



WETMORE TOOL & ENGINEERING

PRECISION CUTTING TOOLS SINCE 1956



WETMORE TOOL & ENGINEERING

QUALITY CUTTING TOOLS SINCE 1956

WETMORE TOOL AND ENGINEERING CO. HAS THREE BRANDS THAT SUPPLY UNIQUE TOOLING FOR THE AIRFRAME ASSEMBLY, FLUID POWER, AUTOMOTIVE PRODUCTION AND GENERAL MACHINING INDUSTRIES. ISO Certification, impeccable service and made in the USA are the cornerstone of the company.

H.P. MANUFACTURING has offered quality products, technical advice and pro-active customer service for the past fifty years. Specializing in cutting tools for air frame assembly and using that expertise to supply HSS, Colbalt and Carbide rotary cutting tools to all industries. HP's product offering includes carbide tipped rivet shavers, specialty reamers, threaded shank adapter drills, quick-change adapter drills, core drills, double-margin step drills, nutplate drills and special application drills and reamers. We have now expanded our products to include tools made of carbide and PCD for the new materials being machined. In addition to being the premier producer of made to order custom tools HP also manufactures and stocks the largest and most complete threaded shank drill offering in the world.

WETMORE CUTTING TOOLS are known for their precision engineering, cost-effectiveness, balance and serviceability. Since 1956, our tools have set the highest standards in the industry, especially for porting tools for automotive and military applications. A large portion of our business is directed towards providing special cutting tools for machining hydraulic manifolds and other products for automotive, aerospace and medical applications. Our inventory includes port contour cutters to machine to the most current ISO, Metric, DIN and BSPP as well as the most popular applications. See the Wetmore Cutting Tool Catalog for more details.

CALIFORNIA ASSOCIATED PRODUCTS has been a manufacturer of Cleco fasteners for over twenty years. We produce and stock a full line of Cleco fasteners, wing nut fasteners, side grip clamps and drill stops. CAP is dedicated to providing our customers the most reliable products at the lowest prices possible.

PRODUCT LINE



> HP MANUFACTURING

> CALIFORNIA ASSOCIATED PRODUCTS

THREADED SHANK DRILLS

- > High Speed Steel, Cobalt, Carbide & PCD Description [2]
- > High Speed Steel, Cobalt, Carbide & PCD drills in Stub Series [3]
- > High Speed Steel, Cobalt, Carbide & PCD drills in Short Series [4]
- > High Speed Steel, Cobalt, Carbide & PCD drills in Long Series [5]

AIRCRAFT EXTENSION DRILLS

- > 6" High Speed Steel & Cobalt [6]
- > 6" Carbide & PCD [7]
- > 12" HSS, Cobalt, Carbide & PCD [8]

NUTPLATE DRILL/COUNTERSINK [9]

RIVET SHAVERS

- > Solid Carbide/Solid Carbide Blade [10]

SPECIAL DRILLS & REAMERS

- > Reamers, Core Drills, Double Margin Drills & Quick Change Drills [11]

TOOLS FOR COMPOSITES

- > Assorted Carbide Tools for composites [12-13]

CLAMPS & FASTENERS

- > Cleco Fasteners, Hex Nut & Wing Nut Fasteners, Side Grip Clamps, Pliers [14-16]
- > Drill Stops [17]

Threaded Shank Drills

Made in U.S.A

High Speed Steel

- Type B Threaded Hex Shank HSS Adaptor
Drill - NAS 965 1/4-28 UNF Class 2A Thread
- Surface Treated-Steam Oxide
- Drills are manufactured to NAS 965 Type B construction.
- High Speed Steel drills are for drilling general to medium duty, low tensile strength materials in confined areas.

Carbide

Reference NAS 965 specification with special geometry for drilling composite and composite stack ups.

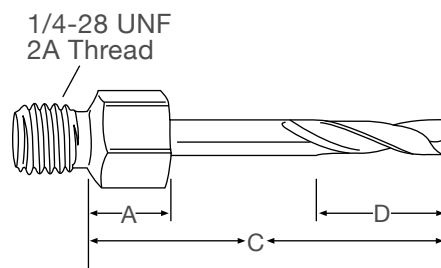
Cobalt

- Type D Threaded Square Shank Cobalt Adaptor
Drill NAS 965 1/4-28 UNF Class 2A Thread
- Surface Treated-Steam Oxide
- Drills are manufactured to NAS 965 Type D construction.
- Cobalt drills are for drilling hard, tough, high tensile strength materials in confined areas

PCD

Polycrystalline Diamond tipped. Reference NAS 965 specification with special geometry for composite drilling.

Drill Size	Series	A	C	D
#40 to 1/8" .0980 to .1250	Stub	1/8	1/2	5/16
	Short	1/4	1	9/16
	Long	1/4	2 1/8	7/8
#30 to #10 .1285 to .1935	Stub	1/8	9/16	5/16
	Short	1/4	1 1/4	9/16
	Long	1/4	2 1/8	1 1/8
#9 to F .1960 to .2570	Stub	1/4	5/8	5/16
	Short	5/16	1 1/4	9/16
	Long	5/16	2 1/8	1 1/8



To determine your part number:

Desired size (or 4-place decimal) + Part No. Prefix.

Example: 211 - #40 or 211 - 0980

Additional sizes available upon request.



