CLE-LINE®

THE BRAND FOR THE PROFESSIONAL

Holemaking, Threading, Dies, Masonry, Saws





GREENFIELD INDUSTRIES

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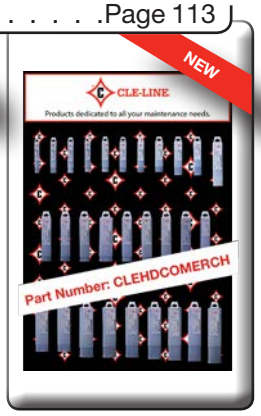
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CLE-LINE®

CLE-LINE® is part of the Greenfield Industries family of quality cutting tools.

Cle-Line® is a familiar name to users of quality cutting tools. Cle-Line® cutting tools have been manufactured for decades specifically for the construction, maintenance, repair, operating, and industrial markets.

This catalog gives you all the tools you need to keep your industry working. A wide selection of high-quality drills, saw blades, taps, dies, and burs have been brought together to give you one complete resource for purchasing cutting tools. You can shop this catalog with confidence knowing the high standards of quality and service that come from Cle-Line®.

Cle-Line® tools are sold exclusively through a network of industrial distributors. When you contact your distributor, request Cle-Line® for your everyday applications.

Metalcutting Safety

(read this before using Cle-Line® products)

Modern metalcutting operations involve high energy, high spindle or cutter speeds, and high temperatures and cutting forces. Hot, flying chips may be projected from the workpiece during metal-cutting. Although advanced cutting tool materials are designed and manufactured to withstand the high cutting forces and temperatures that normally occur in these operations, they are susceptible to fragmenting in service, particularly if they are subjected to over-stress, severe impact or otherwise abused. Therefore, precautions should be taken to adequately protect workers, observers and equipment against hot, flying chips, fragmented cutting tools, broken work pieces or other similar projectiles. Machines should be fully guarded and personal protective equipment should be used at all times. When grinding advanced cutting tool materials, a suitable means for collection and disposal of dust, mist or sludge should be provided. Over-exposure to dust or mist containing metallic particles can be hazardous to one's health particularly if exposure continues over an extended period of time and may cause eye, skin, and mucous membrane irritation and temporary or permanent respiratory disease. Certain existing pulmonary and skin conditions may be aggravated by exposure to dust or mist. Adequate ventilation, respiratory protection and eye protection should be provided when grinding and workers should avoid breathing of and prolonged skin contact with dust or mist.

General Industry Safety and Health Regulations, Part 1910, U.S. Department of Labor, published in Title 29 of the Code of Federal Regulations should be consulted. Obtain from Cle-Line® and read the applicable Safety Data Sheet before grinding.

Cutting tools are only one part of the worker-machine-tool system. Many variables exist in machining operations, including the metal removal rate; the workpiece size, shape, strength and rigidity; the chucking and fixturing; the load carrying capability of centers; the cutter and spindle speed and torque limitations; the holder and boring bar overhang; the available power; and the condition of the tooling and the machine. A safe metalcutting operation must take all of these variables, and others, into consideration.

Cle-Line® has no control over the end use of its products or the environment into which those products are placed. Cle-Line® urges that its customers adhere to the recommended standards of use of their metalcutting operations. The information included throughout this catalog under the heading "Technical Data" and other recommendations on machining practices referred to herein are only advisory in nature and do not constitute representations or warranties and are not necessarily appropriate for any particular work environment or application.

WARNING: This product contains Cobalt and/or Nickel and/or Lead a chemical known to the state of California to cause cancer, or birth defects or other reproductive harm. For more information: **www.P65Warnings.ca.gov**



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**with flats*

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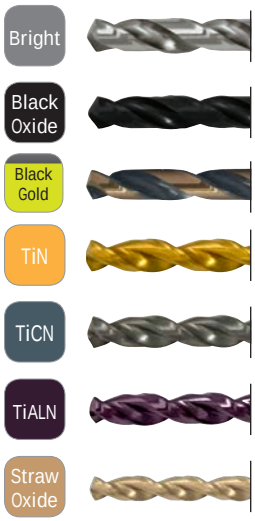
International products

Material

✓ = BEST Performance * Also Suitable

Icon	Material	Hardness	Surface Treatment Suggestion TiN	TiCN	TiALN
M	Austenitic Stainless Steel	< 35 HRc		*	✓
	Martensitic Stainless Steel	< 35 HRc		*	✓
	Martensitic Stainless Steel	>= 35 HRc			✓
	PH Stainless Steel	< 35 HRc		*	✓
	PH Stainless Steel	<= 35 HRc		*	✓
S	Ni, Co, Fe Based Super Alloys				✓
	Titanium				✓
P	Alloy Steel	16-23 HRc	*	*	✓
	Alloy Steel	23-38 HRc	*	*	✓
	Alloy Steel	> 38 HRc		*	✓
	Carbon Steel	16-23 HRc	*	*	✓
	Carbon Steel	23-38 HRc	*	*	✓
	Carbon Steel	> 38 HRc		*	✓
	Low Carbon Steel	13-23 HRc	*	*	✓
	Low Carbon Steel	23-38 HRc	*	*	✓
	Low Carbon Steel	> 38 HRc		*	✓
K	Gray Cast Iron	18-22 HRc		*	✓
	Nodular Cast Iron	22-32 HRc	*	✓	
N	Aluminum	< 10% Si	*	✓	
	Aluminum	> 10% Si	*	✓	
H	Hardened Steel	>45 HRc		*	✓

Surface Treatment

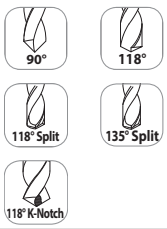


Additional treatments available upon request.

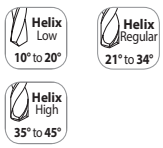
Base Material

HSS Cobalt

Point Angle



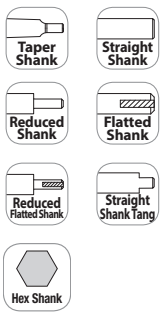
Helix Angle



Standard

ASME B94.11M DIN 338 DIN 340 DIN 1897

Shank



P K N

ASME B94.11M | DIN 338 | HSS | Bright | TiN | Black Oxide | 118° | Helix Regular 21° to 34° | Straight Shank

Note

For general purpose drilling and maintenance applications.

For Reduced Shank see Style #1900 or 1808.

Style 1606 (Metric) now combined with style 1600.



Black Oxide



Bright



TiN

drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1600 Black Oxide	1601 Bright	1899 Black Oxide	1898 Bright	1898T TiN
	0.35	.0138	19	4	—	—	C22780	—	—
	0.40	.0157	20	5	—	—	C22781	C01802	—
	0.45	.0177	20	5	—	—	C22782	C01807	—
	0.50	.0197	22	6	—	—	C22783	C01810	—
	0.55	.0217	24	7	—	—	C22784	—	—
	0.60	.0236	24	7	—	—	C22785	C01815	—
	0.65	.0256	26	8	—	—	C22786	—	—
	0.70	.0276	28	9	—	—	C22787	C01820	—
	0.75	.0295	28	9	—	—	C22788	—	—
1/32		.0312	1-3/8	1/2	—	—	C22643	—	—
	0.80	.0315	30	10	—	—	C22789	C01826	—
	0.85	.0335	30	10	—	—	C22790	C01829	—
	0.90	.0354	32	11	—	—	C22791	C01831	—
	0.95	.0374	32	11	—	—	C22792	C01834	—
	1.00	.0394	34	12	C68606	—	C22793	C62793	C24325
60		.0400	1-5/8	11/16	—	—	C22645	C23024	C19159
59		.0410	1-5/8	11/16	—	—	C22646	C23025	C19158
	1.05	.0413	34	12	—	—	C22794	C62794	—
58		.0420	1-5/8	11/16	—	—	C22647	C23026	C19157
57		.0430	1-3/4	3/4	—	—	C22648	C23027	C19156
	1.10	.0433	36	14	—	—	C22795	C62795	—
	1.15	.0453	36	14	—	—	C22796	C62796	—
56		.0465	1-3/4	3/4	—	—	C22649	C23028	C19155
3/64		.0469	1-3/4	3/4	—	—	C22644	—	—
	1.20	.0472	38	16	—	—	C22797	C62797	C24326
	1.25	.0492	38	16	—	—	C22798	C62798	—
	1.30	.0512	38	16	—	—	C22799	C62799	—
55		.0520	1-7/8	7/8	—	—	C22650	C23029	C19154
	1.35	.0531	40	18	—	—	C22800	C62800	—
54		.0550	1-7/8	7/8	—	—	C22651	C23030	C19153
	1.40	.0551	40	18	—	—	C22801	C62801	—
	1.45	.0571	40	18	—	—	C22802	C62802	—
	1.50	.0591	40	18	C68607	—	C22803	C62803	C24327
53		.0595	1-7/8	7/8	—	—	C22652	C23031	C19152
	1.55	.0610	43	20	—	—	C22804	C62804	—
1/16		.0625	1-7/8	7/8	C68000	C68114	C22653	C22995	C19160
	1.60	.0630	43	20	—	—	C22805	C62805	C24306
52		.0635	1-7/8	7/8	—	—	C22654	C23032	C19151
	1.65	.0650	43	20	—	—	C22806	C62806	—

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drill diameter frac/wire/let	drill diameter mm	decimal equivalent	overall length	flute length	order number 1600 Black Oxide	order number 1601 Bright	order number 1899 Black Oxide	order number 1898 Bright	order number 1898T TiN
	1.70	.0669	43	20	—	—	C22807	C62807	—
51		.0670	2	1	—	—	C22655	C23033	C19150
	1.75	.0689	46	22	—	—	C22808	C62808	—
50		.0700	2	1	—	—	C22656	C23034	C19149
	1.80	.0709	46	22	—	—	C22809	C62809	—
	1.85	.0728	46	22	—	—	C22810	C62810	—
49		.0730	2	1	—	—	C22657	C23035	C19148
	1.90	.0748	46	22	—	—	C22811	C62811	—
48		.0760	2	1	—	—	C22658	C23036	C19147
	1.95	.0768	49	24	—	—	C22812	C62812	—
5/64		.0781	2	1	C68001	C68115	C22659	C22996	C19161
47		.0785	2	1	—	—	C22660	C23037	C19146
	2.00	.0787	49	24	C68608	—	C22813	C62813	C24328
	2.05	.0807	49	24	—	—	C22814	C62814	—
46		.0810	2-1/8	1-1/8	—	—	C22661	C23038	C19145
45		.0820	2-1/8	1-1/8	—	—	C22662	C23039	C19144
	2.10	.0827	49	24	—	—	C22815	C62815	—
	2.15	.0846	53	27	—	—	C22816	C62816	—
44		.0860	2-1/8	1-1/8	—	—	C22663	C23040	C19143
	2.20	.0866	53	27	—	—	C22817	C62817	—
	2.25	.0886	53	27	—	—	C22818	C62818	—
43		.0890	2-1/4	1-1/4	—	—	C22664	C23041	C19142
	2.30	.0906	53	27	—	—	C22819	C62819	C24329
	2.35	.0925	53	27	—	—	C22820	C62820	—
42		.0935	2-1/4	1-1/4	—	—	C22665	C23042	C19141
3/32		.0938	2-1/4	1-1/4	C68002	C68116	C22666	C22997	C19162
	2.40	.0945	57	30	—	—	C22821	C62821	C24330
41		.0960	2-3/8	1-3/8	—	—	C22667	C23043	C19140
	2.45	.0965	57	30	—	—	C22822	C62822	—
40		.0980	2-3/8	1-3/8	—	—	C22668	C23044	C19139
	2.50	.0984	57	30	C68609	—	C22823	C62823	C24331
39		.0995	2-3/8	1-3/8	—	—	C22669	C23045	C19138
38		.1015	2-1/2	1-7/16	—	—	C22670	C23046	C19137
	2.60	.1024	57	30	—	—	C22824	C62824	—
37		.1040	2-1/2	1-7/16	—	—	C22671	C23047	C19136
	2.70	.1063	61	33	—	—	C22825	C62825	C24332
36		.1065	2-1/2	1-7/16	—	—	C22672	C23048	C19135
	2.75	.1082	61	33	—	—	C01112	—	—
7/64		.1094	2-5/8	1-1/2	C68003	C68117	C22673	C22998	C19163
35		.1100	2-5/8	1-1/2	—	—	C22674	C23049	C19134
	2.80	.1102	61	33	—	—	C22826	C62826	C24333
34		.1110	2-5/8	1-1/2	—	—	C22675	C23050	C19133
33		.1130	2-5/8	1-1/2	—	—	C22676	C23051	C19132
	2.90	.1142	61	33	—	—	C22827	C62827	C24334
32		.1160	2-3/4	1-5/8	—	—	C22677	C23052	C19131
	3.00	.1181	61	33	C68610	—	C22828	C62828	C24335
31		.1200	2-3/4	1-5/8	—	—	C22678	C23053	C19130
	3.10	.1220	65	36	—	—	C22829	C62829	C24336
1/8		.1250	2-3/4	1-5/8	C68004	C68118	C22679	C22999	C19164
	3.20	.1260	65	36	—	—	C22830	C62830	C24337
	3.25	.1280	65	36	—	—	C01125	C01912	—
30		.1285	2-3/4	1-5/8	—	—	C22680	C23054	C19129
	3.30	.1299	65	36	—	—	C22831	C62831	C24338
	3.40	.1339	70	39	—	—	C22832	C62832	—

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drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1600 Black Oxide	1601 Bright	1899 Black Oxide	1898 Bright	1898T TiN
29		.1360	2-7/8	1-3/4	—	—	C22681	C23055	C19128
	3.50	.1378	70	39	C68611	—	C22833	C62833	C24339
28		.1405	2-7/8	1-3/4	—	—	C22682	C23056	C19127
9/64		.1406	2-7/8	1-3/4	C68005	C68119	C22683	C23000	C19165
	3.60	.1417	70	39	—	—	C22834	C62834	C24340
27		.1440	3	1-7/8	—	—	C22684	C23057	C19126
	3.70	.1457	70	39	—	—	C22835	C62835	C24341
26		.1470	3	1-7/8	—	—	C22685	C23058	C19125
	3.75	.1476	70	39	—	—	C01137	C01924	—
25		.1495	3	1-7/8	—	—	C22686	C23059	C19124
	3.80	.1496	75	43	—	—	C22836	C62836	C24342
24		.1520	3-1/8	2	—	—	C22687	C23060	C19123
	3.90	.1535	75	43	—	—	C22837	C62837	—
23		.1540	3-1/8	2	—	—	C22688	C23061	C19122
5/32		.1562	3-1/8	2	C68006	C68120	C22689	C23001	C19166
22		.1570	3-1/8	2	—	—	C22690	C23062	C19121
	4.00	.1575	75	43	C68612	—	C22838	C62838	C24343
21		.1590	3-1/4	2-1/8	—	—	C22691	C23063	C19120
20		.1610	3-1/4	2-1/8	—	—	C22692	C23064	C19119
	4.10	.1614	75	43	—	—	C22839	C62839	C24344
	4.20	.1654	75	43	—	—	C22840	C62840	C24345
19		.1660	3-1/4	2-1/8	—	—	C22693	C23065	C19118
	4.25	.1673	75	43	—	—	C01338	C01938	—
	4.30	.1693	80	47	—	—	C22841	C62841	—
18		.1695	3-1/4	2-1/8	—	—	C22694	C23066	C19117
11/64		.1719	3-1/4	2-1/8	C68007	C68121	C22695	C23002	C19167
17		.1730	3-3/8	2-3/16	—	—	C22696	C23067	C19116
	4.40	.1732	80	47	—	—	C22842	C62842	—
16		.1770	3-3/8	2-3/16	—	—	C22697	C23068	C19115
	4.50	.1772	80	47	C68613	—	C22843	C62843	C24346
15		.1800	3-3/8	2-3/16	—	—	C22698	C23069	C19114
	4.60	.1811	80	47	—	—	C22844	C62844	C24347
14		.1820	3-3/8	2-3/16	—	—	C22699	C23070	C19113
13		.1850	3-1/2	2-5/16	—	—	C22700	C23071	C19112
	4.70	.1850	80	47	—	—	C22845	C62845	—
	4.75	.1870	80	47	—	—	C01164	—	—
3/16		.1875	3-1/2	2-5/16	C68008	C68122	C22701	C23003	C19168
12		.1890	3-1/2	2-5/16	—	—	C22702	C23072	C19111
	4.80	.1890	86	52	—	—	C22846	C62846	C24348
11		.1910	3-1/2	2-5/16	—	—	C22703	C23073	C19110
	4.90	.1929	86	52	—	—	C22847	C62847	C24349
10		.1935	3-5/8	2-7/16	—	—	C22704	C23074	C19109
9		.1960	3-5/8	2-7/16	—	—	C22705	C23075	C19108
	5.00	.1969	86	52	C68614	—	C22848	C62848	C24350
8		.1990	3-5/8	2-7/16	—	—	C22706	C23076	C19107
	5.10	.2008	86	52	—	—	C22849	C62849	C24351
7		.2010	3-5/8	2-7/16	—	—	C22707	C23077	C19106
13/64		.2031	3-5/8	2-7/16	C68009	C68123	C22708	C23004	C19169
6		.2040	3-3/4	2-1/2	—	—	C22709	C23078	C19105
	5.20	.2047	86	52	—	—	C22850	C62850	C24352
5		.2055	3-3/4	2-1/2	—	—	C22710	C23079	C19104
	5.25	.2066	86	52	—	—	C01180	—	—
	5.30	.2087	86	52	—	—	C22851	C62851	—
4		.2090	3-3/4	2-1/2	—	—	C22711	C23080	C19103

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drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1600 Black Oxide	1601 Bright	1899 Black Oxide	1898 Bright	1898T TiN
	5.40	.2126	93	57	—	—	C22852	C62852	—
3		.2130	3-3/4	2-1/2	—	—	C22712	C23081	C19102
	5.50	.2165	93	57	C68615	—	C22853	C62853	C24353
7/32		.2188	3-3/4	2-1/2	C68010	C68124	C22713	C23005	C19170
	5.60	.2205	93	57	—	—	C22854	C62854	—
2		.2210	3-7/8	2-5/8	—	—	C22714	C23082	C19101
	5.70	.2244	93	57	—	—	C22855	C62855	—
	5.75	.2263	93	57	—	—	C01190	—	—
1		.2280	3-7/8	2-5/8	—	—	C22715	C23083	C19100
	5.80	.2283	93	57	—	—	C22856	C62856	—
	5.90	.2323	93	57	—	—	C22857	C62857	C24354
A		.2340	3-7/8	2-5/8	—	—	C22716	C22970	—
15/64		.2344	3-7/8	2-5/8	C68011	C68125	C22717	C23006	C19171
	6.00	.2362	93	57	C68616	—	C22858	C62858	C24355
B		.2380	4	2-3/4	—	—	C22718	C22971	—
	6.10	.2402	101	63	—	—	C22859	C62859	—
C		.2420	4	2-3/4	—	—	C22719	C22972	—
	6.20	.2441	101	63	—	—	C22860	C62860	—
D		.2460	4	2-3/4	—	—	C22720	C22973	C19193
	6.25	.2460	101	63	—	—	C01202	—	—
	6.30	.2480	101	63	—	—	C22861	C62861	—
1/4, E		.2500	4	2-3/4	C68012	C68126	C22721	C23007	C19172
	6.40	.2520	101	63	—	—	C22862	C62862	C24356
	6.50	.2559	101	63	C68617	—	C22863	C62863	C24357
F		.2570	4-1/8	2-7/8	—	—	C22722	C22974	C19194
	6.60	.2598	101	63	—	—	C22864	C62864	C24358
G		.2610	4-1/8	2-7/8	—	—	C22723	C22975	C19195
	6.70	.2638	101	63	—	—	C22865	C62865	C24359
17/64		.2656	4-1/8	2-7/8	C68013	C68127	C22724	C23008	C19173
	6.75	.2657	109	69	—	—	C01213	—	—
H		.2660	4-1/8	2-7/8	—	—	C22725	C22976	C19196
	6.80	.2677	109	69	—	—	C22866	C62866	C24360
	6.90	.2717	109	69	—	—	C22867	C62867	C24361
I		.2720	4-1/8	2-7/8	—	—	C22726	C22977	C19197
	7.00	.2756	109	69	C68618	—	C22868	C62868	C24362
J		.2770	4-1/8	2-7/8	—	—	C22727	C22978	C19198
	7.10	.2795	109	69	—	—	C22869	C62869	—
K		.2810	4-1/4	2-15/16	—	—	C22728	C22979	—
9/32		.2812	4-1/4	2-15/16	C68014	C68128	C22729	C23009	C19174
	7.20	.2835	109	69	—	—	C22870	C62870	C24363
	7.25	.2854	109	69	—	—	C01223	—	—
	7.30	.2874	109	69	—	—	C22871	C62871	C24317
L		.2900	4-1/4	2-15/16	—	—	C22730	C22980	C19199
	7.40	.2913	109	69	—	—	C22872	C62872	—
M		.2950	4-3/8	3-1/16	—	—	C22731	C22981	—
	7.50	.2953	109	69	C68619	—	C22873	C62873	C24364
19/64		.2969	4-3/8	3-1/16	C68015	C68129	C22732	C23010	C19175
	7.60	.2992	117	75	—	—	C22874	C62874	—
N		.3020	4-3/8	3-1/16	—	—	C22733	C22982	C19200
	7.70	.3031	117	75	—	—	C22875	C62875	—
	7.75	.3051	117	75	—	—	C01234	—	—
	7.80	.3071	117	75	—	—	C22876	C62876	—
	7.90	.3110	117	75	—	—	C22877	C62877	—
5/16		.3125	4-1/2	3-3/16	C68016	C68130	C22734	C23011	C19176
	8.00	.3150	117	75	C68620	—	C22878	C62878	C24365

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drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1600 Black Oxide	1601 Bright	1899 Black Oxide	1898 Bright	1898T TiN
O		.3160	4-1/2	3-3/16	—	—	C22735	C22983	C19201
	8.10	.3189	117	75	—	—	C22879	C62879	—
	8.20	.3228	117	75	—	—	C22880	C62880	—
P		.3230	4-5/8	3-5/16	—	—	C22736	C22984	—
	8.25	.3248	117	75	—	—	C01243	—	—
	8.30	.3268	117	75	—	—	C22881	C62881	C24366
21/64		.3281	4-5/8	3-5/16	C68017	C68131	C22737	C23012	C19177
	8.40	.3307	117	75	—	—	C22882	C62882	—
Q		.3320	4-3/4	3-7/16	—	—	C22738	C22985	C19202
	8.50	.3346	117	75	C68621	—	C22883	C62883	C24367
	8.60	.3386	125	81	—	—	C22884	C62884	—
R		.3390	4-3/4	3-7/16	—	—	C22739	C22986	C19203
	8.70	.3425	125	81	—	—	C22885	C62885	—
11/32		.3438	4-3/4	3-7/16	C68018	C68132	C22740	C23013	C19178
	8.75	.3444	125	81	—	—	C01253	—	—
	8.80	.3465	125	81	—	—	C22886	C62886	—
S		.3480	4-7/8	3-1/2	—	—	C22741	C22987	—
	8.90	.3504	125	81	—	—	C22887	C62887	—
	9.00	.3543	125	81	C68622	—	C22888	C62888	C24368
T		.3580	4-7/8	3-1/2	—	—	C22742	C22988	C19204
	9.10	.3583	125	81	—	—	C22889	C62889	—
23/64		.3594	4-7/8	3-1/2	C68019	C68133	C22743	C23014	C19179
	9.20	.3622	125	81	—	—	C22890	C62890	—
	9.25	.3641	125	81	—	—	C01262	—	—
	9.30	.3661	125	81	—	—	C22891	C62891	—
U		.3680	5	3-5/8	—	—	C22744	C22989	
	9.40	.3701	125	81	—	—	C22892	C62892	—
	9.50	.3740	125	81	C68623	—	C22893	C62893	C24369
3/8		.3750	5	3-5/8	C68020	C68134	C22745	C23015	C19180
V		.3770	5	3-5/8	—	—	C22746	C22990	—
	9.60	.3780	133	87	—	—	C22894	C62894	—
	9.70	.3819	133	87	—	—	C22895	C62895	—
	9.80	.3858	133	87	—	—	C22896	C62896	—
W		.3860	5-1/8	3-3/4	—	—	C22747	C22991	C19206
	9.90	.3898	133	87	—	—	C22897	C62897	—
25/64		.3906	5-1/8	3-3/4	C68021	C68135	C22505	C23016	C19181
	10.00	.3937	133	87	C68624	—	C22898	C62898	C24370
X		.3970	5-1/8	3-3/4	—	—	C22748	C22992	—
	10.10	.3976	133	87	—	—	C22941	—	—
	10.20	.4016	133	87	—	—	C22899	C62899	C24371
	10.25	.4035	133	87	—	—	C22942	—	—
Y		.4040	5-1/4	3-7/8	—	—	C22749	C22993	—
13/32		.4062	5-1/4	3-7/8	C68022	C68136	C22506	C23017	C19182
	10.40	.4094	133	87	—	—	C22944	—	—
Z		.4130	5-1/4	3-7/8	—	—	C22750	C22994	—
	10.50	.4134	133	87	C68625	—	C22900	C62900	C24372
	10.70	.4212	142	94	—	—	C22947	C02070	—
27/64		.4219	5-3/8	3-15/16	C68023	C68137	C22507	C23018	C19183
	10.80	.4252	142	94	—	—	C22901	C62901	C24373
	11.00	.4331	142	94	C68626	—	C22902	C62902	C24374
	11.10	.4370	142	94	—	—	C22951	C02073	—
7/16		.4375	5-1/2	4-1/16	C68024	C68138	C22751	C23019	C19184
	11.20	.4409	142	94	—	—	C22903	C62903	—
	11.40	.4488	142	94	—	—	C22954	—	—

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Jobber
Maintenance

Styles: 1600, 1601, 1899, 1898, 1898T *(continued)*

CLE-LINE

drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1600 Black Oxide	1601 Bright	1899 Black Oxide	1898 Bright	1898T TiN
	11.50	.4528	142	94	C68627	—	C22904	C62904	C24375
29/64		.4531	5-5/8	4-3/16	C68025	C68139	C22508	C23020	C19185
	11.80	.4646	142	94	—	—	C22905	C62905	C24376
15/32		.4688	5-3/4	4-5/16	C68026	C68140	C22753	C23021	C19186
	12.00	.4724	151	101	C68628	—	C22906	C62906	C24377
	12.20	.4803	151	101	—	—	C22907	C62907	—
31/64		.4844	5-7/8	4-3/8	C68027	C68141	C22755	C23022	C19187
	12.50	.4921	151	101	C68629	—	C22908	C62908	C24378
1/2		.5000	6	4-1/2	C68028	C68142	C22757	C23023	C19188
	12.80	.5039	151	101	—	—	C22909	C62909	—
	13.00	.5118	151	101	C68630	—	C22910	C62910	C24379
	13.20	.5197	161	101	—	—	C22911	C62911	—
	13.50	.5315	160	108	—	—	C22912	C62912	—
	13.80	.5433	160	108	—	—	C22913	C62913	—
	14.00	.5512	160	108	—	—	C22914	C62914	—
	14.25	.5610	169	114	—	—	C22915	C62915	—
	14.50	.5709	169	114	—	—	C22916	C62916	—
	14.75	.5807	169	114	—	—	C22917	C62917	—
	15.00	.5906	169	114	—	—	C22918	C62918	—
	15.25	.6004	178	120	—	—	C22919	—	—
	15.50	.6102	178	120	—	—	C22920	C62920	—
	15.75	.6201	178	120	—	—	C22921	C62921	—
	16.00	.6299	178	120	—	—	C22922	C62922	—
	16.25	.6398	184	125	—	—	C22923	C62923	—
	16.50	.6496	184	125	—	—	C22924	C62924	—
	16.75	.6594	184	125	—	—	C22925	—	—
	17.00	.6693	184	125	—	—	C22926	C62926	—
	17.25	.6791	191	130	—	—	C22927	—	—
	17.50	.6890	191	130	—	—	C22928	C62928	—
	18.00	.7086	191	130	—	—	C22929	C62929	—
	18.50	.7283	198	135	—	—	C22930	—	—
	19.00	.7480	198	135	—	—	C22931	C62931	—
	19.50	.7677	205	140	—	—	C22932	—	—
	20.00	.7874	205	140	—	—	C22933	—	—

Jobber
3/8" Reduced Shank

Styles: 1900, 1808

HSS | Bright | Black Oxide | 118° | Helix Regular 21° to 34° | Reduced Shank



Black Oxide



Bright

drill diameter	decimal equivalent	overall length	flute length	order number 1900 Black Oxide	1808 Bright
25/64	.3906	5-1/8	3-3/4	C69369	C20621
13/32	.4062	5-1/4	3-7/8	C69370	C20622
27/64	.4219	5-3/8	3-15/16	C69371	C20623
7/16	.4375	5-1/2	4-1/16	C69372	C20624
29/64	.4531	5-5/8	4-3/16	C69373	C20625
15/32	.4688	5-3/4	4-5/16	C69374	C20626
31/64	.4844	5-7/8	4-3/8	C69375	C20627
1/2	.5000	6	4-1/2	C69376	C20628

GREENFIELD INDUSTRIES

SET

Styles: 1600, 1899, 1900, 1898, 1898T

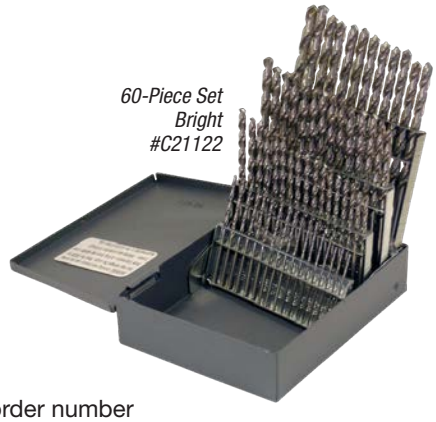
Metal Case (unless noted otherwise)



13-Piece Set
Black Oxide
#C21105



29-Piece Set
TiN
#C19211



60-Piece Set
Bright
#C21122

drill sizes	no. of pieces	order number 1600 Black Oxide	1899 Black Oxide	1899/1900 BO - 3/8" shank	1898 Bright	1898T TiN
36, 29, 25, 21, 7, F, 5/16, U, 27/64 **Taps:** (Style# 0402) 6-32, 8-32,10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	18	—	—	—	C21190	—
1/16"– 3/8" x 1/32"	11	—	C21101	—	C21100	—
1/16"– 1/4" x 1/64"	13	C69034	C21105	—	C21104	—
1/16"– 1/2" x 1/32"	15	*C69035	C21109	C21156	C21108	C19210
1/16"– 3/8" x 1/64"	21	C69036	C21114	–	C21113	–
1/16"– 1/2" x 1/64"	29	*C69037	C21118	C21159	C21117	C19211
A – Z	26	—	C21158	—	—	—
#1 – #60	60	—	C21123	—	C21122	—
1/16"– 1/2" x 1/64", A to Z, #1 – #60	115	—	C21127	—	C21126	—
1mm – 6mm x 0.5mm	11	—	C21130	—	—	—
1mm – 10mm x 0.5mm	19	—	—	—	—	C24380
1mm – 13mm x 0.5mm	25	*C69038	C21131	—	C18127	—
Tap & Drill Sets						
5.0, 6.0, 6.7, 8.5, 10.2mm **Taps:** (Style# 0411): M6 x 1.0, M7 x 1.0, M8 x 1.25 , M10 x 1.5, M12 x 1.75	18	—	C00451	—	—	—

**Plastic Case*

SET

Styles: 1860

Plastic Tube Case

Jobber Sets
Drill and Tap Sets

Note
*Drill style: **1898** bright*
Uses Cle-Line Tap Style: #0411 Spiral Point



jobber drill sizes	plug tap spiral point	no. of pieces	order number 1860 bright
36	6-32	2	C22305
29	8-32	2	C22304
25	10-24	2	C22307
21	10-32	2	C22306
7	1/4-20	2	C22308
F	5/16-18	2	C22300
5/16"	3/8-16	2	C22303
U	7/16-14	2	C22302
27/64"	1/2-13	2	C22301

Jobber
Maintenance - Left Hand

General Application Drills

Style: 1898L

CLE-LINE

P K N

ASME B94.11M | HSS | Bright | 118° | Helix Regular 21° to 34° | Straight Shank

Note
For general purpose drilling and maintenance applications.



drill diameter	decimal equivalent	overall length	flute length	order number 1898L Bright
3/64	.0469	1-3/4	3/4	C18400
1/16	.0625	1-7/8	7/8	C18401
5/64	.0781	2	1	C18402
3/32	.0938	2-1/4	1-1/4	C18403
7/64	.1094	2-5/8	1-1/2	C18404
1/8	.1250	2-3/4	1-5/8	C18405
9/64	.1406	2-7/8	1-3/4	C18406
5/32	.1562	3-1/8	2	C18407
11/64	.1719	3-1/4	2-1/8	C18408
3/16	.1875	3-1/2	2-5/16	C18409
13/64	.2031	3-5/8	2-7/16	C18410
7/32	.2188	3-3/4	2-1/2	C18411
15/64	.2344	3-7/8	2-5/8	C18412
1/4	.2500	4	2-3/4	C18413
17/64	.2656	4-1/8	2-7/8	C18414
9/32	.2812	4-1/4	2-15/16	C18415
19/64	.2969	4-3/8	3-1/16	C18416
5/16	.3125	4-1/2	3-3/16	C18417
21/64	.3281	4-5/8	3-5/16	C18418
11/32	.3438	4-3/4	3-7/16	C18419
23/64	.3594	4-7/8	3-1/2	C18420
3/8	.3750	5	3-5/8	C18421
25/64	.3906	5-1/8	3-3/4	C18422
13/32	.4062	5-1/4	3-7/8	C18423
27/64	.4219	5-3/8	3-15/16	C18424
7/16	.4375	5-1/2	4-1/16	C18425
29/64	.4531	5-5/8	4-3/16	C18426
15/32	.4688	5-3/4	4-5/16	C18427
31/64	.4844	5-7/8	4-3/8	C18428
1/2	.5000	6	4-1/2	C18429

P K

ASME B94.11M | DIN 338 | HSS | Black Oxide | Black Gold | 135° Split | Straight Shank | Flatted Shank

Note
Three Flats on sizes 3/16" (4.8mm) & larger for tighter chucking.

For Reduced Shank see Style #1605, 1809, 1879.



