

Quick Index

Cutting Tools

Drills, Reamers, Taps, Dies, Carbide End Mills,
Cobalt End Mills, Spotting Drills, Drill Mills,
Countersinks

pgs 2 - 167

Carbide Tooling

Turning, Threading, Milling, Cut-Off, Grooving,
Drilling, Tool-Flo, K-Tool, Internal Tool

pgs 168 - 315

Work Holding

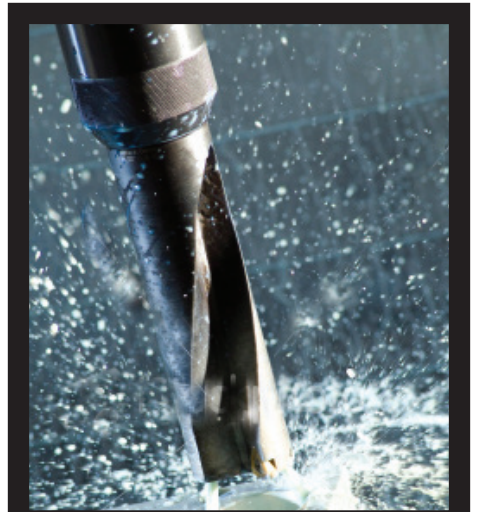
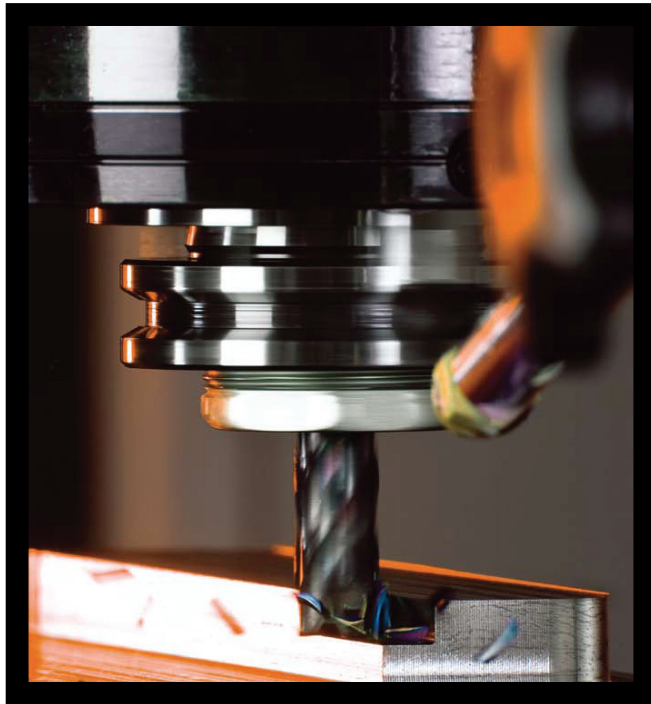
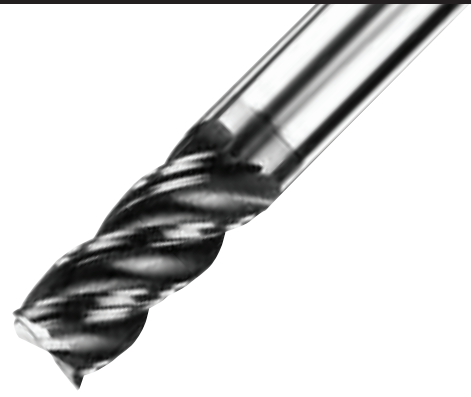
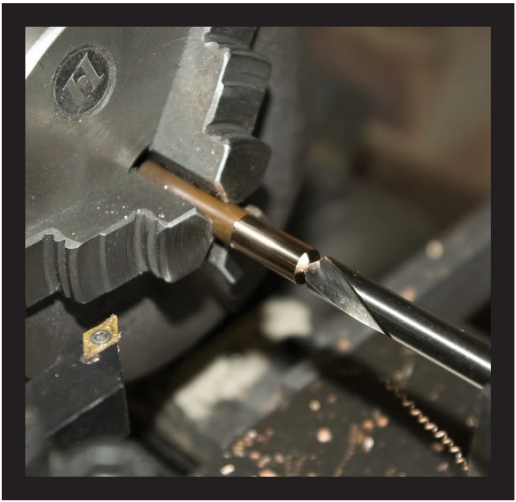
DA Holders & Collets, ER Holders & Collets, TG Holders & Collets,
Milling Holders & Collets, End Mill Holders, Shell Mill Holders,
Tap Holders & Collets, Soft Jaws

pgs 316 - 335

Fluids

Metalworking Fluids, Preventatives, Cleaners, Tools

pgs 336 - 345





Drills

- 4 Cobalt Screw Machine Drills - Bronze
- 6 Cobalt Screw Machine Drills - TiN
- 8 Cobalt Screw Machine Drills - Parabolic TiN
- 10 Cobalt Jober Length Drills - Bronze
- 12 Cobalt Jober Length Drills - TiN
- 14 High Speed Jober Length Drills - Parabolic TiN
- 16 High Speed Jober Length Drills - TiN
- 18 High Speed Jober Length Drills - Black
- 20 High Speed Taper Length Drills - Bright
- 22 High Speed Silver& Deming Drills
- 23 Center Drills
- 25 M.A. Ford Solid Carbide Drills - 3xD
- 27 M.A. Ford Solid Carbide Drills - 5xD
- 29 M.A. Ford Micro-Tuff Drills
- 31 YG1 Carbide Dream Drills w/o coolant - 3xD
- 34 YG1 Carbide Dream Drills - 3xD
- 36 YG1 Carbide Dream Drills - 5xD
- 38 YG1 Carbide Dream Drills - 8xD
- 40 YG1 Carbide Dream Drills INOX - 3xD
- 42 YG1 Carbide Dream Drills INOX - 5xD
- 44 YG1 Carbide Dream Drills INOX - 8xD
- 46 YG1 Carbide Dream Drills MQL - 10xD
- 47 YG1 Carbide Dream Drills MQL - 12xD
- 47 YG1 Carbide Dream Drills MQL - 15xD
- 48 YG1 Carbide Dream Drills - Speeds & Feeds
- 50 YG1 Cobalt Spade Blades (T15)
- 53 YG1 Cobalt Spade Blades (T15) - Flat Bottom
- 54 YG1 High Speed Spade Blades (M4)
- 56 YG1 Carbide Spade Blades (C2 & C5)
- 58 YG1 Spade Blades - Speeds & Feeds
- 61 YG1 Spade Blade Holders

Reamers

- 64 HSS Reamers
- 71 Solid Carbide Reamers

Taps

- 74 Morse SHEARTAP - Spiral Point
- 76 Morse SHEARTAP - Spiral Flute
- 78 Morse Spiral Point Plug Taps
- 82 Morse Straight Flute Hand Taps
- 86 Morse Taper Pipe Taps
- 87 Morse Straight Pipe Taps
- 88 YG1 Combo Taps - Spiral Point
- 90 YG1 Combo Taps - Spiral Flute
- 92 YG1 Combo Taps - SPPT - Stainless
- 94 YG1 Combo Taps - SPFL - Stainless
- 96 YG1 Forming Taps
- 97 YG1 Spiral Point Plug Taps
- 98 Tap Drill Sizes

Dies

- 100 National Coarse Thread
- 100 National Fine Thread

IMCO Carbide End Mills

- 101 IMCO POW-R-FEED Carbide End Mills
- 110 IMCO POW-R-FEED Speeds & Feeds
- 114 IMCO POW-R-PATH Carbide End Mills
- 120 IMCO POW-R-PATH Speeds & Feeds
- 122 IMCO OMEGA-6 Carbide End Mills
- 123 IMCO OMEGA-6 Speeds & Feeds
- 124 IMCO INCONEX Carbide End Mills
- 125 IMCO INCONEX Speeds & Feeds
- 126 IMCO enDuro Carbide End Mills
- 130 IMCO enDuro Speeds & Feeds
- 131 IMCO 3 Flute Streaker End Mills
- 134 IMCO 2 Flute Streaker End Mills
- 137 IMCO Streaker Speeds & Feeds
- 138 IMCO 4 Flute General Purpose End Mills
- 143 IMCO 4 Flute Carb EM Speeds & Feeds
- 144 IMCO 2 Flute General Purpose End Mills
- 149 IMCO 2 Flute Carb EM Speeds & Feeds
- 150 IMCO Rougher/Finisher End Mills
- 151 IMCO Rougher/Finisher Speeds & Feeds

Fullerton Carbide End Mills

- 152 Series 3200 - 4 Flute Square
- 153 Series 3200R - 4 Flute Radius
- 154 Series 3215 - 2 Flute Square
- 156 Series 3215R - 2 Flute Radius
- 157 Series 3975 - Hogger End Mills

Melin Cobalt End Mills

- 158 Single Ended, Multiple Flute
- 160 Melin Coarse Pitch Rougher
- 161 Melin Fine Pitch Rougher

Misc.

- 162 Spotting Drills
- 163 Drill Mills
- 164 Chamfer Mills
- 165 Radius Mills
- 166 Countersinks

COBALT SCREW MACHINE DRILLS

HSS-Co8%

Flute Geometry: Right hand spiral

Point: 135° split point

Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron.



Fractional Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
3/64	.0469	1/2	1-3/8	A232-3/64
1/16	.0625	5/8	1-5/8	A232-1/16
5/64	.0781	11/16	1-11/16	A232-5/64
3/32	.0937	3/4	1-3/4	A232-3/32
7/64	.1094	13/16	1-13/16	A232-7/64
1/8	.1250	7/8	1-7/8	A232-1/8
9/64	.1406	15/16	1-15/16	A232-9/64
5/32	.1562	1	2-1/16	A232-5/32
11/64	.1719	1-1/16	2-1/8	A232-11/64
3/16	.1875	1-1/8	2-3/16	A232-3/16
13/64	.2031	1-3/16	2-1/4	A232-13/64
7/32	.2187	1-1/4	2-3/8	A232-7/32
15/64	.2344	1-5/16	2-7/16	A232-15/64
1/4	.2500	1-3/8	2-1/2	A232-1/4
17/64	.2656	1-7/16	2-5/8	A232-17/64

Fractional Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
9/32	.2812	1-1/2	2-11/16	A232-9/32
19/64	.2969	1-9/16	2-3/4	A232-19/64
5/16	.3125	1-5/8	2-13/16	A232-5/16
21/64	.3281	1-11/16	2-15/16	A232-21/64
11/32	.3437	1-11/16	3	A232-11/32
23/64	.3594	1-3/4	3-1/16	A232-23/64
3/8	.3750	1-13/16	3-1/8	A232-3/8
25/64	.3906	1-7/8	3-1/4	A232-25/64
13/32	.4062	1-15/16	3-5/16	A232-13/32
27/64	.4219	2	3-3/8	A232-27/64
7/16	.4375	2-1/16	3-7/16	A232-7/16
29/64	.4531	2-1/8	3-9/16	A232-29/64
15/32	.4687	2-1/8	3-5/8	A232-15/32
31/64	.4844	2-3/16	3-11/16	A232-31/64
1/2	.5000	2-1/4	3-3/4	A232-1/2

Letter Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
A	.2340	1-5/16	2-7/16	A232-A
B	.2380	1-3/8	2-1/2	A232-B
C	.2420	1-3/8	2-1/2	A232-C
D	.2460	1-3/8	2-1/2	A232-D
E	.2500	1-3/8	2-1/2	A232-E
F	.2570	1-7/16	2-5/8	A232-F
G	.2610	1-7/16	2-5/8	A232-G
H	.2660	1-1/2	2-11/16	A232-H
I	.2720	1-1/2	2-11/16	A232-I
J	.2770	1-1/2	2-11/16	A232-J
K	.2810	1-1/2	2-11/16	A232-K
L	.2900	1-9/16	2-3/4	A232-L
M	.2950	1-9/16	2-3/4	A232-M

Letter Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
N	.3020	1-5/8	2-13/16	A232-N
O	.3160	1-11/16	2-15/16	A232-O
P	.3230	1-11/16	2-15/16	A232-P
Q	.3320	1-11/16	3	A232-Q
R	.3390	1-11/16	3	A232-R
S	.3480	1-3/4	3-1/16	A232-S
T	.3580	1-3/4	3-1/16	A232-T
U	.3680	1-13/16	3-1/8	A232-U
V	.3770	1-7/8	3-1/4	A232-V
W	.3860	1-7/8	3-1/4	A232-W
X	.3970	1-15/16	3-5/16	A232-X
Y	.4040	1-15/16	3-5/16	A232-Y
Z	.4130	2	3-3/8	A232-Z

COBALT SCREW MACHINE DRILLS

HSS-Co8%



Flute Geometry: Right hand spiral

Point: 135° split point

Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron.

Wire Gauge Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1	.2280	1-5/16	2-7/16	A232-1
2	.2210	1-5/16	2-7/16	A232-2
3	.2130	1-1/4	2-3/8	A232-3
4	.2090	1-1/4	2-3/8	A232-4
5	.2055	1-1/4	2-3/8	A232-5
6	.2040	1-1/4	2-3/8	A232-6
7	.2010	1-3/16	2-1/4	A232-7
8	.1990	1-3/16	2-1/4	A232-8
9	.1960	1-3/16	2-1/4	A232-9
10	.1935	1-3/16	2-1/4	A232-10
11	.1910	1-3/16	2-1/4	A232-11
12	.1890	1-3/16	2-1/4	A232-12
13	.1850	1-1/8	2-3/16	A232-13
14	.1820	1-1/8	2-3/16	A232-14
15	.1800	1-1/8	2-3/16	A232-15
16	.1770	1-1/8	2-3/16	A232-16
17	.1730	1-1/8	2-3/16	A232-17
18	.1695	1-1/16	2-1/8	A232-18
19	.1660	1-1/16	2-1/8	A232-19
20	.1610	1-1/16	2-1/8	A232-20
21	.1590	1-1/16	2-1/8	A232-21
22	.1570	1-1/16	2-1/8	A232-22
23	.1540	1	2-1/16	A232-23
24	.1520	1	2-1/16	A232-24
25	.1495	1	2-1/16	A232-25
26	.1470	1	2-1/16	A232-26
27	.1440	1	2-1/16	A232-27
28	.1405	15/16	1-15/16	A232-28
29	.1360	15/16	1-15/16	A232-29
30	.1285	15/16	1-15/16	A232-30

Wire Gauge Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
31	.1200	7/8	1-7/8	A232-31
32	.1160	7/8	1-7/8	A232-32
33	.1130	7/8	1-7/8	A232-33
34	.1110	7/8	1-7/8	A232-34
35	.1100	7/8	1-7/8	A232-35
36	.1065	13/16	1-13/16	A232-36
37	.1040	13/16	1-13/16	A232-37
38	.1015	13/16	1-13/16	A232-38
39	.0995	13/16	1-13/16	A232-39
40	.0980	13/16	1-13/16	A232-40
41	.0960	13/16	1-13/16	A232-41
42	.0935	3/4	1-3/4	A232-42
43	.0890	3/4	1-3/4	A232-43
44	.0860	3/4	1-3/4	A232-44
45	.0820	3/4	1-3/4	A232-45
46	.0810	3/4	1-3/4	A232-46
47	.0785	11/16	1-11/16	A232-47
48	.0760	11/16	1-11/16	A232-48
49	.0730	11/16	1-11/16	A232-49
50	.0700	11/16	1-11/16	A232-50
51	.0670	11/16	1-11/16	A232-51
52	.0635	11/16	1-11/16	A232-52
53	.0595	5/8	1-5/8	A232-53
54	.0550	5/8	1-5/8	A232-54
55	.0520	5/8	1-5/8	A232-55
56	.0465	1/2	1-3/8	A232-56
57	.0430	1/2	1-3/8	A232-57
58	.0420	1/2	1-3/8	A232-58
59	.0410	1/2	1-3/8	A232-59
60	.0400	1/2	1-3/8	A232-60

COBALT SCREW MACHINE DRILLS

HSS-Co8% - TiN Coated

Flute Geometry: Right hand spiral
Point: 135° split point
Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron.



Metric Size

Size OD	Decimal Equiv. OD	Flute Length (mm)	OAL (mm)	Part Number
1.0	.0393	6	26	A117-1.0mm
1.1	.04332	7	28	A117-1.1mm
1.2	.0472	8	30	A117-1.2mm
1.3	.0512	8	30	A117-1.3mm
1.4	.0551	9	32	A117-1.4mm
1.5	.0590	9	32	A117-1.5mm
1.6	.0630	10	34	A117-1.6mm
1.7	.0669	10	34	A117-1.7mm
1.8	.0709	11	36	A117-1.8mm
1.9	.0748	11	36	A117-1.9mm
2.0	.0787	12	38	A117-2.0mm
2.1	.0827	12	38	A117-2.1mm
2.2	.0866	13	40	A117-2.2mm
2.3	.0906	13	40	A117-2.3mm
2.4	.0945	14	43	A117-2.4mm
2.5	.0984	14	43	A117-2.5mm
2.6	.1024	14	43	A117-2.6mm
2.7	.1063	16	46	A117-2.7mm
2.8	.1102	16	46	A117-2.8mm
2.9	.1142	16	46	A117-2.9mm
3.0	.1181	16	46	A117-3.0mm
3.1	.1220	18	49	A117-3.1mm
3.2	.1260	18	49	A117-3.2mm
3.3	.1299	18	49	A117-3.3mm

Metric Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length (mm)	OAL (mm)	Part Number
3.4	.1339	20	52	A117-3.4mm
3.5	.1378	20	52	A117-3.5mm
3.6	.1417	20	52	A117-3.6mm
3.7	.1457	20	52	A117-3.7mm
3.8	.1496	22	55	A117-3.8mm
3.9	.1535	22	55	A117-3.9mm
4.0	.1575	22	55	A117-4.0mm
4.1	.1614	22	55	A117-4.1mm
4.2	.1654	22	55	A117-4.2mm
4.3	.1693	24	58	A117-4.3mm
4.4	.1732	24	58	A117-4.4mm
4.5	.1772	24	58	A117-4.5mm
4.6	.1811	24	58	A117-4.6mm
4.7	.1850	24	58	A117-4.7mm
4.8	.1890	26	62	A117-4.8mm
4.9	.1929	26	62	A117-4.9mm
5.0	.1969	26	62	A117-5.0mm
5.1	.2008	26	62	A117-5.1mm
5.2	.2047	26	62	A117-5.2mm
5.3	.2087	26	62	A117-5.3mm
5.4	.2126	28	66	A117-5.4mm
5.5	.2165	28	66	A117-5.5mm
5.6	.2205	28	66	A117-5.6mm
5.7	.2244	28	66	A117-5.7mm

COBALT SCREW MACHINE DRILLS

HSS-Co8% - TiN Coated



Flute Geometry: Right hand spiral
Point: 135° split point
Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron.

Metric Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length (mm)	OAL (mm)	Part Number
5.8	.2283	28	66	A117-5.8mm
5.9	.2323	28	66	A117-5.9mm
6.0	.2362	28	66	A117-6.0mm
6.1	.2402	31	70	A117-6.1mm
6.2	.2441	31	70	A117-6.2mm
6.3	.2480	31	70	A117-6.3mm
6.4	.2520	31	70	A117-6.4mm
6.5	.2559	31	70	A117-6.5mm
6.6	.2598	31	70	A117-6.6mm
6.7	.2638	31	70	A117-6.7mm
6.8	.2677	34	74	A117-6.8mm
6.9	.2717	34	74	A117-6.9mm
7.0	.2756	34	74	A117-7.0mm
7.1	.2795	34	74	A117-7.1mm
7.2	.2835	34	74	A117-7.2mm
7.3	.2874	34	74	A117-7.3mm
7.4	.2913	34	74	A117-7.4mm
7.5	.2953	34	74	A117-7.5mm
7.6	.2992	37	79	A117-7.6mm
7.7	.3031	37	79	A117-7.7mm
7.8	.3071	37	79	A117-7.8mm
7.9	.3110	37	79	A117-7.9mm
8.0	.3150	37	79	A117-8.0mm
8.1	.3189	37	79	A117-8.1mm

Metric Size

Size OD	Decimal Equiv. OD	Flute Length (mm)	OAL (mm)	Part Number
8.2	.3228	37	79	A117-8.2mm
8.3	.3268	37	79	A117-8.3mm
8.4	.3307	37	79	A117-8.4mm
8.5	.3346	37	79	A117-8.5mm
8.6	.3386	40	84	A117-8.6mm
8.7	.3425	40	84	A117-8.7mm
8.8	.3465	40	84	A117-8.8mm
8.9	.3504	40	84	A117-8.9mm
9.0	.3543	40	84	A117-9.0mm
9.1	.3583	40	84	A117-9.1mm
9.2	.3622	40	84	A117-9.2mm
9.3	.3661	40	84	A117-9.3mm
9.4	.3701	40	84	A117-9.4mm
9.5	.3740	40	84	A117-9.5mm
10.0	.3937	43	89	A117-10.0mm
10.5	.4134	43	89	A117-10.5mm
11.0	.4331	47	95	A117-11.0mm
11.5	.4528	47	95	A117-11.5mm
12.0	.4724	51	102	A117-12.0mm
12.5	.4921	51	102	A117-12.5mm
13.0	.5118	51	102	A117-13.0mm

COBALT SCREW MACHINE DRILLS

HSS-Co5% - Parabolic Flute, TiN Coated

Flute Geometry: Right hand spiral, **PARABOLIC FLUTE**
 38° helix
Point: 130° split point... .059 diameter and over.
Application: Improved chip removal in most materials,
 especially in deep drilling applications



Fractional Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
3/32	.0937	3/4	1-3/4	DN514006
7/64	.1094	13/16	1-13/16	DN514007
1/8	.1250	7/8	1-7/8	DN514008
9/64	.1406	15/16	1-15/16	DN514009
5/32	.1562	1	2-1/16	DN514010
11/64	.1719	1-1/16	2-1/8	DN514011
3/16	.1875	1-1/8	2-3/16	DN514012
13/64	.2031	1-3/16	2-1/4	DN514013
7/32	.2187	1-1/4	2-3/8	DN514014
15/64	.2344	1-5/16	2-7/16	DN514015
1/4	.2500	1-3/8	2-1/2	DN514016
17/64	.2656	1-7/16	2-5/8	DN514017
9/32	.2812	1-1/2	2-11/16	DN514018
19/64	.2969	1-9/16	2-3/4	DN514019

Fractional Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
5/16	.3125	1-5/8	2-13/16	DN514020
21/64	.3281	1-11/16	2-15/16	DN514021
11/32	.3427	1-11/16	3	DN514022
23/64	.3594	1-3/4	3-1/16	DN514023
3/8	.3750	1-13/16	3-1/8	DN514024
25/64	.3906	1-7/8	3-1/4	DN514025
13/32	.4062	1-15/16	3-5/16	DN514026
27/64	.4219	2	3-3/8	DN514027
7/16	.4375	2-1/16	3-7/16	DN514028
29/64	.4531	2-1/8	3-9/16	DN514029
15/32	.4687	2-1/8	3-5/8	DN514030
31/64	.4844	2-3/16	3-11/16	DN514031
1/2	.5000	2-1/4	3-3/4	DN514032

Letter Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
A	.2340	1-5/16	2-7/16	DN516101
B	.2380	1-3/8	2-1/2	DN516102
C	.2420	1-3/8	2-1/2	DN516103
D	.2460	1-3/8	2-1/2	DN516104
E	.2500	1-3/8	2-1/2	DN516105
F	.2570	1-7/16	2-5/8	DN516106
G	.2610	1-7/16	2-5/8	DN516107
H	.2660	1-1/2	2-11/16	DN516108
I	.2720	1-1/2	2-11/16	DN516109
J	.2770	1-1/2	2-11/16	DN516110
K	.2810	1-1/2	2-11/16	DN516111
L	.2900	1-9/16	2-3/4	DN516112
M	.2950	1-9/16	2-3/4	DN516113

Letter Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
N	.3020	1-5/8	2-13/16	DN516114
O	.3160	1-11/16	2-15/16	DN516115
P	.3230	1-11/16	2-15/16	DN516116
Q	.3320	1-11/16	3	DN516117
R	.3390	1-11/16	3	DN516118
S	.3480	1-3/4	3-1/16	DN516119
T	.3580	1-3/4	3-1/16	DN516120
U	.3680	1-13/16	3-1/8	DN516121
V	.3770	1-7/8	3-1/4	DN516122
W	.3860	1-7/8	3-1/4	DN516123
X	.3970	1-15/16	3-5/16	DN516124
Y	.4040	1-15/16	3-5/16	DN516125
Z	.4130	2	3-3/8	DN516126

COBALT SCREW MACHINE DRILLS

HSS-Co5% - Parabolic Flute, TiN Coated



Flute Geometry: Right hand spiral, **PARABOLIC FLUTE**
38° helix
Point: 130° split point... .059 diameter and over.
Application: Improved chip removal in most materials,
especially in deep drilling applications

Wire Gauge Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1	.2280	1-5/16	2-7/16	DN515201
2	.2210	1-5/16	2-7/16	DN515202
3	.2130	1-1/4	2-3/8	DN515203
4	.2090	1-1/4	2-3/8	DN515204
5	.2055	1-1/4	2-3/8	DN515205
6	.2040	1-1/4	2-3/8	DN515206
7	.2010	1-3/16	2-1/4	DN515207
8	.1990	1-3/16	2-1/4	DN515208
9	.1960	1-3/16	2-1/4	DN515209
10	.1935	1-3/16	2-1/4	DN515210
11	.1910	1-3/16	2-1/4	DN515211
12	.1890	1-3/16	2-1/4	DN515212
13	.1850	1-1/8	2-3/16	DN515213
14	.1820	1-1/8	2-3/16	DN515214
15	.1800	1-1/8	2-3/16	DN515215
16	.1770	1-1/8	2-3/16	DN515216
17	.1730	1-1/8	2-3/16	DN515217
18	.1695	1-1/16	2-1/8	DN515218
19	.1660	1-1/16	2-1/8	DN515219
20	.1610	1-1/16	2-1/8	DN515220
21	.1590	1-1/16	2-1/8	DN515221
22	.1570	1-1/16	2-1/8	DN515222
23	.1540	1	2-1/16	DN515223
24	.1520	1	2-1/16	DN515224

Wire Gauge Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
25	.1495	1	2-1/16	DN515225
26	.1470	1	2-1/16	DN515226
27	.1440	1	2-1/16	DN515227
28	.1405	15/16	1-15/16	DN515228
29	.1360	15/16	1-15/16	DN515229
30	.1285	15/16	1-15/16	DN515230
31	.1200	7/8	1-7/8	DN515231
32	.1160	7/8	1-7/8	DN515232
33	.1130	7/8	1-7/8	DN515233
34	.1110	7/8	1-7/8	DN515234
35	.1100	7/8	1-7/8	DN515235
36	.1065	13/16	1-13/16	DN515236
37	.1040	13/16	1-13/16	DN515237
38	.1015	13/16	1-13/16	DN515238
39	.0995	13/16	1-13/16	DN515239
40	.0980	13/16	1-13/16	DN515240
41	.0960	13/16	1-13/16	DN515241
42	.0935	3/4	1-3/4	DN515242
43	.0890	3/4	1-3/4	DN515243
44	.0860	3/4	1-3/4	DN515244
45	.0820	3/4	1-3/4	DN515245
46	.0810	3/4	1-3/4	DN515246
47	.0785	11/16	1-11/16	DN515247

COBALT JOBBER LENGTH DRILLS

HSS-Co8%

Flute Geometry: Right hand spiral, wider flutes
Point: 135° split point... .059 diameter and over
Surface Treatment: Bright body TiN coating on working part
Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron



Fractional Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
3/64	.0469	3/4	1-3/4	A745-3/64
1/16	.0625	7/8	1-7/8	A745-1/16
5/64	.0781	1	2	A745-5/64
3/32	.0937	1-1/4	2-1/4	A745-3/32
7/64	.1094	1-1/2	2-5/8	A745-7/64
1/8	.1250	1-5/8	2-3/4	A745-1/8
9/64	.1406	1-3/4	2-7/8	A745-9/64
5/32	.1562	2	3-1/8	A745-5/32
11/64	.1719	2-1/8	3-1/4	A745-11/64
3/16	.1875	2-5/16	3-1/2	A745-3/16
13/64	.2031	2-7/16	3-5/8	A745-13/64
7/32	.2187	2-1/2	3-3/4	A745-7/32
15/64	.2344	2-5/8	3-7/8	A745-15/64
1/4	.2500	2-3/4	4	A745-1/4
17/64	.2656	2-7/8	4-1/8	A745-17/64

Fractional Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
9/32	.2812	2-15/16	4-1/4	A745-9/32
19/64	.2969	3-1/16	4-3/8	A745-19/64
5/16	.3125	3-3/16	4-1/2	A745-5/16
21/64	.3281	3-5/16	4-5/8	A745-21/64
11/32	.3437	3-7/16	4-3/4	A745-11/32
23/64	.3594	3-1/2	4-7/8	A745-23/64
3/8	.3750	3-5/8	5	A745-3/8
25/64	.3906	3-3/4	5-1/8	A745-25/64
13/32	.4062	3-7/8	5-1/4	A745-13/32
27/64	.4219	3-15/16	5-3/8	A745-27/64
7/16	.4375	4-1/16	5-1/2	A745-7/16
29/64	.4531	4-3/16	5-5/8	A745-29/64
15/32	.4687	4-5/16	5-3/4	A745-15/32
31/64	.4844	4-3/8	5-7/8	A745-31/64
1/2	.5000	4-1/2	6	A745-1/2

Letter Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
A	.2340	2-5/8	3-7/8	A745-A
B	.2380	2-3/4	4	A745-B
C	.2420	2-3/4	4	A745-C
D	.2460	2-3/4	4	A745-D
E	.2500	2-3/4	4	A745-E
F	.2570	2-7/8	4-1/8	A745-F
G	.2610	2-7/8	4-1/8	A745-G
H	.2660	2-7/8	4-1/8	A745-H
I	.2720	2-7/8	4-1/8	A745-I
J	.2770	2-7/8	4-1/8	A745-J
K	.2810	2-15/16	4-1/4	A745-K
L	.2900	2-15/16	4-1/4	A745-L
M	.2950	3-1/16	4-3/8	A745-M

Letter Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
N	.3020	3-1/16	4-3/8	A745-N
O	.3160	3-3/16	4-1/2	A745-O
P	.3230	3-5/16	4-5/8	A745-P
Q	.3320	3-7/16	4-3/4	A745-Q
R	.3390	3-7/16	4-3/4	A745-R
S	.3480	3-1/2	4-7/8	A745-S
T	.3580	3-1/2	4-7/8	A745-T
U	.3680	3-5/8	5	A745-U
V	.3770	3-5/8	5	A745-V
W	.3860	3-3/4	5-1/8	A745-W
X	.3970	3-3/4	5-1/8	A745-X
Y	.4040	3-7/8	5-1/4	A745-Y
Z	.4130	3-7/8	5-1/4	A745-Z

COBALT JOBBER LENGTH DRILLS

HSS-Co8%



Flute Geometry: Right hand spiral, wider flutes
Point: 135° split point... .059 diameter and over
Surface Treatment: Bright body TiN coating on working part
Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron

Wire Gauge Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1	.2280	2-5/8	3-7/8	A745-1
2	.2210	2-5/8	3-7/8	A745-2
3	.2130	2-1/2	3-3/4	A745-3
4	.2090	2-1/2	3-3/4	A745-4
5	.2055	2-1/2	3-3/4	A745-5
6	.2040	2-1/2	3-3/4	A745-6
7	.2010	2-7/16	3-5/8	A745-7
8	.1990	2-7/16	3-5/8	A745-8
9	.1960	2-7/16	3-5/8	A745-9
10	.1935	2-7/16	3-5/8	A745-10
11	.1910	2-5/16	3-1/2	A745-11
12	.1890	2-5/16	3-1/2	A745-12
13	.1850	2-5/16	3-1/2	A745-13
14	.1820	2-3/16	3-3/8	A745-14
15	.1800	2-3/16	3-3/8	A745-15
16	.1770	2-3/16	3-3/8	A745-16
17	.1730	2-3/16	3-3/8	A745-17
18	.1695	2-1/8	3-1/4	A745-18
19	.1660	2-1/8	3-1/4	A745-19
20	.1610	2-1/8	3-1/4	A745-20
21	.1590	2-1/8	3-1/4	A745-21
22	.1570	2	3-1/8	A745-22
23	.1540	2	3-1/8	A745-23
24	.1520	2	3-1/8	A745-24
25	.1495	1-7/8	3	A745-25
26	.1470	1-7/8	3	A745-26
27	.1440	1-7/8	3	A745-27
28	.1405	1-3/4	2-7/8	A745-28

Wire Gauge Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
29	.1360	1-3/4	2-7/8	A745-29
30	.1285	1-5/8	2-3/4	A745-30
31	.1200	1-5/8	2-3/4	A745-31
32	.1160	1-5/8	2-3/4	A745-32
33	.1130	1-1/2	2-5/8	A745-33
34	.1110	1-1/2	2-5/8	A745-34
35	.1100	1-1/2	2-5/8	A745-35
36	.1065	1-7/16	2-1/2	A745-36
37	.1040	1-7/16	2-1/2	A745-37
38	.1015	1-7/16	2-1/2	A745-38
39	.0995	1-3/8	2-3/8	A745-39
40	.0980	1-3/8	2-3/8	A745-40
41	.0960	1-3/8	2-3/8	A745-41
42	.0935	1-1/4	2-1/4	A745-42
43	.0890	1-1/4	2-1/4	A745-43
44	.0860	1-1/8	2-1/8	A745-44
45	.0820	1-1/8	2-1/8	A745-45
46	.0810	1-1/8	2-1/8	A745-46
47	.0785	1	2	A745-47
48	.0760	1	2	A745-48
49	.0730	1	2	A745-49
50	.0700	1	2	A745-50
51	.0670	1	2	A745-51
52	.0635	7/8	1-7/8	A745-52
53	.0635	7/8	1-7/8	A745-53
54	.0595	7/8	1-7/8	A745-54
55	.0520	7/8	1-7/8	A745-55
56	.0465	3/4	1-3/4	A745-56

COBALT JOBBER LENGTH DRILLS

HSS-Co8% - TiN Coated

Flute Geometry: Right hand spiral, wider flutes
Point: 135° split point... .059 diameter and over
Surface Treatment: Bright body TiN coating on working part
Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron



Metric Size

Size OD	Decimal Equiv. OD	Flute Length (mm)	OAL (mm)	Part Number
1.0mm	0.0394	12	34	A002-1.0mm
1.1mm	0.0433	14	36	A002-1.1mm
1.2mm	0.0472	16	38	A002-1.2mm
1.3mm	0.0512	16	38	A002-1.3mm
1.4mm	0.0551	18	40	A002-1.4mm
1.5mm	0.0591	18	40	A002-1.5mm
1.6mm	0.0630	20	43	A002-1.6mm
1.7mm	0.0669	20	43	A002-1.7mm
1.8mm	0.0709	22	46	A002-1.8mm
1.9mm	0.0748	22	46	A002-1.9mm
2.0mm	0.0787	24	49	A002-2.0mm
2.1mm	0.0827	24	49	A002-2.1mm
2.2mm	0.0866	27	53	A002-2.2mm
2.3mm	0.0906	27	53	A002-2.3mm
2.4mm	0.0945	30	57	A002-2.4mm
2.5mm	0.0984	30	57	A002-2.5mm
2.6mm	0.1024	30	57	A002-2.6mm
2.7mm	0.1063	33	61	A002-2.7mm
2.8mm	0.1102	33	61	A002-2.8mm
2.9mm	0.1142	33	61	A002-2.9mm
3.0mm	0.1181	33	61	A002-3.0mm
3.1mm	0.1220	36	65	A002-3.1mm
3.2mm	0.1260	36	65	A002-3.2mm
3.3mm	0.1299	36	65	A002-3.3mm
3.4mm	0.1339	39	70	A002-3.4mm
3.5mm	0.1378	39	70	A002-3.5mm
3.6mm	0.1417	39	70	A002-3.6mm
3.7mm	0.1457	39	70	A002-3.7mm
3.8mm	0.1496	43	75	A002-3.8mm
3.9mm	0.1535	43	75	A002-3.9mm
4.0mm	0.1575	43	75	A002-4.0mm

Metric Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length (mm)	OAL (mm)	Part Number
4.1mm	0.1614	43	75	A002-4.1mm
4.2mm	0.1654	43	75	A002-4.2mm
4.3mm	0.1693	47	80	A002-4.3mm
4.4mm	0.1732	47	80	A002-4.4mm
4.5mm	0.1772	47	80	A002-4.5mm
4.6mm	0.1811	47	80	A002-4.6mm
4.7mm	0.1850	47	80	A002-4.7mm
4.8mm	0.1890	52	86	A002-4.8mm
4.9mm	0.1929	52	86	A002-4.9mm
5.0mm	0.1969	52	86	A002-5.0mm
5.1mm	0.2008	52	86	A002-5.1mm
5.2mm	0.2047	52	86	A002-5.2mm
5.3mm	0.2087	52	86	A002-5.3mm
5.4mm	0.2126	57	93	A002-5.4mm
5.5mm	0.2165	57	93	A002-5.5mm
5.6mm	0.2205	57	93	A002-5.6mm
5.7mm	0.2244	57	93	A002-5.7mm
5.8mm	0.2283	57	93	A002-5.8mm
5.9mm	0.2323	57	93	A002-5.9mm
6.0mm	0.2362	57	93	A002-6.0mm
6.1mm	0.2402	63	101	A002-6.1mm
6.2mm	0.2441	63	101	A002-6.2mm
6.3mm	0.2480	63	101	A002-6.3mm
6.4mm	0.2520	63	101	A002-6.4mm
6.5mm	0.2559	63	101	A002-6.5mm
6.6mm	0.2598	63	101	A002-6.6mm
6.7mm	0.2638	63	101	A002-6.7mm
6.8mm	0.2677	69	109	A002-6.8mm
6.9mm	0.2717	69	109	A002-6.9mm
7.0mm	0.2756	69	109	A002-7.0mm
7.1mm	0.2795	69	109	A002-7.1mm

COBALT JOBBER LENGTH DRILLS

HSS-Co8% - TiN Coated



Flute Geometry: Right hand spiral, wider flutes
Point: 135° split point... .059 diameter and over
Surface Treatment: Bright body TiN coating on working part
Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron

Metric Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length (mm)	OAL (mm)	Part Number
7.2mm	0.2835	69	109	A002-7.2mm
7.3mm	0.2874	69	109	A002-7.3mm
7.4mm	0.2913	69	109	A002-7.4mm
7.5mm	0.2953	69	109	A002-7.5mm
7.6mm	0.2992	75	117	A002-7.6mm
7.7mm	0.3031	75	117	A002-7.7mm
7.8mm	0.3071	75	117	A002-7.8mm
7.9mm	0.3110	75	117	A002-7.9mm
8.0mm	0.3150	75	117	A002-8.0mm
8.1mm	0.3189	75	117	A002-8.1mm
8.2mm	0.3228	75	117	A002-8.2mm
8.3mm	0.3268	75	117	A002-8.3mm
8.4mm	0.3307	75	117	A002-8.4mm
8.5mm	0.3346	75	117	A002-8.5mm
8.6mm	0.3386	81	125	A002-8.6mm
8.7mm	0.3425	81	125	A002-8.7mm
8.8mm	0.3465	81	125	A002-8.8mm
8.9mm	0.3504	81	125	A002-8.9mm
9.0mm	0.3543	81	125	A002-9.0mm
9.1mm	0.3583	81	125	A002-9.1mm
9.2mm	0.3622	81	125	A002-9.2mm
9.3mm	0.3661	81	125	A002-9.3mm
9.4mm	0.3701	81	125	A002-9.4mm
9.5mm	0.3740	81	125	A002-9.5mm
9.6mm	0.3780	87	133	A002-9.6mm
9.7mm	0.3819	87	133	A002-9.7mm
9.8mm	0.3858	87	133	A002-9.8mm
9.9mm	0.3898	87	133	A002-9.9mm
10.0mm	0.3937	87	133	A002-10.0mm
10.1mm	0.3976	87	133	A002-10.1mm

Metric Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length (mm)	OAL (mm)	Part Number
10.2mm	0.4016	87	133	A002-10.2mm
10.3mm	0.4055	87	133	A002-10.3mm
10.4mm	0.4094	87	133	A002-10.4mm
10.5mm	0.4134	87	133	A002-10.5mm
10.6mm	0.4173	87	133	A002-10.6mm
10.7mm	0.4213	94	142	A002-10.7mm
10.8mm	0.4252	94	142	A002-10.8mm
10.9mm	0.4291	94	142	A002-10.9mm
11.0mm	0.4331	94	142	A002-11.0mm
11.1mm	0.4370	94	142	A002-11.1mm
11.2mm	0.4409	94	142	A002-11.2mm
11.3mm	0.4449	94	142	A002-11.3mm
11.4mm	0.4488	94	142	A002-11.4mm
11.5mm	0.4528	94	142	A002-11.5mm
11.6mm	0.4567	94	142	A002-11.6mm
11.7mm	0.4606	94	142	A002-11.7mm
11.8mm	0.4646	94	142	A002-11.8mm
11.9mm	0.4685	101	151	A002-11.9mm
12.0mm	0.4724	101	151	A002-12.0mm
12.1mm	0.4764	101	151	A002-12.1mm
12.2mm	0.4803	101	151	A002-12.2mm
12.3mm	0.4843	101	151	A002-12.3mm
12.4mm	0.4882	101	151	A002-12.4mm
12.5mm	0.4921	101	151	A002-12.5mm
12.6mm	0.4961	101	151	A002-12.6mm
12.7mm	0.5000	101	151	A002-12.7mm
12.8mm	0.5039	101	151	A002-12.8mm
12.9mm	0.5079	101	151	A002-12.9mm
13.0mm	0.5118	101	151	A002-13.0mm

COBALT JOBBER LENGTH DRILLS

HSS-Co5% - Parabolic Flute - TiN Coated

Flute Geometry: Right hand spiral, 38° helix, parabolic flute.

Point: 130° split point

Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron



Fractional Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
5/64	.0781	1	2	DLGP511005
3/32	.0937	1-1/4	2-1/4	DLGP511006
7/64	.1094	1-1/2	2-5/8	DLGP511007
1/8	.1250	1-5/8	2-3/4	DLGP511008
9/64	.1406	1-3/4	2-7/8	DLGP511009
5/32	.1562	2	3-1/8	DLGP511010
11/64	.1719	2-1/8	3-1/4	DLGP511011
3/16	.1875	2-5/16	3-1/2	DLGP511012
13/64	.2031	2-7/16	3-5/8	DLGP511013
7/32	.2187	2-1/2	3-3/4	DLGP511014
15/64	.2344	2-5/8	3-7/8	DLGP511015
1/4	.2500	2-3/4	4	DLGP511016
17/64	.2656	2-7/8	4-1/8	DLGP511017
9/32	.2812	2-15/16	4-1/4	DLGP511018

Fractional Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
19/64	.2969	3-1/16	4-3/8	DLGP511019
5/16	.3125	3-3/16	4-1/2	DLGP511020
21/64	.3281	3-5/16	4-5/8	DLGP511021
11/32	.3437	3-7/16	4-3/4	DLGP511022
23/64	.3594	3-1/2	4-7/8	DLGP511023
3/8	.3750	3-5/8	5	DLGP511024
25/64	.3906	3-3/4	5-1/8	DLGP511025
13/32	.4062	3-7/8	5-1/4	DLGP511026
27/64	.4219	3-15/16	5-3/8	DLGP511027
7/16	.4375	4-1/16	5-1/2	DLGP511028
29/64	.4531	4-3/16	5-5/8	DLGP511029
15/32	.4687	4-5/16	5-3/4	DLGP511030
31/64	.4844	4-3/8	5-7/8	DLGP511031
1/2	.5000	4-1/2	6	DLGP511032

Letter Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
A	.2340	2-5/8	3-7/8	DLGP513101
B	.2380	2-3/4	4	DLGP513102
C	.2420	2-3/4	4	DLGP513103
D	.2460	2-3/4	4	DLGP513104
E	.2500	2-3/4	4	DLGP513105
F	.2570	2-7/8	4-1/8	DLGP513106
G	.2610	2-7/8	4-1/8	DLGP513107
H	.2660	2-7/8	4-1/8	DLGP513108
I	.2720	2-7/8	4-1/8	DLGP513109
J	.2770	2-7/8	4-1/8	DLGP513110
K	.2810	2-15/16	4-1/4	DLGP513111
L	.2900	2-15/16	4-1/4	DLGP513112
M	.2950	3-1/16	4-3/8	DLGP513113

Letter Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
N	.3020	3-1/16	4-3/8	DLGP513114
O	.3160	3-3/16	4-1/2	DLGP513115
P	.3230	3-5/16	4-5/8	DLGP513116
Q	.3320	3-7/16	4-3/4	DLGP513117
R	.3390	3-7/16	4-3/4	DLGP513118
S	.3480	3-1/2	4-7/8	DLGP513119
T	.3580	3-1/2	4-7/8	DLGP513120
U	.3680	3-5/8	5	DLGP513121
V	.3770	3-5/8	5	DLGP513122
W	.3860	3-3/4	5-1/8	DLGP513123
X	.3970	3-3/4	5-1/8	DLGP513124
Y	.4040	3-7/8	5-1/4	DLGP513125
Z	.4130	3-7/8	5-1/4	DLGP513126

COBALT JOBBER LENGTH DRILLS

HSS-Co5% - Parabolic Flute - TiN Coated



Flute Geometry: Right hand spiral, 38° helix, parabolic flute.

Point: 130° split point

Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron

Wire Gauge Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1	.2280	2-5/8	3-7/8	DLGP512247
2	.2210	2-5/8	3-7/8	DLGP512246
3	.2130	2-1/2	3-3/4	DLGP512245
4	.2090	2-1/2	3-3/4	DLGP512244
5	.2055	2-1/2	3-3/4	DLGP512243
6	.2040	2-1/2	3-3/4	DLGP512242
7	.2010	2-7/16	3-5/8	DLGP512241
8	.1990	2-7/16	3-5/8	DLGP512240
9	.1960	2-7/16	3-5/8	DLGP512239
10	.1935	2-7/16	3-5/8	DLGP512238
11	.1910	2-5/16	3-1/2	DLGP512237
12	.1890	2-5/16	3-1/2	DLGP512236
13	.1850	2-5/16	3-1/2	DLGP512235
14	.1820	2-3/16	3-3/8	DLGP512234
15	.1800	2-3/16	3-3/8	DLGP512233
16	.1770	2-3/16	3-3/8	DLGP512232
17	.1730	2-3/16	3-3/8	DLGP512231
18	.1695	2-1/8	3-1/4	DLGP512230
19	.1660	2-1/8	3-1/4	DLGP512229
20	.1610	2-1/8	3-1/4	DLGP512228
21	.1590	2-1/8	3-1/4	DLGP512227
22	.1570	2	3-1/8	DLGP512226
23	.1540	2	3-1/8	DLGP512225
24	.1520	2	3-1/8	DLGP512224

Wire Gauge Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
25	.1495	1-7/8	3	DLGP512223
26	.1470	1-7/8	3	DLGP512222
27	.1440	1-7/8	3	DLGP512221
28	.1405	1-3/4	2-7/8	DLGP512220
29	.1360	1-3/4	2-7/8	DLGP512219
30	.1285	1-5/8	2-3/4	DLGP512218
31	.1200	1-5/8	2-3/4	DLGP512217
32	.1160	1-5/8	2-3/4	DLGP512216
33	.1130	1-1/2	2-5/8	DLGP512215
34	.1110	1-1/2	2-5/8	DLGP512214
35	.1100	1-1/2	2-5/8	DLGP512213
36	.1065	1-7/16	2-1/2	DLGP512212
37	.1040	1-7/16	2-1/2	DLGP512211
38	.1015	1-7/16	2-1/2	DLGP512210
39	.0995	1-3/8	2-3/8	DLGP512209
40	.0980	1-3/8	2-3/8	DLGP512208
41	.0960	1-3/8	2-3/8	DLGP512207
42	.0935	1-1/4	2-1/4	DLGP512206
43	.0890	1-1/4	2-1/4	DLGP512205
44	.0860	1-1/8	2-1/8	DLGP512204
45	.0820	1-1/8	2-1/8	DLGP512203
46	.0810	1-1/8	2-1/8	DLGP512202
47	.0785	1	2	DLGP512201

HIGH SPEED JOBBER LENGTH DRILLS

HSS Straight Shank - TiN Coated

Flute Geometry: Right hand spiral, wider flutes
Point: 135° split point... .059 diameter and over
Surface Treatment: Bright body TiN coating on working part
Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron



Fractional Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
3/64	.0469	3/4	1-3/4	A012-3/64
1/16	.0625	7/8	1-7/8	A012-1/16
5/64	.0781	1	2	A012-5/64
3/32	.0937	1-1/4	2-1/4	A012-3/32
7/64	.1094	1-1/2	2-5/8	A012-7/64
1/8	.1250	1-5/8	2-3/4	A012-1/8
9/64	.1406	1-3/4	2-7/8	A012-9/64
5/32	.1562	2	3-1/8	A012-5/32
11/64	.1719	2-1/8	3-1/4	A012-11/64
3/16	.1875	2-5/16	3-1/2	A012-3/16
13/64	.2031	2-7/16	3-5/8	A012-13/64
7/32	.2187	2-1/2	3-3/4	A012-7/32
15/64	.2344	2-5/8	3-7/8	A012-15/64
1/4	.2500	2-3/4	4	A012-1/4
17/64	.2656	2-7/8	4-1/8	A012-17/64

Fractional Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
9/32	.2812	2-15/16	4-1/4	A012-9/32
19/64	.2969	3-1/16	4-3/8	A012-19/64
5/16	.3125	3-3/16	4-1/2	A012-5/16
21/64	.3281	3-5/16	4-5/8	A012-21/64
11/32	.3437	3-7/16	4-3/4	A012-11/32
23/64	.3594	3-1/2	4-7/8	A012-23/64
3/8	.3750	3-5/8	5	A012-3/8
25/64	.3906	3-3/4	5-1/8	A012-25/64
13/32	.4062	3-7/8	5-1/4	A012-13/32
27/64	.4219	3-15/16	5-3/8	A012-27/64
7/16	.4375	4-1/16	5-1/2	A012-7/16
29/64	.4531	4-3/16	5-5/8	A012-29/64
15/32	.4687	4-5/16	5-3/4	A012-15/32
31/64	.4844	4-3/8	5-7/8	A012-31/64
1/2	.5000	4-1/2	6	A012-1/2

Letter Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
A	.2340	2-5/8	3-7/8	A012-A
B	.2380	2-3/4	4	A012-B
C	.2420	2-3/4	4	A012-C
D	.2460	2-3/4	4	A012-D
E	.2500	2-3/4	4	A012-E
F	.2570	2-7/8	4-1/8	A012-F
G	.2610	2-7/8	4-1/8	A012-G
H	.2660	2-7/8	4-1/8	A012-H
I	.2720	2-7/8	4-1/8	A012-I
J	.2770	2-7/8	4-1/8	A012-J
K	.2810	2-15/16	4-1/4	A012-K
L	.2900	2-15/16	4-1/4	A012-L
M	.2950	3-1/16	4-3/8	A012-M

Letter Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
N	.3020	3-1/16	4-3/8	A012-N
O	.3160	3-3/16	4-1/2	A012-O
P	.3230	3-5/16	4-5/8	A012-P
Q	.3320	3-7/16	4-3/4	A012-Q
R	.3390	3-7/16	4-3/4	A012-R
S	.3480	3-1/2	4-7/8	A012-S
T	.3580	3-1/2	4-7/8	A012-T
U	.3680	3-5/8	5	A012-U
V	.3770	3-5/8	5	A012-V
W	.3860	3-3/4	5-1/8	A012-W
X	.3970	3-3/4	5-1/8	A012-X
Y	.4040	3-7/8	5-1/4	A012-Y
Z	.4130	3-7/8	5-1/4	A012-Z

HIGH SPEED JOBBER LENGTH DRILLS

HSS Straight Shank - TiN Coated



Flute Geometry: Right hand spiral, wider flutes
Point: 135° split point... .059 diameter and over
Surface Treatment: Bright body TiN coating on working part
Application: Drilling in steel, cast steel, alloyed and non-alloyed, grey cast iron, graphite, malleable cast iron

Wire Gauge Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1	.2280	2-5/8	3-7/8	A012-1
2	.2210	2-5/8	3-7/8	A012-2
3	.2130	2-1/2	3-3/4	A012-3
4	.2090	2-1/2	3-3/4	A012-4
5	.2055	2-1/2	3-3/4	A012-5
6	.2040	2-1/2	3-3/4	A012-6
7	.2010	2-7/16	3-5/8	A012-7
8	.1990	2-7/16	3-5/8	A012-8
9	.1960	2-7/16	3-5/8	A012-9
10	.1935	2-7/16	3-5/8	A012-10
11	.1910	2-5/16	3-1/2	A012-11
12	.1890	2-5/16	3-1/2	A012-12
13	.1850	2-5/16	3-1/2	A012-13
14	.1820	2-3/16	3-3/8	A012-14
15	.1800	2-3/16	3-3/8	A012-15
16	.1770	2-3/16	3-3/8	A012-16
17	.1730	2-3/16	3-3/8	A012-17
18	.1695	2-1/8	3-1/4	A012-18
19	.1660	2-1/8	3-1/4	A012-19
20	.1610	2-1/8	3-1/4	A012-20
21	.1590	2-1/8	3-1/4	A012-21
22	.1570	2	3-1/8	A012-22
23	.1540	2	3-1/8	A012-23
24	.1520	2	3-1/8	A012-24
25	.1495	1-7/8	3	A012-25
26	.1470	1-7/8	3	A012-26
27	.1440	1-7/8	3	A012-27
28	.1405	1-3/4	2-7/8	A012-28

Wire Gauge Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
29	.1360	1-3/4	2-7/8	A012-29
30	.1285	1-5/8	2-3/4	A012-30
31	.1200	1-5/8	2-3/4	A012-31
32	.1160	1-5/8	2-3/4	A012-32
33	.1130	1-1/2	2-5/8	A012-33
34	.1110	1-1/2	2-5/8	A012-34
35	.1100	1-1/2	2-5/8	A012-35
36	.1065	1-7/16	2-1/2	A012-36
37	.1040	1-7/16	2-1/2	A012-37
38	.1015	1-7/16	2-1/2	A012-38
39	.0995	1-3/8	2-3/8	A012-39
40	.0980	1-3/8	2-3/8	A012-40
41	.0960	1-3/8	2-3/8	A012-41
42	.0935	1-1/4	2-1/4	A012-42
43	.0890	1-1/4	2-1/4	A012-43
44	.0860	1-1/8	2-1/8	A012-44
45	.0820	1-1/8	2-1/8	A012-45
46	.0810	1-1/8	2-1/8	A012-46
47	.0785	1	2	A012-47
48	.0760	1	2	A012-48
49	.0730	1	2	A012-49
50	.0700	1	2	A012-50
51	.0670	1	2	A012-51
52	.0635	7/8	1-7/8	A012-52
53	.0635	7/8	1-7/8	A012-53
54	.0595	7/8	1-7/8	A012-54
55	.0520	7/8	1-7/8	A012-55
56	.0465	3/4	1-3/4	A012-56

HIGH SPEED JOBBER LENGTH DRILLS

HSS Straight Shank - Black Coated

Flute Geometry: Right hand spiral
Point: 118° conventional point
Application: Drilling in steel, stainless steel, alloyed and non-alloyed, cast iron.



