped Hole Cutter Kit 5/8" (P/N 51110), 3/4" (P/N 51112), 7/8" (P/N 51114), 1-3/16" (P/N 51119), 1-1/2" (P/N 51124), 2" (P/N 51132) Hole Cutters with 6 Pilot Drills and 6 Ejector Springs Packed in a Rugged Plastic Case	A	8806

RAZORQWIK™ STUBBY CARBIDE TIPPED HOLE CUTTERS

THE ULTIMATE SOLUTION TO DRILLING UP TO 1/8" THICK STEEL

The perfect, portable tool for the professional electrician, plumber, mechanic and general contractor. An extremely productive tool that is a cost effective alternative to bi-metal holesaws.

INCREDIBLY FAST AND EASY TO USE!

For cutting steel plate, stainless steel, sheet metal and tubing up to 1/8" thick. An invaluable time, money and labor saver!



- SPECIAL TUNGSTEN CARBIDE TEETH – SUPERIOR WEAR AND HEAT RESISTANCE. CUTS STAINLESS STEEL AND TOUGH ALLOYS
- ONE-PIECE CONSTRUCTION – NO ASSEMBLY REQUIRED AND ASSURES STABLE, ACCURATE DRILLING
- EJECTOR SPRING AND PILOT DRILL (INCLUDED AND ASSEMBLED) – EJECTS THE SLUG SAVING TIME AND AGGRAVATION TRYING TO REMOVE SLUGS
- SAFETY COLLAR STOP – PREVENTS OVER PENETRATION FOR SAFER, FASTER OPERATION
- 1/4" HEX SHANK – FOR USE IN QUICK-CHANGE ADAPTERS
- FAST, CLEAN CUTS EVERY TIME
- PERFECT FOR USE IN BATTERY POWERED DRILLS BECAUSE THEY CUT QUICKLY WITH LOW POWER



APPLICATIONS:

- Junction/Switch Boxes
- Metal Studs
- Electrical Appliances
- Lighting Fixtures
- Auto Body Repair
- Truck/Trailer Frames
- Ductile Pipe
- *Anywhere a standard holesaw just won't cut it!*

RAZORQWIK™ STUBBY CARBIDE TIPPED HOLE CUTTERS

DIAMETER	STEEL (RPM)	PART	DIAMETER	STEEL (RPM)	PART
5/8"	700-1000	A 51150	1-3/16"	500-800	A 51159
11/16"	700-1000	A 51151	1-1/4"	300-600	A 51160
3/4"	700-1000	A 51152	1-5/16"	300-600	A 51161
13/16"	700-1000	A 51153	1-3/8"	300-600	A 51162
7/8"	500-800	A 51154	Pilot Drill for Stubby Carbide Hole Cutters		A 51163
15/16"	500-800	A 51155	Screw for Stubby Carbide Hole Cutters		A 51164
1"	500-800	A 51156	Spring for Stubby Carbide Hole Cutters		A 51165
1-1/16"	500-800	A 51157	1/4 and 3/8 Quick Change Adapter		A 51166
1-1/8"	500-800	A 51158			

RAZORQWIK™ STUBBY CARBIDE TIPPED HOLE CUTTER KITS

	DESCRIPTION	PART
Standard	6-Piece RazorQwik™ Stubby Carbide Tipped Hole Cutter Kit 5/8" (P/N 51150), 3/4" (P/N 51152), 7/8" (P/N 51154), 1" (P/N 51156), 1-1/8" (P/N 51158) Stubby Hole Cutters, Quick Change Adapter, 5 Pilot Drills and 5 Ejector Springs Packed in a Steel Case	A 8812
Pipe/Conduit	6-Piece RazorQwik™ Stubby Carbide Tipped Hole Cutter Kit (2) 7/8" (P/N 51154), (2) 1-1/8" (P/N 51158), (1) 1-3/8" (P/N 51162) Stubby Hole Cutters, Quick Change Adapter, 5 Pilot Drills and 5 Ejector Springs Packed in a Steel Case	A 8813
	Case Only	A 8812C



Part #8812

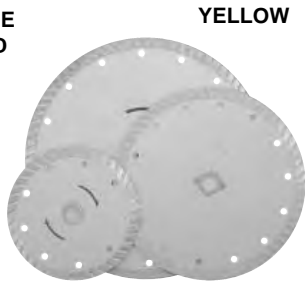
DIAMOND BLADES

THE ULTIMATE IN CIRCULAR SAW BLADES

Turns circular saws into specialty tools. Cuts concrete, block, brick, asphalt and masonry as well as general purpose applications. These diamond blades can be used wet or dry.

NINJA STAR

- THESE BLADES HAVE A UNIQUE COLD PRESSED CASTELLATED RIM WHICH PROVIDES FAST CHIP FREE CUTTING
- CUTS BRICK, BLOCK, CONCRETE, BLUESTONE, FLAGSTONE, GRANITE, ROOF TILE AND OTHER HARD MASONRY MATERIALS

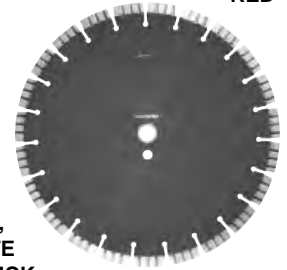


YELLOW

BLADE DIA.	ARBOR	MAX RPM	PART	
4" (100mm)	7/8-5/8	15,000	A	18986
4.5" (115mm)	7/8-5/8	13,300	A	18987
7" (175mm)	DM-5/8	8,730	A	18990
10" (250mm)	7/8-5/8	6,115	A	18993

BOHEMIAN DEVIL

- DESIGNED WITH A DOUBLE SEGMENT HEIGHT FOR LONGER BLADE LIFE
- SAVES TIME WITH LESS BLADE CHANGES
- SEGMENTS ARE LASER WELDED WITH A SUPER SOFT BOND FOR CUTTING
- CUTS CURED CONCRETE, REINFORCED CONCRETE, REBAR, CONCRETE PIPE, RIGID CONCRETE PIPE (RCP) AND REFRACTORY BRICK

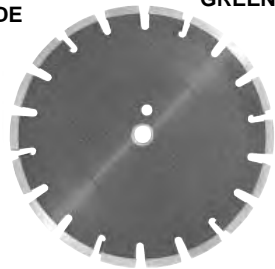


RED

BLADE DIA.	ARBOR	MAX RPM	PART	
12" (300mm)	1"-20mm	6,300	A	18994
14" (350mm)	1"-20mm	5,400	A	18995

GIGANTICO

- DESIGNED TO PROVIDE LONG BLADE LIFE AND FAST CUTS WITH IT'S 15MM JUMBO SEGMENT HEIGHT
- A FUNCTIONAL VALUE AT AN ECONOMICAL PRICE
- MEDIUM BOND BLADE IS PERFECT FOR CUTTING GENERAL PURPOSE MASONRY, BRICK, BLOCK AND CONCRETE

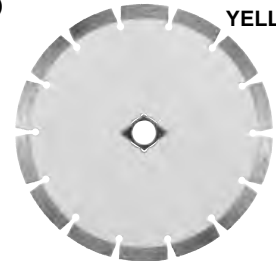


GREEN

BLADE DIA.	ARBOR	MAX RPM	PART	
12" (300mm)	1"-20mm	6,300	A	19014
14" (350mm)	1"-20mm	5,400	A	19015

WILD DEMON

- .395 SEGMENTED HEIGHT (10MM) SUPREME BLADES ARE AMONG THE FINEST ON THE MARKET
- OUTLASTING MOST OF THE COMPETITION BY 30-40%
- HEAT TREATED STEEL CORE PROVIDES EXTREME BLADE STRENGTH FOR DEEP CUTS
- MEDIUM BOND, FOR GENERAL PURPOSE, BRICK, BLOCK AND CONCRETE



YELLOW

BLADE DIA.	ARBOR	MAX RPM	PART	
4" (100mm)	7/8-5/8	15,000	A	18999
4.5" (115mm)	7/8-5/8	13,300	A	19000
7" (175mm)	DM-5/8	8,730	A	19003
10" (250mm)	7/8-5/8	6,115	A	19006

SLICER

- LASER WELDED SEGMENTED BLADE IS PERFECT FOR LOW HP WALK BEHIND SAWS
- THE UNIQUE FEATURE OF THIS BLADE IS ITS UNDERCUT PROTECTION SYSTEM WITH C3 CARBIDE INSERTS
- CUTS AND CLEARS A CUTTING PATH IN ONE MOTION
- HARD BOND IS PERFECT FOR CUTTING ASPHALT, GREEN CONCRETE AND LIGHTWEIGHT BLOCK



GREEN

BLADE DIA.	ARBOR	MAX RPM	PART	
12" (300mm)	1"-20mm	6,300	A	19019
14" (350mm)	1"-20mm	5,400	A	19020

DIAMOND BLADES (Cont'd.)

PRO-BLADES - PRO 1, PRO 2, PRO 3, PRO 4

The PRO-BLADE is truly the finest quality professional blade in the market. With a 40% diamond concentration and a 10mm (.395) segment height, this blade cuts 30% faster and lasts up to 40% longer. Blade specifications meet or exceed demands of Department of Transportation & Professional Concrete/Asphalt Cutters. These blades are perfect for high horsepower and low RPM walk behind saws. Length of cuts: 6,000 to 18,000 inch feet.