Black Oxide



Black and Gold



Black and Gold with flats

drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1602 Black Oxide	1604 Black and Gold	1607 Black & Gold w/flats	1801 Black Oxide	1878 Black & Gold w/flats
	*1.00	.0394	34	12	—	—	—	—	C74001
*60		.0400	1-5/8	11/16	C68342	—	—	C23154	C18113
*59		.0410	1-5/8	11/16	C68341	—	—	C23155	C18112
*58		.0420	1-5/8	11/16	C68340	—	—	C23156	C18111
*57		.0430	1-3/4	3/4	C68339	—	—	C23157	C18110
*56		.0465	1-3/4	3/4	C68338	—	—	C23158	C18109
*3/64		.0469	1-3/4	3/4	—	—	—	C23214	—
	*1.20	.0472	38	16	—	—	—	—	C74025
*55		.0520	1-7/8	7/8	C68337	—	—	C23159	C18108
*54		.0550	1-7/8	7/8	C68336	—	—	C23160	C18107
	*1.50	.0591	40	18	—	—	—	—	C74002
*53		.0595	1-7/8	7/8	C68335	—	—	C23161	C18106
1/16		.0625	1-7/8	7/8	C68229	C69042	C69339	C23125	C18000
	1.60	.0630	43	20	—	—	—	—	C74026
52		.0635	1-7/8	7/8	C68334	—	—	C23162	C18105
51		.0670	2	1	C68333	—	—	C23163	C18104
50		.0700	2	1	C68332	—	—	C23164	C18103
49		.0730	2	1	C68331	—	—	C23165	C18102
48		.0760	2	1	C68330	—	—	C23166	C18101
5/64		.0781	2	1	C68230	C69043	C69340	C23126	C18001
47		.0785	2	1	C68329	—	—	C23167	C18100
	2.00	.0787	49	24	—	—	—	—	C74003
46		.0810	2-1/8	1-1/8	C68328	—	—	C23168	C18099
45		.0820	2-1/8	1-1/8	C68327	—	—	C23169	C18098
44		.0860	2-1/8	1-1/8	C68326	—	—	C23170	C18097
43		.0890	2-1/4	1-1/4	C68325	—	—	C23171	C18096
	2.30	.0906	53	27	—	—	—	—	C74027
42		.0935	2-1/4	1-1/4	C68324	—	—	C23172	C18095
3/32		.0938	2-1/4	1-1/4	C68231	C69044	C69341	C23127	C18002
	2.40	.0945	57	30	—	—	—	—	C74028
41		.0960	2-3/8	1-3/8	C68323	—	—	C23173	C18094
40		.0980	2-3/8	1-3/8	C68322	—	—	C23174	C18093
	2.50	.0984	57	30	—	—	—	—	C74004
39		.0995	2-3/8	1-3/8	C68321	—	—	C23175	C18092
38		.1015	2-1/2	1-7/16	C68320	—	—	C23176	C18091
37		.1040	2-1/2	1-7/16	C68319	—	—	C23177	C18090

**Not split point under 1/16".*

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Jobber

Maintenance - Heavy Duty

Styles: 1602, 1604, 1607, 1801, 1878 *(continued)*

drill diameter frac/wire/let	drill diameter mm	decimal equivalent	overall length	flute length	order number 1602 Black Oxide	1604 Black and Gold	1607 Black & Gold w/flats	1801 Black Oxide	1878 Black & Gold w/flats
	2.70	.1063	61	33	—	—	—	—	C74029
36		.1065	2-1/2	1-7/16	C68318	—	—	C23178	C18089
7/64		.1094	2-5/8	1-1/2	C68232	C69045	C69342	C23128	C18003
35		.1100	2-5/8	1-1/2	C68317	—	—	C23179	C18088
	2.80	.1102	61	33	—	—	—	—	C74030
34		.1110	2-5/8	1-1/2	C68316	—	—	C23180	C18087
33		.1130	2-5/8	1-1/2	C68315	—	—	C23181	C18086
	2.90	.1142	61	33	—	—	—	—	C74031
32		.1160	2-3/4	1-5/8	C68314	—	—	C23182	C18085
	3.00	.1181	61	33	—	—	—	—	C74005
31		.1200	2-3/4	1-5/8	C68313	—	—	C23183	C18084
	3.10	.1220	65	36	—	—	—	—	C74032
1/8		.1250	2-3/4	1-5/8	C68233	C69046	C69343	C23129	C18004
	3.20	.1260	65	36	—	—	—	—	C74033
30		.1285	2-3/4	1-5/8	C68312	—	—	C23184	C18083
	3.30	.1299	65	36	—	—	—	—	C74034
29		.1360	2-7/8	1-3/4	C68311	—	—	C23185	C18082
	3.50	.1378	70	39	—	—	—	—	C74006
28		.1405	2-7/8	1-3/4	C68310	—	—	C23186	C18081
9/64		.1406	2-7/8	1-3/4	C68234	C69047	C69344	C23130	C18005
	3.60	.1417	70	39	—	—	—	—	C74035
27		.1440	3	1-7/8	C68309	—	—	C23187	C18080
	3.70	.1457	70	39	—	—	—	—	C74036
26		.1470	3	1-7/8	C68308	—	—	C23188	C18079
25		.1495	3	1-7/8	C68307	—	—	C23189	C18078
	3.80	.1496	75	43	—	—	—	—	C74037
24		.1520	3-1/8	2	C68306	—	—	C23190	C18077
23		.1540	3-1/8	2	C68305	—	—	C23191	C18076
5/32		.1562	3-1/8	2	C68235	C69048	C69345	C23131	C18006
22		.1570	3-1/8	2	C68304	—	—	C23192	C18075
	4.00	.1575	75	43	—	—	—	—	C74007
21		.1590	3-1/4	2-1/8	C68303	—	—	C23193	C18074
20		.1610	3-1/4	2-1/8	C68302	—	—	C23194	C18073
	4.10	.1614	75	43	—	—	—	—	C74038
	4.20	.1654	75	43	—	—	—	—	C74039
19		.1660	3-1/4	2-1/8	C68301	—	—	C23195	C18072
18		.1695	3-1/4	2-1/8	C68300	—	—	C23196	C18071
11/64		.1719	3-1/4	2-1/8	C68236	C69049	C69346	C23132	C18007
17		.1730	3-3/8	2-3/16	C68299	—	—	C23197	C18070
16		.1770	3-3/8	2-3/16	C68298	—	—	C23198	C18069
	4.50	.1772	80	47	—	—	—	—	C74008
15		.1800	3-3/8	2-3/16	C68297	—	—	C23199	C18068
	4.60	.1811	80	47	—	—	—	—	C74040
14		.1820	3-3/8	2-3/16	C68296	—	—	C23200	C18067
13		.1850	3-1/2	2-5/16	C68295	—	—	C23201	C18066
3/16		.1875	3-1/2	2-5/16	C68237	C69050	C69347	C23133	C18008
12		.1890	3-1/2	2-5/16	C68294	—	—	C23202	C18065
	4.80	.1890	86	52	—	—	—	—	C74041
11		.1910	3-1/2	2-5/16	C68293	—	—	C23203	C18064
	4.90	.1929	86	52	—	—	—	—	C74042
10		.1935	3-5/8	2-7/16	C68292	—	—	C23204	C18063
9		.1960	3-5/8	2-7/16	C68291	—	—	C23205	C18062
	5.00	.1969	86	52	—	—	—	—	C74009
8		.1990	3-5/8	2-7/16	C68290	—	—	C23206	C18061
	5.10	.2008	86	52	—	—	—	—	C74043
7		.2010	3-5/8	2-7/16	C68289	—	—	C23207	C18060

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drill diameter frac/wire/let	drill diameter mm	decimal equivalent	overall length	flute length	order number 1602 Black Oxide	1604 Black and Gold	1607 Black & Gold w/flats	1801 Black Oxide	1878 Black & Gold w/flats
13/64		.2031	3-5/8	2-7/16	C68238	C69051	C69348	C23134	C18009
6		.2040	3-3/4	2-1/2	C68288	—	—	C23208	C18059
	5.20	.2047	86	52	—	—	—	—	C74044
5		.2055	3-3/4	2-1/2	C68287	—	—	C23209	C18058
4		.2090	3-3/4	2-1/2	C68286	—	—	C23210	C18057
3		.2130	3-3/4	2-1/2	C68285	—	—	C23211	C18056
	5.50	.2165	93	57	—	—	—	—	C74010
7/32		.2188	3-3/4	2-1/2	C68239	C69052	C69349	C23135	C18010
2		.2210	3-7/8	2-5/8	C68284	—	—	C23212	C18055
1		.2280	3-7/8	2-5/8	C68283	—	—	C23213	C18054
	5.90	.2323	93	57	—	—	—	—	C74045
A		.2340	3-7/8	2-5/8	C68258	—	—	C23100	C18029
15/64		.2344	3-7/8	2-5/8	C68240	C69053	C69350	C23136	C18011
	6.00	.2362	93	57	—	—	—	—	C74011
B		.2380	4	2-3/4	C68259	—	—	C23101	C18030
C		.2420	4	2-3/4	C68260	—	—	C23102	C18031
D		.2460	4	2-3/4	C68261	—	—	C23103	C18032
1/4, E		.2500	4	2-3/4	C68241	C69054	C69351	C23137	C18012
	6.40	.2520	101	63	—	—	—	—	C74046
	6.50	.2559	101	63	—	—	—	—	C74012
F		.2570	4-1/8	2-7/8	C68262	—	—	C23104	C18033
	6.60	.2598	101	63	—	—	—	—	C74047
G		.2610	4-1/8	2-7/8	C68263	—	—	C23105	C18034
	6.70	.2638	101	63	—	—	—	—	C74048
17/64		.2656	4-1/8	2-7/8	C68242	C69055	C69352	C23138	C18013
H		.2660	4-1/8	2-7/8	C68264	—	—	C23106	C18035
	6.80	.2677	109	69	—	—	—	—	C74049
	6.90	.2717	109	69	—	—	—	—	C74050
I		.2720	4-1/8	2-7/8	C68265	—	—	C23107	C18036
	7.00	.2756	109	69	—	—	—	—	C74013
J		.2770	4-1/8	2-7/8	C68266	—	—	C23108	C18037
K		.2810	4-1/4	2-15/16	C68267	—	—	C23109	C18038
9/32		.2812	4-1/4	2-15/16	C68243	C69056	C69353	C23139	C18014
	7.20	.2835	109	69	—	—	—	—	C74051
	7.30	.2874	109	69	—	—	—	—	C74052
L		.2900	4-1/4	2-15/16	C68268	—	—	C23110	C18039
M		.2950	4-3/8	3-1/16	C68269	—	—	C23111	C18040
	7.50	.2953	109	69	—	—	—	—	C74014
19/64		.2969	4-3/8	3-1/16	C68244	C69057	C69354	C23140	C18015
N		.3020	4-3/8	3-1/16	C68270	—	—	C23112	C18041
5/16		.3125	4-1/2	3-3/16	C68245	C69058	C69355	C23141	C18016
	8.00	.3150	117	75	—	—	—	—	C74015
O		.3160	4-1/2	3-3/16	C68271	—	—	C23113	C18042
P		.3230	4-5/8	3-5/16	C68272	—	—	C23114	C18043
	8.30	.3268	117	75	—	—	—	—	C74053
21/64		.3281	4-5/8	3-5/16	C68246	C69059	C69356	C23142	C18017
Q		.3320	4-3/4	3-7/16	C68273	—	—	C23115	C18044
	8.50	.3346	117	75	—	—	—	—	C74016
R		.3390	4-3/4	3-7/16	C68274	—	—	C23116	C18045
11/32		.3438	4-3/4	3-7/16	C68247	C69060	C69357	C23143	C18018
S		.3480	4-7/8	3-1/2	C68275	—	—	C23117	C18046
	9.00	.3543	125	81	—	—	—	—	C74017
T		.3580	4-7/8	3-1/2	C68276	—	—	C23118	C18047
23/64		.3594	4-7/8	3-1/2	C68248	C69061	C69358	C23144	C18019
U		.3680	5	3-5/8	C68277	—	—	C23119	C18048
	9.50	.3740	125	81	—	—	—	—	C74018

continued on next page

Jobber
Maintenance - Heavy Duty

Styles: 1602, 1604, 1607, 1801, 1878 *(continued)*

drill diameter frac/wire/let	drill diameter mm	decimal equivalent	overall length	flute length	order number 1602 Black Oxide	1604 Black and Gold	1607 Black & Gold w/flats	1801 Black Oxide	1878 Black & Gold w/flats
3/8		.3750	5	3-5/8	C68249	C69062	C69359	C23145	C18020
V		.3770	5	3-5/8	C68278	—	—	C23120	C18049
W		.3860	5-1/8	3-3/4	C68279	—	—	C23121	C18050
25/64		.3906	5-1/8	3-3/4	C68250	C69063	C69360	C23146	C18021
	10.00	.3937	133	87	—	—	—	—	C74019
X		.3970	5-1/8	3-3/4	C68280	—	—	C23122	C18051
	10.20	.4016	133	87	—	—	—	—	C74054
Y		.4040	5-1/4	3-7/8	C68281	—	—	C23123	C18052
13/32		.4062	5-1/4	3-7/8	C68251	C69064	C69361	C23147	C18022
Z		.4130	5-1/4	3-7/8	C68282	—	—	C23124	C18053
	10.50	.4134	133	87	—	—	—	—	C74020
27/64		.4219	5-3/8	3-15/16	C68252	C69065	C69362	C23148	C18023
	10.80	.4252	142	94	—	—	—	—	C74055
	11.00	.4331	142	94	—	—	—	—	C74021
7/16		.4375	5-1/2	4-1/16	C68253	C69066	C69363	C23149	C18024
	11.50	.4528	142	94	—	—	—	—	C74022
29/64		.4531	5-5/8	4-3/16	C68254	C69067	C69364	C23150	C18025
	11.80	.4646	142	94	—	—	—	—	C74056
15/32		.4688	5-3/4	4-5/16	C68255	C69068	C69365	C23151	C18026
	12.00	.4724	151	101	—	—	—	—	C74023
31/64		.4844	5-7/8	4-3/8	C68256	C69069	C69366	C23152	C18027
	12.50	.4921	151	101	—	—	—	—	C74024
1/2		.5000	6	4-1/2	C68257	C69070	C69367	C23153	C18028
	13.00	.5118	151	101	—	—	—	—	C74057

Heavy Duty
3/8" Reduced Shank

Styles: 1605, 1809, 1879

HSS | Black Oxide | Black Gold | 135° Split | Reduced Flatted Shank



Style #1605 - Black and Gold



Style #1809 - Black Oxide

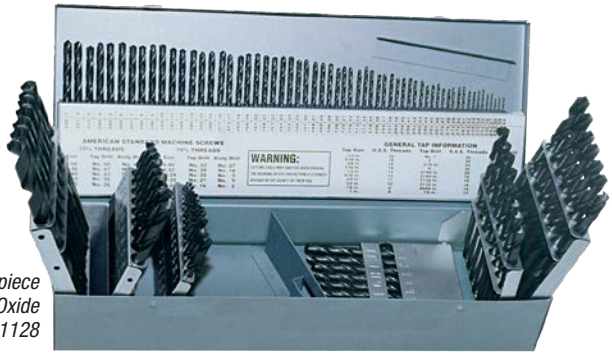


Style #1879 - Black and Gold w/ flats

drill diameter	decimal equivalent	overall length	flute length	order number 1605 Black and Gold	1809 Black Oxide	1879 Black & Gold w/flats
25/64	.3906	5-1/8	3-3/4	C69071	C20631	C18114
13/32	.4062	5-1/4	3-7/8	C69072	C20632	C18115
27/64	.4219	5-3/8	3-15/16	C69073	C20633	C18116
7/16	.4375	5-1/2	4-1/16	C69074	C20634	C18117
29/64	.4531	5-5/8	4-3/16	C69075	C20635	C18118
15/32	.4688	5-3/4	4-5/16	C69076	C20636	C18119
31/64	.4844	5-7/8	4-3/8	C69077	C20637	C18120
1/2	.5000	6	4-1/2	C69078	C20638	C18121
17/32	.5312	6-5/8	4-13/16	–	C20659	–
9/16	.5625	6-5/8	4-13/16	–	C20660	–
5/8	.6094	7-1/8	5-3/16	–	C20661	–
11/16	.6875	7-5/8	5-5/8	–	C20662	–



29-piece Bit Barrel Set #C18128



115-piece Black Oxide #C21128

drill sizes	no. of pieces	order number 1602 Black Oxide	1604 Black & Gold	1605 3/8" shank Black & Gold	1607 with flats Black & Gold	1801 Black Oxide	1878 with flats Black & Gold	1878/1879 3/8" shank Black & Gold
36, 29, 25, 21, 7, F, 5/16, U, 27/64 Taps: (Style# 0402) 6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	18	— —	— —	— —	— —	— —	**C21191 **C21192	— —
1/16"– 1/4" x 1/64"	13	C69381	C69030	—	C68343	C21157	C18123	—
1/16"– 1/2" x 1/32"	15	C69382	C69031	—	C68461	C21110	C18124	—
1/16"– 3/8" x 1/64"	21	—	—	—	—	C21115	—	—
1/16"– 1/2" x 1/64"	29	*C69383	*C69032	*C69033	*C69368	C21119	C18125	C18122
Bit Barrel™ 1/16"– 1/2" x 1/64"	29	—	—	—	*C69385	—	*C18128	—
#1 – #60	60	—	—	—	—	C21124	—	—
1/16"– 1/2" x 1/64", A to Z, #1 – #60	115	—	—	—	—	C21128	–	–
Metric: 1mm to 6mm	11						C74058	
1mm to 13mm	25						C74059	

**Plastic Case* ***C21191 - Hand taps **C21192 - Spiral point taps*

Specialty
Drill & Screw Extractors

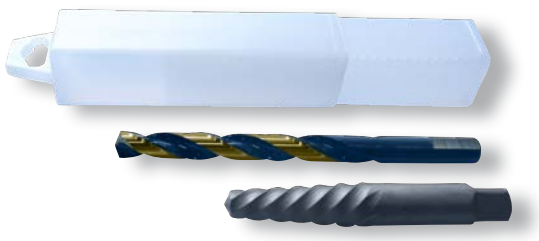
SET **Style: 1864**

P K H

Plastic Tube

Black Gold

Note
Drill style: 1878 Black & Gold



jobber drill	screw extractor	no. of pcs.	order number 1864	jobber drill	screw extractor	no. of pcs.	order number 1864
5/64"	#1	2	C22311	1/4", E	#4	2	C22314
7/64"	#2	2	C22312	17/64"	#5	2	C22315
5/32"	#3	2	C22313	13/32"	#6	2	C22316

Jobber
TiN Tip

General Application Drills

Styles: 1500-TT, 1501-TT

CLE-LINE

P K N

ASME B94.11M | HSS | HS-CO | TiN | 135° Split | Helix Regular 21° to 34° | Straight Shank | NEW

Available in late 2018



drill diameter frac/wire/let	decimal equivalent	overall length	flute length	order number 1500-TT HSS TiN	order number 1501-TT HS-Co TiN
56	.0465	1-3/4	3/4	C97410	C66110
3/64	.0469	1-3/4	3/4	C97300	C66000
55	.0520	1-7/8	7/8	C97409	C66109
54	.0550	1-7/8	7/8	C97408	C66108
53	.0595	1-7/8	7/8	C97407	C66107
1/16	.0625	1-7/8	7/8	C97301	C66001
52	.0635	1-7/8	7/8	C97406	C66106
51	.0670	2	1	C97405	C66105
50	.0700	2	1	C97404	C66104
49	.0730	2	1	C97403	C66103
48	.0760	2	1	C97402	C66102
5/64	.0781	2	1	C97302	C66002
47	.0785	2	1	C97401	C66101
46	.0810	2-1/8	1-1/8	C97400	C66100
45	.0820	2-1/8	1-1/8	C97399	C66099
44	.0860	2-1/8	1-1/8	C97398	C66098
43	.0890	2-1/4	1-1/4	C97397	C66097
42	.0935	2-1/4	1-1/4	C97396	C66096
3/32	.0938	2-1/4	1-1/4	C97303	C66003
41	.0960	2-3/8	1-3/8	C97395	C66095
40	.0980	2-3/8	1-3/8	C97394	C66094
39	.0995	2-3/8	1-3/8	C97393	C66093
38	.1015	2-1/2	1-7/16	C97392	C66092
37	.1040	2-1/2	1-7/16	C97391	C66091
36	.1065	2-1/2	1-7/16	C97390	C66090
7/64	.1094	2-5/8	1-1/2	C97304	C66004
35	.1100	2-5/8	1-1/2	C97389	C66089
34	.1110	2-5/8	1-1/2	C97388	C66088
33	.1130	2-5/8	1-1/2	C97387	C66087
32	.1160	2-3/4	1-5/8	C97386	C66086
31	.1200	2-3/4	1-5/8	C97385	C66085
1/8	.1250	2-3/4	1-5/8	C97305	C66005
30	.1285	2-3/4	1-5/8	C97384	C66084
29	.1360	2-7/8	1-3/4	C97383	C66083
28	.1405	2-7/8	1-3/4	C97382	C66082
9/64	.1406	2-7/8	1-3/4	C97306	C66006
27	.1440	3	1-7/8	C97381	C66081
26	.1470	3	1-7/8	C97380	C66080
25	.1495	3	1-7/8	C97379	C66079
24	.1520	3-1/8	2	C97378	C66078
23	.1540	3-1/8	2	C97377	C66077
5/32	.1562	3-1/8	2	C97307	C66007

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drill diameter frac/wire/let	decimal equivalent	overall length	flute length	order number 1500-TT HSS TiN	order number 1501-TT HS-Co TiN
22	.1570	3-1/8	2	C97376	C66076
21	.1590	3-1/4	2-1/8	C97375	C66075
20	.1610	3-1/4	2-1/8	C97374	C66074
19	.1660	3-1/4	2-1/8	C97373	C66073
18	.1695	3-1/4	2-1/8	C97372	C66072
11/64	.1719	3-1/4	2-1/8	C97308	C66008
17	.1730	3-3/8	2-3/16	C97371	C66071
16	.1770	3-3/8	2-3/16	C97370	C66070
15	.1800	3-3/8	2-3/16	C97369	C66069
14	.1820	3-3/8	2-3/16	C97368	C66068
13	.1850	3-1/2	2-5/16	C97367	C66067
3/16	.1875	3-1/2	2-5/16	C97309	C66009
12	.1890	3-1/2	2-5/16	C97366	C66066
11	.1910	3-1/2	2-5/16	C97365	C66065
10	.1935	3-5/8	2-7/16	C97364	C66064
9	.1960	3-5/8	2-7/16	C97363	C66063
8	.1990	3-5/8	2-7/16	C97362	C66062
7	.2010	3-5/8	2-7/16	C97361	C66061
13/64	.2031	3-5/8	2-7/16	C97310	C66010
6	.2040	3-3/4	2-1/2	C97360	C66060
5	.2055	3-3/4	2-1/2	C97359	C66059
4	.2090	3-3/4	2-1/2	C97358	C66058
3	.2130	3-3/4	2-1/2	C97357	C66057
7/32	.2188	3-3/4	2-1/2	C97311	C66011
2	.2210	3-7/8	2-5/8	C97356	C66056
1	.2280	3-7/8	2-5/8	C97355	C66055
A	.2340	3-7/8	2-5/8	C97330	C66030
15/64	.2344	3-7/8	2-5/8	C97312	C66012
B	.2380	4	2-3/4	C97331	C66031
C	.2420	4	2-3/4	C97332	C66032
D	.2460	4	2-3/4	C97333	C66033
1/4-E	.2500	4	2-3/4	C97313	C66013
F	.2570	4-1/8	2-7/8	C97334	C66034
G	.2610	4-1/8	2-7/8	C97335	C66035
17/64	.2656	4-1/8	2-7/8	C97314	C66014
H	.2660	4-1/8	2-7/8	C97336	C66036
I	.2720	4-1/8	2-7/8	C97337	C66037
J	.2770	4-1/8	2-7/8	C97338	C66038
K	.2810	4-1/4	2-15/16	C97339	C66039
9/32	.2812	4-1/4	2-15/16	C97315	C66015
L	.2900	4-1/4	2-15/16	C97340	C66040
M	.2950	4-3/8	3-1/16	C97341	C66041
19/64	.2969	4-3/8	3-1/16	C97316	C66016
N	.3020	4-3/8	3-1/16	C97342	C66042
5/16	.3125	4-1/2	3-3/16	C97317	C66017
O	.3160	4-1/2	3-3/16	C97343	C66043
P	.3230	4-5/8	3-5/16	C97344	C66044
21/64	.3281	4-5/8	3-5/16	C97318	C66018
Q	.3320	4-3/4	3-7/16	C97345	C66045
R	.3390	4-3/4	3-7/16	C97346	C66046
11/32	.3438	4-3/4	3-7/16	C97319	C66019
S	.3480	4-7/8	3-1/2	C97347	C66047
T	.3580	4-7/8	3-1/2	C97348	C66048
23/64	.3594	4-7/8	3-1/2	C97320	C66020

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Jobber
TiN Tip

General Application Drills

Styles: 1500-TT, 1501-TT

CLE-LINE

drill diameter frac/wire/let	decimal equivalent	overall length	flute length	order number 1500-TT HSS TiN	order number 1501-TT HS-Co TiN
U	.3680	5	3-5/8	C97349	C66049
3/8	.3750	5	3-5/8	C97321	C66021
V	.3770	5	3-5/8	C97350	C66050
W	.3860	5-1/8	3-3/4	C97351	C66051
25/64	.3906	5-1/8	3-3/4	C97322	C66022
X	.3970	5-1/8	3-3/4	C97352	C66052
Y	.4040	5-1/4	3-7/8	C97353	C66053
13/32	.4062	5-1/4	3-7/8	C97323	C66023
Z	.4130	5-1/4	3-7/8	C97354	C66054
27/64	.4219	5-3/8	3-15/16	C97324	C66024
7/16	.4375	5-1/2	4-1/16	C97325	C66025
29/64	.4531	5-5/8	4-3/16	C97326	C66026
15/32	.4688	5-3/4	4-5/16	C97327	C66027
31/64	.4844	5-7/8	4-3/8	C97328	C66028
1/2	.5000	6	4-1/2	C97329	C66029

Jobber
TiN Tip

SET

Styles: 1500-TT, 1501-TT

Metal Case

NEW

Available in late 2018

drill sizes	no. of pieces	order number 1500-TT HSS TiN	order number 1501-TT HS-Co TiN
#1 - #56	56	C97411	C66111
Ltr A - Z	26	C97412	C66112
1/16-1/2 x 1/64	29	C97413	C66113
1/16 - 1/2 x 1/32	15	C97414	C66114

Styles: 1872, 1872TN

Jobber
Heavy Duty Parabolic Flute

P K N

ASME B94.11M | DIN 338 | HSS | Black Gold | TiN | 135° Split | Helix High 35° to 45° | Straight Shank

Note

For a wide range of material applications.

Exceptional for deeper drilling.

Faster penetration rates than conventional HSS heavy duty jobber drills.

Aerospace-style 135° split point reduces drill "walking".

For Reduced Shank see Style #1873.



Black and Gold



TiN

drill diameter frac/wire/let	drill diameter mm	decimal equivalent	overall length	flute length	order number 1872 Black & Gold	order number 1872TN TiN
	*1.00	.0394	34	12	C18570	C18670
	*1.50	.0591	40	18	C18573	C18671
1/16		.0625	1-7/8	7/8	C18430	C18630
	1.60	.0630	43	20	C18574	—
	1.65	.0650	43	20	C18575	—
	1.75	.0689	46	22	C18576	—
	1.80	.0709	46	22	C18577	—
5/64		.0781	2	1	C18431	C18631
	2.00	.0787	49	24	C18578	C18672
	2.05	.0807	49	24	C18579	—
	2.30	.0906	53	27	C18580	—
3/32		.0938	2-1/4	1-1/4	C18432	C18632
41		.0960	2-3/8	1-3/8	C18541	—
40		.0980	2-3/8	1-3/8	C18540	—
	2.50	.0984	57	30	C18581	C18673
39		.0995	2-3/8	1-3/8	C18539	—
38		.1015	2-1/2	1-7/16	C18538	—
	2.60	.1024	57	30	C18582	—
37		.1040	2-1/2	1-7/16	C18537	—
36		.1065	2-1/2	1-7/16	C18536	—
7/64		.1094	2-5/8	1-1/2	C18433	C18633
35		.1100	2-5/8	1-1/2	C18535	—
34		.1110	2-5/8	1-1/2	C18534	—
33		.1130	2-5/8	1-1/2	C18533	—
	2.90	.1142	61	33	C18583	—
32		.1160	2-3/4	1-5/8	C18532	—
	3.00	.1181	61	33	C18584	C18674
31		.1200	2-3/4	1-5/8	C18531	—
1/8		.1250	2-3/4	1-5/8	C18434	C18634
	3.20	.1260	65	36	C18585	—
30		.1285	2-3/4	1-5/8	C18530	—
	3.30	.1299	65	36	C18586	C18675
29		.1360	2-7/8	1-3/4	C18529	—
	3.50	.1378	70	39	C18587	C18676
28		.1405	2-7/8	1-3/4	C18528	—
9/64		.1406	2-7/8	1-3/4	C18435	C18635
27		.1440	3	1-7/8	C18527	—
	3.70	.1457	70	39	C18588	—
26		.1470	3	1-7/8	C18526	—
25		.1495	3	1-7/8	C18525	—
24		.1520	3-1/8	2	C18524	—
23		.1540	3-1/8	2	C18523	—
5/32		.1562	3-1/8	2	C18436	C18636
22		.1570	3-1/8	2	C18522	—
	4.00	.1575	75	43	C18589	C18677
21		.1590	3-1/4	2-1/8	C18521	—
20		.1610	3-1/4	2-1/8	C18520	—
	4.10	.1614	75	43	C18590	—
	4.20	.1654	75	43	C18591	C18678

*Not split point.

continued on next page

Jobber
Heavy Duty Parabolic Flute

Styles: 1872, 1872TN *(continued)*

drill diameter frac/wire/let	drill diameter mm	decimal equivalent	overall length	flute length	order number 1872 Black & Gold	order number 1872TN TiN
19		.1660	3-1/4	2-1/8	C18519	—
	4.30	.1693	80	47	C18722	—
18		.1695	3-1/4	2-1/8	C18518	—
11/64		.1719	3-1/4	2-1/8	C18437	C18637
17		.1730	3-3/8	2-3/16	C18517	—
16		.1770	3-3/8	2-3/16	C18516	—
	4.50	.1772	80	47	C18592	C18679
15		.1800	3-3/8	2-3/16	C18515	—
14		.1820	3-3/8	2-3/16	C18514	—
13		.1850	3-1/2	2-5/16	C18513	—
3/16		.1875	3-1/2	2-5/16	C18438	C18638
12		.1890	3-1/2	2-5/16	C18512	—
	4.80	.1890	86	52	C18723	—
11		.1910	3-1/2	2-5/16	C18511	—
10		.1935	3-5/8	2-7/16	C18510	—
9		.1960	3-5/8	2-7/16	C18509	—
	5.00	.1969	86	52	C18593	C18680
8		.1990	3-5/8	2-7/16	C18508	—
	5.10	.2008	86	52	C18724	—
7		.2010	3-5/8	2-7/16	C18507	—
13/64		.2031	3-5/8	2-7/16	C18439	C18639
6		.2040	3-3/4	2-1/2	C18506	—
	5.20	.2047	86	52	C18725	—
5		.2055	3-3/4	2-1/2	C18505	—
4		.2090	3-3/4	2-1/2	C18504	—
3		.2130	3-3/4	2-1/2	C18503	—
	5.50	.2165	93	57	C18594	C18681
7/32		.2188	3-3/4	2-1/2	C18440	C18640
2		.2210	3-7/8	2-5/8	C18502	—
	5.70	.2244	93	57	C18726	—
1		.2280	3-7/8	2-5/8	C18501	—
15/64		.2344	3-7/8	2-5/8	C18441	C18641
	6.00	.2362	93	57	C18595	C18682
1/4		.2500	4	2-3/4	C18442	C18642
	6.50	.2559	101	63	C18596	C18683
F		.2570	4-1/8	2-7/8	C18474	—
	6.70	.2638	101	63	C18597	—
17/64		.2656	4-1/8	2-7/8	C18443	C18643
	6.80	.2677	109	69	C18598	C18684
	7.00	.2756	109	69	C18599	C18685
9/32		.2812	4-1/4	2-15/16	C18444	C18644
	7.40	.2913	109	69	C18600	—
	7.50	.2953	109	69	C18601	C18686
19/64		.2969	4-3/8	3-1/16	C18445	C18645
	7.80	.3071	117	75	C18602	—
5/16		.3125	4-1/2	3-3/16	C18446	C18646
	8.00	.3150	117	75	C18603	C18687
21/64		.3281	4-5/8	3-5/16	C18447	C18647
Q		.3320	4-3/4	3-7/16	C18485	—
	8.50	.3346	117	75	C18604	C18688
	8.70	.3425	125	81	C18605	—
11/32		.3438	4-3/4	3-7/16	C18459	C18648
	9.00	.3543	125	81	C18606	C18689
23/64		.3594	4-7/8	3-1/2	C18449	C18649
	9.40	.3701	125	81	C18607	—
	9.50	.3740	125	81	C18608	C18690
3/8		.3750	5	3-5/8	C18450	C18650
25/64		.3906	5-1/8	3-3/4	C18451	C18651
	10.00	.3937	133	87	C18609	C18697
	10.20	.4016	133	87	C18610	—
13/32		.4062	5-1/4	3-7/8	C18452	C18652

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Styles: 1872, 1872TN *(continued)*

Jobber
Heavy Duty Parabolic Flute

drill diameter frac/wire/let	drill diameter mm	decimal equivalent	overall length	flute length	order number 1872 Black & Gold	order number 1872TN TiN
	10.50	.4134	133	87	C18611	C18691
27/64		.4219	5-3/8	3-15/16	C18453	C18653
	10.80	.4252	142	94	C18612	—
	11.00	.4331	142	94	C18613	C18692
7/16		.4375	5-1/2	4-1/16	C18454	C18654
	11.20	.4409	142	94	C18614	—
	11.50	.4528	142	94	C18615	C18693
29/64		.4531	5-5/8	4-3/16	C18455	C18655
15/32		.4688	5-3/4	4-5/16	C18456	C18656
	12.00	.4724	151	101	C18616	C18694
31/64		.4844	5-7/8	4-3/8	C18457	C18657
	12.50	.4921	151	101	C18617	C18695
1/2		.5000	6	4-1/2	C18458	C18658
	13.00	.5118	151	101	C18618	C18696

Style: 1873

Jobber
3/8" Reduced Shank

Note
Faster penetration rates than conventional HSS heavy duty jobber drills.

ASME B94.11M | HSS | Black Gold | 135° Split | Reduced Shank



drill diameter	decimal equivalent	overall length	flute length	order number 1873 Black & Gold
25/64	.3906	5-1/8	3-3/4	C18710
13/32	.4062	5-1/4	3-7/8	C18711
27/64	.4219	5-3/8	3-15/16	C18712
7/16	.4375	5-1/2	4-1/16	C18713
29/64	.4531	5-5/8	4-3/16	C18714
15/32	.4688	5-3/4	4-5/16	C18715
31/64	.4844	5-7/8	4-3/8	C18716
1/2	.5000	6	4-1/2	C18717

SET Styles: 1872, 1872TN, 1873

Jobber Sets
Heavy Duty Parabolic Flute



29-Piece Set
Black & Gold
#C18622

drill sizes	no. of pieces	order number 1872 Black & Gold	order number 1872TN TiN	order number 1872 / 1873 3/8" Shanks
1/16"– 1/4" x 1/64"	13	C18619	C18700	–
1/16"– 1/2" x 1/32"	15	C18620	C18701	C18719
1/16"– 3/8" x 1/64"	21	C18621	C18702	–
1/16"– 1/2" x 1/64"	29	C18622	C18703	C18718
1mm – 6mm x 0.5mm	11	C18626	C18704	–
1mm – 13mm x 1mm	25	C18628	C18706	–

CLE-LINE

Jobber
Hex Shank, Cobalt

Style: 1804

NEW

P K N

Hex Shank | Helix Regular 21° to 34° | Cobalt | Straw Oxide | 118° Split

Note

***11/64" and smaller have a straight shank with no flats.**

3/16" and larger have a straight shank with 6 flats.



drill diameter	decimal equivalent	overall length	flat length	order number 1804 straw
*1/16	.0625	1.875	—	C10600
*5/64	.0781	2.000	—	C10601
*3/32	.0938	2.250	—	C10602
*7/64	.1094	2.625	—	C10603
*1/8	.1250	2.750	—	C10604
*9/64	.1406	2.875	—	C10605
*5/32	.1562	3.125	—	C10606
*11/64	.1719	3.250	—	C10607
3/16	.1875	3.500	1.125	C10608
13/64	.2031	3.625	1.125	C10609
7/32	.2188	3.750	1.125	C10610
15/64	.2344	3.875	1.125	C10611
1/4	.2500	4.000	1.125	C10612
17/64	.2656	4.125	1.125	C10613
9/32	.2812	4.250	1.125	C10614
19/64	.2969	4.375	1.125	C10615
5/16	.3125	4.500	1.125	C10616
21/64	.3281	4.625	1.125	C10617
11/32	.3438	4.750	1.125	C10618
23/64	.3594	4.875	1.125	C10619
3/8	.3750	5.000	1.125	C10620
25/64	.3906	5.125	1.125	C10621
13/32	.4062	5.250	1.125	C10622
27/64	.4219	5.375	1.125	C10623
7/16	.4375	5.500	1.125	C10624
29/64	.4531	5.625	1.125	C10625
15/32	.4688	5.750	1.125	C10626
31/64	.4844	5.875	1.125	C10627
1/2	.5000	6.000	1.125	C10628

Jobber
Hex Shank, Cobalt

SET

Style: 1804



Bit Barrel

drill sizes	no. of pieces	order number 1804 straw
1/16"– 1/2" x 1/64"	29	C10629

GREENFIELD INDUSTRIES

S P K N H

ASME B94.11M | Cobalt | Straw Oxide | 135° Split | Helix Regular 21° to 34° | Straight Shank

Note

Designed to drill tough, high-tensile materials and work-hardening materials like high-strength alloy steels, stainless steel, titanium, manganese steel, armor plate, and inconel.

For Reduced Shank see Style #1812.

Style 1891 (Metric) now combined with style 1802.



drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1603 Straw Oxide	order number 1802 Straw Oxide
	*1.00	.0394	34	12	—	C18900
*60		.0400	1-5/8	11/16	C68460	C23374
*59		.0410	1-5/8	11/16	C68459	C23375
*58		.0420	1-5/8	11/16	C68458	C23376
*57		.0430	1-3/4	3/4	C68457	C23377
*56		.0465	1-3/4	3/4	C68456	C23378
	*1.20	.0472	38	16	—	C18902
*55		.0520	1-7/8	7/8	C68455	C23379
*54		.0550	1-7/8	7/8	C68454	C23380
	*1.50	.0591	40	18	—	C18905
*53		.0595	1-7/8	7/8	C68453	C23381
1/16		.0625	1-7/8	7/8	C68344	C23345
	1.60	.0630	43	20	—	C18906
52		.0635	1-7/8	7/8	C68452	C23382
51		.0670	2	1	C68451	C23383
50		.0700	2	1	C68450	C23384
49		.0730	2	1	C68449	C23385
48		.0760	2	1	C68448	C23386
5/64		.0781	2	1	C68345	C23346
47		.0785	2	1	C68447	C23387
	2.00	.0787	49	24	—	C18910
46		.0810	2-1/8	1-1/8	C68446	C23388
45		.0820	2-1/8	1-1/8	C68445	C23389
44		.0860	2-1/8	1-1/8	C68444	C23390
43		.0890	2-1/4	1-1/4	C68443	C23391
42		.0935	2-1/4	1-1/4	C68442	C23392
3/32		.0938	2-1/4	1-1/4	C68346	C23347
	2.40	.0945	57	30	—	C18914
41		.0960	2-3/8	1-3/8	C68441	C23393
40		.0980	2-3/8	1-3/8	C68440	C23394
	2.50	.0984	57	30	—	C18915
39		.0995	2-3/8	1-3/8	C68439	C23395
38		.1015	2-1/2	1-7/16	C68438	C23396
37		.1040	2-1/2	1-7/16	C68437	C23397
36		.1065	2-1/2	1-7/16	C68436	C23398
7/64		.1094	2-5/8	1-1/2	C68347	C23348
35		.1100	2-5/8	1-1/2	C68435	C23399
	2.80	.1102	61	33	—	C18918
34		.1110	2-5/8	1-1/2	C68434	C23400
33		.1130	2-5/8	1-1/2	C68433	C23401
32		.1160	2-3/4	1-5/8	C68432	C23402
	3.00	.1181	61	33	—	C18920
31		.1200	2-3/4	1-5/8	C68431	C23403
	3.10	.1220	65	36	—	C18921
1/8		.1250	2-3/4	1-5/8	C68351	C23349
	3.20	.1260	65	36	—	C18922

**Not split point.*

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drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1603 Straw Oxide	order number 1802 Straw Oxide
30		.1285	2-3/4	1-5/8	C68430	C23404
	3.30	.1299	65	36	—	C18923
29		.1360	2-7/8	1-3/4	C68429	C23405
	3.50	.1378	70	39	—	C18925
28		.1405	2-7/8	1-3/4	C68428	C23406
9/64		.1406	2-7/8	1-3/4	C68352	C23350
	3.60	.1417	70	39	—	C18926
27		.1440	3	1-7/8	C68427	C23407
	3.70	.1457	70	39	—	C18927
26		.1470	3	1-7/8	C68426	C23408
25		.1495	3	1-7/8	C68425	C23409
24		.1520	3-1/8	2	C68424	C23410
	3.90	.1535	75	43	—	C18929
23		.1540	3-1/8	2	C68423	C23411
5/32		.1562	3-1/8	2	C68353	C23351
22		.1570	3-1/8	2	C68422	C23412
	4.00	.1575	75	43	—	C18930
21		.1590	3-1/4	2-1/8	C68421	C23413
20		.1610	3-1/4	2-1/8	C68420	C23414
	4.10	.1614	75	43	—	C18931
	4.20	.1654	75	43	—	C18932
19		.1660	3-1/4	2-1/8	C68419	C23415
18		.1695	3-1/4	2-1/8	C68418	C23416
11/64		.1719	3-1/4	2-1/8	C68354	C23352
17		.1730	3-3/8	2-3/16	C68417	C23417
16		.1770	3-3/8	2-3/16	C68416	C23418
	4.50	.1772	80	47	—	C18935
15		.1800	3-3/8	2-3/16	C68415	C23419
	4.60	.1811	80	47	—	C18936
14		.1820	3-3/8	2-3/16	C68414	C23420
13		.1850	3-1/2	2-5/16	C68413	C23421
3/16		.1875	3-1/2	2-5/16	C68355	C23353
12		.1890	3-1/2	2-5/16	C68412	C23422
	4.80	.1890	86	52	—	C18938
11		.1910	3-1/2	2-5/16	C68411	C23423
	4.90	.1929	86	52	—	C18939
10		.1935	3-5/8	2-7/16	C68410	C23424
9		.1960	3-5/8	2-7/16	C68409	C23425
	5.00	.1969	86	52	—	C18940
8		.1990	3-5/8	2-7/16	C68408	C23426
	5.10	.2008	86	52	—	C18941
7		.2010	3-5/8	2-7/16	C68407	C23427
13/64		.2031	3-5/8	2-7/16	C68356	C23354
6		.2040	3-3/4	2-1/2	C68406	C23428
	5.20	.2047	86	52	—	C18942
5		.2055	3-3/4	2-1/2	C68405	C23429
4		.2090	3-3/4	2-1/2	C68404	C23430
3		.2130	3-3/4	2-1/2	C68403	C23431
	5.50	.2165	93	57	—	C18945
7/32		.2188	3-3/4	2-1/2	C68357	C23355
2		.2210	3-7/8	2-5/8	C68402	C23432
1		.2280	3-7/8	2-5/8	C68401	C23433
A		.2340	3-7/8	2-5/8	C68376	C23320
15/64		.2344	3-7/8	2-5/8	C68358	C23356
	6.00	.2362	93	57	—	C18950
B		.2380	4	2-3/4	C68377	C23321

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drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1603 Straw Oxide	order number 1802 Straw Oxide
C		.2420	4	2-3/4	C68378	C23322
D		.2460	4	2-3/4	C68379	C23323
1/4, E		.2500	4	2-3/4	C68359	C23357
	6.50	.2559	101	63	—	C18955
F		.2570	4-1/8	2-7/8	C68380	C23324
G		.2610	4-1/8	2-7/8	C68381	C23325
17/64		.2656	4-1/8	2-7/8	C68360	C23358
H		.2660	4-1/8	2-7/8	C68382	C23326
	6.80	.2677	109	69	—	C18958
I		.2720	4-1/8	2-7/8	C68383	C23327
	7.00	.2756	109	69	—	C18960
J		.2770	4-1/8	2-7/8	C68384	C23328
K		.2810	4-1/4	2-15/16	C68385	C23329
9/32		.2812	4-1/4	2-15/16	C68361	C23359
L		.2900	4-1/4	2-15/16	C68386	C23330
M		.2950	4-3/8	3-1/16	C68387	—
	7.50	.2953	109	69	—	C18965
19/64		.2969	4-3/8	3-1/16	C68362	C23360
N		.3020	4-3/8	3-1/16	C68388	—
5/16		.3125	4-1/2	3-3/16	C68363	C23361
	8.00	.3150	117	75	—	C18970
O		.3160	4-1/2	3-3/16	C68389	—
P		.3230	4-5/8	3-5/16	C68390	—
21/64		.3281	4-5/8	3-5/16	C68364	C23362
Q		.3320	4-3/4	3-7/16	C68391	C23335
	8.50	.3346	117	75	—	C18975
R		.3390	4-3/4	3-7/16	C68392	C23336
11/32		.3438	4-3/4	3-7/16	C68365	C23363
S		.3480	4-7/8	3-1/2	C68393	—
	9.00	.3543	125	81	—	C18980
T		.3580	4-7/8	3-1/2	C68394	—
23/64		.3594	4-7/8	3-1/2	C68366	C23364
U		.3680	5	3-5/8	C68395	C23339
	9.50	.3740	125	81	—	C18985
3/8		.3750	5	3-5/8	C68367	C23365
V		.3770	5	3-5/8	C68396	C23340
W		.3860	5-1/8	3-3/4	C68397	C23341
25/64		.3906	5-1/8	3-3/4	C68368	C23366
	10.00	.3937	133	87	—	C18990
X		.3970	5-1/8	3-3/4	C68398	—
	10.20	.4016	133	87	—	C18991
Y		.4040	5-1/4	3-3/4	C68399	—
13/32		.4062	5-1/4	3-7/8	C68369	C23367
Z		.4130	5-1/4	3-7/8	C68400	—
	10.50	.4134	133	87	—	C18992
27/64		.4219	5-3/8	3-15/16	C68370	C23368
	11.00	.4331	142	94	—	C18993
7/16		.4375	5-1/2	4-1/16	C68371	C23369
	11.50	.4528	142	94	—	C18995
29/64		.4531	5-5/8	4-3/16	C68372	C23370
15/32		.4688	5-3/4	4-5/16	C68373	C23371
	12.00	.4724	151	101	—	C18996
31/64		.4844	5-7/8	4-3/8	C68374	C23372
	12.50	.4921	151	101	—	C18998
1/2		.5000	6	4-1/2	C68375	C23373
	13.00	.5118	151	101	—	C18999

CLE-LINE

Jobber Sets
Cobalt Heavy Duty

Style: 1812

S P K N H

ASME B94.11M | Cobalt | Straw Oxide | 135° Split | Helix Regular 21° to 34° | Reduced Shank

Note
Designed to drill tough, high-tensile materials and work-hardening materials like high-strength alloy steels, stainless steel, titanium, manganese steel, armor plate, and inconel.



drill diameter	decimal equivalent	overall length	flute length	order number 1812 Straw Oxide
25/64	.3906	5-1/8	3-3/4	C20651
13/32	.4063	5-1/4	3-7/8	C20652
27/64	.4219	5-3/8	3-15/16	C20653
7/16	.4375	5-1/2	4-1/16	C20654
29/64	.4531	5-5/8	4-3/16	C20655
15/32	.4688	5-3/4	4-5/16	C20656
31/64	.4844	5-7/8	4-3/8	C20657
1/2	.5000	6	4-1/2	C20658

Jobber
3/8" Reduced Shank

SET

Styles: 1603, 1802

Metal Case (unless noted otherwise)

drill size	no. of pieces	order number 1603 Straw Oxide	1802 Straw Oxide
1/16"– 1/4" x 1/64"	13	C69377	C21107
1/16"– 1/2" x 1/32"	15	C69378	C21112
1/16"– 1/2" x 1/64"	29	*C69379	C21121
#1 – #60	60	C69380	C21125
1/16"– 1/2" x 1/64", A to Z, #1 – #60	115	—	C21129

**Plastic Case*



15-Piece Set Straw Oxide #C21112

GREENFIELD INDUSTRIES

P K

ASME B94.11M | HSS | Black Gold | 135° Split | Helix Regular 21° to 34° | Flatted Shank

Note
Three flats on sizes above 11/64" for tighter chucking.
For Reduced Shank see Style #1876.