Fractional Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1/64	0.0156	3/16	3/4	L501-1/64
1/32	0.0312	1/2	1.3/8	L501-1/32
3/64	0.0469	3/4	1.3/4	L501-3/64
1/16	0.0625	7/8	1.7/8	L501-1/16
5/64	0.0781	1"	2"	L501-5/64
3/32	0.0938	1.1/4	2.1/4	L501-3/32
7/64	0.1094	1.1/2	2.5/8	L501-7/64
1/8	0.1250	1.5/8	2.3/4	L501-1/8
9/64	0.1406	1.3/4	2.7/8	L501-9/64
5/32	0.1562	2"	3.1/8	L501-5/32
11/64	0.1719	2.1/8	3.1/4	L501-11/64
3/16	0.1875	2.5/16	3.1/2	L501-3/16
13/64	0.2031	2.7/16	3.5/8	L501-13/64
7/32	0.2188	2.1/2	3.3/4	L501-7/32
15/64	0.2344	2.5/8	3.7/8	L501-15/64
1/4	0.2500	2.3/4	4"	L501-1/4
17/64	0.2656	2.7/8	4.1/8	L501-17/64
9/32	0.2812	2.15/16	4.1/4	L501-9/32
19/64	0.2969	3.1/16	4.3/8	L501-19/64
5/16	0.3125	3.3/16	4.1/2	L501-5/16
21/64	0.3281	3.5/16	4.5/8	L501-21/64
11/32	0.3438	3.7/16	4.3/4	L501-11/32

Fractional Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
23/64	0.3594	3.1/2	4.7/8	L501-23/64
3/8	0.3750	3.5/8	5"	L501-3/8
25/64	0.3906	3.3/4	5.1/8	L501-25/64
13/32	0.4062	3.7/8	5.1/4	L501-13/32
27/64	0.4219	3.15/16	5.3/8	L501-27/64
7/16	0.4375	4.1/16	5.1/2	L501-7/16
29/64	0.4531	4.3/16	5.5/8	L501-29/64
15/32	0.4688	4.5/16	5.3/4	L501-15/32
31/64	0.4844	4.3/8	5.7/8	L501-31/64
1/2	0.5000	4.1/2	6"	L501-1/2
33/64	0.5156	4.13/16	6.5/8	L501-33/64
17/32	0.5312	4.13/16	6.5/8	L501-17/32
35/64	0.5469	4.13/16	6.5/8	L501-35/64
9/16	0.5625	4.13/16	6.5/8	L501-9/16
37/64	0.5781	4.13/16	6.5/8	L501-37/64
19/32	0.5938	5.3/16	7.1/8	L501-19/32
39/64	0.6094	5.3/16	7.1/8	L501-39/64
5/8	0.6250	5.3/16	7.1/8	L501-5/8
41/64	0.6406	5.3/16	7.1/8	L501-41/64
21/32	0.6562	5.3/16	7.1/8	L501-21/32
43/64	0.6719	5.5/8	7.5/8	L501-43/64
11/16	0.6875	5.5/8	7.5/8	L501-11/16

Letter Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
A	0.2340	2.5/8	3.7/8	L501-A
B	0.2380	2.3/4	4"	L501-B
C	0.2420	2.3/4	4"	L501-C
D	0.2460	2.3/4	4"	L501-D
E	0.2500	2.3/4	4"	L501-E
F	0.2570	2.7/8	4.1/8	L501-F
G	0.2610	2.7/8	4.1/8	L501-G
H	0.2660	2.7/8	4.1/8	L501-H
I	0.2720	2.7/8	4.1/8	L501-I
J	0.2770	2.7/8	4.1/8	L501-J
K	0.2810	2.15/16	4.1/4	L501-K
L	0.2900	2.15/16	4.1/4	L501-L
M	0.2950	3.1/16	4.3/8	L501-M

Letter Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
N	0.3020	3.1/16	4.3/8	L501-N
O	0.3160	3.3/16	4.1/2	L501-O
P	0.3230	3.5/16	4.5/8	L501-P
Q	0.3320	3.7/16	4.3/4	L501-Q
R	0.3390	3.7/16	4.3/4	L501-R
S	0.3480	3.1/2	4.7/8	L501-S
T	0.3580	3.1/2	4.7/8	L501-T
U	0.3680	3.5/8	5"	L501-U
V	0.3770	3.5/8	5"	L501-V
W	0.3860	3.3/4	5.1/8	L501-W
X	0.3970	3.3/4	5.1/8	L501-X
Y	0.4040	3.7/8	5.1/4	L501-Y
Z	0.4130	3.7/8	5.1/4	L501-Z

HIGH SPEED JOBBER LENGTH DRILLS

HSS Straight Shank - Black Coated



Flute Geometry: Right hand spiral
Point: 118° conventional point
Application: Drilling in steel, stainless steel, alloyed and non-alloyed, cast iron.

Wire Gauge Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1	0.2280	2.5/8	3.7/8	L501-1
2	0.2210	2.5/8	3.7/8	L501-2
3	0.2130	2.1/2	3.3/4	L501-3
4	0.2090	2.1/2	3.3/4	L501-4
5	0.2055	2.1/2	3.3/4	L501-5
6	0.2040	2.1/2	3.3/4	L501-6
7	0.2010	2.7/16	3.5/8	L501-7
8	0.1990	2.7/16	3.5/8	L501-8
9	0.1960	2.7/16	3.5/8	L501-9
10	0.1935	2.7/16	3.5/8	L501-10
11	0.1910	2.5/16	3.1/2	L501-11
12	0.1890	2.5/16	3.1/2	L501-12
13	0.1850	2.5/16	3.1/2	L501-13
14	0.1820	2.3/16	3.3/8	L501-14
15	0.1800	2.3/16	3.3/8	L501-15
16	0.1770	2.3/16	3.3/8	L501-16
17	0.1730	2.3/16	3.3/8	L501-17
18	0.1695	2.1/8	3.1/4	L501-18
19	0.1660	2.1/8	3.1/4	L501-19
20	0.1610	2.1/8	3.1/4	L501-20
21	0.1590	2.1/8	3.1/4	L501-21
22	0.1570	2"	3.1/8	L501-22
23	0.1540	2"	3.1/8	L501-23
24	0.1520	2"	3.1/8	L501-24
25	0.1495	1.7/8	3"	L501-25
26	0.1470	1.7/8	3"	L501-26
27	0.1440	1.7/8	3"	L501-27
28	0.1405	1.3/4	2.7/8	L501-28
29	0.1360	1.3/4	2.7/8	L501-29
30	0.1285	1.5/8	2.3/4	L501-30

Wire Gauge Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
31	0.1200	1.5/8	2.3/4	L501-31
32	0.1160	1.5/8	2.3/4	L501-32
33	0.1130	1.1/2	2.5/8	L501-33
34	0.1110	1.1/2	2.5/8	L501-34
35	0.1100	1.1/2	2.5/8	L501-35
36	0.1065	1.7/16	2.1/2	L501-36
37	0.1040	1.7/16	2.1/2	L501-37
38	0.1015	1.7/16	2.1/2	L501-38
39	0.0995	1.3/8	2.3/8	L501-39
40	0.0980	1.3/8	2.3/8	L501-40
41	0.0960	1.3/8	2.3/8	L501-41
42	0.0935	1.1/4	2.1/4	L501-42
43	0.0890	1.1/4	2.1/4	L501-43
44	0.0860	1.1/8	2.1/8	L501-44
45	0.0820	1.1/8	2.1/8	L501-45
46	0.0810	1.1/8	2.1/8	L501-46
47	0.0785	1"	2"	L501-47
48	0.0760	1"	2"	L501-48
49	0.0730	1"	2"	L501-49
50	0.0700	1"	2"	L501-50
51	0.0670	1"	2"	L501-51
52	0.0635	7/8	1.7/8	L501-52
53	0.0595	7/8	1.7/8	L501-53
54	0.0550	7/8	1.7/8	L501-54
55	0.0520	7/8	1.7/8	L501-55
56	0.0465	3/4	1.3/4	L501-56
57	0.0430	3/4	1.3/4	L501-57
58	0.0420	11/16	1.5/8	L501-58
59	0.0410	11/16	1.5/8	L501-59
60	0.0400	11/16	1.5/8	L501-60

HIGH SPEED TAPER LENGTH DRILLS

HSS Straight Shank - Bright Finish

Flute Geometry: Right hand spiral
Point: 118° conventional point
Application: Drilling in steel, stainless steel, alloyed and non-alloyed, cast iron.



Fractional Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1/64	0.0156	5/16	1.1/2	A234-1/64
1/32	0.0312	3/4	2"	A234-1/32
3/64	0.0469	1.1/8	2.1/4	A234-3/64
1/16	0.0625	1.3/4	3"	A234-1/16
5/64	0.0781	2"	3.3/4	A234-5/64
3/32	0.0938	2.1/4	4.1/4	A234-3/32
7/64	0.1094	2.1/2	4.5/8	A234-7/64
1/8	0.1250	2.3/4	5.1/8	A234-1/8
9/64	0.1406	3"	5.3/8	A234-9/64
5/32	0.1562	3"	5.3/8	A234-5/32
11/64	0.1719	3.3/8	5.3/4	A234-11/64
3/16	0.1875	3.3/8	5.3/4	A234-3/16
13/64	0.2031	3.5/8	6"	A234-13/64
7/32	0.2188	3.5/8	6"	A234-7/32
15/64	0.2344	3.3/4	6.1/8	A234-15/64
1/4	0.2500	3.3/4	6.1/8	A234-1/4
17/64	0.2656	3.7/8	6.1/4	A234-17/64
9/32	0.2812	3.7/8	6.1/4	A234-9/32
19/64	0.2969	4"	6.3/8	A234-19/64
5/16	0.3125	4"	6.3/8	A234-5/16
21/64	0.3281	4.1/8	6.1/2	A234-21/64
11/32	0.3438	4.1/8	6.1/2	A234-11/32

Fractional Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
23/64	0.3594	4.1/4	6.3/4	A234-23/64
3/8	0.3750	4.1/4	6.3/4	A234-3/8
25/64	0.3906	4.3/8	7"	A234-25/64
13/32	0.4062	4.3/8	7"	A234-13/32
27/64	0.4219	4.5/8	7.1/4	A234-27/64
7/16	0.4375	4.5/8	7.1/4	A234-7/16
29/64	0.4531	4.3/4	7.1/2	A234-29/64
15/32	0.4688	4.3/4	7.1/2	A234-15/32
31/64	0.4844	4.3/4	7.3/4	A234-31/64
1/2	0.5000	4.3/4	7.3/4	A234-1/2
33/64	0.5156	4.3/4	8"	A234-33/64
17/32	0.5312	4.3/4	8"	A234-17/32
35/64	0.5469	4.7/8	8.1/4	A234-35/64
9/16	0.5625	4.7/8	8.1/4	A234-9/16
37/64	0.5781	4.7/8	8.3/4	A234-37/64
19/32	0.5938	4.7/8	8.3/4	A234-19/32
39/64	0.6094	4.7/8	8.3/4	A234-39/64
5/8	0.6250	4.7/8	8.3/4	A234-5/8
41/64	0.6406	5.1/8	9"	A234-41/64
21/32	0.6562	5.1/8	9"	A234-21/32
43/64	0.6719	5.3/8	9.1/4	A234-43/64
11/16	0.6875	5.3/8	9.1/4	A234-11/16

Letter Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
A	0.2340	3.3/4	6.1/8	A234-A
B	0.2380	3.3/4	6.1/8	A234-B
C	0.2420	3.3/4	6.1/8	A234-C
D	0.2460	3.3/4	6.1/8	A234-D
E	0.2500	3.3/4	6.1/8	A234-E
F	0.2570	3.7/8	6.1/4	A234-F
G	0.2610	3.7/8	6.1/4	A234-G
H	0.2660	3.7/8	6.1/4	A234-H
I	0.2720	3.7/8	6.1/4	A234-I
J	0.2770	3.7/8	6.1/4	A234-J
K	0.2810	3.7/8	6.1/4	A234-K
L	0.2900	4"	6.3/8	A234-L
M	0.2950	4"	6.3/8	A234-M

Letter Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
N	0.3020	4"	6.3/8	A234-N
O	0.3160	4.1/8	6.1/2	A234-O
P	0.3230	4.1/8	6.1/2	A234-P
Q	0.3320	4.1/8	6.1/2	A234-Q
R	0.3390	4.1/8	6.1/2	A234-R
S	0.3480	4.1/4	6.3/4	A234-S
T	0.3580	4.1/4	6.3/4	A234-T
U	0.3680	4.1/4	6.3/4	A234-U
V	0.3770	4.3/8	7"	A234-V
W	0.3860	4.3/8	7"	A234-W
X	0.3970	4.3/8	7"	A234-X
Y	0.4040	4.3/8	7"	A234-Y
Z	0.4130	4.5/8	7.1/4	A234-Z

HIGH SPEED TAPER LENGTH DRILLS

HSS Straight Shank - Bright Finish



Flute Geometry: Right hand spiral

Point: 118° conventional point

Application: Drilling in steel, stainless steel, alloyed and non-alloyed, cast iron.

Wire Gauge Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1	0.2280	3.3/4	6.1/8	A234-1
2	0.2210	3.3/4	6.1/8	A234-2
3	0.2130	3.5/8	6"	A234-3
4	0.2090	3.5/8	6"	A234-4
5	0.2055	3.5/8	6"	A234-5
6	0.2040	3.5/8	6"	A234-6
7	0.2010	3.5/8	6"	A234-7
8	0.1990	3.5/8	6"	A234-8
9	0.1960	3.5/8	6"	A234-9
10	0.1935	3.5/8	6"	A234-10
11	0.1910	3.5/8	6"	A234-11
12	0.1890	3.5/8	6"	A234-12
13	0.1850	3.3/8	5.3/4	A234-13
14	0.1820	3.3/8	5.3/4	A234-14
15	0.1800	3.3/8	5.3/4	A234-15
16	0.1770	3.3/8	5.3/4	A234-16
17	0.1730	3.3/8	5.3/4	A234-17
18	0.1695	3.3/8	5.3/4	A234-18
19	0.1660	3.3/8	5.3/4	A234-19
20	0.1610	3.3/8	5.3/4	A234-20
21	0.1590	3.3/8	5.3/4	A234-21
22	0.1570	3.3/8	5.3/4	A234-22
23	0.1540	3"	5.3/8	A234-23
24	0.1520	3"	5.3/8	A234-24
25	0.1495	3"	5.3/8	A234-25
26	0.1470	3"	5.3/8	A234-26
27	0.1440	3"	5.3/8	A234-27
28	0.1405	3"	5.3/8	A234-28
29	0.1360	3"	5.3/8	A234-29
30	0.1285	3"	5.3/8	A234-30

Wire Gauge Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
31	0.1200	2.3/4	5.1/8	A234-31
32	0.1160	2.3/4	5.1/8	A234-32
33	0.1130	2.3/4	5.1/8	A234-33
34	0.1110	2.3/4	5.1/8	A234-34
35	0.1100	2.3/4	5.1/8	A234-35
36	0.1065	2.1/2	4.5/8	A234-36
37	0.1040	2.1/2	4.5/8	A234-37
38	0.1015	2.1/2	4.5/8	A234-38
39	0.0995	2.1/2	4.5/8	A234-39
40	0.0980	2.1/2	4.5/8	A234-40
41	0.0960	2.1/2	4.5/8	A234-41
42	0.0935	2.1/4	4.1/4	A234-42
43	0.0890	2.1/4	4.1/4	A234-43
44	0.0860	2.1/4	4.1/4	A234-44
45	0.0820	2.1/4	4.1/4	A234-45
46	0.0810	2.1/4	4.1/4	A234-46
47	0.0785	2.1/4	4.1/4	A234-47
48	0.0760	2"	3.3/4	A234-48
49	0.0730	2"	3.3/4	A234-49
50	0.0700	2"	3.3/4	A234-50
51	0.0670	2"	3.3/4	A234-51
52	0.0635	2"	3.3/4	A234-52
53	0.0595	1.3/4	3"	A234-53
54	0.0550	1.3/4	3"	A234-54
55	0.0520	1.3/4	3"	A234-55
56	0.0465	1.1/8	2.1/4	A234-56
57	0.0430	1.1/8	2.1/4	A234-57
58	0.0420	1.1/8	2.1/4	A234-58
59	0.0410	1.1/8	2.1/4	A234-59
60	0.0400	1.1/8	2.1/4	A234-60

HIGH SPEED SILVER & DEMING DRILLS

HSS - 3 Flat Black & Gold

Flute Geometry: Right hand spiral
Point: 118° conventional point



Fractional Size

Size	Shank	Flute Length	OAL	Part Number
1/2	1/2	3	6	A179-1/2
33/64	1/2	3	6	A179-33/64
17/32	1/2	3	6	A179-17/32
35/64	1/2	3	6	A179-35/64
9/16	1/2	3	6	A179-9/16
37/64	1/2	3	6	A179-37/64
19/32	1/2	3	6	A179-19/32
39/64	1/2	3	6	A179-39/64
5/8	1/2	3	6	A179-5/8
41/64	1/2	3	6	A179-41/64
21/32	1/2	3	6	A179-21/32
43/64	1/2	3	6	A179-43/64
11/16	1/2	3	6	A179-11/16
45/64	1/2	3	6	A179-45/64
23/32	1/2	3	6	A179-23/32
47/64	1/2	3	6	A179-47/64
3/4	1/2	3	6	A179-3/4
49/64	1/2	3	6	A179-49/64
25/32	1/2	3	6	A179-25/32
51/64	1/2	3	6	A179-51/64
13/16	1/2	3	6	A179-13/16
53/64	1/2	3	6	A179-53/64
27/32	1/2	3	6	A179-27/32
55/64	1/2	3	6	A179-55/64
7/8	1/2	3	6	A179-7/8
57/64	1/2	3	6	A179-57/64
29/32	1/2	3	6	A179-29/32
59/64	1/2	3	6	A179-59/64
15/16	1/2	3	6	A179-15/16

Fractional Size (cont.)

Size	Shank	Flute Length	OAL	Part Number
61/64	1/2	3	6	A179-61/64
31/32	1/2	3	6	A179-31/32
63/64	1/2	3	6	A179-63/64
1	1/2	3	6	A179-1
1-1/64	1/2	3	6	A179-1-1/64
1-1/32	1/2	3	6	A179-1-1/32
1-3/64	1/2	3	6	A179-1-3/64
1-1/16	1/2	3	6	A179-1-1/16
1-5/64	1/2	3	6	A179-1-5/64
1-3/32	1/2	3	6	A179-1-3/32
1-7/64	1/2	3	6	A179-1-7/64
1-1/8	1/2	3	6	A179-1-1/8
1-9/64	1/2	3	6	A179-1-9/64
1-5/32	1/2	3	6	A179-1-5/32
1-11/64	1/2	3	6	A179-1-11/64
1-3/16	1/2	3	6	A179-1-3/16
1-13/64	1/2	3	6	A179-1-13/64
1-7/32	1/2	3	6	A179-1-7/32
1-15/64	1/2	3	6	A179-1-15/64
1-1/4	1/2	3	6	A179-1-1/4
1-9/32	1/2	3	6	A179-1-9/32
1-5/16	1/2	3	6	A179-1-5/16
1-11/32	1/2	3	6	A179-1-11/32
1-3/8	1/2	3	6	A179-1-3/8
1-13/32	1/2	3	6	A179-1-13/32
1-7/16	1/2	3	6	A179-1-7/16
1-15/32	1/2	3	6	A179-1-15/32
1-1/2	1/2	3	6	A179-1-1/2

Center Drill A220 - 60° High Speed



Flute Geometry: Straight Shank, Short Length, Right Hand Spiral
Point: 118° drill point... 60° Countersink Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals

Size	Decimal Inch	Dr. Dia.	Body Dia.	Length	Part Number
00	0.025	0.0250	1/8	1-1/8	A220-00
0	1/32	0.0312	1/8	1-1/8	A220-0
1	3/64	0.0468	1/8	1-1/4	A220-1
2	5/64	0.0781	3/16	1-7/8	A220-2
3	7/64	0.1093	1/4	2	A220-3
4	1/8	0.1250	5/16	2-1/8	A220-4
4-1/2	9/64	0.1406	3/8	2-1/2	A220-4-1/2
5	3/16	0.1874	7/16	2-3/4	A220-5
6	7/32	0.2187	1/2	3	A220-6
7	1/4	0.2500	5/8	3-1/4	A220-7
8	5/16	0.3125	3/4	3-1/2	A220-8
9	11/32	0.3437	7/8	3-9/16	A220-9

Center Drill A222 - 60° High Speed



Flute Geometry: Straight Shank, Short Length, Right Hand Spiral
Point: 118° drill point... 60° Countersink Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals

Size	Decimal Inch	Dr. Dia.	Body Dia.	Length	Part Number
11	0.0469	3/64	1/8	1-1/4	A222-11
12	0.0625	1/16	3/16	1-7/8	A222-12
13	0.0938	3/32	1/4	2	A222-13
14	0.1094	7/64	5/16	2-1/8	A222-14
15	0.1563	5/32	7/16	2-3/4	A222-15
16	0.1875	3/16	1/2	3	A222-16
17	0.2188	7/32	5/8	3-1/4	A222-17
18	0.2500	1/4	3/4	3-1/2	A222-18

Center Drill A219 - 60° High Speed



Flute Geometry: Straight Shank, Long Length, Right Hand Spiral
Point: 118° drill point... 60° Countersink Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals

Size	Decimal Inch	Dr. Dia.	Body Dia.	Length	Part Number
1	.0469	3/64	1/8	3	A219-1X3
1	.0469	3/64	1/8	4	A219-1X4
1	.0469	3/64	1/8	5	A219-1X5
1	.0469	3/64	1/8	6	A219-1X6
2	.0781	5/64	3/16	4	A219-2X4
2	.0781	5/64	3/16	5	A219-2X5
2	.0781	5/64	3/16	6	A219-2X6
3	.1094	7/64	1/4	4	A219-3X4
3	.1094	7/64	1/4	5	A219-3X5
3	.1094	7/64	1/4	6	A219-3X6
4	.1250	1/8	5/16	4	A219-4X4
4	.1250	1/8	5/16	5	A219-4X5

Size	Decimal Inch	Dr. Dia.	Body Dia.	Length	Part Number
4	.1250	1/8	5/16	6	A219-4X6
4.5	.1406	9/64	3/8	4	A219-4-1/2X4
4.5	.1406	9/64	3/8	5	A219-4-1/2X5
4.5	.1406	9/64	3/8	6	A219-4-1/2X6
5	.1875	3/16	7/16	4	A219-5X4
5	.1875	3/16	7/16	5	A219-5X5
5	.1875	3/16	7/16	6	A219-5X6
6	.2188	7/32	1/2	5	A219-6X5
6	.2188	7/32	1/2	6	A219-6X6
7	.2500	1/4	5/8	6	A219-7X6
8	.3125	5/16	3/4	6	A219-8X6

CENTER DRILLS

Center Drill A221 - 60° Cobalt



Flute Geometry: Straight Shank, Short Length, Right Hand Spiral
Point: 118° drill point... 60° Countersink Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals

Size	Decimal Inch	Dr. Dia.	Body Dia.	Length	Part Number
00	0.025	0.0250	1/8	1-1/8	A221-00
0	1/32	0.0312	1/8	1-1/8	A221-0
1	3/64	0.0468	1/8	1-1/4	A221-1
2	5/64	0.0781	3/16	1-7/8	A221-2
3	7/64	0.1093	1/4	2	A221-3
4	1/8	0.1250	5/16	2-1/8	A221-4
4-1/2	9/64	0.1406	3/8	2-1/2	A221-4-1/2
5	3/16	0.1874	7/16	2-3/4	A221-5
6	7/32	0.2187	1/2	3	A221-6
7	1/4	0.2500	5/8	3-1/4	A221-7
8	5/16	0.3125	3/4	3-1/2	A221-8
9	11/32	0.3437	7/8	3-9/16	A221-9

Center Drill A236 - 60° High Speed TiN



Flute Geometry: Straight Shank, Short Length, Right Hand Spiral
Surface Treatment: TiN Coating
Point: 118° drill point... 60° Countersink Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals

Size	Decimal Inch	Dr. Dia.	Body Dia.	Length	Part Number
00	0.025	0.0250	1/8	1-1/8	A236-00
0	1/32	0.0312	1/8	1-1/8	A236-0
1	3/64	0.0468	1/8	1-1/4	A236-1
2	5/64	0.0781	3/16	1-7/8	A236-2
3	7/64	0.1093	1/4	2	A236-3
4	1/8	0.1250	5/16	2-1/8	A236-4
5	3/16	0.1874	7/16	2-3/4	A236-5
6	7/32	0.2187	1/2	3	A236-6
7	1/4	0.2500	5/8	3-1/4	A236-7
8	5/16	0.3125	3/4	3-1/2	A236-8
9	11/32	0.3437	7/8	3-9/16	A236-9

Center Drill A217 - 82° High Speed



Flute Geometry: Straight Shank, Short Length, Right Hand Spiral
Point: 120° drill point... 82° Countersink Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals

Size	Decimal Inch	Dr. Dia.	Body Dia.	Length	Part Number
1	0.0469	3/8	1-1/4	1/8	A217-1
2	0.0781	33/64	1-7/8	3/16	A217-2
3	0.1094	5/8	2"	1/4	A217-3
4	0.1250	45/64	2-1/8	5/16	A217-4
5	0.1875	1"	2-3/4	7/16	A217-5
6	0.2188	1"	3"	1/2	A217-6
7	0.2500	1-13/16	3-1/4	5/8	A217-7
8	0.3125	1-11/32	3-1/2	3/4	A217-8
9	11/32	0.3437	7/8	3-9/16	A217-9

Center Drill A218 - 90° High Speed



Flute Geometry: Straight Shank, Short Length, Right Hand Spiral
Point: 120° drill point... 90° Countersink Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals

Size	Decimal Inch	Dr. Dia.	Body Dia.	Length	Part Number
1	0.0469	3/8	1-1/4	1/8	A218-1
2	0.0781	33/64	1-7/8	3/16	A218-2
3	0.1094	5/8	2"	1/4	A218-3
4	0.1250	45/64	2-1/8	5/16	A218-4
5	0.1875	1"	2-3/4	7/16	A218-5
6	0.2188	1"	3"	1/2	A218-6
7	0.2500	1-13/64	3-1/4	5/8	A218-7
8	0.3125	1-11/32	3-1/2	3/4	A218-8



Solid Carbide - 3x Drill Length

Flute Geometry: Four Facet Drill Point
Point: 118° drill point... 21° Helix Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals

Wire Gauge Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1	.2280	1	2-1/2	FORD-26370
2	.2210	1	2-1/2	FORD-26364
3	.2130	1	2-1/2	FORD-26352
4	.2090	3/4	2-1/4	FORD-26346
5	.2055	3/4	2-1/4	FORD-26340
6	.2040	3/4	2-1/4	FORD-26334
7	.2010	3/4	2-1/4	FORD-26328
8	.1990	3/4	2-1/4	FORD-26322
9	.1960	3/4	2-1/4	FORD-26316
10	.1935	3/4	2-3/16	FORD-26313
11	.1910	3/4	2-3/16	FORD-26307
12	.1890	3/4	2-3/16	FORD-26304
13	.1850	3/4	2-3/16	FORD-26295
14	.1820	3/4	2-3/16	FORD-26292
15	.1800	3/4	2-3/16	FORD-26286
16	.1770	3/4	2-1/8	FORD-26280
17	.1730	3/4	2-1/8	FORD-26274
18	.1695	3/4	2-1/8	FORD-26268
19	.1660	3/4	2-1/8	FORD-26262
20	.1610	3/4	2	FORD-26253
21	.1590	3/4	2	FORD-26250
22	.1570	3/4	2	FORD-26244
23	.1540	5/8	2	FORD-26238
24	.1520	5/8	2	FORD-26232
25	.1495	5/8	2	FORD-26226
26	.1470	5/8	2	FORD-26223
27	.1440	5/8	2	FORD-26217
28	.1405	5/8	2	FORD-26208
29	.1360	5/8	2	FORD-26202
30	.1285	5/8	2	FORD-26193

Wire Gauge Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
31	.1200	5/8	2	FORD-26181
32	.1160	5/8	2	FORD-26175
33	.1130	5/8	2	FORD-26169
34	.1110	5/8	2	FORD-26166
35	.1100	5/8	2	FORD-26160
36	.1065	5/8	2	FORD-26154
37	.1040	5/8	2	FORD-26148
38	.1015	5/8	2	FORD-26142
39	.0995	5/8	2	FORD-26139
40	.0980	5/8	2	FORD-26133
41	.0960	1/2	2	FORD-26130
42	.0935	1/2	2	FORD-26121
43	.0890	1/2	2	FORD-26115
44	.0860	1/2	2	FORD-26109
45	.0820	1/2	1-1/2	FORD-26103
46	.0810	1/2	1-1/2	FORD-26100
47	.0785	1/2	1-1/2	FORD-26094
48	.0760	1/2	1-1/2	FORD-26088
49	.0730	3/8	1-1/2	FORD-26082
50	.0700	3/8	1-1/2	FORD-26076
51	.0670	3/8	1-1/2	FORD-26073
52	.0635	3/8	1-1/2	FORD-26067
53	.0595	3/8	1-1/2	FORD-26058
54	.0550	3/8	1-1/2	FORD-26046
55	.0520	3/8	1-1/2	FORD-26040
56	.0465	3/8	1-1/2	FORD-26025
57	.0430	3/8	1-1/2	FORD-26016
58	.0420	3/8	1-1/2	FORD-26013
59	.0410	3/8	1-1/2	FORD-26007
60	.0400	3/8	1-1/2	FORD-26004

MA FORD-Twister GP Series 206

Solid Carbide - 3x Drill Length

Flute Geometry: Four Facet Drill Point
Point: 118° drill point... 21° Helix Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals



Fractional Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
3/64	.0469	3/8	1-1/2	FORD-26028
1/16	.0625	3/8	1-1/2	FORD-26061
5/64	.0781	1/2	1-1/2	FORD-26091
3/32	.0938	1/2	2	FORD-26124
7/64	.1094	5/8	2	FORD-26157
1/8	.1250	5/8	2	FORD-26187
9/64	.1406	5/8	2	FORD-26211
5/32	.1562	3/4	2	FORD-26241
11/64	.1719	3/4	2-1/8	FORD-26271
3/16	.1875	3/4	2-3/16	FORD-26298
13/64	.2031	3/4	2-1/4	FORD-26331
7/32	.2187	1	2-1/2	FORD-26358
15/64	.2344	1	2-1/2	FORD-26382
1/4	.2500	1	2-1/2	FORD-26406
17/64	.2656	1	2-1/2	FORD-26427
9/32	.2812	1	2-1/2	FORD-26454
19/64	.2969	1-1/4	2-1/2	FORD-26475
5/16	.3125	1-1/4	2-1/2	FORD-26493
21/64	.3281	1-1/4	2-1/2	FORD-26514
11/32	.3438	1-1/4	2-1/2	FORD-26535
23/64	.3594	1-1/4	2-1/2	FORD-26556
3/8	.3750	1-1/4	2-1/2	FORD-26574
25/64	.3906	1-1/4	2-3/4	FORD-26595
13/32	.4062	1-1/4	2-3/4	FORD-26616

Fractional Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
27/64	.4219	1-1/4	2-3/4	FORD-26634
7/16	.4375	1-1/4	2-3/4	FORD-26649
29/64	.4531	1-1/4	3	FORD-26664
15/32	.4688	1-1/4	3	FORD-26679
31/64	.4844	1-1/4	3	FORD-26685
1/2	.5000	1-1/4	3	FORD-26691
33/64	.5156	1-3/8	3-1/2	FORD-26697
17/32	.5312	1-3/8	3-1/2	FORD-26700
35/64	.5469	1-1/2	3-1/2	FORD-26706
9/16	.5625	1-1/2	3-1/2	FORD-26712
37/64	.5781	1-5/8	3-1/2	FORD-26718
19/32	.5938	1-5/8	3-1/2	FORD-26724
39/64	.6094	1-3/4	3-1/2	FORD-26727
5/8	.6250	1-3/4	3-1/2	FORD-26733
41/64	.6406	1-7/8	4	FORD-26739
21/32	.6562	1-7/8	4	FORD-26745
43/64	.6719	1-7/8	4	FORD-26751
11/16	.6875	1-7/8	4	FORD-26754
45/64	.7031	2	4	FORD-26760
23/32	.7188	2-1/8	4	FORD-26766
47/64	.7344	2-1/8	4	FORD-26772
3/4	.7500	2-1/8	4	FORD-26778
49/64	.7656	2-1/4	4	FORD-26781
25/32	.7812	2-1/4	4	FORD-26784



Solid Carbide - 5x Drill Length

Flute Geometry: Four Facet Drill Point
Point: 118° drill point... 21° Helix Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals

Wire Gauge Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1	0.228	1-3/4	3	FORD-24478
2	0.221	1-3/4	3	FORD-24472
3	0.213	1-3/4	3	FORD-24460
4	0.209	1-3/4	3	FORD-24454
5	0.2055	1-3/4	3	FORD-24448
6	0.204	1-3/4	3	FORD-24442
7	0.201	1-3/4	3	FORD-24436
8	0.199	1-3/4	3	FORD-24430
9	0.196	1-3/4	3	FORD-24424
10	0.1935	1-5/8	2-3/4	FORD-24421
11	0.191	1-5/8	2-3/4	FORD-24415
12	0.189	1-5/8	2-3/4	FORD-24412
13	0.185	1-5/8	2-3/4	FORD-24403
14	0.182	1-5/8	2-3/4	FORD-24400
15	0.18	1-5/8	2-3/4	FORD-24394
16	0.177	1-5/8	2-3/4	FORD-24388
17	0.173	1-5/8	2-3/4	FORD-24382
18	0.1695	1-5/8	2-3/4	FORD-24376
19	0.166	1-5/8	2-3/4	FORD-24370
20	0.161	1-3/8	2-1/2	FORD-24361
21	0.159	1-3/8	2-1/2	FORD-24358
22	0.157	1-3/8	2-1/2	FORD-24352
23	0.154	1-3/8	2-1/2	FORD-24346
24	0.152	1-3/8	2-1/2	FORD-24340
25	0.1495	1-3/8	2-1/2	FORD-24334
26	0.147	1-3/8	2-1/2	FORD-24331
27	0.144	1-3/8	2-1/2	FORD-24325

Wire Gauge Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
28	0.1405	1-3/8	2-1/2	FORD-24316
29	0.136	1-3/8	2-1/2	FORD-24310
30	0.1285	1-1/4	2-1/4	FORD-24301
31	0.12	1-1/4	2-1/4	FORD-24289
32	0.116	1-1/4	2-1/4	FORD-24283
33	0.113	1-1/4	2-1/4	FORD-24277
34	0.111	1-1/4	2-1/4	FORD-24274
35	0.11	1-1/4	2-1/4	FORD-24268
36	0.1065	1-1/4	2-1/4	FORD-24262
37	0.104	1-1/4	2-1/4	FORD-24256
38	0.1015	1-1/4	2-1/4	FORD-24250
39	0.0995	1-1/4	2-1/4	FORD-24247
40	0.098	1	2	FORD-24241
41	0.096	1	2	FORD-24238
42	0.0935	1	2	FORD-24229
43	0.089	1	2	FORD-24223
44	0.086	1	2	FORD-24217
45	0.082	7/8	1-3/4	FORD-24211
46	0.081	7/8	1-3/4	FORD-24208
47	0.0785	7/8	1-3/4	FORD-24202
48	0.076	7/8	1-3/4	FORD-24196
49	0.073	7/8	1-3/4	FORD-24190
50	0.07	7/8	1-3/4	FORD-24184
51	0.067	3/4	1-1/2	FORD-24181
52	0.0635	3/4	1-1/2	FORD-24175
53	0.0595	3/4	1-1/2	FORD-24166
54	0.055	3/4	1-1/2	FORD-24154

MA FORD-Twister GP Series 204

Solid Carbide - 5x Drill Length

Flute Geometry: Four Facet Drill Point
Point: 118° drill point... 21° Helix Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals



Fractional Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
1/64	0.0156	1/4	1-1/2	FORD-24013
1/32	0.0312	3/8	1-1/2	FORD-24073
3/64	0.0469	3/4	1-1/2	FORD-24136
1/16	0.0625	3/4	1-1/2	FORD-24169
5/64	0.0781	7/8	1-3/4	FORD-24199
3/32	0.0938	1	2	FORD-24232
7/64	0.1094	1-1/4	2-1/4	FORD-24265
1/8	0.1250	1-1/4	2-1/4	FORD-24295
9/64	0.1406	1-3/8	2-1/2	FORD-24319
5/32	0.1562	1-3/8	2-1/2	FORD-24349
11/64	0.1719	1-5/8	2-3/4	FORD-24379
3/16	0.1875	1-5/8	2-3/4	FORD-24406
13/64	0.2031	1-3/4	3	FORD-24439
7/32	0.2187	1-3/4	3	FORD-24466
15/64	0.2344	2	3-1/4	FORD-24490
1/4	0.2500	2	3-1/4	FORD-24514
17/64	0.2656	2-1/8	3-1/2	FORD-24535
9/32	0.2812	2-1/8	3-1/2	FORD-24562
19/64	0.2969	2-3/8	3-3/4	FORD-24583
5/16	0.3125	2-3/8	3-3/4	FORD-24601
21/64	0.3281	2-1/2	4	FORD-24622
11/32	0.3438	2-1/2	4	FORD-24643
23/64	0.3594	2-3/4	4-1/4	FORD-24664
3/8	0.3750	2-3/4	4-1/4	FORD-24682
25/64	0.3906	2-7/8	4-1/2	FORD-24703

Fractional Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Part Number
13/32	0.4062	2-7/8	4-1/2	FORD-24724
27/64	0.4219	2-7/8	4-1/2	FORD-24742
7/16	0.4375	2-7/8	4-1/2	FORD-24757
29/64	0.4531	3	4-3/4	FORD-24772
15/32	0.4688	3	4-3/4	FORD-24787
31/64	0.4844	3	4-3/4	FORD-24793
1/2	0.5000	3	4-3/4	FORD-24799
33/64	0.5156	3-1/4	5	FORD-24805
17/32	0.5312	3-1/4	5	FORD-24808
35/64	0.5469	3-1/4	5	FORD-24814
9/16	0.5625	3-1/4	5	FORD-24820
37/64	0.5781	3-1/2	5-1/4	FORD-24826
19/32	0.5938	3-1/2	5-1/4	FORD-24832
39/64	0.6094	3-1/2	5-1/4	FORD-24835
5/8	0.6250	3-1/2	5-1/4	FORD-24841
41/64	0.6406	3-5/8	5-1/2	FORD-24847
21/32	0.6562	3-5/8	5-1/2	FORD-24853
43/64	0.6719	3-5/8	5-1/2	FORD-24859
11/16	0.6875	3-5/8	5-1/2	FORD-24862
45/64	0.7031	3-7/8	5-3/4	FORD-24868
23/32	0.7188	3-7/8	5-3/4	FORD-24874
47/64	0.7344	3-7/8	5-3/4	FORD-24880
3/4	0.7500	3-7/8	5-3/4	FORD-24886
49/64	0.7656	4	6	FORD-24889
25/32	0.7812	4	6	FORD-24892

MA FORD-Twister Micro-Tuff Series 305



Solid Carbide - Micro Drill

Flute Geometry: Web-Thinned Point
Point: 135° drill point... 12° Helix Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals
Shank & OAL: 1/8" Shank & 1-1/2" OAL

Fractional / Letter / Wire Size

Size OD	Decimal Equiv. OD	Flute Length	OAL	Coated Number
# 83	0.0120	0.19	1-1/2	FORD-34145
# 82	0.0125	0.19	1-1/2	FORD-34146
# 81	0.0130	0.19	1-1/2	FORD-34147
# 80	0.0135	0.19	1-1/2	FORD-34148
# 79	0.0145	0.19	1-1/2	FORD-34149
1/64	0.0156	0.19	1-1/2	FORD-34150
# 78	0.0160	0.19	1-1/2	FORD-34151
# 77	0.0180	0.25	1-1/2	FORD-34152
# 76	0.0200	0.25	1-1/2	FORD-34153
# 75	0.0210	0.25	1-1/2	FORD-34154
# 74	0.0225	0.25	1-1/2	FORD-34155
# 73	0.0240	0.25	1-1/2	FORD-34156
# 72	0.0250	0.25	1-1/2	FORD-34157
# 71	0.0260	0.25	1-1/2	FORD-34158
# 70	0.0280	0.32	1-1/2	FORD-34159
# 69	0.0292	0.32	1-1/2	FORD-34160
# 68	0.0310	0.4	1-1/2	FORD-34161
1/32	0.0312	0.4	1-1/2	FORD-34162
# 67	0.0320	0.4	1-1/2	FORD-34163
# 66	0.0330	0.4	1-1/2	FORD-34164
# 65	0.0350	0.4	1-1/2	FORD-34165
# 64	0.0360	0.4	1-1/2	FORD-34166
# 63	0.0370	0.4	1-1/2	FORD-34167
# 62	0.0380	0.4	1-1/2	FORD-34168
# 61	0.0390	0.4	1-1/2	FORD-34169
# 60	0.0400	0.4	1-1/2	FORD-34170
# 59	0.0410	0.4	1-1/2	FORD-34171
# 58	0.0420	0.4	1-1/2	FORD-34172
# 57	0.0430	0.4	1-1/2	FORD-34173
# 56	0.0465	0.4	1-1/2	FORD-34174
3/64	0.0469	0.4	1-1/2	FORD-34175

Fractional / Letter / Wire Size (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Coated Number
# 55	0.0520	0.4	1-1/2	FORD-34176
# 54	0.0550	0.4	1-1/2	FORD-34177
# 53	0.0595	0.4	1-1/2	FORD-34178
1/16	0.0625	0.48	1-1/2	FORD-34179
# 52	0.0635	0.48	1-1/2	FORD-34180
# 51	0.0670	0.48	1-1/2	FORD-34181
# 50	0.0700	0.48	1-1/2	FORD-34182
# 49	0.0730	0.48	1-1/2	FORD-34183
# 48	0.0760	0.48	1-1/2	FORD-34184
3/64	0.0781	0.48	1-1/2	FORD-34185
# 47	0.0785	0.48	1-1/2	FORD-34186
# 46	0.0810	0.48	1-1/2	FORD-34187
# 45	0.0820	0.48	1-1/2	FORD-34188
# 44	0.0860	0.48	1-1/2	FORD-34189
# 43	0.0890	0.48	1-1/2	FORD-34190
# 42	0.0935	0.48	1-1/2	FORD-34191
3/32	0.0938	0.48	1-1/2	FORD-34192
# 41	0.0960	0.48	1-1/2	FORD-34193
# 40	0.0980	0.48	1-1/2	FORD-34194
# 39	0.0995	0.48	1-1/2	FORD-34195
# 38	0.1015	0.48	1-1/2	FORD-34196
# 37	0.1040	0.48	1-1/2	FORD-34197
# 36	0.1065	0.48	1-1/2	FORD-34198
7/64	0.1094	0.48	1-1/2	FORD-34199
# 35	0.1100	0.48	1-1/2	FORD-34200
# 34	0.1110	0.48	1-1/2	FORD-34201
# 33	0.1130	0.48	1-1/2	FORD-34202
# 32	0.1160	0.48	1-1/2	FORD-34203
# 31	0.1200	0.48	1-1/2	FORD-34204
1/8	0.1250	0.48	1-1/2	FORD-34205

MA FORD-Twister Micro-Tuff Series 305

Solid Carbide - Micro Drill

Flute Geometry: Web-Thinned Point
Point: 135° drill point... 12° Helix Angle
Application: Drilling in steel, cast steel, stainless steel, and non-ferrous metals
Shank & OAL: 1/8" Shank & 1-1/2" OAL



Metric

Size OD	Decimal Equiv. OD	Flute Length	OAL	Coated Number
0.30mm	0.0118	4.80mm	38.0mm	FORD-34206
0.35mm	0.0138	4.80mm	38.0mm	FORD-34207
0.40mm	0.0157	4.80mm	38.0mm	FORD-34208
0.45mm	0.0177	6.35mm	38.0mm	FORD-34209
0.50mm	0.0197	6.35mm	38.0mm	FORD-34210
.55mm	0.0217	6.35mm	38.0mm	FORD-34211
.6mm	0.0236	6.35mm	38.0mm	FORD-34212
.65mm	0.0256	6.35mm	38.0mm	FORD-34213
.7mm	0.0276	8.13mm	38.0mm	FORD-34214
.75mm	0.0295	8.13mm	38.0mm	FORD-34215
.8mm	0.0315	10.16mm	38.0mm	FORD-34216
.85mm	0.0335	10.16mm	38.0mm	FORD-34217
.9mm	0.0354	10.16mm	38.0mm	FORD-34218
.95mm	0.0374	10.16mm	38.0mm	FORD-34219
1.0mm	0.0394	10.16mm	38.0mm	FORD-34220
1.10mm	0.0433	10.16mm	38.0mm	FORD-34222
1.15mm	0.0452	10.16mm	38.0mm	FORD-34223
1.2mm	0.0472	10.16mm	38.0mm	FORD-34224
1.25mm	0.0492	10.16mm	38.0mm	FORD-34225
1.3mm	0.0511	10.16mm	38.0mm	FORD-34226
1.35mm	0.0531	10.16mm	38.0mm	FORD-34227
1.4mm	0.0551	10.16mm	38.0mm	FORD-34228
1.45mm	0.0571	10.16mm	38.0mm	FORD-34229
1.5mm	0.0590	10.16mm	38.0mm	FORD-34230
1.55mm	0.0610	10.16mm	38.0mm	FORD-34231
1.6mm	0.0630	12.19mm	38.0mm	FORD-34232
1.65mm	0.0649	12.19mm	38.0mm	FORD-34233

Metric (cont.)

Size OD	Decimal Equiv. OD	Flute Length	OAL	Coated Number
1.7mm	0.0669	12.19mm	38.0mm	FORD-34234
1.75mm	0.0689	12.19mm	38.0mm	FORD-34235
1.8mm	0.0708	12.19mm	38.0mm	FORD-34236
1.85mm	0.0728	12.19mm	38.0mm	FORD-34237
1.9mm	0.0748	12.19mm	38.0mm	FORD-34238
1.95mm	0.0767	12.19mm	38.0mm	FORD-34239
2mm	0.0787	12.19mm	38.0mm	FORD-34240
2.05mm	0.0807	12.19mm	38.0mm	FORD-34241
2.1mm	0.0827	12.19mm	38.0mm	FORD-34242
2.15mm	0.0846	12.19mm	38.0mm	FORD-34243
2.2mm	0.0866	12.19mm	38.0mm	FORD-34244
2.25mm	0.0886	12.19mm	38.0mm	FORD-34245
2.3mm	0.0906	12.19mm	38.0mm	FORD-34246
2.35mm	0.0925	12.19mm	38.0mm	FORD-34247
2.4mm	0.0945	12.19mm	38.0mm	FORD-34248
2.45mm	0.0965	12.19mm	38.0mm	FORD-34249
2.5mm	0.0984	12.19mm	38.0mm	FORD-34250
2.55mm	0.1004	12.19mm	38.0mm	FORD-34251
2.6mm	0.1024	12.19mm	38.0mm	FORD-34252
2.65mm	0.1043	12.19mm	38.0mm	FORD-34253
2.7mm	0.1063	12.19mm	38.0mm	FORD-34254
2.75mm	0.1083	12.19mm	38.0mm	FORD-34255
2.8mm	0.1102	12.19mm	38.0mm	FORD-34256
2.85mm	0.1122	12.19mm	38.0mm	FORD-34257
2.9mm	0.1142	12.19mm	38.0mm	FORD-34258
2.95mm	0.1161	12.19mm	38.0mm	FORD-34259
3mm	0.1181	12.19mm	38.0mm	FORD-34260



TiAlN-Coated Carbide Dream Drills - 3xD without Coolant Holes

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.