PRO-1 Bond: Soft
Cuts: Cured concrete

PRO-2 Bond: Medium
Cuts: Cured concrete

PRO-3 Bond: Hard
Cuts: Asphalt

PRO-4 Bond: Medium
Cuts: Asphalt over concrete

Use wet only (do not run dry).

*Also available in a Super Soft Bond

WHITE
BLUE
GRAY
RED



BLADE DIA.	ARBOR	MODEL	MAX. RPM	PART	
12" x .125	1"	Pro-1	5,095	A	19061
14" x .125	1"	Pro-1	4,365	A	19062
14" x .187	1"	Pro-1	4,365	A	19063
14" x .250	1"	Pro-1	4,365	A	19064
14" x .312	1"	Pro-1	4,365	A	19065
14" x .375	1"	Pro-1	4,365	A	19066
16" x .125	1"	Pro-1	3,280	A	19067
16" x .187	1"	Pro-1	3,280	A	19068
16" x .500	1"	Pro-1	3,280	A	19069
18" x .125	1"	Pro-1	3,395	A	19070
18" x .155	1"	Pro-1	3,395	A	19071
18" x .187	1"	Pro-1	3,395	A	19072
18" x .250	1"	Pro-1	3,395	A	19073
18" x .312	1"	Pro-1	3,395	A	19074
18" x .375	1"	Pro-1	3,395	A	19075
20" x .125	1"	Pro-1	3,055	A	19076
20" x .155	1"	Pro-1	3,055	A	19077
20" x .187	1"	Pro-1	3,055	A	19078
24" x .125	1"	Pro-1	2,550	A	19079
24" x .155	1"	Pro-1	2,550	A	19080
24" x .187	1"	Pro-1	2,550	A	19081
24" x .250	1"	Pro-1	2,550	A	19082
26" x .155	1"	Pro-1	2,350	A	19083
26" x .187	1"	Pro-1	2,350	A	19084
26" x .250	1"	Pro-1	2,350	A	19085
30" x .160	1"	Pro-1	2,040	A	19086
30" x .187	1"	Pro-1	2,040	A	19087
30" x .250	1"	Pro-1	2,040	A	19088
36" x .160	1"	Pro-1	1,700	A	19089
36" x .187	1"	Pro-1	1,700	A	19090
14" x .125	1"	Pro-2	4,365	A	19091
14" x .187	1"	Pro-2	4,365	A	19092
16" x .125	1"	Pro-2	3,280	A	19093
18" x .125	1"	Pro-2	3,395	A	19094
18" x .187	1"	Pro-2	3,395	A	19095
20" x .125	1"	Pro-2	3,055	A	19096
20" x .187	1"	Pro-2	3,055	A	19097
24" x .125	1"	Pro-2	2,550	A	19098
24" x .155	1"	Pro-2	2,550	A	19099
24" x .187	1"	Pro-2	2,550	A	19100

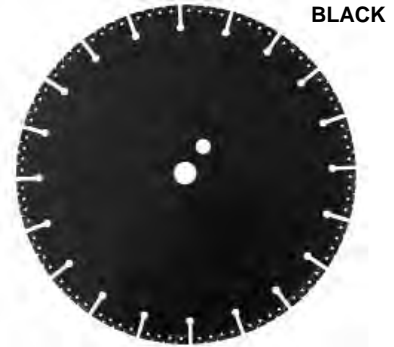
BLADE DIA.	ARBOR	MODEL	MAX. RPM	PART	
26" x .155	1"	Pro-2	2,350	A	19101
26" x .187	1"	Pro-2	2,350	A	19102
30" x .187	1"	Pro-2	2,040	A	19103
36" x .187	1"	Pro-2	1,700	A	19104
12" x .125	1"	Pro-3	2,550	A	19105
14" x .125	1"	Pro-3	2,550	A	19106
14" x .187	1"	Pro-3	5,095	A	19107
14" x .250	1"	Pro-3	4,365	A	19108
14" x .312	1"	Pro-3	4,365	A	19109
14" x .375	1"	Pro-3	4,365	A	19110
14" x .500	1"	Pro-3	4,365	A	19111
16" x .125	1"	Pro-3	3,280	A	19112
16" x .187	1"	Pro-3	3,280	A	19113
16" x .250	1"	Pro-3	3,280	A	19114
16" x .500	1"	Pro-3	3,280	A	19115
18" x .125	1"	Pro-3	3,395	A	19116
18" x .155	1"	Pro-3	3,395	A	19117
18" x .187	1"	Pro-3	3,395	A	19118
18" x .250	1"	Pro-3	3,395	A	19119
18" x .312	1"	Pro-3	3,395	A	19120
18" x .375	1"	Pro-3	3,395	A	19121
20" x .125	1"	Pro-3	3,055	A	19122
20" x .155	1"	Pro-3	3,055	A	19123
20" x .187	1"	Pro-3	3,055	A	19124
24" x .125	1"	Pro-3	2,550	A	19125
24" x .155	1"	Pro-3	2,550	A	19126
24" x .187	1"	Pro-3	2,550	A	19127
24" x .250	1"	Pro-3	2,550	A	19128
26" x .160	1"	Pro-3	2,350	A	19129
26" x .187	1"	Pro-3	2,350	A	19130
30" x .187	1"	Pro-3	2,040	A	19131
36" x .187	1"	Pro-3	1,700	A	19132
14" x .125	1"	Pro-4	4,365	A	19133
16" x .125	1"	Pro-4	3,280	A	19134
18" x .125	1"	Pro-4	3,395	A	19135
18" x .187	1"	Pro-4	3,395	A	19136
24" x .187	1"	Pro-4	2,550	A	19137
26" x .187	1"	Pro-4	2,350	A	19138
30" x .187	1"	Pro-4	2,040	A	19139
36" x .187	1"	Pro-4	1,700	A	19140

DIAMOND BLADES (Cont'd.)

SABERTOOTH

The newly engineered Sabertooth Diamond Blade is designed to power cut through all hard materials with its electroplated diamond grit, like a knife through butter.

- Tensioned Core
- Diamond: MBS 940
- Bond: Hard
- Cuts: Ductile Iron, Cast Iron, Steel, PVC, Reinforced Concrete Pipe and Cured Concrete.
- Use Wet or Dry
- High Speed



BLADE DIA.	THICKNESS	SEG. HEIGHT	ARBOR	MAX RPM		PART
4"	.080	5 mm	7/8"-5/8"	15,000	A	19031
4.5"	.080	5 mm	7/8"-5/8"	13,300	A	19032
7"	.080	5 mm	DM-5/8"	8,730	A	19033
10"	.110	5 mm	7/8"-5/8"	6,115	A	19034
12"	.125	5 mm	1"-20 mm	6,300	A	19035
14"	.125	5 mm	1"-20 mm	5,400	A	19036

HURRICANE 1 - SINGLE ROW CUP WHEELS

Hurricane 1 cup wheels fit most angle grinders and floor grinding machines. They are the perfect tool in construction for concrete surface preparation and tilt wall finishing. Also perfect for fast grinding and rough de-burring. Ideal for the contractor that is concerned with up front costs.

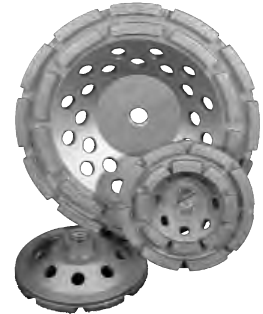


- Bond: Soft
- Cuts: Grinding and de-burring and cleaning concrete, natural stone, artificial stone, and similar materials. For smoothing rough and patched floors, sidewalks, patios, driveways, streets, etc. Can also be used for grinding down bumps and rough joints on ground surfaces and slant walls.
- Use wet or dry
- High Speed

BLADE DIA.	ARBOR	MAX. RPM		PART
4"	5/8-11	15,000	A	19157
7"	5/8-11	8,730	A	19158

HURRICANE 2 - DOUBLE ROW CUP WHEELS

Hurricane 2 cup wheels fit most angle grinders and floor grinding machines. They are the perfect tool in construction for concrete surface preparation and tilt wall finishing. Also perfect for fast grinding and rough de-burring. Ideal for the contractor that is concerned with up front costs.



- Bond: Soft
- Cuts: Grinding and de-burring and cleaning concrete, natural stone, artificial stone, and similar materials. For smoothing rough and patched floors, sidewalks, patios, driveways, streets, etc. Can also be used for grinding down bumps and rough joints on ground surfaces and slant walls.
- Use wet or dry
- High Speed

BLADE DIA.	ARBOR	MAX. RPM		PART
4"	5/8-11	15,000	A	19159
7"	5/8-11	8,730	A	19160

DIAMOND BLADES (Cont'd.)

RESTOR ONE

These 10mm segment height tuck point blades are ideal for the economy minded contractor who has a large restoration project to tackle and needs low up front costs. Also provides superior cutting ability for aggressive and rapid mortar removal with a minimum of equipment strain. These tuck pointer blades perform extremely well for the cost, providing fast speed and good life.