Stub Series

Size	HSS Part #	Cobalt Part #	Carbide Part #	PCD Part #	Overall Length (C)	Flute Length (D)
#50	111-0700	152-0700	140-0700	180-0700	1/2	5/16
3/32	111-0938	152-0938	140-0938	180-0938	1/2	5/16
#40	111-0980	152-0980	140-0980	180-0980	1/2	5/16
#39	111-0995	152-0995	140-0995	180-0995	1/2	5/16
#38	111-1015	152-1015	140-1015	180-1015	1/2	5/16
#37	111-1040	152-1040	140-1040	180-1040	1/2	5/16
#36	111-1065	152-1065	140-1065	180-1065	1/2	5/16
7/64	111-1094	152-1094	140-1094	180-1094	1/2	5/16
#35	111-1100	152-1100	140-1100	180-1100	1/2	5/16
#34	111-1110	152-1110	140-1110	180-1110	1/2	5/16
#33	111-1130	152-1130	140-1130	180-1130	1/2	5/16
#32	111-1160	152-1160	140-1160	180-1160	1/2	5/16
#31	111-1200	152-1200	140-1200	180-1200	1/2	5/16
1/8	111-1250	152-1250	140-1250	180-1250	9/16	5/16
#30	111-1285	152-1285	140-1285	180-1285	9/16	5/16
#29	111-1360	152-1360	140-1360	180-1360	9/16	5/16
#28	111-1405	152-1405	140-1405	180-1405	9/16	5/16
9/64	111-1406	152-1406	140-1406	180-1406	9/16	5/16
#27	111-1440	152-1440	140-1440	180-1440	9/16	5/16
#26	111-1470	152-1470	140-1470	180-1470	9/16	5/16
#25	111-1495	152-1495	140-1495	180-1495	9/16	5/16
#24	111-1520	152-1520	140-1520	180-1520	9/16	5/16
#23	111-1540	152-1540	140-1540	180-1540	9/16	5/16
5/32	111-1562	152-1562	140-1562	180-1562	9/16	5/16
#22	111-1570	152-1570	140-1570	180-1570	9/16	5/16
#21	111-1590	152-1590	140-1590	180-1590	9/16	5/16
#20	111-1610	152-1610	140-1610	180-1610	9/16	5/16
#19	111-1660	152-1660	140-1660	180-1660	9/16	5/16
#18	111-1695	152-1695	140-1695	180-1695	9/16	5/16
11/64	111-1719	152-1719	140-1719	180-1719	9/16	5/16
#17	111-1730	152-1730	140-1730	180-1730	9/16	5/16
#16	111-1770	152-1770	140-1770	180-1770	9/16	5/16
#15	111-1800	152-1800	140-1800	180-1800	9/16	5/16
#14	111-1820	152-1820	140-1820	180-1820	9/16	5/16
#13	111-1850	152-1850	140-1850	180-1850	9/16	5/16
3/16	111-1875	152-1875	140-1875	180-1875	9/16	5/16
#12	111-1890	152-1890	140-1890	180-1890	9/16	5/16
#11	111-1910	152-1910	140-1910	180-1910	9/16	5/16
#10	111-1935	152-1935	140-1935	180-1935	9/16	5/16
#9	111-1960	152-1960	140-1960	180-1960	5/8	5/16
#8	111-1990	152-1990	140-1990	180-1990	5/8	5/16
#7	111-2010	152-2010	140-2010	180-2010	5/8	5/16
13/64	111-2031	152-2031	140-2031	180-2031	5/8	5/16
#6	111-2040	152-2040	140-2040	180-2040	5/8	5/16
#5	111-2055	152-2055	140-2055	180-2055	5/8	5/16
#4	111-2090	152-2090	140-2090	180-2090	5/8	5/16
#3	111-2130	152-2130	140-2130	180-2130	5/8	5/16
7/32	111-2188	152-2188	140-2188	180-2188	5/8	5/16
#2	111-2210	152-2210	140-2210	180-2210	5/8	5/16
#1	111-2280	152-2280	140-2280	180-2280	5/8	5/16
"A"	111-2340	152-2340	140-2340	180-2340	5/8	5/16
15/64	111-2344	152-2344	140-2344	180-2344	5/8	5/16
"B"	111-2380	152-2380	140-2380	180-2380	5/8	5/16
"C"	111-2420	152-2420	140-2420	180-2420	5/8	5/16
"D"	111-2460	152-2460	140-2460	180-2460	5/8	5/16
1/4	111-2500	152-2500	140-2500	180-2500	5/8	5/16
"F"	111-2570	152-2570	140-2570	180-2570	5/8	5/16
"G"	111-2610	152-2610	140-2610	180-2610	5/8	5/16
9/32	111-2812	152-2812	140-2812	180-2812	5/8	5/16
5/16	111-3125	152-3125	140-3125	180-3125	3/4	5/16
3/8	111-3750	152-3750	140-3750	180-3750	3/4	5/16