Advantages: Self Centering, excellent positioning, good chip removal, powerful drilling

Helix Angle: 30°
Point Angle: 140°



Diameter Fractional	Diameter Inch	O.A.L	Flute Length	Part Number
1/8	.1250	1-59/64	45/64	YGD-0081ATF
9/64	.1406	2-3/64	25/32	YGD-0091ATF
5/32	.1562	2-3/16	7/8	YGD-0101ATF
11/64	.1719	2-9/32	15/16	YGD-0111ATF
3/16	.1875	2-7/16	1	YGD-0121ATF
13/64	.2031	2-7/16	1	YGD-0131ATF
7/32	.2188	2-5/8	1-1/8	YGD-0141ATF
15/64	.2344	2-5/8	1-1/8	YGD-0151ATF
1/4	.2500	3-3/16	1-5/8	YGD-0161ATF
F	.2570	3-17/64	1-11/16	YGD-2061ATF
17/64	.2656	3-17/64	1-11/16	YGD-0171ATF
I	.2720	3-17/64	1-11/16	YGD-2091ATF
9/32	.2812	3-7/16	1-3/4	YGD-0181ATF
19/64	.2969	3-9/16	1-7/8	YGD-0191ATF
5/16	.3125	3-9/16	1-7/8	YGD-0201ATF
21/64	.3281	3-3/4	2-1/16	YGD-0211ATF
Q	.3320	3-3/4	2-1/16	YGD-2171ATF

Diameter Fractional	Diameter Inch	O.A.L	Flute Length	Part Number
11/32	.3438	3-7/8	2-3/16	YGD-0221ATF
23/64	.3594	4	2-9/32	YGD-0231ATF
U	.3680	4	2-9/32	YGD-2211ATF
3/8	.3750	4-1/8	2-3/8	YGD-0241ATF
25/64	.3906	4-1/8	2-3/8	YGD-0251ATF
13/32	.4062	4-13/32	2-5/8	YGD-0261ATF
27/64	.4219	4-1/2	2-11/16	YGD-0271ATF
7/16	.4375	4-5/8	2-13/16	YGD-0281ATF
29/64	.4531	4-3/4	2-7/8	YGD-0291ATF
15/32	.4688	4-3/4	2-7/8	YGD-0301ATF
31/64	.4844	5-5/16	3	YGD-0311ATF
1/2	.5000	5-3/8	3-1/16	YGD-0321ATF
33/64	.5156	5-11/16	3-11/32	YGD-0331ATF
17/32	.5312	5-11/16	3-11/32	YGD-0341ATF
9/16	.5625	5-15/16	3-1/2	YGD-0361ATF
37/64	.5781	6	3-37/64	YGD-0371ATF
5/8	.6250	6-19/64	3-25/32	YGD-0401ATF

YG1 - CARBIDE DREAM DRILLS

TiAlN-Coated Carbide Dream Drills - 3xD without Coolant Holes

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.

Advantages: Self Centering, excellent positioning,
good chip removal, powerful drilling

Helix Angle: 30°

Point Angle: 140°



Diameter Metric	Diameter Inch	O.A.L	Flute Length	Part Number
3.0	.1181	46	16	YGD-DH404030
3.1	.1220	49	18	YGD-DH404031
3.2	.1260	49	18	YGD-DH404032
3.3	.1299	49	18	YGD-DH404033
3.4	.1339	52	20	YGD-DH404034
3.5	.1378	52	20	YGD-DH404035
3.6	.1417	52	20	YGD-DH404036
3.7	.1457	52	20	YGD-DH404037
3.8	.1496	55	22	YGD-DH404038
3.9	.1535	55	22	YGD-DH404039
4.0	.1575	55	22	YGD-DH404040
4.1	.1614	55	22	YGD-DH404041
4.2	.1654	55	22	YGD-DH404042
4.3	.1693	58	24	YGD-DH404043
4.4	.1732	58	24	YGD-DH404044
4.5	.1772	58	24	YGD-DH404045
4.6	.1811	58	24	YGD-DH404046
4.7	.1850	58	24	YGD-DH404047
4.8	.1890	62	26	YGD-DH404048
4.9	.1929	62	26	YGD-DH404049
5.0	.1969	62	26	YGD-DH404050
5.1	.2008	62	26	YGD-DH404051
5.2	.2047	62	26	YGD-DH404052

Diameter Metric	Diameter Inch	O.A.L	Flute Length	Part Number
5.3	.2087	62	26	YGD-DH404053
5.4	.2126	66	28	YGD-DH404054
5.5	.2165	66	28	YGD-DH404055
5.6	.2205	66	28	YGD-DH404056
5.7	.2244	66	28	YGD-DH404057
5.8	.2283	66	28	YGD-DH404058
5.9	.2323	66	28	YGD-DH404059
6.0	.2362	66	28	YGD-DH404060
6.1	.2402	70	31	YGD-DH404061
6.2	.2441	70	31	YGD-DH404062
6.3	.2480	70	31	YGD-DH404063
6.4	.2520	70	31	YGD-DH404064
6.5	.2559	70	31	YGD-DH404065
6.6	.2598	70	31	YGD-DH404066
6.7	.2638	70	31	YGD-DH404067
6.8	.2677	74	34	YGD-DH404068
6.9	.2717	74	34	YGD-DH404069
7.0	.2756	74	34	YGD-DH404070
7.1	.2795	74	34	YGD-DH404071
7.2	.2835	74	34	YGD-DH404072
7.3	.2874	74	34	YGD-DH404073
7.4	.2913	74	34	YGD-DH404074
7.5	.2953	74	34	YGD-DH404075



TiAlN-Coated Carbide Dream Drills - 3xD without Coolant Holes (cont.)

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.

Advantages: Self Centering, excellent positioning, good chip removal, powerful drilling

Helix Angle: 30°

Point Angle: 140°



Diameter Metric	Diameter Inch	O.A.L	Flute Length	Part Number
7.6	.2992	79	37	YGD-DH404076
7.7	.3031	79	37	YGD-DH404077
7.8	.3071	79	37	YGD-DH404078
7.9	.3110	79	37	YGD-DH404079
8.0	.3150	79	37	YGD-DH404080
8.1	.3189	79	37	YGD-DH404081
8.2	.3228	79	37	YGD-DH404082
8.3	.3268	79	37	YGD-DH404083
8.4	.3307	79	37	YGD-DH404084
8.5	.3346	79	37	YGD-DH404085
8.6	.3386	84	40	YGD-DH404086
8.7	.3425	84	40	YGD-DH404087
8.8	.3465	84	40	YGD-DH404088
8.9	.3504	84	40	YGD-DH404089
9.0	.3543	84	40	YGD-DH404090
9.1	.3583	84	40	YGD-DH404091
9.2	.3622	84	40	YGD-DH404092
9.3	.3661	84	40	YGD-DH404093
9.4	.3701	84	40	YGD-DH404094
9.5	.3740	84	40	YGD-DH404095
9.6	.3780	89	43	YGD-DH404096
9.7	.3819	89	43	YGD-DH404097
9.8	.3858	89	43	YGD-DH404098

Diameter Metric	Diameter Inch	O.A.L	Flute Length	Part Number
9.9	.3898	89	43	YGD-DH404099
10.0	.3937	89	43	YGD-DH404100
10.2	.4016	89	43	YGD-DH404102
10.5	.4134	89	43	YGD-DH404105
11.0	.4331	95	47	YGD-DH404110
11.5	.4528	95	47	YGD-DH404115
12.0	.4724	102	51	YGD-DH404120
13.0	.5118	102	51	YGD-DH404130
13.5	.5314	107	54	YGD-DH404135
14.0	.5511	107	54	YGD-DH404140
14.5	.5708	111	56	YGD-DH404145
15.0	.5905	111	56	YGD-DH404150
15.5	.6102	115	58	YGD-DH404155
16.0	.6299	115	58	YGD-DH404160
16.5	.6495	119	60	YGD-DH404165
17.0	.6692	119	60	YGD-DH404170
17.5	.6889	123	62	YGD-DH404175
18.0	.7086	123	62	YGD-DH404180
18.5	.7283	127	64	YGD-DH404185
19.0	.7480	127	64	YGD-DH404190
19.5	.7676	131	66	YGD-DH404195
20.0	.7873	131	66	YGD-DH404200

YG1 - CARBIDE DREAM DRILLS

TiAlN-Coated Carbide Dream Drills - 3xD with Coolant Holes

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.

Advantages: Self Centering, excellent positioning, good chip removal, powerful drilling

Helix Angle: 30°

Point Angle: 140°



Diameter Fractional	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
1/8	.1250	15/64	2.992	1.102	YGD-DH711008
11/64	.1719	15/64	3.386	1.417	YGD-DH711011
3/16	.1875	15/64	3.543	1.575	YGD-DH711012
13/64	.2031	15/64	3.228	1.082	YGD-DH711013
7/32	.2188	15/64	3.228	1.181	YGD-DH711014
15/64	.2344	15/64	3.228	1.181	YGD-DH711015
1/4	.2500	17/64	3.465	1.279	YGD-DH711016
F	.2570	17/64	3.465	1.279	YGD-DH711206
17/64	.2656	17/64	3.465	1.378	YGD-DH711017
I	.2720	.2720	3.465	1.378	YGD-DH711209
9/32	.2812	5/16	3.701	1.476	YGD-0181BTF
19/64	.2969	5/16	3.701	1.476	YGD-0191BTF
5/16	.3125	5/16	3.701	1.575	YGD-0201BTF
21/64	.3281	11/32	3.937	1.673	YGD-DH711021

Diameter Fractional	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
Q	.3320	11/32	3.937	1.673	YGD-DH711217
11/32	.3438	11/32	3.937	1.772	YGD-DH711022
23/64	.3594	25/64	4.174	1.870	YGD-DH711023
U	.3680	25/64	4.174	1.870	YGD-DH711221
3/8	.3705	25/64	4.174	1.969	YGD-DH711024
25/64	.3906	25/64	4.174	1.969	YGD-DH711025
13/32	.4062	27/64	4.567	2.067	YGD-DH711026
27/64	.4219	27/64	4.567	2.165	YGD-DH711027
7/16	.4375	15/32	4.803	2.264	YGD-DH711028
29/64	.4531	15/32	4.803	2.264	YGD-DH711029
15/32	.4688	15/32	4.803	2.362	YGD-DH711030
31/64	.4844	1/2	5.039	2.461	YGD-0311BTF
1/2	.5000	1/2	5.039	2.559	YGD-0321BTF

TiAlN-Coated Carbide Dream Drills - 3xD with Coolant Holes

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.

Advantages: Self Centering, excellent positioning, good chip removal, powerful drilling

Helix Angle: 30°

Point Angle: 140°



Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3.0	.1181	6.0	62	20	YGD-DH406030
3.1	.1220	6.0	62	20	YGD-DH406031
3.2	.1260	6.0	62	20	YGD-DH406032
3.3	.1299	6.0	62	20	YGD-DH406033
3.4	.1339	6.0	62	20	YGD-DH406034
3.5	.1378	6.0	62	20	YGD-DH406035
3.6	.1417	6.0	62	20	YGD-DH406036
3.7	.1457	6.0	62	20	YGD-DH406037
3.8	.1496	6.0	66	24	YGD-DH406038
3.9	.1535	6.0	66	24	YGD-DH406039
4.0	.1575	6.0	66	24	YGD-DH406040
4.1	.1614	6.0	66	24	YGD-DH406041
4.2	.1654	6.0	66	24	YGD-DH406042
4.3	.1693	6.0	66	24	YGD-DH406043
4.4	.1732	6.0	66	24	YGD-DH406044

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
4.5	.1772	6.0	66	24	YGD-DH406045
4.6	.1811	6.0	66	24	YGD-DH406046
4.7	.1850	6.0	66	24	YGD-DH406047
4.8	.1890	6.0	66	28	YGD-DH406048
4.9	.1929	6.0	66	28	YGD-DH406049
5.0	.1969	6.0	66	28	YGD-DH406050
5.1	.2008	6.0	66	28	YGD-DH406051
5.2	.2047	6.0	66	28	YGD-DH406052
5.3	.2087	6.0	66	28	YGD-DH406053
5.4	.2126	6.0	66	28	YGD-DH406054
5.5	.2165	6.0	66	28	YGD-DH406055
5.6	.2205	6.0	66	28	YGD-DH406056
5.7	.2244	6.0	66	28	YGD-DH406057
5.8	.2283	6.0	66	28	YGD-DH406058
5.9	.2323	6.0	66	28	YGD-DH406059



TiAlN-Coated Carbide Dream Drills - 3xD with Coolant Holes (cont.)



Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.

Advantages: Self Centering, excellent positioning, good chip removal, powerful drilling

Helix Angle: 30°

Point Angle: 140°

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
6.0	.2362	6.0	66	28	YGD-DH406060
6.1	.2402	8.0	79	34	YGD-DH406061
6.2	.2441	8.0	79	34	YGD-DH406062
6.3	.2480	8.0	79	34	YGD-DH406063
6.4	.2520	8.0	79	34	YGD-DH406064
6.5	.2559	8.0	79	34	YGD-DH406065
6.6	.2598	8.0	79	34	YGD-DH406066
6.7	.2638	8.0	79	34	YGD-DH406067
6.8	.2677	8.0	79	34	YGD-DH406068
6.9	.2717	8.0	79	34	YGD-DH406069
7.0	.2756	8.0	79	34	YGD-DH406070
7.1	.2795	8.0	79	41	YGD-DH406071
7.2	.2835	8.0	79	41	YGD-DH406072
7.3	.2874	8.0	79	41	YGD-DH406073
7.4	.2913	8.0	79	41	YGD-DH406074
7.5	.2953	8.0	79	41	YGD-DH406075
7.6	.2992	8.0	79	41	YGD-DH406076
7.7	.3031	8.0	79	41	YGD-DH406077
7.8	.3071	8.0	79	41	YGD-DH406078
7.9	.3110	8.0	79	41	YGD-DH406079
8.0	.3150	8.0	79	41	YGD-DH406080
8.1	.3189	10.0	89	47	YGD-DH406081
8.2	.3228	10.0	89	47	YGD-DH406082
8.3	.3268	10.0	89	47	YGD-DH406083
8.4	.3307	10.0	89	47	YGD-DH406084
8.5	.3346	10.0	89	47	YGD-DH406085
8.6	.3386	10.0	89	47	YGD-DH406086
8.7	.3425	10.0	89	47	YGD-DH406087
8.8	.3465	10.0	89	47	YGD-DH406088
8.9	.3504	10.0	89	47	YGD-DH406089
9.0	.3543	10.0	89	47	YGD-DH406090
9.1	.3583	10.0	89	47	YGD-DH406091
9.2	.3622	10.0	89	47	YGD-DH406092
9.3	.3661	10.0	89	47	YGD-DH406093
9.4	.3701	10.0	89	47	YGD-DH406094
9.5	.3740	10.0	89	47	YGD-DH406095
9.6	.3780	10.0	89	47	YGD-DH406096
9.7	.3819	10.0	89	47	YGD-DH406097
9.8	.3858	10.0	89	47	YGD-DH406098

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
9.9	.3898	10.0	89	47	YGD-DH406099
10.0	.3937	10.0	89	47	YGD-DH406100
10.1	.3976	12.0	102	55	YGD-DH406101
10.2	.4016	12.0	102	55	YGD-DH406102
10.3	.4055	12.0	102	55	YGD-DH406103
10.4	.4094	12.0	102	55	YGD-DH406104
10.5	.4134	12.0	102	55	YGD-DH406105
10.6	.4173	12.0	102	55	YGD-DH406106
10.7	.4212	12.0	102	55	YGD-DH406107
10.8	.4252	12.0	102	55	YGD-DH406108
10.9	.4291	12.0	102	55	YGD-DH406109
11.0	.4330	12.0	102	55	YGD-DH406110
11.1	.4370	12.0	102	55	YGD-DH406111
11.2	.4409	12.0	102	55	YGD-DH406112
11.3	.4448	12.0	102	55	YGD-DH406113
11.4	.4488	12.0	102	55	YGD-DH406114
11.5	.4527	12.0	102	55	YGD-DH406115
11.6	.4566	12.0	102	55	YGD-DH406116
11.7	.4606	12.0	102	55	YGD-DH406117
11.8	.4645	12.0	102	55	YGD-DH406118
11.9	.4685	12.0	102	55	YGD-DH406119
12.0	.4724	12.0	102	55	YGD-DH406120
12.5	.4921	14.0	107	60	YGD-DH406125
13.0	.5118	14.0	107	60	YGD-DH406130
13.5	.5314	14.0	107	60	YGD-DH406135
14.0	.5511	14.0	107	60	YGD-DH406140
14.5	.5708	16.0	115	65	YGD-DH406145
15.0	.5905	16.0	115	65	YGD-DH406150
15.5	.6102	16.0	115	65	YGD-DH406155
16.0	.6299	16.0	115	65	YGD-DH406160
16.5	.6495	18.0	123	73	YGD-DH406165
17.0	.6692	18.0	123	73	YGD-DH406170
17.5	.6889	18.0	123	73	YGD-DH406175
18.0	.7086	18.0	123	73	YGD-DH406180
18.5	.7283	20.0	131	79	YGD-DH406185
19.0	.7480	20.0	131	79	YGD-DH406190
19.5	.7676	20.0	131	79	YGD-DH406195
20.0	.7873	20.0	131	79	YGD-DH406200

YG1 - CARBIDE DREAM DRILLS

TiAlN-Coated Carbide Dream Drills - 5xD with Coolant Holes

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.

Advantages: Self Centering, excellent positioning,
good chip removal, powerful drilling

Helix Angle: 30° **Point Angle:** 140°



Diameter Fractional	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
13/64	0.2031	15/64	3-15/16	1-3/4	YGD-0131CTF
7/32	0.2188	15/64	3-15/16	1-57/64	YGD-0141CTF
15/64	0.2344	15/64	3-15/16	1-57/64	YGD-0151CTF
1/4	0.2500	17/64	4-19/64	2-3/64	YGD-0161CTF
F	0.2570	17/64	4-19/64	2-13/64	YGD-2061CTF
17/64	0.2656	17/64	4-19/64	2-13/64	YGD-0171CTF
I	0.2720	.2720	4-19/64	2-13/64	YGD-2091CTF
9/32	0.2812	5/16	4-41/64	2-23/64	YGD-0181CTF
19/64	0.2969	5/16	4-41/64	2-33/64	YGD-0191CTF
5/16	0.3125	5/16	4-41/64	2-33/64	YGD-0201CTF
21/64	0.3281	11/32	5	2-43/64	YGD-0211CTF
Q	0.3320	11/32	5	2-43/64	YGD-2171CTF

Diameter Fractional	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
11/32	0.3438	11/32	5	2-27/32	YGD-0221CTF
23/64	0.3594	25/64	5-23/64	3	YGD-0231CTF
U	0.3680	25/64	5-23/64	3	YGD-2211CTF
3/8	0.3750	25/64	5-23/64	3-5/32	YGD-0241CTF
25/64	0.3906	25/64	5-23/64	3-5/32	YGD-0251CTF
13/32	0.4062	27/64	5-7/8	3-5/16	YGD-0261CTF
27/64	0.4219	27/64	5-7/8	3-15/32	YGD-0271CTF
7/16	0.4375	15/32	6-7/32	3-5/8	YGD-0281CTF
29/64	0.4531	15/32	6-7/32	3-25/32	YGD-0291CTF
15/32	0.4688	15/32	6-7/32	3-25/32	YGD-0301CTF
31/64	0.4844	1/2	6-37/64	3-15/16	YGD-0311CTF
1/2	0.5000	1/2	6-37/64	4-3/32	YGD-0321CTF

TiAlN-Coated Carbide Dream Drills - 5xD with Coolant Holes

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.

Advantages: Self Centering, excellent positioning,
good chip removal, powerful drilling

Helix Angle: 30° **Point Angle:** 140°



Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
1.0	0.0394	3.0	55	8	YGD-DH408010
1.1	0.0433	3.0	55	12	YGD-DH408011
1.2	0.0472	3.0	55	12	YGD-DH408012
1.3	0.0512	3.0	55	12	YGD-DH408013
1.4	0.0551	3.0	55	12	YGD-DH408014
1.5	0.0591	3.0	55	16	YGD-DH408015
1.6	0.0630	3.0	55	16	YGD-DH408016
1.7	0.0669	3.0	55	16	YGD-DH408017
1.8	0.0709	3.0	55	16	YGD-DH408018
1.9	0.0748	3.0	55	16	YGD-DH408019
2.0	0.0787	4.0	57	21	YGD-DH408020
2.1	0.0827	4.0	57	21	YGD-DH408021
2.2	0.0866	4.0	57	21	YGD-DH408022
2.3	0.0906	4.0	57	21	YGD-DH408023
2.4	0.0945	4.0	57	21	YGD-DH408024
2.5	0.0984	4.0	57	21	YGD-DH408025
2.6	0.1024	4.0	57	21	YGD-DH408026
2.7	0.1063	4.0	57	21	YGD-DH408027
2.8	0.1102	4.0	57	21	YGD-DH408028
2.9	0.1142	4.0	57	21	YGD-DH408029

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3.0	0.1181	6.0	66	28	YGD-DH408030
3.1	0.1220	6.0	66	28	YGD-DH408031
3.2	0.1260	6.0	66	28	YGD-DH408032
3.3	0.1299	6.0	66	28	YGD-DH408033
3.4	0.1339	6.0	66	28	YGD-DH408034
3.5	0.1378	6.0	66	28	YGD-DH408035
3.6	0.1417	6.0	66	28	YGD-DH408036
3.7	0.1457	6.0	66	28	YGD-DH408037
3.8	0.1496	6.0	74	36	YGD-DH408038
3.9	0.1535	6.0	74	36	YGD-DH408039
4.0	0.1575	6.0	74	36	YGD-DH408040
4.1	0.1614	6.0	74	36	YGD-DH408041
4.2	0.1654	6.0	74	36	YGD-DH408042
4.3	0.1693	6.0	74	36	YGD-DH408043
4.4	0.1732	6.0	74	36	YGD-DH408044
4.5	0.1772	6.0	74	36	YGD-DH408045
4.6	0.1811	6.0	74	36	YGD-DH408046
4.7	0.1850	6.0	74	36	YGD-DH408047
4.8	0.1890	6.0	82	44	YGD-DH408048
4.9	0.1929	6.0	82	44	YGD-DH408049



TiAlN-Coated Carbide Dream Drills - 5xD with Coolant Holes (cont.)

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.



Advantages: Self Centering, excellent positioning,
good chip removal, powerful drilling

Helix Angle: 30° **Point Angle:** 140°

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
5.0	0.1969	6.0	82	44	YGD-DH408050
5.1	0.2008	6.0	82	44	YGD-DH408051
5.2	0.2047	6.0	82	44	YGD-DH408052
5.3	0.2087	6.0	82	44	YGD-DH408053
5.4	0.2126	6.0	82	44	YGD-DH408054
5.5	0.2165	6.0	82	44	YGD-DH408055
5.6	0.2205	6.0	82	44	YGD-DH408056
5.7	0.2244	6.0	82	44	YGD-DH408057
5.8	0.2283	6.0	82	44	YGD-DH408058
5.9	0.2323	6.0	82	44	YGD-DH408059
6.0	0.2362	6.0	82	44	YGD-DH408060
6.1	0.2402	8.0	91	53	YGD-DH408061
6.2	0.2441	8.0	91	53	YGD-DH408062
6.3	0.2480	8.0	91	53	YGD-DH408063
6.4	0.2520	8.0	91	53	YGD-DH408064
6.5	0.2559	8.0	91	53	YGD-DH408065
6.6	0.2598	8.0	91	53	YGD-DH408066
6.7	0.2638	8.0	91	53	YGD-DH408067
6.8	0.2677	8.0	91	53	YGD-DH408068
6.9	0.2717	8.0	91	53	YGD-DH408069
7.0	0.2756	8.0	91	53	YGD-DH408070
7.1	0.2795	8.0	91	53	YGD-DH408071
7.2	0.2835	8.0	91	53	YGD-DH408072
7.3	0.2874	8.0	91	53	YGD-DH408073
7.4	0.2913	8.0	91	53	YGD-DH408074
7.5	0.2953	8.0	91	53	YGD-DH408075
7.6	0.2992	8.0	91	53	YGD-DH408076
7.7	0.3031	8.0	91	53	YGD-DH408077
7.8	0.3071	8.0	91	53	YGD-DH408078
7.9	0.3110	8.0	91	53	YGD-DH408079
8.0	0.3150	8.0	91	53	YGD-DH408080
8.1	0.3189	10.0	103	61	YGD-DH408081
8.2	0.3228	10.0	103	61	YGD-DH408082
8.3	0.3268	10.0	103	61	YGD-DH408083
8.4	0.3307	10.0	103	61	YGD-DH408084
8.5	0.3346	10.0	103	61	YGD-DH408085
8.6	0.3386	10.0	103	61	YGD-DH408086
8.7	0.3425	10.0	103	61	YGD-DH408087
8.8	0.3465	10.0	103	61	YGD-DH408088
8.9	0.3504	10.0	103	61	YGD-DH408089
9.0	0.3543	10.0	103	61	YGD-DH408090

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
9.1	0.3583	10.0	103	61	YGD-DH408091
9.2	0.3622	10.0	103	61	YGD-DH408092
9.3	0.3661	10.0	103	61	YGD-DH408093
9.4	0.3701	10.0	103	61	YGD-DH408094
9.5	0.3740	10.0	103	61	YGD-DH408095
9.6	0.3780	10.0	103	61	YGD-DH408096
9.7	0.3819	10.0	103	61	YGD-DH408097
9.8	0.3858	10.0	103	61	YGD-DH408098
9.9	0.3898	10.0	103	61	YGD-DH408099
10.0	0.3937	10.0	103	61	YGD-DH408100
10.1	0.3976	12.0	118	71	YGD-DH408101
10.2	0.4016	12.0	118	71	YGD-DH408102
10.3	0.4055	12.0	118	71	YGD-DH408103
10.4	0.4094	12.0	118	71	YGD-DH408104
10.5	0.4134	12.0	118	71	YGD-DH408105
10.6	0.4173	12.0	118	71	YGD-DH408106
10.7	0.4212	12.0	118	71	YGD-DH408107
10.8	0.4252	12.0	118	71	YGD-DH408108
10.9	0.4291	12.0	118	71	YGD-DH408109
11.0	0.4330	12.0	118	71	YGD-DH408110
11.1	0.4370	12.0	118	71	YGD-DH408111
11.2	0.4409	12.0	118	71	YGD-DH408112
11.3	0.4448	12.0	118	71	YGD-DH408113
11.4	0.4488	12.0	118	71	YGD-DH408114
11.5	0.4527	12.0	118	71	YGD-DH408115
11.6	0.4566	12.0	118	71	YGD-DH408116
11.7	0.4606	12.0	118	71	YGD-DH408117
11.8	0.4645	12.0	118	71	YGD-DH408118
11.9	0.4685	12.0	118	71	YGD-DH408119
12.0	0.4724	12.0	118	71	YGD-DH408120
12.2	0.4803	12.0	118	71	YGD-DH408122
12.3	0.4842	12.0	118	71	YGD-DH408123
12.5	0.4921	14.0	124	77	YGD-DH408125
13.0	0.5118	14.0	124	77	YGD-DH408130
13.5	0.5314	14.0	124	77	YGD-DH408135
14.0	0.5511	14.0	124	77	YGD-DH408140
14.5	0.5708	16.0	133	83	YGD-DH408145
15.0	0.5905	16.0	133	83	YGD-DH408150
15.5	0.6102	16.0	133	83	YGD-DH408155
16.0	0.6299	16.0	133	83	YGD-DH408160

YG1 - CARBIDE DREAM DRILLS

TiAlN-Coated Carbide Dream Drills - 8xD with Coolant Holes

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.

Advantages: Self Centering, excellent positioning, good chip removal, powerful drilling

Helix Angle: 30°

Point Angle: 140°



Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3.0	.1181	6.0	72	34	YGD-DH421030
3.1	.1220	6.0	72	34	YGD-DH421031
3.2	.1260	6.0	72	34	YGD-DH421032
3.3	.1299	6.0	72	34	YGD-DH421033
3.4	.1339	6.0	72	34	YGD-DH421034
3.5	.1378	6.0	72	34	YGD-DH421035
3.6	.1417	6.0	72	34	YGD-DH421036
3.7	.1457	6.0	72	34	YGD-DH421037
3.8	.1496	6.0	81	43	YGD-DH421038
3.9	.1535	6.0	81	43	YGD-DH421039
4.0	.1575	6.0	81	43	YGD-DH421040
4.1	.1614	6.0	81	43	YGD-DH421041
4.2	.1654	6.0	81	43	YGD-DH421042
4.3	.1693	6.0	81	43	YGD-DH421043
4.4	.1732	6.0	81	43	YGD-DH421044
4.5	.1772	6.0	81	43	YGD-DH421045
4.6	.1811	6.0	81	43	YGD-DH421046
4.7	.1850	6.0	81	43	YGD-DH421047
4.8	.1890	6.0	95	57	YGD-DH421048
4.9	.1929	6.0	95	57	YGD-DH421049
5.0	.1969	6.0	95	57	YGD-DH421050
5.1	.2008	6.0	95	57	YGD-DH421051
5.2	.2047	6.0	95	57	YGD-DH421052
5.3	.2087	6.0	95	57	YGD-DH421053
5.4	.2126	6.0	95	57	YGD-DH421054
5.5	.2165	6.0	95	57	YGD-DH421055
5.6	.2205	6.0	95	57	YGD-DH421056
5.7	.2244	6.0	95	57	YGD-DH421057
5.8	.2283	6.0	95	57	YGD-DH421058
5.9	.2323	6.0	95	57	YGD-DH421059
6.0	.2362	6.0	95	57	YGD-DH421060
6.1	.2402	8.0	114	76	YGD-DH421061

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
6.2	.2441	8.0	114	76	YGD-DH421062
6.3	.2480	8.0	114	76	YGD-DH421063
6.4	.2520	8.0	114	76	YGD-DH421064
6.5	.2559	8.0	114	76	YGD-DH421065
6.6	.2598	8.0	114	76	YGD-DH421066
6.7	.2638	8.0	114	76	YGD-DH421067
6.8	.2677	8.0	114	76	YGD-DH421068
6.9	.2717	8.0	114	76	YGD-DH421069
7.0	.2756	8.0	114	76	YGD-DH421070
7.1	.2795	8.0	114	76	YGD-DH421071
7.2	.2835	8.0	114	76	YGD-DH421072
7.3	.2874	8.0	114	76	YGD-DH421073
7.4	.2913	8.0	114	76	YGD-DH421074
7.5	.2953	8.0	114	76	YGD-DH421075
7.6	.2992	8.0	114	76	YGD-DH421076
7.7	.3031	8.0	114	76	YGD-DH421077
7.8	.3071	8.0	114	76	YGD-DH421078
7.9	.3110	8.0	114	76	YGD-DH421079
8.0	.3150	8.0	114	76	YGD-DH421080
8.1	.3189	10.0	142	95	YGD-DH421081
8.2	.3228	10.0	142	95	YGD-DH421082
8.3	.3268	10.0	142	95	YGD-DH421083
8.4	.3307	10.0	142	95	YGD-DH421084
8.5	.3346	10.0	142	95	YGD-DH421085
8.6	.3386	10.0	142	95	YGD-DH421086
8.7	.3425	10.0	142	95	YGD-DH421087
8.8	.3465	10.0	142	95	YGD-DH421088
8.9	.3504	10.0	142	95	YGD-DH421089
9.0	.3543	10.0	142	95	YGD-DH421090
9.1	.3583	10.0	142	95	YGD-DH421091
9.2	.3622	10.0	142	95	YGD-DH421092
9.3	.3661	10.0	142	95	YGD-DH421093



TiAlN-Coated Carbide Dream Drills - 8xD with Coolant Holes (cont.)

Used for drilling into steel, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.



Advantages: Self Centering, excellent positioning, good chip removal, powerful drilling

Helix Angle: 30°

Point Angle: 140°

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
9.4	.3701	10.0	142	95	YGD-DH421094
9.5	.3740	10.0	142	95	YGD-DH421095
9.6	.3780	10.0	142	95	YGD-DH421096
9.7	.3819	10.0	142	95	YGD-DH421097
9.8	.3858	10.0	142	95	YGD-DH421098
9.9	.3898	10.0	142	95	YGD-DH421099
10.0	.3937	10.0	142	95	YGD-DH421100
10.1	.3976	12.0	162	114	YGD-DH421101
10.2	.4016	12.0	162	114	YGD-DH421102
10.3	.4055	12.0	162	114	YGD-DH421103
10.4	.4094	12.0	162	114	YGD-DH421104
10.5	.4134	12.0	162	114	YGD-DH421105
10.6	.4173	12.0	162	114	YGD-DH421106
10.7	.4212	12.0	162	114	YGD-DH421107
10.8	.4252	12.0	162	114	YGD-DH421108
10.9	.4291	12.0	162	114	YGD-DH421109
11.0	.4330	12.0	162	114	YGD-DH421110
11.1	.4370	12.0	162	114	YGD-DH421111
11.2	.4409	12.0	162	114	YGD-DH421112
11.3	.4448	12.0	162	114	YGD-DH421113
11.4	.4488	12.0	162	114	YGD-DH421114
11.5	.4527	12.0	162	114	YGD-DH421115
11.6	.4566	12.0	162	114	YGD-DH421116
11.7	.4606	12.0	162	114	YGD-DH421117
11.8	.4645	12.0	162	114	YGD-DH421118
11.9	.4685	12.0	162	114	YGD-DH421119
12.0	.4724	12.0	162	114	YGD-DH421120
12.5	.4291	14.0	178	133	YGD-DH421125
13.0	.5118	14.0	178	133	YGD-DH421130
13.5	.5314	14.0	178	133	YGD-DH421135
14.0	.5512	14.0	178	133	YGD-DH421140

YG1 - CARBIDE DREAM DRILLS

TiAlN-Coated Carbide INOX Dream Drills - 3xD with Coolant Holes

This tool features a special flute shape and geometry for suitable machining of stainless steel.

Advantages: Excellent chip evacuation due to better surface treatment.
Point R-thinning makes the superior centering and chip curl.

Helix Angle: 30° **Point Angle:** 140°



Diameter Fractional	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
1/8	0.1250	15/64	2.992	1.102	YGD-DH463008
11/64	0.1719	15/64	3.386	1.417	YGD-DH463011
3/16	0.1875	15/64	3.543	1.575	YGD-DH463012
13/64	0.2031	15/64	3.228	1.082	YGD-DH463013
7/32	0.2188	15/64	3.228	1.181	YGD-DH463014
15/64	0.2344	15/64	3.228	1.181	YGD-DH463015
1/4	0.2500	17/64	3.465	1.279	YGD-DH463016
F	0.2570	17/64	3.465	1.279	YGD-DH463206
17/64	0.2656	17/64	3.465	1.378	YGD-DH463017
I	0.2720	0.2720	3.465	1.378	YGD-DH463209
9/32	0.2813	5/16	3.701	1.476	YGD-DH463018
19/64	0.2969	5/16	3.701	1.476	YGD-DH463019
5/16	0.3125	5/16	3.701	1.575	YGD-DH463020
21/64	0.3281	11/32	3.937	1.673	YGD-DH463021
Q	0.3320	11/32	3.937	1.673	YGD-DH463217
11/32	0.3438	11/32	3.937	1.772	YGD-DH463022
23/64	0.3594	25/64	4.174	1.870	YGD-DH463023
U	0.3680	25/64	4.174	1.870	YGD-DH463221

Diameter Fractional	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3/8	0.3750	25/64	4.174	1.969	YGD-DH463024
25/64	0.3906	25/64	4.174	1.969	YGD-DH463025
13/32	0.4063	27/64	4.567	2.067	YGD-DH463026
27/64	0.4219	27/64	4.567	2.165	YGD-DH463027
7/16	0.4375	15/32	4.803	2.264	YGD-DH463028
29/64	0.4531	15/32	4.803	2.264	YGD-DH463029
15/32	0.4688	15/32	4.803	2.362	YGD-DH463030
31/64	0.4844	1/2	5.039	2.461	YGD-DH463031
1/2	0.5000	1/2	5.039	2.559	YGD-DH463032
33/64	0.5156	35/64	5.276	2.657	YGD-DH463033
17/32	0.5313	35/64	5.276	2.756	YGD-DH463034
35/64	0.5469	35/64	5.276	2.756	YGD-DH463035
9/16	0.5625	37/64	5.512	2.854	YGD-DH463036
37/64	0.5781	37/64	5.512	2.953	YGD-DH463037
19/32	0.5938	5/8	5.709	3.051	YGD-DH463038
39/64	0.6094	5/8	5.709	3.051	YGD-DH463039
5/8	0.6250	5/8	5.709	3.150	YGD-DH463040

TiAlN-Coated Carbide INOX Dream Drills - 3xD with Coolant Holes

This tool features a special flute shape and geometry for suitable machining of stainless steel.

Advantages: Excellent chip evacuation due to better surface treatment.
Point R-thinning makes the superior centering and chip curl.

Helix Angle: 30° **Point Angle:** 140°



Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3.0	.1181	6.0	62	20	YGD-DH451030
3.1	.1220	6.0	62	20	YGD-DH451031
3.2	.1260	6.0	62	20	YGD-DH451032
3.3	.1299	6.0	62	20	YGD-DH451033
3.4	.1339	6.0	62	20	YGD-DH451034
3.5	.1378	6.0	62	20	YGD-DH451035
3.6	.1417	6.0	62	20	YGD-DH451036
3.7	.1457	6.0	62	20	YGD-DH451037
3.8	.1496	6.0	66	24	YGD-DH451038
3.9	.1535	6.0	66	24	YGD-DH451039
4.0	.1575	6.0	66	24	YGD-DH451040
4.1	.1614	6.0	66	24	YGD-DH451041
4.2	.1654	6.0	66	24	YGD-DH451042
4.3	.1693	6.0	66	24	YGD-DH451043

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
4.4	.1732	6.0	66	24	YGD-DH451044
4.5	.1772	6.0	66	24	YGD-DH451045
4.6	.1811	6.0	66	24	YGD-DH451046
4.7	.1850	6.0	66	24	YGD-DH451047
4.8	.1890	6.0	66	28	YGD-DH451048
4.9	.1929	6.0	66	28	YGD-DH451049
5.0	.1969	6.0	66	28	YGD-DH451050
5.1	.2008	6.0	66	28	YGD-DH451051
5.2	.2047	6.0	66	28	YGD-DH451052
5.3	.2087	6.0	66	28	YGD-DH451053
5.4	.2126	6.0	66	28	YGD-DH451054
5.5	.2165	6.0	66	28	YGD-DH451055
5.6	.2205	6.0	66	28	YGD-DH451056
5.7	.2244	6.0	66	28	YGD-DH451057



TiAlN-Coated Carbide INOX Dream Drills - 3xD with Coolant Holes (cont.)

This tool features a special flute shape and geometry for suitable machining of stainless steel.

Advantages: Excellent chip evacuation due to better surface treatment.
Point R-thinning makes the superior centering and chip curl.

Helix Angle: 30° **Point Angle:** 140°



Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
5.8	.2283	6.0	66	28	YGD-DH451058
5.9	.2323	6.0	66	28	YGD-DH451059
6.0	.2362	6.0	66	28	YGD-DH451060
6.1	.2402	8.0	79	34	YGD-DH451061
6.2	.2441	8.0	79	34	YGD-DH451062
6.3	.2480	8.0	79	34	YGD-DH451063
6.4	.2520	8.0	79	34	YGD-DH451064
6.5	.2559	8.0	79	34	YGD-DH451065
6.6	.2598	8.0	79	34	YGD-DH451066
6.7	.2638	8.0	79	34	YGD-DH451067
6.8	.2677	8.0	79	34	YGD-DH451068
6.9	.2717	8.0	79	34	YGD-DH451069
7.0	.2756	8.0	79	34	YGD-DH451070
7.1	.2795	8.0	79	41	YGD-DH451071
7.2	.2835	8.0	79	41	YGD-DH451072
7.3	.2874	8.0	79	41	YGD-DH451073
7.4	.2913	8.0	79	41	YGD-DH451074
7.5	.2953	8.0	79	41	YGD-DH451075
7.6	.2992	8.0	79	41	YGD-DH451076
7.7	.3031	8.0	79	41	YGD-DH451077
7.8	.3071	8.0	79	41	YGD-DH451078
7.9	.3110	8.0	79	41	YGD-DH451079
8.0	.3150	8.0	79	41	YGD-DH451080
8.1	.3189	10.0	89	47	YGD-DH451081
8.2	.3228	10.0	89	47	YGD-DH451082
8.3	.3268	10.0	89	47	YGD-DH451083
8.4	.3307	10.0	89	47	YGD-DH451084
8.5	.3346	10.0	89	47	YGD-DH451085
8.6	.3386	10.0	89	47	YGD-DH451086
8.7	.3425	10.0	89	47	YGD-DH451087
8.8	.3465	10.0	89	47	YGD-DH451088
8.9	.3504	10.0	89	47	YGD-DH451089
9.0	.3543	10.0	89	47	YGD-DH451090
9.1	.3583	10.0	89	47	YGD-DH451091
9.2	.3622	10.0	89	47	YGD-DH451092
9.3	.3661	10.0	89	47	YGD-DH451093
9.4	.3701	10.0	89	47	YGD-DH451094
9.5	.3740	10.0	89	47	YGD-DH451095
9.6	.3780	10.0	89	47	YGD-DH451096
9.7	.3819	10.0	89	47	YGD-DH451097

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
9.8	.3858	10.0	89	47	YGD-DH451098
9.9	.3898	10.0	89	47	YGD-DH451099
10.0	.3937	10.0	89	47	YGD-DH451100
10.1	.3976	12.0	102	55	YGD-DH451101
10.2	.4016	12.0	102	55	YGD-DH451102
10.3	.4055	12.0	102	55	YGD-DH451103
10.4	.4094	12.0	102	55	YGD-DH451104
10.5	.4134	12.0	102	55	YGD-DH451105
10.6	.4173	12.0	102	55	YGD-DH451106
10.7	.4212	12.0	102	55	YGD-DH451107
10.8	.4252	12.0	102	55	YGD-DH451108
10.9	.4291	12.0	102	55	YGD-DH451109
11.0	.4330	12.0	102	55	YGD-DH451110
11.1	.4370	12.0	102	55	YGD-DH451111
11.2	.4409	12.0	102	55	YGD-DH451112
11.3	.4448	12.0	102	55	YGD-DH451113
11.4	.4488	12.0	102	55	YGD-DH451114
11.5	.4527	12.0	102	55	YGD-DH451115
11.6	.4566	12.0	102	55	YGD-DH451116
11.7	.4606	12.0	102	55	YGD-DH451117
11.8	.4645	12.0	102	55	YGD-DH451118
11.9	.4685	12.0	102	55	YGD-DH451119
12.0	.4724	12.0	102	55	YGD-DH451120
12.5	.4921	14.0	107	60	YGD-DH451125
13.0	.5118	14.0	107	60	YGD-DH451130
13.5	.5314	14.0	107	60	YGD-DH451135
14.0	.5511	14.0	107	60	YGD-DH451140
14.5	.5708	16.0	115	65	YGD-DH451145
15.0	.5905	16.0	115	65	YGD-DH451150
15.5	.6102	16.0	115	65	YGD-DH451155
16.0	.6299	16.0	115	65	YGD-DH451160
16.5	.6495	18.0	123	73	YGD-DH451165
17.0	.6692	18.0	123	73	YGD-DH451170
17.5	.6889	18.0	123	73	YGD-DH451175
18.0	.7086	18.0	123	73	YGD-DH451180
18.5	.7283	20.0	131	79	YGD-DH451185
19.0	.7480	20.0	131	79	YGD-DH451190
19.5	.7676	20.0	131	79	YGD-DH451195
20.0	.7874	20.0	131	79	YGD-DH451200

YG1 - CARBIDE DREAM DRILLS

TiAlN-Coated Carbide INOX Dream Drills - 5xD with Coolant Holes

This tool features a special flute shape and geometry for suitable machining of stainless steel.

Advantages: Excellent chip evacuation due to better surface treatment.
Point R-thinning makes the superior centering and chip curl.

Helix Angle: 30° **Point Angle:** 140°



Diameter Fractional	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
13/64	0.2031	15/64	3-15/16	1-3/4	YGD-DH464013
7/32	0.2188	15/64	3-15/16	1-57/64	YGD-DH464014
15/64	0.2344	15/64	3-15/16	1-57/64	YGD-DH464015
1/4	0.2500	17/64	4-19/64	2-3/64	YGD-DH464016
F	0.2570	17/64	4-19/64	2-13/64	YGD-DH464206
17/64	0.2656	17/64	4-19/64	2-13/64	YGD-DH464017
I	0.2720	0.2720	4-19/64	2-13/64	YGD-DH464209
9/32	0.2813	5/16	4-41/64	2-23/64	YGD-DH464018
19/64	0.2969	5/16	4-41/64	2-33/64	YGD-DH464019
5/16	0.3125	5/16	4-41/64	2-33/64	YGD-DH464020
21/64	0.3281	11/32	5	2-43/64	YGD-DH464021
Q	0.3320	11/32	5	2-43/64	YGD-DH464217

Diameter Fractional	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
11/32	0.3438	11/32	5	2-27/32	YGD-DH464022
23/64	0.3594	25/64	5-23/64	3	YGD-DH464023
U	0.3680	25/64	5-23/64	3	YGD-DH464221
3/8	0.3750	25/64	5-23/64	3-5/32	YGD-DH464024
25/64	0.3906	25/64	5-23/64	3-5/32	YGD-DH464025
13/32	0.4063	27/64	5-7/8	3-5/16	YGD-DH464026
27/64	0.4219	27/64	5-7/8	3-15/32	YGD-DH464027
7/16	0.4375	15/32	6-7/32	3-5/8	YGD-DH464028
29/64	0.4531	15/32	6-7/32	3-25/32	YGD-DH464029
15/32	0.4688	15/32	6-7/32	3-25/32	YGD-DH464030
31/64	0.4844	1/2	6-37/64	3-15/16	YGD-DH464031
1/2	0.5000	1/2	6-37/64	4-3/32	YGD-DH464032

TiAlN-Coated Carbide INOX Dream Drills - 5xD with Coolant Holes

This tool features a special flute shape and geometry for suitable machining of stainless steel.

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Point R-thinning makes the superior centering and chip curl.

Helix Angle: 30° **Point Angle:** 140°



Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3.0	0.1181	6.0	66	28	YGD-DH452030
3.1	0.1220	6.0	66	28	YGD-DH452031
3.2	0.1260	6.0	66	28	YGD-DH452032
3.3	0.1299	6.0	66	28	YGD-DH452033
3.4	0.1339	6.0	66	28	YGD-DH452034
3.5	0.1378	6.0	66	28	YGD-DH452035
3.6	0.1417	6.0	66	28	YGD-DH452036
3.7	0.1457	6.0	66	28	YGD-DH452037
3.8	0.1496	6.0	74	36	YGD-DH452038
3.9	0.1535	6.0	74	36	YGD-DH452039
4.0	0.1575	6.0	74	36	YGD-DH452040
4.1	0.1614	6.0	74	36	YGD-DH452041
4.2	0.1654	6.0	74	36	YGD-DH452042
4.3	0.1693	6.0	74	36	YGD-DH452043
4.4	0.1732	6.0	74	36	YGD-DH452044
4.5	0.1772	6.0	74	36	YGD-DH452045

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
4.6	0.1811	6.0	74	36	YGD-DH452046
4.7	0.1850	6.0	74	36	YGD-DH452047
4.8	0.1890	6.0	82	44	YGD-DH452048
4.9	0.1929	6.0	82	44	YGD-DH452049
5.0	0.1969	6.0	82	44	YGD-DH452050
5.1	0.2008	6.0	82	44	YGD-DH452051
5.2	0.2047	6.0	82	44	YGD-DH452052
5.3	0.2087	6.0	82	44	YGD-DH452053
5.4	0.2126	6.0	82	44	YGD-DH452054
5.5	0.2165	6.0	82	44	YGD-DH452055
5.6	0.2205	6.0	82	44	YGD-DH452056
5.7	0.2244	6.0	82	44	YGD-DH452057
5.8	0.2283	6.0	82	44	YGD-DH452058
5.9	0.2323	6.0	82	44	YGD-DH452059
6.0	0.2362	6.0	82	44	YGD-DH452060
6.1	0.2402	8.0	91	53	YGD-DH452061

TiAlN-Coated Carbide INOX Dream Drills - 5xD with Coolant Holes (cont.)



This tool features a special flute shape and geometry for suitable machining of stainless steel.

Advantages: Excellent chip evacuation due to better surface treatment.
Point R-thinning makes the superior centering and chip curl.