Spiral Black and Gold



Style #1875L, Left-Hand Spiral Black and Gold

drill diameter	decimal equivalent	overall length	flute length	order number 1620 Black & Gold	1875R Black & Gold	1875L Black & Gold
*1/16	.0625	1-7/8	7/8	C68462	C23830	C23701
*5/64	.0781	2	1	C68463	C23831	—
*3/32	.0938	2-1/4	1-1/4	C68464	C23832	—
*7/64	.1094	2-3/8	1-5/16	C68465	C23833	—
*1/8	.1250	2-1/2	1-7/16	C68466	C23834	C23702
*9/64	.1406	2-5/8	1-9/16	C68467	C23835	—
*5/32	.1562	2-3/4	1-11/16	C68468	C23836	—
*11/64	.1719	2-7/8	1-13/16	C68469	C23837	—
3/16	.1875	3	1-7/8	C68470	C23838	C23703
13/64	.2031	3-1/8	1-15/16	C68471	C23839	—
7/32	.2188	3-1/4	2	C68472	C23840	—
15/64	.2344	3-3/8	2-1/16	C68473	C23841	—
1/4	.2500	3-1/2	2	C68474	C23842	C23704
17/64	.2656	3-5/8	2-1/8	C68475	C23843	—
9/32	.2812	3-3/4	2-1/4	C68476	C23844	—
19/64	.2969	3-7/8	2-3/8	C68477	C23845	—
5/16	.3125	4	2-1/2	C68478	C23846	C23706
21/64	.3281	4-1/16	2-9/16	C68479	C23847	—
11/32	.3438	4-1/8	2-5/8	C68480	C23848	—
23/64	.3594	4-3/16	2-11/16	C68481	C23849	—
3/8	.3750	4-1/4	2-11/16	C68482	C23850	C23707
**25/64	.3906	4-5/16	2-3/4	C68483	C23851	—
**13/32	.4062	4-3/8	2-13/16	C68484	C23852	—
27/64	.4219	4-7/16	2-7/8	C68485	C23853	—
7/16	.4375	4-1/2	2-15/16	C68486	C23854	C23708
29/64	.4531	4-5/8	3	C68487	C23855	—
15/32	.4688	4-3/4	3-1/8	C68488	C23856	—
31/64	.4844	4-7/8	3-1/4	C68489	C23857	—
1/2	.5000	5	3-3/8	C68490	C23859	C23709

**No flats on shank.*

***Style #1875 sizes 25/64" and 13/32" drills with flats will fit in 3/8" shank drill chucks without having reduced shanks.*

Mechanics Length
3/8" Reduced Shank

General Application Drills

Style: 1876

CLE-LINE

ASME B94.11M | HSS | Black Gold | 135° Split | Reduced Flatted Shank



drill diameter	decimal equivalent	overall length	flute length	order number 1876 Black & Gold
27/64	.4219	4-7/16	2-7/8	C23860
7/16	.4375	4-1/2	2-15/16	C23861
29/64	.4531	4-5/8	3	C23862
15/32	.4688	4-3/4	3-1/8	C23863
31/64	.4844	4-7/8	3-1/4	C23864
1/2	.5000	5	3-3/8	C23865

Mechanics Length Sets
Heavy Duty

SET

Styles: 1620, 1875R, 1875L

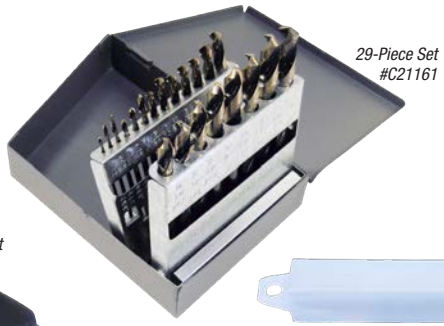
Metal unless noted below

NEW


29-Piece Set #C69041



29-Piece Bit Barrel Set #C21165


29-Piece Set #C21161


29-Piece Set #C22309

drill sizes	no. of pieces	order number 1620 Black & Gold	Bit Barrel™ 1620 Black & Gold	1875R Black & Gold	Bit Barrel™ 1875R Black & Gold	Plastic Tube 1875R Black & Gold	3/8" Shank 1875/1876 Black & Gold
1/16"– 1/4" x 1/64"	13	C69029		C18126	–	–	–
1/16" – 3/8" x 1/64"	21			C21161	–	–	–
1/16"– 1/2" x 1/64"	29	**C69041	**C69384	C21162	**C21165	–	*C21163
1/16"– 1/2" x 1/32"	15			C21160	–	–	–
1/16" - 1/4" x 1/16"	4			–	–	C22310	–
1/16" - 3/8" x 1/16"	6			–	–	C22309	–

**Includes Style #1875 in sizes 25/64" and 13/32" which will fit in 3/8" shank drill chucks without having reduced shanks.* ***Plastic Case*

M S P K H

ASME B94.11M | Cobalt | Straw Oxide | 135° Split | Straight Shank

Note
Superior rigidity in portable drilling.



drill diameter	decimal equivalent	overall length	flute length	order number 1880 Straw Oxide
5/64	.0781	2	1	C30505
7/64	.1094	2-3/16	1	C30507
1/8	.1250	2-1/4	1-1/16	C30508
5/32	.1562	2-9/16	1-1/4	C30510
3/16	.1875	2-7/8	1-1/2	C30512
7/32	.2188	3-1/8	1-5/8	C30514
1/4	.2500	3-5/16	1-3/4	C30516
9/32	.2812	3-9/16	2	C30518
19/64	.2969	3-5/8	2-1/16	C30519
5/16	.3125	3-3/4	2-1/8	C30520
11/32	.3438	3-15/16	2-1/4	C30522
3/8	.3750	4-1/8	2-3/8	C30524
13/32	.4063	4-3/8	2-1/2	C30526
7/16	.4375	4-9/16	2-5/8	C30528
15/32	.4688	4-3/4	2-3/4	C30530
1/2	.5000	5	2-7/8	C30532

Screw Machine Length

Heavy Duty

Styles: 1621, 1896

CLE-LINE

P K

ASME B94.11M | HSS | Black Oxide | 135° Split | Straight Shank

Note

Superior rigidity in hand or machine drilling.



drill diameter frac/wire/let	drill diameter mm	decimal equivalent	overall length	flute length	order number 1621 Black Oxide	order number 1896 Black Oxide
	*1.00	.0394	26	6	—	C23885
*60		.0400	1-3/8	1/2	—	C23500
*59		.0410	1-3/8	1/2	—	C23501
*58		.0420	1-3/8	1/2	—	C23502
*57		.0430	1-3/8	1/2	—	C23503
*56		.0465	1-3/8	1/2	—	C23504
	*1.25	.0492	30	8	—	C23886
*55		.0520	1-5/8	5/8	—	C23505
*54		.0550	1-5/8	5/8	—	C23506
	*1.50	.0591	32	9	—	C23887
*53		.0595	1-5/8	5/8	—	C23507
1/16		.0625	1-5/8	5/8	C68491	C23460
52		.0635	1-11/16	11/16	—	C23508
51		.0670	1-11/16	11/16	—	C23509
50		.0700	1-11/16	11/16	—	C23510
	1.80	.0709	36	11	—	C24018
49		.0730	1-11/16	11/16	—	C23511
48		.0760	1-11/16	11/16	—	C23512
5/64		.0781	1-11/16	11/16	C68492	C23461
47		.0785	1-3/4	3/4	—	C23513
	2.00	.0787	38	12	—	C23888
46		.0810	1-3/4	3/4	—	C23514
45		.0820	1-3/4	3/4	—	C23515
44		.0860	1-3/4	3/4	—	C23516
	2.20	.0866	40	13	—	C23889
43		.0890	1-3/4	3/4	—	C23517
	2.30	.0906	40	13	—	C23890
42		.0935	1-3/4	3/4	—	C23518
3/32		.0938	1-3/4	3/4	C68493	C23462
	2.40	.0945	43	14	—	C23891
41		.0960	1-13/16	13/16	—	C23519
40		.0980	1-13/16	13/16	—	C23520
	2.50	.0984	43	14	—	C23892
39		.0995	1-13/16	13/16	—	C23521
38		.1015	1-13/16	13/16	—	C23522
	2.60	.1024	43	14	—	C23893
37		.1040	1-13/16	13/16	—	C23523
36		.1065	1-13/16	13/16	—	C23524
7/64		.1094	1-13/16	13/16	C68494	C23463
35		.1100	1-7/8	7/8	—	C23525
	2.80	.1102	46	16	—	C23894

**Not split point.*

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drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1621 Black Oxide	order number 1896 Black Oxide
34		.1110	1-7/8	7/8	—	C23526
33		.1130	1-7/8	7/8	—	C23527
32		.1160	1-7/8	7/8	—	C23528
	3.00	.1181	46	16	—	C23895
31		.1200	1-7/8	7/8	—	C23529
	3.10	.1220	49	18	—	C23896
1/8		.1250	1-7/8	7/8	C68495	C23464
	3.20	.1260	49	18	—	C23898
30		.1285	1-15/16	15/16	—	C23530
	3.30	.1299	49	18	—	C23899
	3.40	.1339	52	20	—	C23900
29		.1360	1-15/16	15/16	—	C23531
	3.50	.1378	52	20	—	C23901
28		.1405	1-15/16	15/16	—	C23532
9/64		.1406	1-15/16	15/16	C68496	C23465
	3.60	.1417	52	20	—	C24036
27		.1440	2-1/16	1	—	C23533
	3.70	.1457	52	20	—	C23902
26		.1470	2-1/16	1	—	C23534
25		.1495	2-1/16	1	—	C23535
	3.80	.1496	55	22	—	C23903
24		.1520	2-1/16	1	—	C23536
23		.1540	2-1/16	1	—	C23537
5/32		.1562	2-1/16	1	C68497	C23466
22		.1570	2-1/8	1-1/16	—	C23538
	4.00	.1575	55	22	—	C23904
21		.1590	2-1/8	1-1/16	—	C23539
20		.1610	2-1/8	1-1/16	—	C23540
	4.10	.1614	55	22	—	C23905
	4.20	.1654	55	22	—	C23906
19		.1660	2-1/8	1-1/16	—	C23541
	4.30	.1693	58	24	—	C23907
18		.1695	2-1/8	1-1/16	—	C23542
11/64		.1719	2-1/8	1-1/16	C68498	C23467
17		.1730	2-3/16	1-1/8	—	C23543
16		.1770	2-3/16	1-1/8	—	C23544
	4.50	.1772	58	24	—	C23908
15		.1800	2-3/16	1-1/8	—	C23545
	4.60	.1811	58	24	—	C23909
14		.1820	2-3/16	1-1/8	—	C23546
13		.1850	2-3/16	1-1/8	—	C23547
	4.70	.1850	58	24	—	C23910
3/16		.1875	2-3/16	1-1/8	C68499	C23468
12		.1890	2-1/4	1-3/16	—	C23548
	4.80	.1890	62	26	—	C23911
11		.1910	2-1/4	1-3/16	—	C23549
	4.90	.1929	62	26	—	C23912
10		.1935	2-1/4	1-3/16	—	C23550
9		.1960	2-1/4	1-3/16	—	C23551
	5.00	.1969	62	26	—	C23913
8		.1990	2-1/4	1-3/16	—	C23552

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Screw Machine Length
Heavy Duty

Styles: 1621, 1896 *(continued)*

drill diameter frac/wire/let	drill diameter mm	decimal equivalent	overall length	flute length	order number 1621 Black Oxide	order number 1896 Black Oxide
	5.10	.2008	62	26	—	C23914
7		.2010	2-1/4	1-3/16	—	C23553
13/64		.2031	2-1/4	1-3/16	C68500	C23469
6		.2040	2-3/8	1-1/4	—	C23554
	5.20	.2047	62	26	—	C23915
5		.2055	2-3/8	1-1/4	—	C23555
	5.30	.2087	62	26	—	C23916
4		.2090	2-3/8	1-1/4	—	C23556
3		.2130	2-3/8	1-1/4	—	C23557
	5.50	.2165	66	28	—	C23917
7/32		.2188	2-3/8	1-1/4	C68501	C23470
	5.60	.2205	66	28	—	C23918
2		.2210	2-7/16	1-5/16	—	C23558
	5.70	.2244	66	28	—	C23919
1		.2280	2-7/16	1-5/16	—	C23559
	5.80	.2283	66	28	—	C24058
15/64		.2344	2-7/16	1-5/16	C68502	C23471
	6.00	.2362	66	28	—	C23920
	6.10	.2402	70	31	—	C23921
	6.30	.2480	70	31	—	C23922
1/4		.2500	2-1/2	1-3/8	C68503	C23472
	6.50	.2559	70	31	—	C23923
	6.60	.2598	70	31	—	C23924
17/64		.2656	2-5/8	1-7/16	C68504	C23473
	6.80	.2677	74	34	—	C23925
	6.90	.2717	74	34	—	C23926
	7.00	.2756	74	34	—	C23927
9/32		.2812	2-11/16	1-1/2	C68505	C23474
	7.20	.2835	74	34	—	C23928
	7.30	.2874	74	34	—	C23929
	7.50	.2953	74	34	—	C23930
19/64		.2969	2-3/4	1-9/16	C68506	C23475
5/16		.3125	2-13/16	1-5/8	C68507	C23476
	8.00	.3150	79	37	—	C23931
21/64		.3281	2-15/16	1-11/16	C68508	C23477
	8.50	.3346	79	37	—	C23932
	11/32	.3438	3	1-11/16	C68509	C23478
	9.00	.3543	84	40	—	C23933
23/64		.3594	3-1/16	1-3/4	C68510	C23479
	9.50	.3740	84	40	—	C23934
3/8		.3750	3-1/8	1-13/16	C68511	C23480
25/64		.3906	3-1/4	1-7/8	C68512	C23481
	10.00	.3937	89	43	—	C23935
	10.20	.4016	89	43	—	C23936
13/32		.4062	3-5/16	1-15/16	C68513	C23482
	10.50	.4134	89	43	—	C23937
27/64		.4219	3-3/8	2	C68514	C23483
	11.00	.4331	95	47	—	C23938
7/16		.4375	3-7/16	2-1/16	C68515	C23484
	11.50	.4528	95	47	—	C23939
29/64		.4531	3-9/16	2-1/8	C68516	C23485

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drill diameter frac/wire/let	mm	decimal equivalent	overall length	flute length	order number 1621 Black Oxide	order number 1896 Black Oxide
15/32		.4688	3-5/8	2-1/8	C68517	C23486
	12.00	.4724	102	51	—	C23940
	12.20	.4803	102	51	—	C23941
31/64		.4844	3-11/16	2-3/16	C68518	C23487
	12.50	.4921	102	51	—	C23942
1/2		.5000	3-3/4	2-1/4	C68519	C23488
	13.00	.5118	102	51	—	C23943
	13.50	.5315	107	54	—	C23964
	14.00	.5512	107	54	—	C23965
	14.50	.5709	111	56	—	C23966
	15.00	.5906	111	56	—	C23967
	16.00	.6299	115	58	—	C23969
	17.00	.6693	119	60	—	C23971

SET

Style: 1896

Metal Case

Screw Machine Length - Sets *Heavy Duty*



60-Piece Set
Black Oxide
#C21947

drill sizes	no. of pieces	order number 1896 Black Oxide
1/16"– 1/2" x 1/64"	29	C21133
#1 – #60	60	C21947

Extended Length
Aircraft Extension 6" and 12"

General Application Drills

Styles: 1630, 1631, 1803, 1805

CLE-LINE

P

ASME B94.11M | HSS | Black Oxide | 135° Split | Helix Regular 21° to 34° | Straight Shank

Note
Superior rigidity in hand or machine drilling.



6" OAL Black Oxide



12" OAL Black Oxide

drill diameter frac/wire/let	decimal equivalent	flute length	order number 1630 6" Overall	1631 12" Overall	1803 6" Overall	1805 12" Overall
1/16	.0625	7/8	C68867	C68936	C23621	C23721
5/64	.0781	1	C68868	C68937	C23622	C23722
3/32	.0938	1-1/4	C68869	C68938	C23623	C23723
40	.0980	1-3/8	C68935	C69004	C23700	C23800
39	.0995	1-3/8	C68934	C69003	C23699	C23799
38	.1015	1-7/16	C68933	C69002	C23698	—
37	.1040	1-7/16	C68932	C69001	C23697	—
36	.1065	1-7/16	C68931	C69000	C23696	—
7/64	.1094	1-1/2	C68870	C68939	C23624	C23724
35	.1100	1-1/2	C68930	C68999	C23695	—
34	.1110	1-1/2	C68929	C68998	C23694	—
33	.1130	1-1/2	C68928	C68997	C23693	—
32	.1160	1-5/8	C68927	C68996	C23692	—
31	.1200	1-5/8	C68926	C68995	C23691	C23791
1/8	.1250	1-5/8	C68871	C68940	C23625	C23725
30	.1285	1-5/8	C68925	C68994	C23690	C23790
29	.1360	1-3/4	C68924	C68993	C23689	C23789
28	.1405	1-3/4	C68923	C68992	C23688	—
9/64	.1406	1-3/4	C68872	C68941	C23626	C23726
27	.1440	1-7/8	C68922	C68991	C23687	—
26	.1470	1-7/8	C68921	C68990	C23686	—
25	.1495	1-7/8	C68920	C68989	C23685	C23785
24	.1520	2	C68919	C68988	C23684	—
23	.1540	2	C68918	C68987	C23683	—
5/32	.1562	2	C68873	C68942	C23627	C23727
22	.1570	2	C68917	C68986	C23682	—
21	.1590	2-1/8	C68916	C68985	C23681	C23781
20	.1610	2-1/8	C68915	C68984	C23680	C23780
19	.1660	2-1/8	C68914	C68983	C23679	C23779
18	.1695	2-1/8	C68913	C68982	C23678	—
11/64	.1719	2-1/8	C68874	C68943	C23628	C23728
17	.1730	2-3/16	C68912	C68981	C23677	—
16	.1770	2-3/16	C68911	C68980	C23676	C23776
15	.1800	2-3/16	C68910	C68979	C23675	—
14	.1820	2-3-16	C68909	C68978	C23674	—
13	.1850	2-5/16	C68908	C68977	C23673	C23773

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drill diameter	decimal equivalent	flute length	order number 1630 6" Overall	1631 12" Overall	1803 6" Overall	1805 12" Overall
3/16	.1875	2-5/16	C68875	C68944	C23629	C23729
12	.1890	2-5/16	C68907	C68976	C23672	C23772
11	.1910	2-5/6	C68906	C68975	C23671	C23771
10	.1935	2-7/16	C68905	C68974	C23670	C23770
9	.1960	2-7/16	C68904	C68973	C23669	C23769
8	.1990	2-7/16	C68903	C68972	C23668	C23768
7	.2010	2-7/16	C68902	C68971	C23667	C23767
13/64	.2031	2-7/16	C68876	C68945	C23630	C23730
6	.2040	2-1/2	C68901	C68970	C23666	C23766
5	.2055	2-1/2	C68900	C68969	C23665	C23765
4	.2090	2-1/2	C68899	C68968	C23664	C23764
3	.2130	2-1/2	C68898	C68967	C23663	C23763
7/32	.2188	2-1/2	C68877	C68946	C23631	C23731
2	.2210	2-5/8	C68897	C68966	C23662	C23762
1	.2280	2-5/8	C68896	C68965	C23661	C23761
15/64	.2344	2-5/8	C68878	C68947	C23632	C23732
1/4, E	.2500	2-3/4	C68879	C68948	C23633	C23733
17/64	.2656	2-5/8	C68880	C68949	C23634	C23734
9/32	.2812	3-1/16	C68881	C68950	C23635	C23735
19/64	.2969	3-1/16	C68882	C68951	C23636	C23736
5/16	.3125	3-3/16	C68883	C68952	C23637	C23737
21/64	.3281	3-7/16	C68884	C68953	C23638	C23738
11/32	.3438	3-7/16	C68885	C68954	C23639	C23739
23/64	.3594	3-1/2	C68886	C68955	C23640	C23740
3/8	.3750	3-5/8	C68887	C68956	C23641	C23741
25/64	.3906	3-3/4	C68888	C68957	C23642	C23742
13/32	.4062	3-3/4	C68889	C68958	C23643	C23743
27/64	.4219	3-15/16	C68890	C68959	C23644	C23744
7/16	.4375	4-1/16	C68891	C68960	C23645	C23745
29/64	.4531	4-3/16	C68892	C68961	—	C23746
15/32	.4688	4-5/6	C68893	C68962	—	—
31/64	.4844	4-3/8	C68894	C68963	—	—
1/2	.5000	4-1/2	C68895	C68964	C23649	C23749

Extra Length
Extended 12", and 18"

General Application Drills

Styles: 1806, 1807

CLE-LINE

P K

ASME B94.11M | HSS | Black Oxide | 118° | Helix Regular 21° to 34° | Straight Shank



12" OAL Black Oxide



18" OAL Black Oxide

drill diameter	decimal equivalent	order number 1806 **9" Flute Length** 12" Overall Length	order number 1807 **14" Flute Length** 18" Overall Length
1/8	.1250	C20436	—
5/32	.1562	C20438	—
3/16	.1875	C20440	—
7/32	.2188	C20442	—
1/4	.2500	C20444	C20481
9/32	.2812	C20446	C20483
5/16	.3125	C20448	C20485
11/32	.3438	C20450	C20487
3/8	.3750	C20452	C20489
13/32	.4062	C20454	C20491
7/16	.4375	C20456	C20493
15/32	.4688	C20458	C20495
1/2	.5000	C20460	C20497
17/32	.5313	C20462	—
9/16	.5625	C20464	—
19/32	.5938	C20466	—
5/8	.6250	C20468	—
21/32	.6563	C20470	—
11/16	.6875	C20472	—

P K

ASME B94.11M | HSS | Black Oxide | 118° | Helix Regular 21° to 34° | Taper Shank



drill diameter	decimal equivalent	overall length	flute length	morse taper number	order number 1682 Black Oxide	order number 1894 Black Oxide
1/8	.1250	5-1/8	1-7/8	1	—	C20049
9/64	.1406	5-1/8	1-7/8	1	—	C20050
5/32	.1562	5-3/8	2-1/8	1	—	C20051
11/64	.1719	5-3/4	2-1/2	1	—	C20052
3/16	.1875	5-3/4	2-1/2	1	—	C20053
13/64	.2031	6	2-3/4	1	—	C20054
7/32	.2188	6	2-3/4	1	—	C20055
15/64	.2344	6-1/8	2-7/8	1	—	C20056
1/4	.2500	6-1/8	2-7/8	1	—	C20057
17/64	.2656	6-1/4	3	1	—	C20058
9/32	.2812	6-1/4	3	1	—	C20059
19/64	.2969	6-3/8	3-1/8	1	—	C20060
5/16	.3125	6-3/8	3-1/8	1	C68779	C20061
21/64	.3281	6-1/2	3-1/4	1	C68780	C20062
11/32	.3438	6-1/2	3-1/4	1	C68781	C20063
23/64	.3594	6-3/4	3-1/2	1	C68782	C20064
3/8	.3750	6-3/4	3-1/2	1	C68794	C20524
3/8	.3750	7-3/8	3-1/2	2	C68738	C20020
25/64	.3906	7	3-5/8	1	C68795	C20525
25/64	.3906	7	3-5/8	2	C68739	—
13/32	.4062	7	3-5/8	1	C68796	C20526
13/32	.4063	7-1/2	3-5/8	2	C68740	C20022
27/64	.4219	7-1/4	3-7/8	1	C68797	C20527
27/64	.4219	7-3/4	3-7/8	2	C68741	—
7/16	.4375	7-1/4	3-7/8	1	C68798	C20528
7/16	.4375	7-3/4	3-7/8	2	C68742	C20024
29/64	.4531	7-1/2	4-1/8	1	C68799	C20529
29/64	.4531	8	4-1/8	2	C68743	—
15/32	.4688	7-1/2	4-1/8	1	C68800	C20530
31/64	.4844	8-1/4	4-3/8	2	C68801	—
1/2	.5000	7-3/4	4-3/8	1	C68744	C20026
1/2	.5000	8-1/4	4-3/8	2	C68802	—
33/64	.5156	8-1/2	4-5/8	2	C68803	—
17/32	.5312	8	4-5/8	1	C68745	—
17/32	.5312	8-1/2	4-5/8	2	C68804	—
35/64	.5469	8-3/4	4-7/8	2	C68805	C20535
9/16	.5625	8-3/4	4-7/8	2	C68806	—
37/64	.5781	8-3/4	4-7/8	2	C68807	—
19/32	.5938	8-3/4	4-7/8	2	C68808	—
39/64	.6094	8-3/4	4-7/8	2	C68809	—
5/8	.6250	8-3/4	4-7/8	2	C68810	C20540

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drill diameter	decimal equivalent	overall length	flute length	morse taper number	order number 1682 Black Oxide	order number 1894 Black Oxide
41/64	.6406	9	5-1/8	2	C68811	—
21/32	.6562	9	5-1/8	2	C68812	—
21/32	.6562	9-3/4	5-1/8	3	C68746	—
43/64	.6719	9-1/4	5-3/8	2	C68813	C20543
11/16	.6875	9-1/4	5-3/8	2	C68814	—
11/16	.6875	10	5-3/8	3	C68747	C20029
45/64	.7031	9-1/2	5-5/8	2	C68815	C20545
23/32	.7188	9-1/2	5-5/8	2	C68816	—
47/64	.7344	9-3/4	5-7/8	2	C68817	—
3/4	.7500	9-3/4	5-7/8	2	C68818	—
3/4	.7500	10-1/2	5-7/8	3	C68748	C20030
49/64	.7656	9-7/8	6	2	C68819	C20549
49/64	.7656	10-5/8	6	3	C68749	—
25/32	.7812	9-7/8	6	2	C68820	C20550
25/32	.7812	10-5/8	6	3	C68750	—
51/64	.7969	10-3/4	6-1/8	3	C68821	C20551
13/16	.8125	10	6-1/8	2	C68751	—
13/16	.8125	10-3/4	6-1/8	3	C68822	C20552
53/64	.8281	10-3/4	6-1/8	3	C68823	C20553
27/32	.8438	10	6-1/8	2	C68752	—
27/32	.8438	10-3/4	6-1/8	3	C68824	C20554
55/64	.8594	10-3/4	6-1/8	3	C68825	C20555
7/8	.8750	10	6-1/8	2	C68753	C20035
7/8	.8750	10-3/4	6-1/8	3	C68826	C20556
57/64	.8906	10-3/4	6-1/8	3	C68827	C20557
29/32	.9062	10-3/4	6-1/8	3	C68828	C20558
59/64	.9219	10-3/4	6-1/8	3	C68829	C20559
15/16	.9375	10-3/4	6-1/8	3	C68830	C20560
61/64	.9531	11	6-3/8	3	C68831	C20561
31/32	.9688	11	6-3/8	3	C68832	C20562
63/64	.9844	11	6-3/8	3	C68833	C20563
1	1.0000	11	6-3/8	3	C68834	C20564
1	1.0000	12	6-3/8	4	C68754	—
1-1/64	1.0156	11-1/8	6-1/2	3	C68835	C20565
1-1/32	1.0312	11-1/8	6-1/2	3	C68836	C20566
1-3/64	1.0469	11-1/4	6-5/8	3	C68837	C20567
1-1/16	1.0625	11-1/4	6-5/8	3	C68838	C20568
1-1/16	1.0625	12-1/4	6-5/8	4	C68755	—
1-5/64	1.0781	12-1/2	6-7/8	4	C68839	C20569
1-3/32	1.0938	11-1/2	6-7/8	3	C68756	—
1-3/32	1.0938	12-1/2	6-7/8	4	C68840	C20570
1-7/64	1.1094	11-3/4	7-1/8	3	C68757	—
1-7/64	1.1094	12-3/4	7-1/8	4	C68841	C20571
1-1/8	1.1250	11-3/4	7-1/8	3	C68758	C20040
1-1/8	1.1250	12-3/4	7-1/8	4	C68842	C20572
1-9/64	1.1406	12-7/8	7-1/4	4	C68843	C20573
1-5/32	1.1562	11-7/8	7-1/4	3	C68759	—
1-5/32	1.1562	12-7/8	7-1/4	4	C68844	C20574
1-11/64	1.1719	13	7-3/8	4	C68845	C20575
1-3/16	1.1875	12	7-3/8	3	C68760	—
1-3/16	1.1875	13	7-3/8	4	C68846	C20576

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drill diameter	decimal equivalent	overall length	flute length	morse taper number	order number 1682 Black Oxide	order number 1894 Black Oxide
1-13/64	1.2031	13-1/8	7-1/2	4	C68847	C20577
1-7/32	1.2188	13-1/8	7-1/2	4	C68848	C20578
1-15/64	1.2344	13-1/2	7-7/8	4	C68849	C20579
1-1/4	1.2500	12-1/2	7-7/8	3	C68761	C20043
1-1/4	1.2500	13-1/2	7-7/8	4	C68850	C20580
1-17/64	1.2656	14-1/8	8-1/2	4	C68851	C20581
1-9/32	1.2812	14-1/8	8-1/2	4	C68852	C20582
1-19/64	1.2969	14-1/4	8-5/8	4	C68853	C20583
1-5/16	1.3125	14-1/4	8-5/8	4	C68854	C20584
1-21/64	1.3281	14-3/8	8-3/4	4	C68855	C20585
1-11/32	1.3438	14-3/8	8-3/4	4	C68856	C20586
1-23/64	1.3594	14-1/2	8-7/8	4	C68857	C20587
1-3/8	1.3750	14-1/2	8-7/8	4	C68858	C20588
1-25/64	1.3906	14-5/8	9	4	C68859	C20589
1-13/32	1.4062	14-5/8	9	4	C68860	C20590
1-27/64	1.4219	14-3/4	9-1/8	4	C68861	C20591
1-7/16	1.4375	14-3/4	9-1/8	4	C68862	C20592
1-29/64	1.4531	14-7/8	9-1/4	4	C68863	—
1-15/32	1.4688	14-7/8	9-1/4	4	C68864	—
1-31/64	1.4844	15	9-3/8	4	C68865	—
1-1/2	1.5000	15	9-3/8	4	C68866	C20596
1-17/32	1.5312	15	9-3/8	4	C68762	—
1-17/32	1.5312	16-3/8	9-3/8	5	C68783	—
1-9/16	1.5625	16-5/8	9-5/8	5	C68784	C20068
1-19/32	1.5938	16-7/8	9-7/8	5	C68785	—
1-5/8	1.6250	15-5/8	10	4	C68763	C20045
1-5/8	1.6250	17	10	5	C68786	C20072
1-21/32	1.6562	17-1/8	10-1/8	5	C68787	—
1-11/16	1.6875	17-1/8	10-1/8	5	C68788	—
1-23/32	1.7188	17-1/8	10-1/8	5	C68764	—
1-3/4	1.7500	16-1/4	10-3/8	4	C68765	—
1-3/4	1.7500	17-1/8	10-3/8	5	C68789	—
1-13/16	1.8125	17-1/8	10-1/8	5	C68790	—
1-7/8	1.8750	17-3/8	10-3/8	5	C68791	—
1-15/16	1.9375	17-3/8	10-3/8	5	C68792	—
2	2.0000	16-5/8	10-5/8	4	C68766	—
2	2.0000	17-3/8	10-3/8	5	C68793	—

Reduced Shank
Silver & Deming

General Application Drills

Styles: 1680, 1681, 1813, 1892, 1877

CLE-LINE

P K

Black Oxide | HSS | Black Gold #1877 | 118° | 118° Split #1877 | Reduced Shank #1680 #1813 | Reduced Flatted Shank #1681 #1892 #1877

Note

**Metric sizes made to order (minimum order quantities apply).*

1/2" reduced shank.

Style 1877M (Metric) now combined with style 1877.