Short Series

Size	HSS Part #	Cobalt Part #	Carbide Part #	PCD Part #	Overall Length (C)	Flute Length (D)
#50	211-0700	252-0700	240-0700	280-0700	1	9/16
3/32	211-0938	252-0938	240-0938	280-0938	1	9/16
#40	211-0980	252-0980	240-0980	280-0980	1	9/16
#39	211-0995	252-0995	240-0995	280-0995	1	9/16
#38	211-1015	252-1015	240-1015	280-1015	1	9/16
#37	211-1040	252-1040	240-1040	280-1040	1	9/16
#36	211-1065	252-1065	240-1065	280-1065	1	9/16
7/64	211-1094	252-1094	240-1094	280-1094	1	9/16
#35	211-1100	252-1100	240-1100	280-1100	1	9/16
#34	211-1110	252-1110	240-1110	280-1110	1	9/16
#33	211-1130	252-1130	240-1130	280-1130	1	9/16
#32	211-1160	252-1160	240-1160	280-1160	1	9/16
#31	211-1200	252-1200	240-1200	280-1200	1	9/16
1/8	211-1250	252-1250	240-1250	280-1250	1	9/16
#30	211-1285	252-1285	240-1285	280-1285	1 1/4	9/16
#29	211-1360	252-1360	240-1360	280-1360	1 1/4	9/16
#28	211-1405	252-1405	240-1405	280-1405	1 1/4	9/16
9/64	211-1406	252-1406	240-1406	280-1406	1 1/4	9/16
#27	211-1440	252-1440	240-1440	280-1440	1 1/4	9/16
#26	211-1470	252-1470	240-1470	280-1470	1 1/4	9/16
#25	211-1495	252-1495	240-1495	280-1495	1 1/4	9/16
#24	211-1520	252-1520	240-1520	280-1520	1 1/4	9/16
#23	211-1540	252-1540	240-1540	280-1540	1 1/4	9/16
5/32	211-1562	252-1562	240-1562	280-1562	1 1/4	9/16
#22	211-1570	252-1570	240-1570	280-1570	1 1/4	9/16
#21	211-1590	252-1590	240-1590	280-1590	1 1/4	9/16
#20	211-1610	252-1610	240-1610	280-1610	1 1/4	9/16
#19	211-1660	252-1660	240-1660	280-1660	1 1/4	9/16
#18	211-1695	252-1695	240-1695	280-1695	1 1/4	9/16
11/64	211-1719	252-1719	240-1719	280-1719	1 1/4	9/16
#17	211-1730	252-1730	240-1730	280-1730	1 1/4	9/16
#16	211-1770	252-1770	240-1770	280-1770	1 1/4	9/16
#15	211-1800	252-1800	240-1800	280-1800	1 1/4	9/16
#14	211-1820	252-1820	240-1820	280-1820	1 1/4	9/16
#13	211-1850	252-1850	240-1850	280-1850	1 1/4	9/16
3/16	211-1875	252-1875	240-1875	280-1875	1 1/4	9/16
#12	211-1890	252-1890	240-1890	280-1890	1 1/4	9/16
#11	211-1910	252-1910	240-1910	280-1910	1 1/4	9/16
#10	211-1935	252-1935	240-1935	280-1935	1 1/4	9/16
#9	211-1960	252-1960	240-1960	280-1960	1 1/4	9/16
#8	211-1990	252-1990	240-1990	280-1990	1 1/4	9/16
#7	211-2010	252-2010	240-2010	280-2010	1 1/4	9/16
13/64	211-2031	252-2031	240-2031	280-2031	1 1/4	9/16
#6	211-2040	252-2040	240-2040	280-2040	1 1/4	9/16
#5	211-2055	252-2055	240-2055	280-2055	1 1/4	9/16
#4	211-2090	252-2090	240-2090	280-2090	1 1/4	9/16
#3	211-2130	252-2130	240-2130	280-2130	1 1/4	9/16
7/32	211-2188	252-2188	240-2188	280-2188	1 1/4	9/16
#2	211-2210	252-2210	240-2210	280-2210	1 1/4	9/16
#1	211-2280	252-2280	240-2280	280-2280	1 1/4	9/16
"A"	211-2340	252-2340	240-2340	280-2340	1 1/4	9/16
15/64	211-2344	252-2344	240-2344	280-2344	1 1/4	9/16
"B"	211-2380	252-2380	240-2380	280-2380	1 1/4	9/16
"C"	211-2420	252-2420	240-2420	280-2420	1 1/4	9/16
"D"	211-2460	252-2460	240-2460	280-2460	1 1/4	9/16
1/4	211-2500	252-2500	240-2500	280-2500	1 1/4	9/16
"E"	211-2570	252-2570	240-2570	280-2570	1 1/4	9/16
"G"	211-2610	252-2610	240-2610	280-2610	1 1/4	9/16
9/32	211-2812	252-2812	240-2812	280-2812	1 1/4	9/16
5/16	211-3125	252-3125	240-3125	280-3125	1 1/4	9/16
3/8	211-3750	252-3750	240-3750	280-3750	1 1/4	9/16