Helix Angle: 30° **Point Angle:** 140°

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
6.2	0.2441	8.0	91	53	YGD-DH452062
6.3	0.2480	8.0	91	53	YGD-DH452063
6.4	0.2520	8.0	91	53	YGD-DH452064
6.5	0.2559	8.0	91	53	YGD-DH452065
6.6	0.2598	8.0	91	53	YGD-DH452066
6.7	0.2638	8.0	91	53	YGD-DH452067
6.8	0.2677	8.0	91	53	YGD-DH452068
6.9	0.2717	8.0	91	53	YGD-DH452069
7.0	0.2756	8.0	91	53	YGD-DH452070
7.1	0.2795	8.0	91	53	YGD-DH452071
7.2	0.2835	8.0	91	53	YGD-DH452072
7.3	0.2874	8.0	91	53	YGD-DH452073
7.4	0.2913	8.0	91	53	YGD-DH452074
7.5	0.2953	8.0	91	53	YGD-DH452075
7.6	0.2992	8.0	91	53	YGD-DH452076
7.7	0.3031	8.0	91	53	YGD-DH452077
7.8	0.3071	8.0	91	53	YGD-DH452078
7.9	0.3110	8.0	91	53	YGD-DH452079
8.0	0.3150	8.0	91	53	YGD-DH452080
8.1	0.3189	10.0	103	61	YGD-DH452081
8.2	0.3228	10.0	103	61	YGD-DH452082
8.3	0.3268	10.0	103	61	YGD-DH452083
8.4	0.3307	10.0	103	61	YGD-DH452084
8.5	0.3346	10.0	103	61	YGD-DH452085
8.6	0.3386	10.0	103	61	YGD-DH452086
8.7	0.3425	10.0	103	61	YGD-DH452087
8.8	0.3465	10.0	103	61	YGD-DH452088
8.9	0.3504	10.0	103	61	YGD-DH452089
9.0	0.3543	10.0	103	61	YGD-DH452090
9.1	0.3583	10.0	103	61	YGD-DH452091
9.2	0.3622	10.0	103	61	YGD-DH452092
9.3	0.3661	10.0	103	61	YGD-DH452093
9.4	0.3701	10.0	103	61	YGD-DH452094
9.5	0.3740	10.0	103	61	YGD-DH452095

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
9.6	0.3780	10.0	103	61	YGD-DH452096
9.7	0.3819	10.0	103	61	YGD-DH452097
9.8	0.3858	10.0	103	61	YGD-DH452098
9.9	0.3898	10.0	103	61	YGD-DH452099
10.0	0.3937	10.0	103	61	YGD-DH452100
10.1	0.3976	12.0	118	71	YGD-DH452101
10.2	0.4016	12.0	118	71	YGD-DH452102
10.3	0.4055	12.0	118	71	YGD-DH452103
10.4	0.4094	12.0	118	71	YGD-DH452104
10.5	0.4134	12.0	118	71	YGD-DH452105
10.6	0.4173	12.0	118	71	YGD-DH452106
10.7	0.4212	12.0	118	71	YGD-DH452107
10.8	0.4252	12.0	118	71	YGD-DH452108
10.9	0.4291	12.0	118	71	YGD-DH452109
11.0	0.4330	12.0	118	71	YGD-DH452110
11.1	0.4370	12.0	118	71	YGD-DH452111
11.2	0.4409	12.0	118	71	YGD-DH452112
11.3	0.4448	12.0	118	71	YGD-DH452113
11.4	0.4488	12.0	118	71	YGD-DH452114
11.5	0.4527	12.0	118	71	YGD-DH452115
11.6	0.4566	12.0	118	71	YGD-DH452116
11.7	0.4606	12.0	118	71	YGD-DH452117
11.8	0.4645	12.0	118	71	YGD-DH452118
11.9	0.4685	12.0	118	71	YGD-DH452119
12.0	0.4724	12.0	118	71	YGD-DH452120
12.5	0.4921	14.0	124	77	YGD-DH452125
13.0	0.5118	14.0	124	77	YGD-DH452130
13.5	0.5314	14.0	124	77	YGD-DH452135
14.0	0.5511	14.0	124	77	YGD-DH452140
14.5	0.5708	16.0	133	83	YGD-DH452145
15.0	0.5905	16.0	133	83	YGD-DH452150
15.5	0.6102	16.0	133	83	YGD-DH452155
16.0	0.6299	16.0	133	83	YGD-DH452160

YG1 - CARBIDE DREAM DRILLS

TiAlN-Coated Carbide INOX Dream Drills - 8xD with Coolant Holes

This tool features a special flute shape and geometry for suitable machining of stainless steel.

Advantages: Excellent chip evacuation due to better surface treatment.
Point R-thinning makes the superior centering and chip curl.

Helix Angle: 30° **Point Angle:** 140°



Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3.0	.1181	6.0	72	34	YGD-DH453030
3.1	.1220	6.0	72	34	YGD-DH453031
3.2	.1260	6.0	72	34	YGD-DH453032
3.3	.1299	6.0	72	34	YGD-DH453033
3.4	.1339	6.0	72	34	YGD-DH453034
3.5	.1378	6.0	72	34	YGD-DH453035
3.6	.1417	6.0	72	34	YGD-DH453036
3.7	.1457	6.0	72	34	YGD-DH453037
3.8	.1496	6.0	81	43	YGD-DH453038
3.9	.1535	6.0	81	43	YGD-DH453039
4.0	.1575	6.0	81	43	YGD-DH453040
4.1	.1614	6.0	81	43	YGD-DH453041
4.2	.1654	6.0	81	43	YGD-DH453042
4.3	.1693	6.0	81	43	YGD-DH453043
4.4	.1732	6.0	81	43	YGD-DH453044
4.5	.1772	6.0	81	43	YGD-DH453045
4.6	.1811	6.0	81	43	YGD-DH453046
4.7	.1850	6.0	81	43	YGD-DH453047
4.8	.1890	6.0	95	57	YGD-DH453048
4.9	.1929	6.0	95	57	YGD-DH453049
5.0	.1969	6.0	95	57	YGD-DH453050
5.1	.2008	6.0	95	57	YGD-DH453051
5.2	.2047	6.0	95	57	YGD-DH453052
5.3	.2087	6.0	95	57	YGD-DH453053

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
5.4	.2126	6.0	95	57	YGD-DH453054
5.5	.2165	6.0	95	57	YGD-DH453055
5.6	.2205	6.0	95	57	YGD-DH453056
5.7	.2244	6.0	95	57	YGD-DH453057
5.8	.2283	6.0	95	57	YGD-DH453058
5.9	.2323	6.0	95	57	YGD-DH453059
6.0	.2362	6.0	95	57	YGD-DH453060
6.1	.2402	8.0	114	76	YGD-DH453061
6.2	.2441	8.0	114	76	YGD-DH453062
6.3	.2480	8.0	114	76	YGD-DH453063
6.4	.2520	8.0	114	76	YGD-DH453064
6.5	.2559	8.0	114	76	YGD-DH453065
6.6	.2598	8.0	114	76	YGD-DH453066
6.7	.2638	8.0	114	76	YGD-DH453067
6.8	.2677	8.0	114	76	YGD-DH453068
6.9	.2717	8.0	114	76	YGD-DH453069
7.0	.2756	8.0	114	76	YGD-DH453070
7.1	.2795	8.0	114	76	YGD-DH453071
7.2	.2835	8.0	114	76	YGD-DH453072
7.3	.2874	8.0	114	76	YGD-DH453073
7.4	.2913	8.0	114	76	YGD-DH453074
7.5	.2953	8.0	114	76	YGD-DH453075
7.6	.2992	8.0	114	76	YGD-DH453076
7.7	.3031	8.0	114	76	YGD-DH453077



TiAlN-Coated Carbide INOX Dream Drills - 8xD with Coolant Holes (cont.)

This tool features a special flute shape and geometry for suitable machining of stainless steel.

Advantages: Excellent chip evacuation due to better surface treatment.
Point R-thinning makes the superior centering and chip curl.

Helix Angle: 30° **Point Angle:** 140°



Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
7.8	.3071	8.0	114	76	YGD-DH453078
7.9	.3110	8.0	114	76	YGD-DH453079
8.0	.3150	8.0	114	76	YGD-DH453080
8.1	.3189	10.0	142	95	YGD-DH453081
8.2	.3228	10.0	142	95	YGD-DH453082
8.3	.3268	10.0	142	95	YGD-DH453083
8.4	.3307	10.0	142	95	YGD-DH453084
8.5	.3346	10.0	142	95	YGD-DH453085
8.6	.3386	10.0	142	95	YGD-DH453086
8.7	.3425	10.0	142	95	YGD-DH453087
8.8	.3465	10.0	142	95	YGD-DH453088
8.9	.3504	10.0	142	95	YGD-DH453089
9.0	.3543	10.0	142	95	YGD-DH453090
9.1	.3583	10.0	142	95	YGD-DH453091
9.2	.3622	10.0	142	95	YGD-DH453092
9.3	.3661	10.0	142	95	YGD-DH453093
9.4	.3701	10.0	142	95	YGD-DH453094
9.5	.3740	10.0	142	95	YGD-DH453095
9.6	.3780	10.0	142	95	YGD-DH453096
9.7	.3819	10.0	142	95	YGD-DH453097
9.8	.3858	10.0	142	95	YGD-DH453098
9.9	.3898	10.0	142	95	YGD-DH453099
10.0	.3937	10.0	142	95	YGD-DH453100
10.1	.3976	12.0	162	114	YGD-DH453101

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
10.2	.4016	12.0	162	114	YGD-DH453102
10.3	.4055	12.0	162	114	YGD-DH453103
10.4	.4094	12.0	162	114	YGD-DH453104
10.5	.4134	12.0	162	114	YGD-DH453105
10.6	.4173	12.0	162	114	YGD-DH453106
10.7	.4212	12.0	162	114	YGD-DH453107
10.8	.4252	12.0	162	114	YGD-DH453108
10.9	.4291	12.0	162	114	YGD-DH453109
11.0	.4330	12.0	162	114	YGD-DH453110
11.1	.4370	12.0	162	114	YGD-DH453111
11.2	.4409	12.0	162	114	YGD-DH453112
11.3	.4448	12.0	162	114	YGD-DH453113
11.4	.4488	12.0	162	114	YGD-DH453114
11.5	.4527	12.0	162	114	YGD-DH453115
11.6	.4566	12.0	162	114	YGD-DH453116
11.7	.4606	12.0	162	114	YGD-DH453117
11.8	.4645	12.0	162	114	YGD-DH453118
11.9	.4685	12.0	162	114	YGD-DH453119
12.0	.4724	12.0	162	114	YGD-DH453120
12.5	.4291	14.0	178	133	YGD-DH453125
13.0	.5118	14.0	178	133	YGD-DH453130
13.5	.5314	14.0	178	133	YGD-DH453135
14.0	.5512	14.0	178	133	YGD-DH453140

YG1 - CARBIDE DREAM DRILLS

TiAlN-Coated Carbide Dream Drills - MQL Type with Coolant Holes

Non step drilling up to 10 times of drill diameter.

Advantages: Special design = Good chip removal.
Powerful drilling.

Helix Angle: 30°

Point Angle: 140°



MQL Type - 10xD

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3.0	.1181	3.0	90	39	YGD-DH510030
3.3	.1299	4.0	97	46	YGD-DH510033
3.5	.1378	4.0	97	46	YGD-DH510035
4.0	.1575	4.0	103	52	YGD-DH510040
4.2	.1654	5.0	112	59	YGD-DH510042
4.5	.1772	5.0	112	59	YGD-DH510045
5.0	.1969	5.0	118	65	YGD-DH510050
5.5	.2165	6.0	127	72	YGD-DH510055
6.0	.2362	6.0	133	78	YGD-DH510060
6.5	.2559	7.0	141	85	YGD-DH510065
6.8	.2677	7.0	147	91	YGD-DH510068
7.0	.2756	7.0	147	91	YGD-DH510070
7.5	.2953	8.0	155	98	YGD-DH510075
8.0	.3150	8.0	161	104	YGD-DH510080
8.5	.3346	9.0	169	111	YGD-DH510085
9.0	.3543	9.0	175	117	YGD-DH510090
9.5	.3740	10.0	182	124	YGD-DH510095
10.0	.3937	10.0	188	130	YGD-DH510100
10.5	.4134	11.0	201	137	YGD-DH510105
11.0	.4330	11.0	207	143	YGD-DH510110
11.5	.4527	12.0	215	150	YGD-DH510115
12.0	.4724	12.0	221	156	YGD-DH510120
12.5	.4921	13.0	229	163	YGD-DH510125
13.0	.5118	13.0	235	169	YGD-DH510130
13.5	.5314	14.0	243	176	YGD-DH510135
14.0	.5511	14.0	249	182	YGD-DH510140

YG1 - CARBIDE DREAM DRILLS



TiAlN-Coated Carbide Dream Drills - MQL Type with Coolant Holes (cont.)

Non step drilling up to 10 times of drill diameter.

Advantages: Special design = Good chip removal.
Powerful drilling.

Helix Angle: 30°

Point Angle: 140°



MQL Type - 12xD

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3.0	.1181	3.0	105	54	YGD-DH515030
3.5	.1378	4.0	114	63	YGD-DH515035
4.0	.1575	4.0	123	72	YGD-DH515040
4.5	.1772	5.0	134	81	YGD-DH515045
5.0	.1969	5.0	143	90	YGD-DH515050
5.5	.2165	6.0	154	99	YGD-DH515055
6.0	.2362	6.0	163	108	YGD-DH515060
7.0	.2756	7.0	182	126	YGD-DH515070
8.0	.3150	8.0	201	144	YGD-DH515080
9.0	.3543	9.0	220	162	YGD-DH515090
10.0	.3937	10.0	238	180	YGD-DH515100
11.0	.4330	11.0	262	198	YGD-DH515110
12.0	.4724	12.0	281	216	YGD-DH515120

MQL Type - 15xD

Diameter Metric	Diameter Inch	Shank Diameter	O.A.L	Flute Length	Part Number
3.0	.1181	3.0	120	69	YGD-DH520030
3.5	.1378	4.0	132	81	YGD-DH520035
4.0	.1575	4.0	143	92	YGD-DH520040
4.5	.1772	5.0	157	104	YGD-DH520045
5.0	.1969	5.0	168	115	YGD-DH520050
5.5	.2165	6.0	182	127	YGD-DH520055
6.0	.2362	6.0	193	138	YGD-DH520060
7.0	.2756	7.0	217	161	YGD-DH520070
8.0	.3150	8.0	241	184	YGD-DH520080
9.0	.3543	9.0	265	207	YGD-DH520090
10.0	.3937	10.0	288	230	YGD-DH520100
12.0	.4724	12.0	341	276	YGD-DH520120

YG1 - CARBIDE DREAM DRILLS

Technical Information - TiAlN - Carbide Dream Drills INOX

DH451, DH463, DH714, DH452, DH464, DH715, DH453 SERIES

CARBIDE, DREAM DRILL - INOX with COOLANT HOLES, TiAlN-COATED

WORK MATERIAL			P			M						N		
			CARBON STEELS ALLOY STEELS			400 STAINLESS STEELS			300 STAINLESS STEELS			ALUMINUM		
STRENGTH						< 800 N/mm ²			> 800 N/mm ²			< 10% Si		
DRILLING SPEED(SFM)			260 ~ 410 ft/min			120 ~ 230 ft/min			60 ~ 140 ft/min			490 ~ 720 ft/min		
DIAMETER			RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR
Metric(mm)	Decimal	Fractional												
1.0	.0394		26000	0.02	.001	12000	0.02	.001	6200	0.02	.001	48000	0.04	.002
1.5	.0591		18000	0.03	.001	9000	0.03	.001	5400	0.02	.001	43000	0.05	.002
2.5	.0984		10800	0.05	.002	7000	0.04	.002	4200	0.03	.001	25500	0.08	.003
3.0	.1181	1/8	13000	0.04	.002	7400	0.04	.002	4700	0.02	.001	23000	0.12	.005
4.0	.1575	5/32	10000	0.05	.002	5600	0.05	.002	3600	0.03	.001	17500	0.18	.007
5.0	.1969	13/64	8000	0.05	.002	4400	0.05	.002	2800	0.03	.001	14000	0.20	.008
6.0	.2362	15/64	6600	0.06	.002	3700	0.06	.002	2400	0.04	.002	11700	0.25	.010
8.0	.3150	5/16	5000	0.08	.003	2800	0.08	.003	1800	0.06	.002	8800	0.30	.012
10.0	.3937	25/64	4000	0.10	.004	2200	0.10	.004	1400	0.08	.003	7000	0.40	.016
12.0	.4724	15/32	3300	0.12	.005	1900	0.12	.005	1200	0.10	.004	5800	0.50	.020
14.0	.5512	35/64	2800	0.15	.006	1600	0.15	.006	1000	0.12	.005	5000	0.60	.024
16.0	.6299	5/8	2500	0.20	.008	1400	0.20	.008	900	0.15	.006	4380	0.80	.031
18.0	.7087	45/64	2200	0.22	.009	1250	0.22	.009	800	0.17	.007	3900	1.00	.039
20.0	.7874	25/32	2000	0.24	.009	1120	0.24	.009	720	0.19	.007	3500	1.20	.047

WORK MATERIAL			N						S		
			ALUMINUM			NON FERROUS			TITANIUM TITANIUM ALLOYS		
STRENGTH			< 10% Si								
DRILLING SPEED(SFM)			390 ~ 570 ft/min			390 ~ 490 ft/min			80 ~ 160 ft/min		
DIAMETER			RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR
Metric(mm)	Decimal	Fractional									
1.0	.0394		38000	0.03	.001	38000	0.02	.001	8100	0.01	.0004
1.5	.0591		32000	0.04	.002	25500	0.03	.001	7500	0.01	.0004
2.5	.0984		19500	0.06	.002	15500	0.05	.002	4500	0.02	.001
3.0	.1181	1/8	18500	0.10	.004	16000	0.08	.003	5300	0.03	.001
4.0	.1575	5/32	13900	0.15	.006	11900	0.10	.004	4000	0.04	.002
5.0	.1969	13/64	11000	0.18	.007	9500	0.12	.005	3200	0.05	.002
6.0	.2362	15/64	9300	0.25	.010	8000	0.15	.006	2650	0.06	.002
8.0	.3150	5/16	7000	0.30	.012	6000	0.18	.007	2000	0.07	.003
10.0	.3937	25/64	5600	0.35	.014	4800	0.22	.009	1600	0.08	.003
12.0	.4724	15/32	4600	0.40	.016	4000	0.26	.010	1300	0.10	.004
14.0	.5512	35/64	4000	0.50	.020	3400	0.30	.012	1100	0.12	.005
16.0	.6299	5/8	3500	0.60	.024	3000	0.40	.016	1000	0.14	.006
18.0	.7087	45/64	3100	0.70	.028	2650	0.45	.018	900	0.16	.006
20.0	.7874	25/32	2800	0.80	.031	2400	0.50	.020	800	0.18	.007

- Recommend to reduce the feed rate as following
 DH463/DH714/DH451(3xD), DH464/DH714/DH452(5xD) : Feed 100%
 DH453(8xD) : Feed 85%

RPM = rev./min.
 FEED = mm/rev.
 IPR = inch/rev



Technical Information - TiAlN - Carbide Dream Drills

DH406, DH408, DH421 SERIES

WORK MATERIAL		P						K					
		NON-ALLOY STEELS			ALLOY STEELS			SOFT GREY CAST IRON			HARD GREY CAST IRON		
STRENGTH		< HRc 20			> HRc 20			< 240 BHN			< 300 BHN		
DRILLING SPEED		160 ~ 490 ft/min			150 ~ 440 ft/min			270 ~ 820 ft/min			170 ~ 530 ft/min		
DIAMETER		RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR
Metric(mm)	Decimal												
1.0	.0394	16250	0.05	.002	14800	0.05	.002	26600	0.05	.002	17300	0.05	.002
2.0	.0787	16250	0.07	.003	14800	0.07	.003	26600	0.07	.003	17300	0.07	.003
3.0	.1181	16000	0.16	.006	14500	0.16	.006	26000	0.16	.006	17000	0.16	.006
4.0	.1575	12000	0.17	.007	11000	0.17	.007	20000	0.17	.007	13000	0.17	.007
5.0	.1969	9550	0.18	.007	8600	0.18	.007	16000	0.18	.007	10000	0.18	.007
6.0	.2362	8000	0.20	.008	7200	0.20	.008	13000	0.20	.008	8500	0.20	.008
7.0	.2756	6800	0.22	.009	6100	0.22	.009	11500	0.22	.009	7300	0.22	.009
8.0	.3150	6000	0.24	.009	5400	0.24	.009	9900	0.24	.009	6400	0.24	.009
9.0	.3543	5300	0.27	.011	4800	0.27	.011	8800	0.27	.011	5700	0.27	.011
10.0	.3937	4800	0.30	.012	4300	0.30	.012	8000	0.30	.012	5100	0.30	.012
12.0	.4724	4000	0.33	.013	3600	0.33	.013	6600	0.33	.013	4250	0.33	.013
14.0	.5512	3400	0.36	.014	3050	0.36	.014	5700	0.36	.014	3650	0.36	.014
16.0	.6299	3000	0.39	.015	2700	0.39	.015	5000	0.39	.015	3200	0.39	.015
18.0	.7087	2650	0.42	.017	2400	0.42	.017	4400	0.42	.017	2850	0.42	.017
20.0	.7874	2400	0.45	.018	2150	0.45	.018	4000	0.45	.018	2550	0.45	.018

- Recommend to reduce the feed rate as following
 DH406(3xD) : Feed 100%, DH408(5xD) : Feed 85%
 DH421(8xD) : Feed 70%

RPM = rev./min.
 FEED = mm/rev.
 IPR = inch/rev

CARBIDE, DREAM DRILLS - GENERAL with COOLANT HOLES, TiAlN-COATED

DH404, DH423, DH424 SERIES

WORK MATERIAL		P						K					
		NON-ALLOY STEELS			ALLOY STEELS			SOFT GREY CAST IRON			HARD GREY CAST IRON		
STRENGTH		< HRc 20			> HRc 20			< 240 BHN			< 300 BHN		
DRILLING SPEED		130 ~ 400 ft/min			115 ~ 340 ft/min			220 ~ 650 ft/min			150 ~ 430 ft/min		
DIAMETER		RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR	RPM	FEED	IPR
Metric(mm)	Decimal												
1.0	.0394	13000	0.04	.002	11250	0.04	.002	21300	0.04	.002	14200	0.04	.002
2.0	.0787	13000	0.06	.002	11250	0.06	.002	21300	0.06	.002	14200	0.06	.002
3.0	.1181	13000	0.13	.005	11000	0.13	.005	21000	0.13	.005	14000	0.13	.005
4.0	.1575	9500	0.14	.006	8400	0.14	.006	16000	0.14	.006	10500	0.14	.006
5.0	.1969	7600	0.15	.006	6700	0.15	.006	13000	0.15	.006	8300	0.15	.006
6.0	.2362	6400	0.17	.007	5600	0.17	.007	11000	0.17	.007	6900	0.17	.007
7.0	.2756	5500	0.19	.007	4800	0.19	.007	9100	0.19	.007	5900	0.19	.007
8.0	.3150	4800	0.21	.008	4200	0.21	.008	8000	0.21	.008	5200	0.21	.008
9.0	.3543	4200	0.23	.009	3700	0.23	.009	7100	0.23	.009	4600	0.23	.009
10.0	.3937	3800	0.25	.010	3350	0.25	.010	6400	0.25	.010	4150	0.25	.010
12.0	.4724	3200	0.27	.011	2800	0.27	.011	5300	0.27	.011	3450	0.27	.011
14.0	.5512	2750	0.29	.011	2400	0.29	.011	4550	0.29	.011	3000	0.29	.011
16.0	.6299	2400	0.31	.012	2100	0.31	.012	4000	0.31	.012	2600	0.31	.012
18.0	.7087	2100	0.33	.013	1850	0.33	.013	3550	0.33	.013	2300	0.33	.013
20.0	.7874	1900	0.35	.014	1650	0.35	.014	3200	0.35	.014	2100	0.35	.014

- Recommend to reduce the feed rate as following
 DH404(3xD), DH423(3xD) : Feed 100%
 DH424(5xD) : Feed 85%



CARBIDE, DREAM DRILLS - GENERAL without COOLANT HOLES, TiAlN-COATED

YG1 SPADE BLADES

Super HSS (T15) Spade Drill

Series Min to Max	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number	Hardslick Coated Part Number
Y .374" to .436" (3/32") Thick	9.5mm	.3740"	YG1-S08Y01	YG1-S09Y01
	3/8"	.3750"	YG1-S08Y02	YG1-S09Y02
	9.8mm	.3860"	YG1-S08Y03	YG1-S09Y03
	25/64"	.3906"	YG1-S08Y04	YG1-S09Y04
	10mm	.3937"	YG1-S08Y05	YG1-S09Y05
	10.2mm	.4016"	YG1-S08Y06	YG1-S09Y06
	13/32"	.4063"	YG1-S08Y07	YG1-S09Y07
	10.5mm	.4134"	YG1-S08Y08	YG1-S09Y08
	27/64"	.4219"	YG1-S08Y09	YG1-S09Y09
	10.8mm	.4252"	YG1-S08Y10	YG1-S09Y10
	11mm	.4331"	YG1-S08Y11	YG1-S09Y11
Z .437" to .510" (3/32") Thick	7/16"	.4375"	YG1-S08Z01	YG1-S09Z01
	11.5mm	.4528"	YG1-S08Z02	YG1-S09Z02
	29/64"	.4531"	YG1-S08Z03	YG1-S09Z03
	15/32"	.4688"	YG1-S08Z04	YG1-S09Z04
	12mm	.4724"	YG1-S08Z05	YG1-S09Z05
	31/64"	.4844"	YG1-S08Z06	YG1-S09Z06
	12.5mm	.4921"	YG1-S08Z07	YG1-S09Z07
	1/2"	.5000"	YG1-S08Z08	YG1-S09Z08
O .511" to .695" (1/8") Thick	13mm	.5118"	YG1-S08001	YG1-S09001
	33/64"	.5156"	YG1-S08002	YG1-S09002
	17/32"	.5313"	YG1-S08003	YG1-S09003
	13.5mm	.5315"	YG1-S08004	YG1-S09004
	35/64"	.5469"	YG1-S08060	YG1-S09060
	14mm	.5512"	YG1-S08005	YG1-S09005
	9/16"	.5625"	YG1-S08006	YG1-S09006
	14.5mm	.5709"	YG1-S08007	YG1-S09007
	37/64"	.5781"	YG1-S08008	YG1-S09008
	15mm	.5906"	YG1-S08009	YG1-S09009
	19/32"	.5938"	YG1-S08010	YG1-S09010
	39/64"	.6094"	YG1-S08061	YG1-S09061
	15.5mm	.6102"	YG1-S08011	YG1-S09011
	5/8"	.6250"	YG1-S08012	YG1-S09012
	16mm	.6299"	YG1-S08013	YG1-S09013
	41/64"	.6406"	YG1-S08062	YG1-S09062
	16.5mm	.6496"	YG1-S08014	YG1-S09014
	21/32"	.6563"	YG1-S08015	YG1-S09015
	17mm	.6693"	YG1-S08016	YG1-S09016
	43/64"	.6719"	YG1-S08063	YG1-S09063
	11/16"	.6875"	YG1-S08017	YG1-S09017
17.5mm	.6890"	YG1-S08018	YG1-S09018	



Super HSS (T15) Spade Drill

Series Min to Max	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number	Hardslick Coated Part Number
1 .690" to .960" (5/32") Thick	45/64"	.7031"	YG1-S08101	YG1-S09101
	18mm	.7087"	YG1-S08102	YG1-S09102
	23/32"	.7188"	YG1-S08103	YG1-S09103
	18.5mm	.7283"	YG1-S08104	YG1-S09104
	47/64"	.7344"	YG1-S08105	YG1-S09105
	19mm	.7480"	YG1-S08106	YG1-S09106
	3/4"	.7500"	YG1-S08107	YG1-S09107
	49/64"	.7656"	YG1-S08108	YG1-S09108
	19.5mm	.7677"	YG1-S08109	YG1-S09109
	25/32"	.7813"	YG1-S08110	YG1-S09110
	20mm	.7874"	YG1-S08111	YG1-S09111
	51/64"	.7969"	YG1-S08160	YG1-S09160
	20.5mm	.8071"	YG1-S08112	YG1-S09112
	13/16"	.8125"	YG1-S08113	YG1-S09113
	21mm	.8268"	YG1-S08114	YG1-S09114
	27/32"	.8438"	YG1-S08115	YG1-S09115
	55/64"	.8594"	YG1-S08161	YG1-S09161
	22mm	.8661"	YG1-S08116	YG1-S09116
	7/8"	.8750"	YG1-S08117	YG1-S09117
	57/64"	.8906"	YG1-S08162	YG1-S09162
	23mm	.9055"	YG1-S08118	YG1-S09118
	29/32"	.9063"	YG1-S08119	YG1-S09119
59/64"	.9219"	YG1-S08120	YG1-S09120	
15/16"	.9375"	YG1-S08121	YG1-S09121	
24mm	.9449"	YG1-S08122	YG1-S09122	
2 .961" to 1.380" (3/16") Thick	31/32"	.9688"	YG1-S08201	YG1-S09201
	63/64"	.9843"	YG1-S08202	YG1-S09202
	1"	1.0000"	YG1-S08203	YG1-S09203
	1-1/64"	1.0156"	YG1-S08204	YG1-S09204
	26mm	1.0236"	YG1-S08205	YG1-S09205
	1-1/32"	1.0313"	YG1-S08206	YG1-S09206
	1-3/64"	1.0469"	YG1-S08260	YG1-S09260
	1-1/16"	1.0625"	YG1-S08207	YG1-S09207
	27mm	1.0630"	YG1-S08208	YG1-S09208
	1-3/32"	1.0938"	YG1-S08209	YG1-S09209
	28mm	1.1024"	YG1-S08210	YG1-S09210
	1-7/64"	1.1094"	YG1-S08261	YG1-S09261
	1-1/8"	1.1250"	YG1-S08211	YG1-S09211
	29mm	1.1417"	YG1-S08212	YG1-S09212
	1-5/32"	1.1563"	YG1-S08213	YG1-S09213
	30mm	1.1811"	YG1-S08214	YG1-S09214

Super HSS (T15) Spade Drill

Series Min to Max	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number	Hardslick Coated Part Number
2 .961" to 1.380" (3/16") Thick	1-3/16"	1.1875"	YG1-S08215	YG1-S09215
	1-7/32"	1.2188"	YG1-S08216	YG1-S09216
	31mm	1.2205"	YG1-S08217	YG1-S09217
	1-1/4"	1.2500"	YG1-S08218	YG1-S09218
	32mm	1.2598"	YG1-S08219	YG1-S09219
	1-9/32"	1.2813"	YG1-S08220	YG1-S09220
	33mm	1.2992"	YG1-S08221	YG1-S09221
	1-5/16"	1.3125"	YG1-S08222	YG1-S09222
	34mm	1.3386"	YG1-S08223	YG1-S09223
	1-11/32"	1.3438"	YG1-S08224	YG1-S09224
	1-3/8"	1.3750"	YG1-S08225	YG1-S09225
	35mm	1.3780"	YG1-S08226	YG1-S09226
3 1.353" to 1.882" (1/4") Thick	1-13/32"	1.4063"	YG1-S08301	YG1-S09301
	36mm	1.4173"	YG1-S08302	YG1-S09302
	1-7/16"	1.4375"	YG1-S08303	YG1-S09303
	37mm	1.4567"	YG1-S08304	YG1-S09304
	1-15/32"	1.4688"	YG1-S08305	YG1-S09305
	38mm	1.4961"	YG1-S08306	YG1-S09306
	1-1/2"	1.5000"	YG1-S08307	YG1-S09307
	1-17/32"	1.5313"	YG1-S08308	YG1-S09308
	39mm	1.5354"	YG1-S08309	YG1-S09309
	1-9/16"	1.5625"	YG1-S08310	YG1-S09310
	40mm	1.5748"	YG1-S08311	YG1-S09311
	1-19/32"	1.5938"	YG1-S08312	YG1-S09312
	41mm	1.6142"	YG1-S08313	YG1-S09313
	1-5/8"	1.6250"	YG1-S08314	YG1-S09314
	42mm	1.6535"	YG1-S08315	YG1-S09315
	1-21/32"	1.6563"	YG1-S08316	YG1-S09316
	1-11/16"	1.6875"	YG1-S08317	YG1-S09317
	43mm	1.6929"	YG1-S08318	YG1-S09318
	1-23/32"	1.7188"	YG1-S08319	YG1-S09319
	44mm	1.7323"	YG1-S08320	YG1-S09320
	1-3/4"	1.7500"	YG1-S08321	YG1-S09321
	45mm	1.7717"	YG1-S08322	YG1-S09322
	1-25/32"	1.7813"	YG1-S08323	YG1-S09323
	46mm	1.8110"	YG1-S08324	YG1-S09324
	1-13/16"	1.8125"	YG1-S08325	YG1-S09325
	1-27/32"	1.8438"	YG1-S08326	YG1-S09326
	47mm	1.8504"	YG1-S08327	YG1-S09327
	1-7/8"	1.8750"	YG1-S08328	YG1-S09328



Super HSS (T15) Spade Drill

Series Min to Max	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number	Hardslick Coated Part Number
4 1.850" to 2.570" (5/16") Thick	1-29/32"	1.9063"	YG1-S08402	YG1-S09402
	1-15/16"	1.9375"	YG1-S08404	YG1-S09404
	1-31/32"	1.9688"	YG1-S08406	YG1-S09406
	2"	2.0000"	YG1-S08407	YG1-S09407
	2-1/32"	2.0313"	YG1-S08409	YG1-S09409
	2-3/64"	2.0472"	YG1-S08410	YG1-S09410
	2-1/16"	2.0625"	YG1-S08411	YG1-S09411
	2-3/32"	2.0938"	YG1-S08413	YG1-S09413
	2-1/8"	2.1250"	YG1-S08414	YG1-S09414
	2-5/32"	2.1563"	YG1-S08416	YG1-S09416
	2-3/16"	2.1875"	YG1-S08418	YG1-S09418
	2-7/32"	2.2188"	YG1-S08420	YG1-S09420
	2-1/4"	2.2500"	YG1-S08422	YG1-S09422
	2-9/32"	2.2813"	YG1-S08423	YG1-S09423
	2-5/16"	2.3125"	YG1-S08425	YG1-S09425
	2-11/32"	2.3438"	YG1-S08427	YG1-S09427
	2-3/8"	2.3750"	YG1-S08429	YG1-S09429
	2-13/32"	2.4063"	YG1-S08431	YG1-S09431
	2-7/16"	2.4375"	YG1-S08432	YG1-S09432
	2-15/32"	2.4688"	YG1-S08434	YG1-S09434
	2-1/2"	2.5000"	YG1-S08436	YG1-S09436
	2-17/32"	2.5313"	YG1-S08438	YG1-S09438
	2-9/16"	2.5625"	YG1-S08440	YG1-S09440



YG1 SPADE BLADES

Super HSS (T15) Spade Drill

Series Min to Max (mm/inch)	Diameter Inch Metric	Diameter Decimal (Inch)	Hardslick Coated Part Number
5 62.38 (2.456") to 76.20 (3.00")	2-1/2"	2.5000"	YG1-S09501
	64mm	2.5197"	YG1-S09502
	2-17/32"	2.5313"	YG1-S09503
	2-9/16"	2.5625"	YG1-S09504
	2-19/32"	2.5938"	YG1-S09505
	66mm	2.5984"	YG1-S09506
	2-5/8"	2.6250"	YG1-S09507
	2-21/32"	2.6563"	YG1-S09508
	68mm	2.6772"	YG1-S09509
	2-11/16"	2.6875"	YG1-S09510
	2-23/32"	2.7188"	YG1-S09511
	2-3/4"	2.7500"	YG1-S09512
	70mm	2.7559"	YG1-S09513
	2-25/32"	2.7813"	YG1-S09514
	2-13/16"	2.8125"	YG1-S09515
	72mm	2.8346"	YG1-S09516
	2-27/32"	2.8438"	YG1-S09517
	2-7/8"	2.8750"	YG1-S09518
	2-29/32"	2.9063"	YG1-S09519
	74mm	2.9134"	YG1-S09520
2-15/16"	2.9375"	YG1-S09521	
2-31/32"	2.9688"	YG1-S09522	
76mm	2.9921"	YG1-S09523	
3"	3.0000"	YG1-S09524	
6 76.23 (3.001") to 89.08 (3.507")	3-1/32"	3.0313"	YG1-S09601
	3-1/16"	3.0625"	YG1-S09602
	78mm	3.0709"	YG1-S09603
	3-3/32"	3.0938"	YG1-S09604
	3-1/8"	3.1250"	YG1-S09605
	80mm	3.1496"	YG1-S09606
	3-5/32"	3.1563"	YG1-S09607
	3-3/16"	3.1875"	YG1-S09608
	3-7/32"	3.2188"	YG1-S09609
	82mm	3.2283"	YG1-S09610
	3-1/4"	3.2500"	YG1-S09611
	3-9/32"	3.2813"	YG1-S09612
	84mm	3.3071"	YG1-S09613
	3-5/16"	3.3125"	YG1-S09614
	3-11/32"	3.3438"	YG1-S09615
	3-3/8"	3.3750"	YG1-S09616
86mm	3.3858"	YG1-S09617	
3-13/32"	3.4063"	YG1-S09618	



Super HSS (T15) Spade Drill

Series Min to Max (mm/inch)	Diameter Inch Metric	Diameter Decimal (Inch)	Hardslick Coated Part Number
	3-7/16"	3.4375"	YG1-S09619
	88mm	3.4646"	YG1-S09620
	3-15/32"	3.4688"	YG1-S09621
	3-1/2"	3.5000"	YG1-S09622
7 87.76 (3.455") to 101.60 (4.000")	3-17/32"	3.5313"	YG1-S09701
	90mm	3.5433"	YG1-S09702
	3-9/16"	3.5625"	YG1-S09703
	3-19/32"	3.5938"	YG1-S09704
	92mm	3.6221"	YG1-S09705
	3-5/8"	3.6250"	YG1-S09706
	3-21/32"	3.6563"	YG1-S09707
	3-11/16"	3.6875"	YG1-S09708
	94mm	3.7008"	YG1-S09709
	3-23/32"	3.7188"	YG1-S09710
	3-3/4"	3.7500"	YG1-S09711
	96mm	3.7795"	YG1-S09712
	3-25/32"	3.7813"	YG1-S09713
	3-13/16"	3.8125"	YG1-S09714
	3-27/32"	3.8438"	YG1-S09715
	98mm	3.8583"	YG1-S09716
	3-7/8"	3.8750"	YG1-S09717
	3-29/32"	3.9063"	YG1-S09718
	100mm	3.9370"	YG1-S09719
	3-15/16"	3.9375"	YG1-S09720
3-31/32"	3.9688"	YG1-S09721	
4"	4.0000"	YG1-S09722	
8 101.63 (4.001") to 114.48 (4.507")	4-1/64"	4.0157"	YG1-S09801
	4-1/16"	4.0625"	YG1-S09802
	4-3/32"	4.0945"	YG1-S09803
	4-1/8"	4.1250"	YG1-S09804
	106mm	4.1732"	YG1-S09805
	4-3/16"	4.1875"	YG1-S09806
	4-1/4"	4.2500"	YG1-S09807
	108mm	4.2520"	YG1-S09808
	4-5/16"	4.3125"	YG1-S09809
	110mm	4.3307"	YG1-S09810
	4-3/8"	4.3750"	YG1-S09811
	112mm	4.4094"	YG1-S09812
4-7/16"	4.4375"	YG1-S09813	
114mm	4.4882"	YG1-S09814	
4-1/2"	4.5000"	YG1-S09815	

Flat Bottom (T-15) Spade Drill

Series Min to Max (mm/inch)	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number
Y .374" to .436" (3/32") Thick	3/8"	.3750"	YG1-SF15024
	13/32"	.4063"	YG1-SF15026
	7/16"	.4375"	YG1-SF15028
Z .437" to .510" (3/32") Thick	15/32"	.4688"	YG1-SF15030
	1/2"	.5000"	YG1-SF15032
O .511" to .695" (1/8") Thick	17/32"	.5313"	YG1-SF15034
	9/16"	.5625"	YG1-SF15036
	19/32"	.5938"	YG1-SF15038
	5/8"	.6250"	YG1-SF15040
	21/32"	.6563"	YG1-SF15042
	11/16"	.6875"	YG1-SF15044



Flat Bottom (T-15) Spade Drill

Series Min to Max (mm/inch)	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number
1 .690" to .960" (5/32") Thick	23/32"	.7188"	YG1-SF15046
	3/4"	.7500"	YG1-SF15048
	25/32"	.7813"	YG1-SF15050
	13/16"	.8125"	YG1-SF15052
	27/32"	.8438"	YG1-SF15054
	7/8"	.8750"	YG1-SF15056
	29/32"	.9063"	YG1-SF15058
	15/16"	.9375"	YG1-SF15060
2 .961" to 1.380" (3/16") Thick	31/32"	.9688"	YG1-SF15062
	1"	1.0000"	YG1-SF15100
	1-1/32"	1.0313"	YG1-SF15102
	1-1/16"	1.0625"	YG1-SF15104
	1-3/32"	1.0938"	YG1-SF15106
	1-1/8"	1.1250"	YG1-SF15108
	1-5/32"	1.1563"	YG1-SF15110
	1-3/16"	1.1875"	YG1-SF15112
	1-7/32"	1.2188"	YG1-SF15114
	1-1/4"	1.2500"	YG1-SF15116
	1-9/32"	1.2813"	YG1-SF15118
	1-5/16"	1.3125"	YG1-SF15120
	1-11/32"	1.3438"	YG1-SF15122
1-3/8"	1.3750"	YG1-SF15124	



YG1 SPADE BLADES

HSS (M4) Spade Drill

Series Min to Max (mm/inch)	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number	Hardslick Coated Part Number
1 .690" to .960" (5/32") Thick	45/64"	.7031"	YG1-S03101	YG1-S04101
	18mm	.7087"	YG1-S03102	YG1-S04102
	23/32"	.7188"	YG1-S03103	YG1-S04103
	18.5mm	.7283"	YG1-S03104	YG1-S04104
	47/64"	.7344"	YG1-S03105	YG1-S04105
	19mm	.7480"	YG1-S03106	YG1-S04106
	3/4"	.7500"	YG1-S03107	YG1-S04107
	49/64"	.7656"	YG1-S03108	YG1-S04108
	19.5mm	.7677"	YG1-S03109	YG1-S04109
	25/32"	.7813"	YG1-S03110	YG1-S04110
	20mm	.7874"	YG1-S03111	YG1-S04111
	51/64"	.7969"	YG1-S03160	YG1-S04160
	20.5mm	.8071"	YG1-S03112	YG1-S04112
	13/16"	.8125"	YG1-S03113	YG1-S04113
	21mm	.8268"	YG1-S03114	YG1-S04114
	27/32"	.8438"	YG1-S03115	YG1-S04115
	55/64"	.8594"	YG1-S03161	YG1-S04161
	22mm	.8661"	YG1-S03116	YG1-S04116
	7/8"	.8750"	YG1-S03117	YG1-S04117
	57/64"	.8906"	YG1-S03162	YG1-S04162
	23mm	.9055"	YG1-S03118	YG1-S04118
	29/32"	.9063"	YG1-S03119	YG1-S04119
	59/64"	.9219"	YG1-S03120	YG1-S04120
	15/16"	.9375"	YG1-S03121	YG1-S04121
24mm	.9449"	YG1-S03122	YG1-S04122	
2 .961" to 1.380" (3/16") Thick	31/32"	.9688"	YG1-S03201	YG1-S04201
	63/64"	.9843"	YG1-S03202	YG1-S04202
	1"	1.0000"	YG1-S03203	YG1-S04203
	1-1/64"	1.0156"	YG1-S03204	YG1-S04204
	26mm	1.0236"	YG1-S03205	YG1-S04205
	1-1/32"	1.0313"	YG1-S03206	YG1-S04206
	1-3/64"	1.0469"	YG1-S03260	YG1-S04260
	1-1/16"	1.0625"	YG1-S03207	YG1-S04207
	27mm	1.0630"	YG1-S03208	YG1-S04208
	1-3/32"	1.0938"	YG1-S03209	YG1-S04209
28mm	1.1024"	YG1-S03210	YG1-S04210	



HSS (M4) Spade Drill

Series Min to Max (mm/inch)	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number	Hardslick Coated Part Number
2 .961" to 1.380" (3/16") Thick	1-7/64"	1.1094"	YG1-S03261	YG1-S04261
	1-1/8"	1.1250"	YG1-S03211	YG1-S04211
	29mm	1.1417"	YG1-S03212	YG1-S04212
	1-5/32"	1.1563"	YG1-S03213	YG1-S04213
	30mm	1.1811"	YG1-S03214	YG1-S04214
	1-3/16"	1.1875"	YG1-S03215	YG1-S04215
	1-7/32"	1.2188"	YG1-S03216	YG1-S04216
	31mm	1.2205"	YG1-S03217	YG1-S04217
	1-1/4"	1.2500"	YG1-S03218	YG1-S04218
	32mm	1.2598"	YG1-S03219	YG1-S04219
	1-9/32"	1.2813"	YG1-S03220	YG1-S04220
	33mm	1.2992"	YG1-S03221	YG1-S04221
	1-5/16"	1.3125"	YG1-S03222	YG1-S04222
	34mm	1.3386"	YG1-S03223	YG1-S04223
	1-11/32"	1.3438"	YG1-S03224	YG1-S04224
	1-3/8"	1.3750"	YG1-S03225	YG1-S04225
	35mm	1.3780"	YG1-S03226	YG1-S04226
	3 1.353" to 1.882" (1/4") Thick	1-13/32"	1.4063"	YG1-S03301
36mm		1.4173"	YG1-S03302	YG1-S04302
1-7/16"		1.4375"	YG1-S03303	YG1-S04303
37mm		1.4567"	YG1-S03304	YG1-S04304
1-15/32"		1.4688"	YG1-S03305	YG1-S04305
38mm		1.4961"	YG1-S03306	YG1-S04306
1-1/2"		1.5000"	YG1-S03307	YG1-S04307
1-17/32"		1.5313"	YG1-S03308	YG1-S04308
39mm		1.5354"	YG1-S03309	YG1-S04309
1-9/16"		1.5625"	YG1-S03310	YG1-S04310
40mm		1.5748"	YG1-S03311	YG1-S04311
1-19/32"		1.5938"	YG1-S03312	YG1-S04312
41mm		1.6142"	YG1-S03313	YG1-S04313
1-5/8"		1.6250"	YG1-S03314	YG1-S04314
42mm		1.6535"	YG1-S03315	YG1-S04315
1-21/32"	1.6563"	YG1-S03316	YG1-S04316	
1-11/16"	1.6875"	YG1-S03317	YG1-S04317	
43mm	1.6929"	YG1-S03318	YG1-S04318	
1-23/32"	1.7188"	YG1-S03319	YG1-S04319	



HSS (M4) Spade Drill

Series Min to Max (mm/inch)	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number	Hardslick Coated Part Number
3 1.353" to 1.882" (1/4") Thick	44mm	1.7323"	YG1-S03320	YG1-S04320
	1-3/4"	1.7500"	YG1-S03321	YG1-S04321
	45mm	1.7717"	YG1-S03322	YG1-S04322
	1-25/32"	1.7813"	YG1-S03323	YG1-S04323
	46mm	1.8110"	YG1-S03324	YG1-S04324
	1-13/16"	1.8125"	YG1-S03325	YG1-S04325
	1-27/32"	1.8438"	YG1-S03326	YG1-S04326
	47mm	1.8504"	YG1-S03327	YG1-S04327
	1-7/8"	1.8750"	YG1-S03328	YG1-S04328
4 1.850" to 2.570" (5/16") Thick	1-29/32"	1.9063	YG1-S03402	YG1-S04402
	1-15/16"	1.9375	YG1-S03404	YG1-S04404
	1-31/32"	1.9688	YG1-S03406	YG1-S04406
	2"	2.0000	YG1-S03407	YG1-S04407
	2-1/32"	2.0313	YG1-S03409	YG1-S04409
	2-3/64"	2.0472	YG1-S03410	YG1-S04410
	2-1/16"	2.0625	YG1-S03411	YG1-S04411
	2-3/32"	2.0938	YG1-S03413	YG1-S04413
	2-1/8"	2.1250	YG1-S03414	YG1-S04414
	2-5/32"	2.1563	YG1-S03416	YG1-S04416
	2-3/16"	2.1875	YG1-S03418	YG1-S04418
	2-7/32"	2.2188	YG1-S03420	YG1-S04420
	2-1/4"	2.2500	YG1-S03422	YG1-S04422
	2-9/32"	2.2813	YG1-S03423	YG1-S04423
	2-5/16"	2.3125	YG1-S03425	YG1-S04425
	2-11/32"	2.3438	YG1-S03427	YG1-S04427
	2-3/8"	2.3750	YG1-S03429	YG1-S04429
	2-13/32"	2.4063	YG1-S03431	YG1-S04431
	2-7/16"	2.4375	YG1-S03432	YG1-S04432
	2-15/32"	2.4688	YG1-S03434	YG1-S04434
2-1/2"	2.5000	YG1-S03436	YG1-S04436	
2-17/32"	2.5313	YG1-S03438	YG1-S04438	
2-9/16"	2.5625	YG1-S03440	YG1-S04440	



HSS (M4) Spade Drill

Series Min to Max (mm/inch)	Diameter Inch Metric	Diameter Decimal (Inch)	TiAlN Coated Part Number	Hardslick Coated Part Number
5 2.456" to 3.000" (7/16") Thick	2-3/4"	2.7500	YG1-S03512	YG1-S04512
	2-25/32"	2.7813	YG1-S03514	YG1-S04514
	2-13/16"	2.8125	YG1-S03515	YG1-S04515
	2-27/32"	2.8438	YG1-S03517	YG1-S04517
	2-7/8"	2.8750	YG1-S03518	YG1-S04518
	2-29/32"	2.9063	YG1-S03519	YG1-S04519
	2-15/16"	2.9375	YG1-S03521	YG1-S04521
	2-31/32"	2.9688	YG1-S03522	YG1-S04522
	3"	3.0000	YG1-S03524	YG1-S04524
6 3.001" to 3.507" (7/16") Thick	3-1/16"	3.0625	YG1-S03602	YG1-S04602
	3-1/8"	3.1250	YG1-S03605	YG1-S04605
	3-1/4"	3.2500	YG1-S03611	YG1-S04611
	3-3/8"	3.3750	YG1-S03616	YG1-S04616
	3-7/16"	3.4375	YG1-S03619	YG1-S04619
	3-1/2"	3.5000	YG1-S03622	YG1-S04622
7 3.455" to 4.000" (7/16") Thick	3-9/16"	3.5625	YG1-S03703	YG1-S04703
	3-5/8"	3.6250	YG1-S03706	YG1-S04706
	3-3/4"	3.7500	YG1-S03711	YG1-S04711
	3-7/8"	3.8750	YG1-S03717	YG1-S04717
	4"	4.0000	YG1-S03722	YG1-S04722
8 4.001" to 4.507" (7/16") Thick	4-1/16"	4.0625	YG1-S03802	YG1-S04802
	4-1/8"	4.1250	YG1-S03804	YG1-S04804
	4-1/4"	4.2500	YG1-S03807	YG1-S04807
	4-3/8"	4.3750	YG1-S03811	YG1-S04811
	4-1/2"	4.5000	YG1-S03815	YG1-S04815