Style #1680 / 1813 black oxide with round shank



Style #1681 / 1892 black oxide with flatted shank



Style #1877 black & gold split point with flatted shank

drill diameter fractional	drill diameter mm	decimal equivalent	overall length	flute length	order number 1680 Round Shank Black Oxide	1681 (3)Flatted Shank Black Oxide	1813 Round Shank Black Oxide	1892 (3)Flatted Shank Black Oxide	1877 (3)Flatted Shank Black & Gold
1/2		.5000	6	3-1/8	C68631	C68674	C20732	C20670	—
	13.0	.5118	152	79	—	—	C21070	—	C21170
33/64		.5156	6	3-1/8	C68632	C68675	C20733	C20671	C17031
17/32		.5312	6	3-1/8	C68633	C68676	C20734	C20672	C17032
	13.5	.5315	152	79	—	—	C21071	—	C21171
35/64		.5469	6	3-1/8	C68634	C68677	C20735	C20673	C17033
	14.0	.5512	152	79	—	—	C21072	—	C21172
9/16		.5625	6	3-1/8	C68635	C68678	C20736	C20674	C17034
	14.5	.5709	152	79	—	—	C21073	—	C21173
37/64		.5781	6	3-1/8	C68636	C68679	C20737	C20675	C17035
	15.0	.5906	152	79	—	—	C21074	—	C21174
19/32		.5938	6	3-1/8	C68637	C68680	C20738	C20676	C17036
39/64		.6094	6	3-1/8	C68638	C68681	C20739	C20677	C17037
	15.5	.6102	152	79	—	—	C21075	—	C21175
5/8		.6250	6	3-1/8	C68639	C68682	C20740	C20678	C17038
	16.0	.6299	152	79	—	—	C21076	—	C21176
41/64		.6406	6	3-1/8	C68640	C68683	C20741	C20679	C17039
	16.5	.6496	152	79	—	—	C21077	—	C21177
21/32		.6562	6	3-1/8	C68641	C68684	C20742	C20680	C17040
	17.0	.6693	152	79	—	—	C21078	—	C21178
43/64		.6719	6	3-1/8	C68642	C68685	C20743	C20681	C17041
11/16		.6875	6	3-1/8	C68643	C68686	C20744	C20682	C17042
	17.5	.6890	152	79	—	—	C21079	—	C21179
45/64		.7031	6	3-1/8	C68644	C68687	C20745	C20683	C17043
	18.0	.7087	152	79	—	—	C21080	—	C21180
23/32		.7188	6	3-1/8	C68645	C68688	C20746	C20684	C17044
	18.5	.7283	152	79	—	—	C21081	—	C21181
47/64		.7344	6	3-1/8	C68646	C68689	C20747	C20685	C17045
	19.0	.7480	152	79	—	—	C21082	—	C21182
3/4		.7500	6	3-1/8	C68647	C68690	C20748	C20686	C17046
49/64		.7656	6	3-1/8	C68648	C68691	C20749	C20687	C17047
	19.5	.7677	152	79	—	—	C21083	—	C21183
25/32		.7812	6	3-1/8	C68649	C68692	C20750	C20688	C17048
	20.0	.7874	152	79	—	—	C21084	—	C21184
51/64		.7969	6	3-1/8	C68650	C68693	C20669	—	C17049
13/16		.8125	6	3-1/8	C68651	C68694	C20751	C20689	C17050
	21.0	.8268	152	79	—	—	C21085	—	C21185
53/64		.8281	6	3-1/8	C68652	C68695	C20724	—	C17051
27/32		.8438	6	3-1/8	C68653	C68696	C20752	C20690	C17052
55/64		.8594	6	3-1/8	C68654	C68697	C20725	—	C17053
	22.0	.8661	152	79	—	—	C21086	—	C21186
7/8		.8750	6	3-1/8	C68655	C68698	C20753	C20691	C17054
57/64		.8906	6	3-1/8	C68656	C68699	C20726	—	C17055

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drill diameter fractional	drill diameter mm	decimal equivalent	overall length	flute length	order number 1680 Round Shank Black Oxide	1681 (3)Flatted Shank Black Oxide	1813 Round Shank Black Oxide	1892 (3)Flatted Shank Black Oxide	1877 (3)Flatted Shank Black & Gold
	23.0	.9055	152	79	—	—	C21087	—	C21187
29/32		.9062	6	3-1/8	C68657	C68700	C20754	C20692	C17056
59/64		.9219	6	3-1/8	C68658	C68701	C20727	—	C17057
15/16		.9375	6	3-1/8	C68659	C68702	C20755	C20693	C17058
	24.0	.9449	152	79	—	—	C21088	—	C21188
61/64		.9531	6	3-1/8	C68660	C68703	C20728	—	C17059
31/32		.9688	6	3-1/8	C68661	C68704	C20756	C20694	C17060
	25.0	.9843	152	79	—	—	C21089	—	C21189
63/64		.9844	6	3-1/8	C68662	C68705	C20729	—	C17061
1		1.0000	6	3-1/8	C68663	C68706	C20757	C20695	C17062
1-1/64		1.0156	6	3-1/8	—	C68707	—	—	—
1-1/32		1.0312	6	3-1/8	C68664	C68708	C20730	—	—
1-3/64		1.0469	6	3-1/8	—	C68709	—	—	—
1-1/16		1.0625	6	3-1/8	C68665	C68710	C20758	C20696	C17066
1-5/64		1.0781	6	3-1/8	—	C68711	—	—	—
1-3/32		1.0938	6	3-1/8	—	C68712	—	—	—
1-7/64		1.1094	6	3-1/8	—	C68713	—	—	—
1-1/8		1.1250	6	3-1/8	C68666	C68714	C20759	C20697	C17070
1-9/64		1.1406	6	3-1/8	—	C68715	—	—	—
1-5/32		1.1562	6	3-1/8	C68667	C68716	C20731	—	—
1-11/64		1.1719	6	3-1/8	—	C68717	—	—	—
1-3/16		1.1875	6	3-1/8	C68668	C68718	C20760	C20698	C17074
1-13/64		1.2031	6	3-1/8	—	C68719	—	—	—
1-7/32		1.2188	6	3-1/8	—	C68720	—	—	—
1-15/64		1.2344	6	3-1/8	—	C68721	—	—	—
1-1/4		1.2500	6	3-1/8	C68669	C68722	C20761	C20699	C17078
1-17/64		1.2656	6	3-1/8	—	C68723	—	—	—
1-9/32		1.2812	6	3-1/8	—	C68724	—	—	—
1-19/64		1.2969	6	3-1/8	—	C68725	—	—	—
1-5/16		1.3125	6	3-1/8	C68670	C68726	C20762	—	C17082
1-21/64		1.3281	6	3-1/8	—	C68727	—	—	—
1-11/32		1.3438	6	3-1/8	—	C68728	—	—	—
1-23/64		1.3594	6	3-1/8	—	C68729	—	—	—
1-3/8		1.3750	6	3-1/8	C68671	C68730	C20763	—	C17086
1-25/64		1.3906	6	3-1/8	—	C68731	—	—	—
1-13/32		1.4062	6	3-1/8	—	C68732	—	—	—
1-27/64		1.4219	6	3-1/8	—	C68733	—	—	—
1-7/16		1.4375	6	3-1/8	C68672	C68734	C20764	—	C17090
1-29/64		1.4531	6	3-1/8	—	C68735	—	—	—
1-31/64		1.4844	6	3-1/8	—	C68736	—	—	—
1-1/2		1.5000	6	3-1/8	C68673	C68737	C20765	—	C17094

SET Styles: 1680, 1681, 1813, 1892, 1877

Reduced Shank Sets
Silver & Deming

Metal Case (unless noted otherwise)

sizes	no. of pieces	order number 1680 Round Shank	1681 (3) Flatted Shank	1813 Round Shank	1892 (3) Flatted Shank	1877 (3) Flatted Shank
9/16" – 1" x 1/16"	8	C69039	C69040	C21135	C22761	*C21164
1/2" – 1" x 1/64"	33	—	—	C21134	—	—

*Plastic Case



8-Piece Set Flatted Shank #C21164



33-Piece Set Round Shank #C21134

CLE-LINE

Masonry
Carbide Tipped

Style: 1818

NORM ANSI

Note
- *Precision: squared tip for better centering.*
- *High grade carbide for longer lasting life.*
- *Use with rotation or rotary percussion drill motors.*
- *Sandblasted finish.*

Parts may vary slightly. *This style was updated; previous style will be shipped until inventory is depleted.*





cutting diameter fractional	cutting diameter decimal	shank diameter	working length	overall length	order number 1818
1/8	.1250	3/32"	1-3/8	3	C20930
3/16	.1875	5/32"	2-1/2	4	C20932
3/16	.1875	5/32"	4	6	C20910
1/4	.2500	7/32"	2-1/2	4	C20934
1/4	.2500	7/32"	4	6	C20935
1/4	.2500	3/16"	10	12	C20911
5/16	.3125	15/64"	2-1/2	4	C20937
5/16	.3125	15/64"	4	6	C20938
5/16	.3125	15/64"	10	12	C20912
3/8	.3750	5/16"	2-1/2	4	C20939
3/8	.3750	5/16"	4	6	C20940
3/8	.3750	5/16"	10	12	C20913
1/2	.5000	3/8"	4	6	C20944
1/2	.5000	3/8"	10	12	C20914
5/8	.6250	1/2"	4	6	C20946
5/8	.6250	1/2"	10	12	C20925
3/4	.7500	1/2"	4	6	C20948
3/4	.7500	1/2"	10	12	C20926
7/8	.8750	1/2"	10	12	C20927
1	1.0000	1/2"	4	6	C20950
1	1.0000	1/2"	10	12	C20928

Masonry
Carbide Tipped

SET

Style: 1818

Plastic Case

NORM ANSI

drill sizes	no. of pieces	order number 1818
1/8, 5/32, 3/16, 1/4, 5/16	5	C20929



Masonry
Carbide Tipped

Style: 1841 Tapcon

NORM ANSI

Note
- *Sandblasted finish.*
- *Flat and cylindrical shank.*
- *Squared tip for better centering.*
- *20% More battery life.*

Parts may vary slightly. *This style was updated; previous style will be shipped until inventory is depleted.*





cutting diameter fractional	cutting diameter decimal	shank diameter	flute length	overall length	order number 1841
5/32	.1562	5/32"	3-3/32"	4-1/2	C19010
5/32	.1562	5/32"	3-53/64"	5-1/2	C19012
3/16	.1875	5/32"	2-9/16"	4-1/2	C19011
3/16	.1875	5/32"	3-13/16"	5-1/2	C19013

Style: 1889

Masonry
Carbide Tipped

Note
- *Durability in concrete, brick, and brittle materials.*
- *Speeds up dust extraction.*
- *Better resistance to high temperature when drilling.*
- *Use with rotation or rotary percussion drill motors.*
- *Sandblasted finish.*

NORM ANSI

Parts may vary slightly. *This style was updated; previous style will be shipped until inventory is depleted.*



cutting diameter fractional	cutting diameter decimal	shank diameter	flute length	overall length	order number 1889
1/8	.1250	3/32"	1-9/16"	3	C23286
3/16	.1875	5/32"	3-15/16	4	C23270
1/4	.2500	7/32"	2-11/64	4	C23287
1/4	.2500	7/32"	3-3/4	6	C23271
1/4	.2500	7/32"	8-25/32	12	C23272
5/16	.3125	15/64"	2-11/64	4	C23288
5/16	.3125	15/64"	3-3/4	6	C23273
5/16	.3125	15/64"	8-25/32	12	C23274
3/8	.3750	5/16"	2-11/64	4	C23289
3/8	.3750	5/16"	3-3/4	6	C23275
3/8	.3750	5/16"	8-25/32	12	C23276
1/2	.5000	3/8"	2-11/64	4	C23278
1/2	.5000	3/8"	3-3/4	6	C23280
1/2	.5000	3/8"	8-25/32	12	C23281
5/8	.6250	1/2"	3-11/32	6	C23282
3/4	.7500	1/2"	3-5/64	6	C23283



SET Style: 1889

Masonry
Carbide Tipped

NORM ANSI

drill sizes	no. of pieces	order number 1889
1/4", 5/16", 3/8", 1/2"	4	C23290

Style: 1822

Masonry
Glass & Tile

Note
- *New harder carbide grade.*
- *4 Sided design "diamond style" tip improves precision and penetration*
- *Drills through up to class 3 ceramic tiles.*
- *Used dry.*
- *Suitable for more materials: non-tempered glass, plastic, composite, brick, marble.*

Parts may vary slightly. *This style was updated; previous style will be shipped until inventory is depleted.*



cutting diameter fractional	cutting diameter decimal	overall length	order number 1822
1/8	.1250	3-5/32	C20718
3/16	.1875	3-5/32	C20719
1/4	.2500	3-15/16	C20720
5/16	.3125	3-15/16	C20721
3/8	.3750	3-15/16	C20722
1/2	.5000	3-15/16	C20723



SET Style: 1822

Masonry
Glass & Tile

drill sizes	no. of pieces	order number 1822
1/8", 1/4", 3/8", 1/2"	4	C21148

Masonry
SDS® Carbide Tipped

Style: 1821 SDS® - plus 2 Cutting Premium

CLE-LINE

NORM ANSI

Parts may vary slightly. *This style was updated; previous style will be shipped until inventory is depleted.*

Note

- *Carbide Tip.*
- *Self Centering And Concrete Breaker Tip.*
- *160° Tip Angle.*
- *Square Flute.*
- *Compatible SDS-Plus Shank.*
- *Chiseling Effect To Break Concrete.*



cutting diameter fractional	cutting diameter decimal	shank diameter	working length	overall length	order number 1821
3/16	.1875	SDS + shank 3/8"	2	4	C21032
3/16	.1875	SDS + shank 3/8"	4	6	C20712
3/16	.1875	SDS + shank 3/8"	6	8	C21033
3/16	.1875	SDS + shank 3/8"	10	12	C21020
1/4	.2500	SDS + shank 3/8"	2	4	C21034
1/4	.2500	SDS + shank 3/8"	4	6	C20713
1/4	.2500	SDS + shank 3/8"	6	8	C21035
1/4	.2500	SDS + shank 3/8"	10	12	C21021
5/16	.3125	SDS + shank 3/8"	4	6	C21036
5/16	.3125	SDS + shank 3/8"	10	12	C21022
3/8	.3750	SDS + shank 3/8"	4	6	C20714
3/8	.3750	SDS + shank 3/8"	6	8	C21039
3/8	.3750	SDS + shank 3/8"	10	12	C21040
3/8	.3750	SDS + shank 3/8"	16	18	C21023
1/2	.5000	SDS + shank 3/8"	4	6	C20715
1/2	.5000	SDS + shank 3/8"	6	8	C21042
1/2	.5000	SDS + shank 3/8"	10	12	C21043
1/2	.5000	SDS + shank 3/8"	16	18	C21024
5/8	.6250	SDS + shank 3/8"	6	8	C21025
5/8	.6250	SDS + shank 3/8"	8	10	C20716
5/8	.6250	SDS + shank 3/8"	10	12	C21046
5/8	.6250	SDS + shank 3/8"	16	18	C21026
3/4	.7500	SDS + shank 3/8"	6	8	C20717
3/4	.7500	SDS + shank 3/8"	10	12	C21048
3/4	.6250	SDS + shank 3/8"	16	18	C21027
7/8	.8750	SDS + shank 3/8"	8	10	C21028
1	1.0000	SDS + shank 3/8"	10	12	C21029
1	1.0000	SDS + shank 3/8"	16	18	C21030



Masonry
SDS® Carbide Tipped

SET

Styles: 1821

Plastic Case



drill sizes	no. of pieces	order number 1821
3/16", 1/4", 5/16", 3/8", 1/2" x 6	5	C21031

Style: 1833 - SDS® - plus 3 Cutting Premium

Note

Monobloc carbide tip with self centering point.
3 Cutting edges.
135° Tip angle.
Combines square and round flute shape.
Compatible SDS-plus shank.
The solution for drilling rebar and concrete without cracking.

NORM ANSI



cutting diameter fractional	cutting diameter decimal	shank diameter	working length	overall length	order number 1833
3/16	.1875	SDS + shank 3/8"	2	4	C22100
3/16	.1875	SDS + shank 3/8"	4	6	C22101
1/4	.2500	SDS + shank 3/8"	2	4	C22102
1/4	.2500	SDS + shank 3/8"	4	6	C22103
1/4	.2500	SDS + shank 3/8"	10	12	C22104
5/16	.3125	SDS + shank 3/8"	4	6	C22105
5/16	.3125	SDS + shank 3/8"	10	12	C22106
3/8	.3750	SDS + shank 3/8"	4	6	C22107
3/8	.3750	SDS + shank 3/8"	10	12	C22108
1/2	.5000	SDS + shank 3/8"	4	6	C22109
1/2	.5000	SDS + shank 3/8"	10	12	C22110
9/16	.5625	SDS + shank 3/8"	4	6	C22111
9/16	.5625	SDS + shank 3/8"	10	12	C22112





SET Style: 1833 - SDS-plus 3 Cutting Premium

Masonry
Drill ReBar

Plastic Case



drill sizes	no. of pieces	order number 1833
3/16", 1/4", 5/16", 3/8", 1/2" x 6	5	C22113

CLE-LINE

Masonry
Multi-purpose Carbide Tipped

Style: 1838

NEW

Note

Carbide tip.
118° point angle.
Universal use.

Used in low density Wood, Alloy Steel, Non-Ferrous Materials, Slate, Composite, and Tile



cutting diameter fractional	cutting diameter decimal	shank diameter	working length	overall length	order number 1838
1/8	.1250	7/64"	25/32	2-1/2	C22210
5/32	.1562	5/32"	1-3/8	3	C22211
3/16	.1875	3/16"	1-25/32	3-1/2	C22212
1/4	.2500	7/32"	2-1/2	4	C22213
5/16	.3125	19/64"	3	4-1/2	C22214
3/8	.3750	23/64"	3	4-1/2	C22215
1/2	.5000	31/64"	4	6	C22216
5/8	.6250	1/2"	4	6	C22217



Masonry
Multi-purpose Carbide Tipped

SET

Style: 1838

drill sizes	no. of pieces	order number 1838
1/8", 5/32", 3/16", 1/4", 5/16"	5	C22218

Masonry
Universal

Style: 1837

Note

Carbide tip.
L shaped flute.
Universal use.

Parts only available until inventory is depleted.



cutting diameter fractional	cutting diameter decimal	shank diameter	flute length	overall length	order number 1837
1/8	.1250	7/64"	1-11/32	2-3/4	C22200
5/32	.1562	5/32"	1-9/16	3	C22201
3/16	.1875	3/16"	1-31/32	3-5/16	C22202
1/4	.2500	7/32"	2-23/64	3-15/16	C22203
5/16	.3125	19/64"	2-53/64	4-3/4	C22204
3/8	.3750	23/64"	2-53/64	4-3/4	C22205
1/2	.5000	31/64"	3-19/32	5-7/8	C22206
5/8	.6250	1/2"	3-7/64	5-7/8	C22207



Masonry
Universal

SET

Style: 1837

drill sizes	no. of pieces	order number 1837
1/8", 5/32", 3/16", 1/4", 5/16"	5	C22208



Specialty
Step Drills

Styles: 1874, 1874TN

Bright | TiN | 118° Split

Note
Standard off-the-shelf delivery from stock.


Bright


TiN

Inch Sizes

step description	hole sizes	decimal equivalent	shank diameter	overall length	order number 1874 Bright	order number 1874TN TiN
3/16-1/2 x 1/16	3/16-1/2	.1875 - .5000	1/4	3-1/8	C20285	C20295
3/16-7/8 x 1/16	3/16-7/8	.1875 - .8750	3/8	3-1/4	C20288	C20298
1/8-1/2 x 1/32	1/8-1/2	.1250 - .5000	1/4	3-1/8	C20286	C20296
1/4-3/4 x 1/16	1/4-3/4	.2500 - .7500	3/8	2-3/4	C20287	C20297
7/8 - 1-3/8	7/8 - 1-3/8	.8750 - 1.3750	3/8	3-1/4	C20290	—
7/8 - 1-1/8	7/8 - 1-1/8	.8750 - 1.1250	3/8	3-7/64	C20293	—

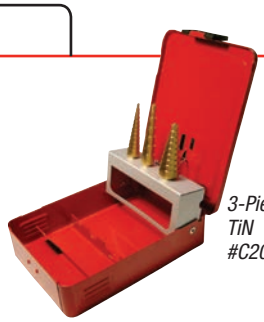
Specialty
Step Drills

SET

Styles: 1874, 1874TN

Metal Case

drilling diameter range	no. of pieces	order number 1874 Bright	order number 1874TN TiN
3/16 - 3/4	3	C20325	C20326


3-Piece Set
TiN
#C20326

Specialty
Quick Change Chucks

Style: 1817

Black Oxide

Note
For use with 1/4" hex shank drills or for 1/4" and 3/8" shank drills.
Installs in 3/8" or larger chucks.
Converts standard power tool chucks to quick-change operation.
No chuck keys needed.


#C20920


#C20958


#C20957

description	order number 1817
Quick-change chuck insert converts standard chucks to quick-change operation	C20920
Quick-change chuck for 1/4" hex shank drills	C20955
Dual-drive quick-change chuck for 1/4" and 3/8" hex shank tools	C20956
Extra length (6" OAL) quick-drive quick-change chuck for 1/4" hex shank tools	C20958
Extra length (12" OAL) quick-drive quick-change chuck for 1/4" hex shank tools	C20957

CLE-LINE

Specialty
Double End

Styles: 1683, 1815

P

HSS | Black Oxide | 135° Split

Note
Made specifically for sheet metal and other thin materials having a thickness similar to the drill diameter.



drill diameter frac/wire	drill diameter mm	decimal equivalent	overall length	flute length	order number 1683 Black Oxide	order number 1815 Black Oxide
	2.00	.0787	38	9	C69005	—
	2.10	.0826	38	9	C69006	—
	2.50	.0984	43	10	C69007	—
	3.00	.1181	46	11	C69008	—
1/8		.1250	1.929	.433	C69021	C20500
	3.20	.1259	49	12	C69009	—
	3.26	.1283	49	12	C69010	—
#30		.1285	1.875	.500	C69028	C23811
	3.30	.1299	49	12	C69012	—
	3.50	.1377	52	14	C69013	—
9/64		.1406	2.047	.551	C69022	C17618
5/32		.1562	2.165	.551	C69023	C17619
	4.00	.1574	55	14	C69014	—
#20		.1610	2.063	.625	C69027	C23810
	4.10	.1614	55	14	C69015	—
	4.20	.1653	55	14	C69016	—
3/16		.1875	2.441	.669	C69024	C20501
#11		.1910	2.344	.688	C69026	C23809
	4.90	.1929	62	17.5	C69017	—
	5.00	.1968	62	17.5	C69018	—
	5.10	.2007	62	17.5	C69019	—
	5.20	.2047	62	17.5	C69020	—
1/4		.2500	2.756	.787	C69025	C20503

Specialty
1/4" Hex Shank

Style: 1816

P

HSS | Bright | 135° Split

Note
Use in quick change chucks, Style #1817, shown on previous page for fast size changes.



drill diameter	decimal equivalent	order number 1816 Bright
1/16	.0625	C20510
5/64	.0781	C20511
3/32	.0938	C20512
7/64	.1094	C20513
1/8	.1250	C20514
9/64	.1406	C20516
5/32	.1562	C20517
3/16	.1875	C20518
7/32	.2188	C20908
1/4	.2500	C20909

Style: 1843



Use **CLE-LINE®** rotary chuck drivers on these models:

	# C19019 Spline Drive	# C19020 SDS Max Drive
AEG®	PH350, PH240, PH38, PHD26, PHD38	—
B & D®	5041, 5045, 5059, 5093, 5095, 5096, 5098	5097K, 5099K
Bosch®	11202, 11203, 11205, 11209, 11214, 11216, 11219, 11220, 11232	11214, 11216, 11223, 11227, 11230, 11231,11309, 11311
Dewalt®	DW539, DW533	545
Hilti®	—	TEF52, TEY54, TEY55, TEF60, TEF72, TEY74, TEY75, TE76, TEF92, TEY94
Hitachi®	DH25, DH38YE, DH50SB	—
Kango®	950S, 637S, 501S, 430S, 728S, 750S, 978S	—
Makita®	HR3851, HR5000	—
Metabo®	RH-32, RH-33, RH-66, 1129, 1130, 6030	—
Milwaukee®	5311, 5312, 5316, 5317, 5334, 5341, 5343, 5344, 5345-21, 5347, 5348, 5352, 5353	5308, 5313, 5346-21

description	order number 1843 Bright
Spline Drive	C19019
SDS Max Drive	C19020

Style: 2184

Specialty
Rivet Hole Drills

P

HSS | Black Oxide | 135° Split | Straight Shank

Note
Designed to drill rivet holes and other applications in thin sheet metal.
Ideal for hand drilling.



drill diameter	decimal equivalent	overall length	flute length	order number 2184 Black Oxide
3/32	.0938	1-3/4	7/16	C20259
1/8	.1250	1-7/8	1/2	C20257
5/32	.1562	2-1/16	9/16	C20260
3/16	.1875	2-3/16	9/16	C20258
1/4	.2500	2-1/2	3/4	C20256

CLE-LINE

Specialty - Metric
Welding Point Drills

Styles: 2195, 2185, 2185F

P

Cobalt | Straw Oxide | Straight Shank | Flatted Shank

Note
Designed to drill rivet holes and other applications in thin sheet metal.
Ideal for hand drilling.


Cobalt


Cobalt Straw Oxide


Cobalt Straw Oxide w/ Flats

drill diameter (mm)	decimal equivalent	overall length	flute length	order number 2195 Cobalt	2185 Cobalt - Straw	2185F Cobalt - Straw w/flats
6.0	.2362	66	28	C20988	C20478	C20878
6.5	.2559	70	31	—	—	C20877
8.0	.3150	79	37	C20989	C20479	C20879
10.0	.3937	89	43	C20990	C20480	C20880

Specialty
Power Wood Bit

Style: 1823

Note
Unique Turbo Twist™ clears holes of chips.
3 flats on shank.
Easy to re-sharpen.

Black Oxide | Square Shank



drill diameter	decimal equivalent	overall length	order number 1823 Black Oxide
1/4	.2500	6	C17100
5/16	.3125	6	C17101
3/8	.3750	6	C17102
7/16	.4375	6	C17103
1/2	.5000	6	C17104
9/16	.5625	6	C17105
5/8	.6250	6	C17106
11/16	.6875	6	C17107
3/4	.7500	6	C17108
13/16	.8125	6	C17109
7/8	.8750	6	C17110
15/16	.9375	6	C17111
1	1.0000	6	C17112
1-1/8	1.1250	6	C17113
1-1/4	1.2500	6	C17114
1-3/8	1.3750	6	C17115
1-1/2	1.5000	6	C17116

GREENFIELD INDUSTRIES

Style: 2616

Bridge Length Reamer
Spiral Flute / Hex Shank

P K

HSS | Black Gold | LHS RHC

Note
Heavy duty reaming in steel assemblies.
Tapered at the point which is ideal for holes which are out of alignment.
Magnets are 180° apart in the hex shank to reduce the chance of falling out of the socket.



reamer size		point diameter		hex size	overall length	flute length	order number 2616 Black & Gold
9/16	.5625	11/32	.344	1-1/16	6-7/8	5-1/8	C36000
5/8	.6250	3/8	.375	1-1/16	7-7/8	6-1/8	C36001
11/16	.6875	3/8	.375	1-1/16	9-1/4	7-1/8	C36002
3/4	.7500	13/32	.406	1-1/4	9-3/8	7-3/8	C36003
13/16	.8125	1/2	.500	1-1/4	9-3/8	7-3/8	C36004
7/8	.8750	9/16	.563	1-7/16	9-3/8	7-3/8	C36005
15/16	.9375	19/32	.594	1-7/16	9-3/8	7-3/8	C36006
1	1.0000	11/16	.687	1-7/16	9-3/8	7-3/8	C36007
1-1/16	1.0625	3/4	.750	1-5/8	9-3/8	7-3/8	C36008
1-1/8	1.1250	13/16	.812	1-5/8	9-3/8	7-3/8	C36009
1-3/16	1.1875	7/8	.875	1-13/16	9-3/8	7-3/8	C36010
1-1/4	1.2500	15/16	.937	1-13/16	9-3/8	7-3/8	C36011
1-5/16	1.3125	1	1.000	2	10	7-3/8	C36012
1-3/8	1.3750	1-1/16	1.062	2	10	7-3/8	C36013
1-7/16	1.4375	1-1/8	1.125	2	10	7-3/8	C36014
1-1/2	1.5000	1-3/16	1.187	2'	10	7-3/8	C36015
1-9/16	1.5625	1-9/16	1.562	2	10	7-3/8	C36016
1-5/8	1.6250	1-5/16	1.312	2	10	7-3/8	C36017

Style: 2618

Car Length Reamer
Spiral Flute / Hex Shank

P K

HSS | Black Gold | LHS RHC

Note
Heavy duty reaming in steel assemblies.
Tapered at the point which is ideal for holes which are out of alignment.
Magnets are 180° apart in the hex shank to reduce the chance of falling out of the socket.



reamer size		point diameter		hex size	overall length	flute length	order number 2618 Black & Gold
1/2	.5000	9/32	.281	1-1/16	5-1/2	4	C36018
9/16	.5625	11/32	.344	1-1/16	5-7/8	4	C36019
5/8	.6250	11/32	.344	1-1/16	6	4-1/2	C36020
11/16	.6875	3/8	.375	1-1/16	6-3/8	4-1/2	C36021
3/4	.7500	13/32	.406	1-1/4	7	5	C36022
13/16	.8125	1/2	.500	1-1/4	7	5	C36023
7/8	.8750	9/16	.562	1-7/16	7	5	C36024
15/16	.9375	19/32	.594	1-7/16	7	5	C36025
1	1.0000	11/16	.687	1-7/16	7	5	C36026
1-1/16	1.0625	3/4	.750	1-5/8	7	5	C36027
1-1/8	1.1250	13/16	.812	1-5/8	7	5	C36028
1-3/16	1.1875	7/8	.875	1-13/16	7	5	C36029
1-1/4	1.2500	15/16	.937	1-13/16	7	5	C36030
1-5/16	1.3125	1	1.000	2	7-7/8	5	C36031

Specialty
Combined Drill and Countersink

Style: 1824

CLE-LINE

Note
Produces a 60° included angle center, used for most applications.

HSS | Bright



size	drill diameter	decimal equivalent	body diameter	overall length	order number 1824 Bright
0	1/32	.0312	1/8	1-1/8	C20891
1	3/64	.0469	1/8	1-1/4	C20892
2	5/64	.0781	3/16	1-7/8	C20893
3	7/64	.1094	1/4	2	C20894
4	1/8	.1250	5/16	2-1/8	C20895
5	3/16	.1875	7/16	2-3/4	C20896
6	7/32	.2188	1/2	3	C20897
7	1/4	.2500	5/8	3-1/4	C20898
8	5/16	.2344	3/4	3-1/2	C20899

Specialty
Die Drill

Style: 1844

Note
Long carbide tip to prevent chipping, to improve cutting, and for better cooling.
Brazed tip for strength, performance and durability.
Special fluting for rapid chip evacuations and heat dissipation.
Specially tempered bodies for strength and longer tool life.
Designed for hardened steel.
Run at 75-100 SFM.

ASME B94.11M | Reduced Shank



drill diameter	decimal equivalent	shank diameter	overall length	order number 1844 Right-Hand	Left-Hand
3/16	.1875	3/16	3	C19000	C19005
1/4	.2500	1/4	4	C19001	C19006
1/4	.2500	1/4	6	C19002	C19007
5/16	.3125	1/4	4	C19003	C19008
3/8	.3750	3/8	4	C19004	C19009

Style: 1829

Specialty
Screw Extractors

P K N

Square Shank

Note
Removes broken cap screws, set screws, studs, bolts, pipe fittings and other threaded parts without damaging the threads in the hole.



extractor size	small end	large diameter	length of taper	overall length	order number 1829 Bright
1	.0625	.1562	3/4	2	C17170
2	.0860	.1800	3/4	2-3/8	C17171
3	.1250	.2500	1	2-3/4	C17172
4	.1875	.3125	1	3	C17173
5	.2500	.4375	1-1/2	3-3/8	C17174
6	.3750	.5938	1-3/4	3-3/4	C17176
7	.5000	.7812	2-1/4	4-1/8	C17178
8	.7500	1.0312	2-1/4	4-3/8	C17180

SET

Style: 1829

Fold-up Pouch

Specialty
Screw Extractors

P K H



size range	no. of pieces	order number 1829 Bright
#1 – #5	5	C21149

SET

Style: 1864

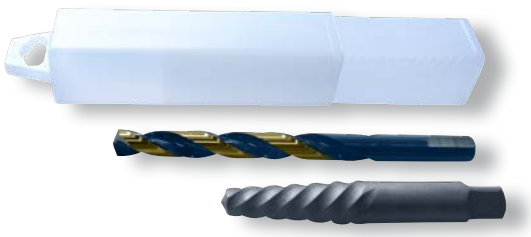
Specialty
Drill & Screw Extractors

P K H

Black Gold

NEW

Note
Drill style: 1878 Black & Gold



jobber drill	screw extractor	no. of pcs.	order number 1864
5/64	#1	2	C22311
7/64	#2	2	C22312
5/32	#3	2	C22313
1/4", E	#4	2	C22314
17/64"	#5	2	C22315
13/32"	#6	2	C22316

Drill Sets
All Styles

SET

Cost Saving Drill Sets

See product specific page for additional information

size range	no. of pcs.	drill description	case type	style	order number
Jobber Length - Drills & Tap Set					
36 / 6-32	2	Bright, Drill: #36 Tap: 6-32 spiral point	plastic tube	1860	C22305
29 / 8-32	2	Bright, Drill: #29 Tap: 8-32 spiral point	plastic tube	1860	C22304
25 / 10-24	2	Bright, Drill: #25 Tap: 10-24 spiral point	plastic tube	1860	C22307
21 / 10-32	2	Bright, Drill: #21 Tap: 10-32 spiral point	plastic tube	1860	C22306
7 / 1/4-20	2	Bright, Drill: #7 Tap: 1/4-20 spiral point	plastic tube	1860	C22308
F / 5/16-18	2	Bright, Drill: F Tap: 5/16-18 spiral point	plastic tube	1860	C22300
5/16" / 3/8-16	2	Bright, Drill: 5/16" Tap: 3/8-16 spiral point	plastic tube	1860	C22303
U / 7/16-14	2	Bright, Drill: U Tap: 7/16-14 spiral point	plastic tube	1860	C22302
27/64" / 1/2-13	2	Bright, Drill: 27/64" Tap: 1/2-13 spiral point	plastic tube	1860	C22301
36, 29, 25, 21, 7, F, 5/16, U, 27/64, Taps: 6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	18	Bright, drill & hand tap set	metal	1898	C21190
		Black & gold HD drill, Bright hand tap set	metal	1878	C21191
		Black & gold split pt. HD drill, Black oxide tap	metal	1878	C21192
Jobber Length - Drills Set					
1/16" – 3/8" x 1/32"	11	Bright, general purpose, 118° point	metal	1898	C21100
		Black, general purpose, 118° point	metal	1899	C21101
1/16" – 1/4" x 1/64"	13	Bright, general purpose, 118° point	metal	1600	C69034
		Bright, general purpose, 118° point	metal	1898	C21104
		Black, general purpose, 118° point	metal	1899	C21105
		Heavy duty, 135° split point	metal	1801	C21157
		Black & gold, heavy duty 135° split point	metal	1604	C69030
		Black & gold, heavy duty 135° split point	metal	1878	C18123
		Heavy duty parabolic, 135° split point	metal	1872	C18619
		TiN heavy duty parabolic, 135° split point	metal	1872TN	C18700
		Cobalt heavy duty, 135° split point	metal	1603	C69377
		Cobalt heavy duty, 135° split point	metal	1802	C21107
		Black & gold heavy duty, flats on shank	metal	1607	C68343
1/16" – 1/2" x 1/32"	15	Bright, general purpose, 118° point	metal	1898	C21108
		Black, general purpose, 118° point	plastic	1600	C69035
		Black, general purpose, 118° point	metal	1899	C21109
		Black, general purpose, 3/8" shank, 118° pt	metal	1900	C21156
		TiN general purpose, 118° point	metal	1898T	C19210
		Heavy duty, 135° split point	metal	1801	C21110
		Black & gold, heavy duty	metal	1878	C18124
		Black & gold, heavy duty, 135° split point	plastic	1604	C69031
		Heavy duty parabolic, 135° split point	metal	1872	C18620
		TiN heavy duty parabolic, 135° split point	metal	1872TN	C18701
		Heavy duty parabolic 3/8" shank	metal	1872/1873	C18719
		Cobalt heavy duty, 135° split point	metal	1603	C69378
		Cobalt heavy duty, 135° split point	metal	1802	C21112
		Black & gold heavy duty, flats on shank	plastic	1607	C68461
1/16" – 3/8" x 1/64"	21	Bright, general purpose, 118° point	metal	1898	C21113
		Black, general purpose, 118° point	metal	1600	C69036
		Black, general purpose, 118° point	metal	1899	C21114
		Heavy duty, 135° split point	metal	1801	C21115
		Heavy duty parabolic, 135° split point	metal	1872	C18621
		TiN heavy duty parabolic, 135° split point	metal	1872TN	C18702
1/16" – 1/2" x 1/64"	29	Bright, general purpose, 118° point	metal	1898	C21117
		Black, general purpose, 118° point	plastic	1600	C69037
		Black, general purpose, 118° point	metal	1899	C21118
		Black, general purpose, 3/8" shank, 118°	metal	1899/1900	C21159
		TiN, general purpose, 118° point	metal	1898T	C19211
		Black & Gold, heavy duty	metal	1878	C18125
		Black & gold, heavy duty	Bit Barrel™	1878	C18128



2 Piece Set
Bright, Drill & Tap
#C22304



13 Piece Set
Bright
#C21104



15 Piece Set
Black & Gold
#C18124

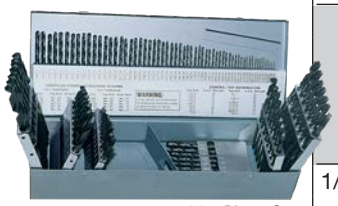


29 Piece Set
Bright
#C21117

continued on next page

See product specific page for additional information


60 Piece Set Cobalt Heavy Duty #C21125


115-Piece Set Black Oxide #C21127


25-Piece Set Black Oxide #C69038


29-Piece Set Black & Gold #C21165


60-Piece Set Black Oxide #C21947

size range	no. of pcs.	drill description	case type	style	order number
Jobber Length - Drills Set *(Continued)*					
1mm to 6mm	11	Metric Black & Gold, flatted shank		1878	C74058
1mm to 13mm	25	Metric Black & Gold, flatted shank		1878	C74059
1/16"-1/2" x 1/64"	29	Black & Gold, Heavy Duty, 3/8" shank	metal	1878/1879	C18122
		Black & gold heavy duty, 135° split point	plastic	1604	C69032
		Black & gold HD, 3/8" shank, 135° split pt	plastic	1605	C69033
		Black & gold HD, flats on shank, 135° split pt	plastic	1607	C69368
		Heavy Duty, 135° split	metal	1801	C21119
		Heavy duty parabolic, 135° split point	metal	1872	C18622
		TiN heavy duty parabolic, 135° split point	metal	1872TN	C18703
		Heavy duty parabolic 3/8" shank	metal	1872/1873	C18718
		Cobalt heavy duty, 135° split point	plastic	1603	C69379
		Cobalt heavy duty, 135° split	metal	1802	C21121
		Cobalt hex shank, 135° split point	metal	1804	C10629
A - Z	26	Black, general purpose, 118° point	metal	1899	C21158
#1 – #60	60	Bright, general purpose, 118° point	metal	1898	C21122
		Black, general purpose, 118° point	metal	1899	C21123
		Heavy duty, 135° split point	metal	1801	C21124
		Cobalt heavy duty, 135° split point	metal	1603	C69380
		Cobalt heavy duty, 135° split point	metal	1802	C21125
1/16"–1/2" x 1/64", #1– #60, A – Z	115	Bright, general purpose, 118° point	metal	1898	C21126
		Black, general purpose, 118° point	metal	1899	C21127
		Heavy duty, 135° split point	metal	1801	C21128
		Cobalt, 135° split point	metal	1802	C21129
1mm–6mm x 0.5mm	11	Black, 118° point	metal	1899	C21130
		Heavy duty parabolic, 135° split point	metal	1872	C18626
		TiN heavy duty parabolic, 135° split point	metal	1872TN	C18704
1mm-10mm x 0.5mm	19	TiN, general purpose, 118° point	metal	1898T	C24380
1mm–13mm x 0.5mm	25	Black, general purpose, 118° point	plastic	1600	C69038
		Bright, general purpose, 118° point	metal	1898	C18127
		Black, general purpose, 118° point	metal	1899	C21131
		TiN, general purpose, 118° point	metal	1898T	C24381
		Heavy duty parabolic, 135° split point	metal	1872	C18628
		TiN heavy duty parabolic, 135° split point	metal	1872TN	C18706
Mechanics Length					
1/16" - 1/4" x 1/64"	13	Black & gold, gen purpose, 135° sp point	metal	1620	C69029
		Black & gold, heavy duty, 135° split point	metal	1875R	C18126
1/16" - 3/8" x 1/64"	21	Black & gold, heavy duty, 135° split point	metal	1875R	C21161
1/16" - 1/2" x 1/64"	29	Black & gold, gen purpose, 135° sp point	metal	1620	C69041
		Black & gold, gen purpose, 135° sp point	Bit Barrel™	1620	C69384
		Black & gold, heavy duty, 135° split point	metal	1875R	C21162
		Black & gold, heavy duty	Bit Barrel™	1875R	C21165
		Black & gold, 3/8" shank, 135° split point	metal	1875/1876	C21163
1/16" - 1/2" x 1/32"	15	Black & gold, heavy duty, 135° split point	metal	1875R	C21160
1/16" - 1/4" x 1/16"	4	Black & gold, heavy duty, 135° split point	plastic tube	1875R	C22310
1/16" - 3/8" x 1/16"	6	Black & gold, heavy duty, 135° split point	plastic tube	1875R	C22309
Screw Machine Length					
1/16" – 1/2" x 1/64"	29	Black heavy duty, 135° split point	metal	1896	C21133
#1 – #60	60	Black heavy duty, 135° split point	metal	1896	C21947

continued on next page

size range	no. of pcs.	drill description	case type	style	order number
Reduced Shank					
9/16" – 1" x 1/16"	8	1/2" reduced round shank, black	metal	1680	C69039
		1/2" reduced shank with flats, black	metal	1681	C69040
Silver & Deming					
9/16" – 1" x 1/16"	8	1/2" reduced round shank, black	metal	1813	C21135
		1/2" reduced shank with flats, black	metal	1892	C22761
		1/2" reduced shank with flats, black & gold	metal	1877	C21164
	33	1/2" reduced round shank, black	metal	1813	C21134
Step Drills					
3/16 – 3/4"	3	Bright, 118° split point	metal	1874	C20325
		TiN, 118° split point	metal	1874TN	C20326
Masonry					
1/8, 5/32, 3/16, 1/4, 5/16"	5	Carbide Tipped	plastic	1818	C20929
3/16, 1/4, 5/16, 3/8, 1/2" x 6"	5	Carbide Tipped - SDS® plus 2 Cutting Premium	plastic	1821	C21031
1/8, 1/4, 3/8, 1/2"	4	Glass & Tile	plastic	1822	C21148
1/8, 5/32, 3/16, 1/4, 5/16"	5	Multi-purpose	plastic	1837	C22208
3/16, 1/4, 5/16, 3/8, 1/2" x 6"	5	Drill Rebar - SDS plus 3 Cutting Premium	plastic	1833	C22113
1/4", 5/16", 3/8", 1/2"	4	Carbide Tipped		1889	C23290
1/8", 5/32", 3/16", 1/4", 5/16"	5	Multi-purpose		1838	C22218
Screw Extractor Set in Fold-up Pouch					
#1 - #5	5	Screw extractors	fold-up	1829	C21149
Screw Extractor & Drill Set					
Extractor #1	2	5/64" drill - black and gold	plastic tube	1864	C22311
Extractor #2		7/64" drill - black and gold	plastic tube	1864	C22312
Extractor #3		5/32" drill - black and gold	plastic tube	1864	C22313
Extractor #4		1/4"(E) drill - black and gold	plastic tube	1864	C22314
Extractor #5		17/64" drill - black and gold	plastic tube	1864	C22315
Extractor #6		13/32" drill - black and gold	plastic tube	1864	C22316
Drill Dispensers					
1/16" - 1/2"		Dispenser Only	metal	1867	C23992
Letter A - Z		Dispenser Only	metal	1867	C23993
#1 - #60		Dispenser Only	metal	1867	C23994
Tap, Die and Drill - *For additional sets with taps and drills - see Jobber Drills - Drill & Tap Set*					
451	5 sizes	M6 x 1.0, M7 x 1.0, M8 x 1.25, M10 x 1.5, M12 x 1.75, 5.0mm, 6.0mm, 6.7mm, 8.5mm, 10.2mm	metal		C00451