Long Series

Size	HSS Part #	Cobalt Part #	Carbide Part #	PCD Part #	Overall Length (C)	Flute Length (D)
#50	311-0700	352-0700	340-0700	380-0700	2 1/8	7/8
3/32	311-0938	352-0938	340-0938	380-0938	2 1/8	7/8
#40	311-0980	352-0980	340-0980	380-0980	2 1/8	7/8
#39	311-0995	352-0995	340-0995	380-0995	2 1/8	7/8
#38	311-1015	352-1015	340-1015	380-1015	2 1/8	7/8
#37	311-1040	352-1040	340-1040	380-1040	2 1/8	7/8
#36	311-1065	352-1065	340-1065	380-1065	2 1/8	7/8
7/64	311-1094	352-1094	340-1094	380-1094	2 1/8	7/8
#35	311-1100	352-1100	340-1100	380-1100	2 1/8	7/8
#34	311-1110	352-1110	340-1110	380-1110	2 1/8	7/8
#33	311-1130	352-1130	340-1130	380-1130	2 1/8	7/8
#32	311-1160	352-1160	340-1160	380-1160	2 1/8	7/8
#31	311-1200	352-1200	340-1200	380-1200	2 1/8	7/8
1/8	311-1250	352-1250	340-1250	380-1250	2 1/8	7/8
#30	311-1285	352-1285	340-1285	380-1285	2 1/8	1 1/8
#29	311-1360	352-1360	340-1360	380-1360	2 1/8	1 1/8
#28	311-1405	352-1405	340-1405	380-1405	2 1/8	1 1/8
9/64	311-1406	352-1406	340-1406	380-1406	2 1/8	1 1/8
#27	311-1440	352-1440	340-1440	380-1440	2 1/8	1 1/8
#26	311-1470	352-1470	340-1470	380-1470	2 1/8	1 1/8
#25	311-1495	352-1495	340-1495	380-1495	2 1/8	1 1/8
#24	311-1520	352-1520	340-1520	380-1520	2 1/8	1 1/8
#23	311-1540	352-1540	340-1540	380-1540	2 1/8	1 1/8
5/32	311-1562	352-1562	340-1562	380-1562	2 1/8	1 1/8
#22	311-1570	352-1570	340-1570	380-1570	2 1/8	1 1/8
#21	311-1590	352-1590	340-1590	380-1590	2 1/8	1 1/8
#20	311-1610	352-1610	340-1610	380-1610	2 1/8	1 1/8
#19	311-1660	352-1660	340-1660	380-1660	2 1/8	1 1/8
#18	311-1695	352-1695	340-1695	380-1695	2 1/8	1 1/8
11/64	311-1719	352-1719	340-1719	380-1719	2 1/8	1 1/8
#17	311-1730	352-1730	340-1730	380-1730	2 1/8	1 1/8
#16	311-1770	352-1770	340-1770	380-1770	2 1/8	1 1/8
#15	311-1800	352-1800	340-1800	380-1800	2 1/8	1 1/8
#14	311-1820	352-1820	340-1820	380-1820	2 1/8	1 1/8
#13	311-1850	352-1850	340-1850	380-1850	2 1/8	1 1/8
3/16	311-1875	352-1875	340-1875	380-1875	2 1/8	1 1/8
#12	311-1890	352-1890	340-1890	380-1890	2 1/8	1 1/8
#11	311-1910	352-1910	340-1910	380-1910	2 1/8	1 1/8
#10	311-1935	352-1935	340-1935	380-1935	2 1/8	1 1/8
#9	311-1960	352-1960	340-1960	380-1960	2 1/8	1 1/8
#8	311-1990	352-1990	340-1990	380-1990	2 1/8	1 1/8
#7	311-2010	352-2010	340-2010	380-2010	2 1/8	1 1/8
13/64	311-2031	352-2031	340-2031	380-2031	2 1/8	1 1/8
#6	311-2040	352-2040	340-2040	380-2040	2 1/8	1 1/8
#5	311-2055	352-2055	340-2055	380-2055	2 1/8	1 1/8
#4	311-2090	352-2090	340-2090	380-2090	2 1/8	1 1/8
#3	311-2130	352-2130	340-2130	380-2130	2 1/8	1 1/8
7/32	311-2188	352-2188	340-2188	380-2188	2 1/8	1 1/8
#2	311-2210	352-2210	340-2210	380-2210	2 1/8	1 1/8
#1	311-2280	352-2280	340-2280	380-2280	2 1/8	1 1/8
"A"	311-2340	352-2340	340-2340	380-2340	2 1/8	1 1/8
15/64	311-2344	352-2344	340-2344	380-2344	2 1/8	1 1/8
"B"	311-2380	352-2380	340-2380	380-2380	2 1/8	1 1/8
"C"	311-2420	352-2420	340-2420	380-2420	2 1/8	1 1/8
"D"	311-2460	352-2460	340-2460	380-2460	2 1/8	1 1/8
1/4	311-2500	352-2500	340-2500	380-2500	2 1/8	1 1/8
"F"	311-2570	352-2570	340-2570	380-2570	2 1/8	1 1/8
"G"	311-2610	352-2610	340-2610	380-2610	2 1/8	1 1/8
9/32	311-2812	352-2812	340-2812	380-2812	2 1/8	1 1/8
5/16	311-3125	352-3125	340-3125	380-3125	2 1/8	1 1/8
3/8	311-3750	352-3750	340-3750	380-3750	2 1/8	1 1/8

Aircraft Extension Drills

Made in U.S.A

NAS 907 Type “B” & Type “J” 135° Split Point

Our aircraft extension drills are manufactured to provide long life. Our cobalt drills are used for drilling in tough, high tensile strength materials like stainless steel, titanium and inconel. We incorporate a heavy flute design and 135° split point.



High Speed Steel & Cobalt 6” Aircraft Extensions

Size	HSS Part #	Cobalt Part #
1/16	4010-0625	4040-0625
52	4010-0635	4040-0635
51	4010-0670	4040-0670
50	4010-0700	4040-0700
49	4010-0730	4040-0730
48	4010-0760	4040-0760
5/64	4010-0781	4040-0781
47	4010-0785	4040-0785
46	4010-0810	4040-0810
45	4010-0820	4040-0820
44	4010-0860	4040-0860
43	4010-0890	4040-0890
42	4010-0935	4040-0935
3/32	4010-0938	4040-0938
41	4010-0960	4040-0960
40	4010-0980	4040-0980
39	4010-0995	4040-0995
38	4010-1015	4040-1015
37	4010-1040	4040-1040
36	4010-1065	4040-1065
7/64	4010-1094	4040-1094
35	4010-1100	4040-1100
34	4010-1110	4040-1110
33	4010-1130	4040-1130
32	4010-1160	4040-1160
31	4010-1200	4040-1200
1/8	4010-1250	4040-1250
30	4010-1285	4040-1285
29	4010-1360	4040-1360
28	4010-1405	4040-1405
9/64	4010-1406	4040-1406
27	4010-1440	4040-1440
26	4010-1470	4040-1470
25	4010-1495	4040-1495
24	4010-1520	4040-1520
23	4010-1540	4040-1540
5/32	4010-1562	4040-1562
22	4010-1570	4040-1570
21	4010-1590	4040-1590
20	4010-1610	4040-1610
19	4010-1660	4040-1660
18	4010-1695	4040-1695