- Bond: Soft
- Cuts: Mortar removal
- Use wet or dry
- High Speed

BLADE DIA.	ARBOR	MAX. RPM	PART
4"	7/8-5/8	15,000	A 19022
4.5"	7/8-5/8	13,300	A 19023

CORE BIT - WET

These PREMIUM GRADE core bits are manufactured to the highest specifications and designed for a multitude of drilling applications. Example: cutting into highways, runways, dams, buildings, bridges, parking garages, walls, floors, culverts, drainage pipes and more. The Premium Plus has a higher concentration of diamonds; faster cuts, longer life.



- Wet cutting



BLADE DIA.	ARBOR	MAX. RPM	PART
2"	1-1/4"-7	-	A 19141
2.25"	1-1/4"-7	-	A 19142
2.5"	1-1/4"-7	-	A 19143
3"	1-1/4"-7	-	A 19144
3.5"	1-1/4"-7	-	A 19145
4"	1-1/4"-7	15,000	A 19146
4.25"	1-1/4"-7	-	A 19147
4.5"	1-1/4"-7	13,300	A 19148
5"	1-1/4"-7	12,000	A 19149
5.5"	1-1/4"-7	-	A 19150
6"	1-1/4"-7	10,150	A 19151
6.5"	1-1/4"-7	-	A 19152
7"	1-1/4"-7	8,730	A 19153
8"	1-1/4"-7	7,640	A 19154
10"	1-1/4"-7	6,115	A 19155
12"	1-1/4"-7	5,095	A 19156

DIAMOND CORE BITS

DIAMOND CORE BITS

- Engineered to bore and drill fast clean holes
- For natural and composite materials
- 1/4" shank
- Perfect for porcelain
- Includes extractor



DIAMETER	PART
1/8"	D 51006
3/16"	D 51007
1/4"	D 51008
5/16"	B 51009
3/8"	B 51010
1/2"	B 51011

DIAMOND CORE BIT ASSORTMENT

- Engineered to bore and drill fast clean holes
- For natural and composite materials
- 1/4" shank
- Perfect for porcelain
- Includes extractor



P/N 8818

OSCILLATING TOOL BLADES

BI-METAL UNIVERSAL BLADE

Features

Bi-metal universal blades are great for plunge and flush cuts in a wide range of materials.

Cuts

- Sheet metal
- Copper pipes
- Aluminum profiles
- PVC
- Wood w/ embedded nails
- Plasterboard
- Nearly all plastics



Each package includes 3 blades.

BLADE WIDTH	BLADE MATERIAL	ARBOR STYLE	BLADE TYPE/USAGE	PART	
1-1/3"	Bi-metal	Uni-Fit Mount	Metal & Wood	A	19161

HIGH CARBON STEEL (HCS) STANDARD BLADES

Features

High carbon steel (HCS) standard blades are great for plunge and flush cuts in a wide range of non metallic materials.

Cuts

- Softwood
- Hardwood
- Particle board
- Plywood
- Fiberglass
- Plexiglass
- Nearly all plastics



Each package includes 3 blades.

BLADE WIDTH	BLADE MATERIAL	ARBOR STYLE	BLADE TYPE/USAGE	PART	
1-1/3"	HCS	Uni-Fit Mount	Wood & Plastic	A	19162
2-1/3"	HCS	Uni-Fit Mount	Wood & Plastic	A	19163

HIGH CARBON STEEL (HCS) PRECISION JAPAN BLADES

Features

High carbon steel (HCS) precision Japan tooth blades are great for plunge and flush cuts in a wide range of materials. Fastest cutting blade due to the large, sharp teeth.

Cuts

- Drywall
- Hardwood floors
- Molding
- Soft plastics
- Trim
- Laminated materials



Each package includes 3 blades.

BLADE WIDTH	BLADE MATERIAL	ARBOR STYLE	BLADE TYPE/USAGE	PART	
1-1/3"	HCS	Uni-Fit Mount	Wood & Plastic	A	19164
2-1/3"	HCS	Uni-Fit Mount	Wood & Plastic	A	19165

ALL OSCILLATING TOOL BLADES FOR USE WITH...

FEIN® MultiMaster® • Bosch® Max Multi-X™ • Dremel® Multi-Max® • Craftsman® NEXTEC® • Skil® Multi-Tasker® • Milwaukee® M12™ • Tools with 3/8" round arbors

OSCILLATING TOOL BLADES

HIGH SPEED STEEL (HSS) CIRCULAR BLADE

Features

High speed steel (HSS) universal blades are great for cutting a wide range of materials.

Cuts

- Sheet metal
- Copper pipes
- Aluminum profiles
- PVC
- Wood w/embedded nails
- Brass
- Bronze
- Nearly all plastics



Each package includes 2 blades.

BLADE WIDTH	BLADE MATERIAL	ARBOR STYLE	BLADE TYPE/USAGE	PART
3-1/8"	HSS	Uni-Fit Mount	Metal & Wood	A 19168

HIGH SPEED STEEL (HSS) RECESSED SEGMENT BLADE

Features

High speed steel (HSS) universal blades are great for cutting a wide range of materials. Recessed design allows flush cutting. Segmented design allows cutting into corners without damaging the adjacent material.

Cuts

- Hardwood
- Softwood
- Sheet metal
- Copper pipes
- Aluminum profiles
- PVC
- Wood w/ embedded nails
- Brass
- Bronze
- Nearly all plastics



BLADE WIDTH	BLADE MATERIAL	ARBOR STYLE	BLADE TYPE/USAGE	PART
3-1/8"	HSS	Uni-Fit Mount	Metal & Wood	A 19166

COMBO 3 PACK - HIGH CARBON STEEL (HCS) PRECISION JAPAN BLADES

Includes

- Bi-Metal Universal Blade
P/N 19161
- HCS Standard Blade
P/N 19162
- HCS Precision Japan Blade
P/N 19165

Cuts

- Hardwood
- Softwood
- Sheet metal
- Copper pipes
- Aluminum profiles
- PVC and Soft plastics
- Molding
- Trim
- Wood w/ embedded nails
- Brass and Bronze
- Drywall
- Hardwood floors
- Laminated materials



DESCRIPTION	PART
Combo 3 Pack	A 19170

ALL OSCILLATING TOOL BLADES FOR USE WITH...

FEIN® MultiMaster® • Bosch® Max Multi-X™ • Dremel® Multi-Max® • Craftsman® NEXTEC® • Skil® Multi-Tasker® • Milwaukee® M12™ • Tools with 3/8" round arbors

OSCILLATING TOOL BLADES

CARBIDE RECESSED SEGMENT GROUT BLADE

Features

A recessed design and it allows flush cutting. The segmented design also allows cutting into corners without damaging the adjacent material. Approximately 0.090" thick.

Removes

- Great for removing old grout from tile joints
- Can also be used to remove thin set or mortar and cut grooves in concrete



BLADE WIDTH	BLADE MATERIAL	ARBOR STYLE	BLADE TYPE/USAGE	PART
2-1/2"	Carbide	Uni-Fit Mount	Grout & Thin Set	A 19167

CARBIDE TRIANGULAR RASP

Features

The triangular design allows easy grinding into corners and tight spaces. The recessed design allows flush cutting.

For Grinding

- Concrete
- Stone
- Wood
- Thin set
- Mortar

Removes

- Paint
- Epoxy coatings



BLADE WIDTH	BLADE MATERIAL	ARBOR STYLE	BLADE TYPE/USAGE	PART
3-1/8"	Carbide	Uni-Fit Mount	Grout & Thin Set	A 19169

ALL OSCILLATING TOOL BLADES FOR USE WITH...

FEIN® MultiMaster® • Bosch® Max Multi-X™ • Dremel® Multi-Max® • Craftsman® NEXTEC® • Skil® Multi-Tasker® • Milwaukee® M12™ • Tools with 3/8" round arbors

OSCILLATING TOOL BLADES

M12 CORDLESS LITHIUM-ION MULTI-TOOL KIT



Features

- Tackle awkward applications on any jobsite
- Variable speed dial
- Runs at 5,000 to 20,000 OPM - Allows the user to match the speed to the application
- On-board fuel gauge displays the remaining run-time
- M12™ RED LITHIUM™ battery

Applications

- Flush cuts
- Plunge cuts
- Removing grout
- Grinding thinset
- Sanding
- Scraping

Kit Contents

- 2426 M12™ Cordless LITHIUM-ION Multi-Tool
- Adapter
- Wood Cutting Blade
- Sanding Pad
- (5) Assorted Sanding Sheets
- (2) M12 RED LITHIUM™ Batteries
- Charger
- Contractor Bag

Benefits

- Cordless
- Light weight
- Universal adaptor (included in each kit) allows the M12 Multi-Tool to be compatible with most competitive accessories on the market today

Ideal For

- Maintenance repair technicians
- Remodelers
- Contractors
- Electricians



P/N M2426-22

Specifications

- Voltage: 12V
- Speed Settings: 12
- OPM: 5,000 - 20,000
- Battery: RED LITHIUM™
- Charge Time: 30 Minutes
- Length: 10-7/8"
- Weight: 2.1 lbs



CHROMATE BAND SAW TROUBLESHOOTING

1. PREMATURE AND EXCESSIVE TOOTH WEAR

- Feed pressure too light. Increase it.
- Lower band velocity.
- Insufficient coolant (apply at point of cut, saturate teeth and kerf evenly).
- Improper coolant.
- Improper tooth selection, use a finer pitch.
- Improper break-in with new band. Velocity and feeding should be reduced the first few cuts.
- Teeth are running the wrong direction. Be sure teeth are pointing in proper direction.
- Incorrect insert size for the band, allowing them to strike teeth.