YG1 SPADE BLADES

Carbide Spade Drill

Series Min to Max	Diameter Inch Metric	Diameter Decimal (Inch)	C2 Part Number	C5 Part Number
Y .374" to .436" (3/32") Thick	9.5mm	.3740"	YG1-S23Y01	YG1-S28Y01
	3/8"	.3750"	YG1-S23Y02	YG1-S28Y02
	9.8mm	.3860"	YG1-S23Y03	YG1-S28Y03
	25/64"	.3906"	YG1-S23Y04	YG1-S28Y04
	10mm	.3937"	YG1-S23Y05	YG1-S28Y05
	10.2mm	.4016"	YG1-S23Y06	YG1-S28Y06
	13/32"	.4063"	YG1-S23Y07	YG1-S28Y07
	10.5mm	.4134"	YG1-S23Y08	YG1-S28Y08
	27/64"	.4219"	YG1-S23Y09	YG1-S28Y09
	10.8mm	.4252"	YG1-S23Y10	YG1-S28Y10
	11mm	.4331"	YG1-S23Y11	YG1-S28Y11
Z .437" to .510" (3/32") Thick	7/16"	.4375"	YG1-S23Z01	YG1-S28Z01
	11.5mm	.4528"	YG1-S23Z02	YG1-S28Z02
	29/64"	.4531"	YG1-S23Z03	YG1-S28Z03
	15/32"	.4688"	YG1-S23Z04	YG1-S28Z04
	12mm	.4724"	YG1-S23Z05	YG1-S28Z05
	31/64"	.4844"	YG1-S23Z06	YG1-S28Z06
	12.5mm	.4921"	YG1-S23Z07	YG1-S28Z07
	1/2"	.5000"	YG1-S23Z08	YG1-S28Z08
O .511" to .695" (1/8") Thick	13mm	.5118"	YG1-S23001	YG1-S28001
	33/64"	.5156"	YG1-S23002	YG1-S28002
	17/32"	.5313"	YG1-S23003	YG1-S28003
	13.5mm	.5315"	YG1-S23004	YG1-S28004
	35/64"	.5469"	YG1-S23060	YG1-S28060
	14mm	.5512"	YG1-S23005	YG1-S28005
	9/16"	.5625"	YG1-S23006	YG1-S28006
	14.5mm	.5709"	YG1-S23007	YG1-S28007
	37/64"	.5781"	YG1-S23008	YG1-S28008
	15mm	.5906"	YG1-S23009	YG1-S28009
	19/32"	.5938"	YG1-S23010	YG1-S28010
	39/64"	.6094"	YG1-S23061	YG1-S28061
	15.5mm	.6102"	YG1-S23011	YG1-S28011
	15.7mm	.6181"	YG1-S23064	YG1-S28064
	5/8"	.6250"	YG1-S23012	YG1-S28012
	16mm	.6299"	YG1-S23013	YG1-S28013
	41/64"	.6406"	YG1-S23062	YG1-S28062
	16.5mm	.6496"	YG1-S23014	YG1-S28014
	21/32"	.6563"	YG1-S23015	YG1-S28015
	17mm	.6693"	YG1-S23016	YG1-S28016
43/64"	.6719"	YG1-S23063	YG1-S28063	
11/16"	.6875"	YG1-S23017	YG1-S28017	
17.5mm	.6890"	YG1-S23018	YG1-S28018	



Carbide Spade Drill

Series Min to Max	Diameter Inch Metric	Diameter Decimal (Inch)	C2 Part Number	C5 Part Number
1 .690" to .960" (5/32") Thick	45/64"	.7031"	YG1-S23101	YG1-S28101
	18mm	.7087"	YG1-S23102	YG1-S28102
	23/32"	.7188"	YG1-S23103	YG1-S28103
	18.5mm	.7283"	YG1-S23104	YG1-S28104
	47/64"	.7344"	YG1-S23105	YG1-S28105
	19mm	.7480"	YG1-S23106	YG1-S28106
	3/4"	.7500"	YG1-S23107	YG1-S28107
	49/64"	.7656"	YG1-S23108	YG1-S28108
	19.5mm	.7677"	YG1-S23109	YG1-S28109
	25/32"	.7813"	YG1-S23110	YG1-S28110
	20mm	.7874"	YG1-S23111	YG1-S28111
	51/64"	.7969"	YG1-S23160	YG1-S28160
	20.5mm	.8071"	YG1-S23112	YG1-S28112
	13/16"	.8125"	YG1-S23113	YG1-S28113
	21mm	.8268"	YG1-S23114	YG1-S28114
	27/32"	.8438"	YG1-S23115	YG1-S28115
	55/64"	.8594"	YG1-S23161	YG1-S28161
	22mm	.8661"	YG1-S23116	YG1-S28116
	7/8"	.8750"	YG1-S23117	YG1-S28117
	57/64"	.8906"	YG1-S23162	YG1-S28162
	23mm	.9055"	YG1-S23118	YG1-S28118
	29/32"	.9063"	YG1-S23119	YG1-S28119
	59/64"	.9219"	YG1-S23120	YG1-S28120
	15/16"	.9375"	YG1-S23121	YG1-S28121
	24mm	.9449"	YG1-S23122	YG1-S28122



Carbide Spade Drill

Series Min to Max	Diameter Inch Metric	Diameter Decimal (Inch)	C2 Part Number	C5 Part Number
2 .961" to 1.380" (3/16") Thick	31/32"	.9688"	YG1-S23201	YG1-S28201
	63/64"	.9843"	YG1-S23202	YG1-S28202
	1"	1.0000"	YG1-S23203	YG1-S28203
	1-1/64"	1.0156"	YG1-S23204	YG1-S28204
	26mm	1.0236"	YG1-S23205	YG1-S28205
	1-1/32"	1.0313"	YG1-S23206	YG1-S28206
	1-3/64"	1.0469"	YG1-S23260	YG1-S28260
	1-1/16"	1.0625"	YG1-S23207	YG1-S28207
	27mm	1.0630"	YG1-S23208	YG1-S28208
	1-3/32"	1.0938"	YG1-S23209	YG1-S28209
	28mm	1.1024"	YG1-S23210	YG1-S28210
	1-7/64"	1.1094"	YG1-S23261	YG1-S28261
	1-1/8"	1.1250"	YG1-S23211	YG1-S28211
	29mm	1.1417"	YG1-S23212	YG1-S28212
	1-5/32"	1.1563"	YG1-S23213	YG1-S28213
	30mm	1.1811"	YG1-S23214	YG1-S28214
	1-3/16"	1.1875"	YG1-S23215	YG1-S28215
	1-7/32"	1.2188"	YG1-S23216	YG1-S28216
	31mm	1.2205"	YG1-S23217	YG1-S28217
	1-1/4"	1.2500"	YG1-S23218	YG1-S28218
	32mm	1.2598"	YG1-S23219	YG1-S28219
	1-9/32"	1.2813"	YG1-S23220	YG1-S28220
	33mm	1.2992"	YG1-S23221	YG1-S28221
	1-5/16"	1.3125"	YG1-S23222	YG1-S28222
	34mm	1.3386"	YG1-S23223	YG1-S28223
	1-11/32"	1.3438"	YG1-S23224	YG1-S28224
	1-3/8"	1.3750"	YG1-S23225	YG1-S28225
	35mm	1.3780"	YG1-S23226	YG1-S28226

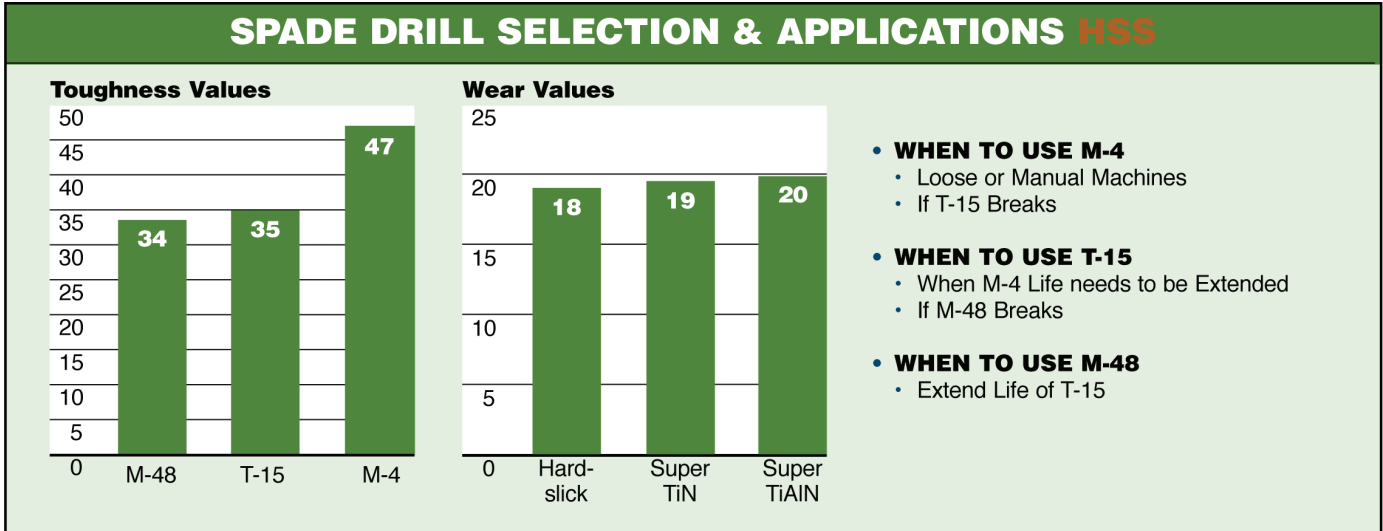


Carbide Spade Drill

Series Min to Max	Diameter Inch Metric	Diameter Decimal (Inch)	C2 Part Number	C5 Part Number
3 1.353" to 1.882" (1/4") Thick	1-13/32"	1.4063"	YG1-S23301	YG1-S28301
	36mm	1.4173"	YG1-S23302	YG1-S28302
	1-7/16"	1.4375"	YG1-S23303	YG1-S28303
	37mm	1.4567"	YG1-S23304	YG1-S28304
	1-15/32"	1.4688"	YG1-S23305	YG1-S28305
	38mm	1.4961"	YG1-S23306	YG1-S28306
	1-1/2"	1.5000"	YG1-S23307	YG1-S28307
	1-17/32"	1.5313"	YG1-S23308	YG1-S28308
	39mm	1.5354"	YG1-S23309	YG1-S28309
	1-9/16"	1.5938"	YG1-S23310	YG1-S28310
	40mm	1.5748"	YG1-S23311	YG1-S28311
	1-19/32"	1.5938"	YG1-S23312	YG1-S28312
	41mm	1.6142"	YG1-S23313	YG1-S28313
	1-5/8"	1.6250"	YG1-S23314	YG1-S28314
	42mm	1.6535"	YG1-S23315	YG1-S28315
	1-21/32"	1.6563"	YG1-S23316	YG1-S28316
	1-11/16"	1.6875"	YG1-S23317	YG1-S28317
	43mm	1.6929"	YG1-S23318	YG1-S28318
	1-23/32"	1.7188"	YG1-S23319	YG1-S28319
	44mm	1.7323"	YG1-S23320	YG1-S28320
	1-3/4"	1.7500"	YG1-S23321	YG1-S28321
	45mm	1.7717"	YG1-S23322	YG1-S28322
	1-25/32"	1.7813"	YG1-S23323	YG1-S28323
	46mm	1.8110"	YG1-S23324	YG1-S28324
	1-13/16"	1.8125"	YG1-S23325	YG1-S28325
	1-27/32"	1.8438"	YG1-S23326	YG1-S28326
	47mm	1.8504"	YG1-S23327	YG1-S28327
	1-7/8"	1.8750"	YG1-S23328	YG1-S28328



HSS Application Guide - Speeds & Feeds



SPEEDS – FEED RECOMMENDATIONS

Material	Material Hardness (BHN)	SFM Surface Footage	Feed (IPR)						
			3/8" to 1/2"	33/64" to 11/16"	45/64" to 15/16"	31/32" to 1-3/8"	1-13/32" to 1-7/8"	1-29/32" to 2-9/16"	2-19/32" to 4-1/2"
Free Machining Steel 1118, 1215, 12L14, etc.	100 - 150	280	.007	.010	.013	.016	.020	.023	.028
	150 - 200	260	.007	.010	.013	.016	.020	.023	.028
	200 - 250	240	.007	.010	.013	.016	.020	.023	.028
Low & Medium Carbon Steel 1018, 1040, 1140, etc.	125 - 175	240	.006	.009	.012	.015	.019	.023	.027
	175 - 225	225	.005	.008	.010	.014	.018	.021	.024
	225 - 275	210	.005	.008	.010	.014	.018	.021	.024
	275 - 325	195	.004	.007	.009	.012	.016	.019	.022
Alloy Steel 4140, 5140, 8640, etc.	125 - 175	210	.006	.008	.010	.014	.017	.019	.022
	175 - 225	195	.005	.008	.010	.014	.017	.019	.022
	225 - 275	180	.005	.007	.010	.014	.017	.019	.022
	275 - 325	170	.004	.006	.009	.012	.015	.017	.020
High Strength Alloy Steel 4340, 4330V, 300M, etc.	325 - 375	155	.003	.006	.009	.012	.015	.017	.020
	225 - 300	110	.005	.007	.009	.010	.014	.017	.020
	300 - 350	85	.004	.007	.009	.010	.014	.017	.020
350 - 400	70	.003	.006	.008	.009	.012	.015	.018	
	100 - 150	200	.006	.010	.012	.014	.018	.021	.026
Structural Steel A36, A285, A516, etc.	150 - 250	170	.005	.009	.010	.012	.016	.019	.024
	250 - 350	140	.004	.008	.009	.010	.014	.017	.020
	140 - 220	40	.003	.006	.007	.008	.010	.012	.015
High Temp, Alloy Hastelloy B, Inconel 600, etc.	220 - 310	35	.003	.006	.007	.008	.010	.012	.015
	135 - 185	105	.006	.008	.009	.011	.014	.016	.020
Stainless Steel 303, 416, 420, 17-4 PH, etc.	185 - 275	90	.005	.007	.008	.010	.012	.014	.018
	150 - 200	110	.004	.006	.008	.010	.012	.015	.017
Tool Steel H-13, H021, A04, O-2, S-3, etc.	200 - 250	90	.004	.006	.008	.010	.012	.015	.017
	30	850	.008	.013	.016	.020	.022	.025	.025
Aluminum	180	450	.008	.013	.016	.018	.022	.025	.025
	120 - 150	250	.007	.012	.016	.020	.024	.027	.030
Cast Iron Gray, Ductile, Nodular	150 - 200	225	.006	.011	.014	.018	.022	.025	.028
	200 - 220	195	.006	.009	.012	.016	.018	.021	.024
	220 - 260	165	.005	.007	.009	.012	.014	.017	.020
	260 - 320	135	.004	.006	.007	.009	.012	.014	.016
	30	850	.008	.013	.016	.020	.022	.025	.025

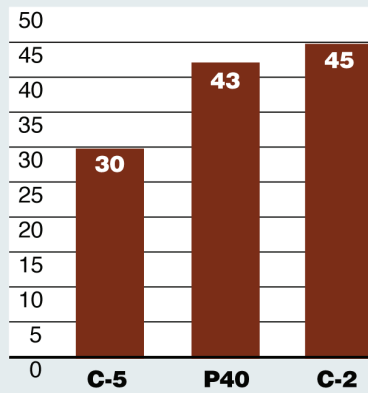
STANDARD GEOMETRY

FOR SM POINT ADD 5% TO 10%

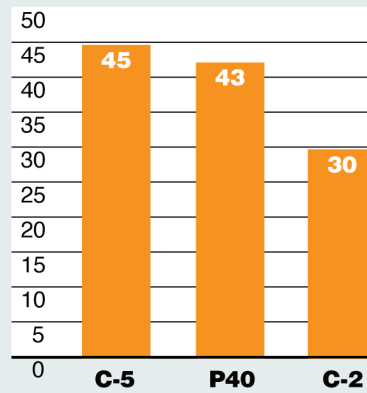
Carbide Application Guide - Speeds & Feeds

SPADE DRILL SELECTION & APPLICATIONS **CARBIDE**

Toughness Values



Wear Values



If C-5 chips try C-2 at 10% – 20% lower S.F.M. than C-5 rating

Grade	Geometry and Application	Stocked Coatings
P40 & C-5	Steel Cutting	Super TiN TiAlN
C-3	Cast Iron	Super TiN TiAlN
P40 & C-2	Ductile Iron Stainless Steel Aluminum Exotic Alloys	Super TiN TiAlN

Note: Carbide has a lower transverse rupture strength than HSS and is prone to chipping and breakage. Recutting of chips or lack of rigidity can cause breakage. Check Coolant Recommendations Chart on Page 15 for flow rates.

SPEEDS – FEED RECOMMENDATIONS

Material	Material Hardness (BHN)	SFM Surface Footage	Feed (IPR)				
			3/8" to 1/2"	33/64" to 11/16"	45/64" to 15/16"	31/32" to 1-3/8"	1-13/32" to 1-7/8"
Free Machining Steel 1118, 1215, 12L14, etc.	100 - 150	420	.006	.009	.012	.015	.019
	150 - 200	360	.006	.008	.011	.013	.017
	200 - 250	340	.005	.008	.010	.012	.015
Medium Carbon Steel 1018, 1040, 1140, etc.	125 - 175	340	.005	.008	.010	.014	.017
	175 - 225	310	.005	.007	.009	.012	.016
	225 - 275	270	.004	.007	.009	.012	.015
	275 - 325	230	.004	.006	.008	.010	.014
Alloy Steel 4140, 5140, 8640, etc.	125 - 175	325	.005	.008	.010	.013	.016
	175 - 225	300	.005	.007	.009	.012	.015
	225 - 275	270	.004	.007	.009	.012	.015
	275 - 325	250	.004	.006	.008	.011	.014
325 - 375	220	.003	.005	.007	.010	.013	
High Strength Alloy Steel 4340, 4330V, 300M, etc.	225 - 300	200	.005	.007	.009	.010	.014
	300 - 350	180	.004	.006	.008	.009	.012
	350 - 400	160	.003	.005	.007	.008	.010
Structural Steel A36, A285, A516, etc.	100 - 150	310	.006	.010	.011	.012	.016
	150 - 250	250	.005	.008	.010	.011	.015
	250 - 350	230	.004	.007	.009	.009	.013
High Temp, Alloy Hastelloy B, Inconel 600, etc.	140 - 220	80	.003	.006	.007	.009	.011
	220 - 310	60	.003	.005	.006	.008	.010
Stainless Steel 303, 416, 420, 17-4 PH, etc.	135 - 185	210	.006	.008	.009	.011	.013
	185 - 275	160	.005	.007	.008	.010	.011
Tool Steel H-13, H021, A04, O-2, S-3, etc.	150 - 200	220	.003	.005	.007	.009	.011
	200 - 250	170	.003	.005	.007	.009	.011
Aluminum	30	1500	.008	.013	.016	.020	.022
	180	1000	.007	.011	.014	.018	.020
Cast Iron Gray, Ductile, Nodular	120 - 150	460	.006	.009	.011	.015	.020
	150 - 200	400	.005	.008	.010	.014	.018
	200 - 220	360	.005	.007	.008	.012	.015
	220 - 260	310	.004	.006	.007	.010	.013
	260 - 320	270	.004	.005	.006	.008	.011

STANDARD GEOMETRY

FOR SM POINT ADD 5% TO 10%

Cobalt FB Application Guide - Speeds & Feeds

Material	Material Hardness (Bhn)	Speed (SFM)		Feed			
		TiN	TiAlN	Ø 3/8" ~1/2"	Ø 33/64" ~11/16"	Ø 45/64" ~15/16"	Ø 31/32" ~1*3/8"
Free machining Steel 1213, 12L13, 1215 12L14, 1118 etc	100 - 150	165	220	0.005	0.007	0.010	0.013
	150 - 200	150	215	0.005	0.007	0.010	0.013
	200 - 250	135	190	0.004	0.007	0.010	0.012
Low Carbon Steel 1015, 1020, 1140 1025 etc	85 - 125	140	195	0.005	0.007	0.009	0.012
	125 - 175	135	190	0.005	0.007	0.009	0.012
	175 - 225	125	180	0.004	0.006	0.008	0.011
	225 - 275	115	175	0.004	0.006	0.008	0.011
Medium Carbon Steel 1035, 1050, 1045 1055, 1140 etc	125 - 175	135	195	0.004	0.007	0.009	0.011
	175 - 225	125	180	0.004	0.006	0.007	0.011
	225 - 275	115	165	0.004	0.006	0.007	0.011
	275 - 325	105	150	0.003	0.005	0.007	0.009
Structural Steel A36, A516, A182 etc	100 - 150	115	165	0.004	0.007	0.009	0.011
	150 - 250	100	140	0.004	0.007	0.008	0.009
	250 - 350	80	115	0.003	0.006	0.007	0.008
Cast Iron / S,G Iron A48-76 GR30/GR45 A536-72 60-40-18 A220-76 GR40010 etc	120 - 150	145	215	0.005	0.010	0.014	0.016
	150 - 200	130	190	0.005	0.008	0.011	0.016
	200 - 220	110	165	0.005	0.008	0.010	0.014
	220 - 260	95	150	0.004	0.006	0.008	0.010
	260 - 320	80	120	0.004	0.005	0.006	0.008
Alloy Steel 8620, 4130, 4137 4140, 6150 etc	125 - 175	125	165	0.005	0.006	0.008	0.011
	175 - 225	115	150	0.004	0.006	0.008	0.011
	225 - 275	105	145	0.004	0.005	0.007	0.011
	275 - 325	100	140	0.003	0.005	0.007	0.009
Tool Steel H13, H21, A2, S1 etc	150 - 200	65	90	0.003	0.005	0.006	0.008
	200 - 250	45	75	0.003	0.005	0.006	0.008
High Temp. Alloy Hastelloy B, Inconel etc	140 - 220	20	30	0.003	0.005	0.006	0.008
	220 - 310	15	25	0.003	0.004	0.006	0.006
High Strength Alloy 9840, 4340, 4330V etc	225 - 300	65	90	0.004	0.006	0.007	0.008
	300 - 350	45	70	0.003	0.006	0.007	0.008
	350 - 400	40	60	0.003	0.005	0.006	0.007
Aluminium 2014, 6061, 7075 etc	30	520	700	0.007	0.011	0.014	0.017
	180	255	390	0.007	0.011	0.014	0.016
Stainless Steel 310, 316, 410, 330 etc	135 - 185	60	90	0.005	0.007	0.008	0.009
	185 - 275	50	80	0.004	0.006	0.007	0.009

RPM = revolution per minute (rev/min)
SFM = surface feet per minute (ft/min)
DIA = diameter of drill (inch)
IPR = feed rate (in/rev)
IPM = inch per minute penetration rate

*** Formulas :**

$$SFM = (RPM) \cdot (.262) \cdot (DIA.)$$

$$IPM = (RPM) \cdot (IPR)$$

$$RPM = \frac{(SFM) \cdot (3.82)}{(DIA.)}$$

The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points. Speed and feed reductions (20% reduction in speed and 10% reduction in feed) are recommended.





Short Length Straight Shank Holder - Straight Flute

Series	A	B	C	D	E	F		G	Part Number
	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank Diameter	Shank Length	Pipe Tap	
Y	3/8" - 27/64"	1-1/4"	2-1/32"	2-1/8"	4-13/32"	3/4"	2-3/8"	1/8"	YG1-P13Y01
Z	7/16" - 1/2"	1-1/4"	2-1/32"	2-1/8"	4-13/32"	3/4"	2-3/8"	1/8"	YG1-P13Z01
0	33/64" - 11/16"	1-3/8"	2-3/16"	2-19/64"	4-9/16"	3/4"	2-3/8"	1/8"	YG1-P13001
0.5	39/64" - 11/16"	1-3/8"	2-3/16"	2-19/64"	4-9/16"	3/4"	2-3/8"	1/8"	YG1-P13051
1	45/64" - 15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	3/4"	3"	1/8"	YG1-P13101
1	45/64" - 15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	1"	3"	1/8"	YG1-P13102
1.5	55/64" - 15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	3/4"	3"	1/8"	YG1-P13151
1.5	55/64" - 15/16"	2-5/8"	3-7/8"	4-1/64"	6-7/8"	1"	3"	1/8"	YG1-P13152
2	31/32" - 1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1"	3-1/2"	1/8"	YG1-P13202
2	31/32" - 1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1-1/4"	3-1/2"	1/8"	YG1-P13203
2.5	1-3/16" - 1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1"	3-1/2"	1/8"	YG1-P13252
2.5	1-3/16" - 1-3/8"	3-3/8"	4-1/2"	4-41/64"	8"	1-1/4"	3-1/2"	1/8"	YG1-P13253
3	1-13/32" - 1-7/8"	4-3/4"	6"	6-3/16"	10"	1-1/4"	4"	1/4"	YG1-P13303
3	1-13/32" - 1-7/8"	4-3/4"	6"	6-3/16"	10"	1-1/2"	4"	1/4"	YG1-P13304
4	1-29/32" - 2-9/16"	5-1/8"	6-1/2"	6-11/16"	10-1/2"	1-1/2"	4"	1/4"	YG1-P13404
4	1-29/32" - 2-9/16"	5-1/8"	6-1/2"	6-11/16"	10-1/2"	1-3/4"	4"	1/4"	YG1-P13405
5-6	2-1/2" - 3-1/2"	6-3/4"	8-1/2"	8-3/4"	12-1/2"	2"	4"	1/2"	YG1-P13506
7-8	3-17/32" - 4-1/2"	6-3/4"	8-7/8"	9-1/8"	13-7/8"	3"	5"	1/2"	YG1-P13708



Intermediate Length Straight Shank Holder - Straight Flute

Series	A	B	C	E	F		G	Part Number
	Drill Insert Range	Max. Drill Depth	Flute Length	Overall Length	Shank Diameter	Shank Length	Pipe Tap	
1	45/64" - 15/16"	4-5/8"	5-7/8"	8-7/8"	1"	3"	1/8"	YG1-P14102
1.5	55/64" - 15/16"	4-5/8"	5-7/8"	8-7/8"	1"	3"	1/8"	YG1-P14152
2	31/32" - 1-3/8"	5-3/8"	6-1/2"	10"	1-1/4"	3-1/2"	1/8"	YG1-P14203
2.5	1-3/16" - 1-3/8"	5-3/8"	6-1/2"	10"	1-1/4"	3-1/2"	1/8"	YG1-P14253
3	1-13/32" - 1-7/8"	6-1/2"	7-3/4"	11-3/4"	1-1/2"	4"	1/4"	YG1-P14304



YG1 SPADE BLADE HOLDERS



Standard Length Straight Shank Holder - Straight Flute

Series	A	B	C	D	E	F		G	Part Number
	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank Diameter	Shank Length	Pipe Tap	
Y	3/8" - 27/64"	2-3/8"	3-5/32"	3-1/4"	5-17/32"	3/4"	2-3/8"	1/8"	YG1-P15Y01
Z	7/16" - 1/2"	2-3/8"	3-5/32"	3-1/4"	5-17/32"	3/4"	2-3/8"	1/8"	YG1-P15Z01
0	33/64" - 11/16"	2-1/2"	3-5/16"	3-27/64"	5-11/16"	3/4"	2-3/8"	1/8"	YG1-P15001
0.5	39/64" - 11/16"	2-1/2"	3-5/16"	3-27/64"	5-11/16"	3/4"	2-3/8"	1/8"	YG1-P15051
1	45/64" - 15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	3/4"	3"	1/8"	YG1-P15101
1	45/64" - 15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	1"	3"	1/8"	YG1-P15102
1.5	55/64" - 15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	3/4"	3"	1/8"	YG1-P15151
1.5	55/64" - 15/16"	6-5/8"	7-7/8"	8-1/64"	10-7/8"	1"	3"	1/8"	YG1-P15152
2	31/32" - 1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1"	3-1/2"	1/8"	YG1-P15202
2	31/32" - 1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1-1/4"	3-1/2"	1/8"	YG1-P15203
2.5	1-3/16" - 1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1"	3-1/2"	1/8"	YG1-P15252
2.5	1-3/16" - 1-3/8"	7-3/8"	8-1/2"	8-41/64"	12"	1-1/4"	3-1/2"	1/8"	YG1-P15253
3	1-13/32" - 1-7/8"	8-1/4"	9-1/2"	9-11/16"	13-1/2"	1-1/4"	4"	1/4"	YG1-P15303
3	1-13/32" - 1-7/8"	8-1/4"	9-1/2"	9-11/16"	13-1/2"	1-1/2"	4"	1/4"	YG1-P15304
4	1-29/32" - 2-9/16"	9-1/8"	10-1/2"	10-11/16"	14-1/2"	1-1/2"	4"	1/4"	YG1-P15404
4	1-29/32" - 2-9/16"	9-1/8"	10-1/2"	10-11/16"	14-1/2"	1-3/4"	4"	1/4"	YG1-P15405
5-6	2-1/2" - 3-1/2"	10-3/4"	12-1/2"	12-3/4"	16-1/2"	2"	4"	1/2"	YG1-P15506
7-8	3-17/32" - 4-1/2"	10-3/4"	12-7/8"	13-1/8"	17-7/8"	3"	5"	1/2"	YG1-P15708





**Extended Length
Straight Shank Holder - Straight Flute**

Series	A	B	C	D	E	F		G	Part Number
	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank Diameter	Shank Length	Pipe Tap	
Y	3/8" - 27/64"	4-3/8"	5-5/32"	5-1/4"	7-17/32"	3/4"	2-3/8"	1/8"	YG1-P16Y01
Z	7/16" - 1/2"	4-3/8"	5-5/32"	5-1/4"	7-17/32"	3/4"	2-3/8"	1/8"	YG1-P16Z01
0	33/64" - 11/16"	4-1/2"	5-5/16"	5-27/64"	7-11/16"	3/4"	2-3/8"	1/8"	YG1-P16001
0.5	39/64" - 11/16"	4-1/2"	5-5/16"	5-27/64"	7-11/16"	3/4"	2-3/8"	1/8"	YG1-P16051
1	45/64" - 15/16"	10-5/8"	11-7/8"	12-1/64"	14-7/8"	1"	3"	1/8"	YG1-P16102
1.5	55/64" - 15/16"	10-5/8"	11-7/8"	12-1/64"	14-7/8"	1"	3"	1/8"	YG1-P16152
2	31/32" - 1-3/8"	11-3/8"	12-1/2"	12-41/64"	16"	1-1/4"	3-1/2"	1/8"	YG1-P16203
2.5	1-3/16" - 1-3/8"	11-3/8"	12-1/2"	12-41/64"	16"	1-1/4"	3-1/2"	1/8"	YG1-P16253
3	1-13/32" - 1-7/8"	13-3/4"	15"	15-3/16"	19"	1-1/4"	4"	1/4"	YG1-P16303
4	1-29/32" - 2-9/16"	16-5/8"	18"	18-3/16"	22"	1-1/2"	4"	1/4"	YG1-P16404
5-6	2-1/2" - 3-1/2"	18-1/4"	20"	20-1/4"	24"	2"	4"	1/2"	YG1-P16506
7-8	3-17/32" - 4-1/2"	21-7/8"	24"	24-1/4"	29"	3"	5"	1/2"	YG1-P16708



**Long Length
Straight Shank Holder - Straight Flute**

Series	A	B	C	D	E	F		G	Part Number
	Drill Insert Range	Max. Drill Depth	Flute Length	Ref. Length	Overall Length	Shank Diameter	Shank Length	Pipe Tap	
0	33/64" - 11/16"	7"	7-13/16"	7-59/64"	10-3/16"	3/4"	2-3/8"	1/8"	YG1-P17001
0.5	39/64" - 11/16"	7"	7-13/16"	7-59/64"	10-3/16"	3/4"	2-3/8"	1/8"	YG1-P17051

XL Length - Straight Shank Holder - Straight Flute

1	45/64" - 15/16"	18"	19-1/4"	19-25/64"	22-1/4"	1"	3"	1/8"	YG1-P17101
2	31/32" - 1-3/8"	20-1/8"	21-1/4"	21-25/64"	24-3/4"	1-1/4"	3-1/2"	1/8"	YG1-P17303
3	1-13/32" - 1-7/8"	22"	23-1/4"	23-7/16"	27-1/4"	1-1/2"	4"	1/4"	YG1-P17506
4	1-29/32" - 2-9/16"	24-5/8"	26"	26-3/16"	30"	1-1/2"	4"	1/4"	YG1-P17708
5-6	2-1/2" - 3-1/2"	26"	27-3/4"	28"	31-3/4"	2"	4"	1/2"	YG1-P17506
7-8	3-17/32" - 4-1/2"	27"	29-1/8"	29-3/8"	34-1/8"	3"	5"	1/2"	YG1-P17708

HSS REAMERS

Straight Shank Chucking Reamer

Flute Geometry: Straight Flute - Right Hand Cut
Point: 45° Chamfer
Diameter Tolerances: up to 1/2" - +.0002/-0
 over 1/2" to 5/8" - +.003/-0
 over 5/8" to 1-1/2" - +.001/+0.004



Decimal Equivalent

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
66	0.0330	1/2	2-1/2	4	RMR-0330
	0.0394	1/2	2-1/2	4	RMR-0394
60	0.0400	1/2	2-1/2	4	RMR-0400
59	0.0410	1/2	2-1/2	4	RMR-0410
58	0.0420	1/2	2-1/2	4	RMR-0420
57	0.0430	1/2	2-1/2	4	RMR-0430
	0.0460	1/2	2-1/2	4	RMR-0460
56	0.0465	1/2	2-1/2	4	RMR-0465
3/64	0.0469	1/2	2-1/2	4	RMR-0469
	0.0510	1/2	2-1/2	4	RMR-0510
55	0.0520	1/2	2-1/2	4	RMR-0520
54	0.0550	1/2	2-1/2	4	RMR-0550
	0.0585	1/2	2-1/2	4	RMR-0585
	0.0590	1/2	2-1/2	4	RMR-0590
	0.0591	1/2	2-1/2	4	RMR-0591
53	0.0595	1/2	2-1/2	4	RMR-0595
	0.0600	1/2	2-1/2	4	RMR-0600
	0.0605	1/2	2-1/2	4	RMR-0605
	0.0610	1/2	2-1/2	4	RMR-0610
	0.0615	1/2	2-1/2	4	RMR-0615
	0.0620	1/2	2-1/2	4	RMR-0620
1/16	0.0625	1/2	2-1/2	4	RMR-0625
52	0.0635	1/2	2-1/2	4	RMR-0635
	0.0640	1/2	2-1/2	4	RMR-0640
51	0.0670	3/4	3	4	RMR-0670
	0.0680	3/4	3	4	RMR-0680
	0.0690	3/4	3	4	RMR-0690
	0.0695	3/4	3	4	RMR-0695
50	0.0700	3/4	3	4	RMR-0700
49	0.0730	3/4	3	4	RMR-0730
48	0.0760	3/4	3	4	RMR-0760
	0.0775	3/4	3	4	RMR-0775
5/64	0.0781	3/4	3	4	RMR-0781
47	0.0785	3/4	3	4	RMR-0785
	0.0787	3/4	3	4	RMR-0787
	0.0790	3/4	3	4	RMR-0790
	0.0795	3/4	3	4	RMR-0795
	0.0800	3/4	3	4	RMR-0800
46	0.0810	3/4	3	4	RMR-0810

Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
45	0.0820	3/4	3	4	RMR-0820
	0.0825	3/4	3	4	RMR-0825
	0.0850	3/4	3	4	RMR-0850
44	0.0860	3/4	3	4	RMR-0860
43	0.0890	3/4	3	4	RMR-0890
	0.0900	3/4	3	4	RMR-0900
	0.0910	3/4	3	4	RMR-0910
	0.0920	3/4	3	4	RMR-0920
	0.0930	3/4	3	4	RMR-0930
42	0.0935	3/4	3	4	RMR-0935
3/32	0.0938	3/4	3	4	RMR-0938
	0.0940	3/4	3	4	RMR-0940
41	0.0960	7/8	3-1/2	4	RMR-0960
	0.0970	7/8	3-1/2	4	RMR-0970
40	0.0980	7/8	3-1/2	4	RMR-0980
	0.0984	7/8	3-1/2	4	RMR-0984
39	0.0995	7/8	3-1/2	4	RMR-0995
	0.1000	7/8	3-1/2	4	RMR-1000
38	0.1015	7/8	3-1/2	4	RMR-1015
	0.1025	7/8	3-1/2	4	RMR-1025
37	0.1040	7/8	3-1/2	4	RMR-1040
36	0.1065	7/8	3-1/2	4	RMR-1065
7/64	0.1094	7/8	3-1/2	4	RMR-1094
	0.1094	7/8	3-1/2	4	RMR-1094
35	0.1100	7/8	3-1/2	4	RMR-1100
34	0.1110	7/8	3-1/2	4	RMR-1110
	0.1120	7/8	3-1/2	4	RMR-1120
33	0.1130	7/8	3-1/2	4	RMR-1130
	0.1140	7/8	3-1/2	4	RMR-1140
32	0.1160	7/8	3-1/2	4	RMR-1160
	0.1170	7/8	3-1/2	4	RMR-1170
	0.1181	7/8	3-1/2	4	RMR-1181
	0.1185	7/8	3-1/2	4	RMR-1185
	0.1190	7/8	3-1/2	4	RMR-1190
	0.1195	7/8	3-1/2	4	RMR-1195
31	0.1200	7/8	3-1/2	4	RMR-1200
	0.1230	7/8	3-1/2	4	RMR-1230
	0.1235	7/8	3-1/2	4	RMR-1235
	0.1240	7/8	3-1/2	4	RMR-1240

Straight Shank Chucking Reamer



Flute Geometry: Straight Flute - Right Hand Cut
Point: 45° Chamfer
Diameter Tolerances: up to 1/2" - +.0002/-0
 over 1/2" to 5/8" - +.003/-0
 over 5/8" to 1-1/2" - +.001/+0.004

Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
	0.1245	7/8	3-1/2	4	RMR-1245
	0.1247	7/8	3-1/2	4	RMR-1247
1/8	0.1250	7/8	3-1/2	4	RMR-1250
	0.1255	7/8	3-1/2	4	RMR-1255
	0.1260	7/8	3-1/2	4	RMR-1260
	0.1265	7/8	3-1/2	4	RMR-1265
	0.1270	7/8	3-1/2	4	RMR-1270
	0.1275	7/8	3-1/2	4	RMR-1275
	0.1280	7/8	3-1/2	4	RMR-1280
30	0.1285	7/8	3-1/2	4	RMR-1285
	0.1290	7/8	3-1/2	4	RMR-1290
	0.1295	7/8	3-1/2	4	RMR-1295
	0.1300	7/8	3-1/2	4	RMR-1300
	0.1310	7/8	3-1/2	4	RMR-1310
	0.1320	7/8	3-1/2	4	RMR-1320
	0.1350	7/8	3-1/2	4	RMR-1350
29	0.1360	1	4	4	RMR-1360
	0.1370	1	4	4	RMR-1370
	0.1375	1	4	4	RMR-1375
	0.1378	1	4	4	RMR-1378
	0.1380	1	4	4	RMR-1380
	0.1385	1	4	4	RMR-1385
	0.1400	1	4	4	RMR-1400
28	0.1405	1	4	4	RMR-1405
9/64	0.1406	1	4	4	RMR-1406
	0.1410	1	4	4	RMR-1410
	0.1415	1	4	4	RMR-1415
	0.1420	1	4	4	RMR-1420
27	0.1440	1	4	4	RMR-1440
	0.1450	1	4	4	RMR-1450
	0.1460	1	4	4	RMR-1460
26	0.1470	1	4	4	RMR-1470
25	0.1495	1	4	4	RMR-1495
	0.1500	1	4	4	RMR-1500
24	0.1520	1	4	4	RMR-1520
23	0.1540	1	4	4	RMR-1540
	0.1550	1	4	4	RMR-1550
	0.1560	1	4	4	RMR-1560
5/32	0.1562	1	4	4	RMR-1562

Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
22	0.1570	1	4	4	RMR-1570
	0.1575	1	4	4	RMR-1575
	0.1580	1	4	4	RMR-1580
21	0.1590	1-1/8	4-1/2	6	RMR-1590
	0.1610	1-1/8	4-1/2	6	RMR-1610
	0.1620	1-1/8	4-1/2	6	RMR-1620
	0.1640	1-1/8	4-1/2	6	RMR-1640
	0.1650	1-1/8	4-1/2	6	RMR-1650
	0.1655	1-1/8	4-1/2	6	RMR-1655
	0.1660	1-1/8	4-1/2	6	RMR-1660
	0.1670	1-1/8	4-1/2	6	RMR-1670
	0.1680	1-1/8	4-1/2	6	RMR-1680
	0.1695	1-1/8	4-1/2	6	RMR-1695
	0.1700	1-1/8	4-1/2	6	RMR-1700
11/64	0.1719	1-1/8	4-1/2	6	RMR-1719
	0.1720	1-1/8	4-1/2	6	RMR-1720
17	0.1730	1-1/8	4-1/2	6	RMR-1730
	0.1740	1-1/8	4-1/2	6	RMR-1740
	0.1750	1-1/8	4-1/2	6	RMR-1750
	0.1760	1-1/8	4-1/2	6	RMR-1760
16	0.1770	1-1/8	4-1/2	6	RMR-1770
	0.1772	1-1/8	4-1/2	6	RMR-1772
	0.1795	1-1/8	4-1/2	6	RMR-1795
15	0.1800	1-1/8	4-1/2	6	RMR-1800
	0.1810	1-1/8	4-1/2	6	RMR-1810
14	0.1820	1-1/8	4-1/2	6	RMR-1820
	0.1830	1-1/8	4-1/2	6	RMR-1830
	0.1840	1-1/8	4-1/2	6	RMR-1840
	0.1845	1-1/8	4-1/2	6	RMR-1845
13	0.1850	1-1/8	4-1/2	6	RMR-1850
	0.1855	1-1/8	4-1/2	6	RMR-1855
	0.1860	1-1/8	4-1/2	6	RMR-1860
	0.1865	1-1/8	4-1/2	6	RMR-1865
	0.1870	1-1/8	4-1/2	6	RMR-1870
3/16	0.1875	1-1/8	4-1/2	6	RMR-1875
	0.1880	1-1/8	4-1/2	6	RMR-1880
	0.1885	1-1/8	4-1/2	6	RMR-1885
	0.1890	1-1/8	4-1/2	6	RMR-1890
	0.1890	1-1/8	4-1/2	6	RMR-1890

HSS REAMERS

Straight Shank Chucking Reamer

Flute Geometry: Straight Flute - Right Hand Cut
Point: 45° Chamfer
Diameter Tolerances: up to 1/2" - +.0002/-0
 over 1/2" to 5/8" - +.003/-0
 over 5/8" to 1-1/2" - +.001/+0.004



Decimal Equivalent

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
	0.1895	1-1/8	4-1/2	6	RMR-1895
	0.1900	1-1/8	4-1/2	6	RMR-1900
	0.1905	1-1/8	4-1/2	6	RMR-1905
11	0.1910	1-1/4	5	6	RMR-1910
	0.1915	1-1/4	5	6	RMR-1915
	0.1920	1-1/4	5	6	RMR-1920
	0.1930	1-1/4	5	6	RMR-1930
10	0.1935	1-1/4	5	6	RMR-1935
	0.1940	1-1/4	5	6	RMR-1940
	0.1950	1-1/4	5	6	RMR-1950
9	0.1960	1-1/4	5	6	RMR-1960
	0.1969	1-1/4	5	6	RMR-1969
	0.1970	1-1/4	5	6	RMR-1970
	0.1975	1-1/4	5	6	RMR-1975
	0.1980	1-1/4	5	6	RMR-1980
8	0.1990	1-1/4	5	6	RMR-1990
	0.2000	1-1/4	5	6	RMR-2000
	0.2005	1-1/4	5	6	RMR-2005
7	0.2010	1-1/4	5	6	RMR-2010
	0.2020	1-1/4	5	6	RMR-2020
	0.2025	1-1/4	5	6	RMR-2025
	0.2030	1-1/4	5	6	RMR-2030
13/64	0.2031	1-1/4	5	6	RMR-2031
6	0.2040	1-1/4	5	6	RMR-2040
	0.2045	1-1/4	5	6	RMR-2045
	0.2050	1-1/4	5	6	RMR-2050
5	0.2055	1-1/4	5	6	RMR-2055
	0.2060	1-1/4	5	6	RMR-2060
	0.2070	1-1/4	5	6	RMR-2070
	0.2080	1-1/4	5	6	RMR-2080
4	0.2090	1-1/4	5	6	RMR-2090
	0.2095	1-1/4	5	6	RMR-2095
	0.2100	1-1/4	5	6	RMR-2100
	0.2110	1-1/4	5	6	RMR-2110
	0.2120	1-1/4	5	6	RMR-2120
3	0.2130	1-1/4	5	6	RMR-2130
	0.2140	1-1/4	5	6	RMR-2140
	0.2150	1-1/4	5	6	RMR-2150
	0.2155	1-1/4	5	6	RMR-2155

Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
	0.2160	1-1/4	5	6	RMR-2160
	0.2165	1-1/4	5	6	RMR-2165
	0.2170	1-1/4	5	6	RMR-2170
	0.2180	1-1/4	5	6	RMR-2180
7/32	0.2187	1-1/4	5	6	RMR-2187
	0.2188	1-1/4	5	6	RMR-2188
	0.2190	1-1/4	5	6	RMR-2190
	0.2195	1-1/4	5	6	RMR-2195
	0.2200	1-1/4	5	6	RMR-2200
2	0.2210	1-1/2	6	6	RMR-2210
	0.2270	1-1/2	6	6	RMR-2270
1	0.2280	1-1/2	6	6	RMR-2280
	0.2300	1-1/2	6	6	RMR-2300
	0.2310	1-1/2	6	6	RMR-2310
	0.2320	1-1/2	6	6	RMR-2320
A	0.2340	1-1/2	6	6	RMR-2340
15/64	0.2344	1-1/2	6	6	RMR-2344
	0.2350	1-1/2	6	6	RMR-2350
	0.2360	1-1/2	6	6	RMR-2360
	0.2362	1-1/2	6	6	RMR-2362
	0.2370	1-1/2	6	6	RMR-2370
B	0.2380	1-1/2	6	6	RMR-2380
	0.2390	1-1/2	6	6	RMR-2390
	0.2400	1-1/2	6	6	RMR-2400
	0.2410	1-1/2	6	6	RMR-2410
C	0.2420	1-1/2	6	6	RMR-2420
	0.2430	1-1/2	6	6	RMR-2430
	0.2435	1-1/2	6	6	RMR-2435
	0.2440	1-1/2	6	6	RMR-2440
	0.2450	1-1/2	6	6	RMR-2450
D	0.2460	1-1/2	6	6	RMR-2460
	0.2470	1-1/2	6	6	RMR-2470
	0.2475	1-1/2	6	6	RMR-2475
	0.2480	1-1/2	6	6	RMR-2480
	0.2485	1-1/2	6	6	RMR-2485
	0.2490	1-1/2	6	6	RMR-2490
	0.2495	1-1/2	6	6	RMR-2495
1/4	0.2500	1-1/2	6	6	RMR-2500
	0.2505	1-1/2	6	6	RMR-2505

Straight Shank Chucking Reamer



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 over 1/2" to 5/8" - +.003/-0
 over 5/8" to 1-1/2" - +.001/+0.004

Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
	0.2510	1-1/2	6	6	RMR-2510
	0.2515	1-1/2	6	6	RMR-2515
	0.2520	1-1/2	6	6	RMR-2520
	0.2530	1-1/2	6	6	RMR-2530
	0.2540	1-1/2	6	6	RMR-2540
	0.2550	1-1/2	6	6	RMR-2550
	0.2559	1-1/2	6	6	RMR-2559
	0.2565	1-1/2	6	6	RMR-2565
F	0.2570	1-1/2	6	6	RMR-2570
	0.2575	1-1/2	6	6	RMR-2575
	0.2580	1-1/2	6	6	RMR-2580
	0.2590	1-1/2	6	6	RMR-2590
	0.2600	1-1/2	6	6	RMR-2600
	0.2605	1-1/2	6	6	RMR-2605
G	0.2610	1-1/2	6	6	RMR-2610
	0.2650	1-1/2	6	6	RMR-2650
17/64	0.2656	1-1/2	6	6	RMR-2656
H	0.2660	1-1/2	6	6	RMR-2660
	0.2670	1-1/2	6	6	RMR-2670
	0.2675	1-1/2	6	6	RMR-2675
	0.2680	1-1/2	6	6	RMR-2680
	0.2690	1-1/2	6	6	RMR-2690
	0.2695	1-1/2	6	6	RMR-2695
	0.2700	1-1/2	6	6	RMR-2700
	0.2710	1-1/2	6	6	RMR-2710
I	0.2720	1-1/2	6	6	RMR-2720
	0.2740	1-1/2	6	6	RMR-2740
	0.2750	1-1/2	6	6	RMR-2750
	0.2756	1-1/2	6	6	RMR-2756
	0.2760	1-1/2	6	6	RMR-2760
J	0.2770	1-1/2	6	6	RMR-2770
	0.2780	1-1/2	6	6	RMR-2780
	0.2800	1-1/2	6	6	RMR-2800
	0.2805	1-1/2	6	6	RMR-2805
K	0.2810	1-1/2	6	6	RMR-2810
9/32	0.2812	1-1/2	6	6	RMR-2812
	0.2820	1-1/2	6	6	RMR-2820
	0.2830	1-1/2	6	6	RMR-2830
	0.2835	1-1/2	6	6	RMR-2835

Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
	0.2840	1-1/2	6	6	RMR-2840
	0.2860	1-1/2	6	6	RMR-2860
	0.2870	1-1/2	6	6	RMR-2870
	0.2890	1-1/2	6	6	RMR-2890
L	0.2900	1-1/2	6	6	RMR-2900
	0.2920	1-1/2	6	6	RMR-2920
	0.2930	1-1/2	6	6	RMR-2930
	0.2940	1-1/2	6	6	RMR-2940
M	0.2950	1-1/2	6	6	RMR-2950
	0.2953	1-1/2	6	6	RMR-2953
	0.2960	1-1/2	6	6	RMR-2960
19/64	0.2969	1-1/2	6	6	RMR-2969
	0.2980	1-1/2	6	6	RMR-2980
	0.2990	1-1/2	6	6	RMR-2990
N	0.3020	1-1/2	6	6	RMR-3020
	0.3030	1-1/2	6	6	RMR-3030
	0.3050	1-1/2	6	6	RMR-3050
	0.3060	1-1/2	6	6	RMR-3060
	0.3070	1-1/2	6	6	RMR-3070
	0.3090	1-1/2	6	6	RMR-3090
	0.3100	1-1/2	6	6	RMR-3100
	0.3105	1-1/2	6	6	RMR-3105
	0.3110	1-1/2	6	6	RMR-3110
	0.3115	1-1/2	6	6	RMR-3115
	0.3120	1-1/2	6	6	RMR-3120
5/16	0.3125	1-1/2	6	6	RMR-3125
	0.3130	1-1/2	6	6	RMR-3130
	0.3135	1-1/2	6	6	RMR-3135
	0.3140	1-1/2	6	6	RMR-3140
	0.3145	1-1/2	6	6	RMR-3145
	0.3150	1-1/2	6	6	RMR-3150
	0.3155	1-1/2	6	6	RMR-3155
O	0.3160	1-1/2	6	6	RMR-3160
	0.3165	1-1/2	6	6	RMR-3165
	0.3170	1-1/2	6	6	RMR-3170
	0.3180	1-1/2	6	6	RMR-3180
	0.3190	1-1/2	6	6	RMR-3190
	0.3200	1-1/2	6	6	RMR-3200
	0.3220	1-1/2	6	6	RMR-3220

HSS REAMERS

Straight Shank Chucking Reamer

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 over 5/8" to 1-1/2" - +.001/+0.004