Size	HSS Part #	Cobalt Part #
11/64	4010-1719	4040-1719
17	4010-1730	4040-1730
16	4010-1770	4040-1770
15	4010-1800	4040-1800
14	4010-1820	4040-1820
13	4010-1850	4040-1850
3/16	4010-1875	4040-1875
12	4010-1890	4040-1890
11	4010-1910	4040-1910
10	4010-1935	4040-1935
9	4010-1960	4040-1960
8	4010-1990	4040-1990
7	4010-2010	4040-2010
13/64	4010-2031	4040-2031
6	4010-2040	4040-2040
5	4010-2055	4040-2055
4	4010-2090	4040-2090
3	4010-2130	4040-2130
7/32	4010-2188	4040-2188
2	4010-2210	4040-2210
1	4010-2280	4040-2280
15/64	4010-2344	4040-2344
D	4010-2460	4040-2460
1/4	4010-2500	4040-2500
F	4010-2570	4040-2570
G	4010-2610	4040-2610
17/64	4010-2656	4040-2656
9/32	4010-2812	4040-2812
19/64	4010-2969	4040-2969
5/16	4010-3125	4040-3125
21/64	4010-3281	4040-3281
11/32	4010-3438	4040-3438
23/64	4010-3594	4040-3594
3/8	4010-3750	4040-3750
25/64	4010-3906	4040-3906
13/32	4010-4062	4040-4062
27/64	4010-4219	4040-4219
7/16	4010-4375	4040-4375
29/64	4010-4531	4040-4531
15/32	4010-4688	4040-4688
31/64	4010-4844	4040-4844
1/2	4010-5000	4040-5000



Carbide & PCD 6" Aircraft Extensions



Size	Carbide Part #	PCD Part #
1/16	4045-0625	4090-0625
52	4045-0635	4090-0635
51	4045-0670	4090-0670
50	4045-0700	4090-0700
49	4045-0730	4090-0730
48	4045-0760	4090-0760
5/64	4045-0781	4090-0781
47	4045-0785	4090-0785
46	4045-0810	4090-0810
45	4045-0820	4090-0820
44	4045-0860	4090-0860
43	4045-0890	4090-0890
42	4045-0935	4090-0935
3/32	4045-0938	4090-0938
41	4045-0960	4090-0960
40	4045-0980	4090-0980
39	4045-0995	4090-0995
38	4045-1015	4090-1015
37	4045-1040	4090-1040
36	4045-1065	4090-1065
7/64	4045-1094	4090-1094
35	4045-1100	4090-1100
34	4045-1110	4090-1110
33	4045-1130	4090-1130
32	4045-1160	4090-1160
31	4045-1200	4090-1200
1/8	4045-1250	4090-1250
30	4045-1285	4090-1285
29	4045-1360	4090-1360
28	4045-1405	4090-1405
9/64	4045-1406	4090-1406
27	4045-1440	4090-1440
26	4045-1470	4090-1470
25	4045-1495	4090-1495
24	4045-1520	4090-1520
23	4045-1540	4090-1540
5/32	4045-1562	4090-1562
22	4045-1570	4090-1570
21	4045-1590	4090-1590
20	4045-1610	4090-1610
19	4045-1660	4090-1660
18	4045-1695	4090-1695

Size	Carbide Part #	PCD Part #
11/64	4045-1719	4090-1719
17	4045-1730	4090-1730
16	4045-1770	4090-1770
15	4045-1800	4090-1800
14	4045-1820	4090-1820
13	4045-1850	4090-1850
3/16	4045-1875	4090-1875
12	4045-1890	4090-1890
11	4045-1910	4090-1910
10	4045-1935	4090-1935
9	4045-1960	4090-1960
8	4045-1990	4090-1990
7	4045-2010	4090-2010
13/64	4045-2031	4090-2031
6	4045-2040	4090-2040
5	4045-2055	4090-2055
4	4045-2090	4090-2090
3	4045-2130	4090-2130
7/32	4045-2188	4090-2188
2	4045-2210	4090-2210
1	4045-2280	4090-2280
15/64	4045-2344	4090-2344
D	4045-2460	4090-2460
1/4	4045-2500	4090-2500
F	4045-2570	4090-2570
G	4045-2610	4090-2610
17/64	4045-2656	4090-2656
9/32	4045-2812	4090-2812
19/64	4045-2969	4090-2969
5/16	4045-3125	4090-3125
21/64	4045-3281	4090-3281
11/32	4045-3438	4090-3438
23/64	4045-3594	4090-3594
3/8	4045-3750	4090-3750
25/64	4045-3906	4090-3906
13/32	4045-4062	4090-4062
27/64	4045-4219	4090-4219
7/16	4045-4375	4090-4375
29/64	4045-4531	4090-4531
15/32	4045-4688	4090-4688
31/64	4045-4844	4090-4844
1/2	4045-5000	4090-5000

High Speed Steel & Cobalt 12" Aircraft Extensions

Size	HSS Part #	Cobalt Part #
1/16	4030-0625	4070-0625
52	4030-0635	4070-0635
51	4030-0670	4070-0670
50	4030-0700	4070-0700
49	4030-0730	4070-0730
48	4030-0760	4070-0760
5/64	4030-0781	4070-0781
47	4030-0785	4070-0785
46	4030-0810	4070-0810
45	4030-0820	4070-0820
44	4030-0860	4070-0860
43	4030-0890	4070-0890
42	4030-0935	4070-0935
3/32	4030-0938	4070-0938
41	4030-0960	4070-0960
40	4030-0980	4070-0980
39	4030-0995	4070-0995
38	4030-1015	4070-1015
37	4030-1040	4070-1040
36	4030-1065	4070-1065
7/64	4030-1094	4070-1094
35	4030-1100	4070-1100
34	4030-1110	4070-1110
33	4030-1130	4070-1130
32	4030-1160	4070-1160
31	4030-1200	4070-1200
1/8	4030-1250	4070-1250
30	4030-1285	4070-1285