33 piece Set Silver & Deming #C21134



5 piece Set Masonry, Carbide Tipped #C20929



Drill Dispenser #C23992



5-Size Set Tap, Die and Drill #C00451

Diameter Tolerances

Diameter Range	Plus (+)	Minus (–)
through 1/8	.0000	.0005
over 1/8 through 1/4	.0000	.0007
over 1/4 through 1/2	.0000	.0010
over 1/2 through 1	.0000	.0012
over 1 through 2	.0000	.0015
over 2 through 3-1/2	.0000	.0020

Lip Height Tolerances

Diameter Range	Total Indicator Variation
1/16 through 1/8	.0020
over 1/8 through 1/4	.0030
over 1/4 through 1/2	.0040
over 1/2 through 1	.0050
over 1 through 3-1/2	.0060

Point Angle Tolerances

Diameter Range	Included Angle	Tolerance
1/16 through 1/2	118° / 135°	± 5°
over 1/2 through 1-1/2	118°	± 3°
over 1-1/2 through 3-1/2	118°	± 2°

Overall Length and Flute Length Tolerances

Diameter Range	Plus (+)	Minus (–)
#80 through 1/8	.1250	.0625
over 1/8 through 1/2	.1250	.1250
over 1/2 through 1	.2500	.1250
over 1 through 2	.2500	.2500
over 2 through 3-1/2	.3750	.3750

Tap Drill Sizes

Machine Screw and Fractional Sizes

nominal tap size	drill size	decimal equivalent	nominal tap size	drill size	decimal equivalent
0-80	3/64	.0469	5/16-18	F	.2570
1-64	53	.0595	5/16-24	I	.2720
1-72	53	.0595	3/8-16	5/16	.3125
2-56	50	.0700	3/8-24	Q	.3320
2-64	50	.0700	7/16-14	U	.3680
3-48	47	.0785	7/16-20	25/64	.3906
3-56	46	.081 0	1/2-13	27/64	.4219
4-40	43	.0890	1/2-20	29/64	.4531
4-48	42	.0935	9/16-12	31/64	.4844
5-40	38	.1015	9/16-18	33/64	.5156
5-44	37	.1040	5/8-11	17/32	.5312
6-32	36	.1065	5/8-18	37/64	.5781
6-40	33	.1130	3/4-10	21/32	.6562
8-32	29	.1360	3/4-16	11/16	.6875
8-36	29	.1360	7/8-9	49/64	.7656
10-24	26	.1470	7/8-14	13/16	.8125
10-32	21	.1590	1-8	7/8	.8750
12-24	16	.1770	1-12	59/64	.9219
12-28	15	.1800			
1/4-20	7	.2010			
1/4-28	3	.2130			

Metric Sizes

nominal tap size	drill size	decimal equivalent	nominal tap size	drill size	decimal equivalent
M1.6 x 0.35	1.25	.0492	M18 x 2.5	15.5	.6102
M1.8 x 0.35	1.45	.0571	M18 x 1.5	16.5	.6496
M2 x 0.4	1.6	.0630	M20 x 2.5	17.5	.6890
M2.2 x 0.45	1.75	.0689	M20 x 1.5	18.5	.7283
M2.5 x 0.45	2.05	.0807	M22 x 2.5	19.5	.7677
M3 x 0.5	2.5	.0984	M22 x 1.5	20.5	.8071
M3.5 x 0.6	2.9	.1142	M24 x 3.0	21.0	.8268
M4 x 0.7	3.3	.1299	M24 x 2.0	22.0	.8661
M4.5 x 0.75	3.7	.1457	M27 x 3.0	24.0	.9449
M5 x 0.8	4.2	.1654	M27 x 2.0	25.0	.9843
M6 x 1.0	5.0	.1969	M30 x 3.5	26.5	1.0433
M7 x 1.0	6.0	.2362	M30 x 2.0	28.0	1.1024
M8 x 1.25	6.7	.2638	M33 x 3.5	29.5	1.1614
M8 x 1.0	7.0	.2756	M33 x 2.0	31.0	1.2205
M10 x 1.5	8.5	.3346	M36 x 4.0	32.0	1.2598
M10 x 1.25	8.7	.3425	M36 x 3.0	33.0	1.2992
M12 x 1.75	10.2	.4016			
M12 x 1.25	10.8	.4252			
M14 x 2.0	12.0	.4724			
M16 x 2.0	14.0	.5512			
M16 x 1.5	14.5	.5709			

Pipe Sizes

nominal tap size	NPT, NPTF w/o reamer	NPT, NPTF w/reamer	NPSM	NPSC	NPSF
1/16-27	C (.242)	A (.234)	—	1/4	D (.246)
1/8-27	Q (.332)	21/64	T (.358)	11/32	R (.339)
1/4-18	7/16	27/64	15/32	7/16	7/16
3/8-18	9/16	9/16	(.603 special)	37/64	37/64
1/2-14	45/64	11/16	19mm	23/32	45/64
3/4-14	29/32	57/64	61/64	59/64	59/64
1-11½	1-9/64	1-1/8	1-13/64	1-5/32	1-5/32
1¼-11½	1-31/64	1-15/32	1-35/64	1-1/2	—
1½-11½	1-23/32	1-45/64	1-25/32	1-3/4	—
2-11½	2-3/16	2-11/64	2-1/4	2-7/32	—

Drill Feeds

Diameter Range (in)	Normal Feeds (IPR)	Heavy Feeds (IPR)
1/16 thru 1/8	.001-.002	.002-.004
over 1/8 thru 1/4	.002-.004	.004-.008
over 1/4 thru 1/2	.004-.008	.008-.016
over 1/2 thru 1	.008-.016	.016-.024
over 1	.016-.024	.024-.032

Recommended Drill Speeds and Coolants

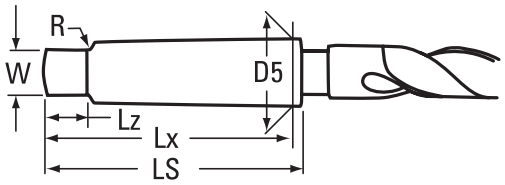
Ferrous Materials

		Brinell	Surface Feet per Minute	Coolant
Low Carbon Steel	85-125	80-95	Soluble Oil	
Medium Carbon Steel		125-175	70-85	Soluble Oil
High Carbon Steel	175-225	45-65	Soluble Oil	
Steels Alloyed		Under 200	60-90	Soluble Oil
		200-300	40-70	Soluble Oil
		Over 300	20-30	Soluble Oil
Steel Drop Forgings		330-370	30-40	Cutting Oil
Heat Treated		370-420	20-30	Cutting Oil
		Over 420	10-20	Cutting Oil
Grey Cast Iron	Soft	125	140-150	Dry
	Medium	120-200	50-80	Soluble Oil
	Hard	Up to 350	25-40	Soluble Oil
Titanium Alloys	Ti-75A	300-440	50-60	Cutting Oil
	Ti-150A, RS-120	300-440	40-50	Cutting Oil
	Ti-140A, RC 130B	300-440	30-40	Cutting Oil
	Ti-6AL -4V	300-440	20-30	Cutting Oil
Stainless Steel	300 Series	120-200	20-40	Cutting Oil
	400 Series	200-300	40-70	Cutting Oil
	Martensitic 416, 420, F416 Plus K, 400F,4165SE, 440F	135-185	40-50	Cutting Oil
	Precipitation Hardening	325-375	30	Cutting Oil
	Cast Stainless Steel	400-450	20	Cutting Oil
Heat Resisting Steels		175-225	10-25	Cutting Oil
Nimonic Alloys		200-300	10-20	Cutting Oil
Manganese	12-14% min	125-220	10-12	Cutting Oil
Spring Steels		402	15-30	Soluble Oil

Non-Ferrous Materials

		Brinell	Surface Feet per Minute	Coolant
Aluminum	Pure	140-350	130-200	Soluble Oil
	Aluminum Alloys	140-330	150-300	Soluble Oil
	Leaded	40-100	200-325	Soluble Oil
	Silicon Alloy Die Cast	40-100	25-50	Soluble Oil
Brass		190-210	200-250	Cutting or Soluble Oil
Bronze		150-200	200-250	Soluble Oil
Copper, Nickel & Copper Tin Alloy		65-100	140-200	Cutting or Soluble Oil
Copper Aluminum Alloys		30-100	120-200	Cutting or Soluble Oil
Magnesium Alloys	Wrought	50-90	140-330	Cutting or Soluble Oil
	Cast	50-90	140-365	Cutting or Soluble Oil
Nickel Alloys-		80-170	70	Cutting or Soluble Oil
Wrought and Cast	Monel	115-240	55	Cutting or Soluble Oil
Berylilium Nickel		200-250	12	Soluble Oil
Zinc Alloy		112-126	200-250	Soluble Oil
Armor Plate		200-250	40	Soluble Oil
		250-300	35	Soluble Oil
		300-350	30	Cutting Oil

Morse Taper Shank Specifications



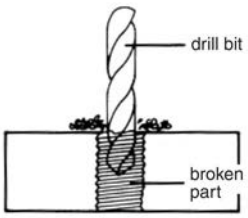
morse taper shank no.	taper per foot	taper per inch	**D5** max shank diameter	**LS** length of shank	**Lx** shank lngth to gage line	**Lz** length of tang	**W** thickness of tang	**R** radius
1	.5985	.0498	.475	2.56	2.44	.37	.20	.19
2	.5994	.0499	.700	3.12	2.94	.44	.25	.25
3	.6023	.0501	.938	3.87	3.69	.56	.31	.28
4	.6232	.0519	1.231	4.87	4.62	.62	.47	.31
5	.6315	.0526	1.749	6.12	5.87	.75	.62	.37
6	.6256	.0521	2.494	8.56	8.25	1.12	.75	.50

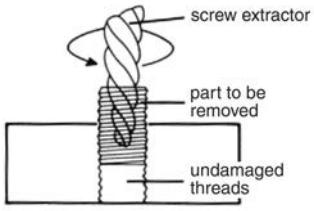
How - To

Screw Extractor
How to Use

Screw extractors are used to remove broken screws, bolts, or other threaded parts. To remove a broken screw, follow this procedure.

- Drill a hole into the broken screw using the recommended drill size from the table at right.
- Insert the proper screw extractor into the hole and start a counter-clockwise (left-hand) rotation using a tap wrench on the square on the shank.
- The extractor will grip the wall of the hole in the screw and back the screw out without damaging the threads.
- A penetrating oil can be helpful in removing rusty or corroded parts.





extractor size	use on this size screw or bolt	pipe drill size	use
1	#8 to 1/4	—	5/64
2	#12 to 5/16	—	7/64
3	5/16 to 7/16	—	5/32
4	7/16 to 9/16	1/8	1/4
5	9/16 to 3/4	1/8	17/64
6	3/4 to 1	3/8	13/32
7	1 to 1-3/8	—	17/32
8	1-3/8 to 1-3/4	3/4	13/16



Set Sections

All Available Sets 85-86



Technical Information

Drill & Tap Recommendations. 61

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Straight Flute			
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1691 - Plug Chamfer, HSS		66	66
1692 - Bottoming Chamfer, HSS		66	66
1696 - Taper Chamfer, Carbon		66	66
1697 - Plug Chamfer, Carbon		66	66
1698 - Bottoming Chamfer, Carbon		66	66
0401 - Taper Chamfer		67-68	67-68
0402 - Plug Chamfer		67-68	67-68
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1694 - Plug Chamfer		69-70	70
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Style/Surface Treatment	Image	Page	Sets Page
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245 - Long Shank T-Handle		84	
Sets			
Complete listing of available sets			85-86

International products

Material

- M — Steel
- S — Super Alloys
- P — Alloy/Steel
- K — Cast Iron
- N — Aluminum
- H — Hardened Steel

Refer to the Icon Glossary in the Drilling section for more detailed information

Surface Treatment

- Bright
- Black Oxide
- TiN

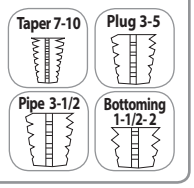


Additional treatments available upon request.

Base Material

- HSS
- Carbon Steel

Chamfers



Standard

- ASME B94.9

Thread Form



HSS | Carbon Steel | Bright | 302 | Taper 7-10 | Plug 3-5 | Bottoming 1-1/2-2

Note

General use:

- *Taper chamfer: hand operations*
- *Plug chamfer: general purpose applications*
- *Bottoming chamfer: thread close to an obstruction or blind hole.*

Styles: #1693 and 1699 Set - 1 each of taper, plug, bottoming tap.

Style 169_M (Metric) now combined with corresponding style below.



Taper Chamfer



Plug Chamfer



Bottoming Chamfer



Set: 1 each

tap size TPI	series	tap size pitch	dec. equiv.	no. of flutes	overall length	thread length	order number 1690 taper HSS	1691 plug HSS	1692 bottoming HSS	1693 set 1 ea. HSS	1696 taper Carbon	1697 plug Carbon	1698 bottoming Carbon	1699 set 1 ea. Carbon
4-40	UNC		.1120	3	1-7/8	9/16	C69079	C69080	C69081	C69082	—	—	—	—
		M3 x 0.5	.1181	3	49	16	C69267	C69268	C69269	C69270	C69513	C69514	C69515	C69516
5-40	UNC		.1250	3	1-15/16	5/8	C69083	C69084	C69085	C69086	—	—	—	—
6-32	UNC		.1380	3	2	11/16	C69087	C69088	C69089	C69090	—	—	—	—
		M4 x 0.7	.1575	4	54	19	C69271	C69272	C69273	C69274	C69517	C69518	C69519	C69520
8-32	UNC		.1640	4	2-1/8	3/4	C69091	C69092	C69093	C69094	—	—	—	—
10-24	UNC		.1900	4	2-3/8	7/8	C69095	C69096	C69097	C69098	—	—	—	—
10-32	UNF		.1900	4	2-3/8	7/8	C69099	C69100	C69101	C69102	—	—	—	—
		M5 x 0.8	.1969	4	60	22	C69275	C69276	C69277	C69278	C69521	C69522	C69523	C69524
12-24	UNC		.2160	4	2-3/8	15/16	C69103	C69104	C69105	C69106	—	—	—	—
		M6 x 1	.2362	4	63.5	25.4	C69279	C69280	C69281	C69282	C69526	C69527	C69528	C69529
1/4-20	UNC		.2500	4	2-1/2	1	C69107	C69108	C69109	C69110	C69409	C69410	C69411	C69412
1/4-28	UNF		.2500	4	2-1/2	1	C69111	C69112	C69113	C69114	C69413	C69414	C69415	C69416
		M7 x 1	.2756	4	69	29	C69283	C69284	C69285	C69286	—	—	—	—
5/16-18	UNC		.3125	4	2-23/32	1-1/8	C69115	C69116	C69117	C69118	C69417	C69418	C69419	C69420
5/16-24	UNF		.3125	4	2-23/32	1-1/8	C69119	C69120	C69121	C69122	C69421	C69422	C69423	C69424
		M8 x 1.25	.3150	4	69	29	C69287	C69288	C69289	C69290	C69531	C69532	C69533	C69534
3/8-16	UNC		.3750	4	2-15/16	1-1/4	C69123	C69124	C69125	C69126	C69425	C69426	C69427	C69428
3/8-24	UNF		.3750	4	2-15/16	1-1/4	C69127	C69128	C69129	C69130	C69429	C69430	C69431	C69432
		M10 x 1.5	.3937	4	75	31.75	C69291	C69292	C69293	C69294	C69535	C69536	C69537	C69538
7/16-14	UNC		.4375	4	3-5/32	1-7/16	C69131	C69132	C69133	C69134	C69433	C69434	C69435	C69436
7/16-20	UNF		.4375	4	3-5/32	1-7/16	C69135	C69136	C69137	C69138	C69437	C69438	C69439	C69440
		M12 x 1.75	.4724	4	86	42	C69295	C69296	C69297	C69298	C69539	C69540	C69541	C69542
1/2-13	UNC		.5000	4	3-3/8	1-21/32	C69139	C69140	C69141	C69142	C69441	C69442	C69443	C69444
1/2-20	UNF		.5000	4	3-3/8	1-21/32	C69143	C69144	C69145	C69146	C69445	C69446	C69447	C69448
		M14 x 2	.5512	4	91	42	C69299	C69300	C69301	C69302	C69543	C69544	C69545	C69546
9/16-12	UNC		.5625	4	3-19/32	1-21/32	C69147	C69148	C69149	C69150	C69449	C69450	C69451	C69452
9/16-18	UNF		.5625	4	3-19/32	1-21/32	C69151	C69152	C69153	C69154	C69453	C69454	C69455	C69456
5/8-11	UNC		.6250	4	3-13/16	1-13/16	C69155	C69156	C69157	C69158	C69457	C69458	C69459	C69460
5/8-18	UNF		.6250	4	3-13/16	1-13/16	C69159	C69160	C69161	C69162	C69461	C69462	C69463	C69464
		M16 x 2	.6299	4	96	46	C69303	C69304	C69305	C69306	C69547	C69548	C69549	C69550
		M18 x 2.5	.7087	4	102	46	C69307	C69308	C69309	C69310	—	—	—	—
3/4-10	UNC		.7500	4	4-1/4	2	C69163	C69164	C69165	C69166	C69465	C69466	C69467	C69468
3/4-16	UNF		.7500	4	4-1/4	2	C69167	C69168	C69169	C69170	C69469	C69470	C69471	C69472
		M20 x 2.5	.7874	4	113.5	50.8	C69311	C69312	C69313	C69314	C69551	C69552	C69553	C69554
7/8-9	UNC		.8750	4	4-11/16	2-7/32	C69171	C69172	C69173	C69174	—	—	—	—
7/8-14	UNF		.8750	4	4-11/16	2-7/32	C69175	C69176	C69177	C69178	C69473	C69474	C69475	C69476
1-8	UNC		1.0000	4	5-1/8	2-1/2	C69179	C69180	C69181	C69182	C69477	C69478	C69479	C69480
1-12	UNF		1.0000	4	5-1/8	2-1/2	C69183	C69184	C69185	C69186	C69481	C69482	C69483	C69484
1-14	UNS		1.0000	4	5-1/8	2-1/2	C69187	C69188	C69189	C69190	—	—	—	—

Note

General use:
- *Taper chamfer: hand operations*
- *Plug chamfer: general purpose applications*
- *Bottoming chamfer: to thread close to an obstruction or blind hole.*

Styles: #0404 Set -1 each of taper, plug, bottoming tap.

Inch products provided with H-limits, Metric products provided with D-limits.

Style 040_M (Metric) now combined with corresponding style below.

HSS | Bright | 302 | Taper 7-10 | Plug 3-5 | Bottoming 1-1/2-2



Taper Chamfer style 0401



Plug Chamfer style 0402



Bottoming Chamfer style 0403



tap size TPI	series	tap size pitch	decimal equiv.	no. of flutes	limit	overall length	thread length	order number 0401 Taper	0402 Plug	0403 Bottoming	0404 Set of 1 each
0-40	UNF		.0600	2	H1	1-5/8	5/16	C00761	C00766	C00770	—
1-64	UNC		.0730	2	H1	1-11/16	3/8	C00762	C00767	C00771	—
1-72	UNF		.0730	2	H1	1-11/16	3/8	C00763	C00700	C00772	—
2-56	UNC		.0860	3	H2	1-3/4	7/16	C00764	C00768	C00701	C00323
2-64	UNF		.0860	3	H2	1-3/4	7/16	C00765	C00769	C00773	—
3-48	UNC		.0990	3	H2	1-13/16	1/2	C00702	C00703	C00704	C00325
3-56	UNF		.0990	3	H2	1-13/16	1/2	C00705	C00706	C00707	C00326
4-40	UNC		.1120	3	H2	1-7/8	9/16	C62001	C62002	C62003	C62004
4-48	UNF		.1120	3	H2	1-7/8	9/16	C00708	C00709	C00710	C00327
		M3 x 0.5	.1181	3	D3	49	16	C63201	C63202	C63203	C63204
5-40	UNC		.1250	2	H2	1-15/16	5/8	—	C00711	C00712	—
5-40	UNC		.1250	3	H2	1-15/16	5/8	C62005	C62006	C62007	C62008
5-44	UNF		.1380	3	H2	1-15/16	5/8	C00713	C00714	C00715	C00328
6-32	UNC		.1380	3	H2	2	11/16	C00716	C00717	C00718	C00329
6-32	UNC		.1380	3	H3	2	11/16	C62009	C62010	C62011	C62012
6-40	UNF		.1380	3	H2	2	11/16	C00719	C00720	C00721	C00330
		M4 x 0.7	.1575	4	D4	54	19	C63209	C63210	C63211	C63212
8-32	UNC		.1640	4	H2	2-1/8	3/4	C00722	C00723	C00724	C00331
8-32	UNC		.1640	4	H3	2-1/8	3/4	C62013	C62014	C62015	C62016
8-36	UNF		.1640	4	H2	2-1/8	3/4	C00725	C00726	C00727	C00332
10-24	UNC		.1900	4	H2	2-3/8	7/8	C00728	C00729	C00730	C00333
10-24	UNC		.1900	4	H3	2-3/8	7/8	C62017	C62018	C62019	C62020
10-32	UNF		.1900	4	H2	2-3/8	7/8	C00731	C00732	C00733	C00334
10-32	UNF		.1900	4	H3	2-3/8	7/8	C62021	C62022	C62023	C62024
		M5 x 0.8	.1969	4	D4	60	22	C63217	C63218	C63219	C63220
12-24	UNC		.2160	4	H3	2-3/8	15/16	C62025	C62026	C62027	C62028
12-28	UNF		.2160	4	H3	2-3/8	15/16	C00734	C00735	C00736	C00335
		M6 x 1	.2362	4	D5	63.5	25.4	C63221	C63222	C63223	C63224
1/4-20	UNC		.2500	4	H3	2-1/2	1	C62029	C62030	C62031	C62032
1/4-20	UNC		.2500	4	H5	2-1/2	1	—	C00737	C00738	—
1/4-17	UNF		.2500	4	H2	2-1/2	1	—	C00739	C00740	—
1/4-28	UNF		.2500	4	H3	2-1/2	1	C62033	C62034	C62035	C62036
		M7 x 1	.2756	4	D5	69	29	C63225	C63226	C63227	C63228
5/16-18	UNC		.3125	4	H3	2-23/32	1-1/8	C62037	C62038	C62039	C62040
5/16-18	UNC		.3125	4	H5	2-23/32	1-1/8	—	C00741	C00742	—
5/16-24	UNF		.3125	4	H3	2-23/32	1-1/8	C62041	C62042	C62043	C62044
		M8 x 1.25	.3150	4	D5	69	29	C63229	C63230	C63231	C63232
3/8-16	UNC		.3750	4	H3	2-15/16	1-1/4	C62045	C62046	C62047	C62048
3/8-16	UNC		.3750	4	H5	2-15/16	1-1/4	—	C00743	C00744	—
3/8-24	UNF		.3750	4	H3	2-15/16	1-1/4	C62049	C62050	C62051	C62052
		M10 x 1.5	.3937	4	D6	75	31.75	C63233	C63234	C63235	C63236
7/16-14	UNC		.4375	4	H3	3-5/32	1-7/16	C62053	C62054	C62055	C62056

continued on next page

CLE-LINE

Hand Taps

Styles: 0401, 0402, 0403, 0404 (continued)

tap size TPI	series	tap size pitch	decimal equiv.	no. of flutes	limit	overall length	thread length	order number 0401 Taper	0402 Plug	0403 Bottoming	0404 Set of 1 each
7/16-14	UNC		.4375	4	H5	3-5/32	1-7/16	—	C00745	C00746	—
7/16-20	UNF		.4375	4	H3	3-5/32	1-7/16	C62057	C62058	C62059	C62060
7/16-20	UNF		.4375	4	H5	3-5/32	1-7/16	—	C00747	C00748	—
		M12 x 1.75	.4724	4	D6	86	42	C63237	C63238	C63239	C63240
1/2-13	UNC		.5000	4	H3	3-3/8	1-21/32	C62061	C62062	C62063	C62064
1/2-13	UNC		.5000	4	H5	3-3/8	1-21/32	—	C00749	C00750	—
1/2-20	UNF		.5000	4	H3	3-3/8	1-21/32	C62065	C62066	C62067	C62068
1/2-20	UNF		.5000	4	H5	3-3/8	1-21/32	—	C00751	—	—
		M14 x 2	.5512	4	D7	91	42	C63241	C63242	C63243	C63244
9/16-12	UNC		.5625	4	H3	3-19/32	1-21/32	C62069	C62070	C62071	C62072
9/16-18	UNF		.5625	4	H3	3-19/32	1-21/32	C62073	C62074	C62075	C62076
5/8-11	UNC		.6250	4	H3	3-13/16	1-13/16	C62077	C62078	C62079	C62080
5/8-11	UNC		.6250	4	H5	3-13/16	1-13/16	—	C00752	C00753	—
5/8-18	UNF		.6250	4	H3	3-13/16	1-13/16	C62081	C62082	C62083	C62084
		M16 x 2	.6299	4	D7	96	46	C63245	C63246	C63247	C63248
11/16-11	UNS		.6875	4	H3	4-1/32	1-13/16	C00754	C00756	C00757	C00336
11/16-16	UNS		.6875	4	H3	4-1/32	1-13/16	C00758	C00759	C00760	C00337
		M18 x 2.5	.7087	4	D7	102	46	C63249	C63250	C63251	C63252
3/4-10	UNC		.7500	4	H3	4-1/4	2	C62085	C62086	C62087	C62088
3/4-16	UNF		.7500	4	H3	4-1/4	2	C62089	C62090	C62091	C62092
		M20 x 2.5	.7874	4	D7	113.5	50.8	C63253	C63254	C63255	C63256
7/8-9	UNC		.8750	4	H4	4-11/16	2-7/32	C62093	C62094	C62095	C62096
7/8-14	UNF		.8750	4	H4	4-11/16	2-7/32	C62097	C62098	C62099	C62100
1-8	UNC		1.0000	4	H4	5-1/8	2-1/2	C62101	C62102	C62103	C62104
1-12	UNF		1.0000	4	H4	5-1/8	2-1/2	C62105	C62106	C62107	C62108
1-14	UNS		1.0000	4	H4	5-1/8	2-1/2	C62109	C62110	C62111	C62112

Hand Tap & Die Sets

Quick-Set Die

SET **Style: 0402**

Note

*All use Cap Style #**1383** and Guide style #**1384**, unless noted with an asterisks.*

Plastic Case



20 cutting sizes
#C00608

set no.	number of cutting sizes	Tap: 0402 threading sizes		collet 055 number	wrench number	die stock 380 number	order number
558	20	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 9/16-12, 5/8-11, 3/4-10, 7/8-9, 1-8	1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20, 9/16-18, 5/8-18, 3/4-16, 7/8-14, 1-14 NS	—	#5, #7	#1, #5	C00608
559	7	4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20		A1	T9, A1	A1	C00609
5510	5	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13		1	#5	#1	C00610
5511	10	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 9/16-12, 5/8-11, 3/4-10, 7/8-9, 1-8		5	#5,#7	5A	C00611
5512	10	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20	1	#5	#1	C00612
5513	20	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 9/16-12, 5/8-11, 3/4-10, 7/8-9, 1-8	1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20, 9/16-18, 5/8-18, 3/4-16, 7/8-14, 1-14	1,5	#5,#7	#1,#5B	*C00613

**No Cap included*

GREENFIELD INDUSTRIES

Styles: 1694, 0411

Spiral Point Tap

HSS | Bright | 302 | Plug 3-5

Note

General use:

- *Spiral point: pushes chips forward for through hole applications.*
- *Plug chamfer for general purpose applications.*

Style 1694 are maintenance taps.

Style 0411 provided with H-limits.

Style 1694M, 0411M (Metric) now combined with corresponding style below.



Plug Chamfer style 1694



Plug Chamfer style 0411

tap size TPI	series	tap size pitch	decimal equivalent	no. of flutes	overall length	thread length	order number 1694 Plug	order number 0411 Plug	0411 limit
0-80	UNF		.0600	2	1-11/16	3/8	—	C00775	H2
1-64	UNC		.0730	2	1-11/16	3/8	—	C00776	H2
1-72	UNF		.0730	2	1-11/16	3/8	—	C00777	H2
		M2 x 0.4	.0787	2	44	11	*C69205	C62172	D3
2-56	UNC		.0860	2	1-3/4	7/16	—	C00778	H2
2-64	UNF		.0860	2	1-3/4	7/16	—	C00779	H2
3-48	UNC		.0990	2	1-13/16	1/2	—	C00780	H2
3-56	UNF		.0990	2	1-13/16	1/2	—	C00781	H2
4-40	UNC		.1120	2	1-7/8	9/16	*C69191	C62151	H2
4-48	UNF		.1120	2	1-7/8	9/16	—	C00782	H2
		M3 x 0.5	.1181	2	49	16	*C69206	C62175	D3
5-40	UNC		.1250	2	1-15/16	5/8	*C69192	C62152	H2
6-32	UNC		.1380	2	2	11/16	—	C00783	H2
6-32	UNC		.1380	2	2	11/16	*C69193	C62153	H3
6-40	UNF		.1380	2	2	11/16	—	C00784	H2
		M4 x 0.7	.1575	2	54	19	*C69207	C62177	D4
8-32	UNC		.1640	2	2-1/8	3/4	—	C00785	H2
8-32	UNC		.1640	2	2-1/8	3/4	*C69194	C62154	H3
8-36	UNF		.1640	2	2-1/8	3/4	—	C00786	H2
10-24	UNC		.1900	2	2-3/8	7/8	—	C00787	H2
10-24	UNC		.1900	2	2-3/8	7/8	*C69195	C62155	H3
10-32	UNF		.1900	2	2-3/8	7/8	—	C00788	H2
10-32	UNF		.1900	2	2-3/8	7/8	*C69196	C62156	H3
		M5 x 0.8	.1969	2	60	22	*C69208	C62179	D4
12-24	UNC		.2160	2	2-3/8	15/16	*C69197	C62157	H3
12-28	UNF		.2160	2	2-3/8	15/16	—	C00789	H3
		M6 x 1	.2362	2	63.5	25.4	*C69209	C62180	D5
1/4-20	UNC		.2500	2	2-1/2	1	*C69198	C62158	H3
1/4-20	UNC		.2500	3	2-1/2	1	—	C00790	H3
1/4-20	UNC		.2500	3	2-1/2	1	—	C00791	H5
1/4-28	UNF		.2500	2	2-1/2	1	*C69199	C62159	H3
5/16-18	UNC		.3125	2	2-23/32	1-1/8	*C69200	C62160	H3
5/16-18	UNC		.3125	3	2-23/32	1-1/8	—	C00793	H3
5/16-18	UNC		.3125	3	2-23/32	1-1/8	—	C00794	H5
5/16-24	UNF		.3125	2	2-23/32	1-1/8	*C69201	C62161	H3
		M8 x 1.25	.3150	2	69	29	*C69210	C62183	D5
3/8-16	UNC		.3750	3	2-15/16	1-1/4	*C69202	C62162	H3
3/8-16	UNC		.3750	3	2-15/16	1-1/4	—	C00795	H5
3/8-24	UNF		.3750	3	2-15/16	1-1/4	*C69203	C62163	H3
		M10 x 1.5	.3937	3	75	31.75	*C69211	C62185	D6
7/16-14	UNC		.4375	3	3-5/32	1-7/16	—	C00796	H3
7/16-14	UNC		.4375	3	3-5/32	1-7/16	—	C00797	H5
7/16-20	UNF		.4375	3	3-5/32	1-7/16	—	C00798	H3
7/16-20	UNF		.4375	3	3-5/32	1-7/16	—	C00799	H5

**No H-limit*

continued on next page

CLE-LINE

Spiral Point Tap

Styles: 1694, 0411 (continued)

tap size TPI	series	tap size pitch	decimal equivalent	no. of flutes	overall length	thread length	order number 1694 Plug	order number 0411 Plug	0411 limit
		M12 x 1.75	.4724	3	86	42	*C69212	C62187	D6
1/2-13	UNC		.5000	3	3-3/8	1-21/32	*C69204	C62164	H3
1/2-13	UNC		.5000	3	3-3/8	1-21/32	—	C00800	H5
1/2-20	UNF		.5000	3	3-3/8	1-21/32	—	C00801	H3
5/8-11	UNC		.6250	3	3-13/16	1-13/16	—	C00802	H3
5/8-11	UNC		.6250	3	3-13/16	1-13/16	—	C00803	H5
5/8-18	UNF		.6250	3	3-13/16	1-13/16	—	C00804	H3
		M16 x 2	.6299	3	96	46	*C69213	C62191	D7
3/4-10	UNC		.7500	3	4-1/4	2	—	C00805	H3
3/4-10	UNC		.7500	3	4-1/4	2	—	C00806	H5
3/4-16	UNF		.7500	3	4-1/4	2	—	C00774	H3

*No H-limit

Spiral Point Tap & Die Set

SET — See description below

Plastic Case

Note

Uses Cap Style #1383 and Guide style #1384
Uses Cleveland® Brand Tap Style #1011 unless noted otherwise.

set no.	number of cutting sizes	Tap: 0411 threading sizes	collet 055 number	wrench number	die stock 380 number	order number
448	7	M2.5 x 0.45, M3 x 0.5, M3.5 x 0.6, M4 x 0.7, M4.5 x 0.75, M5 x 0.8, M6 x 1.0				C00448
449	5	M6 x 1.0, M7 x 1.0, M8 x 1.25, M10 x 1.5, M12 x 1.75				C00449
5514	7	M6 x 1, M8 x 1.25, M10 x 1.5, M12 x 1.75, *M14 x 2, M16 x 2, *M18 x 2.5	5	#6	#5	C00614

*Uses Cleveland® Brand Tap Style #1002

Spiral Point Tap, Die, & Drill Set

SET — See description below

Plastic Case

set no.	number of cutting sizes	Tap: 0411 threading sizes	Drill: 1899 drill sizes (mm)	collet 055 number	wrench number	die stock 710 number	order number
451	5	M6 x 1.0, M7 x 1.0, M8 x 1.25, M10 x 1.5, M12 x 1.75	5.0, 6.0, 6.7, 8.5, 10.2	—	—		C00451

Styles: 1686, 1700, 0462, 1688, 0464

Pipe Tap
Taper

Note
3-1/2 thread chamfer.

- *Style #0462: regular NPT thread design*
- *Style #0464: interrupted thread for better lubrication and chip clearance.*

HSS | Carbon Steel | Bright | 311 | NPT



Regular NPT Thread



Interrupted NPT Thread

tap size	tap TPI	tap series	decimal equiv.	shank diameter	overall length	thread length	order number regular threads flutes	1686 HSS	1700 carbon	0462 HSS	order number interrupted thread flutes	1688 HSS	0464 HSS
1/8	27	NPT	.1250	.3125	2-1/8	3/4	4	C69315	C69507	C64213	5	C69325	C64223
*1/8	27	NPT	.1250	.4375	2-1/8	3/4	4	C69316	—	C64214	5	C69326	C64224
1/4	18	NPT	.2500	.5626	2-7/16	1-1/16	4	C69317	C69508	C64215	5	C69327	C64225
3/8	18	NPT	.3750	.7000	2-9/16	1-1/16	4	C69318	C69509	C64216	5	C69328	C64226
1/2	14	NPT	.5000	.6875	3-1/8	1-3/8	4	C69319	C69510	C64217	5	C69329	C64227
3/4	14	NPT	.7500	.9063	3-1/4	1-3/8	5	C69320	C69511	C64218	5	C69330	C64228
1	11-1/2	NPT	1.0000	1.1250	3-3/4	1-3/8	5	C69321	C69512	C64219	5	C69331	C64229
1-1/4	11-1/2	NPT	1.2500	1.3125	4	1-3/4	5	C69322	—	C64220	5	C69332	C64230
1-1/2	11-1/2	NPT	1.5000	1.5000	4-1/4	1-3/4	7	C69323	—	C64221	–	–	–
2	11-1/2	NPT	2.0000	1.8750	4-1/2	1-3/4	7	C69324	—	C64222	–	–	–

**large shank*

Styles: 1687, 0463

Pipe Tap
Straight Pipe Taps

Note
3-1/2 thread chamfer.

NPS thread design
- suitable for NPSC or NPSM.