2. BLADE VIBRATION

- Increase or decrease band velocity.
- Increase tension of band.
- Teeth too coarse for workpiece.
- Increase feed pressure.
- Material not securely vised.
- Use a Vari-Pitch tooth blade.

3. TOOTH STRIPPAGE

- Teeth too coarse for workpiece.
- Material not securely vised.
- Improper coolant.
- Insufficient coolant.
- Too much feed pressure — reduce for good chip curl.
- Band velocity too low — increase speed.
- Gullet may be loading up — use higher viscosity lubricant or coolant.

4. FINISHED CUT SURFACE TOO ROUGH

- Improper tooth selection — choose a finer pitch.
- Increase band velocity.
- Decrease feed rate.
- Apply sufficient coolant.

5. PREMATURE BLADE BREAKAGE

- Thickness of blade too heavy for diameter of wheels and speed of machine.
- Increase or decrease velocity.
- Check wheels for defects.
- Teeth too coarse for workpiece — use a finer pitch.
- Decrease blade tension.
- Decrease feeding force.
- Brittle weld — increase annealing period, decreasing heat gradually.
- Check for proper adjustment of band guides, saw guide arms, saw guide inserts and back-up bearings.
- Apply sufficient coolant.

6. BLADE MAKING BELLY-SHAPED CUTS

- Increase tension.
- Adjust guides closer to workpiece.
- Teeth too fine — use a coarser pitch.
- Decrease feed force.

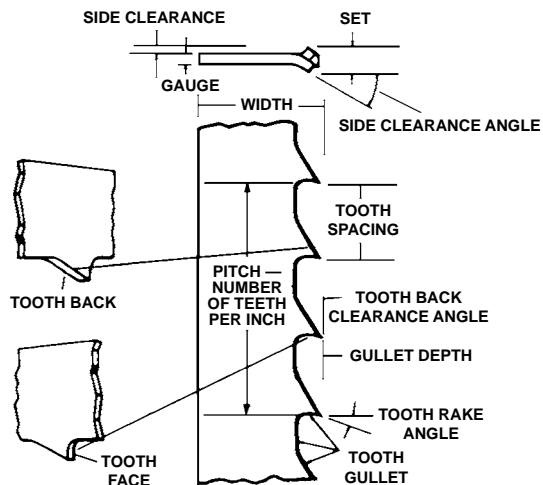
7. GULLET LOADING

- Teeth too fine for workpiece — use a coarser pitch.
- Apply proper coolant or lubricant.
- Decrease band velocity.

8. BAND DEVELOPS A NEGATIVE CAMBER

- Band is riding on saw guide backup bearing too heavily. Adjust band for alignment on top and bottom wheels.
- Check band wheel alignment.

GLOSSARY OF INDUSTRIAL TERMINOLOGY



AGE HARDENING — A process of aging that increases strength and hardness and ordinarily decreases the ductility of metals.

ALLOY — A substance with metallic properties composed of two or more chemical elements, at least one of which is metal.

BLADE TENSION — The resistance a saw blade has to back deflection when subjected to the edge thrust of feed pressure.

BEAM STRENGTH — The resistance a saw blade has to back deflection when subjected to the edge thrust of feed pressure.

CAMBER — An arcing or bending of the back or cutting edge of the saw blade. In positive camber the cutting edge arcs backward; in negative camber the cutting edge arcs forward.

CARBON STEEL — The result of carbon being added to iron in the making of steel.

CHATTER — Rumbling sound in the machine caused by trying to take too heavy a cut. The sound comes from overloading the machine or transmission.

CHIP — A small fragment of material removed by each tooth on the cutting edge.

CHIP CLEARANCE — The gullet area between two teeth.

CHIP WELDING — The fusing of the entire chip to tooth face. It is caused by extreme heating of the tooth and material.

COOLANT — A liquid used to dissipate heat in the saw and workpiece. The term often is used loosely as a synonym for cutting fluid, encompassing the concept of lubricating properties as well as cooling effects.

CUTTING RATE — The speed at which the cross sectional area of the workpiece is cut, expressed in square inches of cutting per minute.

E.T.S. (Every Tooth Set) - Each tooth is alternately set left then right, used generally in woodworking and for non-ferrous metals. Also known as alternate set.

FEED — The pressure exerted by the workpiece against the cutting edge of a saw blade expressed in pounds.

FEED RATE — The linear travel of the workpiece into the blade, usually expressed in inches per minute.

FLEX BACK (Regular metal cutting) — Saw blade with hardened teeth but a relatively soft back.

FRICITION SAWING — A method of sawing ferrous materials. It utilizes the frictional heat generated by high blade velocity and heavy feed pressure to soften the material. Then the saw blade removes the softened material.

GULLET — The space within the curved area between two saw blade teeth.

HARD BACK — A type of high carbon, spring tempered back, saw blade.

HIGH SPEED STEEL — Steel which does not soften even at red heat and, therefore, can be used in saw blades at high speeds and feeds that generate great heat.

HOOK TOOTH — A tooth form consisting of a shallow gullet and widely spaced teeth having a positive rake angle.

KERF — The slot made by a cutting tool in parting materials.

NESTING — Assembling multiple workpieces in a pile, or "nest" in order to saw a large number of parts at one time. Same as stacking, but nesting usually refers to rounds or tubing.

PITCH — The number of teeth per inch in a saw blade.

POINTS — The tips of teeth in a saw blade.

RAKE ANGLE — The angle the tooth face makes with respect to a perpendicular line from the back edge of the blade. It is positive when the tooth angles forward in the direction of the cutting action and negative when it angles backward from the direction of the cutting action.

SET — The bending of teeth in a saw blade to the left and/or right of center. The setting of teeth enables a saw blade to cut straighter, to clear the chips from the kerf, and to allow the back of the band to clear the cut and not bind.

SIDE CLEARANCE — The difference in dimension between the set of the teeth and the back of the blade. It provides space for maneuvering the band in contour cuts, prevents lead when making straight cuts and minimizes transfer of frictional heat to the work.

SKIP TOOTH — A tooth form consisting of a shallow gullet with widely spaced teeth to provide for ample chip clearance.

STANDARD TOOTH (Conventional tooth) — A tooth form consisting of a deep gullet with a smooth radius at the bottom.

STRIPPAGE — When one or more teeth are pulled or break out of a saw.

TWIST — The tendency of a saw blade to spiral after use.

WAVY SET — A saw tooth pattern having one group of teeth set to the right and the next group of teeth set to the left to give the appearance of a wave when viewed from the top of the blade.

WORK HARDNESS — A hard quality developed in metal as a result of cold working, dull band saw teeth, excessive band speed or too light feed pressure.

GENERAL INFORMATION

CHROMATE BAND SAW BLADES

I — HOW TO WRITE THE BAND SAW BLADE ORDER

QUANTITY		STOCK NUMBER	PRICE		PER	EXTENSION		*	DESCRIPTION
ORDER	SHIP								
(A)	110	19664	1	83	FT.	201	30		1/4 x 14/10 Vari-Pitch Carbon Hardback 10 Feet 3 Inches Long INTERNAL NOTE: 10 blades @ 10' 3" long
(B)	10	19600	3	40	E	34	00		Tri-Temp BSB Weld Charge
						235	30		

EXPLANATION:

(A) BSB's Are Billed To The Next Highest Full Foot

10'3" = 11 Feet

Number of Blades: X 10

Total Feet Billed: 110

(B) Number of Cut and Welded Blades Ordered

NOTE: WELD CHARGE P/N FOR
SUPERWELD BLADES
IS 19600

II — BSB ORDER PROCESSING

Band saw blades are custom cut and welded to order. Due to special processing required, allow 2-3 weeks for delivery.

III — TOOTH SELECTION



TOO COARSE



TOO FINE



CORRECT

Fewer than 3 teeth in the work may cause tooth strippage. More than 24 teeth will also lead to tooth strippage and/or gullet clogging. Best results are obtained with 6-12 teeth, achieved by correct combination of tooth pitch and proper vise loading.

Therefore, the general practice is to choose finer teeth per inch on small or thin sections and coarser teeth on large or thicker sections. Also, soft or gummy materials can be best cut by using a coarser tooth. This choice will prevent chips from jamming and clogging the gullets, reducing the efficiency of the blade.