Size	HSS Part #	Cobalt Part #
29	4030-1360	4070-1360
28	4030-1405	4070-1405
9/64	4030-1406	4070-1406
27	4030-1440	4070-1440
26	4030-1470	4070-1470
25	4030-1495	4070-1495
24	4030-1520	4070-1520
23	4030-1540	4070-1540
5/32	4030-1562	4070-1562
22	4030-1570	4070-1570
21	4030-1590	4070-1590
20	4030-1610	4070-1610
19	4030-1660	4070-1660
18	4030-1695	4070-1695
11/64	4030-1719	4070-1719
17	4030-1730	4070-1730
16	4030-1770	4070-1770
15	4030-1800	4070-1800
14	4030-1820	4070-1820
13	4030-1850	4070-1850
3/16	4030-1875	4070-1875
12	4030-1890	4070-1890
11	4030-1910	4070-1910
10	4030-1935	4070-1935
9	4030-1960	4070-1960
8	4030-1990	4070-1990
7	4030-2010	4070-2010
13/64	4030-2031	4070-2031

Size	HSS Part #	Cobalt Part #
6	4030-2040	4070-2040
5	4030-2055	4070-2055
4	4030-2090	4070-2090
3	4030-2130	4070-2130
7/32	4030-2188	4070-2188
2	4030-2210	4070-2210
1	4030-2280	4070-2280
15/64	4030-2344	4070-2344
D	4030-2460	4070-2460
1/4	4030-2500	4070-2500
F	4030-2570	4070-2570
G	4030-2610	4070-2610
17/64	4030-2656	4070-2656
9/32	4030-2812	4070-2812
19/64	4030-2969	4070-2969
5/16	4030-3125	4070-3125
21/64	4030-3281	4070-3281
11/32	4030-3438	4070-3438
23/64	4030-3594	4070-3594
3/8	4030-3750	4070-3750
25/64	4030-3906	4070-3906
13/32	4030-4062	4070-4062
27/64	4030-4219	4070-4219
7/16	4030-4375	4070-4375
29/64	4030-4531	4070-4531
15/32	4030-4688	4070-4688
31/64	4030-4844	4070-4844
1/2	4030-5000	4070-5000

Carbide & PCD 12" Aircraft Extensions

Size	Carbide Part Number	PCD Part Number
1/16	4080-0625	4095-0625
52	4080-0635	4095-0635
51	4080-0670	4095-0670
50	4080-0700	4095-0700
49	4080-0730	4095-0730
48	4080-0760	4095-0760
5/64	4080-0781	4095-0781
47	4080-0785	4095-0785
46	4080-0810	4095-0810
45	4080-0820	4095-0820
44	4080-0860	4095-0860
43	4080-0890	4095-0890
42	4080-0935	4095-0935
3/32	4080-0938	4095-0938
41	4080-0960	4095-0960
40	4080-0980	4095-0980
39	4080-0995	4095-0995
38	4080-1015	4095-1015
37	4080-1040	4095-1040
36	4080-1065	4095-1065
7/64	4080-1094	4095-1094
35	4080-1100	4095-1100
34	4080-1110	4095-1110
33	4080-1130	4095-1130
32	4080-1160	4095-1160
31	4080-1200	4095-1200
1/8	4080-1250	4095-1250
30	4080-1285	4095-1285

Size	Carbide Part Number	PCD Part Number
29	4080-1360	4095-1360
28	4080-1405	4095-1405
9/64	4080-1406	4095-1406
27	4080-1440	4095-1440
26	4080-1470	4095-1470
25	4080-1495	4095-1495
24	4080-1520	4095-1520
23	4080-1540	4095-1540
5/32	4080-1562	4095-1562
22	4080-1570	4095-1570
21	4080-1590	4095-1590
20	4080-1610	4095-1610
19	4080-1660	4095-1660
18	4080-1695	4095-1695
11/64	4080-1719	4095-1719
17	4080-1730	4095-1730
16	4080-1770	4095-1770
15	4080-1800	4095-1800
14	4080-1820	4095-1820
13	4080-1850	4095-1850
3/16	4080-1875	4095-1875
12	4080-1890	4095-1890
11	4080-1910	4095-1910
10	4080-1935	4095-1935
9	4080-1960	4095-1960
8	4080-1990	4095-1990
7	4080-2010	4095-2010
13/64	4080-2031	4095-2031

Size	Carbide Part Number	PCD Part Number
6	4080-2040	4095-2040
5	4080-2055	4095-2055
4	4080-2090	4095-2090
3	4080-2130	4095-2130
7/32	4080-2188	4095-2188
2	4080-2210	4095-2210
1	4080-2280	4095-2280
15/64	4080-2344	4095-2344
D	4080-2460	4095-2460
1/4	4080-2500	4095-2500
F	4080-2570	4095-2570
G	4080-2610	4095-2610
17/64	4080-2656	4095-2656
9/32	4080-2812	4095-2812
19/64	4080-2969	4095-2969
5/16	4080-3125	4095-3125
21/64	4080-3281	4095-3281
11/32	4080-3438	4095-3438
23/64	4080-3594	4095-3594
3/8	4080-3750	4095-3750
25/64	4080-3906	4095-3906
13/32	4080-4062	4095-4062
27/64	4080-4219	4095-4219
7/16	4080-4375	4095-4375
29/64	4080-4531	4095-4531
15/32	4080-4688	4095-4688
31/64	4080-4844	4095-4844
1/2	4080-5000	4095-5000

Nutplate Drill/Countersink

Made in U.S.A

Nutplate Drill/Countersink

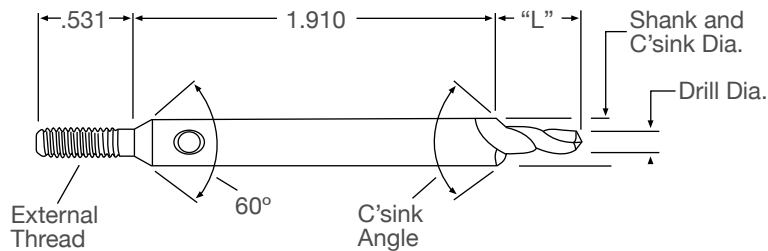
High Speed Steel, Cobalt or Solid Carbide HPD Series Drill
Countersinks for Nutplate Drillmotors

To determine your part number:

Series# + Material + Countersink Angle + Length Dash# + Thread

Example: HPD40-M7-100°-35-8

Note: The standard HPD nutplate drill countersink is made of M7 HSS and is used for drilling aluminum and mild steel. Substitute M7 with M42 for cobalt if drills are used for drilling hard steel or titanium, or substitute M7 with C for carbide if required.