Decimal Equivalent

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
P	0.3230	1-1/2	6	6	RMR-3230
	0.3240	1-1/2	6	6	RMR-3240
	0.3250	1-1/2	6	6	RMR-3250
	0.3270	1-1/2	6	6	RMR-3270
21/64	0.3281	1-1/2	6	6	RMR-3281
	0.3290	1-1/2	6	6	RMR-3290
	0.3300	1-1/2	6	6	RMR-3300
Q	0.3320	1-1/2	6	6	RMR-3320
	0.3346	1-1/2	6	6	RMR-3346
	0.3350	1-1/2	6	6	RMR-3350
	0.3360	1-1/2	6	6	RMR-3360
	0.3370	1-1/2	6	6	RMR-3370
R	0.3390	1-1/2	6	6	RMR-3390
	0.3415	1-1/2	6	6	RMR-3415
	0.3430	1-1/2	6	6	RMR-3430
11/32	0.3437	1-1/2	6	6	RMR-3437
	0.3435	1-1/2	6	6	RMR-3435
	0.3438	1-1/2	6	6	RMR-3438
	0.3440	1-1/2	6	6	RMR-3440
	0.3445	1-1/2	6	6	RMR-3445
	0.3450	1-1/2	6	6	RMR-3450
	0.3460	1-1/2	6	6	RMR-3460
S	0.3480	1-3/4	7	6	RMR-3480
	0.3490	1-3/4	7	6	RMR-3490
	0.3520	1-3/4	7	6	RMR-3520
	0.3543	1-3/4	7	6	RMR-3543
	0.3550	1-3/4	7	6	RMR-3550
	0.3570	1-3/4	7	6	RMR-3570
T	0.3580	1-3/4	7	6	RMR-3580
23/64	0.3594	1-3/4	7	6	RMR-3594
	0.3620	1-3/4	7	6	RMR-3620
U	0.3680	1-3/4	7	6	RMR-3680
	0.3690	1-3/4	7	6	RMR-3690
	0.3715	1-3/4	7	6	RMR-3715
	0.3720	1-3/4	7	6	RMR-3720
	0.3730	1-3/4	7	6	RMR-3730
	0.3735	1-3/4	7	6	RMR-3735
	0.3740	1-3/4	7	6	RMR-3740
	0.3745	1-3/4	7	6	RMR-3745

Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
3/8	0.3750	1-3/4	7	6	RMR-3750
	0.3755	1-3/4	7	6	RMR-3755
	0.3760	1-3/4	7	6	RMR-3760
	0.3765	1-3/4	7	6	RMR-3765
V	0.3770	1-3/4	7	6	RMR-3770
	0.3780	1-3/4	7	6	RMR-3780
	0.3790	1-3/4	7	6	RMR-3790
	0.3800	1-3/4	7	6	RMR-3800
	0.3820	1-3/4	7	6	RMR-3820
	0.3830	1-3/4	7	6	RMR-3830
	0.3840	1-3/4	7	6	RMR-3840
	0.3855	1-3/4	7	6	RMR-3855
W	0.3860	1-3/4	7	6	RMR-3860
	0.3865	1-3/4	7	6	RMR-3865
	0.3870	1-3/4	7	6	RMR-3870
	0.3875	1-3/4	7	6	RMR-3875
	0.3880	1-3/4	7	6	RMR-3880
	0.3890	1-3/4	7	6	RMR-3890
25/64	0.3906	1-3/4	7	6	RMR-3906
	0.3910	1-3/4	7	6	RMR-3910
	0.3937	1-3/4	7	6	RMR-3937
	0.3920	1-3/4	7	6	RMR-3920
	0.3930	1-3/4	7	6	RMR-3930
	0.3940	1-3/4	7	6	RMR-3940
	0.3950	1-3/4	7	6	RMR-3950
	0.3955	1-3/4	7	6	RMR-3955
	0.3960	1-3/4	7	6	RMR-3960
X	0.3970	1-3/4	7	6	RMR-3970
	0.3980	1-3/4	7	6	RMR-3980
	0.4000	1-3/4	7	6	RMR-4000
	0.4020	1-3/4	7	6	RMR-4020
Y	0.4040	1-3/4	7	6	RMR-4040
13/32	0.4062	1-3/4	7	6	RMR-4062
	0.4100	1-3/4	7	6	RMR-4100
	0.4120	1-3/4	7	6	RMR-4120
Z	0.4130	1-3/4	7	6	RMR-4130
	0.4134	1-3/4	7	6	RMR-4134
27/64	0.4219	1-3/4	7	6	RMR-4219
	0.4230	1-3/4	7	6	RMR-4230

Straight Shank Chucking Reamer



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Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
	0.4240	1-3/4	7	6	RMR-4240
	0.4300	1-3/4	7	6	RMR-4300
	0.4320	1-3/4	7	6	RMR-4320
	0.4331	1-3/4	7	6	RMR-4331
	0.4335	1-3/4	7	6	RMR-4335
	0.4340	1-3/4	7	6	RMR-4340
	0.4355	1-3/4	7	6	RMR-4355
	0.4365	1-3/4	7	6	RMR-4365
	0.4370	1-3/4	7	6	RMR-4370
7/16	0.4375	1-3/4	7	6	RMR-4375
	0.4385	1-3/4	7	6	RMR-4385
	0.4390	1-3/4	7	6	RMR-4390
	0.4400	1-3/4	7	6	RMR-4400
	0.4410	1-3/4	7	6	RMR-4410
	0.4420	1-3/4	7	6	RMR-4420
	0.4430	1-3/4	7	6	RMR-4430
	0.4435	1-3/4	7	6	RMR-4435
	0.4440	1-3/4	7	6	RMR-4440
	0.4450	1-3/4	7	6	RMR-4450
	0.4480	1-3/4	7	6	RMR-4480
	0.4490	1-3/4	7	6	RMR-4490
	0.4500	1-3/4	7	6	RMR-4500
	0.4528	1-3/4	7	6	RMR-4528
	0.4530	1-3/4	7	6	RMR-4530
29/64	0.4531	1-3/4	7	6	RMR-4531
	0.4550	1-3/4	7	6	RMR-4550
	0.4560	1-3/4	7	6	RMR-4560
	0.4570	1-3/4	7	6	RMR-4570
15/32	0.4687	1-3/4	7	6	RMR-4687
	0.4688	1-3/4	7	6	RMR-4688
	0.4700	2	8	6	RMR-4700
	0.4715	2	8	6	RMR-4715
	0.4724	2	8	6	RMR-4724
	0.4730	2	8	6	RMR-4730
	0.4735	2	8	6	RMR-4735
	0.4740	2	8	6	RMR-4740
	0.4820	2	8	6	RMR-4820
31/64	0.4844	2	8	6	RMR-4844
	0.4880	2	8	6	RMR-4880

Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
	0.4900	2	8	6	RMR-4900
	0.4921	2	8	6	RMR-4921
	0.4930	2	8	6	RMR-4930
	0.4940	2	8	6	RMR-4940
	0.4970	2	8	6	RMR-4970
	0.4980	2	8	6	RMR-4980
	0.4990	2	8	6	RMR-4990
	0.4995	2	8	6	RMR-4995
1/2	0.5000	2	8	6	RMR-5000
	0.5005	2	8	6	RMR-5005
	0.5010	2	8	6	RMR-5010
	0.5015	2	8	6	RMR-5015
	0.5020	2	8	6	RMR-5020
	0.5030	2	8	6	RMR-5030
	0.5035	2	8	6	RMR-5035
	0.5040	2	8	6	RMR-5040
	0.5050	2	8	6	RMR-5050
	0.5060	2	8	6	RMR-5060
	0.5070	2	8	6	RMR-5070
	0.5080	2	8	6	RMR-5080
	0.5090	2	8	6	RMR-5090
	0.5118	2	8	6	RMR-5118
	0.5156	2	8	6	RMR-5156
17/32	0.5312	2	8	6	RMR-5312
	0.5315	2	8	6	RMR-5315
	0.5469	2	8	6	RMR-5469
	0.5512	2	8	6	RMR-5512
	0.5615	2	8	6	RMR-5615
9/16	0.5625	2	8	6	RMR-5625
	0.5635	2	8	6	RMR-5635
	0.5709	2	8	6	RMR-5709
	0.5781	2	8	6	RMR-5781
	0.5906	2	8	6	RMR-5906
19/32	0.5937	2	8	6	RMR-5937
	0.5938	2	8	6	RMR-5938
	0.6094	2	8	6	RMR-6094
	0.6102	2-1/4	9	8	RMR-6102
	0.6220	2-1/4	9	8	RMR-6220
	0.6240	2-1/4	9	8	RMR-6240

HSS REAMERS

Straight Shank Chucking Reamer

Flute Geometry: Straight Flute - Right Hand Cut
Point: 45° Chamfer
Diameter Tolerances: up to 1/2" - +.0002/-0
 over 1/2" to 5/8" - +.003/-0
 over 5/8" to 1-1/2" - +.001/+0.004



Decimal Equivalent

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
	0.6245	2-1/4	9	8	RMR-6245
5/8	0.6250	2-1/4	9	8	RMR-6250
	0.6255	2-1/4	9	8	RMR-6255
	0.6260	2-1/4	9	8	RMR-6260
	0.6270	2-1/4	9	8	RMR-6270
	0.6275	2-1/4	9	8	RMR-6275
	0.6280	2-1/4	9	8	RMR-6280
	0.6299	2-1/4	9	8	RMR-6299
	0.6406	2-1/4	9	8	RMR-6406
	0.6496	2-1/4	9	8	RMR-6496
21/32	0.6562	2-1/4	9	8	RMR-6562
	0.6693	2-1/4	9	8	RMR-6693
	0.6719	2-1/4	9	8	RMR-6719
	0.6865	2-1/4	9	8	RMR-6865
11/16	0.6875	2-1/4	9	8	RMR-6875
	0.6890	2-1/4	9	8	RMR-6890
	0.7031	2-1/4	9	8	RMR-7031
	0.7087	2-1/4	9	8	RMR-7087
23/32	0.7187	2-1/4	9	8	RMR-7187
	0.7188	2-1/4	9	8	RMR-7188
	0.7283	2-1/2	9	8	RMR-7283
	0.7344	2-1/2	9	8	RMR-7344
	0.7480	2-1/2	9	8	RMR-7480
	0.7490	2-1/2	9	8	RMR-7490
3/4	0.7500	2-1/2	9	8	RMR-7500
	0.7510	2-1/2	9	8	RMR-7510
	0.7520	2-1/2	9	8	RMR-7520
	0.7550	2-1/2	9	8	RMR-7550
	0.7580	2-1/2	9	8	RMR-7580
	0.7656	2-1/2	9	8	RMR-7656
	0.7677	2-1/2	9	8	RMR-7677
25/32	0.7812	2-1/2	9	8	RMR-7812
	0.7874	2-1/2	9	8	RMR-7874
	0.7969	2-1/2	9	8	RMR-7969
	0.8071	2-1/2	9	8	RMR-8071
	0.8120	2-1/2	9	8	RMR-8120

Decimal Equivalent (cont.)

Size	Dec. Equiv	LOC	OAL	# Of Flutes	Part Number
13/16	0.8125	2-1/2	9	8	RMR-8125
	0.8135	2-1/2	9	8	RMR-8135
	0.8268	2-1/2	9	8	RMR-8268
	0.8281	2-1/2	9	8	RMR-8281
27/32	0.8437	2-1/2	9	8	RMR-8437
	0.8438	2-1/2	9	8	RMR-8438
	0.8465	2-5/8	10	8	RMR-8465
	0.8594	2-5/8	10	8	RMR-8594
	0.8661	2-5/8	10	8	RMR-8661
	0.8745	2-5/8	10	8	RMR-8745
7/8	0.8750	2-5/8	10	8	RMR-8750
	0.8780	2-5/8	10	8	RMR-8780
	0.8858	2-5/8	10	8	RMR-8858
	0.8906	2-5/8	10	8	RMR-8906
	0.9055	2-5/8	10	8	RMR-9055
29/32	0.9062	2-5/8	10	8	RMR-9062
	0.9219	2-5/8	10	8	RMR-9219
	0.9252	2-5/8	10	8	RMR-9252
15/16	0.9375	2-5/8	10	8	RMR-9375
	0.9449	2-5/8	10	8	RMR-9449
	0.9531	2-5/8	10	8	RMR-9531
	0.9646	2-5/8	10	8	RMR-9646
31/32	0.9687	2-5/8	10	8	RMR-9687
	0.9688	2-5/8	10	8	RMR-9688
	0.9843	2-3/4	10-1/2	8	RMR-9843
	0.9844	2-3/4	10-1/2	8	RMR-9844
	0.9980	2-3/4	10-1/2	8	RMR-9980
	0.9950	2-3/4	10-1/2	8	RMR-9995
1	1.0000	2-3/4	10-1/2	8	RMR-10000
	1.0050	2-3/4	10-1/2	8	RMR-10005
	1.0010	2-3/4	10-1/2	8	RMR-10010
1-1/8	1.1250	2-7/8	11	8	RMR-11250
1-1/4	1.2500	3	11-1/2	8	RMR-12500
1-3/8	1.3750	3-1/4	12	10	RMR-13750
1-1/2	1.5000	3-1/2	12-1/2	10	RMR-15000

SOLID CARBIDE REAMERS



Straight Shank Straight Flute Carbide Reamer

Flute Geometry: Right hand cutting - 45° cutting angle
Application: Drilling in steel, cast steel, stainless steel, hardened steels, cast iron, special alloys, and non-ferrous metals

Decimal Equivalent

Size OD	Dec Dia	Shank	OAL	LOC	# of Flutes	Part Number
	0.0135	0.0135	1-1/2	3/16	4	RMR-0135-C
	0.0138	0.0138	1-1/2	3/16	4	RMR-0138-C
	0.0145	0.0145	1-1/2	3/16	4	RMR-0145-C
1/64	0.0156	0.0156	1-1/2	3/16	4	RMR-0156-C
	0.0160	0.0160	1-1/2	3/16	4	RMR-0160-C
	0.0180	0.0180	1-1/2	3/16	4	RMR-0180-C
	0.0197	0.0197	1-1/2	3/16	4	RMR-0197-C
	0.0200	0.0200	1-1/2	3/16	4	RMR-0200-C
	0.0210	0.0210	1-1/2	1/4	4	RMR-0210-C
	0.0225	0.0225	1-1/2	1/4	4	RMR-0225-C
	0.0240	0.0240	1-1/2	1/4	4	RMR-0240-C
	0.0250	0.0250	1-1/2	1/4	4	RMR-0250-C
	0.0260	0.0260	1-1/2	1/4	4	RMR-0260-C
	0.0280	0.0280	1-1/2	1/4	4	RMR-0280-C
	0.0292	0.0292	1-1/2	1/4	4	RMR-0292-C
	0.0300	0.0300	1-1/2	1/4	4	RMR-0300-C
	0.0310	0.0310	1-1/2	1/4	4	RMR-0310-C
1/32	0.0312	0.0312	1-1/2	1/4	4	RMR-0312-C
	0.0315	0.0315	1-1/2	1/4	4	RMR-0315-C
	0.0320	0.0320	1-1/2	1/4	4	RMR-0320-C
	0.0330	0.0330	1-1/2	1/4	4	RMR-0330-C
	0.0335	0.0335	1-1/2	1/4	4	RMR-0335-C
	0.0350	0.0350	1-1/2	1/4	4	RMR-0350-C
	0.0360	0.0360	1-1/2	1/4	4	RMR-0360-C
	0.0370	0.0370	1-1/2	1/4	4	RMR-0370-C
	0.0380	0.0380	1-1/2	1/4	4	RMR-0380-C
	0.0385	0.0385	1-1/2	1/4	4	RMR-0385-C
	0.0390	0.0390	1-1/2	1/4	4	RMR-0390-C
	0.0394	0.0394	1-1/2	1/4	4	RMR-0394-C
	0.0400	0.0400	1-1/2	1/4	4	RMR-0400-C
	0.0410	0.0410	1-1/2	3/8	4	RMR-0410-C
	0.0420	0.0420	1-1/2	3/8	4	RMR-0420-C
	0.0430	0.0430	1-1/2	3/8	4	RMR-0430-C
	0.0465	0.0430	1-1/2	3/8	4	RMR-0465-C

Decimal Equivalent (cont.)

Size OD	Dec Dia	Shank	OAL	LOC	# of Flutes	Part Number
3/64	0.0468	0.0430	1-1/2	3/8	4	RMR-0469-C
	0.0520	0.0460	1-1/2	3/8	4	RMR-0520-C
	0.0550	0.0460	1-1/2	3/8	4	RMR-0550-C
	0.0591	0.0460	1-1/2	3/8	4	RMR-0591-C
	0.0595	0.0580	1-1/2	3/8	4	RMR-0595-C
1/16	0.0625	0.0580	1-1/2	3/8	4	RMR-0625-C
	0.0635	0.0580	1-1/2	3/8	4	RMR-0635-C
	0.0670	0.0650	1-3/4	1/2	4	RMR-0670-C
	0.0700	0.0650	1-3/4	1/2	4	RMR-0700-C
	0.0730	0.0650	1-3/4	1/2	4	RMR-0730-C
	0.0760	0.0730	1-3/4	1/2	4	RMR-0760-C
5/64	0.0781	0.0730	1-3/4	1/2	4	RMR-0781-C
	0.0785	0.0730	1-3/4	1/2	4	RMR-0785-C
	0.0787	0.0730	2-1/4	5/8	4	RMR-0787-C
	0.0810	0.0730	1-3/4	1/2	4	RMR-0810-C
	0.0820	0.0800	2	1/2	4	RMR-0820-C
	0.0860	0.0800	2	1/2	4	RMR-0860-C
	0.0890	0.0800	2	1/2	4	RMR-0890-C
	0.0935	0.0880	2	1/2	4	RMR-0935-C
3/32	0.0937	0.0880	2	1/2	4	RMR-0938-C
	0.0960	0.0880	2	1/2	4	RMR-0960-C
	0.0980	0.0960	2-1/4	5/8	4	RMR-0980-C
	0.0984	0.0960	3-1/2	7/8	4	RMR-0984-C
	0.0995	0.0960	2-1/4	5/8	4	RMR-0995-C
	0.1015	0.0960	2-1/4	5/8	4	RMR-1015-C
	0.1040	0.0960	2-1/4	5/8	4	RMR-1040-C
	0.1065	0.1040	2-1/4	5/8	4	RMR-1065-C
7/64	0.1094	0.1040	2-1/4	5/8	4	RMR-1094-C
	0.1100	0.1040	2-1/4	5/8	4	RMR-1100-C
	0.1110	0.1040	2-1/4	5/8	4	RMR-1110-C
	0.1130	0.1040	2-1/4	5/8	4	RMR-1130-C
	0.1160	0.1120	2-1/4	5/8	4	RMR-1160-C
	0.1181	0.1120	2-1/4	5/8	4	RMR-1181-C
	0.1200	0.1120	2-1/4	5/8	4	RMR-1200-C

SOLID CARBIDE REAMERS

Straight Shank Straight Flute Carbide Reamer

Flute Geometry: Right hand cutting - 45° cutting angle

Application: Drilling in steel, cast steel, stainless steel, hardened steels, cast iron, special alloys, and non-ferrous metals



Decimal Equivalent

Size OD	Dec Dia	Shank	OAL	LOC	# of Flutes	Part Number
1/8 DP2	0.1245	0.1200	2-1/4	5/8	4	RMR-1245-C
1/8 DP1	0.1248	0.1200	2-1/4	5/8	4	RMR-1248-C
1/8 US	0.1249	0.1200	2-1/4	5/8	4	RMR-1249-C
1/8	0.1250	0.1200	2-1/4	5/8	4	RMR-1250-C
1/8 OS	0.1260	0.1200	2-1/4	5/8	4	RMR-1260-C
	0.1285	0.1270	2-1/2	3/4	4	RMR-1285-C
	0.1360	0.1270	2-1/2	3/4	4	RMR-1360-C
	0.1378	0.1350	2-1/2	3/4	4	RMR-1378-C
	0.1405	0.1350	2-1/2	3/4	4	RMR-1405-C
9/64	0.1406	0.1350	2-1/2	3/4	4	RMR-1406-C
	0.1440	0.1350	2-1/2	3/4	4	RMR-1440-C
	0.1470	0.1430	2-1/2	3/4	4	RMR-1470-C
	0.1495	0.1430	2-1/2	3/4	4	RMR-1495-C
	0.1520	0.1430	2-1/2	3/4	4	RMR-1520-C
	0.1540	0.1510	2-1/2	3/4	4	RMR-1540-C
5/32	0.1562	0.1510	2-1/2	3/4	4	RMR-1562-C
	0.1570	0.1510	2-1/2	3/4	4	RMR-1570-C
	0.1575	0.1510	2-1/2	3/4	4	RMR-1575-C
	0.1590	0.1510	2-1/2	3/4	4	RMR-1590-C
	0.1610	0.1580	2-3/4	7/8	4	RMR-1610-C
	0.1660	0.1580	2-3/4	7/8	4	RMR-1660-C
	0.1695	0.1660	2-3/4	7/8	4	RMR-1695-C
11/64	0.1719	0.1660	2-3/4	7/8	4	RMR-1719-C
	0.1730	0.1660	2-3/4	7/8	4	RMR-1730-C
	0.1770	0.1740	2-3/4	7/8	4	RMR-1770-C
	0.1772	0.1740	2-3/4	7/8	4	RMR-1772-C
	0.1800	0.1740	2-3/4	7/8	4	RMR-1800-C
	0.1820	0.1740	2-3/4	7/8	4	RMR-1820-C
	0.1850	0.1820	2-3/4	7/8	4	RMR-1850-C
3/16 DP2	0.1870	0.1820	2-3/4	7/8	4	RMR-1870-C
3/16 DP1	0.1873	0.1820	2-3/4	7/8	4	RMR-1873-C

Decimal Equivalent (cont.)

Size OD	Dec Dia	Shank	OAL	LOC	# of Flutes	Part Number
3/16 US	0.1874	0.1820	2-3/4	7/8	4	RMR-1874-C
3/16	0.1875	0.1820	2-3/4	7/8	4	RMR-1875-C
3/16 OS	0.1885	0.1820	2-3/4	7/8	4	RMR-1885-C
	0.1890	0.1820	2-3/4	7/8	4	RMR-1890-C
	0.1910	0.1820	2-3/4	7/8	4	RMR-1910-C
	0.1935	0.1900	3	1	4	RMR-1935-C
	0.1960	0.1900	3	1	4	RMR-1960-C
	0.1969	0.1900	3	1	4	RMR-1969-C
	0.1990	0.1900	3	1	4	RMR-1990-C
	0.2010	0.1980	3	1	4	RMR-2010-C
13/64	0.2031	0.1980	3	1	4	RMR-2031-C
	0.2040	0.1980	3	1	4	RMR-2040-C
	0.2055	0.1980	3	1	4	RMR-2055-C
	0.2090	0.2050	3	1	4	RMR-2090-C
	0.2130	0.2050	3	1	4	RMR-2130-C
7/32	0.2187	0.2130	3	1	4	RMR-2188-C
	0.2210	0.2130	3	1	4	RMR-2210-C
	0.2280	0.2210	3	1	4	RMR-2280-C
15/64	0.2344	0.2290	3	1	4	RMR-2344-C
	0.2362	0.2290	3	1	4	RMR-2362-C
1/4 DP2	0.2495	0.2440	3	1	4	RMR-2495-C
1/4 DP1	0.2498	0.2440	3	1	4	RMR-2498-C
1/4 US	0.2499	0.2440	3	1	4	RMR-2499-C
1/4	0.2500	0.2440	3	1	4	RMR-2500-C
1/4 OS	0.2510	0.2440	3	1	4	RMR-2510-C
	0.2559	0.2520	3-1/4	1-1/8	4	RMR-2559-C
17/64	0.2656	0.2520	3-1/4	1-1/8	6	RMR-2656-C
	0.2756	0.2700	3-1/4	1-1/8	6	RMR-2756-C
9/32	0.2812	0.2700	3-1/4	1-1/8	6	RMR-2812-C
	0.2953	0.2850	3-1/4	1-1/8	6	RMR-2953-C
19/64	0.2968	0.2850	3-1/4	1-1/8	6	RMR-2969-C



Straight Shank Straight Flute Carbide Reamer

Flute Geometry: Right hand cutting - 45° cutting angle

Application: Drilling in steel, cast steel, stainless steel, hardened steels, cast iron, special alloys, and non-ferrous metals

Decimal Equivalent

Size OD	Dec Dia	Shank	OAL	LOC	# of Flutes	Part Number
5/16 DP2	0.3120	0.3010	3-1/4	1-1/8	6	RMR-3120-C
5/16 DP1	0.3123	0.3010	3-1/4	1-1/8	6	RMR-3123-C
5/16 US	0.3124	0.3010	3-1/4	1-1/8	6	RMR-3124-C
5/16	0.3125	0.3010	3-1/4	1-1/8	6	RMR-3125-C
5/16 OS	0.3135	0.3010	3-1/4	1-1/8	6	RMR-3135-C
	0.3150	0.3010	3-1/4	1-1/8	6	RMR-3150-C
21/64	0.3281	0.3170	3-1/2	1-1/4	6	RMR-3281-C
	0.3346	0.3320	3-1/2	1-1/4	6	RMR-3346-C
11/32	0.3437	0.3320	3-1/2	1-1/4	6	RMR-3438-C
	0.3543	0.3480	3-1/2	1-1/4	6	RMR-3543-C
23/64	0.3594	0.3480	3-1/2	1-1/4	6	RMR-3594-C
	0.3740	0.3630	3-1/2	1-1/4	6	RMR-3740-C
3/8 DP2	0.3745	0.3630	3-1/2	1-1/4	6	RMR-3745-C
3/8 DP1	0.3748	0.3630	3-1/2	1-1/4	6	RMR-3748-C
3/8 US	0.3749	0.3630	3-1/2	1-1/4	6	RMR-3749-C
3/8	0.3750	0.3630	3-1/2	1-1/4	6	RMR-3750-C
3/8 OS	0.3760	0.3630	3-1/2	1-1/4	6	RMR-3760-C
25/64	0.3906	0.3800	3-1/2	1-1/4	6	RMR-3906-C
	0.3937	0.3800	3-1/2	1-1/4	6	RMR-3937-C
13/32	0.4062	0.3800	3-1/2	1-1/4	6	RMR-4062-C
	0.4134	0.3800	3-1/2	1-1/4	6	RMR-4134-C
27/64	0.4219	0.4100	3-3/4	1-3/8	6	RMR-4219-C
	0.4331	0.4100	3-3/4	1-3/8	6	RMR-4331-C
7/16 DP2	0.4370	0.4100	3-3/4	1-3/8	6	RMR-4370-C
7/16 DP1	0.4373	0.4100	3-3/4	1-3/8	6	RMR-4373-C
7/16 US	0.4374	0.4100	3-3/4	1-3/8	6	RMR-4374-C
7/16	0.4375	0.4100	3-3/4	1-3/8	6	RMR-4375-C
7/16 OS	0.4385	0.4100	3-3/4	1-3/8	6	RMR-4385-C
	0.4528	0.4400	3-3/4	1-3/8	6	RMR-4528-C
29/64	0.4531	0.4400	3-3/4	1-3/8	6	RMR-4531-C
15/32	0.4688	0.4400	3-3/4	1-3/8	6	RMR-4688-C

Decimal Equivalent (cont.)

Size OD	Dec Dia	Shank	OAL	LOC	# of Flutes	Part Number
	0.4724	0.4400	3-3/4	1-3/8	6	RMR-4724-C
31/64	0.4844	0.4700	4	1-1/2	6	RMR-4844-C
1/2 DP2	0.4995	0.4700	4	1-1/2	6	RMR-4995-C
1/2 DP1	0.4998	0.4700	4	1-1/2	6	RMR-4998-C
1/2 US	0.4999	0.4700	4	1-1/2	6	RMR-4999-C
1/2	0.5000	0.4700	4	1-1/2	6	RMR-5000-C
1/2 OS	0.5010	0.4700	4	1-1/2	6	RMR-5010-C
	0.5118	0.5050	4	1-1/2	6	RMR-5118-C
33/64	0.5156	0.5050	4	1-1/2	6	RMR-5156-C
17/32	0.5312	0.5050	4	1-1/2	6	RMR-5312-C
35/64	0.5469	0.5350	4	1-1/2	6	RMR-5469-C
	0.5512	0.5350	4	1-1/2	6	RMR-5512-C
9/16	0.5625	0.5350	4	1-1/2	6	RMR-5625-C
37/64	0.5781	0.5650	4	1-3/4	6	RMR-5781-C
	0.5906	0.5650	4	1-1/2	6	RMR-5906-C
19/32	0.5938	0.5650	4	1-3/4	6	RMR-5938-C
39/64	0.6094	0.5950	4	1-3/4	6	RMR-6094-C
5/8	0.6250	0.5950	4	1-3/4	6	RMR-6250-C
	0.6299	0.5950	4	1-1/2	6	RMR-6299-C

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Size	# of Flutes	Thread Length	Neck Length	OAL	Oxide Part Number	TiN Part Number
#4-40	2	.313	.250	1-7/8	MOR-34400	MOR-94400
#6-32	2	.375	.313	2	MOR-34405	MOR-94405
#8-32	3	.375	.375	2-1/8	MOR-34408	MOR-94408
#10-24	3	.500	.375	2-3/8	MOR-34410	MOR-94410
#10-32	3	.500	.375	2-3/8	MOR-34412	MOR-94412
1/4-20	3	.625	.375	2-1/2	MOR-34417	MOR-94417
1/4-28	3	.625	.375	2-1/2	MOR-34420	MOR-94420
5/16-18	3	.688	.438	2-23/32	MOR-34422	MOR-94422
5/16-24	3	.688	.438	2-23/32	MOR-34424	MOR-94424
3/8-16	3	.750	.500	2-15/16	MOR-34426	MOR-94426
3/8-24	3	.750	.500	2-15/16	MOR-34428	MOR-94429
7/16-14	3	.875	.563	3-5/32	MOR-34430	MOR-94430
7/16-20	3	.875	.563	3-5/32	MOR-34432	MOR-94432
1/2-13	3	.938	.719	3-3/8	MOR-34434	MOR-94434
1/2-20	3	.938	.719	3-3/8	MOR-34436	MOR-94436
9/16-12	4	1.000	.673	3-19/32	MOR-34438	MOR-94438
9/16-18	4	1.000	.673	3-19/32	MOR-34439	MOR-94439
5/8-11	4	1.125	.673	3-13/16	MOR-34440	MOR-94440
5/8-18	4	1.125	.673	3-13/16	MOR-34441	MOR-94441
3/4-10	4	1.219	.766	4-1/4	MOR-34444	MOR-94444
3/4-16	4	1.219	.766	4-1/4	MOR-34445	MOR-94445
7/8-9	4	1.344	.875	4-11/16	MOR-34500	MOR-94500
7/8-14	4	1.344	.875	4-11/16	MOR-34501	MOR-94501
1-8	4	1.500	1.000	5-1/8	MOR-34502	MOR-94502
1-12	4	1.500	1.000	5-1/8	MOR-34503	MOR-94503
1-1/8--7	4	1.719	.843	5-7/16	MOR-34504	MOR-94504
1-1/8--12	4	1.719	.843	5-7/16	MOR-34505	MOR-94505
1-1/4--7	4	1.719	.843	5-3/4	MOR-34506	MOR-94506
1-1/4--12	4	1.719	.843	5-3/4	MOR-34507	MOR-94507
1-3/8--6	4	2.000	1.000	6-1/16	MOR-34508	MOR-94508
1-3/8--12	4	2.000	1.000	6-1/16	MOR-34509	MOR-94509
1-1/2--6	6	2.000	1.000	6-3/8	MOR-34510	MOR-94510
1-1/2--12	6	2.000	1.000	6-3/8	MOR-34511	MOR-94511





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Size	Pitch	Pitch Dia.	# of Flutes	Thread Length	Neck Length	OAL	Oxide Part Number	TiN Part Number
M3	0.5	D3	2	.313	.313	1-15/16	MOR-35240	MOR-95240
M3.5	0.6	D4	2	.375	.313	2	MOR-35241	MOR-95241
M4	0.7	D4	3	.375	.375	2-1/8	MOR-35242	MOR-95242
M5	0.8	D4	3	.500	.375	2-3/8	MOR-35243	MOR-95243
M6	1	D5	3	.625	.375	2-1/2	MOR-35244	MOR-95244
M7	1	D5	3	.688	.438	2-23/32	MOR-35245	MOR-95245
M8	1	D5	3	.688	.438	2-23/32	MOR-35246	MOR-95246
M8	1.25	D5	3	.688	.438	2-23/32	MOR-35247	MOR-95247
M10	1.25	D5	3	.750	.500	2-15/16	MOR-35248	MOR-95248
M10	1.5	D6	3	.750	.500	2-15/16	MOR-35249	MOR-95249
M12	1.25	D5	3	.938	.719	3-3/8	MOR-35250	MOR-95250
M12	1.75	D6	3	.938	.719	3-3/8	MOR-35251	MOR-95251
M14	1.5	D6	4	1.000	.673	3-19/32	MOR-35252	MOR-95252
M14	2	D7	4	1.000	.673	3-19/32	MOR-35253	MOR-95253
M16	1.5	D6	4	1.125	.673	3-13/16	MOR-35254	MOR-95254
M16	2	D7	4	1.125	.673	3-13/16	MOR-35255	MOR-95255
M18	1.5	D6	4	1.125	.719	4-1/32	MOR-35256	MOR-95256
M18	2.5	D7	4	1.125	.719	4-1/32	MOR-35257	MOR-95257
M20	1.5	D6	4	1.188	.812	4-15/32	MOR-35280	MOR-95280
M20	2.5	D7	4	1.188	.812	4-15/32	MOR-35281	MOR-95281
M22	1.5	D6	4	1.188	1.031	4-11/16	MOR-35282	MOR-95282
M22	2.5	D7	4	1.188	1.031	4-11/16	MOR-35283	MOR-95283
M24	2	D7	4	1.422	.797	4-29/32	MOR-35284	MOR-95284
M24	3	D8	4	1.422	.797	4-29/32	MOR-35285	MOR-95285

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Size	# of Flutes	Thread Length	Neck Length	OAL	Oxide Part Number	TiN Part Number
#4-40	3	.236	.327	1-7/8	MOR-34450	MOR-94450
#6-32	3	.236	.452	2	MOR-34454	MOR-94454
#8-32	3	.236	.514	2-1/8	MOR-34457	MOR-94457
#10-24	3	.354	.521	2-3/8	MOR-34460	MOR-94460
#10-32	3	.354	.521	2-3/8	MOR-34462	MOR-94462
1/4-20	3	.433	.567	2-1/2	MOR-34466	MOR-94466
1/4-28	3	.433	.567	2-1/2	MOR-34468	MOR-94468
5/16-18	3	.472	.653	2-23/32	MOR-34470	MOR-94470
5/16-24	3	.472	.653	2-23/32	MOR-34472	MOR-94472
3/8-16	3	.551	.699	2-15/16	MOR-34475	MOR-94474
3/8-24	3	.551	.699	2-15/16	MOR-34476	MOR-94477
7/16-14	3	.591	.847	3-5/32	MOR-34478	MOR-94479
7/16-20	3	.591	.847	3-5/32	MOR-34480	MOR-94481
1/2-13	3	.630	1.026	3-3/8	MOR-34482	MOR-94483
1/2-20	3	.630	1.026	3-3/8	MOR-34484	MOR-94485
9/16-12	3	.690	.983	3-19/32	MOR-34486	MOR-94486
9/16-18	3	.690	.983	3-19/32	MOR-34487	MOR-94487
5/8-11	3	.745	1.052	3-13/16	MOR-34488	MOR-94488
5/8-18	3	.745	1.052	3-13/16	MOR-34489	MOR-94489
3/4-10	4	.820	1.165	4-1/4	MOR-34492	MOR-94492
3/4-16	4	.820	1.165	4-1/4	MOR-34493	MOR-94493
7/8-9	4	.911	1.308	4-11/16	MOR-34520	MOR-94520
7/8-14	4	.911	1.308	4-11/16	MOR-34521	MOR-94521
1-8	4	1.025	1.475	5-1/8	MOR-34522	MOR-94522
1-12	4	1.025	1.475	5-1/8	MOR-34523	MOR-94523
1-1/8-7	4	1.143	1.419	5-7/16	MOR-34524	MOR-94524
1-1/8-12	4	1.143	1.419	5-7/16	MOR-34525	MOR-94525
1-1/4-7	4	1.143	1.419	5-3/4	MOR-34526	MOR-94526
1-1/4-12	4	1.143	1.419	5-3/4	MOR-34527	MOR-94527
1-3/8-6	4	1.333	1.667	6-1/16	MOR-34528	MOR-94528
1-3/8-12	4	1.333	1.667	6-1/16	MOR-34529	MOR-94529
1-1/2-6	4	1.333	1.667	6-3/8	MOR-34530	MOR-94530
1-1/2-12	4	1.333	1.667	6-3/8	MOR-34531	MOR-94531





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Size	Pitch	Pitch Dia.	# of Flutes	Thread Length	Neck Length	OAL	Oxide Part Number	TiN Part Number
M3	0.5	D3	3	.236	.389	1-15/16	MOR-35258	MOR-95258
M3.5	0.6	D4	3	.236	.452	2	MOR-35259	MOR-95259
M4	0.7	D4	3	.236	.514	2-1/8	MOR-35260	MOR-95260
M5	0.8	D4	3	.354	.521	2-3/8	MOR-35261	MOR-95261
M6	1	D5	3	.433	.567	2-1/2	MOR-35262	MOR-95262
M7	1	D5	3	.472	.653	2-23/32	MOR-35263	MOR-95263
M8	1	D5	3	.472	.653	2-23/32	MOR-35264	MOR-95264
M8	1.25	D5	3	.472	.653	2-23/32	MOR-35265	MOR-95265
M10	1.25	D5	3	.551	.699	2-15/16	MOR-35266	MOR-95266
M10	1.5	D6	3	.551	.699	2-15/16	MOR-35267	MOR-95267
M12	1.25	D5	3	.630	1.026	3-3/8	MOR-35268	MOR-95268
M12	1.75	D6	3	.630	1.026	3-3/8	MOR-35269	MOR-95269
M14	1.5	D6	3	.690	.983	3-19/32	MOR-35270	MOR-95270
M14	2	D7	3	.690	.983	3-19/32	MOR-35271	MOR-95271
M16	1.5	D6	3	.745	1.052	3-13/16	MOR-35272	MOR-95272
M16	2	D7	3	.745	1.052	3-13/16	MOR-35273	MOR-95273
M18	1.5	D6	4	.813	.983	4-1/32	MOR-35274	MOR-95274
M18	2.5	D7	4	.813	.983	4-1/32	MOR-35275	MOR-95275
M20	1.5	D6	4	.790	1.210	4-15/32	MOR-35290	MOR-95290
M20	2.5	D7	4	.790	1.210	4-15/32	MOR-35291	MOR-95291
M22	1.5	D6	4	.790	1.428	4-11/16	MOR-35292	MOR-95292
M22	2.5	D7	4	.790	1.428	4-11/16	MOR-35293	MOR-95293
M24	2	D7	4	.940	1.279	4-29/32	MOR-35294	MOR-95294
M24	3	D8	4	.940	1.279	4-29/32	MOR-35295	MOR-95295

Spiral Point Plug Taps - Ground Thread - High Speed Steel



Spiral Point taps are designed for machine tapping in the through holes in a wide variety of materials. The point ejects the chips ahead of the tap, eliminating chip disposal problems and thread damage. **Steam Oxide Surface Treatment** increases wear resistance, reduces friction, acts as a lubricant, reduces galling & chip welding, improves chip flow and increases tap lubricant retention.

Size	TPI - UNC	TPI - UNF	# of Flutes Standard	# of Flutes Optional	Pitch Dia.	Thread Length	OAL	Bright Finish Part Number	Oxide Part Number
0	—	80	2	—	H1	5/16	1-5/8	MOR-34001	
0	—	80	2	—	H2	5/16	1-5/8	MOR-34002	MOR-34122
1	64	—	2	—	H1	3/8	1-11/16	MOR-34003	
1	64	—	2	—	H2	3/8	1-11/16	MOR-34004	
1	—	72	2	—	H1	3/8	1-11/16	MOR-34005	
1	—	72	2	—	H2	3/8	1-11/16	MOR-34006	MOR-34126
2	56	—	2	—	H2	7/16	1-3/4	MOR-34008	MOR-34127
2	—	64	2	—	H2	7/16	1-3/4	MOR-34010	
3	48	—	2	—	H2	1/2	1-13/16	MOR-34012	MOR-34129
3	—	56	2	—	H1	1/2	1-13/16	MOR-34013	
3	—	56	2	—	H2	1/2	1-13/16	MOR-34014	MOR-34131
4	40	—	2	—	H1	9/16	1-7/8	MOR-34015	MOR-34132
4	40	—	2	—	H2	9/16	1-7/8	MOR-34016	MOR-34133
4	—	48	2	—	H1	9/16	1-7/8	MOR-34017	
4	—	48	2	—	H2	9/16	1-7/8	MOR-34018	
4	—	36	2	—	H2	9/16	1-7/8	MOR-34019	MOR-34134
5	40	—	2	—	H1	5/8	1-15/16	MOR-34020	
5	40	—	2	—	H2	5/8	1-15/16	MOR-34021	MOR-34136
5	—	44	2	—	H2	5/8	1-15/16	MOR-34022	
6	32	—	2	—	H1	11/16	2	MOR-34023	
6	32	—	2	—	H2	11/16	2	MOR-34024	MOR-34137
6	32	—	2	—	H3	11/16	2	MOR-34025	MOR-34138
6	—	40	2	—	H2	11/16	2	MOR-34026	MOR-34139
8	32	—	2	—	H1	3/4	2-1/8	MOR-34027	
8	32	—	2	—	H2	3/4	2-1/8	MOR-34028	MOR-34140
8	32	—	2	—	H3	3/4	2-1/8	MOR-34029	MOR-34141
8	—	36	2	—	H2	3/4	2-1/8	MOR-34030	MOR-34142
10	24	—	2	—	H1	7/8	2-3/8	MOR-34031	
10	24	—	2	—	H2	7/8	2-3/8	MOR-34032	MOR-34143
10	24	—	2	—	H3	7/8	2-3/8	MOR-34033	MOR-34144
10	—	32	2	—	H1	7/8	2-3/8	MOR-34034	
10	—	32	2	—	H2	7/8	2-3/8	MOR-34035	MOR-34145
10	—	32	2	—	H3	7/8	2-3/8	MOR-34036	MOR-34146
12	24	—	2	—	H3	15/16	2-3/8	MOR-34038	MOR-34147
12	—	28	2	—	H3	15/16	2-3/8	MOR-34039	MOR-34148





Spiral Point Plug Taps - Ground Thread - High Speed Steel (cont.)

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Size	TPI - UNC	TPI - UNF	# of Flutes Standard	# of Flutes Optional	Pitch Dia.	Thread Length	OAL	Bright Finish Part Number	Oxide Part Number
1/4	20	—	2	—	H1	1	2-1/2	MOR-33001	
1/4	20	—	2	—	H2	1	2-1/2	MOR-33002	MOR-33055
1/4	20	—	2	—	H3	1	2-1/2	MOR-33003	MOR-33056
1/4	20	—	2	—	H5	1	2-1/2	MOR-33004	MOR-33057
1/4	20	—	—	3	H3	1	2-1/2	MOR-33005	
1/4	20	—	—	3	H5	1	2-1/2	MOR-33006	
1/4	—	28	2	—	H1	1	2-1/2	MOR-33007	
1/4	—	28	2	—	H2	1	2-1/2	MOR-33008	MOR-33058
1/4	—	28	2	—	H3	1	2-1/2	MOR-33009	MOR-33059
1/4	—	28	2	—	H4	1	2-1/2	MOR-33010	MOR-33060
1/4	—	28	—	3	H2	1	2-1/2	MOR-33011	
1/4	—	28	—	3	H4	1	2-1/2	MOR-33012	
5/16	18	—	2	—	H1	1-1/8	2-23/32	MOR-33013	
5/16	18	—	2	—	H2	1-1/8	2-23/32	MOR-33014	
5/16	18	—	2	—	H3	1-1/8	2-23/32	MOR-33015	MOR-33061
5/16	18	—	2	—	H5	1-1/8	2-23/32	MOR-33016	MOR-33062
5/16	18	—	—	3	H3	1-1/8	2-23/32	MOR-33017	MOR-33063
5/16	18	—	—	3	H5	1-1/8	2-23/32	MOR-33018	MOR-33064
5/16	—	24	2	—	H1	1-1/8	2-23/32	MOR-33019	
5/16	—	24	2	—	H2	1-1/8	2-23/32	MOR-33020	MOR-33065
5/16	—	24	2	—	H3	1-1/8	2-23/32	MOR-33021	MOR-33066
5/16	—	24	2	—	H4	1-1/8	2-23/32	MOR-33022	
5/16	—	24	—	3	H2	1-1/8	2-23/32	MOR-33023	
5/16	—	24	—	3	H4	1-1/8	2-23/32	MOR-33024	MOR-33067
3/8	16	—	3	—	H1	1-1/4	2-15/16	MOR-33025	
3/8	16	—	3	—	H2	1-1/4	2-15/16	MOR-33026	
3/8	16	—	3	—	H3	1-1/4	2-15/16	MOR-33027	MOR-33068
3/8	16	—	3	—	H5	1-1/4	2-15/16	MOR-33028	MOR-33069
3/8	—	24	3	—	H1	1-1/4	2-15/16	MOR-33029	
3/8	—	24	3	—	H2	1-1/4	2-15/16	MOR-33030	
3/8	—	24	3	—	H3	1-1/4	2-15/16	MOR-33031	MOR-33070
3/8	—	24	3	—	H4	1-1/4	2-15/16	MOR-33032	

Spiral Point Plug Taps - Ground Thread - High Speed Steel (cont.)



Spiral Point taps are designed for machine tapping in the through holes in a wide variety of materials. The point ejects the chips ahead of the tap, eliminating chip disposal problems and thread damage. **Steam Oxide Surface Treatment** increases wear resistance, reduces friction, acts as a lubricant, reduces galling & chip welding, improves chip flow and increases tap lubricant retention.

Size	TPI - UNC	TPI - UNF	# of Flutes Standard	# of Flutes Optional	Pitch Dia.	Thread Length	OAL	Bright Finish Part Number	Oxide Part Number
7/16	14	—	3	—	H2	1-7/16	3-5/32	MOR-33033	
7/16	14	—	3	—	H3	1-7/16	3-5/32	MOR-33034	MOR-33071
7/16	14	—	3	—	H5	1-7/16	3-5/32	MOR-33035	MOR-33072
7/16	—	20	3	—	H3	1-7/16	3-5/32	MOR-33036	MOR-33073
7/16	—	20	3	—	H5	1-7/16	3-5/32	MOR-33037	MOR-33074
1/2	13	—	3	—	H2	1-21/32	3-3/8	MOR-33039	
1/2	13	—	3	—	H3	1-21/32	3-3/8	MOR-33040	MOR-33075
1/2	13	—	3	—	H5	1-21/32	3-3/8	MOR-33041	MOR-33076
1/2	—	20	3	—	H1	1-21/32	3-3/8	MOR-33042	
1/2	—	20	3	—	H2	1-21/32	3-3/8	MOR-33043	
1/2	—	20	3	—	H3	1-21/32	3-3/8	MOR-33044	MOR-33077
1/2	—	20	3	—	H5	1-21/32	3-3/8	MOR-33045	MOR-33078
5/8	11	—	3	—	H3	1-13/16	3-13/16	MOR-33046	MOR-33079
5/8	11	—	3	—	H5	1-13/16	3-13/16	MOR-33047	MOR-33080
5/8	—	18	3	—	H3	1-13/16	3-13/16	MOR-33050	MOR-33081
3/4	10	—	3	—	H3	2	4-1/4	MOR-33048	MOR-33082
3/4	10	—	3	—	H5	2	4-1/4	MOR-33049	MOR-33083
3/4	—	16	3	—	H3	2	4-1/4	MOR-33052	MOR-33084





Spiral Point Plug Taps - Ground Thread - High Speed Steel - Metric

Spiral Point taps are designed for machine tapping in the through holes in a wide variety of materials. The point ejects the chips ahead of the tap, eliminating chip disposal problems and thread damage. **TiN Coating** results in an extremely hard surface with high lubricity for increased tool life, improved thread quality, reduced torque and increased tapping speeds for greater productivity.



Size	Pitch Dia	Thread Length	OAL	# of Flutes	Bright Finish Part Number	TiN Part Number
M1.6×0.35	D3	5/16	1-5/8	2	MOR-38516	MOR-98516
M1.8×0.35	D3	3/8	1-11/16	2	MOR-38517	MOR-98517
M2×0.4	D3	7/16	1-3/4	2	MOR-38518	MOR-98518
M2.2×0.45	D3	7/16	1-3/4	2	MOR-38519	MOR-98519
M2.5×0.45	D3	1/2	1-13/16	2	MOR-38501	MOR-98501
M3×0.5	D3	5/8	1-15/16	2	MOR-38502	MOR-98502
M3.5×0.6	D4	11/16	2	2	MOR-38503	MOR-98503
M4×0.7	D4	3/4	2-1/8	2	MOR-38504	MOR-98504
M4.5×0.75	D4	7/8	2-3/8	2	MOR-38505	MOR-98505
M5×0.8	D4	7/8	2-3/8	2	MOR-38506	MOR-98506
M6×1	D5	1	2-1/2	2	MOR-38507	MOR-98507
M7×1	D5	1-1/8	2-23/32	2	MOR-38508	MOR-98508
M8×1	D5	1-1/8	2-23/32	2	MOR-38520	MOR-98520
M8×1.25	D5	1-1/8	2-23/32	2	MOR-38509	MOR-98509
M10×1.25	D5	1-1/4	2-15/16	3	MOR-38521	MOR-98521
M10×1.5	D6	1-1/4	2-15/16	3	MOR-38510	MOR-98510
M12×1.25	D5	1-21/32	3-3/8	3	MOR-38522	MOR-98522
M12×1.75	D6	1-21/32	3-3/8	3	MOR-38511	MOR-98511
M14×1.5	D6	1-21/32	3-19/32	3	MOR-38523	MOR-98523
M14×2	D7	1-21/32	3-19/32	3	MOR-38512	MOR-98512
M16×1.5	D6	1-13/16	3-13/16	3	MOR-38524	MOR-98524
M16×2	D7	1-13/16	3-13/16	3	MOR-38513	MOR-98513
M18×2.5	D7	1-13/16	4-1/32	3	MOR-38514	MOR-98514
M20×2.5	D7	2	4-15/32	3	MOR-38515	MOR-98515

Straight Flute Hand Taps - Ground Thread - High Speed Steel

Straight Flute hand taps are used for hand tapping and machine tapping in through holes or blind holes in a wide variety of materials.