HSS | Bright | NPS



tap size	tap TPI	tap series	decimal equivalent	no. of flutes	shank diameter	overall length	thread length	order number 1687 Bright	0463 Bright
1/8	27	NPSC	.1250	4	.4375	2-1/8	3/4	C69333	C64231
1/4	18	NPSC	.2500	4	.5626	2-7/16	1-1/16	C69334	C64232
3/8	18	NPSC	.3750	4	.7000	2-9/16	1-1/16	C69335	C64233
1/2	14	NPSC	.5000	4	.6875	3-1/8	1-3/8	C69336	C64234
3/4	14	NPSC	.7500	5	.9063	3-1/4	1-3/8	C69337	C64235
1	11-1/2	NPSC	1.0000	5	1.1250	3-3/4	1-3/8	C69338	C64236

CLE-LINE

Other Tools
Combination Drill & Tap

Style: 0450

HSS | Bright

Note
Drill and tap in one operation without changing tools.
Two flutes run length of the tool.



tap size	tap TPI	thread series	decimal equivalent	no. of flutes	overall length	thread length	drill length	drill size	order number 0450 Bright
6	32	UNF	.1380	2	2	7/16	5/16	.1095	C64937
8	32	UNC	.1640	2	2-1/8	1/2	3/8	.1360	C64960
10	32	UNF	.1900	2	2-3/8	5/8	13/32	.1610	C64961
1/4	20	UNC	.2500	2	2-1/2	25/32	17/32	.2010	C64949
5/16	18	UNC	.3125	2	3	15/16	11/16	.2570	C64952
3/8	16	UNC	.3750	2	3-1/2	1-1/16	13/16	.3225	C64955

Die - Hexagon
Re-Threading

Styles: 0650, 492

HSS | Carbon Steel | Bright

Note
Used in repair work for dressing over bruised and rusty threads.
Can be used only in free machining materials.
Style **0650M** (Metric) now combined with style 0650.



die diameter TPI	series	die diameter pitch	decimal equivalent	length across flats	thickness	order number 0650 Carbon Steel	492 High-Speed Steel
		M5 x 0.8	.1969	19/32	1/4	C65580	—
		M6 x 1	.2362	19/32	1/4	C65581	—
1/4-20	UNC		.2500	19/32	1/4	C65601	C77600
1/4-28	UNF		.2500	19/32	1/4	C65602	C77602
5/16-18	UNC		.3125	11/16	5/16	C65603	C77604
5/16-24	UNF		.3125	11/16	5/16	C65605	C77606
		M8 x 1.25	.3150	11/16	5/16	C65582	—
3/8-16	UNC		.3750	25/32	3/8	C65606	C77608
3/8-24	UNF		.3750	25/32	3/8	C65607	C77610
		M10 x 1.5	.3937	7/8	7/16	C65583	—
7/16-14	UNC		.4375	7/8	7/16	C65608	C77612
7/16-20	UNF		.4375	7/8	7/16	C65609	C77614
		M12 x 1.75	.4724	1-1/16	1/2	C65584	—
1/2-13	UNC		.5000	1-1/16	1/2	C65610	C77616
1/2-20	UNF		.5000	1-1/16	1/2	C65611	C77618
		M14 x 2	.5512	1-1/16	1/2	C65585	—
9/16-12	UNC		.5625	1-1/16	1/2	C65612	C77620
9/16-18	UNF		.5625	1-1/16	1/2	C65613	C77622

Styles: 0650, 492 (continued)

Die - Hexagon
Re-Threading

die diameter TPI	series	die diameter pitch	decimal equivalent	length across flats	thickness	order number 0650 Carbon Steel	order number 492 High-Speed Steel
5/8-11	UNC		.6250	1-1/4	5/8	C65614	C77624
5/8-18	UNF		.6250	1-1/4	5/8	C65615	C77626
		M16 x 2	.6299	1-1/4	5/8	C65586	—
11/16-11	NS		.6875	1-7/16	3/4	C65616	—
11/16-16	NS		.6875	1-7/16	3/4	C65617	—
3/4-10	UNC		.7500	1-7/16	3/4	C65618	C77628
3/4-16	UNF		.7500	1-7/16	3/4	C65619	C77630
		M20 x 2.5	.7874	1-5/8	7/8	C65587	—
7/8-9	UNC		.8750	1-5/8	7/8	C65620	C77632
7/8-14	UNF		.8750	1-5/8	7/8	C65621	C77634
1-8	UNC		1.0000	1-13/16	1	C65622	C77636
1-12	UNF		1.0000	1-13/16	1	C65623	C77638
1-14	NS		1.0000	1-13/16	1	C65624	C77640
1-1/8	UNC		1.1250	2	1	C65625	C77642
1-1/8	UNF		1.1250	2	1	C65627	C77644
1-1/4	UNC		1.2500	2-3/16	1	C65628	C77646
1-1/4	UNF		1.2500	2-3/16	1	C65629	—
1-3/8	UNC		1.4100	2-3/8	1	C65630	C77648
1-3/8	UNF		1.4100	2-3/8	1	C65631	—
1-1/2	UNC		1.5000	2-9/16	1	C65632	C77650
1-1/2	UNF		1.5000	2-9/16	1	C65633	—

THREADING / DIES

Style: 0660

Die - Hexagon
Taper Pipe - Carbon Steel

Carbon Steel | Bright | NPT



die diameter TPI and series			decimal equivalent	length across flats	thickness	order number 0660 Carbon Steel
1/8	27	NPT	.1250	1-1/16	3/8	C65571
1/4	18	NPT	.2500	1-1/4	5/8	C65572
3/8	18	NPT	.3750	1-7/16	5/8	C65573
1/2	14	NPT	.5000	1-5/8	3/4	C65574
3/4	14	NPT	.7500	2	13/16	C65575
1	11-1/2	NPT	1.0000	2-3/8	1	C65576

Die - Hexagon Sets

Re-Threading Sets

SET

Styles: 0650

Plastic Case

Carbon Steel

UNC UNF

Note

NC or NF sets

1 each of die sizes listed

set number	number of sizes	die sizes		order number
42NC	8	1/4-20 NC	1/2-13 NC	C67275
		5/16-18 NC	9/16-12 NC	
		3/8-16 NC	5/8-11 NC	
		7/16-14 NC	3/4-10 NC	
42NF	8	1/4-28 NF	1/2-20 NF	C67276
		5/16-24 NF	9/16-18 NF	
		3/8-24 NF	5/8-11 NF	
		7/16-20 NF	3/4-16 NF	
44NC	10	1/4-20 NC	9/16-12 NC	C67278
		5/16-18 NC	5/8-11 NC	
		3/8-16 NC	3/4-10 NC	
		7/16-14 NC	7/8-9 NC	
		1/2-13 NC	1-8 NC	
45NCNF	20	1/4-20 NC	1/4-28 NF	C67282
		5/16-18 NC	5/16-24 NF	
		3/8-16 NC	3/8-24 NF	
		7/16-14 NC	7/16-20 NF	
		1/2-13 NC	1/2-20 NF	
		9/16-12 NC	9/16-18 NF	
		5/8-11 NC	5/8-18 NF	
		3/4-10 NC	3/4-16 NF	
		7/8-9 NC	7/8-14 NF	
		1-8 NC	1-14 NF	
NC/NF	10	¼-20NC	¼-28NF	C67284
		5/16-18NC	5/16-24NF	
		3/8-16NC	3/8-24NF	
		7/16-14NC	7/16-20NF	
		½-13NC	½-20NF	

set number	number of sizes	die sizes	order number
49Metric	7	M6 x 1	C67283
		M8 x 1.25	
		M10 x 1.5	
		M12 x 1.75	
		M14 x 2	
		M16 x 2	
		M20 x 2.5	



8-Piece Die Set #C67275



20-Piece Die Set #C67282

Styles: 0610, 0710

Die - Adjustable
Round

HSS | Bright | Carbon Steel

Note

Short chamfer on both sides of die to extend tool life.

Adjustable for wear and size.

Cut external threads when held in a die stock.

Produce UN thread form.

Can be used for close to shoulder work.

Style 0710M (Metric) now combined with style 0710.



diameter TPI	series	diameter pitch	decimal equiv.	outside dia.	thick-ness	order number 0610 Carbon Steel	order number 0710 HSS
0-80	UNF		.0600	13/16	1/4	C65022	—
1-64	UNC		.0730	13/16	1/4	C65026	—
1-72	UNF		.0730	13/16	1/4	C65027	—
2-56	UNC		.0860	13/16	1/4	C65036	—
2-64	UNF		.0860	13/16	1/4	C65037	—
		M2.5x 0.45	.0984	21	6	—	C65721
3-48	UNC		.0990	13/16	1/4	C65045	—
3-56	UNF		.0990	13/16	1/4	C65046	—
4-40	UNC		.1120	13/16	1/4	C65048	—
4-48	UNF		.1120	13/16	1/4	C65049	—
		M3 x 0.5	.1181	21	6	—	C65724
5-40	UNC		.1250	13/16	1/4	C65057	C65729
5-44	UNF		.1250	13/16	1/4	C65058	C65730
		M3.5 x 0.6	.1378	21	6	—	C65732
6-32	UNC		.1380	13/16	1/4	C65061	C65733
6-32	UNC		.1380	1	3/8	C65114	C65785
6-40	UNF		.1380	13/16	1/4	C65062	C65734
		M4 x 0.7	.1575	21	6	—	C65737
8-32	UNC		.1640	13/16	1/4	C65069	C65739
8-32	UNC		.1640	1	3/8	C65119	C65789
8-36	UNF		.1640	13/16	1/4	C65070	C65740
		M4.5 x 0.75	.1772	21	6	—	C65742
10-24	UNC		.1900	13/16	1/4	C65075	C65743
10-24	UNC		.1900	1	3/8	C65124	C65792
10-32	UNF		.1900	13/16	1/4	C65076	C65744
10-32	UNF		.1900	1	3/8	C65125	C65793
		M5 x 0.8	.1969	21	6	—	C65747
12-24	UNC		.2160	13/16	1/4	C65083	C65751
12-24	UNC		.2160	1	3/8	C65132	C65798
12-28	UNF		.2160	13/16	1/4	C65084	C65752
		M6 x 1	.2362	21	6	—	C65757
		M6 x 1	.2362	25.4	9.5	—	C65801
1/4-20	UNC		.2500	13/16	1/4	C65093	C65760
1/4-20	UNC		.2500	1	3/8	C65140	C65804
1/4-20	UNC		.2500	1-1/2	1/2	C65192	C65839
1/4-20	UNC		.2500	2	5/8	C65264	—
1/4-28	UNF		.2500	13/16	1/4	—	C65761
1/4-28	UNF		.2500	1	3/8	C65142	C65805
1/4-28	UNF		.2500	1-1/2	1/2	C65193	C65840
1/4-28	UNF		.2500	2	5/8	C65265	—
		M7 x 1	.2756	25.4	9.5	—	C65807
5/16-18	UNC		.3125	13/16	1/4	—	C65766
5/16-18	UNC		.3125	1	3/8	C65147	C65808
5/16-18	UNC		.3125	1-1/2	1/2	C65197	C65844
5/16-18	UNC		.3125	2	5/8	C65269	—
5/16-24	UNF		.3125	13/16	1/4	—	C65767
5/16-24	UNF		.3125	1	3/8	C65148	C65809
5/16-24	UNF		.3125	1-1/2	1/2	C65198	C65845
5/16-24	UNF		.3125	2	5/8	C65270	—
		M8 x 1.25	.3150	25.4	9.5	—	C65813
3/8-16	UNC		.3750	1	3/8	C65159	C65816
3/8-16	UNC		.3750	1-1/2	1/2	C65208	C65855
3/8-16	UNC		.3750	2	5/8	C65280	—
3/8-24	UNF		.3750	1	3/8	C65160	C65817
3/8-24	UNF		.3750	1-1/2	1/2	C65209	C65856
3/8-24	UNF		.3750	2	5/8	C65281	—
		M10 x 1.5	.3937	25.4	9.5	—	C65824
7/16-14	UNC		.4375	1	3/8	C65171	C65828
7/16-14	UNC		.4375	1-1/2	1/2	C65220	C65865
7/16-14	UNC		.4375	2	5/8	C65292	—
7/16-20	UNF		.4375	1	3/8	C65172	C65829
7/16-20	UNF		.4375	1-1/2	1/2	C65221	C65866
7/16-20	UNF		.4375	2	5/8	C65293	—
		M12 x 1.75	.4724	25.4	9.5	—	C65833
1/2-13	UNC		.5000	1	3/8	C65470	—
1/2-13	UNC		.5000	1-1/2	1/2	C65232	C65875
1/2-13	UNC		.5000	2	5/8	C65303	—
1/2-20	UNF		.5000	1	3/8	C65471	—
1/2-20	UNF		.5000	1-1/2	1/2	C65233	C65876
1/2-20	UNF		.5000	2	5/8	C65304	—
		M14 x 2	.5512	38	13	—	C65880
9/16-12	UNC		.5625	1-1/2	1/2	C65239	C65881
9/16-12	UNC		.5625	2	5/8	C65311	—
9/16-18	UNF		.5625	1-1/2	1/2	C65240	C65882
9/16-18	UNF		.5625	2	5/8	C65312	—
5/8-11	UNC		.6250	1-1/2	1/2	C65243	C65884
5/8-11	UNC		.6250	2	5/8	C65315	C65946
5/8-11	UNC		.6250	2-1/2	3/4	C65374	—
5/8-18	UNF		.6250	1-1/2	1/2	C65244	C65885
5/8-18	UNF		.6250	2	5/8	C65316	C65947
		M16 x 2	.6300	38	13	—	C65889
		M18 x 2.5	.7087	38	13	—	C65896
3/4-10	UNC		.7500	1-1/2	1/2	C65250	—
3/4-10	UNC		.7500	2	5/8	C65328	C65957
3/4-10	UNC		.7500	2-1/2	3/4	C65384	—
3/4-16	UNF		.7500	1-1/2	1/2	C65251	—
3/4-16	UNF		.7500	2	5/8	C65329	C65958
3/4-16	UNF		.7500	2-1/2	3/4	C65385	—
		M20 x 2.5	.7874	38	13	—	C65901
7/8-9	UNC		.8750	2	5/8	C65339	C65966
7/8-9	UNC		.8750	2-1/2	3/4	C65395	—
7/8-14	UNF		.8750	2	5/8	C65340	C65967
7/8-14	UNF		.8750	2-1/2	3/4	C65396	—

continued on next page

CLE-LINE

Die
Round and Taper Pipe

Styles: 0610, 0710 , 0620

diameter TPI	diameter series	diameter pitch	decimal equiv.	outside dia.	thick-ness	order number 0610 Carbon Steel	order number 0710 HSS
1-8	UNC		1.0000	2	5/8	C65349	—
1-8	UNC		1.0000	2-1/2	3/4	C65405	—
1-8	UNC		1.0000	3	1	C65416	—
1-12	UNF		1.0000	2	5/8	C65350	—
1-12	UNF		1.0000	2-1/2	3/4	C65406	—
1-12	UNF		1.0000	3	1	C65417	—
1-14	UNF		1.0000	2	5/8	C65407	—
1-1/8-7	UNC		1.1250	3	1	C65426	—
1-1/8-12	UNF		1.1250	3	1	C65427	—
1-1/4-7	UNC		1.2500	3	1	C65433	—
1-1/4-12	UNF		1.2500	3	1	C65434	—
1-3/8-6	UNC		1.3750	3	1	C65441	—
1-3/8-12	UNF		1.3750	3	1	C65442	—
1-1/2-6	UNC		1.5000	3	1	C65449	—
1-1/2-12	UNF		1.5000	3	1	C65450	—

Taper pipe sizes — Carbon Steel

die diameter TPI		and series	decimal equiv.	outside dia.	thick-ness	order number 0620 Carbon Steel
1/8	27	NPT	.1250	1	3/8	C65491
1/8	27	NPT	.1250	1-1/2	1/2	C65492
1/4	18	NPT	.2500	1-1/2	1/2	C65493
1/4	18	NPT	.2500	2	5/8	C65495
3/8	18	NPT	.3750	1-1/2	1/2	C65494
3/8	18	NPT	.3750	2	5/8	C65496
1/2	14	NPT	.5000	2	5/8	C65497

Note: Pipe size round adjustable dies are not split.

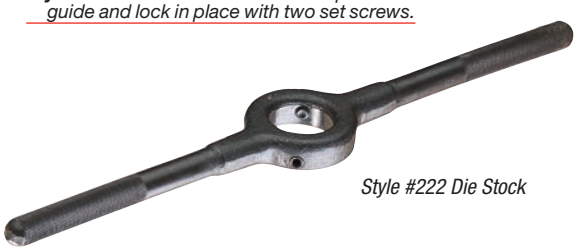
Die Stock
Round Adjustable

Styles: 222, 224

Note

Style #222: *holds round adjustable dies with three adjusting screws.*

Style #224: *stocks have built-in workpiece guide and lock in place with two set screws.*



Style #222 Die Stock



Style #224 Die Stock

product number	die O.D.	overall length	order number 222
2	13/16	6-1/4	C67223
3	1	9	C67224
5	1-1/2	13-7/8	C67226
6	2	23	C67227
7	2-1/2	29	C67228
8	3	40	C67229

product number	die O.D.	overall length	order number 224
13	13/16	6-1/4	C67235
14	1	13	C67236
15	1-1/2	18	C67237
16	2	26	C67238

Note

Each includes:
Combination UNC/UNF sizes.
1 each of tap and die sizes listed.
Tap wrench and die stock included

HSS Maintenance Hand Taps and Carbon Steel Round Adjustable Die.



8 Size Set
#C67271

set number	number of sizes	tap and die sizes		order number
26S	8	2-56 UNC	8-32 UNC	C67271
		3-48 UNC	10-24 UNC	
		4-40 UNC	10-32 UNF	
		6-32 UNC	12-24 UNC	
517	7	4-40 UNC	10-24 UNC	C00517
		6-32 UNC	10-32 UNF	
		8-32 UNC	12-24 UNC	
			1/4-20 UNC	
518	5	1/4-20 UNC	3/8-16 UNC	C00518
		5/16-18 UNC	7/16-14 UNC	
			1/2-13 UNC	
525	8	0-80 UNF	4-40 UNC	C00525
		1-72 UNF	6-32 UNC	
		2-56 UNC	8-32 UNC	
		3-48 UNC	10-24 UNC	
526	10	4-40 UNC	4-48 UNF	C00526
		6-32 UNC	6-40 UNF	
		8-32 UNC	8-36 UNF	
		10-24 UNC	10-32 UNF	
		12-24 UNC	12-28 UNF	
528	11	1/4-20 UNC	1/4-28 UNF	C00528
		5/16-18 UNC	5/16-24 UNF	
		3/8-16 UNC	3/8-24 UNF	
		7/16-14 UNC	7/16-20 UNF	
		1/2-13 UNC	1/2-20 UNF	
		pipe size	1/8-27 (short shank)	
532	21	1/4-20 UNC	1/4-28 UNF	C00532
		5/16-18 UNC	5/16-24 UNF	
		3/8-16 UNC	3/8-24 UNF	
		7/16-14 UNC	7/16-20 UNF	
		1/2-13 UNC	1/2-20 UNF	
		9/16-12 UNC	9/16-18 UNF	
		5/8-11 UNC	5/8-18 UNF	
		3/4-10 UNC	3/4-16 UNF	
		7/8-9 UNC	7/8-14 UNF	
		1-8 UNC	1-14 UNS	
		pipe size	1/8-27 (long shank)	

set number	number of sizes	tap and die sizes		order number
815	20	1/4-20 UNC	1/4-28 UNF	C67293
		5/16-18 UNC	5/16-24 UNF	
		3/8-16 UNC	3/8-24 UNF	
		7/16-14 UNC	7/16-20 UNF	
		1/2-13 UNC	1/2-20 UNF	
		9/16-12 UNC	9/16-18 UNF	
		5/8-11 UNC	5/8-18 UNF	
		3/4-10 UNC	3/4-16 UNF	
		7/8-9 UNC	7/8-14 UNF	
		1-8 UNC	1-12 UNF	
533	28 Taps 15 Dies	4-40 UNC	1/4-20 UNC	C00533
		6-32 UNC	1/4-28 UNF	
		8-32 UNC	5/16-18 UNC	
		10-24 UNC	5/16-24 UNF	
		10-32 UNF	3/8-16 UNC	
		12-24 UNC	3/8-24 UNF	
		7/16-14 UNC	7/16-20 UNF	
		1/2-13 UNC	1/2-20 UNF	
		9/16-12 UNC	9/16-18 UNF	
			5/8-18 UNC	
			3/4-16 UNC	
			7/8-14 UNC	
			1-14 UNS	
		pipe sizes	1/8-27 (long shank)	
			1/4-18	
			3/8-18	
			1/2-14	
			M14 x 1.5	
		metric sizes	M18 x 1.5	

CLE-LINE

THREADING / DIES

Tap & Die Sets
Metric Round - Adjustable

Descriptions below

HSS

Note
Tap & Die Sets with Maintenance Hand Taps and HSS Round Adjustable Dies (metric sizes).



5 Size Set #C00449

7 Size Set #C00448

set number	number of sizes	tap and die sizes		order number
448	7	M2.5 x 0.45 M3 x 0.5 M3.5 x 0.6	M4 x 0.7 M4.5 x 0.75 M5 x 0.8 M6 x 1.0	C00448
449	5	M6 x 1.0 M7 x 1.0	M8 x 1.25 M10 x 1.5 M12 x 1.75	C00449

Tap, Die & Drill Set
Metric Round - Adjustable

Description below

HSS

Note
Each includes:
1 HSS tap, die, and black jobber drill sizes listed.
Tap wrench, die stock, and screwdriver.
Metal case.

set number	number of sizes	tap and die sizes	drill size	order number
451	5	M6 x 1.0	5.0mm	C00451
		M7 x 1.0	6.0mm	
		M8 x 1.25	6.7mm	
		M10 x 1.5	8.5mm	
		M12 x 1.75	10.2mm	



5 Size Set #C00451

Jobber
Drill & Tap Sets

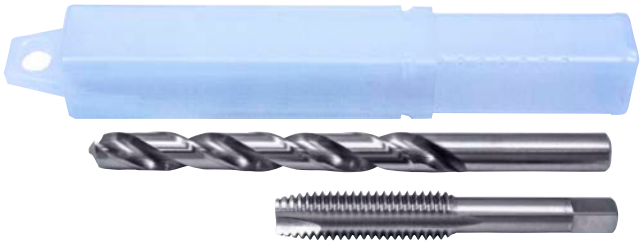
SET

Styles: 1860

NEW

Note
*Drill style: **1898** bright*
Uses Cle-Line Tap Style: #0411 Spiral Point

jobber drill sizes	plug tap spiral point	no. of pieces	order number 1860
36	6-32	2	C22305
29	8-32	2	C22304
25	10-24	2	C22307
21	10-32	2	C22306
7	1/4-20	2	C22308
F	5/16-18	2	C22300
5/16"	3/8-16	2	C22303
U	7/16-14	2	C22302
27/64"	1/2-13	2	C22301



Styles: 0550, 0551, 0552, 0553 General Information

Quick Two-Piece Die Assembly

- Quick-Set Two-Piece Die System consists of these parts
  Series 0550 — Die
  Series 0551 — Cap
  Series 0552 — Guide
  Series 0553 — Collet
- Inch sizes are sold as a complete assembly (see table on this page), or in their component parts.
- Metric sizes are sold in their component parts only.
- Use with Quick-Set die stocks; see page 74.
- Collets for use with Quick-Set dies consist of a cap and a guide; order cap and guide separately, or assembled as a collet (see below).
- Die halves are seated in the beveled cap slot and held in place by the guide, which screws into the underside of the cap.
- Die is adjusted by the set screws at either end of the slot.
- Caps of a given outside diameter are made with several different sizes of slots to take different sizes of dies as indicated in the table below.
- Separate guide is required for each cutting size.
- To order separate guides, specify cutting size of the die and the size of the collet for 1/4" and 1/2" dies.

Application Information:

- Use in most maintenance applications.
- Ideal for hand threading operations.

Styles: 0550, 0551, 0552, 0553, 0554

Collet Assembly *and Components*

HSS | Carbon Steel | UNC UNF

Note

Most cutting sizes may be ordered by size only; however, sizes 1/4" and 1/2" can be furnished in two different blanks, which should be ordered by size and collet number.

Unified and American National thread form standard.

Two-piece construction with two cutting edges in each piece.

Easy to sharpen.

One side has a 2 to 3 thread chamfer for threading; the other side has a 1 to 1-1/2 thread chamfer for threading close to a shoulder.

Unified and American National thread form standard.

Enables a wide range of adjustments.



Regular Quick-Set Die Stock see Style #223



Jr, Quick-Set Die Stock see Style #225



Assembly
(combined Die & Collet)



Die



Cap



Guide



Collet
(combined Cap & Guide)

nominal dia. TPI	nominal dia. series	nominal dia. pitch	decimal equivalent	collet no.	collet O.D.	order number 0554 assembly	die blank no.	order number 0550 die	cap O.D.	order number 0551 cap	0552 guide	0553 collet
4-40	UNC		.1120	A1	1-1/4	C66782	A1	C66693	1-1/4	C66727	C66681	C66754
6-32	UNC		.1380	A1	1-1/4	C66783	A1	C66694	1-1/4	C66727	C66682	C66755
8-32	UNC		.1640	A1	1-1/4	C66784	A1	C66695	1-1/4	C66727	C66683	C66756
10-24	UNC		.1900	A1	1-1/4	C66785	A1	C66696	1-1/4	C66727	C66684	C66757
10-32	UNF		.1900	A1	1-1/4	C66786	A1	C66697	1-1/4	C66727	C66684	C66757
12-24	UNC		.2160	A1	1-1/4	C66787	A1	C66698	1-1/4	C66727	C66685	C66758
		M6 x 1	.2362	5	—	—	A	C66670	70	—	C66820	—
1/4-20	UNC		.2500	A1	1-1/4	C66788	A1	C66699	1-1/4	C66727	C66686	C66759
1/4-20	UNC		.2500	1,5	2	C66789	A	C66701	2	C66728	C66737	C66775
1/4-28	UNF		.2500	1	2	C66790	A1	C66700	2	C66728	C66737	C66775
1/4-28	UNF		.2500	1	2	C66790	A	C66702	2	C66728	C66737	C66775
5/16-18	UNC		.3125	1,5	2	C66791	A	C66703	2	C66728	C66738	C66776
5/16-24	UNF		.3125	1,5	2	C66792	A	C66704	2	C66728	C66738	C66776
		M8 x 1.25	.3150	5	—	—	A	C66671	70	—	C66821	—
3/8-16	UNC		.3750	1,5	2	C66793	B	C66705	2	C66729	C66739	C66777
3/8-24	UNF		.3750	1,5	2	C66794	B	C66706	2	C66729	C66739	C66777

continued on next page

Collet Assembly *and Components*

Styles: 0550, 0551, 0552, 0553, 0554 *(continued)*

CLE-LINE

nominal dia. TPI	series	nominal dia. pitch	decimal equivalent	collet no.	collet O.D.	order number 0554 assembly	die blank no.	order number 0550 die	cap O.D.	order number 0551 cap	0552 guide	0553 collet
		M10 x 1.5	.3937	5	—	—	B	C66672	70	—	C66822	—
7/16-14	UNC		.4375	1,5	2	C66795	B	C66707	2	C66729	C66740	C66778
7/16-20	UNF		.4375	1,5	2	C66796	B	C66708	2	C66729	C66740	C66778
		M12 x 1.75	.4724	5	—	—	B	C66673	70	—	C66823	—
1/2-13	UNC		.5000	1	2	C66797	B	C66709	2	C66729	C66741	C66764
1/2-13	UNC		.5000	5	2-3/4	C66801	B	C66710	2	C66732	C66746	C66769
1/2-20	UNF		.5000	1	2	C66798	C	C66711	2-3/4	C66729	C66741	C66764
1/2-20	UNF		.5000	5	2-3/4	C66802	C	C66712	2-3/4	C66732	C66746	C66769
		M14 x 2	.5512	5	—	—	C	C66674	70	C66732	C66824	—
9/16-12	UNC		.5625	5	2-3/4	C66803	C	C66713	2-3/4	C66732	C66747	C66770
9/16-18	UNF		.5625	5	2-3/4	C66804	C	C66714	2-3/4	C66732	C66747	C66770
5/8-11	UNC		.6250	5	2-3/4	C66805	C	C66715	2-3/4	C66732	C66748	C66771
5/8-18	UNF		.6250	5	2-3/4	C66806	C	C66716	2-3/4	C66732	C66748	C66771
		M16 x 2	.6300	5	—	—	C	C66675	70	C66732	C66825	—
		M18 x 2.5	.7087	5	—	—	C	C66676	70	C66732	C66826	—
3/4-10	UNC		.7500	5	2-3/4	C66807	C	C66717	2-3/4	C66732	C66749	C66772
3/4-16	UNF		.7500	5	2-3/4	C66808	C	C66718	2-3/4	C66732	C66749	C66772
		M20 x 2.5	.7874	5	—	—	C	C66677	70	C66732	C66827	—
		M22 x 2.5	.8661	5	—	—	D	C66678	70	C66733	C66828	—
7/8-9	UNC		.8750	5	2-3/4	C66809	D	C66719	2-3/4	C66733	C66750	C66773
7/8-14	UNF		.8750	5	2-3/4	C66810	D	C66720	2-3/4	C66733	C66750	C66773
		M24 x 3	.9449	5	—	—	D	C66679	70	C66733	C66829	—
1-8	UNC		1.0000	5	2-3/4	C66811	D	C66721	2-3/4	C66733	C66751	C66774
1-12	UNF		1.0000	5	2-3/4	C66812	D	C66722	2-3/4	C66733	C66751	C66774
1-14	UNS		1.0000	5	2-3/4	C66813	D	C66723	2-3/4	C66733	C66751	C66774

Style: 223

Quick Two-Piece Die System

Carbon Steel

Note
Use with all Style #0554 Quick-Set collets with two-piece dies.

Application Information:
Quick-Set die stocks have center holes corresponding to the outside diameter of the Quick-Set collets.



stock no.	collet no.	collet capacity	length of stock	order number 223
#A1	A1	1-1/4	7-1/2	C67216
#1	1	2	14-1/2	C67214
#5	5	2-3/4	23	C67217
#5A	5	2-3/4	26	C67215
#5B	5	2-3/4	29	C67218

Style: 225

Jr. Quick Die Stock

Carbon Steel

Note
Use with all Series 0550 Quick-Set two-piece dies without collet.

Application Information:
- *Quick-Set Jr. die stocks are designed to use Quick-Set dies without collets.*
- *Double slots enable use of two different size blanks in the same stock.*
- *Dies fit directly into the stock and are held in place by a screw guide.*



stock no.	cutting size	die blank size	guide no.	cutting size range	length of stock	order number 225
#1	1/4 to 5/16 3/8 to 1/2	A B	1	1/4 to 1/2	14-1/2	C67220
#5	9/16 to 3/4 7/8 to 1	C D	5	9/16 to 1	26	C67221

Styles: 226

Quick Set
Spanner Wrench

Carbon Steel

Note
Because all guides are so small they are round not square, so you cannot use a standard wrench.

Fits into two holes to turn guide.



stock no.	collet no.	collet capacity	order number 226
#A1	A1	1-1/4	C67232

CLE-LINE

Tap & Die Sets

Quick-Set Two-Piece Die System

SET

Style: 055

Carbon Steel

set no.	number of cutting sizes	threading sizes		collet number	tap wrench number	die stock number	order number 055
559	7	4-40 NC 6-32 NC 8-32 NC	10-24 NC 10-32 NF 12-24 NC 1/4-20 NC	A1	T9, A1	A1	C00609
5510	5	1/4-20 NC 5/16-18 NC 3/8-16 NC	7/16-14 NC 1/2-13 NC	1	#5	#1	C00610
5511	10	1/4-20 NC 5/16-18 NC 3/8-16 NC 7/16-14 NC 1/2-13 NC	9/16-12 NC 5/8-11 NC 3/4-10 NC 7/8-9 NC 1-8 NC	5	#5,#7	5A	C00611
5512	10	1/4-20 NC 5/16-18 NC 3/8-16 NC 7/16-14 NC 1/2-13 NC	1/4-28 NF 5/16-24 NF 3/8-24 NF 7/16-20 NF 1/2-20 NF	1	#5	#1	C00612
5513	20	1/4-20 NC 5/16-18 NC 3/8-16 NC 7/16-14 NC 1/2-13 NC 9/16-12 NC 5/8-11 NC 3/4-10 NC 7/8-9 NC 1-8 NC	1/4-28 NF 5/16-24 NF 3/8-24 NF 7/16-20 NF 1/2-20 NF 9/16-18 NF 5/8-18 NF 3/4-16 NF 7/8-14 NF 1-14 NS	1,5	#5,#7	#1,#5B	C00613
5514	7	M6 x 1 M8 x 1.25 M10 x 1.5 M12 x 1.75 M14 x 2	M16 x 2 M18 x 2.5	5	#6	#5	C00614



7 Size Set Tap & Die #C00609

Tap & Die Sets

Quick-Set Jr. Tap & Die

SET

Style: 055

HSS

Carbon Steel

Note
Die stock to hold dies without collet.

set no.	number of cutting sizes	threading sizes		wrench number	die stock number	order number 055
558	20	1/4-20 NC 5/16-18 NC 3/8-16 NC 7/16-14 NC 1/2-13 NC 9/16-12 NC 5/8-11 NC 3/4-10 NC 7/8-9 NC 1-8 NC	1/4-28 NF 5/16-24 NF 3/8-24 NF 7/16-20 NF 1/2-20 NF 9/16-18 NF 5/8-18 NF 3/4-16 NF 7/8-14 NF 1-14NS	#5, #7	#1, #5	C00608

Style: 240 — Standard Straight

Note
Used for hand tapping.



product number	machine screw	tap size ranges fractional	tap size ranges metric	tap size ranges pipe	overall length	order number 240
0	0 to 14	1/16 to 1/4	M1.5 to M6.3	—	7	C67201
14	0 to 14	1/16 to 3/8	M1.5 to M10	—	9	C67197
5	8 to 14	5/32 to 1/2	M4 to M12.5	1/8	11	C67202
6	8 to 14	5/32 to 3/4	M4 to M19	1/8 to 1/4	15	C67203
7	—	1/4 to 1-1/8	M12 to M28	1/8 to 3/4	19	C67204
8	—	3/4 to 1-5/8	M19 to M40	3/8 to 1-1/4	40	C67205
22	—	1 to 2-1/2	M25 to M56	3/4 to 2	54	C67200

Style: 242 — Plain T-Handle

Note
Used for hand tapping in out-in-the-open jobs.



product number	mach screw	tap size ranges fractional	tap size ranges metric	overall length	order number 242
T9	0 to 14	1/16 to 1/4	M1.5 to M6.3	2-3/4	C67206
T10	12 to 14	7/32 to 1/2	M5.5 to M12.5	3-5/8	C67207

Style: 243 — Slip T-Handle

Note
Used for hand tapping or in difficult spaces requiring a slip handle



product number	mach screw	tap size ranges fractional	tap size ranges metric	overall length	order number 243
T11	0 to 14	1/16 to 1/4	M1.5 to M6.3	2-3/4	C67208
T12	12 to 14	7/32 to 1/2	M5.5 to M12.5	3-5/8	C67209

Tap Wrenches
Various Styles

SET

Straight, Plain, Slip, Combination, Long

CLE-LINE

Combination Ratchet and Slip Handle

Style: 244

Note
Used for hand tapping in difficult spaces needing ratchet drive.



product number	mach screw	tap size ranges fractional	metric	overall length	order number 244
T13	0 to 14	1/16 to 1/4	M1.5 to M6.3	3-3/4	C67210
T14	12 to 14	7/32 to 1/2	M5.5 to M12.5	5	C67211

Long Shank T-Handle

Style: 245

Note
Used for hand tapping where extra reach is required.



product number	mach screw	tap size ranges fractional	metric	overall length	order number 245
T16	0 to 14	1/16 to 1/4	M1.5 to M6.3	8-3/4	C67212
T17	12 to 14	7/32 to 1/2	M5.5 to M12.5	10-5/8	C67213

SETS

See product specific page for additional information

Make it Easy
SETS Cost Saving Sets
Keep it organized!
Most styles come in a set


8 Size Set Re-Threading #C67275


20 Size Set Re-Threading #C67282


7 Size Set Tap and Round Adjustable #C00448


5 Size Set Tap and Round Adjustable #C00449

set number	no. of sizes	sizes	case type	style number	order number
Carbon Steel Re-Threading					**0650**
42NC	8	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 9/16-12, 5/8-11, 3/4-10	plastic		C67275
42NF	8	1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20, 9/16-18, 5/8-11, 3/4-16	plastic		C67276
44NC	10	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 9/16-12, 5/8-11, 3/4-10, 7/8-9, 1-8	plastic		C67278
45NCNF	20	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, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-14	plastic		C67282
NC/NF	10	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, 1/2-20	plastic		C67284
49Metric	7	M6 x 1, M8 x 1.25, M10 x 1.5, M12 x 1.75, M14 x 2, M16 x 2, M20 x 2.5	plastic		C67283
Tap and Round Adjustable Die HSS					
26S	8	2-56, 3-48, 4-40, 6-32, 8-32, 10-24, 10-32, 12-24	metal		C67271
517	7	4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20	metal		C00517
518	5	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	metal		C00518
525	8	0-80, 1-72, 2-56, 3-48, 4-40, 6-32, 8-32, 10-24	metal		C00525
526	10	4-40, 4-48, 6-32, 6-40, 8-32, 8-36, 10-24, 10-32, 12-24, 12-28	metal		C00526
528	11	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, 1/2-20, pipe size, 1/8-27 short shank	metal		C00528
532	21	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, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-14, pipe size, long shank	metal		C00532
815	20	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, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-12	metal		C67293
533	28 Taps 15 Dies	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, 1/2-20, 9/16-12, 9/16-18, 5/8-18, 3/4-16, 7/8-14, 1-14, pipe sizes, 1/8-27 - long shank, 1/4-18, 3/8-18, 1/2-14 metric: M14 x 1.5, M18 x 1.5	metal		C00533
Tap & Die					
448	7	M2.5 x 0.45, M3 x 0.5, M3.5 x 0.6, M4 x 0.7, M4.5 x 0.75, M5 x 0.8, M6 x 1.0		0411	C00448
449	5	M6 x 1.0, M7 x 1.0, M8 x 1.25, M10 x 1.5, M12 x 1.75		0411	C00449

SETS

Tap, Die, & Drill Sets

SET

Cost Saving Sets *(continued)*

See product specific page for additional information

SETS

set number	no. of sizes	sizes	case type	style number	order number
Tap & Die					
451	5	M6 x 1.0, M7 x 1.0, M8 x 1.25, M10 x 1.5, M12 x 1.75, 5.0mm, 6.0mm, 6.7mm, 8.5mm, 10.2mm	metal		C00451
Tap & Drill *- Drill style: 1898 Bright, Uses Cle-Line Tap Style: #0411 Spiral Point*					**1860**
NEW	2	Bright, Drill: #36 Tap: 6-32 spiral point	plastic tube		C22305
	2	Bright, Drill: #29 Tap: 8-32 spiral point	plastic tube		C22304
	2	Bright, Drill: #25 Tap: 10-24 spiral point	plastic tube		C22307
	2	Bright, Drill: #21 Tap: 10-32 spiral point	plastic tube		C22306
	2	Bright, Drill: #7 Tap: 1/4-20 spiral point	plastic tube		C22308
	2	Bright, Drill: F Tap: 5/16-18 spiral point	plastic tube		C22300
	2	Bright, Drill: 5/16" Tap: 3/8-16 spiral point	plastic tube		C22303
	2	Bright, Drill: U Tap: 7/16-14 spiral point	plastic tube		C22302
	2	Bright, Drill: 27/64" Tap: 1/2-13 spiral point	plastic tube		C22301
Quick-Set Two-Piece Die System *Uses: Die #380, Cap #1383, Guide #1384*					**055**
559	7	4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20 *collet: A1 - Tap wrench: T9, A1 - Die stock: A1*		**0402**	C00609
5510	5	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13 *collet: 1 - Tap wrench: #5 - Die stock: #1*		**0402**	C00610
5511	10	1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 9/16-12, 5/8-11, 3/4-10, 7/8-9, 1-8 *collet: 5 - Tap wrench: #5, #7 - Die stock: 5A*		**0402**	C00611
5512	10	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, 1/2-20 *collet: 1 - Tap wrench: #5 - Die stock: #1*		**0402**	C00612
5513	20	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, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-14 *collet: 1, 5 - Tap wrench: #5, #7 - Die stock: #1,#5B*		**0402**	C00613
5514	7	M6 x 1, M8 x 1.25, M10 x 1.5, M12 x 1.75, M14x2, M16 x 2, M18 x 2.5 *collet: 5 - Tap wrench: #6 - Die stock: #5*		**0411 1002**	C00614
Quick-Set Jr. Tap & Die *Uses: Die #380, Guide #1384*					**055**
558	20	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, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-14 *Wrench: #5,#7 - Die stock: #1,#5*		**0402**	C00608



5 Size Set Tap, Die and Drill #C00451



2 Piece Set Bright, Drill & Tap #C22304



7 Size Set Quick-Set Two-Piece Die System #C00609



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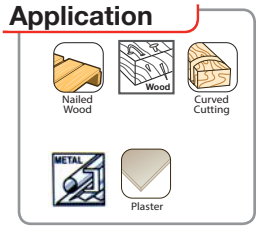
Cut to customer specifications
Weld-to-Length
Band Saw Program
Reduce Cost • Custom Fit

Icon Glossary

Base Material



Application



SAWS

International products

Hole Saws

Styles: 1887

CLE-LINE

4/6 Variable Tooth | Bi-Metal | M42 Cobalt

Note

Traditional narrow openings on the side wall.

High speed cutting edge.

1-7/8" (48mm) cutting depth.
**1-1/2" (32mm) cutting depth.*

3/16" (5mm) thick heavy-duty backing plate eliminates need for drive plate.

Shock resistant teeth, resists tooth strippage, less vibration, cuts 30% faster than conventional saws.

Creates holes for pipe, tubing, door lock installations, electrical conduits, and antennas.

Ideal for plumbing, construction, aircraft, electrical, maintenance and automotive applications.