CHROMATE GUIDE TO BAND SAW BLADE SIZES FOR POPULAR MACHINES

Machine	Length	Width	Machine	Length	Width	Machine	Length	Width
Amada V300	7'10 1/2"	5/8"-3/4"	DoAll, Cloth	14'6"	1/2"-1/2"	Forte SBS 801	34'5"	2"
Amada V300	8'6"	5/8"-3/4"	DoAll, MX-20, 36-3	14'6"	1"	Forte SBS 1001	39'3"	2"
Amada V400, V900	11'3"	5/8"-1"	DoAll, Z-36A, ZV3613, ZV3616	14'6"	1/2"	Gibbs-Kennedy	11'6"	3/4"
Amada H250SA	11'8"	1"	DoAll, 36-2	14'6"	3/4"	Greenlee 530	3'8 1/2"	1/2" (.020)
Amada V500	11'8"	5/8"-3"	DoAll, 3612-3(2)	14'6"	1/4"-1"	Greenlee 521, 531	45 3/4"	1/2"
Amada V500	12'11"	5/8"-3"	DoAll, 3613-2(3), 6013-2(2)	14'6"	1/16"-1"	Greenlee 346, 1346	6'9"	5/8"
Amada VM1000	15'0"	1 1/2"	DoAll, 26-1	14'8"	1"	Greenlee 1348	8'0"	5/8"
Amada H450H, H340HD	15'4"	1 1/2"	DoAll, 3613-1, 36-1	14'8"	1/16"-3/4"	Greenlee 348	8'10"	5/8"
Amada WMS00	15'7"	1 1/2"	DoAll, V-26, V-60(2), 2612, 2613-2	14'9"	1/16"-1"	Grob, S-14	7'9"	3/32"-1/2"
Amada H600	25'0"	2"	DoAll, Z-26A, Z-26, 26-2	14'9"	1"	Grob, S-14, OS-20, OS-36, OSN-14, OSN-20	11'6"	1/16"-1/4"
Amada H900HD	27'4"	2"	DoAll, TF-20	15'0"	1"	Grob, NS-18	12'0"	1/16"-1"
American Saw Mill 12"	6'9"	5/8"-3/4"	DoAll, 26-3, 2613-3	15'6"	1"	Grob, 4V-18	12'6"	5/8"-1"
Atkins #4	14'1"	5/8"-1"	DoAll, 26-5	17'0"	2"	Grob, CO-18	13'6"	3/4"
Atkins #3	15'8"	5/8"-1"	DoAll, 2618-4	17'2"	3/4"-1 1/2"	Grob, HS or NS-24, HS-24	14'4"	1/16"-1"
Atlas Workshop 9360	5'10 1/2"	5/8"-1 1/2"	DoAll, TF-24	17'3"	1"-1 1/4"	Grob, 4V-24	14'8"	5/8"-1"
Atlas 912, Atlas Powerking 12"	6'11"	1/4"	DoAll, 2624-5	18'0"	2"	Grob, NS-3	15'0"	1/16"-1/2"
Avey, Milband	14'9"	1"	DoAll, Bandmill	18'0"	1"-2"	Grob, S-24-U	15'9"	5/8"-1"
Bainbridge	5'0"	1/4"-1/2"	DoAll, 2626-5	18'4"	2"	Grob, NS-36	15'10"	1/16"-1"
Bett-Marr 14SM	8'1"	5/8"-1 1/2"	DoAll, Bandmill	18'5"	1"-2"	Grob, 4V-36	16'0"	5/8"-1"
Bett-Marr 24S	9'10"	1/4"-1/2"	DoAll, Continental, 169, 170, P16A, P16M	19'0"	2"	Grob, NS-60	20'0"	1/16"-1"
Black & Decker 3120, 3121, 3122, 3123	3'8 3/4"	1/2"	DoAll, Pica Master	19'2"	1/2"	Grob, 2S-36, 6V-36	21'0"	1/16"-1"
Boice Crane, 12"	6'5 1/2"	3/16"-1/2"	DoAll, ZS-3620, ZV-3620, ZW-3620	19'6"	5/8"-1"	Grob, OS-20, OSN	140'0"	3/32"-1/4"
Boice Crane 800, 14"	7'6"	3/16"-1/2"	DoAll, CO-36, HP-36	19'6"	5/8"-1"	HE&M 9V	9'0"	1/2"-3/4"
Boice Crane 2300, 14"	8'2"	3/16"-3/4"	DoAll, DZR, DZW, DZ-365	19'6"	1"	HE&M No. 500	9'0"	1/2"
Century 30	16'0"	1/4"-1"	DoAll, ZW-36, ZS-36, HBW, ZV-36	19'6"	5/8"-1 1/4"	HE&M No. 750	11'0"	3/4"
Clark-Compound	15'6"	1"	DoAll, 36-R, 36-W, HP-36, CO-36	20'0"	1/4"-2"	HE&M No. 1000	12'10"	1"
Clark, Junior	10'10"	1/2"-3/4"	DoAll, V-60(3), ZV-60(3)	20'0"	1/4"-2"	HE&M No. 1200	15'0"	1 1/4"
Connecticut, A-24, S, V, F	13'5"	1/2"-3/4"	DoAll, 3624-X1	21'2"	1/16"-1"	Heston & Anderson #1	7'2"	1/4"-1/2"
Crescent, Jr., Light 20"	10'10"	5/8"-3/4"	DoAll, Z-36	21'2"	1/2"	Heston & Anderson #50	7'6"	1/4"-1/2"
Crescent, Jr., Heavy, 20" B20M	11'3"	1/4"-3/4"	DoAll, HS-6013, 6013-2(3)	21'3"	1/4"-1"	Heston & Anderson #14	8'5"	1/4"-1/2"
Crescent 26"	13'9"	1/4"-1"	DoAll, CZ-1620	22'0"	1/2"	Houghton	12'6"	5/8"-3/4"
Crescent 32"	16'4"	1/4"-1"	DoAll, 60-3, 6013-3	22'0"	1/2"	Ideal 9A	11'1"	3/4"
Crescent 36"	18'6"	1/4"-1"	DoAll, C-24	22'3"	1/16"-1"	Jarvis 12"	6'2"	1/4"-1/2"
Crescent, Angle 36"	19'0"	3/4"-1"	DoAll, AC-2016	22'3"	1/2"	Jarvis 16"	8'6"	1/4"-1/2"
Crescent 33"	20'4"	1/4"-1"	DoAll, Pan-Arm	22'3"	1/2"	Johnson, Amada		
Crescent Angle 40"	21'2"	1/4"-1"	Duro, 3026	22'3"	1/2"	CHA 3005	12'0"	1"
Cutron, E	11'10"	3/4"	Duro, A3027 10"	22'3"	1/16"-1"	Johnson, Amada VAC-500	13'3"	1/2"
DoAll, J	7'0"	1/16"-1/2"	Duro, 3020, 3021, 12"	22'3"	1/2"	Johnson, Amada HA16	15'0"	1 1/4"
DoAll, JD	7'8"	1/16"-1/2"	Duro, 3022	22'4"	1"	Johnson, Amada H18H	15'4"	1 1/2"
DoAll, M	9'0"	1/16"-1/2"	Duro, 3022	22'9"	1"	Johnson, Amada H28HD	16'6"	1 1/2"
DoAll, HS, HSV, LHV, SFP, V-16, ML C-16, ML, V-36	10'0"	1/16"-1/2"	Duro, D-3022, D-302275	22'9"	1"	Johnson, Amada H24	25'0"	2"
DoAll, Z-16A, Z-16, U-16, P-16	10'0"	1/2"	Emerson 10-1455, 10-1451	24'3"	1"-2"	Jones Superior 8"	4'6"	1/2"
DoAll, 16-3	10'0"	3/4"-1"	Emerson 10-1700, 10-1701	24'3"	1"-2"	Jones Superior 12"	6'5 1/2"	1/2"
DoAll, 16-2A	10'0"	1"	Ensley 721, 722	26'0"	1"-2"	Jones Superior 15"	9'3"	1/2"
DoAll, 16-2	10'0"	3/4"	Excel	28'9"	1"	Jones Superior 20"	11'4"	1/2"-3/4"
DoAll, HS-3, HSV-3, LSV-3, SFP-3, 1612-U	10'2"	1/16"-1/2"	Famco #612	5'0"	1/8"-1/2"	Jones Superior 30"	16'0"	3/4"
DoAll, 16-3M	10'2"	1/2"	Fay & Egan 24"	5'8"	1/8"-3/8"	Jones Superior (Old)	18'0"	1"
DoAll 16" Cloth	10'2"	1/4"-7/16"	Fay & Egan 155-30	6'6"	1/8"-3/8"	Jones Superior 36" (New)	19'0"	1"
DoAll, 1612-0	10'3"	1/16"-1/2"	Fay & Egan 30"	7'11"	1/8"-1/2"	Kalamazoo, 610, 7A, M7A, C7A	7'5"	1/2"-3/8"
DoAll, 3613-2(2)	10'3"	1/16"-1"	Fay & Egan 345-36, 346-36, 60-36	8'8"	—	Kalamazoo, Startrite 30T (2 and 3 wheels), 14P, 30R	9'4"-12'3"	1/16"-3/4"
DoAll, 16-1, 1612-X1	10'4"	1/2"	Fay & Egan 950-36	8'11"	5/8"	Kalamazoo, Startrite 18T, 18V	9'6"	1/16"-5/8"
DoAll, 1612-1	10'4"	1/16"-3/4"	Fay & Egan 58-42	5'6"	1/2"	Kalamazoo, Startrite 214	9'7"	5/8"
DoAll, 3612-3(2)	10'5"	1/4"-1"	Fay & Egan 459-42	5'0"	1/2"	Kalamazoo, Startrite 314	9'7"-11'7"	5/8"
DoAll, 1612-3	10'6"	1/4"-1"	Forte, Piccolo	8'10"	5/8"	Kalamazoo, Standard 816	10'5"	3/4"
DoAll, 1613-2	10'6"	1/16"-1"	Forte, Mod 160	13'9"	—	Kalamazoo, Startrite 24T, 24V	10'6"	1/16"-5/8"
DoAll, MS-15	10'6"	1/2"-3/8"	Forte, Mod 250, 300, BA-251, SBA-240	15'3"	1 1/2"	Kalamazoo, Startrite 20T, 20R	10'6"	1/16"-3/8"
DoAll, C-4	10'11"	3/4"	Forte, Uniforte 400	17'3"	1 1/2"	Kalamazoo, 8C, 9A	10'10"	1/16"-3/4"
DoAll, C-5a, C-10	11'0"	3/4"	Forte 400	18'4"	—	Kalamazoo, H-9A	10'10 1/2"	3/4"
DoAll, C-12	11'0"	1"	Forte SBA400, SBS400, SBA500	20'6"	2"	Kalamazoo, H-10A	10'10 1/2"	1"
DoAll, MD	11'6"	1/16"-1/2"	Forte SBA 401	21'8"	—	Kalamazoo, H-12B, through Ser. #449	11'8"	1/16"-1"
DoAll, C-41 through C-80	12'0"	1"	Forte SBS 601	23'2"	—	Kalamazoo, VTH21	11'8"	1/16"-1"
DoAll, TF14	13'3"	1"		4'0"	1/2" (.020)	Kalamazoo, H12B, Ser. #450 and later	to 15'0"	1/16"-1"
DoAll, HS-30, HSV-30, LSV-30, SFP-30	13'3"	1/16"-1/2"		9'0"	3/4"		12'1"	3/4"
DoAll, C-7, C-8, C-9	13'4"	1"						
DoAll, 30-M, 3012V	13'4"	1/2"						
DoAll, MP-20	13'6"	1/16"-1"						
DoAll, V-36(3)	13'6"	1/16"-1/2"						
DoAll, CCS	13'10"	1/4"-1/2"						
DoAll, C-6	14'0"	1"						
DoAll, 36" Cloth	14'4"	1/4"-7/16"						