HP Part #	Length	Body & C'Sink Dia.	Drill Dia.	"L" Dim.
HPD40 - 100	-25	.1875	.0980	.295
HPD40 - M42 - 100	-25	.1875	.0980	.295
HPD40 - 100	-35	.1875	.0980	.420
HPD40 - M42 - 100	-35	.1875	.0980	.420
HPD40 - 100	-50	.1875	.0980	.560
HPD40 - M42 - 100	-50	.1875	.0980	.560
HPDS40 - 100	-25	.25	.0980	.295
HPDS40 - M42 - 100	-25	.25	.0980	.295
HPDS40 - 100	-35	.25	.0980	.420
HPDS40 - M42 - 100	-35	.25	.0980	.420
HPDS40 - 100	-50	.25	.0980	.560
HPDS40 - M42 - 100	-50	.25	.0980	.560
HPD30 - 100	-25	.25	.1285	.295
HPD30 - 100	-35	.25	.1285	.420
HPD30 - 100	-50	.25	.1285	.560



Rivet Shaver Bits

Made in U.S.A

Standard 2 Flute

- Solid carbide blade
- For use in any shaver that takes a 1/4" - 28 thread

Part #	Body Diameter
9000 - 2500	1/4"
9000 - 3125	5/16"
9000 - 3750	3/8"
9000 - 4375	7/16"
9000 - 5000	1/2"
9000 - 5625	9/16"
9000 - 6250	5/8"
9000 - 7500	3/4"
9000 - 8750	7/8"
9000 - 10000	1"



14 Flutes

- Unique 2-flute center cutting design with 14 total flutes. Self-centering feature eliminates any cutter chatter and increases operator control.
- Solid carbide head
- 1/4" - 28 male threaded shank

Part #	Body Diameter
9100-3750-0001	3/8"
9100-5000-0001	1/2"



Special Drills & Reamer Capability

Made in U.S.A

- Available in HSS, Carbide, Cobalt & PCD
- Various shank configurations available

Reamers

Ground between centers for concentricity. Used for sizing close tolerance holes.



Core Drills

Used for reworking out of round holes (3 flute) and enlarging previously drilled holes (4 flute).



Double Margin Drills

Used for drilling close tolerance holes. May be manufactured with pilot to maintain concentricity.



Quick Change Adapted Drills

We manufacture drills and reamers to your specifications or print.



Carbide Tools for Composites

Made in U.S.A

Series 3200 Tapered Drill - Reamer

Also known as a “One Shot” drill, this tool can be used for hand drilling (through bushings) or with controlled feed/speed drillmotors. Originally developed for drilling fiberglass, these drills are also excellent for drilling CFRP and graphite composites. Various shank configurations available



Series 3000 Dagger Drill

Used with controlled feed/speed drillmotors such as the Quackenbush, this drill is designed to produce delamination free holes in graphite materials and/or graphite/aluminum provided the material does not exceed 1/4" thickness.



Series 3590 Nut Plate Drill & Countersink

Available in the two common sizes in the industry, and used in conjunction with a nutplate drillmotor. Drill sizes are #30 and #40 both available on 3/16 and 1/4 body with threaded shanks.



Series 3660 (Two Flute) Pilot Countersinks & Series 3670 (Three Flute) Pilot Countersinks

Used to countersink drilled holes in aluminum, graphite, fiberglass, etc. These tools come with standard threaded shanks that fit conventional microstop countersink cages.



Series 1435A Honeycomb Router

Recommended for honeycomb panels and kevlar. Designed with opposing flutes (right hand/ left hand) which compresses the material and produces a clean cut on top and bottom with no delamination or “fuzz.”



Series 2600 Solid Carbide Fluted Routers

2 & 3 flute routers are available in both “up-cut” and “down-cut” styles. For high speed routing on aluminum and composite materials.



Series 2700 Diamond Cut Routers

Long accepted as a standard for routing fiberglass materials, this tool is also being used for routing CFRP materials.



Series 3580 “Drivematic” Drill & Countersink

Used with Drivematic (GEMCOR) and Spacematic drillmotors common to the industry for controlled feed/speed on materials such as CFRP materials, aluminum, fiberglass, titanium and/or a combination of these materials.



Series 3575 “Spacematic” Drill & Countersink



Clamps & Fasteners

Made in U.S.A

Cleco Fasteners

C Series

Our Clecos are plier operated, spring loaded with a durable steel plated body. Designed for sheets that require precise holding of the material while other operations are completed. The C Series Fasteners are the standard button plunger type Clecos. Use C-200 manual plier or US902 pneumatic installation tool for easy installation.

Part #	Cross Ref.	Color Code	Grip	Diameter	Drill Size
C - 3/32	M - 3/32	Zinc	0 - 1/4"	3/32"	#40
C - 1/8	M - 1/8	Copper	0 - 1/4"	1/8"	#30
C - 5/32	M - 5/32	Black	0 - 1/4"	5/32"	#21
C - 3/16	M - 3/16	Brass	0 - 1/4"	3/16"	#10
C - 1/4	M - 1/4	Copper	0 - 1/4"	1/4"	1/4



CC Series

The CC Series fasteners are designed for normal clamping force in more confined areas. The CC type is a miniature fastener with a shorter overall body.