Use in steel, aluminum, brass, cast iron, plastic or wood.



diameter inch (mm)	order number 1887 M3	M42
9/16" (14 mm)	C25058	C25000
5/8" (16 mm)	C26149	C26121
11/16" (17 mm)	C26102	C25002
3/4" (19 mm)	C25061	C26113
(20 mm)	C25062	C25004
13/16" (21 mm)	C26106	C26105
7/8" (22 mm)	C25064	C25006
*7/8" (22 mm)	C24998	C24999
15/16" (24 mm)	C25065	C25007
1" (25 mm)	C25066	C26101
1-1/16" (27 mm)	C25067	C25009
1-1/8" (29 mm)	C25068	C26103
1-3/16" (30 mm)	C25069	C25011
1-1/4" (32 mm)	C25070	C25012
1-5/16" (33 mm)	C25071	C25013
1-3/8" (35 mm)	C26108	C25014
1-7/16" (37 mm)	C25073	C25015
1-1/2" (38 mm)	C25074	C25016
1-9/16" (40 mm)	C25075	C25017
1-5/8" (41 mm)	C25076	C25018
1-11/16" (43 mm)	C25077	C26104

diameter inch (mm)	order number 1887 M3	M42
1-3/4" (44 mm)	C25078	C26107
(45 mm)	C26120	C25021
1-13/16" (46 mm)	C25080	C25022
1-7/8" (48 mm)	C25081	C25023
(50 mm)	C25082	C25024
2" (51 mm)	C25083	C25025
2-1/16" (52 mm)	C25084	C25026
2-1/8" (54 mm)	C25085	C25027
(55 mm)	C25086	C25028
2-1/4" (57 mm)	C26109	C25029
2-5/16" (59 mm)	C25088	C25030
2-3/8" (60 mm)	C25089	C25031
2-1/2" (64 mm)	C25090	C25032
2-9/16" (65 mm)	C25091	C25033
2-5/8" (67 mm)	C25092	C26111
(68 mm)	C25093	C25035
2-3/4" (70mm)	C26110	C25036
2-7/8" (73 mm)	C26112	C25037
(75 mm)	C25096	C25038
3" (76 mm)	C25097	C25039

diameter inch (mm)	order number 1887 M3	M42
3-1/8" (79 mm)	C25098	C25040
3-1/4" (83 mm)	C25099	C26115
3-3/8" (86 mm)	C26116	C25042
3-1/2" (89 mm)	C25001	C25043
3-5/8" (92 mm)	C25102	C25044
3-3/4" (95 mm)	C25103	C25045
3-7/8" (98 mm)	C25104	C25046
(100 mm)	C25105	C25047
4" (102 mm)	C25106	C25048
4-1/8" (105 mm)	C25107	C25049
4-1/4" (108 mm)	C26118	C25050
4-3/8" (111 mm)	C25109	C25051
4-1/2" (114 mm)	C26117	C25052
4-3/4" (121 mm)	C25111	C26119
5" (127 mm)	C25112	C25054
5-1/2" (140 mm)	C25113	C25055
5-3/4" (146 mm)	C25114	C25056
6" (152 mm)	C25115	C25057

Note

Hole Saw Kits available for cutting almost any material.

The kits contain Bi-Metal 8% Cobalt hole saws of 4/6 variable pitch.

Assortment of hole saws and accessories specifically designed for the application environment.

Provided in a heavy duty, plastic case.

4/6 Variable Tooth | Bi-Metal | M42 Cobalt



Electrician's Kit #CHK04

Kit type	3/4" 19mm	7/8" 22mm	1" 25mm	1-1/8" 29mm	1-1/4" 32mm	1-3/8" 35mm	1-1/2" 38mm	1-3/4" 44mm	2" 51mm	2-1/8" 54mm	2-1/4" 57mm	2-1/2" 64mm	3" 76mm	3-1/4" 83mm	3-5/8" 92mm	3-3/4" 95mm	4-1/8" 105mm	4-1/2" 114mm	order number
Handyman's - 7 piece *(includes 1 mandrel and 1 adaptor)*																			
		✓	✓	✓	✓		✓												CHK01
Locksmith's - 9 piece *(includes 2 mandrels and 1 adaptor)*																			
		✓	✓		✓		✓	✓		✓									CHK02
Plumber's - 9 piece *(includes 2 mandrels and 1 adaptor)*																			
	✓	✓		✓			✓	✓			✓								CHK03
Electrician's - 9 piece *(includes 2 mandrels and 1 adaptor)*																			
		✓		✓		✓		✓	✓			✓							CHK04
Electrician's - metric - 9 piece *(includes 2 mandrels and 1 adaptor)*																			
	16mm(5/8"), 20mm, 25mm(1"), 32mm(1-1/4"), 40mm(1-9/16"), 51mm(2")																		CHK05
Journeyman's - 13 piece *(includes 2 mandrels, 1 pilot hole drill, and 1 adaptor)*																			
	✓	✓		✓		✓	✓	✓	✓		✓	✓							CHK06

SAWS

Round Shank



fits the following chuck size	fits the following hole saw size	order number 1885
1/4" (6mm)	9/16" - 1-3/16" (14 to 30mm)	C25116

Hex Shank



fits the following chuck size	fits the following hole saw size	order number 1885
3/8" (9mm)	9/16" - 1-3/16" (14 to 30mm)	C25118
7/16" (11mm)	9/16" - 1-3/16" (14 to 30mm)	C25119

Hex Shank Pinned



fits the following chuck size	fits the following hole saw size	order number 1885
7/16" Pinned (11mm)	1-1/4" - 6" (32 to 152mm)	C25121
3/8" Pinned (9mm)	1-1/4" - 6" (32 to 152mm)	C26198

Hex Shank



fits the following chuck size	fits the following hole saw size	order number 1885
3/8" (9mm)	1-1/4" - 6" (32 to 152mm)	C26195
7/16" (11mm)	1-1/4" - 6" (32 to 152mm)	C26197

Short Pilot Drill with Flat on Shank



description	order number 1885 (2 per pkg.)
3-1/4" overall length x 1/4" dia. (80mm)	C25123

Long Pilot Drill with Whistle Notch on Shank



description	order number 1885 (2 per pkg.)
4" overall length x 1/4" dia. (102mm)	C25124

Adaptor



fits hole saw size	order number 1885
1-1/4" - 6" (32 to 152mm)	C26196

Style: RSB-D

Bi-Metal Reciprocating Blade
Demolition - Wood / Nail

Note
Wider (7/8") and thicker (.062") blades engineered for heavy-duty, tough cutting, demolition applications.

Available in 6", 9", and 12" lengths with 1/2" universal shanks.

M42 Cobalt



Inch (teeth per inch)	order number RSB-D 5 pc.	10 pc.	20 pc.
6" x 7/8" x 0.062" (6)	C30101	C30135	C30156
9" x 7/8" x 0.062" (6)	C30102	C30136	C30157
12" x 7/8" x 0.062" (6)	C30103	C30137	C30158

Style: RSB-D

Bi-Metal Reciprocating Blade
Demolition - Metal / Rescue

Note
Wider (1.0") and thicker (.042") blades engineered for heavy-duty, tough cutting, demolition applications.

Available in 6", 9", and 12" lengths with 1/2" universal shanks.

M42 Cobalt



Inch (teeth per inch)	order number RSB-D 5 pc.	10 pc.	20 pc.
6" x 1" x 0.042" (14)	C30104	C30138	C30159
9" x 1" x 0.042" (14)	C30105	C30139	C30160
12" x 1" x 0.042" (14)	C30106	C30140	C30161

Style: RSB-P

Bi-Metal Reciprocating Blade
Pallet

Note
Wider (3/4") and thicker (.035") blades engineered for the dismantling of pallets.

Available in 8" lengths with 1/2" universal shanks.

- M42 cutting edge with 8% cobalt for longer life.
- Special heat treat for increased tooth life.
- Special blade backer for greater flexibility when cutting block pallets.
- Unique tooth design for fast cutting.
- Rounded nose for easy cutting and safe operation.

M42 Cobalt



Inch (teeth per inch)	order number RSB-P 10 pc.
8" x 3/4" x 0.035" (10)	C25217

Bi-Metal Reciprocating Blade
Wood

Style: RSB-BM

Note

General roughing-in work for wood and nail embedded woods.

Designed for efficient cutting in a wide variety of wood.

1/2" universal shank fits all standard 1/2" shank reciprocating saws.

Tapered end allows for plunge cutting.

Wood | Bi-Metal | M42 Cobalt



Inch (teeth per inch)	order number RSB-BM 5 pc.	10 pc.	50 pc.
6" x 3/4" x 0.050" (5/7)	C30107	C30141	C30170
6" x 3/4" x 0.050" (6)	C30108	C30142	C30171
6" x 3/4" x 0.050" (10)	C30109	C30143	C30172
9" x 3/4" x 0.050" (6)	C30110	C30144	C30173
12" x 3/4" x 0.050" (6)	C30111	C30145	C30174

Bi-Metal Reciprocating Blade
Metal

Style: RSB-BM

Note

See application information below.

Designed for efficient cutting in a wide variety of materials including metal, rod, pipe, and conduit.

1/2" universal shank fits all standard 1/2" shank reciprocating saws.

Quick and accurate cutting.

METAL | Bi-Metal | M42 Cobalt



Inch (teeth per inch)	order number RSB-BM 5 pc.	10 pc.	50 pc.	Applications
6" x 3/4" x 0.035" (14)	C30112	C30146	C30175	14 teeth per inch: For metals heavier than 1/8", bar stock, angles, rubber, masonite, fiberglass, etc.
6" x 3/4" x 0.035" (18)	C30113	C30147	C30176	18 teeth per inch: For heavy gauge sheet metal, conduit, pipe, tubing, thin fiberglass.
6" x 3/4" x 0.035" (24)	C30114	C30148	C30177	24 teeth per inch: For metals lighter than 18-gauge, thin wall tubing, formed sheet, trim, etc.
8" x 3/4" x 0.035" (18)	C30115	C30149	C30178	
9" x 3/4" x 0.035" (14)	C30116	C30150	C30179	
12" x 3/4" x 0.035" (18)	C30117	C30151	C30180	

Styles: RSB-BM *(continued)*

Bi-Metal Reciprocating Blade
All-Purpose Cutting

Wood | METAL | Bi-Metal | M42 Cobalt

Note
Heavy gauge metals, composites, masonite, wood, etc.
Designed for efficient cutting in a wide variety of materials including wood, metal, and plastic.
1/2" universal shank fits all standard 1/2" shank reciprocating saws.
Quick and accurate cutting.



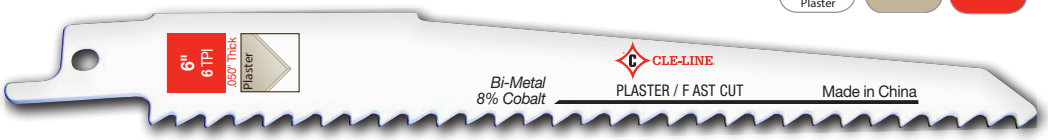
Inch (teeth per inch)	order number RSB-BM 5 pc.	10 pc.	50 pc.
8" x 3/4" x 0.035" (10/14)	C30118	C30152	C30181
12" x 3/4" x 0.050" (10/14)	C30119	C30153	C30182
12" x 3/4" x 0.050" taper (10/14)	C30120	C30154	C30183

Style: RSB-BM

Bi-Metal Reciprocating Blade
Plaster Cutting

Plaster | Bi-Metal | M42 Cobalt

Note
High performance, and fast cutting for plaster.
Designed for efficient cutting in plaster or drywall by minimizing tear out.



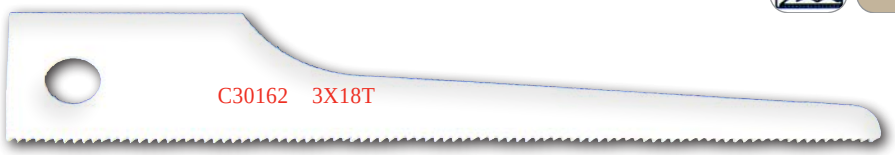
Inch (teeth per inch)	order number RSB-BM 5 pc.	10 pc.	50 pc.
6" x 3/4" x 0.050" straight (6)	C30121	C30155	C30184

Style: RSB-BM

Bi-Metal Reciprocating Blade
Air Saw

METAL | Bi-Metal | M42 Cobalt

Note
See application information below.
Specifically designed blades for use in pneumatic saws. Air Saw blades have fine teeth for cutting metal.



Inch (teeth per inch)	order number RSB-BM 20 pc.	Applications
3" x 1/2" x 0.025" (18)	C30162	18 teeth per inch: For scroll cutting metals lighter than 14 gauge.
3" x 1/2" x 0.025" (24)	C30163	24 teeth per inch: For scroll cutting metals lighter than 18 gauge, thin tubing, formed sheets, trim, etc.
3" x 1/2" x 0.025" (32)	C30164	32 teeth per inch: For scroll cutting metals, very thin gauge metals, sheet, tubing, trim, etc.
4" x 1/2" x 0.025" (18)	C30165	
4" x 1/2" x 0.025" (32)	C30166	
5" x 1/2" x 0.025" (18)	C30167	

CLE-LINE

Bi-Metal Hacksaw Blades

Style: HB-BM

Wood | METAL | Bi-Metal | M42 Cobalt

Note

Cut medium metals (1/16" to 1/4") such as sheet metal, angle iron, bolts, channels, drill rod, threaded rod, pipes, and tubing.

Bi-Metal construction.

Flexible steel spring back.

High speed steel cutting edge.

Blade is heat, shock, and shatter resistant.

For heavy-duty cutting.



Inch (teeth per inch)	order number HB-BM 10 pc.	100 pc.
10" x 1/2" x 0.025" (18)	C25239-10	C25239
10" x 1/2" x 0.025" (24)	C25240-10	C25240
10" x 1/2" x 0.025" (32)	C25241-10	C25241
12" x 1/2" x 0.025" (14)	C25242-10	C25242
12" x 1/2" x 0.025" (18)	C26125-10	C26125
12" x 1/2" x 0.025" (24)	C25244-10	C25244
12" x 1/2" x 0.025" (32)	C25245-10	C25245
12" x 1/2" x 0.025" (10/14)	C25246-10	C25246
12" x 1/2" x 0.025" (14/18)	C25247-10	C25247
12" x 1/2" x 0.025" (18/24)	C25248-10	C25248

Bi-Metal Portable Band Saw

Portable Bands (Matrix II)

Style: P1000

METAL | Bi-Metal | M42 Cobalt

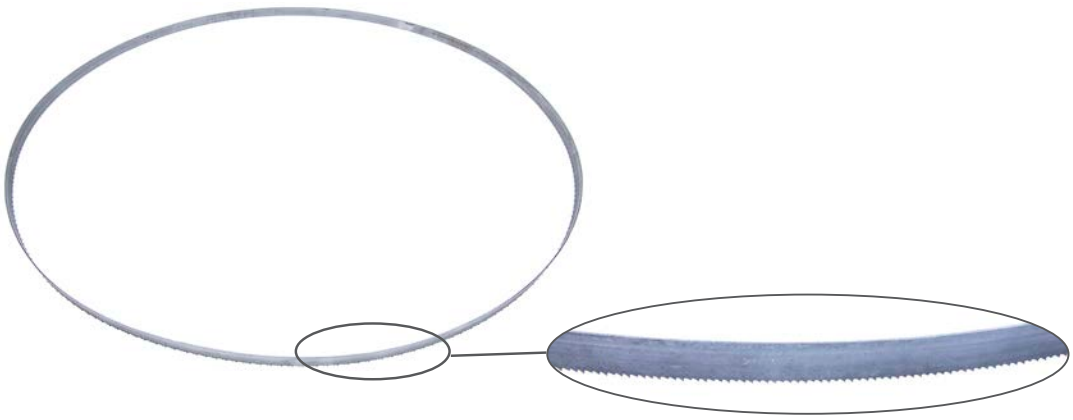
Note

Bi-metal construction.

Matrix II cutting edge containing 8% cobalt.

Available in standard and variable tooth style.

Less tooth chippage.



Inch (teeth per inch)	order number P1000 3 bands	150 bands	NEW
44-7/8" x 1/2" x 0.020" (10/14)	C25126	C25126-150	150 band pack will be available in January 1, 2019
44-7/8" x 1/2" x 0.020" (14/18)	C25127	C25127-150	
44-7/8" x 1/2" x 0.020" (10) Raker	C25129	C25129-150	
44-7/8" x 1/2" x 0.020" (14) Raker	C25130	C25130-150	
44-7/8" x 1/2" x 0.020" (18) Raker	C25131	C25131-150	
44-7/8" x 1/2" x 0.020" (24) Raker	C25132	C25132-150	

>> Order Weld-to-Length <<

How To Order Example

Order Number	Add	*Add Length Required (specify in inches)
C25149	WTL	144"

New Part Number

C26149WTL144"

Available with all styles T1000 - T7000

Minimum Length = 60"

Cut to customer specifications
Weld-to-Length Band Saw Program

Reduce Cost • Custom Fit
Call 800-348-2885 for more information

Please Note...



All Band Saw Coils

+/- 10% shipping policy on the number of feet sold. Coils thru 1-1/4" are 250 feet per coil, over 1-1/4" 150 feet per coil.

Style: T1000

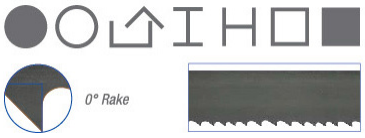
Straight Tooth

Note

Bi-metal construction.
M42 high speed steel cutting edge provides higher heat and wear durability.
Tooth hardness Rc 67-69.
Straight tooth 0° rake for smoother cutting and general applications.
** 150 foot coils, all others 250 feet*
Minimum Length = 60"

Abbreviations below: C = Constant, V = Variable / R = Raker, W = Wavy

All-purpose band for moderate to difficult to cut material.



Inch (teeth per inch)	C / V	R / W	order number T1000
3/4" x 0.035" (6/10)	V	R	C25149
3/4" x 0.035" (8/12)	V	R	C25150
3/4" x 0.035" (10/14)	V	R	C26136
3/4" x 0.035" (10)	C	R	C25152
3/4" x 0.035" (14)	C	W	C25153
1" x 0.035" (4/6)	V	R	C26134
1" x 0.035" (10/14)	V	R	C26133
1" x 0.035" (3/4)	V	R	C25154
1" x 0.035" (5/8)	V	R	C25156

Inch (teeth per inch)	C / V	R / W	order number T1000
1" x 0.035" (6/10)	V	R	C25157
1" x 0.035" (8/12)	V	R	C25158
1" x 0.035" (14T)	C	W	C25160
1-1/4" x 0.042" (3/4)	V	R	C25161
1-1/4" x 0.042" (4/6)	V	R	C25162
1-1/4" x 0.042" (5/8)	V	R	C25163
1-1/4" x 0.042" (6/10)	V	R	C25164
1-1/2" x 0.050" (4/6)	V	R	*C26135

Style: T2000

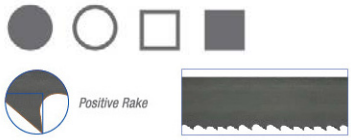
5° Positive Rake Tooth

Note

Bi-metal construction.
M42 high speed steel cutting edge provides higher heat and wear durability.
Tooth hardness Rc 67-69.
5° Positive rake tooth for easier penetration and reduced vibration.
** 150 foot coils, all others 250 feet*
Minimum Length = 60"

Abbreviations below: C = Constant, V = Variable / R = Raker, W = Wavy

For both production or non-production cutting of solids and thick wall tubing of medium alloy. For work hardened materials such as stainless steel.



Inch (teeth per inch)	C / V	R / W	order number T2000
3/4" x 0.035" (4/6)	V	R	C25166
3/4" x 0.035" (5/7)	V	R	C25167
1" x 0.035" (2/3)	V	R	C25168
1" x 0.035" (3/4)	V	R	C25169
1" x 0.035" (4/6)	V	R	C25170
1" x 0.035" (5/7)	V	R	C26137
1" x 0.035" (2) Hook	C	R	C25172
1" x 0.035" (6)	C	R	C25173
1" x 0.035" (8)	C	R	C25174

Inch (teeth per inch)	C / V	R / W	order number T2000
1-1/4" x 0.042" (2/3)	V	R	C25175
1-1/4" x 0.042" (3/4)	V	R	C25176
1-1/4" x 0.042" (4/6)	V	R	C25177
1-1/4" x 0.042" (5/7)	V	R	C26139
1-1/4" x 0.042" (6)	C	R	C25179
1-1/2" x 0.050" (2/3)	V	R	*C26138
1-1/2" x 0.050" (3/4)	V	R	*C25181
1-1/2" x 0.050" (4/6)	V	R	*C25182

10° High Positive Rake

Style: T3000

Note

Bi-metal construction.

M42 high speed steel cutting edge provides higher heat and wear durability.

Tooth hardness Rc 67-69.

Duplex tooth design.

10° high positive rake with DUPLEX tooth design for maximum strength when cutting difficult material such as super alloy.

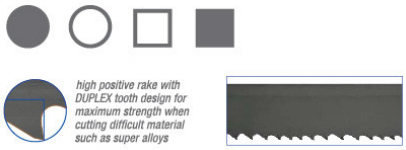
Specially engineered relief angle.

More aggressive acting for easier chip formation.

** 150 foot coils, all others 250 feet*

Minimum Length = 60"

Production sawing of exotic materials such as Inconels, Monels, Hastalloys, Hi-Temp Alloys, Titanium, Stainless and more.



Abbreviations below: C = Constant, V = Variable / R = Raker, W = Wavy

Inch (teeth per inch)	C / V	R / W	order number T3000
3/4" x 0.035" (4/6)	V	R	C26143
1" x 0.035" (2/3)	V	R	C25184
1" x 0.035" (3/4)	V	R	C26140
1" x 0.035" (4/6)	V	R	C25186
1-1/4" x 0.042" (2/3)	V	R	C26141
1-1/4" x 0.042" (3/4)	V	R	C25188
1-1/4" x 0.042" (4/6)	V	R	C25189

Inch (teeth per inch)	C / V	R / W	order number T3000
1-1/2" x 0.050" (2/3)	V	R	*C25190
1-1/2" x 0.050" (3/4)	V	R	*C25191
1-1/2" x 0.050" (4/6)	V	R	*C25192
2" x 0.063" (2/3)	V	R	*C25193
2" x 0.063" (3/4)	V	R	*C26142
2" x 0.063" (4/6)	V	R	*C25195

Protective Tooth

Style: T4000

Note

Bi-Metal construction.

M42 high speed steel cutting edge provides higher heat and wear durability.

Tooth hardness Rc 67-69.

Protective tooth specially designed for tube. To prevent tooth breakage by eliminating excessive tooth stripping due to the domino effect. To withstand the shock of interrupted cuts, allowing for heavier penetration under fast cutting rate.

** 150 foot coils, all others 250 feet*

Minimum Length = 60"

Tubes, structures, small sizes bundles.



Abbreviations below: C = Constant, V = Variable / R = Raker, W = Wavy

Inch (teeth per inch)	C / V	R / W	order number T4000
1" x 0. 035" (4/6)	V	R	C25196
1-1/4" x 0.042" (4/6)	V	R	C25197
1-1/2" x 0.042" (4/6)	V	R	*C25198

Heavy Set

Style: T5000

Note

Bi-Metal construction.

M42 high speed steel cutting edge provides higher heat and wear durability.

Tooth hardness Rc 67-69.

Heavy Set teeth are individually set teeth similar to the Raker Set but are set wider preventing the blade from being pinched or becoming bound during cutting

** 150 foot coils, all others 250 feet*

Minimum Length = 60"

For large bundle cutting of structural steel. Ideal for applications where a larger kerf is needed to prevent blade pinching and stalling from material stresses and movement.



Abbreviations below: C = Constant, V = Variable / R = Raker, W = Wavy

Inch (teeth per inch)	C / V	R / W	order number T5000
1" x 0.035" (4/6)	V	R	C25200
1" x 0.035" (5/7)	V	R	C25201
1-1/4" x 0.042" (3/4)	V	R	C25202
1-1/4" x 0.042" (4/6)	V	R	C26144
1-1/4" x 0.042" (5/7)	V	R	C25204

Inch (teeth per inch)	C = Constant V = Variable	R / W	order number T5000
1-1/2" x 0.050" (3/4)	V	R	*C25205
1-1/2" x 0.050" (4/6)	V	R	*C25206
1-1/2" x 0.050" (5/7)	V	R	*C25207
2" x 0.063" (2/3)	V	R	*C25208
2" x 0.063" (3/4)	V	R	*C25209
2" x 0.063" (4/6)	V	R	*C26145

Style: T6000

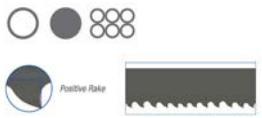
Turtle Back

Note

- *Bi-Metal construction.*
- *M42 high speed steel cutting edge provides higher heat and wear durability.*
- *Tooth hardness Rc 67-69.*
- *Turtle Back Set is a tooth configuration that has a reinforced shoulder or "Turtle Back Hump" on the back of the cutting edge to prevent stripping out and interrupting cuts.*
- ** 150 foot coils, all others 250 feet*
- ***Minimum Length = 60"***

Abbreviations below: C = Constant, V = Variable / R = Raker, W = Wavy

Profiles for thick wall tubing, alloy steel, single layer and bundle cutting steel girders.



Inch (teeth per inch)	C / V	R / W	order number T6000
1" x 0.035" (3/4)	V	R	C26146
1-1/4" x 0.042" (3/4)	C	R	C26147
1-1/2" x 0.050" (3/4)	V	R	*C26148

Style: T7000

Narrow Width Bands (M42)

Note

- *Narrow Width (M42)*
- *Bi-Metal construction.*
- *M42 high speed steel cutting edge provides higher heat and wear durability.*
- *Solid and thick wall tubing of medium to difficult material, such as stainless steel.*
- *Tooth hardness Rc 67-69.*
- *Narrow width (1/2") for contour and miter cutting.*
- *Narrow width and gauge can be welded by customer for die building and internal cutting re-use.*
- *HSS edge contains 8% cobalt.*
- ***Minimum Length = 60"***

Abbreviations below: C = Constant, V = Variable / R = Raker, W = Wavy



Inch (teeth per inch)	C / V	R / W	order number T7000
1/2" x 0.025" (6/10)	V	R	C26127
1/2" x 0.025" (8/12)	V	R	C26128
1/2" x 0.025" (10/14)	V	R	C25141
1/2" x 0.025" (14) Raker	C	R	C25142
1/2" x 0.025" (18) Wavy	C	W	C25143
1/2" x 0.035" (8/12)	V	R	C25144

Inch (teeth per inch)	C / V	R / W	order number T7000
1/2" x 0.035" (10/14)	V	R	C25145
1/2" x 0.035" (6) Positive	C	R	C25147
1/2" x 0.035" (14) Raker	C	R	C25148
1/2" x 0.035" (4) Hook	C	R	C26129

Please Note...



All Band Saw Coils

+/- 10% shipping policy on the number of feet sold. Coils thru 1-1/4" are 250 feet per coil, over 1-1/4" 150 feet per coil.

SAWS

Recommended Operating Speeds for Hole Saws

Guidelines on generally recommended operating speeds. Always follow the recommendations of the hole saw manufacturer concerning use and operating speeds.

Bi-Metal Hole Saw Operating Speeds (RPM Table)

inches	mm	length	mild steel	tool steel & stainless	cast iron	brass	aluminum	wood
9/16	14	0.147	580	300	400	790	900	3000
5/8	16	0.164	550	275	365	730	825	3000
11/16	17	0.180	500	250	330	665	750	3000
3/4	19	0.196	460	230	300	600	690	3000
–	20	0.213	440	220	290	580	660	3000
7/8	22	0.229	390	195	260	520	585	3000
1	25	0.262	350	175	235	470	525	2700
1-1/16	27	0.278	325	160	215	435	480	2700
1-1/8	29	0.295	300	150	200	400	450	2700
1-3/16	30	0.311	285	145	190	380	425	2400
1-1/4	32	0.327	275	140	180	360	410	2400
1-5/16	33	0.344	260	135	175	345	390	2400
1-3/8	35	0.360	250	125	165	330	375	2400
1-7/16	37	0.376	240	120	160	315	360	2400
1-1/2	38	0.393	230	115	150	300	345	2400
1-9/16	40	0.409	220	110	145	290	330	2100
1-5/8	41	0.425	210	105	140	280	315	2100
1-11/16	43	0.442	205	100	135	270	305	2100
1-3/4	44	0.458	195	95	130	260	295	2100
1-13/16	46	0.475	190	95	125	250	285	2100
1-7/8	48	0.491	180	90	120	240	270	2100
2	51	0.524	170	85	115	230	255	2000
2-1/16	52	0.540	165	80	110	220	245	2000
2-1/8	54	0.556	160	80	105	210	240	2000
2 1/4	57	0.589	150	75	100	200	225	2000
2-5/16	59	0.605	145	75	95	195	225	2000
2-3/8	60	0.622	140	70	90	190	220	2000
2-1/2	64	0.655	135	65	85	180	205	1850
2-9/16	65	0.671	130	65	85	175	200	1850
2 5/8	67	0.687	130	65	85	170	195	1800
–	68	0.704	130	65	80	170	190	1800
2-3/4	70	0.720	125	60	80	160	185	1800
2-7/8	73	0.753	120	60	75	160	180	1800
3	76	0.785	115	55	70	150	170	1800
3-1/8	79	0.818	110	55	70	140	165	1500
3-1/4	83	0.851	105	50	65	140	155	1500
3-3/8	86	0.884	100	50	65	130	150	1500
3-1/2	89	0.916	95	45	60	130	145	1200
3 5/8	92	0.949	90	45	60	120	140	1200
3-3/4	95	0.982	90	45	60	120	135	1200
3-7/8	98	1.014	90	45	60	120	135	1200
4	102	1.047	85	40	55	110	130	1000
4-1/8	104	1.080	80	40	55	110	120	1000
4-1/4	108	1.113	80	40	55	110	120	900
4-3/8	111	1.145	80	40	50	100	120	900
4-1/2	114	1.178	75	35	50	100	105	900
4-3/4	121	1.244	75	35	50	92	95	900
5	127	1.309	65	30	45	90	90	800
5-1/2	140	1.440	60	25	40	85	85	800
5-3/4	146	1.505	55	25	35	75	75	800
6	152	1.571	55	25	35	75	75	800

Hole Saw Operating Speeds (RPM Table)

inches	mm	brick ceramic	slate	reinforced plastics	fiberglass
5/8	16	620	1540	2140	920
3/4	19	510	1280	1790	770
–	20	470	1180	1660	715
7/8	22	430	1090	1530	660
1	25	380	960	1340	580
1-1/8	29	340	850	1190	510
1-1/4	32	310	770	1070	460
1 3/8	35	280	700	980	420
1-1/2	38	260	640	890	390
1-3/4	44	220	550	770	330
1-7/8	48	200	510	720	310
2	51	190	480	670	290
2-1/8	54	180	450	630	280
2-1/4	57	170	430	600	270
2-3/8	60	160	400	570	250
2-1/2	64	150	380	540	230
2-3/4	70	140	350	500	210
3	76	130	320	450	190
3-1/4	83	120	295	415	180
3-3/8	86	115	285	400	175
3-3/4	95	102	255	350	160
4	102	95	240	330	150
4-1/2	114	82	215	290	125

diameter inch	diameter mm	pipe tap dia. inch	pipe tap dia. mm	pipe entrance dia inch	pipe entrance dia mm	order number 1887 M3	order number 1887 M42
9/16	14	—	—	—	—	C25058	C25000
5/8	16	—	—	—	—	C26149	C26121
11/16	17	—	—	—	—	C26102	C25002
3/4	19	1/2	13	3/8	10	C25061	C26113
—	20	—	—	—	—	C25062	C25004
13/16	21	—	—	—	—	C26106	C26105
7/8	22	3/4	19	1/2	13	C25064	C25006
*7/8	22	3/4	19	1/2	13	C24998	C24999
15/16	24	—	—	—	—	C25065	C25007
1	25	—	—	—	—	C25066	C26101
1-1/16	27	—	—	—	—	C25067	C25009
1-1/8	29	1	25	3/4	19	C25068	C26103
1-3/16	30	—	—	—	—	C25069	C25011
1-1/4	32	—	—	—	—	C25070	C25012
1-5/16	33	—	—	—	—	C25071	C25013
1-3/8	35	—	—	1	25	C26108	C25014
1-7/16	37	—	—	—	—	C25073	C25015
1-1/2	38	1-1/4	32	—	—	C25074	C25016
1-9/16	40	—	—	—	—	C25075	C25017
1-5/8	41	—	—	—	—	C25076	C25018
1-11/16	43	—	—	—	—	C25077	C26104
1-3/4	44	1-1/2	38	1-1/2	38	C25078	C26107
—	45	—	—	—	—	C26120	C25021
1-13/16	46	—	—	—	—	C25080	C25022
1-7/8	48	—	—	—	—	C25081	C25023
—	50	—	—	—	—	C25082	C25024
2	51	—	—	1-1/2	38	C25083	C25025
2-1/16	52	—	—	—	—	C25084	C25026
2-1/8	54	—	—	—	—	C25085	C25027
—	55	—	—	—	—	C25086	C25028
2-1/4	57	2	51	—	—	C26109	C25029
2-5/16	59	—	—	—	—	C25088	C25030
2-3/8	60	—	—	—	—	C25089	C25031
2-1/2	64	—	—	2	51	C25090	C25032
2-9/16	65	—	—	—	—	C25091	C25033
2-5/8	67	2-1/2	64	—	—	C25092	C26111
—	68	—	—	—	—	C25093	C25035
2-3/4	70	—	—	—	—	C26110	C25036
2-7/8	73	—	—	—	—	C26112	C25037
—	75	—	—	—	—	C25096	C25038
3	76	—	—	2-1/2	64	C25097	C25039
3-1/8	79	—	—	—	—	C25098	C25040
3-1/4	83	3	76	—	—	C25099	C26115
3-3/8	86	—	—	—	—	C26116	C25042
3-1/2	89	—	—	—	—	C25001	C25043
3-5/8	92	—	—	3	76	C25102	C25044
3-3/4	95	3-1/2	89	—	—	C25103	C25045
3-7/8	98	—	—	—	—	C25104	C25046
—	100	—	—	—	—	C25105	C25047
4	102	—	—	—	—	C25106	C25048
4-1/8	105	—	—	3-1/2	89	C25107	C25049
4-1/4	108	4	102	—	—	C26118	C25050
4-3/8	111	—	—	—	—	C25109	C25051
4-1/2	114	—	—	—	—	C26117	C25052
4-3/4	121	4-1/2	114	4	102	C25111	C26119
5	127	—	—	—	—	C25112	C25054
5-1/2	140	—	—	5	127	C25113	C25055
5-3/4	146	—	—	—	—	C25114	C25056
6	152	—	—	—	—	C25115	C25057

**1-1/2" (32mm) cutting depth*

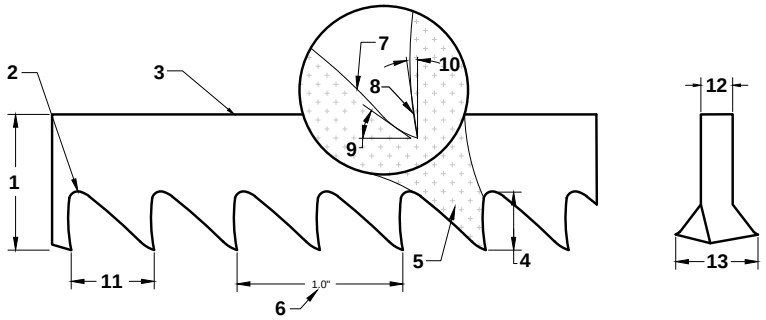
Tech Tip

- Always wear eye protection.
- Always be sure that the pilot drill extends beyond the cutting edge of the saw by at least 1/8".
- Be sure to secure the material to be cut to keep it from spinning or slipping.
- Start the cutting process with the saw square to the material being cut, this will ensure that all teeth begin to cut at the same time and will help prevent premature wear and damage to the saw.
- Follow the recommended operating speed for the saw size and the material being cut.
- Operator should feed the saw in and out to allow the material shavings to clear out of the hole being cut.
- Cutting oils or lubricants should be used to extend the life of the saw, except when cutting wood or cast iron.
- Occasionally check the mandrel's drive pins to be sure they are still fully engaged in the saw and that they have not vibrated out of the drive holes in the saw.
- When sawing in wood, finish the hole from the opposite side to prevent splintering. Once the pilot drill has broken through the other side, you can use this hole to guarantee you are in line with where you have already started cutting.
- When sawing resistant and difficult to cut materials, drill a couple of small holes on the circumference to allow chip to clear.
- Keep an oil soaked sponge inside the hole saw if you:
  - Cannot lubricate in the normal way
  - Operate in stainless steel
  - Operate in a vertical position from above.

Tech Tip

Pipe and Tap Entrance

- Pipe taps are used for threading holes created by a hole saw to receive a threaded pipe. Reference the product charts for proper selection. To cut a hole for a 1" pipe tap, select a 1-1/8" hole saw.
- Pipe entrance is the diameter for the hole through which a pipe of a given diameter will pass during installation or repair.
- Pipe size is defined by the inside diameter. To cut a hole through which a 3/4" pipe may be passed, a 1-1/8" hole saw is used.
- Tubing size is defined by the outside diameter. To cut an entrance hole of a given tubing diameter, the same diameter hole saw should be used.



Terminology

1) Width
The nominal dimension of a saw blade, as measured from the tip of the tooth to the back of the blade.

2) Gullet
The curved area at the base of the tooth.

3) Blade Back
The blade body, not including the tooth portion.

4) Gullet Depth
The distance from the tooth tip to the bottom of the gullet.

5) Tooth
The cutting portion of the saw blade.

6) TPI
The number of teeth per inch.

7) Tooth Back or Relief Angle
The surface of the tooth opposite the cutting edge, or tooth face.

8) Tooth Face or Rake Angle
The cutting surface of the tooth.

9) Tooth Back Clearance Angle
The angle of the tooth back measured in relation to the cutting direction of the saw.

10) Tooth Rake Angle
The angle of the tooth face measured with respect to a line perpendicular to the cutting direction of the saw.

11) Tooth Pitch
The distance from one tooth tip to the next tooth tip.

12) Thickness (Gage)
The thickness of the blade.

13) Tooth Set
The bending of the teeth from right to left to allow clearance **(kerf)** of the blade back through the cut.

TECHNICAL

Tooth Form

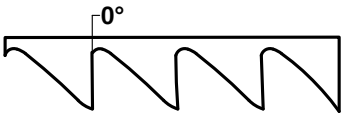
Positive Rake
A positive rake is characterized by a 5° to 10° rake angle on the tooth face, resulting in better tooth penetration and easier chip formation. This tooth form is recommended for cutting difficult to machine materials, and solid cross-sections.

Positive Rake



Standard Straight
A standard straight tooth has a 0° cutting face, and is recommended for cutting easy-to-cut, low alloy materials. This is an efficient tooth form for cutting structural materials and interrupted cuts.

Standard Straight Rake



Tooth Type

Regular
This is a conventional tooth with a 0° cutting angle, ideal for a wide range of general purpose cutting applications.

Hook
This tooth type has a 10° positive rake angle for fast cutting with less feed pressure. The rounded, deeper gullets allow for fast chip removal, and is generally used for cutting nonmetallic and non-ferrous metals.

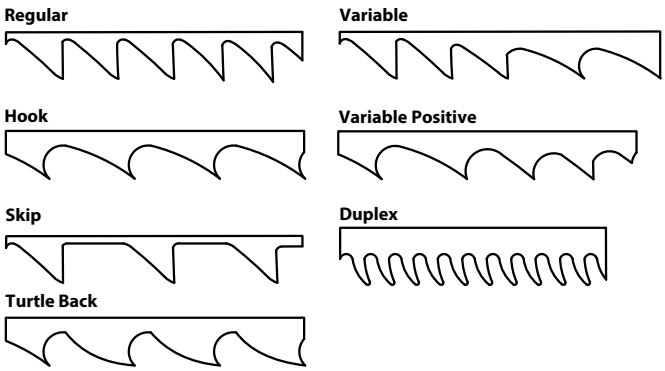
Skip
This tooth type has a 0° rake angle with shallow gullets and evenly spaced teeth for efficient chip removal. It is used for cutting large sections of soft, non-ferrous metal and nonmetal materials, such as wood, composite materials, cork, and plastic.

Turtle Back
This is a tooth configuration that has a reinforced shoulder or “Turtle Back Hump” on the back of the cutting edge to prevent stripping out and interrupted cuts.

Variable
A traditional tooth form that offers a 0° rake angle, varying gullet depths, and tooth sizes. Designed to reduce harmonic vibration, this blade efficiently removes chips, extending blade life in solids and structural.

Variable Positive
Variable positive tooth form offers varying gullet depths, tooth sizes, and a positive rake angle for maximum cutting speeds and better tooth penetration in harder to machine materials.

Duplex
Duplex blades offer deep, chip clearing gullets, large chip-resistant teeth, and a high positive rake angle. This results in faster sawing rates, and improved finishes. Duplex blades are recommended for production cutting of work hardened metals, tool steels, and exotic alloys.