CHROMATE GUIDE TO BAND SAW BLADE SIZES FOR POPULAR MACHINES

Machine	Length	Width	Machine	Length	Width	Machine	Length	Width
Kalamazoo, 1220, 13A	13'11"	1"	Peerless, 300-MH, 3000-MS	17'4"	5/8"-1"	Tannewitz, 36", G3	19'6"	2"
Kalamazoo, H-13A	14'0"	1"-1 1/4"	Peerless, 3600-MS(3)	17'6"	5/8"-1"	Tannewitz, 36", GH, GHE, G-1, G1E, GV1	19'9"	5/8"-2"
Kalamazoo, 14-A	15'6"	1 1/4"-1 1/2"	Peerless, 4800-MH(3)	18'2"	5/8"-1"	Tannewitz, GHN, GH, NE, G1, G-1-NE	20'4"	5/8"-2"
Keller, B-11	7'10"	1/2"	Peerless, 4800-MS(3)	19'8"	5/8"-1"	Tannewitz, RV	20'10"	5/8"-2"
Klemm #1	11'2"	3/4"-5/8"	Peerless, 6000-MS(3)	22'8"	5/8"-1"	Tannewitz, 42", R1, R1E, RU1, R3, RH, RF1E, RHE	22'0"	5/8"-2"
Klemm #2	15'8"	3/4"	Peerless, 6000-MH(3)	22'8"	5/8"-1"	Tannewitz, 60MS(3)	22'3"	1/8"-1"
Kolle, K-16	11'0"	—	Pehaka, SF-4	9'10"	5/8"-3/4"	Tannewitz, 60MH(3)	22'8"	5/8"-1"
Kysor Johnson, B, M, MB-1	7'5"	1/2"	Pehaka, USF-4R(2), ESM-4	9'10"	5/8"-1/2"	Tannewitz, 6000MH	25'2"	5/8"-1 1/4"
Kysor Johnson, R, MR-1	7'9"	5/8"	Pehaka, USF-10(2)	11'0"	5/8"-3/4"	Tannewitz, S-1-E	25'0"	5/8"-2"
Kysor Johnson, V-14	8'2"	3/16"-3/4"	Pehaka, HSE-260	12'2"	1"	Tannewitz, SV-1-NE	26'6"	5/8"-2"
Kysor Johnson, J	11'5"	3/4"	Pehaka, 200, 250, 600	12'2"	1"	Tannewitz, SVTNE, S-52	27'3"	5/8"-1 1/4"
Kysor Johnson, JH	11'5"	1"	Pehaka, HS-340	15'11 1/2"	1"-1 1/4"	Temac, S53B	6'9"	3/8"-1/2"
Kysor Johnson, HS, HSA, A12, M12	11'6"	1"	Pehaka, USF-10(3)	15'9"	5/8"-3/4"	Temac, MODM	8'0"	3/8"-1/2"
Kysor Johnson, V-36(2)	11'6"	5/8"-1"	Pehaka, USF6-3	15'9"	1"-1 1/4"	Thompson, H.G., Milbrand A59, A60	15'0"	1"
Kysor Johnson, V-16	11'6"	5/8"-1"	Pehaka, HS-400	17'4 3/4"	1 1/4"	Thompson	15'8"	5/8"-3/4"
Kysor Johnson, H, HA-300	12'0"	1"	Powerking 8"	5'6"	1/4"-1/2"	Walker-Turner, 10"	5'2"	1/4"-1/2"
Kysor Johnson, V-20	12'8"	5/8"-1"	Powerking, 12"	6'5 1/2"	1/4"-1/2"	Walker-Turner, 12"	6'6"	3/16"-1/2"
Kysor Johnson, H, HA-16	15'0"	1 1/4"	Powermatic, 141, 143	7'11"	1/4"-3/4"	Walker-Turner, 14"	8'3/4"	3/16"-3/4"
Kysor Johnson, V-36(3)	15'4"	5/8"-1"	Powermatic, 140	8'3 1/2"	1/4"-3/4"	Walker-Turner, 16"	9'3 1/2"	1/2"
Kysor Johnson, H-24	23'4"	1 1/4"	Powermatic, 181	12'6"	1/4"-1"	Walker-Turner, 16"	1105MBN	9'6 3/4"
Laidlaw, JM-20, SM-20	11'0"	3/16"-5/8"	Powermatic, 81, 87, 89	12'7"	1/16"-1"	Walker-Turner, 20"	11'9"	1"
Laidlaw, CM, CMT	15'8"	1"	Powermatic, 2	13'3"	5/8"-1"	Wallace, 14"	7'7"	1/4"-1/2"
Laidlaw, JM-30, SM-30	16'0"-17'6"	3/4"-1 1/4"	Powermatic, 5, 8	15'1"	1/4"-1"	Wallace, 16"	9'0"	1/4"-3/4"
Laidlaw, SMT-30	16'0"	5/8"-5/8"	Powermatic, 6	15'6"	1/4"-1"	Wells, 49, 300, 49A, Junior	5'0"	1/2"
Lenox Mobil Mitre	7'5"	1/2"	Racine, #12, 13, 14	7'8"	5/8"-3/8"	Wells, 72	5'9"	1/2"
Lynn Sprunger, BS-45	5'4 1/2"	1/2"	Rekord, SSF 350	9'8"	1/2"	Wells, 58B	7'9"	1/2"
Marvel, 610	8'10"	5/8"	Rekord, SSF 420	10'10"	5/8"	Wells, No. 5	8'2 1/2"	5/8"
Marvel, #81, #81A	14'6"	1"-1 1/4"	Rekord, SSF 500	12'8"	3/4"	Wells, 600	8'2 1/2"	5/8"
Marvel, #81A high column	15'6"	1"-1 1/4"	Rigid	3'8 3/8"	1/2" (.020)	Wells, 9	9'5"	1/2"
Marvel, #8	14'8"	3/4"	Rigid, 945	5'4 1/2"	1/2"	Wells, 8, 7A, 7B, 875	11'6"	3/4"
Marvel, #8 high column	15'8"	3/4"	Rigid, 970	8'11"	3/4"	Wells, 1000, 800, 850, 1075	11'6"	1"
Marvel, 15, 15A	15'6"	1"-1 1/4"	Rockwell, Porta-Band 725, 726, 524	3'8 3/8"	1/2" (.020)	Wells, 54G	12'10"	1"
Marvel, 25A	18'10"	1 1/4"-1 1/2"	Rockwell, Porta-Band 9728	5'5 3/4"	1/2"	Wells, 1200, 1270	13'6"	1"
Milband	12'11"	3/4"	Rockwell, 14"	7'9 1/2"	5/8"-3/4"	Wells, 12	13'7"	1"
Milclark	10'10"	1/2"-5/8"	Rockwell, 7V	7'11 1/2"	1/2"	Wells, 54W	15'10"	1"-1 1/4"
Moak, 20"	11'11"	1/4"-3/4"	Rockwell, 6W	8'11"	3/4"	Wells, 14	15'4"	1 1/4"
Moak, 26"	14'11"	1/4"-1"	Rockwell, 7 and 7A	11'0"	1"	Wells, 20	16'0"	1"
Moak, 32"	16'10"	1/4"-1"	Rockwell, 10, 10A, 12A	12'6"	1"	Wells, 12-20G, 48"	21'0"	1 1/4"
Moak, 36"	19'5"	1/4"-1"	Rockwell, 20"	12'6"	1/2"-1"	Wells, 1224H	21'8"	1 1/4"-1 1/2"
Monarch, 72B, 20"	11'6"	1/4"-3/4"	Rockwell, 9" x 16"	12'10"	3/4"-1"	Wells, 1220G, 60"	23'8"	1 1/4"
Monarch, 61	14'0"	1/4"-1"	Roll-In, All Purpose	9'0"	1/4"-3/4"	Wells, 1220G, 72"	31'3"	1 1/4"
Monarch, X25, 30"	16'8"	1/4"-1"	Roll-In, Journeyman	12'6"	1/2"-1"	Wells, 2400	33'0"	1"
Monarch, 38	18'6"	1/4"-1"	Sears Roebuck, 2428	6'8"	1/2"-1/2"	Wells, 2400	35'11"	1 1/2"
Monarch, X40, 36"	21'1"	1/4"-1"	Sears Roebuck, 2377	11'0"	1/2"-3/4"	W. F. Wells & Sons, A7, A, A6	7'10"	1/2"
Montgomery Ward	8'2"	1/4"-1/2"	Shopmaster	5'4 1/2"	1/2"	W. F. Wells & Sons, W, L9, L, M, W9, H	11'6"	3/4"
Napier, B	12'3"	1"	Stockbridge, 6"	12'5 1/2"	5/8"-3/4"	W. F. Wells & Sons, 0-050	13'2"	1"
Napier, Jr.	8'4"	3/4"	Stockbridge, 9"	13'0"	5/8"-3/4"	W. F. Wells & Sons, F14, F, D	14'5"	1"
Northfield, 20"	11'8"	1/4"-1"	Stockbridge, 12"	15'5 1/2"	3/4"	W. F. Wells & Sons, 014, F15, D	14'5"	1"
Northfield, 27"	14'7"	1/4"-1"	Summit 250A	11'8"	1"	W. F. Wells & Sons, J24	16'9"	1"
Northfield, 32"	16'6"	1/4"-1"	Summit 350	15'1"	1"	W. F. Wells & Sons, VC025	17'2"	1"-1 1/4"
Northfield, 36"	19'2"	1/4"-1"	Summit 500S	17'8 1/2"	1 1/4"	W. F. Wells & Sons, B25	19'8"	1 1/4"
Oliver, 192 18"	9'8"	5/8"-1/2"	Superior 8"	4'6"	1/2"-1/2"	W. F. Wells & Sons, X60	20'10"	1 1/4"
Oliver, 18, 117	15'9"	1/4"-1/2"	Superior 12"	6'5 1/2"	5/8"-1/2"	W. F. Wells & Sons, QJ-24	21'0"	1 1/4"
Oliver, 217	16'0"	5/8"-1 1/4"	Superior 20"	11'4"	1/4"-3/4"	W. F. Wells & Sons, G-30	22'6"	1 1/4"
Oliver, 16, 35	19'0"	1/4"-1 1/2"	Superior 30"	16'0"	1/2"-1"	W. F. Wells & Sons, T40	26'11"	1 1/4"
Oliver 116	19'6"	1/4"-1 1/2"	Superior 36"	19'6"	1/2"-1"	W. F. Wells & Sons, S-40	27'9"	1 1/4"
Oliver, 416	19'6"	1/4"-1 1/2"	Tannewitz, EV24	13'6"	5/8"-1 1/4"	W. F. Wells & Sons, T6940	31'0"	1 1/4"
Oliver, 15, 115, 115-RD	20'0"	1/4"-2"	Tannewitz, E24	13'7"	5/8"-1 1/4"	Williamson, #2	20'9"	1"
Oliver, 316-48	38'0"	1 1/2"	Tannewitz, 24MH, M, MS	14'6"	5/8"-1"	Williamson, #3	24'6"	1"
Oliver, 318-80	49'0"	2"	Tannewitz, 36MH(2), 48MH(2), 60MH(2), 84MH, 84MS	14'10"	5/8"-1"	Wright, P, 1, 2, 3	15'8"	5/8"-3/4"
Olson Mfg. Co. 0-100	8'10"	5/8"	Tannewitz, 36M	16'10 1/2"	1/16"-1/2"	Wright, 4	19'0"	5/8"-3/4"
Oster, 711	—	—	Tannewitz, 30", P1, P1E, P3, PH, PHE, P-130	17'0"	5/8"-1 1/4"	Yates American, W14	7'9 1/2"	1/2"-1/2"
Parks, Dry Ice	7'7"	1/2"	Tannewitz, 36MH(3), MS(3)	17'2"	5/8"-1"	Yates American, W16	9'4"	1/4"-1/2"
Parks, #2, M-2	11'0"	1/4"-1/4"	Tannewitz, PV-1-ME, P-1-NE	17'6"	5/8"-1 1/4"	Yates American, 20"	11'10"	1/4"-3/4"
Peerless, 1216-M, 1216-MH, 2216	12'0"	1"	Tannewitz, 30MH, M, MS	17'10"	5/8"-1"	Yates American, 30"	17'2"	1/4"-1"
Peerless, 1200, 1200-M, 1214, 1216, 1400	12'0"	1"	Tannewitz, 48M, 48MH(3), 48MS(3), 60M	18'2"	1/16"-1/2"	Yates American, 36"	20'0"	1/2"-1"
Peerless, 1200-A, 1200MA, 1218MHA	12'4"	1"				Yates American, 42"	22'8"	1/2"-1"
Peerless, 2400-MH	14'6"	5/8"-1"						
Peerless, 2400MS, 6000M(2)	14'10"	5/8"-1"						
Peerless, 3600M(2), 4800M(2)	17'2"	5/8"-1"						
Peerless, 3600-MH(3)								