Part #	Cross Ref.	Color Code	Grip	Diameter	Drill Size
CC - 3/32	MM - 3/32	Zinc	0 - 1/4"	3/32"	#40
CC - 1/8	MM - 1/8	Copper	0 - 1/4"	1/8"	#30
CC - 5/32	MM - 5/32	Black	0 - 1/4"	5/32"	#21
CC - 3/16	MM - 3/16	Brass	0 - 1/4"	3/16"	#10



CHD Series

The CHD Series fasteners are designed for heavier applications requiring extended grip range.

Part #	Cross Ref.	Color Code	Grip	Diameter	Drill Size
CHD - 3/32	MHD - 3/32	Zinc	0 - 1/2"	3/32"	#40
CHD - 1/8	MHD - 1/8	Copper	0 - 1/2"	1/8"	#30
CHD - 9/64	N/A	Green	0 - 1/2"	9/64"	#27
CHD - 5/32	MHD - 5/32	Black	0 - 1/2"	5/32"	#21
CHD - 3/16	MHD - 3/16	Brass	0 - 1/2"	3/16"	#10
CHD - 1/4	MHD - 1/4	Copper	0 - 1/2"	1/4"	1/4



CL Series

The CL Series fasteners are the standard plunger type Cleco with an extended grip range.

Part #	Cross Ref.	Color Code	Grip	Diameter	Drill Size
CL - 3/32	ML - 3/32	Zinc	1/4" - 1/2"	3/32"	#40
CL - 1/8	ML - 1/8	Copper	1/4" - 1/2"	1/8"	#30
CL - 5/32	ML - 5/32	Black	1/4" - 1/2"	5/32"	#21
CL - 3/16	ML - 3/16	Brass	1/4" - 1/2"	3/16"	#10



Power - Hex Nut Style - Standard Grip 0 - 1/2"

Hex Nut Fasteners are recommended for high production applications that require a consistent clamping force. They are pneumatic driven with the US7381HX Power Nut Runner.

Part #	Cross Ref.	Color Code	Grip	Diameter	Drill Size
CHN - 3/32	HNX - SF - 3/32	Zinc	0 - 1/2"	3/32"	#40
CHN - 1/8	HNX - SF - 1/8	Copper	0 - 1/2"	1/8"	#30
CHN - 5/32	HNX - SF - 5/32	Black	0 - 1/2"	5/32"	#21
CHN - 3/16	HNX - SF - 3/16	Brass	0 - 1/2"	3/16"	#10



Power - Hex Nut Style - Long Grip 0 - 1"

Part #	Cross Ref.	Color Code	Grip	Diameter	Drill Size
CHNL - 3/32	HNXL - SF - 3/32	Zinc	0 - 1"	3/32"	#40
CHNL - 1/8	HNXL - SF - 1/8	Copper	0 - 1"	1/8"	#30
CHNL - 5/32	HNXL - SF - 5/32	Black	0 - 1"	5/32"	#21
CHNL - 3/16	HNXL - SF - 3/16	Brass	0 - 1"	3/16"	#10



Manual Wing Nut Style - Standard Grip 0 - 1/2"

Wing Nut Fasteners are recommended for low production applications where high clamping force is required. The clamping force ranges from zero to 300 lbs.

Part #	Cross Ref.	Color Code	Grip	Diameter	Drill Size
CWN - 3/32	WNX - SF - 3/32	Zinc	0 - 1/2"	3/32"	#40
CWN - 1/8	WNX - SF - 1/8	Copper	0 - 1/2"	1/8"	#30
CWN - 5/32	WNX - SF - 5/32	Black	0 - 1/2"	5/32"	#21
CWN - 3/16	WNX - SF - 3/16	Brass	0 - 1/2"	3/16"	#10



Manual Wing Nut Style - Long Grip 0 - 1"

Part #	Cross Ref.	Color Code	Grip	Diameter	Drill Size
CWNL - 3/32	WNXL - SF - 3/32	Zinc	0 - 1"	3/32"	#40
CWNL - 1/8	WNXL - SF - 1/8	Copper	0 - 1"	1/8"	#30
CWNL - 5/32	WNXL - SF - 5/32	Black	0 - 1"	5/32"	#21
CWNL - 3/16	WNXL - SF - 3/16	Brass	0 - 1"	3/16"	#10



Clamps & Fasteners

Side Grip Clamps

Side Grip clamps are designed to clamp at the edge of the work area. Ideal for holding workpieces of all types, particularly during bonding, sealing, or gluing operations.

- Improved design for longer life
 - Plier - Operated
 - Spring loaded
- Constant clamping force
 - Color-coded for easy identification
 - Use C-200 or US902 installation tool

Part Number	Clamping Capacity (GAP)	Effective Body Depth	Body Length
CSG 1/2 x 1/2	0 - 1/2"	1/2"	2 3/16"
CSG 3/4 x 1/2	0 - 3/4"	1/2"	2 7/16"
CSG 1/2 x 1	0 - 1/2"	1"	2 3/16"
CSG 3/4 x 1	0 - 3/4"	1"	2 7/16"



Cleco Pliers

C-200

- Installs CLEKO - LOK C - CC - CHD fasteners
- Installs Monogram M, MM, ML, MEL & MHD fasteners
- Installs Kwik - LOK K - KK, KL, KEL & KHD fasteners
- Top quality forged construction
- Made from forged steel and nickel plated to resist wear and abuse





Drill Stops

Designed as a versatile aid that helps eliminate drill bit breakage and provides a sure stop to regulate hole depth.

- Unique rounded face reduces surface marring
- Nomar type for composites and other soft materials
- Color coded by size for easy identification

Part Number	Color Code	Nomar	Drill Size
CDS - 40	Zinc	CDSP - 40	#40
CDS - 30	Copper	CDSP - 30	#30
CDS - 21	Zinc	CDSP - 21	#21
CDS - 20	Zinc	CDSP - 20	#20
CDS - 10	Brass	CDSP - 10	#10
CDS - 1/4	Copper	CDSP - 1/4	#1/4
CDS - 5/16	Black		#5/16



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