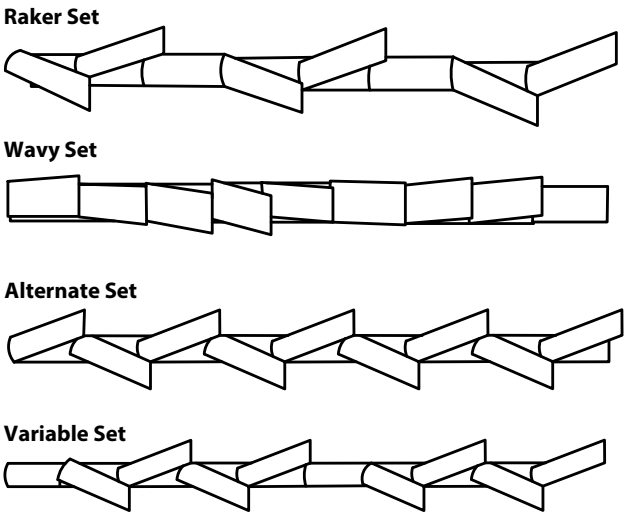
Tooth Set

Raker Set
These are individually set teeth — first right then left — followed by an unset tooth. The unset tooth (raker tooth) allows for fast chip removal and a straight cutting actions This tooth set is recommended for general purpose cutting applications.

Wavy Set
Wavy set teeth are set in groups, right and left, in varying degrees. Wavy set teeth are recommended for cutting light metal sections, such as sheet, tubing, and small solid shapes.

Alternate Set
In an alternate tooth set, every tooth is set — one left, one right — throughout the blade length. This tooth set is primarily used for cutting wood.

Variable Set
Variable set teeth are set in alternating groups with a single unset tooth (raker tooth). When these are combined with the varying set angles of the teeth, a faster, smoother, quieter cutting actions is achieved. Variable tooth blades perform extremely well on most applications and provide fast cutting on solids, shapes, structural, and piping.



Guidelines

Successful Band Saw Operation and Geometries

TECHNICAL

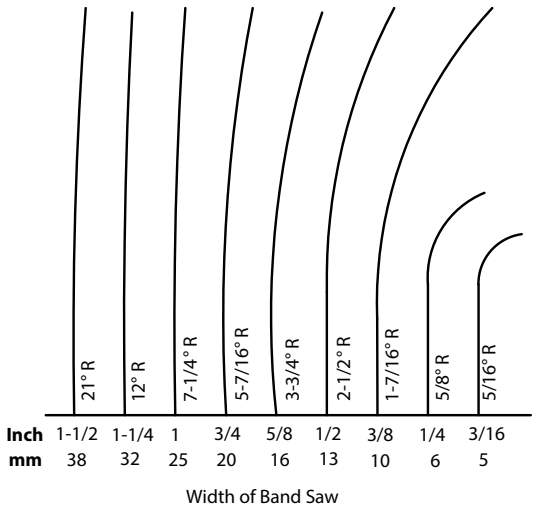
Blade Width Selection

The dimension from tooth tip to back edge of the blade is the blade width. The greater the width, the greater the resistance to deflection while cutting. For straight cutting applications, use the widest blade the machine can accept. For contour cutting use the widest blade that the contour radius will permit, see **Minimum Radii Cutting Chart** to the right.

Radii in this chart are based on manual feeding of one-inch thick milled steel. To cut close tolerance radii the following factors must be considered:

- Blade width
- Machinability
- Location of pivot point
- Material thickness
- Feed force

Minimum Radii Cut Chart



Teeth Per Inch

The pitch of the blade is defined by the number of TPI (Teeth Per Inch). Non-ferrous materials such as brass, bronze, and aluminum require a large chip area. A low TPI, or "course" pitch, prevents the chips from clogging and binding together in the gullets, which can diminish sawing and damage the blade.
On thin walled pipe, tubing, and sheet, many teeth per inch are required in order to avoid damaging or breaking the teeth. A low TPI blade is the best blade for cutting large cross-sections. The ability of each tooth to cut into the workpiece is increased because the saw's feed pressure is distributed over fewer teeth. A coarse pitch blade increases productivity and provides large chip clearing gullets.

Blade Break-In

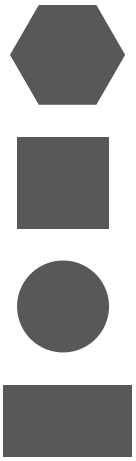
Set Band Saw machine at the recommended speed for the material to be cut. When cutting easily machined metals, the cutting rate should be set at 1/3 to 1/2 of the recommended rate for the first 50 to 75 square inches.
When cutting difficult to machine metals, such as tool steels or workhardened alloys, set the cutting rate at 3/4 of the recommended rate for the first 25 square inches. Gradually increase the feed until you achieve the recommended cutting rate after 50 to 60 square inches.

continued on the next page

Tooth Selection

Tooth selection is based on the principle that there is a tooth pitch best suited for the cutting job. Blade selections should be based on the size, shape, accuracy, materials, and cutting rate expected. The chart below will help you select the correct pitch for cutting solids, tubes, and structurals.

Keep in mind these numbers: 3, 6, 12, and 24. There should be a minimum of three teeth in the work at all times for bi-metal bands. Ideally, 6-12 teeth should be in contact with the work; 24 teeth in the work is too many.



Solids

Cross-section	Pitch
1/4"	10/14 TPI 14 TPI
3/8" - 3/4"	8/12 TPI 10 TPI 8 TPI
3/4"-1-1/2"	4/6 TPI 6 TPI 5/8 TPI
1-1/2" - 3"	4/6 TPI 4 TPI 3/4 TPI
3" - 6"	2/3 TPI 3/4 TPI 3 TPI
6" - 10"	2 TPI 2/3 TPI
10" - 14"	.75 TPI .8/1.5 TPI



Structural

Cross-section	Pitch
1/4" - 1/2"	10/14 TPI 10 TPI 8/12 TPI
1/2" - 3/4"	8 TPI 6/10 TPI 5/8 TPI
3/4" - 1"	4/6 TPI 5/8 TPI 6 TPI



Tubing

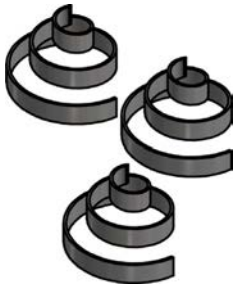
Wall Thickness	Pitch
1/4" - 1/2"	10 TPI 10/14 TPI 8/12 TPI
1/2" - 3/4"	8 TPI 6/10 TPI 5/8 TPI
3/4" - 1"	4/6 TPI 6/10 TPI 6 TPI

Feed Pressure

Chips tell you what is happening with your feed pressure and your blade. Powdery or fine chips indicate not enough feed pressure is being applied. Loosely curled chips tell you everything is going well. Heavy or thick / blue burned chips mean you are pushing the blade to hard, creating too much heat and load for the teeth. If a change in feed or speed rates is required, change one at a time and observe the results after each change.

Correct

Loosely Curled Chip
Correct feed, speed



Incorrect

Thin or powdery chips
Increase feed, speed



Heavy, thick, blue chips
Reduce feed, speed



Tech Tip

Tips On Band Saw Cutting

Machine Checklist

- ___ The blade tension on the tension meter.
- ___ The performance of the chip brush.
- ___ The wear and alignment of the blade guides.
- ___ The band speed with a tachometer.
- ___ The cutting fluid concentration with a refractometer.

Cutting Fluid

The cutting fluid keeps the blade teeth cool; it prevents the chips from welding to the teeth; it also lubricates the chips, allowing them to move through the cut.

- ___ Use a high quality cutting fluid.
- ___ Make sure the cutting fluid is distributed throughout the cut.

Problem	Reason	Solution
Premature and excessive tooth wear	Feed pressure too light	Increase feed pressure
	Band saw too slow	Adjust band speed
	Insufficient coolant, improper coolant mix, or wrong coolant	Apply proper coolant for type material being cut, check flow of coolant
	Improper tooth selection	Call Greenfield Industries for additional information
	Feed pressure too high	Call Greenfield Industries for additional information
	Guides hitting teeth alignment	Check blade
	Improper break-in with new band	Feed should be reduced for first few cuts
Tooth Strippage	Teeth too coarse for material thickness	Select finer pitch
	Material not securely vised	Adjust clamping pressure
	Insufficient or improper coolant	Apply proper coolant for type material begin cut, check flow of coolant
	Excessive feed pressure	Reduce feed pressure
	Band speed too slow	Increase band speed
	Chips loaded in gullet	Replace or adjust chip brush
Finished Surface too Rough	Improper blade selection	Select finer pitch
	Band speed too slow	Adjust band speed
	Feed rate too high	Slow down feed rate
	Improper coolant for type of material being cut	Apply proper coolant
Premature Blade Breakage	Thickness of blade too heavy for diameter of wheels	Select thinner blade
	Band tension too high	Adjust tension
	Improper speed	Call Greenfield Industries for additional information
	Excessive feed pressure	Reduce feed pressure
	Brittle weld	Increase annealing period, decreasing heat gradually
	Saw out of alignment	Get machine properly re-aligned
	Improper coolant	Apply proper coolant for type of material being cut
	Band wheels worn	Replace wheels
Cutting Rate too Slow	Incorrect band speed	Adjust band speed
	Incorrect feed pressure	Adjust feed pressure
	Blade pitch too fine	Select coarser pitch blade
Gullets Loading with Chips	Excessive cutting speed	Reduce cutting rate
	Blade pitch too fine	Select coarse pitch
	Chip brush not working	Replace or adjust chip brush
	Insufficient coolant, improper coolant mix, or improper coolant	Apply proper coolant for type of material being cut, check flow of coolant
Band Squeals	Feed rate too slow	Increase feed rate
	Insufficient coolant flow	Check coolant flow
Belly Shaped Cuts	Blade tension	Check blade tension with tension meter
	Guide arm is too far from work piece	Adjust guides closer to work piece
	Blade pitch too fine	Select coarser pitch blade
	Excessive feed force	Reduce feed force or feed rate
Blade Leading in Cut	Excessive feed force or feed rate	Reduce feed force or feed rate
	Possible hard inclusion	Use cutting oil to reduce leading
	Chip brush not working	Replace or adjust chip brush
	Blade tension too low	Check blade tension with tension meter
Band Develops Twist	Wrong width for radius being cut	Select a narrower blade
	Binding in cut	Adjust blade tension
	Saw guides too close to work piece	Adjust saw guides further from work
Band Stalls in Work	Feed pressure too great	Reduce feed pressure
	Improper blade tension	Adjust blade tension
	Blade pitch too coarse for material being cut	Select finer pitch blade
Burring or Mushrooming of Back Edge	Improper blade tension	Adjust blade tension
	Excessive feed pressure	Reduce feed pressure
	Blade pitch too fine	Select coarser pitch blade
	Improper guide adjustments	Adjust guides
Band Scoring	Band has side wear or grooving	Check saw guide inserts for wear and replace
	Improper alignment of saw guides	Adjust guides so they are square to front vise
	Worn guides	Replace guides
Blade Not Running True against Saw Guide Backup Bearing	Clicking noise against the saw guide backup bearing indicates there is a burr on the back edge of the band	Remove burr on the band
	Weld not in proper alignment	Reweld blade straight and true
	Saw guide backup bearing worn	Replace
	Improper blade tracking	Check band wheel alignment
Band Develops Negative Camber	Band is riding on saw guide backup bearing too heavily	Adjust band alignment on top and bottom wheels Check band wheel alignment
Band Develops Positive Camber	Excessive feed force	Reduce feed force
	Poor tooth penetration	Select a coarser pitch blade for increased tooth penetration
	Saw guide is too far from work piece or no locked	Adjust saw guides closer to work piece
Blade Vibration	Guides poorly adjusted	Check guide adjustments
	Improper band speed	Increase or decrease band speed
	Low blade tension	Increase blade tension
	Feed rate too low	Increase feed rate
	Blade pitch too coarse for material being cut	Select variable pitch blade
	Work piece not properly secured	Adjust clamping pressure
Chip Welding	Excessive feed pressure	Reduce feed pressure
	Excessive cutting speed	Reduce blade speed
	Chip brush not working	Replace or adjust chip brush
	Insufficient or improper coolant	Apply proper coolant for the type of material being cut, check coolant flow



Set Sections

All available sets 112

Solid Carbide Burs		Image: RH Spiral Cut	Image: Double Cut	Image: Aluminum Cut (NEW)	Page
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Carbide Extension Burs

now available on many style types

- Wide selection of shapes and sizes.
- Constructed from solid carbide.
- Bright surface treatment.
- Right-hand spiral cut, double cut, and / or aluminum cut available.
- Solid carbide shanks (Styles A and D) and brazed steel shanks (Styles B and C) available.

Icons

HSS | Bright | NPS

Bur Cutting Speeds

Bur Diameter	Recommended RPM	Maximum RPM
1/16	60,000-90,000	100,000
1/8	40,000-70,000	90,000
3/16	35,000-60,000	80,000
1/4	30,000-50,000	70,000
5/16	20,000-40,000	68,000
3/8	20,000-40,000	66,000
7/16	15,000-40,000	58,000
1/2	15,000-40,000	50,000
5/8	12,000-25,000	40,000
3/4	10,000-20,000	33,000
1	7,500-20,000	25,000

Bur Selection by Material

Workpiece Material	First Choice	Alternative
aluminum	aluminum cut	–
brass	double cut	standard cut
bronze	double cut	standard cut
cast iron	double cut	standard cut
copper	aluminum cut	–
fiberglass	double cut	standard cut
inconel	double cut	standard cut
malleable iron	double cut	standard cut
magnesium	aluminum cut	–
masonite	double cut	standard cut
plastic	standard cut	–
steel alloy	double cut	–
carbon steel	double cut	–
stainless steel	double cut	–
titanium	double cut	–
zinc	aluminum cut	standard cut

Standard Cut Styles



RH Spiral Cut — Cle-Line's right-hand spiral cut produces a smooth finish for general-purpose use on steel, cast iron, and other ferrous and non-ferrous materials.



Double Cut — The double cut style has right- and left-hand helical flutes combined to produce a chisel-type cutting tooth. This feature results in faster penetration and stock removal with minimal bounce or chatter. This results in higher productivity with less operator fatigue and a good finish on a variety of workpiece materials.



Aluminum (end mill) Cut — The aluminum cut can be used for deburring softer, non-ferrous metals and non-metallic materials. The wide clearance and end mill type geometry of the flutes promotes fast stock removal with minimum loading.

Standard Shank Styles

Shank A
1/8" (3mm) solid carbide



Shank B
1/8" (3mm) hardened steel



Shank C
1/4" (6mm) hardened steel



Shank D
1/4" (6mm) solid carbide



CLE-LINE

Solid Carbide Burs
Cylindrical without End Cut

Style: 1845 (CLE-SA)

Note
See index page for Standard Shank Styles explanation.


Right Hand Spiral Cut


Double Cut

USCTI number	cutting diameter fractional	mm	decimal	shank diameter	length of cut	overall length	shank type	order number 1845 RH Spiral Cut	Double Cut
SA-41	1/16		.0625	1/8	1/4	1-1/2	A	C10005	C10008
SA-42	3/32		.0938	1/8	7/16	1-1/2	A	C17601	C17550
SA-43		3	.1181	3	14.3	38.1	A	—	C17591
SA-43	1/8		.1250	1/8	9/16	1-1/2	A	C17602	C17551
SA-14	3/16		.1875	1/4	5/8	2	C	C17608	—
SA-1		6	.2362	6	15.9	50.8	D	—	C17588
SA-51	1/4		.2500	1/8	5/8	2	B	C17606	C17605
SA-1	1/4		.2500	1/4	5/8	2	D	C17609	C17552
SA-1L6	1/4		.2500	1/4	1/2	6-1/2	C	C17800	C17823
SA-2	5/16		.3125	1/4	3/4	2-1/2	C	C17610	C17553
SA-2		7.94	.3125	6	19.1	63.5	C	—	C17589
SA-3	3/8		.3750	1/4	3/4	2-1/2	C	C17611	C17554
SA-3		9.53	.3750	6	19.1	63.5	C	—	C17590
SA-3L6	3/8		.3750	1/4	3/4	6-3/4	C	C17801	C17824
SA-4	7/16		.4375	1/4	1	2-3/4	C	C17612	—
SA-5	1/2		.5000	1/4	1	2-3/4	C	C17613	C17555
SA-5L6	1/2		.5000	1/4	1	7	C	C17802	C17825
SA-5		12.7	.5000	6	25.4	69.9	C	—	C17592
SA-6	5/8		.6250	1/4	1	2-3/4	C	C10006	C17556
SA-7	3/4		.7500	1/4	1	2-3/4	C	C10007	C17615
SA-9	1		1.000	1/4	1	2-3/4	C	C17616	C17557

Solid Carbide Burs
Cylindrical with End Cut

Style: 1846 (CLE-SB)

Note
See index page for Standard Shank Styles explanation.


Right Hand Spiral Cut


Double Cut


Aluminum Cut

USCTI number	cutting diameter fractional	mm	decimal	shank dia	length of cut	overall length	shank type	order number 1846 RH Spiral Cut	Double Cut	Aluminum Cut
SB-41	1/16		.0625	1/8	1/4	1-1/2	A	C10009		
SB-42	3/32		.0938	1/4	1/4	1-1/2	A	C10010	—	—
SB-43		3	.1181	3	14.30	38.1	A	C17632	C17510	—
SB-43	1/8		.1250	1/8	9/16	1-1/2	A	C17622	—	—
SB-11	1/8		.1250	1/4	1/2	2	C	C17625	—	—
SB-14	3/16		.1875	1/4	5/8	2	C	C17626	—	—
SB-1		6	.2362	6	15.90	50.8	D	—	C17507	—
SB-1	1/4		.2500	1/4	5/8	2	D	C17627	C17546	C10015
SB-51	1/4		.2500	1/8	3/16	1-7/16	B	C17624	—	—
SB-51	1/4		.2500	1/8	1/2	1-3/4	A	C10011	C10013	—
SB-2		7.94	.3125	6	19.10	63.5	C	—	C17508	—
SB-3	3/8		.3750	1/4	3/4	2-1/2	C	C17629	C17547	C10016
SB-3		9.53	.3750	6	19.10	63.5	C	—	C17509	—
SB-5	1/2		.5000	1/4	1	2-3/4	C	C17631	C17548	C10017
SB-5		12.7	.5000	6	25.40	69.9	C	—	C17511	—
SB-6	5/8		.6250	1/4	1	2-3/4	C	—	C17549	C10018
SB-6		15.88	.6250	6	25.40	69.9	C	C17633	C17512	—
SB-7	3/4		.7500	1/4	1	2-3/4	C	—	C17781	—
SB-7	3/4		.7500	1/4	1	2-3/4	C	—	C10014	C10019
SB-9	1		1.0000	1/4	1	2-3/4	C	C10012	—	—

Note
See index page for Standard Shank Styles explanation.



Right Hand Spiral Cut



Double Cut



Aluminum Cut

USCTI number	cutting diameter fractional	mm	decimal	shank dia	length of cut	overall length	shank type	order number 1847 RH Spiral Cut	Double Cut	Aluminum Cut
SC-41	3/32		.0938	1/8	7/16	1-1/2	A	C17635	C10023	—
SC-43		3	.1181	3	14.3	38.1	A	C17634	C17517	—
SC-42	1/8		.1250	1/8	9/16	1-1/2	A	C17636	C17540	—
SC-11	1/8		.1250	1/4	1/2	2	C	—	C17539	—
SC-52		3.97	.1562	3	12.7	38.1	A	—	C17520	—
SC14	3/16		.1875	1/4	5/8	2	C	C17641	—	—
SC-53		4.76	.1875	3	12.7	38.1	A	—	C17521	—
SC-1		6	.2362	6	15.9	50.8	D	—	C17513	—
SC-51	1/4		.2500	1/8	1/2	1-3/4	B	C10020	C10024	—
SC-1	1/4		.2500	1/4	5/8	2	D	C17642	C17541	C10026
SC-51		6.35	.2500	3	12.7	44.5	B	—	C17519	—
SC-1L6	1/4		.2500	1/4	1/2	6-1/2	C	C17803	C17826	—
SC-2	5/16		.3125	1/4	3/4	2-1/2	C	—	C17542	—
SC-2		7.94	.3125	6	19.1	63.5	C	—	C17514	—
SC-3	3/8		.3750	1/4	3/4	2-1/2	C	C17644	C17543	C10027
SC-3		9.53	.3750	6	19.1	63.5	C	—	C17515	—
SC-3L6	3/8		.3750	1/4	3/4	6-3/4	C	C17804	C17827	—
SC-5	1/2		.5000	1/4	1	12	C			C10028
SC-5	1/2		.5000	1/4	1	2-3/4	C	C17646	C17544	—
SC-5		12.7	.5000	6	25.4	69.9	C	—	C17518	—
SC-5L6	1/2		.5000	1/4	1	7	C	C17805	C17828	—
SC-6	5/8		.6250	1/4	1	2-3/4	C	C10021	C17545	—
SC-6		15.88	.6250	6	25.4	69.9	C	—	C17522	—
SC-7	3/4		.7500	1/4	1	2-3/4	C	C10022	C10025	C10029
SC-7		19.05	.7500	6	25.4	69.9	C	—	C17523	—

CLE-LINE

Solid Carbide Burs
Round Nose Tree

Style: 1848 (CLE-SF)

Note
See index page for Standard Shank Styles explanation.


Right Hand Spiral Cut


Double Cut


Aluminum Cut

USCTI number	cutting diameter fractional	mm	decimal	shank dia	length of cut	overall length	shank type	order number 1848 RH Spiral Cut	Double Cut	Aluminum Cut
SF-42		3	.1181	3	12.7	38	A	C17663	C17526	—
SF-41	1/8		.1250	1/8	1/4	1-1/2	A	C17650	C10033	—
SF-42	1/8		.1250	1/8	1/2	1-1/2	A	C17651	C10034	—
SF-53		4.76	.1875	3	12.7	38.1	A	—	C17528	—
SF-1		6	.2362	6	15.9	50.8	D	—	C17524	—
SF-51	1/4		.2500	1/8	1/8	1-3/4	B	C10030	C10035	—
SF-1	1/4		.2500	1/4	5/8	2	D	C17654	C17580	C10036
SF-1L6	1/4		.2500	1/4	1/2	6-1/2	C	C17812	C17835	—
SF-51		6.35	.2500	3	12.7	44.5	B	C17596	C17597	—
SF-3	3/8		.3750	1/4	3/4	2-1/2	C	C17655	C17581	C10037
SF-3L6	3/8		.3750	1/4	3/4	6-3/4	C	C17813	C17836	—
SF-3		9.53	.3750	6	19.1	63.5	C	—	C17525	—
SF-13	1/2		.5000	1/4	3/4	2-1/2	C	C17657	—	—
SF-5	1/2		.5000	1/4	1	2-3/4	C	C17658	C17582	C10038
SF-5L6	1/2		.5000	1/4	1	7	C	C17814	C17837	—
SF-5		12.7	.5000	6	25.4	69.9	C	—	C17527	—
SF-6	5/8		.6250	1/4	1	2-3/4	C	C10031	C17583	C10039
SF-7	3/4		.7500	1/4	1	2-3/4	C	C10032	C17584	—
SF-14	3/4		.7500	1/4	1-1/4	3	C	C17661	—	—
SF-15	3/4		.7500	1/4	1-1/2	3-1/4	C	C17662	—	—

Solid Carbide Burs
Pointed Tree

Style: 1849 (CLE-SG)

Note
See index page for Standard Shank Styles explanation.


Right Hand Spiral Cut


Double Cut

USCTI number	cutting diameter fractional	mm	decimal	shank diameter	length of cut	overall length	shank type	order number 1849 RH Spiral Cut	Double Cut
SG-44		3	.1181	3	12.7	38	A	C17674	C17486
SG-41	1/8		.1250	1/8	1/4	1-1/2	A	C17675	C10044
SG-42	1/8		.1250	1/8	5/16	1-1/2	A	C17676	C10042
SG-43	1/8		.1250	1/8	3/8	1-1/2	A	C10040	C10043
SG-51	1/4		.2500	1/8	1/2	1-3/4	B		C10045
SG-53	3/16		.1875	1/8	1/2	1-1/2	A	C17679	—
SG-53		4.76	.1875	3	12.7	38.1	A	—	C17488
SG-1		6	.2362	6	15.9	50.8	D	—	C17483
SG-51	1/4		.2500	1/8	1/2	1-3/4	B	C17680	—
SG-1	1/4		.2500	1/4	5/8	2	D	C17681	C17575
SG-1L6	1/4		.2500	1/4	1/2	6-1/2	C	C17815	C17838
SG-2		7.94	.3125	6	19.1	63.5	C	—	C17484
SG-3	3/8		.3750	1/4	3/4	2-1/2	C	C17683	C17576
SG-3L6	3/8		.3750	1/4	3/4	6-3/4	C	C17816	C17839
SG-3		9.53	.3750	6	19.1	63.5	C	—	C17485
SG-13	1/2		.5000	1/4	3/4	2-1/2	C	—	C17577
SG-5	1/2		.5000	1/4	1	2-3/4	C	C17685	C17578
SG-5L6	1/2		.5000	1/4	1	7	C	C17817	C17840
SG-5		12.7	.5000	6	25.4	69.9	C	—	C17487
SG-6	5/8		.6250	1/4	1	2-3/4	C	C10041	C17579

Note
See index page for Standard Shank Styles explanation.



Right Hand Spiral Cut



Double Cut

USCTI Number	cutting diameter fractional	mm	decimal	shank diameter	length of cut	overall length	included angle	shank type	order number 1850 RH Spiral Cut	Double Cut
SM-42		3	.1181	3	11.1	38.1	14°	A	C17672	C17498
SM-41	1/8		.1250	1/8	3/8	1-1/2	12°	A	C10046	C10049
SM-42	1/8		.1250	1/8	7/16	1-1/2	14°	A	C17690	C17568
SM-43	1/8		.1250	1/8	5/8	1-1/2	7°	A	C10047	C10050
SM-53		4.76	.1875	3	12.7	38.1	16°	A	C17664	—
SM-2		6	.2362	6	19.1	50.8	12°	D	—	C17496
SM-51	1/4		.2500	1/8	1/2	1-7/8	22°	B	C17693	C10076
SM-1	1/4		.2500	1/4	1/2	2	22°	D	C17694	C17569
SM-2	1/4		.2500	1/4	3/4	2	14°	D	C17695	C17570
SM-3	1/4		.2500	1/4	1	2	10°	D	C17696	C17571
SM-4	3/8		.3750	1/4	5/8	2-1/2	28°	C	C10048	C17572
SM-4		9.5	.3750	6	16	61	28°	C	—	C17497
SM-5	1/2		.5000	1/4	7/8	2-3/4	28°	C	C17698	C17573
SM-5		12.7	.5000	6	22.2	69.9	28°	C	C17673	C17499
SM-6	5/8		.6250	1/4	1	2-7/8	31°	C	C17699	C17574
SM-6		15.88	.6250	6	25.4	66.7	31°	C	—	C17502

CLE-LINE

Solid Carbide Burs
Egg Shape

Style: 1851 (CLE-SE)

Note
See index page for Standard Shank Styles explanation.


Right Hand Spiral Cut


Double Cut


Aluminum Cut

USCTI number	cutting diameter fractional	mm	decimal	shank dia	length of cut	overall length	shank type	order number 1851 RH Spiral Cut	Double Cut	Aluminum Cut
SE-41		3.0	.1181	3	5.5	38	A	C17708	—	—
SE-41	1/8		.1250	1/8	7/32	1-1/2	A	C17700	C10052	—
SE-53		4.76	.1875	3	7.1	38.1	A	—	C17489	—
SE-51	1/4		.2500	1/8	3/8	1-5/8	B	C17702	C10053	—
SE-1	1/4		.2500	1/4	3/8	2	D	C17703	C17558	—
SE-1L6	1/4		.2500	1/4	3/8	6-3/8	C	C17809	C17832	—
SE-3	3/8		.3750	1/4	5/8	2-3/8	C	C17704	C17559	C10054
SE-3L6	3/8		.3750	1/4	5/8	6.625	C	C17810	C17833	—
SE-5	1/2		.5000	1/4	7/8	2-5/8	C	C17705	C17560	C10055
SE-5L6	1/2		.5000	1/4	7/8	6-7/8	C	C17811	C17834	—
SE-6	5/8		.6250	1/4	1	2-3/4	C	C17706	—	C10056
SE-7	3/4		.7500	1/4	1	2-3/4	C	C10051	C17561	—

Solid Carbide Burs
Included Angle

Style: 1852 (CLE-SL)

Note
See index page for Standard Shank Styles explanation.


Right Hand Spiral Cut


Double Cut


Aluminum Cut

USCTI number	cutting diameter fractional	mm	decimal	shank dia	length of cut	overall length	included angle	shank type	order number 1852 RH Spiral Cut	Double Cut	Aluminum Cut
SL-41		3	.1181	3	9.5	38	8°	A	C17720	C17595	—
SL-41	1/8		.1250	1/8	3/8	1-1/2	14°	A	C10057	C10058	—
SL-42	1/8		.1250	1/8	1/2	1-1/2	8°	A	C17711	C10059	C10060
SL-1	1/4		.2500	1/4	5/8	2	14°	D	C17713	C17564	C10061
SL-1L6	1/4		.2500	1/4	5/8	6-5/8	14°	C	C17820	C17843	—
SL-2	5/16		.3125	1/4	7/8	2-3/4	14°	C	C17714	C17565	—
SL-3	3/8		.3750	1/4	1-1/16	2-15/16	14°	C	C17715	C17566	—
SL-3L6	3/8		.3750	1/4	1-1/16	7-1/16	14°	C	C17821	C17844	—
SL-3		9.53	.3750	6	27.0	74.6	14°	C	C17719	C17593	—
SL-4	1/2		.5000	1/4	1-1/8	3	14°	C	C17716	C17567	C10062
SL-4L6	1/2		.5000	1/4	1-1/8	7-1/8	14°	C	C17822	C17845	—
SL-4		12.7	.5000	6	28	73	14°	C	—	C17594	—
SL-6	5/8		.6250	1/4	1-5/16	3-3/16	14°	C	C17717	C17587	C10063

Style: 1853 (CLE-SD)

Solid Carbide Burs
Ball Shape

Note
See index page for Standard Shank Styles explanation.


Right Hand Spiral Cut


Double Cut


Aluminum Cut

USCTI number	cutting diameter fractional	mm	decimal	shank dia	length of cut	overall length	shank type	order number 1853 RH Spiral Cut	Double Cut	Aluminum Cut
SD-40	1/16		.0625	1/8	1/16	1-1/2	A	C17725	—	—
SD-41	3/32		.0938	1/8	3/32	1-1/2	A	—	C10064	—
SD-42		3	.1181	3	2.5	38	A	C17724	C17457	—
SD-42	1/8		.1250	1/8	1/8	1-1/2	A	C17727	C17531	—
SD-11	1/8		.1250	1/4	1/8	2	C	C17730	C17530	—
SD-53	3/16		.1875	1/8	3/16	1-1/2	A	C17728	—	—
SD-14	3/16		.1875	1/4	1/8	2	C	C17731	C17532	—
SD-53		4.76	.1875	3	4.76	38.1	A	C17741	C17412	—
SD-1		6	.2362	6	6.0	50.8	D	C17721	C17455	—
SD-51	1/4		.2500	1/8	1/4	1-3/4	B	C17729	C10065	—
SD-1	1/4		.2500	1/4	1/4	2	D	C17732	C17533	C10068
SD-1L6	1/4		.2500	1/4	7/32	6-7/32	C	C17806	C17829	—
SD-51		6.35	.2500	3	6.35	44.45	B	—	C17411	—
SD-2	5/16		.3125	1/4	5/16	2-1/32	C	C17733	C17534	—
SD-3	3/8		.3750	1/4	3/8	2-5/64	C	C17734	C17535	C10069
SD-3L6	3/8		.3750	1/4	5/16	6-5/16	C	C17807	C17830	—
SD-3		9.53	.3750	6	9.53	52.8	C	C17722	C17456	—
SD-5	1/2		.5000	1/4	1/2	2-13/64	C	C17736	C17536	C10070
SD-5L6	1/2		.5000	1/4	7/16	6-7/16	C	C17808	C17831	—
SD-5		12.7	.5000	6	12.7	56.0	C	C17740	C17458	—
SD-6	5/8		.6250	1/4	5/8	2-5/16	C	C17737	C17537	—
SD-7	3/4		.7500	1/4	3/4	2-7/16	C	C17738	C17538	—
SD-7		19.05	.7500	6	19.05	61.9	C	—	C17413	—
SD-9	1		1.0000	1/4	1	2-11/16	C	C17739	—	C10066

Styles: 1854 (CLE-SH)

Solid Carbide Burs
Flame Shape

Note
See index page for Standard Shank Styles explanation.


Right Hand Spiral Cut


Double Cut

USCTI number	cutting diameter fractional	mm	decimal	shank diameter	length of cut	overall length	shank type	order number 1854 RH Spiral Cut	Double Cut
SH-41	1/8		.1250	1/8	1/4	1-1/2	A	C17750	C10072
SH-53		4.76	.1875	3.0	9.5	38.1	A	C17749	C17529
SH-2	5/16		.3125	1/4	3/4	2-1/2	C	C10071	C17562
SH-2L6	5/16		.3125	1/4	3/4	6-3/4	C	C17818	C17841
SH-5	1/2		.5000	1/4	1-1/4	3	C	C17753	C17563
SH-5L6	1/2		.5000	1/4	1-1/4	7-1/4	C	C17819	C17842

CLE-LINE

Solid Carbide Burs
60°/ 90° Angle Burs (countersink)

Styles: 1856 (CLE-SJ), 1857 (CLE-SK)

Note
See index page for Standard Shank Styles explanation.



USCTI number	cutting diameter mm	cutting diameter decimal	shank diameter	length of cut	overall length	included angle	shank type	order number 1856 (60° incl.) RH Spiral Cut	order number 1857 (90° incl.) RH Spiral Cut
SK-5	12.7	.5000	6	6.35	57.9	90°	C	—	C17742
SJ-6	15.88	.6250	6		61.9	60°	C	C17766	—
SK-6	15.88	.6250	6		61.9	90°	C	—	C17767

Solid Carbide Burs
Inverted Taper Burs

Style: 1858 (CLE-SN)

Note
See index page for Standard Shank Styles explanation.



USCTI number	cutting diameter fraction	cutting diameter mm	cutting diameter decimal	shank diameter	length of cut	overall length	included angle	shank type	order number 1858 Single Cut	order number 1858 Double Cut
SN-41	3/32		.0938	1/8	3/16	1-1/2	—	A	C10073	—
SN-51	1/4		.2500	1/8	1/4	1-1/2	10°	A	C10074	C10075
SN-51		6.35	.2500	3.0	6.4	38.1	10°	A	C17780	—

Solid Carbide Burs
Variety Set

SET **Style: 1855**

Plastic Case

Note
See index page for Standard Shank Styles explanation.



8-Piece Set
Bright
#C17763

set contains USCTI Nos.	cutting diameter fractional	cutting diameter decimal	cutting diameter metric	shank diameter	no. of pieces	shank type	order number 1855 RH Spiral Cut
SA-42, SA-43, SC-41, SC-42, SF-42, SG-42 SM-43, SE-41, SD-42	3/32 & 1/8	.0938 .1250	2.38 3.18	1/8	9	A	C17760
SA-51, SA-51-2, SC-51, SF-51, SG-51, SM-51, SE-51, SD-51, SN-51	1/4	.2500	6.35	1/8	9	B	C17761
SA-1, SC-1, SF-1, SG-1, SM-2, SE-1, SL-1, SD-1	1/4	.2500	6.35	1/4	8	C	C17762
SA-5, SC-5, SF-5, SG-5, SM-5, SE-5, SL-4, SD-5	1/2	.5000	12.70	1/4	8	C	C17763

Standard Shank Styles

Shank A
1/8" (3mm) solid carbide



Shank B
1/8" (3mm) hardened steel



Shank C
1/4" (6mm) hardened steel



Shank D
1/4" (6mm) solid carbide



CARBIDE BURS

NEW

CLE-LINE®

Display Merchandisers

Designed with everything included to fit your pegboard wall



Six Display Choices

Jobber Drill Displays

Part # CLEMERCH . . . . . #1899 - Black Oxide Drills, General Purpose
Part # CLEHDMERCH. . . . #1801 - Black Oxide Drills, Heavy Duty
Part # CLEHDBGMERCH . . #1878 - Black and Gold Drills, Heavy Duty
Part # CLEHDCOMERCH . . #1802 - Straw Oxide Drills, Cobalt, Heavy Duty

Saw Blade Displays

Part # CLEBISAWMERCH. . Hole Saw Blades
Part # CLESAWMERCH. . . Reciprocating and Band Saw Blades

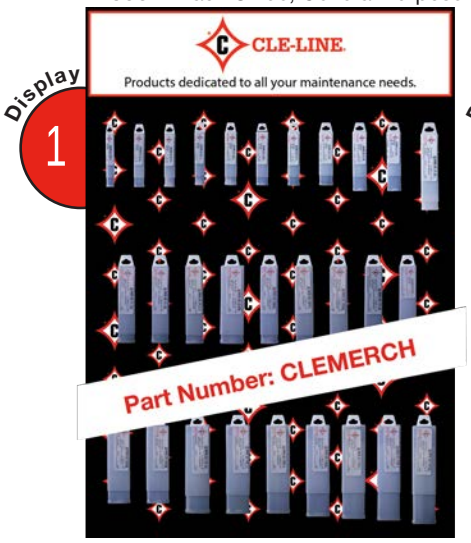
See back page for display samples.

Each display includes:

- Cle-Line® 24"x6" sign
- Cle-Line® 24" wide vinyl backdrop
- Cle-Line® products
- Hanging Hooks
- Labels with part number
- Detailed planogram instructions
- Does ***not*** include pegboard

MERCHANDISER

#1899 - Black Oxide, General Purpose



#1801 - Black Oxide, Heavy Duty



#1878 - Black and Gold, Heavy Duty



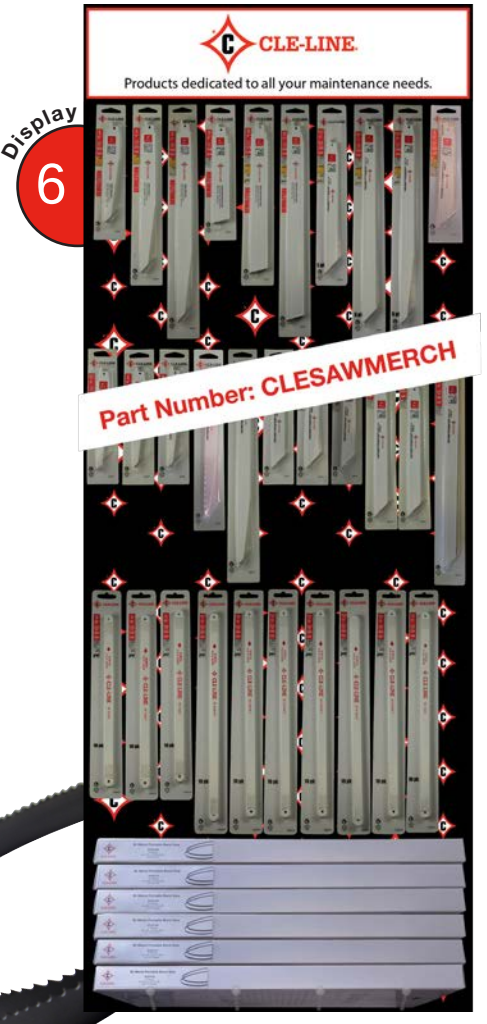
#1802 - Straw Oxide, Cobalt, Heavy Duty



Hole Saw Blades



Reciprocating Blades and Band Saw Blades



Product Choices:

Display 1 #1899 - Black Oxide, General Purpose



Display 2 #1801 - Black Oxide, Heavy Duty



Display 3 #1878 - Black and Gold, Heavy Duty



Display 4 #1802 - Straw Oxide, Cobalt, Heavy Duty



Display 5 Hole Saws



Display 6 Reciprocating and Band Saw Blades



MERCHANDISER

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