SAW BLADES

CROSS REFERENCE CHART

1/2" SHANK RECIPROCATING BLADES

PART	INDUSTRY TYPE	PART	INDUSTRY TYPE
19404	1-418/14 (39484)	19422	1-432 (40432)
19405	1-618/14 (39684)	19426	3-218 (42018)
19410	1-610 (40610)	19427	3-224 (42024)
19411	1-810 (40810)	19431	4-314 (43114)
19412	1-214 (40314)	19442	6-607 (44007)
19413	1-414 (40414)	19447	7-606 (46606)
19414	1-614 (40614)	19449	7-610 (46610)
19415	1-218 (40318)	19452	7-618 (46618)
19416	1-418 (40418)	19456	8-612/8 (47628)
19417	1-618 (40618)	19468	9-603 (49603)
19419	1-424 (40424)	19477	12-608 (52060)
19420	1-624 (40624)		

1/4" SHANK SABRE SAW BLADES

PART	INDUSTRY TYPE	PART	INDUSTRY TYPE
19481	RM 50 (28050)	19487	RM 61 (28057)
19482	RM 51 (28051)	19491	RW 20 (29020)
19483	RM 52 (28052)	19492	RW 21 (29021)
19484	RM 53 (28053)	19498	RW 31 (30031)
19485	RM 54 (28054)	19499	RW 32 (30032)

SAW BLADES (Cont'd.)

REPLACEMENT CHART

1/2" SHANK RECIPROCATING SAW BLADES

CIC	AMERICAN LENOX	BLACK & DECKER	BOSCH	CAPEWELL	MALCO	MILWAUKEE SAWZALL 48-00-	PORTER- CABLE ROCKWELL	SKIL	WESTLUND FIT-AL
19410	610R		S918H	70640			12415	71041	HDM310
19411	810R					2175		71042	HDM410
19412		40111			2-MC14	1171			HDM114
19413	414R	40112		70620	3-MC14	1172	12447	71043	FR214
19414	614R	40113	S918B	70650	4-MC14	1179	12421	71044	FR314
19415		40114			2-MC18	1173			HDM118
19416	418R	40115	S518E	70630	3-MC18	1174	12418	71045	FR218
19417	618R	40116	S918EF	70660	4-MC18	1184	12427	71046	FR318
19419	424R	40117		77170	3-MC24	1176	12424	71047	HDM224
19420	624R	40125	S918A	70670	4-MC24	2171	12433		HDM324
19422		40118	S518G	77160	3-MC32	1178	12430	71048	HDM232
19426	318RC	40119		77140	2-MS18	1102	12436	71053	MC218
19427		40120		77150	2-MS24	1103	12439	71055	MC224
19431	314RC				2-HS14	1162	12445	71052	HDMC214
19442	656R	40098	S644D	77000	3-S6	1031	12400	71061	WC608
19447		40100	S744D	77410	4-HD6	1012	12408	71066	W406
19449		40103		77420	3-HD8	1014	12411	71069	TB410
19452		40106		77430	4-18	1066	12414		
19456			S811H			1014			
19468		40107			6-T3	1002		71056	
19477	636RP	40127	S828D	77520	4-P6	1052	12469	71076	P405

1/4" SHANK SABRE SAW BLADES

CIC	AMERICAN LENOX	BLACK & DECKER	BOSCH	CAPEWELL	MALCO	MILWAUKEE SAWZALL 48-42-	PORTER- CABLE ROCKWELL	SKIL	WESTLUND FIT-AL
19481	380J								
19482	314J	49490	83506	80010	814	0100	12516		J8
19483	318J	31020	83534		818	0120	12517		J9
19484	354J	31021	83535	80020	824	0140	12518	24086	J10
19485	324J	49491	83507	80030	832		12519	24087	J11
19487	340JV					0101	12515	24085	
19488									
19491		49504		80060		0200	12501		
19492		49505		80070		0220	12502		J4
19498		39754		80110	510	0600	12508	22645	J6
19499		54370	83533			0640	12512		

WARNING!