Size	TPI - UNC	TPI - UNF	# of Flutes	Pitch Dia	Thread Length	OAL	Plug Part Number	Bottom Part Number
0	—	80	2	H1	5/16	1-5/8	MOR-33701	MOR-33801
0	—	80	2	H2	5/16	1-5/8	MOR-33702	MOR-33802
1	64	—	2	H1	3/8	1-11/16	MOR-33703	MOR-33803
1	64	—	2	H2	3/8	1-11/16	MOR-33704	
1	—	72	2	H1	3/8	1-11/16	MOR-33705	MOR-33804
1	—	72	2	H2	3/8	1-11/16	MOR-33706	MOR-33805
2	56	—	3	H1	7/16	1-3/4	MOR-33707	MOR-33806
2	56	—	3	H2	7/16	1-3/4	MOR-33708	MOR-33807
2	—	64	3	H2	7/16	1-3/4	MOR-33710	MOR-33809
3	48	—	3	H1	1/2	1-13/16	MOR-33711	
3	48	—	3	H2	1/2	1-13/16	MOR-33712	MOR-33810
3	—	56	3	H2	1/2	1-13/16	MOR-33714	MOR-33812
4	40	—	3	H2	9/16	1-7/8	MOR-33716	MOR-33814
4	—	48	3	H2	9/16	1-7/8	MOR-33719	MOR-33816
4	—	*36	3	H2	9/16	1-7/8	MOR-33720	MOR-33817
5	40	—	3	H1	5/8	1-15/16	MOR-33721	
5	40	—	3	H2	5/8	1-15/16	MOR-33722	MOR-33818
5	—	44	3	H2	5/8	1-15/16	MOR-33724	MOR-33820
6	32	—	3	H1	11/16	2	MOR-33726	MOR-33821
6	32	—	3	H2	11/16	2	MOR-33727	MOR-33822
6	32	—	3	H3	11/16	2	MOR-33728	MOR-33823
6	—	40	3	H1	11/16	2	MOR-33731	
6	—	40	3	H2	11/16	2	MOR-33732	MOR-33826
8	32	—	4	H1	3/4	2-1/8	MOR-33734	MOR-33827
8	32	—	4	H2	3/4	2-1/8	MOR-33735	MOR-33828
8	32	—	4	H3	3/4	2-1/8	MOR-33736	MOR-33829
8	—	36	4	H2	3/4	2-1/8	MOR-33742	MOR-33835
10	24	—	4	H1	7/8	2-3/8	MOR-33743	MOR-33836
10	24	—	4	H2	7/8	2-3/8	MOR-33744	MOR-33837
10	24	—	4	H3	7/8	2-3/8	MOR-33745	MOR-33838
10	—	32	4	H1	7/8	2-3/8	MOR-33751	MOR-33842
10	—	32	4	H2	7/8	2-3/8	MOR-33752	MOR-33843
10	—	32	4	H3	7/8	2-3/8	MOR-33753	MOR-33844
12	24	—	4	H3	15/16	2-3/8	MOR-33758	MOR-33849
12	—	28	4	H3	15/16	2-3/8	MOR-33759	MOR-33850



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Straight Flute Hand Taps - Ground Thread - High Speed Steel

Straight Flute hand taps are used for hand tapping and machine tapping in through holes or blind holes in a wide variety of materials.



Size	TPI - UNC	TPI - UNF	# of Flutes	Pitch Dia	Thread Length	OAL	Plug Part Number	Bottom Part Number
1/4	20	—	4	H1	1	2-1/2	MOR-32402	MOR-32601
1/4	20	—	4	H2	1	2-1/2	MOR-32404	MOR-32602
1/4	20	—	4	H3	1	2-1/2	MOR-32407	MOR-32605
1/4	20	—	4	H5	1	2-1/2	MOR-32409	
1/4	—	28	4	H1	1	2-1/2	MOR-32410	MOR-32607
1/4	—	28	4	H2	1	2-1/2	MOR-32411	MOR-32608
1/4	—	28	4	H3	1	2-1/2	MOR-32414	MOR-32611
1/4	—	28	4	H4	1	2-1/2	MOR-32415	MOR-32612
5/16	18	—	4	H2	1-1/8	2-23/32	MOR-32418	MOR-32614
5/16	18	—	4	H3	1-1/8	2-23/32	MOR-32421	MOR-32617
5/16	18	—	4	H5	1-1/8	2-23/32	MOR-32422	MOR-32618
5/16	—	24	4	H2	1-1/8	2-23/32	MOR-32424	
5/16	—	24	4	H3	1-1/8	2-23/32	MOR-32426	MOR-32621
5/16	—	24	4	H4	1-1/8	2-23/32	MOR-32427	MOR-32622
3/8	16	—	4	H1	1-1/4	2-15/16	MOR-32429	
3/8	16	—	4	H2	1-1/4	2-15/16	MOR-32430	MOR-32624
3/8	16	—	4	H3	1-1/4	2-15/16	MOR-32432	MOR-32626
3/8	16	—	4	H5	1-1/4	2-15/16	MOR-32434	MOR-32627
3/8	—	24	4	H1	1-1/4	2-15/16	MOR-32435	
3/8	—	24	4	H2	1-1/4	2-15/16	MOR-32436	MOR-32629
3/8	—	24	4	H3	1-1/4	2-15/16	MOR-32438	MOR-32631
3/8	—	24	4	H4	1-1/4	2-15/16	MOR-32439	
7/16	14	—	4	H3	1-7/16	3-5/32	MOR-32441	MOR-32633
7/16	14	—	4	H5	1-7/16	3-5/32	MOR-32442	MOR-32634
7/16	—	20	4	H3	1-7/16	3-5/32	MOR-32444	MOR-32635
7/16	—	20	4	H5	1-7/16	3-5/32	MOR-32445	MOR-32636
1/2	13	—	4	H1	1-21/32	3-3/8	MOR-32446	
1/2	13	—	4	H3	1-21/32	3-3/8	MOR-32449	MOR-32640
1/2	13	—	4	H5	1-21/32	3-3/8	MOR-32450	MOR-32641
1/2	—	20	4	H1	1-21/32	3-3/8	MOR-32451	MOR-32642
1/2	—	20	4	H3	1-21/32	3-3/8	MOR-32453	MOR-32643
1/2	—	20	4	H5	1-21/32	3-3/8	MOR-32454	
9/16	12	—	4	H3	1-21/32	3-19/32	MOR-32455	MOR-32644
9/16	12	—	4	H5	1-21/32	3-19/32	MOR-32456	
9/16	—	18	4	H2	1-21/32	3-19/32	MOR-32457	
9/16	—	18	4	H3	1-21/32	3-19/32	MOR-32458	MOR-32645
9/16	—	18	4	H5	1-21/32	3-19/32	MOR-32459	

Straight Flute Hand Taps - Ground Thread - High Speed Steel

Straight Flute hand taps are used for hand tapping and machine tapping in through holes or blind holes in a wide variety of materials.



Size	TPI - UNC	TPI - UNF	# of Flutes	Pitch Dia	Thread Length	OAL	Plug Part Number	Bottom Part Number
5/8	11	—	4	H2	1-13/16	3-13/16	MOR-32460	
5/8	11	—	4	H3	1-13/16	3-13/16	MOR-32461	MOR-32647
5/8	11	—	4	H5	1-13/16	3-13/16	MOR-32462	MOR-32648
5/8	—	18	4	H2	1-13/16	3-13/16	MOR-32463	
5/8	—	18	4	H3	1-13/16	3-13/16	MOR-32464	MOR-32649
5/8	—	18	4	H5	1-13/16	3-13/16	MOR-32465	MOR-32650
3/4	10	—	4	H3	2	4-1/4	MOR-32469	MOR-32653
3/4	10	—	4	H5	2	4-1/4	MOR-32470	MOR-32654
3/4	—	16	4	H1	2	4-1/4	MOR-32471	
3/4	—	16	4	H2	2	4-1/4	MOR-32472	
3/4	—	16	4	H3	2	4-1/4	MOR-32473	MOR-32655
3/4	—	16	4	H5	2	4-1/4	MOR-32474	MOR-32656
7/8	9	—	4	H4	2-7/32	4-11/16	MOR-32475	MOR-32657
7/8	9	—	4	H6	2-7/32	4-11/16	MOR-32476	
7/8	—	14	4	H2	2-7/32	4-11/16	MOR-32477	
7/8	—	14	4	H4	2-7/32	4-11/16	MOR-32478	MOR-32658
1	8	—	4	H4	2-1/2	5-1/8	MOR-32480	MOR-32659
1	8	—	4	H6	2-1/2	5-1/8	MOR-32481	
1	—	12	4	H4	2-1/2	5-1/8	MOR-32482	MOR-32660
1-1/8	7	—	4	H4	2-9/16	5-7/16	MOR-32485	MOR-32662
1-1/8	—	12	4	H4	2-9/16	5-7/16	MOR-32486	MOR-32663
1-1/4	7	—	4	H4	2-9/16	5-3/4	MOR-32487	MOR-32664
1-1/4	—	12	6	H4	2-9/16	5-3/4	MOR-32488	MOR-32665
1-3/8	6	—	4	H4	3	6-1/16	MOR-32489	MOR-32666
1-3/8	—	12	6	H4	3	6-1/16	MOR-32490	MOR-32667
1-1/2	6	—	4	H4	3	6-3/8	MOR-32491	MOR-32668
1-1/2	—	12	6	H4	3	6-3/8	MOR-32492	MOR-32669





Straight Flute Hand Taps - Ground Thread - High Speed Steel - Metric

Straight Flute hand taps are used for hand tapping and machine tapping in through holes or blind holes in a wide variety of materials.



Size	Pitch Dia	# of Flutes	Thread Length	OAL	Plug Part Number	Bottom Part Number
M1.6×0.35	D3	2	5/16	1-5/8	MOR-38016	MOR-38116
M1.8×0.35	D3	2	3/8	1-11/16	MOR-38017	MOR-38117
M2×0.4	D3	3	7/16	1-3/4	MOR-38018	MOR-38118
M2.2×0.45	D3	3	7/16	1-3/4	MOR-38019	MOR-38119
M2.5×0.45	D3	3	1/2	1-13/16	MOR-38001	MOR-38101
M3×0.5	D3	3	5/8	1-15/16	MOR-38002	MOR-38102
M3.5×0.6	D4	3	11/16	2	MOR-38003	MOR-38103
M4×0.7	D4	4	3/4	2-1/8	MOR-38004	MOR-38104
M4.5×0.75	D4	4	7/8	2-3/8	MOR-38005	MOR-38105
M5×0.8	D4	4	7/8	2-3/8	MOR-38006	MOR-38106
M6×1	D5	4	1	2-1/2	MOR-38007	MOR-38107
M7×1	D5	4	1-1/8	2-23/32	MOR-38008	MOR-38108
M8×1	D5	4	1-1/8	2-23/32	MOR-38020	MOR-38120
M8×1.25	D5	4	1-1/8	2-23/32	MOR-38009	MOR-38109
M10×1.25	D5	4	1-1/4	2-15/16	MOR-38021	MOR-38121
M10×1.5	D6	4	1-1/4	2-15/16	MOR-38010	MOR-38110
M12×1.25	D5	4	1-21/32	3-3/8	MOR-38022	MOR-38122
M12×1.75	D6	4	1-21/32	3-3/8	MOR-38011	MOR-38111
M14×1.5	D6	4	1-21/32	3-19/32	MOR-38023	MOR-38123
M14×2	D7	4	1-21/32	3-19/32	MOR-38012	MOR-38112
M16×1.5	D6	4	1-13/16	3-13/16	MOR-38024	MOR-38124
M16×2	D7	4	1-13/16	3-13/16	MOR-38013	MOR-38113
M18×1.5	D6	4	1-13/16	4-1/32	MOR-38025	MOR-38125
M18×2.5	D7	4	1-13/16	4-1/32	MOR-38014	MOR-38114
M20×1.5	D6	4	2	4-15/32	MOR-38026	MOR-38126
M20×2.5	D7	4	2	4-15/32	MOR-38015	MOR-38115
M22×1.5	D6	4	2-7/32	4-11/16	MOR-38027	MOR-38127
M22×2.5	D7	4	2-7/32	4-11/16	MOR-38028	MOR-38128
M24×2	D7	4	2-7/32	4-29/32	MOR-38029	MOR-38129
M24×3	D8	4	2-7/32	4-29/32	MOR-38030	MOR-38130
M27×2	D7	4	2-1/2	5-1/8	MOR-38031	MOR-38131
M27×3	D8	4	2-1/2	5-1/8	MOR-38032	MOR-38132
M30×2	D7	4	2-9/16	5-7/16	MOR-38033	MOR-38133
M30×3.5	D9	4	2-9/16	5-7/16	MOR-38034	MOR-38134
M33×2	D7	6	2-9/16	5-3/4	MOR-38038	MOR-38138
M33×3.5	D9	4	2-9/16	5-3/4	MOR-38035	
M36×3	D8	4	3	6-1/16	MOR-38036	MOR-38136
M36×4	D9	4	3	6-1/16	MOR-38037	MOR-38137

Taper Pipe Taps

Regular Thread NPT taper pipe taps are commonly used for tapping pipe fittings and couplings in a wide variety of materials. Assembly requires the use of a thread sealant to ensure a tight seal.



Size	Thread Length	OAL	# of Flutes	NPT Part Number
1/16-27	11/16	2-1/8	4	NPT-1/16
1/8-27 (SM SK)	3/4	2-1/8	4	NPT-1/8s
1/8-27 (LG SK)	3/4	2-1/8	4	NPT-1/8
1/4-18	1-1/16	2-7/16	4	NPT-1/4
3/8-18	1-1/16	2-9/16	4	NPT-3/8
1/2-14	1-3/8	3-1/8	4	NPT-1/2
3/4-14	1-3/8	3-1/4	5	NPT-3/4
1" - 11-1/2	1-3/4	3-3/4	5	NPT-1"
1-1/4" - 11-1/2	1-3/4	4	5	NPT-1-1/4
1-1/2" - 11-1/2	1-3/4	4-1/4	7	NPT-1-1/2
2" - 11-1/2	1-3/4	4-1/2	7	NPT-2"



NPTF Dryseal taper pipe taps produce threads where a tight seal is achieved during assembly by metal-to-metal contact. Used for applications requiring a tight seal without the use of thread sealants.



Size	Thread Length	OAL	# of Flutes	NPTF Part Number
1/16-27	11/16	2-1/8	4	NPTF-1/16
1/8-27 (SM SK)	3/4	2-1/8	4	NPTF-1/8s
1/8-27 (LG SK)	3/4	2-1/8	4	NPTF-1/8
1/4-18	1-1/16	2-7/16	4	NPTF-1/4
3/8-18	1-1/16	2-9/16	4	NPTF-3/8
1/2-14	1-3/8	3-1/8	4	NPTF-1/2
3/4-14	1-3/8	3-1/4	5	NPTF-3/4
1" - 11-1/2	1-3/4	3-3/4	5	NPTF-1"
1-1/4" - 11-1/2	1-3/4	4	5	NPTF-1-1/4
1-1/2" - 11-1/2	1-3/4	4-1/4	7	NPTF-1-1/2
2" - 11-1/2	1-3/4	4-1/2	7	NPTF-2"



Straight Pipe Taps



NPS straight pipe taps produce straight pipe threads for low pressure applications in a wide variety of materials. Can be assembled with taper pipe threads, straight pipe threads or fittings. Assembly requires the use of a thread sealant to ensure a tight seal.



Size	Thread Length	OAL	# of Flutes	NPS Part Number
1/8-27 (SM SK)	3/4	2-1/8	4	NPS-1/8s
1/8-27 (LG SK)	3/4	2-1/8	4	NPS-1/8
1/4-18	1-1/16	2-7/16	4	NPS-1/4
3/8-18	1-1/16	2-9/16	4	NPS-3/8
1/2-14	1-3/8	3-1/8	4	NPS-1/2
3/4-14	1-3/8	3-1/4	5	NPS-3/4
1" - 11-1/2	1-3/4	3-3/4	5	NPS-1"



NPSF Dryseal straight pipe taps produce threads where a tight seal is achieved during assembly by metal-to-metal contact when assembled with dryseal taper pipe threads. Used for applications requiring a tight seal without the use of thread sealants.



Size	Thread Length	OAL	# of Flutes	NPSF Part Number
1/8-27 (SM SK)	3/4	2-1/8	4	NPSF-1/8s
1/8-27 (LG SK)	3/4	2-1/8	4	NPSF-1/8
1/4-18	1-1/16	2-7/16	4	NPSF-1/4
3/8-18	1-1/16	2-9/16	4	NPSF-3/8
1/2-14	1-3/8	3-1/8	4	NPSF-1/2
3/4-14	1-3/8	3-1/4	5	NPSF-3/4

Spiral Point Combo Taps for Multi-Purpose

Combo Taps have a patented tap design that:

- Reduces tap breakage, ensures accurate thread depth
- Eliminates loose threads due to tap overfeeding
- Improves thread quality & chip evacuation
- Allows tapping of many metals including stainless steel & steels



Spiral Point Taps · T4

Size TPI	Limit	OAL	Thread Length	Shank Dia	Square Size	Square Length	# of Flutes	Bright Finish Part Number	TiCN Finish Part Number
#4 - 40 UNC	GH2	1.88	0.335	0.141	0.110	0.188	2	YGT-T4162	YGT-T4162C
#4 - 48 UNF	GH2	1.88	0.335	0.141	0.110	0.188	2	YGT-T4182	YGT-T4182C
#5 - 40 UNC	GH2	1.94	0.374	0.141	0.110	0.188	3	YGT-T4202	YGT-T4202C
#5 - 44 UNF	GH2	1.94	0.374	0.141	0.110	0.188	3	YGT-T4222	YGT-T4222C
#6 - 32 UNC	GH3	2.00	0.413	0.141	0.110	0.188	3	YGT-T4243	YGT-T4243C
#6 - 40 UNF	GH2	2.00	0.413	0.141	0.110	0.188	3	YGT-T4262	YGT-T4262C
#8 - 32 UNC	GH3	2.13	0.453	0.168	0.131	0.250	3	YGT-T4283	YGT-T4283C
#8 - 36 UNF	GH2	2.13	0.453	0.168	0.131	0.250	3	YGT-T4302	YGT-T4302C
#10 - 24 UNC	GH3	2.38	0.531	0.194	0.152	0.250	3	YGT-T4323	YGT-T4323C
#10 - 32 UNF	GH3	2.38	0.531	0.194	0.152	0.250	3	YGT-T4343	YGT-T4343C
#12 - 24 UNC	GH3	2.38	0.571	0.220	0.165	0.281	3	YGT-T4363	YGT-T4363C
#12 - 28 UNF	GH3	2.38	0.571	0.220	0.165	0.281	3	YGT-T4383	YGT-T4383C
1/4 - 20 UNC	GH3	2.50	0.591	0.255	0.191	0.312	3	YGT-T4403	YGT-T4403C
1/4 - 20 UNF	GH5	2.50	0.591	0.255	0.191	0.312	3	YGT-T4405	YGT-T4405C
1/4 - 28 UNF	GH3	2.50	0.591	0.255	0.191	0.312	3	YGT-T4423	YGT-T4423C
1/4 - 28 UNF	GH4	2.50	0.591	0.255	0.191	0.312	3	YGT-T4424	YGT-T4424C
5/16 - 18 UNC	GH3	2.72	0.669	0.318	0.238	0.375	3	YGT-T4443	YGT-T4443C
5/16 - 18 UNF	GH5	2.72	0.669	0.318	0.238	0.375	3	YGT-T4445	YGT-T4445C
5/16 - 24 UNF	GH3	2.72	0.669	0.318	0.238	0.375	3	YGT-T4463	YGT-T4463C
5/16 - 24 UNF	GH5	2.72	0.669	0.318	0.238	0.375	3	YGT-T4465	YGT-T4465C
3/8 - 16 UNC	GH3	2.94	0.748	0.381	0.286	0.438	3	YGT-T4483	YGT-T4483C
3/8 - 16 UNF	GH5	2.94	0.748	0.381	0.286	0.438	3	YGT-T4485	YGT-T4485C
3/8 - 24 UNF	GH3	2.94	0.748	0.381	0.286	0.438	3	YGT-T4503	YGT-T4503C
3/8 - 24 UNF	GH4	2.94	0.748	0.381	0.286	0.438	3	YGT-T4504	YGT-T4504C
7/16 - 14 UNC	GH3	3.16	0.866	0.323	0.242	0.406	3	YGT-T4523	YGT-T4523C
7/16 - 14 UNF	GH5	3.16	0.866	0.323	0.242	0.406	3	YGT-T4525	YGT-T4525C
7/16 - 20 UNF	GH3	3.16	0.866	0.323	0.242	0.406	3	YGT-T4543	YGT-T4543C
7/16 - 20 UNF	GH5	3.16	0.866	0.323	0.242	0.406	3	YGT-T4545	YGT-T4545C
1/2 - 13 UNC	GH5	3.38	0.984	0.367	0.275	0.438	3	YGT-T4565	YGT-T4565C
1/2 - 20 UNF	GH5	3.38	0.984	0.367	0.275	0.438	3	YGT-T4585	YGT-T4585C
9/16 - 12 UNC	GH5	3.59	0.984	0.429	0.322	0.500	3	YGT-T4605	YGT-T4605C
9/16 - 18 UNF	GH5	3.59	0.984	0.429	0.322	0.500	3	YGT-T4625	YGT-T4625C
5/8 - 11 UNC	GH5	3.81	1.083	0.480	0.360	0.562	3	YGT-T4645	YGT-T4645C
5/8 - 18 UNF	GH5	3.81	1.083	0.480	0.360	0.562	3	YGT-T4665	YGT-T4665C
3/4 - 10 UNC	GH5	4.25	1.201	0.590	0.442	0.688	3	YGT-T4705	YGT-T4705C
3/4 - 16 UNF	GH5	4.25	1.201	0.590	0.442	0.688	3	YGT-T4725	YGT-T4725C
7/8 - 9 UNC	GH6	4.69	1.339	0.697	0.523	0.750	3	YGT-T4746	YGT-T4746C
7/8 - 14 UNF	GH6	4.69	1.339	0.697	0.523	0.750	3	YGT-T4766	YGT-T4766C
1" - 8 UNC	GH6	5.13	1.496	0.800	0.600	0.812	3	YGT-T4786	YGT-T4786C
1" - 12 UNF	GH6	5.13	1.496	0.800	0.600	0.812	3	YGT-T4806	YGT-T4806C





Spiral Point Combo Taps for Multi-Purpose

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- Eliminates loose threads due to tap overfeeding
- Improves thread quality & chip evacuation
- Allows tapping of many metals including stainless steel & steels

Spiral Point Taps · T3



Size - Pitch	Limit	OAL	Thread Length	Shank Dia	Square Size	Square Length	# of Flutes	Bright Finish Part Number	TiCN Finish Part Number
M3 x 0.5	D3	1.94	0.374	0.141	0.110	0.188	3	YGT-T3203	YGT-T3203C
M3.5 x 0.6	D4	2.00	0.413	0.141	0.110	0.188	3	YGT-T3224	YGT-T3224C
M4 x 0.7	D4	2.13	0.453	0.168	0.131	0.250	3	YGT-T3244	YGT-T3244C
M5 x 0.8	D4	2.38	0.531	0.194	0.152	0.250	3	YGT-T3284	YGT-T3284C
M6 x 1.0	D5	2.50	0.591	0.255	0.191	0.312	3	YGT-T3315	YGT-T3315C
M7 x 1.0	D5	2.72	0.669	0.318	0.238	0.375	3	YGT-T3345	YGT-T3345C
M8 x 1.25	D5	2.72	0.669	0.318	0.238	0.375	3	YGT-T3365	YGT-T3365C
M8 x 1.0	D5	2.72	0.669	0.318	0.238	0.375	3	YGT-T3375	YGT-T3375C
M10 x 1.5	D6	2.94	0.748	0.381	0.286	0.438	3	YGT-T3426	YGT-T3426C
M10 x 1.25	D5	2.94	0.748	0.381	0.286	0.438	3	YGT-T3435	YGT-T3435C
M12 x 1.75	D6	3.38	0.984	0.367	0.275	0.438	3	YGT-T3506	YGT-T3506C
M12 x 1.25	D5	3.38	0.984	0.367	0.275	0.438	3	YGT-T3525	YGT-T3525C
M14 x 2.0	D7	3.59	0.984	0.429	0.322	0.500	3	YGT-T3547	YGT-T3547C
M14 x 1.5	D6	3.59	0.984	0.429	0.322	0.500	3	YGT-T3556	YGT-T3556C
M16 x 2.0	D7	3.81	1.083	0.480	0.360	0.562	3	YGT-T3607	YGT-T3607C
M16 x 1.5	D6	3.81	1.083	0.480	0.360	0.562	3	YGT-T3616	YGT-T3616C
M18 x 2.5	D7	4.03	1.083	0.542	0.406	0.625	3	YGT-T3657	YGT-T3657C
M18 x 1.5	D6	4.03	1.083	0.542	0.406	0.625	3	YGT-T3676	YGT-T3676C
M20 x 2.5	D7	4.47	1.201	0.652	0.489	0.688	3	YGT-T3707	YGT-T3707C
M20 x 1.5	D6	4.47	1.201	0.652	0.489	0.688	3	YGT-T3726	YGT-T3726C
M22 x 2.5	D7	4.69	1.339	0.697	0.523	0.750	3	YGT-T3747	YGT-T3747C
M22 x 1.5	D6	4.69	1.339	0.697	0.523	0.750	3	YGT-T3766	YGT-T3766C
M24 x 3.0	D8	4.91	1.339	0.760	0.570	0.750	3	YGT-T3788	YGT-T3788C

Spiral Flute Combo Taps for Multi-Purpose

Combo Taps have a patented tap design that:

- Reduces tap breakage, ensures accurate thread depth
- Eliminates loose threads due to tap overfeeding
- Improves thread quality & chip evacuation
- Allows tapping of many metals including stainless steel & steels



Spiral Flute Taps - T2

Size TPI	Limit	OAL	Thread Length	Shank Dia	Square Size	Square Length	# of Flutes	Bright Finish Part Number	TiCN Finish Part Number
#4 - 40 UNC	GH2	1.88	0.236	0.141	0.11	0.188	2	YGT-T2162	YGT-T2162C
#4 - 48 UNF	GH2	1.88	0.236	0.141	0.11	0.188	2	YGT-T2182	YGT-T2182C
#5 - 40 UNC	GH2	1.94	0.236	0.141	0.11	0.188	3	YGT-T2202	YGT-T2202C
#5 - 44 UNF	GH2	1.94	0.236	0.141	0.11	0.188	3	YGT-T2222	YGT-T2222C
#6 - 32 UNC	GH3	2	0.276	0.141	0.11	0.188	3	YGT-T2243	YGT-T2243C
#6 - 40 UNF	GH2	2	0.276	0.141	0.11	0.188	3	YGT-T2262	YGT-T2262C
#8 - 32 UNC	GH3	2.13	0.276	0.168	0.131	0.25	3	YGT-T2283	YGT-T2283C
#8 - 36 UNF	GH2	2.13	0.276	0.168	0.131	0.25	3	YGT-T2302	YGT-T2302C
#10 - 24 UNC	GH3	2.38	0.354	0.194	0.152	0.25	3	YGT-T2323	YGT-T2323C
#10 - 32 UNF	GH3	2.38	0.276	0.194	0.152	0.25	3	YGT-T2343	YGT-T2343C
#12 - 24 UNC	GH3	2.38	0.354	0.22	0.165	0.281	3	YGT-T2363	YGT-T2363C
#12 - 28 UNF	GH3	2.38	0.276	0.22	0.165	0.281	3	YGT-T2383	YGT-T2383C
1/4 - 20 UNC	GH3	2.5	0.433	0.255	0.191	0.312	3	YGT-T2403	YGT-T2403C
1/4 - 20 UNC	GH5	2.5	0.433	0.255	0.191	0.312	3	YGT-T2405	YGT-T2405C
1/4 - 28 UNF	GH3	2.5	0.354	0.255	0.191	0.312	3	YGT-T2423	YGT-T2423C
1/4 - 28 UNF	GH4	2.5	0.354	0.255	0.191	0.312	3	YGT-T2424	YGT-T2424C
5/16 - 18 UNC	GH3	2.72	0.472	0.318	0.238	0.375	3	YGT-T2443	YGT-T2443C
5/16 - 18 UNC	GH5	2.72	0.472	0.318	0.238	0.375	3	YGT-T2445	YGT-T2445C
5/16 - 24 UNF	GH3	2.72	0.394	0.318	0.238	0.375	3	YGT-T2463	YGT-T2463C
5/16 - 24 UNF	GH5	2.72	0.394	0.318	0.238	0.375	3	YGT-T2465	YGT-T2465C
3/8 - 16 UNC	GH3	2.94	0.551	0.381	0.286	0.438	3	YGT-T2483	YGT-T2483C
3/8 - 16 UNC	GH5	2.94	0.551	0.381	0.286	0.438	3	YGT-T2485	YGT-T2485C
3/8 - 24 UNF	GH3	2.94	0.394	0.381	0.286	0.438	3	YGT-T2503	YGT-T2503C
3/8 - 24 UNF	GH4	2.94	0.394	0.381	0.286	0.438	3	YGT-T2504	YGT-T2504C
7/16 - 14 UNC	GH3	3.16	0.591	0.323	0.242	0.406	3	YGT-T2523	YGT-T2523C
7/16 - 14 UNC	GH5	3.16	0.591	0.323	0.242	0.406	3	YGT-T2525	YGT-T2525C
7/16 - 20 UNF	GH3	3.16	0.472	0.323	0.242	0.406	3	YGT-T2543	YGT-T2543C
7/16 - 20 UNF	GH5	3.16	0.472	0.323	0.242	0.406	3	YGT-T2545	YGT-T2545C
1/2 - 13 UNC	GH5	3.38	0.63	0.367	0.275	0.438	3	YGT-T2565	YGT-T2565C
1/2 - 20 UNF	GH5	3.38	0.472	0.367	0.275	0.438	3	YGT-T2585	YGT-T2585C
9/16 - 12 UNC	GH5	3.59	0.709	0.429	0.322	0.5	3	YGT-T2605	YGT-T2605C
9/16 - 18 UNF	GH5	3.59	0.512	0.429	0.322	0.5	3	YGT-T2625	YGT-T2625C
5/8 - 11 UNC	GH5	3.81	0.748	0.48	0.36	0.562	4	YGT-T2645	YGT-T2645C
5/8 - 18 UNF	GH5	3.81	0.512	0.48	0.36	0.562	4	YGT-T2665	YGT-T2665C
3/4 - 10 UNC	GH5	4.25	0.827	0.59	0.442	0.688	4	YGT-T2705	YGT-T2705C
3/4 - 16 UNF	GH5	4.25	0.591	0.59	0.442	0.688	4	YGT-T2725	YGT-T2725C
7/8 - 9 UNC	GH6	4.69	0.827	0.697	0.523	0.75	4	YGT-T2746	YGT-T2746C
7/8 - 14 UNF	GH6	4.69	0.709	0.697	0.523	0.75	4	YGT-T2766	YGT-T2766C
1" - 8 UNC	GH6	5.13	0.984	0.8	0.6	0.812	4	YGT-T2786	YGT-T2786C
1" - 12 UNF	GH6	5.13	0.709	0.8	0.6	0.812	4	YGT-T2806	YGT-T2806C





Spiral Flute Combo Taps for Multi-Purpose

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- Eliminates loose threads due to tap overfeeding
- Improves thread quality & chip evacuation
- Allows tapping of many metals including stainless steel & steels

Spiral Flute Taps · T5



Size - Pitch	Limit	OAL	Thread Length	Shank Dia	Square Size	Square Length	# of Flutes	Bright Finish Part Number	TiCN Finish Part Number
M3 x 0.5	D3	1.94	0.197	0.141	0.11	0.188	3	YGT-T5203	YGT-T5203C
M3.5 x 0.6	D4	2	0.276	0.141	0.11	0.188	3	YGT-T5224	YGT-T5224C
M4 x 0.7	D4	2.13	0.276	0.168	0.131	0.25	3	YGT-T5244	YGT-T5244C
M5 x 0.8	D4	2.38	0.354	0.194	0.152	0.25	3	YGT-T5284	YGT-T5284C
M6 x 1.0	D5	2.5	0.433	0.255	0.191	0.312	3	YGT-T5315	YGT-T5315C
M7 x 1.0	D5	2.72	0.433	0.318	0.238	0.375	3	YGT-T5345	YGT-T5345C
M8 x 1.25	D5	2.72	0.472	0.318	0.238	0.375	3	YGT-T5365	YGT-T5365C
M8 x 1.0	D5	2.72	0.433	0.318	0.238	0.375	3	YGT-T5375	YGT-T5375C
M10 x 1.5	D6	2.94	0.512	0.381	0.286	0.438	3	YGT-T5426	YGT-T5426C
M10 x 1.25	D5	2.94	0.472	0.381	0.286	0.438	3	YGT-T5435	YGT-T5435C
M12 x 1.75	D6	3.38	0.591	0.367	0.275	0.438	3	YGT-T5506	YGT-T5506C
M12 x 1.25	D5	3.38	0.551	0.367	0.275	0.438	3	YGT-T5525	YGT-T5525C
M14 x 2.0	D7	3.59	0.709	0.429	0.322	0.5	3	YGT-T5547	YGT-T5547C
M14 x 1.5	D6	3.59	0.551	0.429	0.322	0.5	3	YGT-T5556	YGT-T5556C
M16 x 2.0	D7	3.81	0.709	0.48	0.36	0.562	3	YGT-T5607	YGT-T5607C
M16 x 1.5	D6	3.81	0.551	0.48	0.36	0.562	3	YGT-T5616	YGT-T5616C
M18 x 2.5	D7	4.03	0.787	0.542	0.406	0.625	4	YGT-T5657	YGT-T5657C
M18 x 1.5	D6	4.03	0.551	0.542	0.406	0.625	4	YGT-T5676	YGT-T5676C
M20 x 2.5	D7	4.47	0.787	0.652	0.489	0.688	4	YGT-T5707	YGT-T5707C
M20 x 1.5	D6	4.47	0.551	0.652	0.489	0.688	4	YGT-T5726	YGT-T5726C
M22 x 2.5	D7	4.69	0.787	0.697	0.523	0.75	4	YGT-T5747	YGT-T5747C
M22 x 1.5	D6	4.69	0.551	0.697	0.523	0.75	4	YGT-T5766	YGT-T5766C
M24 x 3.0	D8	4.91	0.945	0.76	0.57	0.75	4	YGT-T5788	YGT-T5788C

Spiral Point Combo Taps for Stainless Steel

Combo Taps have a patented tap design that:

- Reduces tap breakage, ensures accurate thread depth
- Eliminates loose threads due to tap overfeeding
- Improves thread quality & chip evacuation



Spiral Point Taps · TCE-C TCF-C

Size TPI	Limit	OAL	Thread Length	Shank Dia	Square Size	Square Length	# of Flutes	TiCN Finish Part Number
#5 - 40 UNC	GH2	1.940	0.374	0.141	0.110	0.188	3	YGT-TCE202C
#5 - 40 UNC	GH3	1.940	0.374	0.141	0.110	0.188	3	YGT-TCE203C
#6 - 32 UNC	GH3	2.000	0.413	0.141	0.110	0.188	3	YGT-TCE243C
#8 - 32 UNC	GH3	2.130	0.453	0.168	0.131	0.250	3	YGT-TCE283C
#10 - 24 UNC	GH3	2.380	0.531	0.194	0.152	0.250	3	YGT-TCE323C
#10 - 32 UNF	GH3	2.380	0.531	0.194	0.152	0.250	3	YGT-TCE343C
1/4 - 20 UNC	GH3	2.500	0.591	0.255	0.191	0.312	3	YGT-TCE403C
1/4 - 20 UNC	GH5	2.500	0.591	0.255	0.191	0.312	3	YGT-TCE405C
1/4 - 28 UNF	GH3	2.500	0.591	0.255	0.191	0.312	3	YGT-TCE423C
5/16 - 18 UNC	GH3	2.720	0.669	0.318	0.238	0.375	3	YGT-TCE443C
5/16 - 18 UNC	GH5	2.720	0.669	0.318	0.238	0.375	3	YGT-TCE445C
5/16 - 24 UNF	GH3	2.720	0.669	0.318	0.238	0.375	3	YGT-TCE463C
3/8 - 16 UNC	GH3	2.940	0.748	0.381	0.286	0.438	3	YGT-TCE483C
3/8 - 16 UNC	GH5	2.940	0.748	0.381	0.286	0.438	3	YGT-TCE485C
3/8 - 24 UNF	GH3	2.940	0.748	0.381	0.286	0.438	3	YGT-TCE503C
7/16 - 14 UNC	GH3	3.160	0.866	0.323	0.242	0.406	3	YGT-TCE523C
7/16 - 14 UNC	GH5	3.160	0.866	0.323	0.242	0.406	3	YGT-TCE525C
7/16 - 20 UNF	GH3	3.160	0.866	0.323	0.242	0.406	3	YGT-TCE543C
7/16 - 20 UNF	GH5	3.160	0.866	0.323	0.242	0.406	3	YGT-TCE545C
1/2 - 13 UNC	GH3	3.380	0.984	0.367	0.275	0.438	3	YGT-TCE563C
1/2 - 13 UNC	GH5	3.380	0.984	0.367	0.275	0.438	3	YGT-TCE565C
1/2 - 20 UNF	GH3	3.380	0.984	0.367	0.275	0.438	3	YGT-TCE583C
9/16 - 12 UNC	GH3	3.590	0.984	0.429	0.322	0.500	3	YGT-TCF603C
9/16 - 18 UNF	GH3	3.590	0.984	0.429	0.322	0.500	3	YGT-TCF623C
5/8 - 11 UNC	GH3	3.810	1.083	0.480	0.360	0.562	3	YGT-TCF643C
5/8 - 11 UNC	GH5	3.810	1.083	0.480	0.360	0.562	3	YGT-TCF645C
5/8 - 18 UNF	GH5	3.810	1.083	0.480	0.360	0.562	3	YGT-TCF665C
3/4 - 10 UNC	GH3	4.250	1.201	0.590	0.442	0.688	3	YGT-TCF703C
3/4 - 10 UNC	GH5	4.250	1.201	0.590	0.442	0.688	3	YGT-TCF705C
7/8 - 9 UNC	GH4	4.690	1.339	0.697	0.523	0.750	3	YGT-TCF744C
7/8 - 9 UNC	GH6	4.690	1.339	0.697	0.523	0.750	3	YGT-TCF746C
7/8 - 14 UNF	GH6	4.690	1.339	0.697	0.523	0.750	3	YGT-TCF766C
1" - 8 UNC	GH4	5.130	1.496	0.800	0.600	0.812	3	YGT-TCF784C
1" - 8 UNC	GH6	5.130	1.496	0.800	0.600	0.812	3	YGT-TCF786C
1" - 12 UNF	GH6	5.130	1.496	0.800	0.600	0.812	3	YGT-TCF806C





Spiral Point Combo Taps for Stainless Steel

Combo Taps have a patented tap design that:

- Reduces tap breakage, ensures accurate thread depth
- Eliminates loose threads due to tap overfeeding
- Improves thread quality & chip evacuation



Spiral Point Taps · TCG-C TCH-C

Size - Pitch	Limit	OAL	Thread Length	Shank Dia	Square Size	Square Length	# of Flutes	TiCN Finish Part Number
M3 x 0.5	D3	1.94	.374	.141	.110	.188	3	YGT-TCG203C
M3.5 x 0.6	D4	2.00	.413	.141	.110	.188	3	YGT-TCG224C
M4 x 0.7	D4	2.13	.453	.168	.131	.250	3	YGT-TCG244C
M5 x 0.8	D4	2.38	.531	.194	.152	.250	3	YGT-TCG284C
M6 x 1.0	D5	2.50	.591	.255	.191	.312	3	YGT-TCG315C
M7 x 1.0	D5	2.72	.669	.318	.238	.375	3	YGT-TCG345C
M8 x 1.25	D5	2.72	.669	.318	.238	.375	3	YGT-TCG365C
M8 x 1.0	D5	2.72	.669	.318	.238	.375	3	YGT-TCG375C
M10 x 1.5	D6	2.94	.748	.381	.286	.438	3	YGT-TCG426C
M10 x 1.25	D5	2.94	.748	.381	.286	.438	3	YGT-TCG435C
M12 x 1.75	D6	3.38	.984	.367	.275	.438	3	YGT-TCG506C
M12 x 1.25	D5	3.38	.984	.367	.275	.438	3	YGT-TCG525C
M14 x 2.0	D7	3.59	.984	.429	.322	.500	3	YGT-TCH547C
M14 x 1.5	D6	3.59	.984	.429	.322	.500	3	YGT-TCH556C
M16 x 2.0	D7	3.81	1.083	.480	.360	.562	3	YGT-TCH607C
M16 x 1.5	D6	3.81	1.083	.480	.360	.562	3	YGT-TCH616C
M18 x 2.5	D7	4.03	1.083	.542	.406	.625	3	YGT-TCH657C
M18 x 1.5	D6	4.03	1.083	.542	.406	.625	3	YGT-TCH676C

Spiral Flute Combo Taps for Stainless Steel

Combo Taps have a patented tap design that:

- Reduces tap breakage, ensures accurate thread depth
- Eliminates loose threads due to tap overfeeding
- Improves thread quality & chip evacuation



Spiral Flute Taps · TCA-C TCB-C

Size TPI	Limit	OAL	Thread Length	Shank Dia	Square Size	Square Length	# of Flutes	TiCN Finish Part Number
#5-40 UNC	H2	1.94	.236	.141	.110	.188	3	YGT-TCA202C
#6-32 UNC	H3	2.00	.276	.141	.110	.188	3	YGT-TCA243C
#8-32 UNC	H3	2.13	.276	.141	.131	.250	3	YGT-TCA283C
#10-24 UNC	H3	2.38	.354	.141	.152	.250	3	YGT-TCA323C
#10-32 UNF	H3	2.38	.276	.141	.152	.250	3	YGT-TCA343C
1/4-20 UNC	H3	2.50	.433	.141	.191	.312	3	YGT-TCA403C
1/4-20 UNC	H5	2.50	.433	.168	.191	.312	3	YGT-TCA405C
1/4-28 UNF	H3	2.50	.354	.168	.191	.312	3	YGT-TCA423C
5/16-18 UNC	H3	2.72	.472	.194	.238	.375	3	YGT-TCA443C
5/16-18 UNC	H5	2.72	.472	.194	.238	.375	3	YGT-TCA445C
5/16-24 UNF	H3	2.72	.394	.220	.238	.375	3	YGT-TCA463C
3/8-16 UNC	H3	2.94	.551	.220	.286	.438	3	YGT-TCA483C
3/8-16 UNC	H5	2.94	.551	.255	.286	.438	3	YGT-TCA485C
3/8-24 UNF	H3	2.94	.394	.255	.286	.438	3	YGT-TCA503C
7/16-14 UNC	H3	3.16	.591	.255	.242	.406	3	YGT-TCA523C
7/16-14 UNC	H5	3.16	.591	.255	.242	.406	3	YGT-TCA525C
7/16-20 UNF	H3	3.16	.472	.318	.242	.406	3	YGT-TCA543C
7/16-20 UNF	H5	3.16	.472	.318	.242	.406	3	YGT-TCA545C
1/2-13 UNC	H3	3.38	.630	.318	.275	.438	3	YGT-TCA563C
1/2-13 UNC	H5	3.38	.630	.318	.275	.438	3	YGT-TCA565C
1/2-20 UNF	H3	3.38	.472	.381	.275	.438	3	YGT-TCA583C
9/16-12 UNC	H3	3.59	.709	.381	.322	.500	3	YGT-TCB603C
9/16-18 UNF	H3	3.59	.512	.381	.322	.500	3	YGT-TCB623C
9/16-18 UNF	H5	3.59	.512	.381	.322	.500	3	YGT-TCB625C
5/8-11 UNC	H3	3.81	.748	.323	.360	.562	4	YGT-TCB643C
5/8-11 UNC	H5	3.81	.748	.323	.360	.562	4	YGT-TCB645C
5/8-18 UNF	H3	3.81	.512	.323	.360	.562	4	YGT-TCB663C
5/8-18 UNF	H5	3.81	.512	.323	.360	.562	4	YGT-TCB665C
3/4-10 UNC	H3	4.25	.827	.367	.442	.688	4	YGT-TCB703C
3/4-10 UNC	H5	4.25	.827	.367	.442	.688	4	YGT-TCB705C
3/4-16 UNF	H3	4.25	.591	.429	.442	.688	4	YGT-TCB723C
3/4-16 UNF	H5	4.25	.591	.429	.442	.688	4	YGT-TCB725C
7/8-9 UNC	H4	4.69	.827	.480	.523	.750	4	YGT-TCB744C
7/8-9 UNC	H6	4.69	.827	.480	.523	.750	4	YGT-TCB746C
7/8-14 UNF	H4	4.69	.709	.590	.523	.750	4	YGT-TCB764C
7/8-14 UNF	H6	4.69	.709	.590	.523	.750	4	YGT-TCB766C
1"-8 UNC	H4	5.13	.984	.697	.600	.812	4	YGT-TCB784C
1"-8 UNC	H6	5.13	.984	.697	.600	.812	4	YGT-TCB786C
1"-12 UNF	H4	5.13	.709	.800	.600	.812	4	YGT-TCB804C
1"-12 UNF	H6	5.13	.709	.800	.600	.812	4	YGT-TCB806C





Spiral Flute Combo Taps for Stainless Steel

Combo Taps have a patented tap design that:

- Reduces tap breakage, ensures accurate thread depth
- Eliminates loose threads due to tap overfeeding
- Improves thread quality & chip evacuation



Spiral Flute Taps - TCC-C TCD-C

Size - Pitch	Limit	OAL	Thread Length	Shank Dia	Square Size	Square Length	# of Flutes	TiCN Finish Part Number
M3 x 0.5	D3	1.94	0.20	0.14	0.11	0.19	3	YGT-TCC203C
M3.5 x 0.6	D4	2.00	0.28	0.14	0.11	0.19	3	YGT-TCC224C
M4 x 0.7	D4	2.13	0.28	0.17	0.13	0.25	3	YGT-TCC244C
M5 x 0.8	D4	2.38	0.35	0.19	0.15	0.25	3	YGT-TCC284C
M6 x 1.0	D5	2.50	0.43	0.26	0.19	0.31	3	YGT-TCC315C
M7 x 1.0	D5	2.72	0.43	0.32	0.24	0.38	3	YGT-TCC345C
M8 x 1.25	D5	2.72	0.47	0.32	0.24	0.38	3	YGT-TCC365C
M8 x 1.0	D5	2.72	0.43	0.32	0.24	0.38	3	YGT-TCC375C
M10 x 1.5	D6	2.94	0.51	0.38	0.29	0.44	3	YGT-TCC426C
M10 x 1.25	D5	2.94	0.47	0.38	0.29	0.44	3	YGT-TCC435C
M12 x 1.75	D6	3.38	0.59	0.37	0.28	0.44	3	YGT-TCC506C
M12 x 1.25	D5	3.38	0.55	0.37	0.28	0.44	3	YGT-TCC525C
M14 x 2.0	D7	3.59	0.71	0.43	0.32	0.50	3	YGT-TCD547C
M14 x 1.5	D6	3.59	0.55	0.43	0.32	0.50	3	YGT-TCD556C
M16 x 2.0	D7	3.81	0.71	0.48	0.36	0.56	3	YGT-TCD607C
M16 x 1.5	D6	3.81	0.55	0.48	0.36	0.56	3	YGT-TCD616C
M18 x 2.5	D7	4.03	0.79	0.54	0.41	0.63	4	YGT-TCD657C
M18 x 1.5	D6	4.03	0.55	0.54	0.41	0.63	4	YGT-TCD676C

Forming Taps for Multi-Purpose

Forming Taps recommended for steel, stainless steel, aluminium, copper, brass, zinc and magnesium.



Size	# of Flutes	Limit	Bright Finish Plug Part Number	TiN Coated Plug Part Number	Bright Finish Bottoming Part Number	TiN Coated Bottoming Part Number
#4-40-UNC	4	H3	YGT-Z4163	YGT-Z5163	YGT-Z6163	YGT-Z7163
#4-40-UNC	4	H5	YGT-Z4165	YGT-Z5165	YGT-Z6165	YGT-Z7165
#4-48-UNF	4	H5	YGT-Z4185	YGT-Z5185	YGT-Z6185	YGT-Z7185
#5-40-UNC	4	H3	YGT-Z4203	YGT-Z5203	YGT-Z6203	YGT-Z7203
#5-40-UNC	4	H5	YGT-Z4205	YGT-Z5205	YGT-Z6205	YGT-Z7205
#5-44-UNF	4	H5	YGT-Z4225	YGT-Z5225	YGT-Z6225	YGT-Z7225
#6-32-UNC	4	H3	YGT-Z4243	YGT-Z5243	YGT-Z6243	YGT-Z7243
#6-32-UNC	4	H5	YGT-Z4245	YGT-Z5245	YGT-Z6245	YGT-Z7245
#6-40-UNF	4	H5	YGT-Z4265	YGT-Z5265	YGT-Z6265	YGT-Z7265
#8-32-UNC	4	H3	YGT-Z4283	YGT-Z5283	YGT-Z6283	YGT-Z7283
#8-32-UNC	4	H5	YGT-Z4285	YGT-Z5285	YGT-Z6285	YGT-Z7285
#8-36-UNF	4	H5	YGT-Z4305	YGT-Z5305	YGT-Z6305	YGT-Z7305
#10-24-UNC	4	H4	YGT-Z4324	YGT-Z5324	YGT-Z6324	YGT-Z7324
#10-24-UNC	4	H6	YGT-Z4326	YGT-Z5326	YGT-Z6326	YGT-Z7326
#10-32-UNF	4	H4	YGT-Z4344	YGT-Z5344	YGT-Z6344	YGT-Z7344
#10-32-UNF	4	H6	YGT-Z4346	YGT-Z5346	YGT-Z6346	YGT-Z7346
1/4"-20-UNC	4	H4	YGT-Z4404	YGT-Z5404	YGT-Z6404	YGT-Z7404
1/4"-20-UNC	4	H6	YGT-Z4406	YGT-Z5406	YGT-Z6406	YGT-Z7406
1/4"-28-UNF	4	H4	YGT-Z4424	YGT-Z5424	YGT-Z6424	YGT-Z7424
1/4"-28-UNF	4	H6	YGT-Z4426	YGT-Z5426	YGT-Z6426	YGT-Z7426
5/16"-18-UNC	4	H5	YGT-Z4445	YGT-Z5445	YGT-Z6445	YGT-Z7445
5/16"-18-UNC	4	H7	YGT-Z4447	YGT-Z5447	YGT-Z6447	YGT-Z7447
5/16"-24-UNF	4	H5	YGT-Z4465	YGT-Z5465	YGT-Z6465	YGT-Z7465
5/16"-24-UNF	4	H7	YGT-Z4467	YGT-Z5467	YGT-Z6467	YGT-Z7467
3/8"-16-UNC	4	H5	YGT-Z4485	YGT-Z5485	YGT-Z6485	YGT-Z7485
3/8"-16-UNC	4	H7	YGT-Z4487	YGT-Z5487	YGT-Z6487	YGT-Z7487
3/8"-24-UNF	4	H5	YGT-Z4505	YGT-Z5505	YGT-Z6505	YGT-Z7505
3/8"-24-UNF	4	H7	YGT-Z4507	YGT-Z5507	YGT-Z6507	YGT-Z7507
7/16"-14-UNC	4	H8	YGT-Z4528	YGT-Z5528	YGT-Z6528	YGT-Z7528
7/16"-20-UNF	4	H8	YGT-Z4548	YGT-Z5548	YGT-Z6548	YGT-Z7548
1/2"-13-UNC	4	H8	YGT-Z4568	YGT-Z5568	YGT-Z6568	YGT-Z7568
1/2"-20-UNF	4	H8	YGT-Z4588	YGT-Z5588	YGT-Z6588	YGT-Z7588





Spiral Pointed Plug Taps for Multi-Purpose

Forming Taps recommended for steel, stainless steel, aluminium, copper, brass, zinc and magnesium.