FAILURE TO OBSERVE PRECAUTIONS CAN CAUSE SERIOUS INJURY

Important Hole Saw Safety Information. All operators must read and understand safety information thoroughly and completely before using hole saws.

RECOMMENDED OPERATING SPEEDS FOR BI-METAL SAWS

Size Inches	Size MM	Mild Steels	Tool and Stainless Steels	Cast Iron	Brass	Aluminum	Wood
9/16	14	580	300	400	790	900	1500
5/8	16	550	275	365	730	825	1500
11/16	17	500	250	330	665	750	1500
3/4	19	460	230	300	600	690	1500
25/32	20	480	240	315	632	660	1500
13/16	21	425	210	280	560	635	1500
7/8	22	390	195	260	520	585	1500
15/16	24	370	185	245	495	555	1500
1	25	350	175	235	470	525	1350
1-1/16	27	325	160	215	435	480	1350
1-1/8	29	300	150	200	400	450	1350
1-3/16	30	285	145	190	380	425	1200
1-1/4	32	275	140	180	360	410	1200
1-5/16	33	260	135	175	345	390	1200
1-3/8	35	250	125	165	330	375	1200
1-7/16	37	240	120	160	315	360	1200
1-1/2	38	230	115	150	300	345	1200
1-9/16	40	220	110	145	290	330	1050
1-5/8	41	210	105	140	280	315	1050
1-11/16	43	205	100	135	270	305	1050
1-3/4	44	195	95	130	260	295	1050
1-13/16	46	190	95	125	250	285	1050
1-7/8	48	180	90	120	240	270	1050
2	50	170	85	115	230	255	1000
2-1/16	52	165	80	110	220	245	1000
2-1/8	54	160	80	105	210	240	1000
2-1/4	57	150	75	100	200	225	1000
2-5/16	59	145	75	100	195	225	1000
2-3/8	60	140	70	95	190	220	1000
2-7/16	62	135	70	95	185	215	900
2-1/2	64	135	65	90	180	205	900
2-9/16	65	130	65	85	175	200	900
2-5/8	67	130	65	85	170	195	900
2-11/16	68	125	60	82	165	190	900
2-3/4	70	125	60	80	160	185	750
2-7/8	73	120	60	80	160	180	750
3	76	115	55	75	150	170	750
3-1/8	79	110	55	70	140	165	600
3-1/4	83	105	50	70	140	155	600
3-3/8	86	100	50	65	130	150	600
3-1/2	89	95	45	65	130	145	600
3-5/8	92	95	45	60	120	140	600
3-3/4	95	90	45	60	120	135	500
3-7/8	99	90	45	60	120	135	500
4	102	85	40	55	110	130	450
4-1/8	105	80	40	55	110	120	450
4-1/4	108	80	40	55	110	120	450
4-3/8	111	80	40	50	100	120	450
4-1/2	114	75	35	50	100	105	400
4-3/4	121	70	35	45	95	95	400
5	127	65	30	45	90	90	400
5-1/2	140	60	25	40	85	85	400
6	152	55	25	35	75	80	400

PIPE TAP AND PIPE ENTRANCE SIZES

HOLE SAW DIAMETER	USE FOR PIPE TAP SIZE	USE FOR PIPE ENTRANCE SIZE
9/16"	3/8"	1/4"
3/4"	1/2"	3/8"
7/8"	3/4"	1/2"
1-1/8"	1"	3/4"
1-3/8"	-	1"
1-1/2"	1-1/4"	-
1-3/4"	1-1/2"	1-1/4"
2"	-	1-1/2"
2-1/4"	2"	-
2-1/2"	-	2"
2-5/8"	2-1/2"	-
3"	-	2-1/2"
3-1/4"	3"	-
3-5/8"	-	3"
3-3/4"	3-1/2"	-
4-1/8"	-	3-1/2"
4-1/4"	4"	-
4-1/2"	-	4"
4-3/4"	4-1/2"	-
5-1/4"	5"	-

ARBORS

Shank Size	Our P/N	Thread Size	Fits Saws (Diameter)
1/4" Round	1098	1/2" - 20	9/16" - 1-3/16"
3/8" Hex	1181	1/2" - 20	9/16" - 1-3/16"
7/16" Hex	2200	1/2" - 20	9/16" - 1-3/16"
7/16" Hex Pin Drive	5450	5/8" - 18	1-1/4" - 6"
5/8" Hex Pin Drive	6720	5/8" - 18	1-1/4" - 6"

NOTE: Use the correct lubricant. For ferrous metals, feed generous amounts of any commercially available cutting oil into the cut. Paraffin or beeswax is suitable for aluminum. Cast iron is cut dry. When cutting materials such as transite, no lubricant is necessary, but a water spray reduces heat and dust and flushes away chips.



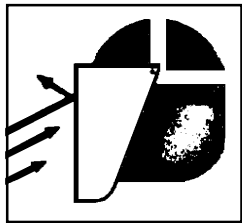
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SEE REVERSE FOR DETAILED WARNINGS

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A



B



C

HOLE SAW SAFETY REQUIREMENTS

- 1. SAFETY GOGGLES:** Safety goggles or full face shields **MUST BE WORN** by all operators. Comply with ANSI Z87.1 "OCCUPATIONAL EYE AND FACE PROTECTIONS". **See figure A.**
- 2.** When drilling in material that causes dust, a dust mask shall be worn. **See figure B.**
- 3. SPEEDS:** Observe all speed restrictions indicated on the saws, containers, labels, or as printed on the reverse side. The maximum safe free speed (MSFS or MAX MFS) should not be exceeded under any circumstances.

NOTE: "MSFS" or "MAX MFS" means maximum safe free speed (RPM) spinning free with no work applied. The efficient cutting speed is less than the MSFS.
- 4. HAND PROTECTION:** Use gloves while mounting, disassembling and operating hole saws. Keep hands in sight and clear of all moving parts. Do not put hands or fingers around, on, or below any rotating cutting tools. **See figure C.**
- 5. STANDARDS:** Observe and comply with all of the requirements of the AMERICAN NATIONAL STANDARDS INSTITUTE "ANSI/ASME B 94.54-1984" "SPECIFICATIONS FOR HOLE SAWS, HOLE SAW ARBORS, AND HOLE SAW ACCESSORIES".

HOLE SAW OPERATING INSTRUCTIONS

1. Select the proper pilot drill, arbor, and saw. Use the correct arbor for the saw you plan to operate. See table on reverse side.
2. When using positive drive quick interchange arbors, retract pins and screw arbor into saw as far as possible. Adjust drive pins into saw by backing off saw just enough to align the drive pin hole with the pins. Then drop pins for engagement.
3. Be sure drive pins are fully engaged at all times and check frequently.
4. Be sure arbor shank is properly inserted in chuck and tighten the chuck with chuck key. Chuck jaws should engage flats of hex shank.
5. Never install or disassemble the saw and arbor by inserting a screw driver or similar tool in the knock-out slots. The saw can shatter or distort.
6. Be sure to clean chips and slugs frequently to avoid heat build-up or stripping of teeth. Frequent clearing by intermittent withdrawal is mandatory except on thin sheet material. This is especially necessary when using the saw in a vertical position, such as in a drill press.
7. Follow the recommended operating speeds found in the table on the reverse side. Too fast or too slow a speed will dull the hole saw or burr the work piece and shorten the life of the hole saw.
8. Use the correct work angles for the hole saw, which is perpendicular to the work. Tilting or bouncing the hole saw when cutting will overload the teeth and cause tooth strippage. This practice also produces a rough, non-round hole.



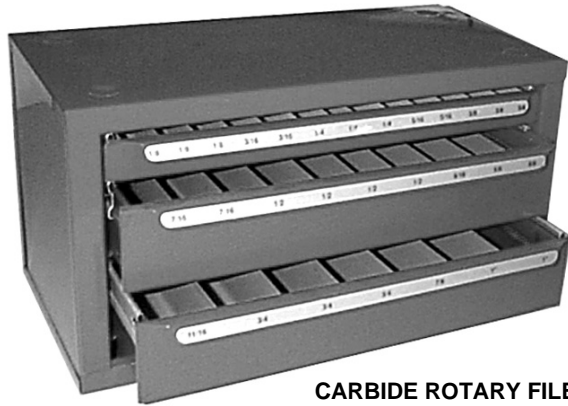
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QTY.	FILE SIZE	QTY.	FILE SIZE	QTY.	FILE SIZE
1	1/4 x 5/8 Cylindrical	1	1/4 x 5/8 Pointed Tree	1	1/4 x 1 Cone
1	1/4 x 5/8 Cylindrical Radius End	1	1/4 x 5/8 Tapered Radius	1	1/2 x 1-1/8 Tapered Radius End
1	1/4 Ball	1	3/8 x 3/4 Cylindrical Radius End	1	1/2 x 1 Cylindrical Radius End
1	1/4 x 3/8 Oval	1	3/8 x 5/8 Oval		
1	1/4 x 5/8 Round Tree	1	3/8 x 3/4 Pointed Tree		

SAVES MONEY, TIME AND LABOR