Size	# of Flutes	Limit	Bright Finish Part Number	TiN Coated Part Number
#2-56-UNC	2	H2	YGT-J0082	YGT-J1082
#4-40-UNC	2	H2	YGT-J0162	YGT-J1162
#5-40-UNF	2	H2	YGT-J0202	YGT-J1202
#6-32-UNC	2	H3	YGT-J0243	YGT-J1243
#8-32-UNC	2	H3	YGT-J0283	YGT-J1283
#10-24-UNC	2	H3	YGT-J0323	YGT-J1323
#10-32-UNF	2	H3	YGT-J0343	YGT-J1343
1/4"-20-UNC	2	H3	YGT-J0403	YGT-J1403
1/4"-20-UNC	2	H5	YGT-J0405	YGT-J1405
1/4"-28-UNF	2	H3	YGT-J0423	YGT-J1423
5/16"-18-UNC	2	H3	YGT-J0443	YGT-J1443
5/16"-18-UNC	2	H5	YGT-J0445	YGT-J1445
5/16"-24-UNF	2	H3	YGT-J0463	YGT-J1463
3/8"-16-UNC	3	H3	YGT-J0483	YGT-J1483
3/8"-16-UNC	3	H5	YGT-J0485	YGT-J1485
3/8"-24-UNF	3	H3	YGT-J0503	YGT-J1503
7/16"-14-UNC	3	H3	YGT-J0523	YGT-J1523
7/16"-14-UNC	3	H5	YGT-J0525	YGT-J1525
7/16"-20-UNF	3	H3	YGT-J0543	YGT-J1543
7/16"-20-UNF	3	H5	YGT-J0545	YGT-J1545
1/2"-13-UNC	3	H3	YGT-J0563	YGT-J1563
1/2"-13-UNC	3	H5	YGT-J0565	YGT-J1565
1/2"-20-UNF	3	H3	YGT-J0583	YGT-J1583
1/2"-20-UNF	3	H5	YGT-J0585	YGT-J1585
9/16"-12-UNC	3	H3	YGT-J0603	YGT-J1603
9/16"-18-UNF	3	H5	YGT-J0625	YGT-J1625
5/8"-11-UNC	3	H3	YGT-J0643	YGT-J1643
5/8"-11-UNC	3	H5	YGT-J0645	YGT-J1645
5/8"-18-UNF	3	H5	YGT-J0665	YGT-J1665
3/4"-10-UNC	3	H3	YGT-J0703	YGT-J1703
3/4"-10-UNC	3	H5	YGT-J0705	YGT-J1705
3/4"-16-UNF	3	H5	YGT-J0725	YGT-J1725
7/8"-9-UNC	3	H4	YGT-J0744	YGT-J1744
7/8"-14-UNF	3	H6	YGT-J0766	YGT-J1766
1"-8-UNC	3	H4	YGT-J0784	YGT-J1784

Tap Drill Sizes

UNIFIED THREADS		
TAP SIZE	CUTTING TAPS	FORMING TAPS
	Based on 75% Thread (in.)	Based on 65% Thread (in.)
0-80	0.0478"	0.0545"
1-64	0.0578"	0.0661"
1-72	0.0595"	0.0669"
2-56	0.0686"	0.0781"
2-64	0.0708"	0.0791"
3-48	0.0787"	0.0898"
3-56	0.0816"	0.0911"
4-40	0.0876"	0.1010"
4-48	0.0917"	0.1028"
5-40	0.1006"	0.1140"
5-44	0.1029"	0.1150"
6-32	0.1076"	0.1242"
6-40	0.1136"	0.1270"
8-32	0.1336"	0.1502"
8-36	0.1369"	0.1517"
10-24	0.1494"	0.1716"
10-32	0.1596"	0.1762"
12-24	0.1754"	0.1976"
12-28	0.1812"	0.2002"
1/4-20	0.2013"	0.2279"
1/4-28	0.2152"	0.2342"
5/16-18	0.2584"	0.2879"
5/16-24	0.2719"	0.2941"
3/8-16	0.3141"	0.3474"
3/8-24	0.3344"	0.3566"
7/16-14	0.3679"	0.4059"
7/16-20	0.3888"	0.4154"
1/2-13	0.4251"	0.4660"
1/2-20	0.4513"	0.4779"
9/16-12	0.4813"	0.5257"
9/16-18	0.5084"	0.5379"
5/8-11	0.5364"	0.5848"
5/8-18	0.5709"	0.6004"
3/4-10	0.6526"	0.7058"
3/4-16	0.6891"	0.7224"
7/8-9	0.7668"	
7/8-14	0.8054"	
1-8	0.8782"	
1-12	0.9188"	
1-14	0.9304"	

NOTE: Information in this chart is for reference only. We will not be held liable for any consequential damages or economic loss due to the use of information contained within this chart.

Tap Drill Sizes

METRIC THREADS		
TAP SIZE	CUTTING TAPS	FORMING TAPS
	<small>Based on 75% Thread (in.)</small>	<small>Based on 65% Thread (in.)</small>
M1.6 X 0.35	0.0496"	0.0569"
M1.8 X 0.35	0.0574"	0.0648"
M2 X 0.4	0.0634"	0.0718"
M2.2 X 0.45	0.0694"	0.0788"
M2.5 X 0.45	0.0812"	0.0906"
M3 X 0.5	0.0989"	0.1094"
M3.5 X 0.6	0.1148"	0.1274"
M4 X 0.7	0.1306"	0.1453"
M4.5 X 0.75	0.1484"	0.1641"
M5 X 0.8	0.1662"	0.1829"
M6 X 1.0	0.1979"	0.2188"
M7 X 1.0	0.2372"	0.2582"
M8 X 1.25	0.2670"	0.2932"
M8 X 1.0	0.2766"	0.2976"
M10 X 1.5	0.3362"	0.3676"
M10 X 1.25	0.3458"	0.3719"
M12 X 1.75	0.4053"	0.4420"
M12 X 1.25	0.4245"	0.4507"
M14 X 2.0	0.4745"	0.5164"
M14 X 1.5	0.4936"	0.5251"
M16 X 2.0	0.5532"	0.5951"
M16 X 1.5	0.5724"	0.6038"
M18 X 2.5	0.6128"	0.6652"
M18 X 1.5	0.6511"	0.6826"
M20 X 2.5	0.6915"	0.7439"
M20 X 1.5	0.7299"	0.7613"
M22 X 2.5	0.7702"	0.8226"
M22 X 1.5	0.8086"	0.8400"
M24 X 3.0	0.8298"	0.8927"
M24 X 2.0	0.8682"	
M27 X 3.0	0.9479"	
M27 X 2.0	0.9863"	
M30 X 3.5	1.0469"	
M30 X 2.0	1.1044"	
M33 X 3.5	1.1650"	
M33 X 2.0	1.2225"	
M36 X 4.0	1.2639"	
M36 X 3.0	1.3023"	
M39 X 4.0	1.3820"	
M39 X 3.0	1.4204"	

Pipe Taps

TAP SIZE	NPT** HOLE SIZE	NPTF** HOLE SIZE	NPS HOLE SIZE	NPSF HOLE SIZE
1/16	0.2460"	0.2420"	0.2500"	0.2460"
1/8	0.3390"	0.3320"	0.3438"	0.3390"
1/4	0.4375"	0.4375"	0.4375"	0.4375"
3/8	0.5781"	0.5625"	0.5781"	0.5781"
1/2	0.7031"	0.7031"	0.7188"	0.7188"
3/4	0.9063"	0.9063"	0.9375"	0.9219"
1	1.1406"	1.1406"	1.1719"	1.1563"
1-1/4	1.4844"	1.4844"	1.5156"	
1-1/2	1.7344"	1.7344"	1.7500"	
2	2.2031"	2.1875"	2.2187"	
2-1/2	2.6250"	2.6250"	2.6563"	
3	3.2500"	3.2500"		

**For tapping without reaming

National Coarse Threads

Size	TPI	Part Number
13/16" O.D.		
#4	40	5-800-003
#5	40	5-800-004
#6	32	5-800-005
#8	32	5-800-010
#10	24	5-800-015
#12	24	5-800-020
1/4	20	5-800-025
5/16	18	5-800-030
1" O.D.		
#4	40	5-800-032
#5	40	5-800-034
#6	32	5-800-035
#8	32	5-800-040
#10	24	5-800-045
#12	24	5-800-050
1/4	20	5-800-055
5/16	18	5-800-060
3/8	16	5-800-065
7/16	14	5-800-070
1/2	13	5-800-075

Size	TPI	Part Number
1-1/2" O.D.		
1/4	20	5-800-080
5/16	18	5-800-085
3/8	16	5-800-090
7/16	14	5-800-095
1/2	13	5-800-100
9/16	12	5-800-105
5/8	11	5-800-110
3/4	10	5-800-115
2" O.D.		
1/4	20	5-800-116
5/16	18	5-800-117
3/8	16	5-800-118
7/16	14	5-800-1185
1/2	13	5-800-1191
9/16	12	5-800-1192
5/8	11	5-800-120
3/4	10	5-800-125
7/8	9	5-800-130
1	8	5-800-135

Size	TPI	Part Number
2-1/2" O.D.		
1-1/8	7	5-800-200
1-1/4	7	5-800-205
1-3/8	6	5-800-210
1-1/2	6	5-800-215
3" O.D.		
1	8	5-800-300
1-1/4	7	5-800-310
1-3/8	6	5-800-315
1-1/2	6	5-800-320
1-5/8	5-1/2	5-800-325
1-3/4	5	5-800-330
1-7/8	5	5-800-335
2	4-1/2	5-800-340



National Fine Threads

Size	TPI	Part Number
13/16" O.D.		
#4	48	5-805-003
#5	44	5-805-004
#6	40	5-805-005
#8	36	5-805-010
#10	32	5-805-015
#12	28	5-805-020
1/4	28	5-805-025
5/16	24	5-805-030
1" O.D.		
#4	48	5-805-034
#6	40	5-805-035
#8	36	5-805-040
#10	32	5-805-045
#12	28	5-805-050
1/4	28	5-805-055
5/16	24	5-805-060
3/8	24	5-805-065
7/16	20	5-805-070
1/2	20	5-805-075

Size	TPI	Part Number
1-1/2" O.D.		
1/4	28	5-805-080
5/16	24	5-805-085
3/8	24	5-805-090
7/16	20	5-805-095
1/2	20	5-805-100
9/16	18	5-805-105
5/8	18	5-805-110
3/4	16	5-805-115
2" O.D.		
1/4	28	5-805-116
5/16	24	5-805-117
3/8	24	5-805-118
7/16	20	5-805-1181
1/2	20	5-805-1191
9/16	18	5-805-1192
5/8	18	5-805-120
3/4	16	5-805-125
7/8	14	5-805-130
1	12	5-805-134
1	14	5-805-135
1	14	5-805-135

Size	TPI	Part Number
2" O.D.		
1-1/8	12	5-805-200
1-1/4	12	5-805-205
1-3/8	12	5-805-210
1-1/2	12	5-805-215
3" O.D.		
1	14	5-805-305
1-1/4	12	5-805-315
1-3/8	12	5-805-320
1-1/2	12	5-805-325
1-5/8	12	5-805-330
1-3/4	12	5-805-335
1-7/8	12	5-805-340
2	12	5-805-345



M924 - 4 Flute



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Square End

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/8	1/8	1/4	1-1/2	IMC-67494
1/8	1/8	1/2	1-1/2	IMC-67498
1/8	1/8	3/4	2-1/4	IMC-67502
5/32	3/16	5/16	2	IMC-67536
5/32	3/16	9/16	2	IMC-67537
5/32	3/16	5/16	2	IMC-67506
3/16	3/16	9/16	2	IMC-67510
3/16	3/16	3/4	2-1/2	IMC-67514
7/32	1/4	3/8	2	IMC-67541
7/32	1/4	3/4	2-1/2	IMC-67542
7/32	1/4	3/8	2	IMC-67518
1/4	1/4	3/4	2-1/2	IMC-67524
1/4	1/4	1-1/4	3	IMC-67530
1/4	1/4	1-3/4	4	IMC-67546
9/32	5/16	3/4	2-1/2	IMC-67549
9/32	5/16	7/16	2	IMC-67092
5/16	5/16	13/16	2-1/2	IMC-67098
5/16	5/16	1-1/4	3	IMC-67104
5/16	5/16	2-1/8	4	IMC-67110
11/32	3/8	7/8	2-1/2	IMC-67552
11/32	3/8	1/2	2	IMC-67116
11/32	3/8	7/8	2-1/2	IMC-67124
11/32	3/8	1-1/4	3	IMC-67132
3/8	3/8	1-5/8	4	IMC-67148
3/8	3/8	2	4	IMC-67164
3/8	3/8	2-1/2	5	IMC-67554
13/32	7/16	1	2-3/4	IMC-67557
13/32	7/16	5/8	2-1/2	IMC-67180

Square End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	Part Number
7/16	7/16	1	2-3/4	IMC-67188
7/16	7/16	2	4	IMC-67196
1/2	1/2	5/8	2-1/2	IMC-67204
1/2	1/2	1	3	IMC-67213
1/2	1/2	1-1/4	3	IMC-67222
1/2	1/2	1-5/8	4	IMC-67231
1/2	1/2	2-1/8	4	IMC-67249
1/2	1/2	2-5/8	5	IMC-67258
1/2	1/2	3-1/4	6	IMC-67267
9/16	9/16	1-1/4	3-1/2	IMC-67559
5/8	5/8	3/4	3	IMC-67276
5/8	5/8	1-3/8	3-1/2	IMC-67286
5/8	5/8	2-1/8	4	IMC-67296
5/8	5/8	2-5/8	5	IMC-67316
5/8	5/8	3-1/4	6	IMC-67326
3/4	3/4	1	3	IMC-67346
3/4	3/4	1-5/8	4	IMC-67356
3/4	3/4	2-3/8	5	IMC-67366
3/4	3/4	3-1/4	6	IMC-67386
3/4	3/4	4-1/8	7	IMC-67396
1	1	1-3/4	4	IMC-67406
1	1	2-1/4	5	IMC-67417
1	1	3-1/4	6	IMC-67439
1	1	4-1/4	7	IMC-67450
1-1/4	1-1/4	2	4-1/2	IMC-67461
1-1/4	1-1/4	3-1/4	6	IMC-67472
1-1/4	1-1/4	5	8	IMC-67483

IMCO POW-R-FEED ENDMILLS

M924 - 4 Flute

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Square End - Weldon Shank

Cutter Dia	Shank Dia	LOC	OAL	Part Number
3/8	3/8	7/8	2-1/2	IMC-68195
3/8	3/8	1-1/4	3	IMC-68196
3/8	3/8	1-5/8	4	IMC-68197
3/8	3/8	2	4	IMC-68198
3/8	3/8	2-1/2	5	IMC-68221
7/16	7/16	1	2-3/4	IMC-68199
7/16	7/16	2	4	IMC-68200
1/2	1/2	1	3	IMC-68710
1/2	1/2	1-1/4	3	IMC-68201
1/2	1/2	1-5/8	4	IMC-68202
1/2	1/2	2-1/8	4	IMC-68203
1/2	1/2	2-5/8	5	IMC-68204
1/2	1/2	3-1/4	6	IMC-68205
5/8	5/8	1-3/8	3-1/2	IMC-68206
5/8	5/8	2-1/8	4	IMC-68207
5/8	5/8	2-5/8	5	IMC-68208
5/8	5/8	3-1/4	6	IMC-68209
3/4	3/4	1-5/8	4	IMC-68210
3/4	3/4	2-3/8	5	IMC-68211
3/4	3/4	3-1/4	6	IMC-68212
3/4	3/4	4-1/8	7	IMC-68213
1	1	1-3/4	4	IMC-68214
1	1	2-1/4	5	IMC-68215
1	1	3-1/4	6	IMC-68216
1	1	4-1/4	7	IMC-68217
1-1/4	1-1/4	2	4-1/2	IMC-68218
1-1/4	1-1/4	3-1/4	6	IMC-68219
1-1/4	1-1/4	5	8	IMC-68220



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Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.090R Part Number	.120R Part Number
1/8	1/8	1/4	1-1/2	IMC-67495-R				
1/8	1/8	1/2	1-1/2	IMC-67499-R				
1/8	1/8	3/4	2-1/4	IMC-67503-R				
5/32	3/16	5/16	2	IMC-67538-R				
5/32	3/16	9/16	2	IMC-67539-R				
3/16	3/16	5/16	2	IMC-67507-R	IMC-67508-R			
3/16	3/16	9/16	2	IMC-67511-R	IMC-67512-R			
3/16	3/16	3/4	2-1/2	IMC-67515-R	IMC-67516-R			
7/32	1/4	3/8	2	IMC-67543-R				
7/32	1/4	3/4	2-1/2	IMC-67544-R				
1/4	1/4	3/8	2	IMC-67519-R	IMC-67520-R			
1/4	1/4	3/4	2-1/2	IMC-67525-R	IMC-67526-R	IMC-67527-R		
1/4	1/4	1-1/4	3	IMC-67531-R	IMC-67532-R			
1/4	1/4	1-3/4	4	IMC-67547-R	IMC-67548-R			
9/32	5/16	3/4	2-1/2	IMC-67550-R	IMC-67551-R			
5/16	5/16	7/16	2	IMC-67093-R	IMC-67094-R			
5/16	5/16	13/16	2-1/2	IMC-67099-R	IMC-67100-R	IMC-67101-R		
5/16	5/16	1-1/4	3	IMC-67105-R	IMC-67106-R			
5/16	5/16	2-1/8	4	IMC-67111-R	IMC-67112-R			
11/32	3/8	7/8	2-1/2		IMC-67553-R			
3/8	3/8	1/2	2	IMC-67117-R	IMC-67118-R			
3/8	3/8	7/8	2-1/2	IMC-67125-R	IMC-67126-R	IMC-67127-R	IMC-67128-R	
3/8	3/8	1-1/4	3	IMC-67133-R	IMC-67134-R	IMC-67135-R		
3/8	3/8	1-5/8	4	IMC-67149-R	IMC-67150-R	IMC-67151-R		
3/8	3/8	2	4	IMC-67165-R	IMC-67166-R	IMC-67167-R		
3/8	3/8	2-1/2	5	IMC-67555-R	IMC-67556-R			
13/32	7/16	1	2-3/4		IMC-67558-R			
7/16	7/16	5/8	2-1/2		IMC-67182-R			
7/16	7/16	1	2-3/4		IMC-67190-R			
7/16	7/16	2	4		IMC-67198-R			

IMCO POW-R-FEED ENDMILLS

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Corner Radius (cont.)

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.090R Part Number	.120R Part Number
1/2	1/2	5/8	2-1/2		IMC-67206-R	IMC-67207-R		
1/2	1/2	1	3	IMC-67214-R	IMC-67215-R	IMC-67216-R	IMC-67217-R	IMC-67218-R
1/2	1/2	1-1/4	3	IMC-67223-R	IMC-67224-R	IMC-67225-R	IMC-67226-R	IMC-67227-R
1/2	1/2	1-5/8	4		IMC-67233-R	IMC-67234-R	IMC-67235-R	IMC-67236-R
1/2	1/2	2-1/8	4		IMC-67251-R	IMC-67252-R	IMC-67253-R	IMC-67254-R
1/2	1/2	2-5/8	5		IMC-67260-R	IMC-67261-R		
1/2	1/2	3-1/4	6		IMC-67269-R	IMC-67270-R		
9/16	9/16	1-1/4	3-1/2		IMC-67560-R			
5/8	5/8	3/4	3		IMC-67278-R	IMC-67279-R		
5/8	5/8	1-3/8	3-1/2		IMC-67288-R	IMC-67289-R	IMC-67290-R	IMC-67291-R
5/8	5/8	2-1/8	4		IMC-67298-R	IMC-67299-R	IMC-67300-R	IMC-67301-R
5/8	5/8	2-5/8	5		IMC-67318-R	IMC-67319-R		
5/8	5/8	3-1/4	6		IMC-67328-R	IMC-67329-R		
3/4	3/4	1	3		IMC-67348-R	IMC-67349-R		
3/4	3/4	1-5/8	4		IMC-67358-R	IMC-67359-R	IMC-67360-R	IMC-67361-R
3/4	3/4	2-3/8	5		IMC-67368-R	IMC-67369-R	IMC-67370-R	IMC-67371-R
3/4	3/4	3-1/4	6		IMC-67388-R	IMC-67389-R		
3/4	3/4	4-1/8	7		IMC-67398-R	IMC-67399-R		
1	1	1-3/4	4		IMC-67408-R	IMC-67409-R	IMC-67410-R	IMC-67411-R
1	1	2-1/4	5		IMC-67419-R	IMC-67420-R	IMC-67422-R	
1	1	3-1/4	6		IMC-67441-R	IMC-67442-R		
1	1	4-1/4	7		IMC-67452-R	IMC-67453-R		
1-1/4	1-1/4	2	4-1/2		IMC-67463-R	IMC-67464-R	IMC-67466-R	
1-1/4	1-1/4	3-1/4	6		IMC-67474-R	IMC-67475-R	IMC-67477-R	
1-1/4	1-1/4	5	8		IMC-67485-R	IMC-67486-R	IMC-67488-R	



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Corner Radius - Weldon Shank

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.120R Part Number
3/8	3/8	7/8	2-1/2	IMC-68116-R	IMC-68117-R	IMC-68118-R	
3/8	3/8	1-1/4	3	IMC-68119-R	IMC-68120-R	IMC-68121-R	
3/8	3/8	1-5/8	4	IMC-68122-R	IMC-68123-R	IMC-68124-R	
3/8	3/8	2	4	IMC-68125-R	IMC-68126-R	IMC-68127-R	
1/2	1/2	1	3	IMC-68711-R	IMC-68712-R	IMC-68713-R	IMC-68714-R
1/2	1/2	1-1/4	3	IMC-68131-R	IMC-68132-R	IMC-68133-R	IMC-68134-R
1/2	1/2	1-5/8	4		IMC-68136-R	IMC-68137-R	
1/2	1/2	2-1/8	4		IMC-68139-R	IMC-68140-R	
1/2	1/2	2-5/8	5		IMC-68142-R	IMC-68143-R	
1/2	1/2	3-1/4	6		IMC-68145-R	IMC-68146-R	
5/8	5/8	1-3/8	3-1/2		IMC-68147-R	IMC-68148-R	
5/8	5/8	2-1/8	4		IMC-68149-R	IMC-68150-R	
5/8	5/8	2-5/8	5		IMC-68151-R	IMC-68152-R	
5/8	5/8	3-1/4	6		IMC-68153-R	IMC-68154-R	
3/4	3/4	1-5/8	4		IMC-68155-R	IMC-68156-R	IMC-68157-R
3/4	3/4	2-3/8	5		IMC-68158-R	IMC-68159-R	IMC-68160-R
3/4	3/4	3-1/4	6		IMC-68161-R	IMC-68162-R	
3/4	3/4	4-1/8	7		IMC-68164-R	IMC-68165-R	
1	1	1-3/4	4		IMC-68167-R	IMC-68168-R	IMC-68169-R
1	1	2-1/4	5		IMC-68171-R	IMC-68172-R	IMC-68173-R
1	1	3-1/4	6		IMC-68175-R	IMC-68176-R	
1	1	4-1/4	7		IMC-68179-R	IMC-68180-R	
1-1/4	1-1/4	2	4-1/2		IMC-68183-R	IMC-68184-R	IMC-68185-R
1-1/4	1-1/4	3-1/4	6		IMC-68187-R	IMC-68188-R	IMC-68189-R
1-1/4	1-1/4	5	8		IMC-68191-R	IMC-68192-R	IMC-68193-R

IMCO POW-R-FEED ENDMILLS

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Ball End

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/8	1/8	1/2	1-1/2	IMC-67501-B
5/32	3/16	9/16	2	IMC-67540-B
3/16	3/16	9/16	2	IMC-67513-B
7/32	1/4	3/4	2-1/2	IMC-67545-B
1/4	1/4	3/4	2-1/2	IMC-67529-B
5/16	5/16	13/16	2-1/2	IMC-67103-B
3/8	3/8	7/8	2-1/2	IMC-67131-B
7/16	7/16	1	2-3/4	IMC-67195-B
1/2	1/2	1	3	IMC-67221-B
1/2	1/2	1-1/4	3	IMC-67230-B
5/8	5/8	1-3/8	3-1/2	IMC-67295-B
3/4	3/4	1-5/8	4	IMC-67365-B



M904 - 4 Flute



- Recommended for high-volume production runs and difficult to machine materials.
- Plunge, slot, rough, and finish in a wide range of materials, including Stainless Steels, Cast Iron, Inconel, Titanium, Carbon Steels, and High-Temp Alloys
- ALTiNX heat resistant bonds with substrate for excellent coating integrity.

Square End



Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/8	1/8	1/2	1-1/2	IMC-63010
5/32	3/16	9/16	2	IMC-63011
3/16	3/16	5/8	2	IMC-63012
7/32	1/4	5/8	2-1/2	IMC-63013
1/4	1/4	3/8	2	IMC-63003
1/4	1/4	3/4	2-1/2	IMC-63014
5/16	5/16	13/16	2-1/2	IMC-63016
3/8	3/8	1/2	2	IMC-63004
3/8	3/8	7/8	2-1/2	IMC-63018
7/16	7/16	1	2-3/4	IMC-63020
1/2	1/2	5/8	2-1/2	IMC-63005
1/2	1/2	1	3	IMC-63022
1/2	1/2	1-1/4	3	IMC-63100
5/8	5/8	3/4	3	IMC-63006
5/8	5/8	1-1/4	3-1/2	IMC-63024
3/4	3/4	7/8	3	IMC-63007
3/4	3/4	1-1/2	4	IMC-63025
1	1	1-1/2	4	IMC-63026

Ball End

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/8	1/8	1/2	1-1/2	IMC-63139-B
3/16	3/16	5/8	2	IMC-63142-B
1/4	1/4	3/4	2-1/2	IMC-63144-B
3/8	3/8	7/8	2-1/2	IMC-63148-B
1/2	1/2	1	3	IMC-63152-B
1/2	1/2	1-1/4	3	IMC-63153-B
3/4	3/4	1-1/2	4	IMC-63156-B



IMCO POW-R-FEED ENDMILLS

M904 - 4 Flute

- Recommended for high-volume production runs and difficult to machine materials.
- Plunge, slot, rough, and finish in a wide range of materials, including Stainless Steels, Cast Iron, Inconel, Titanium, Carbon Steels, and High-Temp Alloys
- ALTiNX heat resistant bonds with substrate for excellent coating integrity.



Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	Radius	Part Number
1/8	1/8	1/4	1-1/2	.015R	IMC-63248-R
1/8	1/8	1/2	1-1/2	.015R	IMC-63064-R
5/32	3/16	9/16	2	.015R	IMC-63118-R
3/16	3/16	5/16	2	.015R	IMC-63249-R
3/16	3/16	5/8	2	.015R	IMC-63065-R
7/32	1/4	5/8	2-1/2	.030R	IMC-63119-R
1/4	1/4	3/8	2	.030R	IMC-63058-R
1/4	1/4	3/4	2-1/2	.030R	IMC-63066-R
1/4	1/4	1-1/8	3	.030R	IMC-63420-R
1/4	1/4	1-1/2	4	.030R	IMC-63425-R
5/16	5/16	13/16	2-1/2	.030R	IMC-63067-R
3/8	3/8	1/2	2	.030R	IMC-63059-R
3/8	3/8	7/8	2-1/2	.030R	IMC-63068-R
3/8	3/8	1-1/8	3	.030R	IMC-63421-R
3/8	3/8	1-3/4	4	.030R	IMC-63426-R



Corner Radius (cont.)

Cutter Dia	Shank Dia	LOC	OAL	Radius	Part Number
7/16	7/16	1	2-3/4	.030R	IMC-63069-R
1/2	1/2	5/8	2-1/2	.060R	IMC-63060-R
1/2	1/2	1	3	.060R	IMC-63070-R
1/2	1/2	1-1/4	3	.060R	IMC-63098-R
1/2	1/2	2	4	.060R	IMC-63422-R
1/2	1/2	2-1/2	5	.060R	IMC-63427-R
1/2	1/2	3	6	.060R	IMC-63430-R
5/8	5/8	3/4	3	.060R	IMC-63061-R
5/8	5/8	1-1/4	3-1/2	.060R	IMC-63071-R
3/4	3/4	7/8	3	.060R	IMC-63062-R
3/4	3/4	1-1/2	4	.060R	IMC-63072-R
3/4	3/4	2-1/4	5	.060R	IMC-63423-R
3/4	3/4	3	6	.060R	IMC-63428-R
1	1	1-1/2	4	.060R	IMC-63073-R
1	1	3	6	.060R	IMC-63429-R
1	1	4-1/8	7	.060R	IMC-63432-R



M905 - 5 Flute

- Recommended for high-volume production runs and difficult to machine materials.
- Plunge, slot, rough, and finish in a wide range of materials, including Stainless Steels, Cast Iron, Inconel, Titanium, Carbon Steels, and High-Temp Alloys
- ALTiNX heat resistant bonds with substrate for excellent coating integrity.



Square End

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/4	1/4	3/4	2-1/2	IMC-63338
3/8	3/8	7/8	2-1/2	IMC-63340
1/2	1/2	1-1/4	3	IMC-63342
5/8	5/8	1-1/4	3-1/2	IMC-63343
3/4	3/4	1-1/2	4	IMC-63344



Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	.020R Part Number	.030R Part Number	.060R Part Number
1/4	1/4	3/4	2-1/2	IMC-63287-R	IMC-63462-R	
3/8	3/8	7/8	2-1/2	IMC-63289-R	IMC-63370-R	
1/2	1/2	1-1/4	3		IMC-63291-R	IMC-63371-R
5/8	5/8	1-1/4	3-1/2		IMC-63292-R	IMC-63374-R
3/4	3/4	1-1/2	4		IMC-63293-R	IMC-63375-R

IMCO POW-R-FEED ENDMILLS

Application Guide M924 POW-R-FEED - Speeds & Feeds (inch)

ISO Code	Work Material	Type of Cut	Axial DOC	Radial DOC	Number of Flutes	Speed (SFM)	Feed (Inches per Tooth)											
							1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1
K	Cast Iron Gray	Slotting	1 x D	1 x D	4	325	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0024	.0030	.0036	.0048
		Peripheral - Rough	1.25 x D	.5 x D	4	400	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
		Finish	1.5 x D	.015 x D	4	475	.0008	.0010	.0012	.0014	.0017	.0021	.0025	.0029	.0033	.0041	.0050	.0066
	Cast Iron Ductile	Slotting	1 x D	1 x D	4	300	.0006	.0007	.0008	.0010	.0011	.0014	.0017	.0019	.0022	.0028	.0033	.0044
		Peripheral - Rough	1.25 x D	.5 x D	4	375	.0007	.0008	.0010	.0012	.0014	.0017	.0020	.0024	.0027	.0034	.0041	.0054
		Finish	1.5 x D	.015 x D	4	450	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
	Cast Iron Malleable	Slotting	.75 x D	1 x D	4	250	.0006	.0007	.0008	.0010	.0011	.0014	.0017	.0019	.0022	.0028	.0033	.0044
		Peripheral - Rough	1.25 x D	.5 x D	4	325	.0007	.0008	.0010	.0012	.0014	.0017	.0020	.0024	.0027	.0034	.0041	.0054
		Finish	1.5 x D	.015 x D	4	400	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
P	Low Carbon Steels 1018, 12L14, 8620	Slotting	1 x D	1 x D	4	350	.0007	.0008	.0010	.0011	.0013	.0016	.0020	.0023	.0026	.0033	.0039	.0052
		Peripheral - Rough	1.25 x D	.5 x D	4	425	.0008	.0010	.0012	.0014	.0016	.0020	.0024	.0028	.0032	.0040	.0048	.0064
		Finish	1.5 x D	.015 x D	4	500	.0009	.0011	.0014	.0016	.0018	.0023	.0027	.0032	.0036	.0045	.0054	.0072
	Medium Carbon Steels 4140, 4340	Slotting	1 x D	1 x D	4	300	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0024	.0030	.0036	.0048
		Peripheral - Rough	1.25 x D	.5 x D	4	375	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
		Finish	1.5 x D	.015 x D	4	450	.0008	.0010	.0012	.0014	.0017	.0021	.0025	.0029	.0033	.0041	.0050	.0066
	Tool & Die Steels <48 Rc A2, D2, H13, P20	Slotting	.75 x D	1 x D	4	300	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0024	.0030	.0036	.0048
		Peripheral - Rough	1.25 x D	.3 x D	4	375	.0007	.0009	.0011	.0013	.0015	.0018	.0022	.0025	.0029	.0036	.0044	.0058
		Finish	1.5 x D	.015 x D	4	450	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
M	Martensitic Stainless Steels 416, 410, 440C	Slotting	.75 x D	1 x D	4	300	.0006	.0008	.0009	.0011	.0012	.0015	.0018	.0021	.0024	.0030	.0036	.0048
		Peripheral - Rough	1.25 x D	.3 x D	4	375	.0007	.0009	.0011	.0013	.0015	.0018	.0022	.0025	.0029	.0036	.0044	.0058
		Finish	1.5 x D	.015 x D	4	450	.0008	.0009	.0011	.0013	.0015	.0019	.0023	.0026	.0030	.0038	.0045	.0060
	Austenitic Stainless Steels 303, 304, 316	Slotting	.75 x D	1 x D	4	275	.0007	.0008	.0010	.0011	.0013	.0016	.0020	.0023	.0026	.0033	.0039	.0052
		Peripheral - Rough	1.25 x D	.3 x D	4	325	.0008	.0010	.0012	.0014	.0016	.0020	.0024	.0028	.0032	.0040	.0048	.0064
		Finish	1.5 x D	.015 x D	4	400	.0008	.0010	.0012	.0014	.0017	.0021	.0025	.0029	.0033	.0041	.0050	.0066
	Precipitation Hardening Stainless Steels 17-4, 15-5, 13-8	Slotting	.5 x D	1 x D	4	250	.0005	.0006	.0008	.0009	.0010	.0013	.0015	.0018	.0020	.0025	.0030	.0040
		Peripheral - Rough	1.25 x D	.3 x D	4	300	.0006	.0008	.0009	.0011	.0013	.0016	.0019	.0022	.0025	.0031	.0038	.0050
		Finish	1.5 x D	.015 x D	4	375	.0007	.0008	.0010	.0011	.0013	.0016	.0020	.0023	.0026	.0033	.0039	.0052
S	Titanium Alloys 6AL - 4V	Slotting	.5 x D	1 x D	4	250	.0005	.0006	.0008	.0009	.0010	.0013	.0015	.0018	.0020	.0025	.0030	.0040
		Peripheral - Rough	1.25 x D	.3 x D	4	300	.0006	.0008	.0009	.0011	.0013	.0016	.0019	.0022	.0025	.0031	.0038	.0050
		Finish	1.5 x D	.015 x D	4	375	.0007	.0008	.0010	.0011	.0013	.0016	.0020	.0023	.0026	.0033	.0039	.0052
	High Temperature Alloys Inconel, Haynes, Stellite, Hastalloy	Slotting	.25 x D	1 x D	4	60	.0005	.0007	.0008	.0009	.0011	.0013	.0016	.0018	.0021	.0026	.0032	.0042
		Peripheral - Rough	1.25 x D	.25 x D	4	90	.0007	.0008	.0010	.0012	.0014	.0017	.0020	.0024	.0027	.0034	.0041	.0054
		Finish	1.5 x D	.01 x D	4	125	.0008	.0010	.0012	.0014	.0016	.0019	.0023	.0027	.0031	.0039	.0047	.0062

D = Tool Diameter

≈ Approximately Equals < Less Than
 ≤ Less Than or Equal To > Greater Than
 ≥ Greater Than or Equal To = Equals
 × Multiply

Application Guide M924 POW-R-FEED - Speeds & Feeds (metric)

ISO Code	Work Material	Type of Cut	Axial DOC	Radial DOC	Number of Flutes	Speed (M/min)	Feed (MM per Tooth)										
							3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0	25.0
K	Cast Iron Gray	Slotting	1 x D	1 x D	4	99	.0144	.0192	.0240	.0288	.0384	.0478	.0576	.0672	.0766	.0956	.1198
		Peripheral - Rough	1.25 x D	.5 x D	4	122	.0180	.0240	.0300	.0360	.0480	.0598	.0720	.0840	.0958	.1195	.1497
		Finish	1.5 x D	.015 x D	4	145	.0198	.0264	.0330	.0396	.0528	.0657	.0792	.0924	.1053	.1315	.1647
	Cast Iron Ductile	Slotting	1 x D	1 x D	4	91	.0132	.0176	.0220	.0264	.0352	.0438	.0528	.0616	.0702	.0876	.1098
		Peripheral - Rough	1.25 x D	.5 x D	4	114	.0162	.0216	.0270	.0324	.0432	.0538	.0648	.0756	.0862	.1076	.1348
		Finish	1.5 x D	.015 x D	4	137	.0180	.0240	.0300	.0360	.0480	.0598	.0720	.0840	.0958	.1195	.1497
	Cast Iron Malleable	Slotting	.75 x D	1 x D	4	76	.0132	.0176	.0220	.0264	.0352	.0438	.0528	.0616	.0702	.0876	.1098
		Peripheral - Rough	1.25 x D	.5 x D	4	99	.0162	.0216	.0270	.0324	.0432	.0538	.0648	.0756	.0862	.1076	.1348
		Finish	1.5 x D	.015 x D	4	122	.0180	.0240	.0300	.0360	.0480	.0598	.0720	.0840	.0958	.1195	.1497
P	Low Carbon Steels 1018, 12L14, 8620	Slotting	1 x D	1 x D	4	107	.0156	.0208	.0260	.0312	.0416	.0518	.0624	.0728	.0830	.1036	.1298
		Peripheral - Rough	1.25 x D	.5 x D	4	130	.0192	.0256	.0320	.0384	.0512	.0637	.0768	.0896	.1021	.1275	.1597
		Finish	1.5 x D	.015 x D	4	152	.0216	.0288	.0360	.0432	.0576	.0717	.0864	.1008	.1149	.1434	.1797
	Medium Carbon Steels 4140, 4340	Slotting	1 x D	1 x D	4	91	.0144	.0192	.0240	.0288	.0384	.0478	.0576	.0672	.0766	.0956	.1198
		Peripheral - Rough	1.25 x D	.5 x D	4	114	.0180	.0240	.0300	.0360	.0480	.0598	.0720	.0840	.0958	.1195	.1497
		Finish	1.5 x D	.015 x D	4	137	.0198	.0264	.0330	.0396	.0528	.0657	.0792	.0924	.1053	.1315	.1647
	Tool & Die Steels <48 Rc A2, D2, H13, P20	Slotting	.75 x D	1 x D	4	91	.0144	.0192	.0240	.0288	.0384	.0478	.0576	.0672	.0766	.0956	.1198
		Peripheral - Rough	1.25 x D	.3 x D	4	114	.0174	.0232	.0290	.0348	.0464	.0578	.0696	.0812	.0926	.1155	.1448
		Finish	1.5 x D	.015 x D	4	137	.0180	.0240	.0300	.0360	.0480	.0598	.0720	.0840	.0958	.1195	.1497
M	Martensitic Stainless Steels 416, 410, 440C	Slotting	.75 x D	1 x D	4	91	.0144	.0192	.0240	.0288	.0384	.0478	.0576	.0672	.0766	.0956	.1198
		Peripheral - Rough	1.25 x D	.3 x D	4	114	.0174	.0232	.0290	.0348	.0464	.0578	.0696	.0812	.0926	.1155	.1448
		Finish	1.5 x D	.015 x D	4	137	.0180	.0240	.0300	.0360	.0480	.0598	.0720	.0840	.0958	.1195	.1497
	Austenitic Stainless Steels 303, 304, 316	Slotting	.75 x D	1 x D	4	84	.0156	.0208	.0260	.0312	.0416	.0518	.0624	.0728	.0830	.1036	.1298
		Peripheral - Rough	1.25 x D	.3 x D	4	99	.0192	.0256	.0320	.0384	.0512	.0637	.0768	.0896	.1021	.1275	.1597
		Finish	1.5 x D	.015 x D	4	122	.0198	.0264	.0330	.0396	.0528	.0657	.0792	.0924	.1053	.1315	.1647
	Precipitation Hardening Stainless Steels 17-4, 15-5, 13-8	Slotting	.5 x D	1 x D	4	76	.0120	.0160	.0200	.0240	.0320	.0398	.0480	.0560	.0638	.0797	.0998
		Peripheral - Rough	1.25 x D	.3 x D	4	91	.0150	.0200	.0250	.0300	.0400	.0498	.0600	.0700	.0798	.0996	.1248
		Finish	1.5 x D	.015 x D	4	114	.0156	.0208	.0260	.0312	.0416	.0518	.0624	.0728	.0830	.1036	.1298
S	Titanium Alloys 6AL-4V	Slotting	.5 x D	1 x D	4	76	.0120	.0160	.0200	.0240	.0320	.0398	.0480	.0560	.0638	.0797	.0998
		Peripheral - Rough	1.25 x D	.3 x D	4	91	.0150	.0200	.0250	.0300	.0400	.0498	.0600	.0700	.0798	.0996	.1248
		Finish	1.5 x D	.015 x D	4	114	.0156	.0208	.0260	.0312	.0416	.0518	.0624	.0728	.0830	.1036	.1298
	High Temperature Alloys Inconel, Haynes, Stellite, Hastalloy	Slotting	.25 x D	1 x D	4	18	.0126	.0168	.0210	.0252	.0336	.0418	.0504	.0588	.0670	.0837	.1048
		Peripheral - Rough	1.25 x D	.25 x D	4	27	.0162	.0216	.0270	.0324	.0432	.0538	.0648	.0756	.0862	.1076	.1348
Finish	1.5 x D	.01 x D	4	38	.0186	.0248	.0310	.0372	.0496	.0617	.0744	.0868	.0989	.1235	.1547		

D = Tool Diameter

IMCO POW·R·FEED ENDMILLS

Application Guide M904 POW·R·FEED - Speeds & Feeds





ISO Code	Work Material	Type of Cut	Axial DOC	Radial DOC	Number of Flutes	Speed (SFM)	Feed (Inches per Tooth)											
							1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1
K	Cast Iron Gray	Slotting	1 x D	1 x D	4	325	.006	.008	.009	.011	.012	.015	.018	.021	.024	.030	.036	.048
		Peripheral - Rough	1.25 x D	.5 x D	4	400	.008	.009	.011	.013	.015	.019	.023	.026	.030	.038	.045	.060
		Finish	1.5 x D	.015 x D	4	475	.008	.010	.012	.014	.017	.021	.025	.029	.033	.041	.050	.066
	Cast Iron Ductile	Slotting	1 x D	1 x D	4	300	.006	.007	.008	.010	.011	.014	.017	.019	.022	.028	.033	.044
		Peripheral - Rough	1.25 x D	.5 x D	4	375	.007	.008	.010	.012	.014	.017	.020	.024	.027	.034	.041	.054
		Finish	1.5 x D	.015 x D	4	450	.008	.009	.011	.013	.015	.019	.023	.026	.030	.038	.045	.060
	Cast Iron Malleable	Slotting	.75 x D	1 x D	4	250	.006	.007	.008	.010	.011	.014	.017	.019	.022	.028	.033	.044
		Peripheral - Rough	1.25 x D	.5 x D	4	325	.007	.008	.010	.012	.014	.017	.020	.024	.027	.034	.041	.054
		Finish	1.5 x D	.015 x D	4	400	.008	.009	.011	.013	.015	.019	.023	.026	.030	.038	.045	.060
P	Low Carbon Steels 1018, 12L14, 8620	Slotting	1 x D	1 x D	4	350	.007	.008	.010	.011	.013	.016	.020	.023	.026	.033	.039	.052
		Peripheral - Rough	1.25 x D	.5 x D	4	425	.008	.010	.012	.014	.016	.020	.024	.028	.032	.040	.048	.064
		Finish	1.5 x D	.015 x D	4	500	.009	.011	.014	.016	.018	.023	.027	.032	.036	.045	.054	.072
	Medium Carbon Steels 4140, 4340	Slotting	1 x D	1 x D	4	300	.006	.008	.009	.011	.012	.015	.018	.021	.024	.030	.036	.048
		Peripheral - Rough	1.25 x D	.5 x D	4	375	.008	.009	.011	.013	.015	.019	.023	.026	.030	.038	.045	.060
		Finish	1.5 x D	.015 x D	4	450	.008	.010	.012	.014	.017	.021	.025	.029	.033	.041	.050	.066
	Tool & Die Steels <48 Rc A2, D2, H13, P20	Slotting	.75 x D	1 x D	4	300	.006	.008	.009	.011	.012	.015	.018	.021	.024	.030	.036	.048
		Peripheral - Rough	1.25 x D	.3 x D	4	375	.007	.009	.011	.013	.015	.018	.022	.025	.029	.036	.044	.058
		Finish	1.5 x D	.015 x D	4	450	.008	.009	.011	.013	.015	.019	.023	.026	.030	.038	.045	.060
M	Martensitic Stainless Steels 416, 410, 440C	Slotting	.75 x D	1 x D	4	300	.006	.008	.009	.011	.012	.015	.018	.021	.024	.030	.036	.048
		Peripheral - Rough	1.25 x D	.3 x D	4	375	.007	.009	.011	.013	.015	.018	.022	.025	.029	.036	.044	.058
		Finish	1.5 x D	.015 x D	4	450	.008	.009	.011	.013	.015	.019	.023	.026	.030	.038	.045	.060
	Austenitic Stainless Steels 303, 304, 316	Slotting	.75 x D	1 x D	4	275	.007	.008	.010	.011	.013	.016	.020	.023	.026	.033	.039	.052
		Peripheral - Rough	1.25 x D	.3 x D	4	325	.008	.010	.012	.014	.016	.020	.024	.028	.032	.040	.048	.064
		Finish	1.5 x D	.015 x D	4	400	.008	.010	.012	.014	.017	.021	.025	.029	.033	.041	.050	.066
	Precipitation Hardening Stainless Steel 17-4, 15-5	Slotting	.5 x D	1 x D	4	250	.005	.006	.008	.009	.010	.013	.015	.018	.020	.025	.030	.040
		Peripheral - Rough	1.25 x D	.3 x D	4	300	.006	.008	.009	.011	.013	.016	.019	.022	.025	.031	.038	.050
		Finish	1.5 x D	.015 x D	4	375	.007	.008	.010	.011	.013	.016	.020	.023	.026	.033	.039	.052
S	Titanium Alloys 6AL - 4V	Slotting	.5 x D	1 x D	4	250	.005	.006	.008	.009	.010	.013	.015	.018	.020	.025	.030	.040
		Peripheral - Rough	1.25 x D	.3 x D	4	300	.006	.008	.009	.011	.013	.016	.019	.022	.025	.031	.038	.050
		Finish	1.5 x D	.015 x D	4	375	.007	.008	.010	.011	.013	.016	.020	.023	.026	.033	.039	.052
	High Temperature Alloys Inconel, Haynes, Stellite, Hastalloy	Slotting	.25 x D	1 x D	4	60	.005	.007	.008	.009	.011	.013	.016	.018	.021	.026	.032	.042
		Peripheral - Rough	1.25 x D	.25 x D	4	90	.007	.008	.010	.012	.014	.017	.020	.024	.027	.034	.041	.054
		Finish	1.5 x D	.01 x D	4	125	.008	.010	.012	.014	.016	.019	.023	.027	.031	.039	.047	.062

D = Tool Diameter

≈ Approximately Equals < Less Than
 ≤ Less Than or Equal To > Greater Than
 ≥ Greater Than or Equal To = Equals
 × Multiply

Application Guide M905 POW·R·FEED - Speeds & Feeds

M905 Application Guide – Speed & Feed (inch)

ISO Code	Work Material	Type of Cut	Axial DOC	Radial DOC	No. of Flutes	Speed (SFM)	Feed (Inches per Tooth)				
							1/4	3/8	1/2	5/8	3/4
	Cast Iron Gray	Slotting	.5 x D	1 x D	5	350	.0011	.0016	.0022	.0027	.0032
		Peripheral - Rough	1.25 x D	.3 x D	5	450	.0014	.0020	.0027	.0034	.0041
		Finish	1.5 x D	.01 x D	5	550	.0018	.0027	.0037	.0046	.0055
	Cast Iron Malleable	Slotting	.5 x D	1 x D	5	300	.0010	.0014	.0019	.0024	.0029
		Peripheral - Rough	1.25 x D	.3 x D	5	375	.0012	.0018	.0024	.0030	.0036
		Finish	1.5 x D	.01 x D	5	450	.0016	.0024	.0033	.0041	.0049
	Low Carbon Steels 1018, 12L14, 8620	Slotting	.5 x D	1 x D	5	350	.0012	.0017	.0023	.0029	.0035
		Peripheral - Rough	1.25 x D	.3 x D	5	425	.0015	.0022	.0029	.0036	.0044
		Finish	1.5 x D	.01 x D	5	500	.0020	.0030	.0039	.0049	.0059
	Medium Carbon Steels 4140, 4340	Slotting	.5 x D	1 x D	5	300	.0011	.0016	.0022	.0027	.0032
		Peripheral - Rough	1.25 x D	.3 x D	5	375	.0014	.0020	.0027	.0034	.0041
		Finish	1.5 x D	.01 x D	5	450	.0018	.0027	.0037	.0046	.0055
	Tool & Die Steels < 48 Rc A2, D2, H13, P20	Slotting	.5 x D	1 x D	5	300	.0010	.0016	.0021	.0026	.0031
		Peripheral - Rough	1.25 x D	.3 x D	5	375	.0013	.0020	.0026	.0033	.0039
		Finish	1.5 x D	.01 x D	5	450	.0016	.0024	.0033	.0041	.0049
	Martensitic Stainless Steels 416, 410, 440C	Slotting	.5 x D	1 x D	5	300	.0010	.0016	.0021	.0026	.0031
		Peripheral - Rough	1.25 x D	.3 x D	5	375	.0013	.0020	.0026	.0033	.0039
		Finish	1.5 x D	.01 x D	5	450	.0016	.0024	.0033	.0041	.0049
	Austenitic Stainless Steels 303, 304, 316	Slotting	.5 x D	1 x D	5	275	.0012	.0018	.0024	.0029	.0035
		Peripheral - Rough	1.25 x D	.3 x D	5	325	.0015	.0022	.0029	.0037	.0044
		Finish	1.5 x D	.01 x D	5	400	.0018	.0027	.0037	.0046	.0055
	Precipitation Hardening Stainless Steels 17-4 PH, 15-5 PH, 13-8 PH	Slotting	.5 x D	1 x D	5	250	.0008	.0012	.0017	.0021	.0025
		Peripheral - Rough	1.25 x D	.3 x D	5	300	.0010	.0016	.0021	.0026	.0031
		Finish	1.5 x D	.01 x D	5	375	.0013	.0019	.0026	.0032	.0039
	Titanium Alloys	Slotting	.5 x D	1 x D	5	250	.0009	.0013	.0017	.0022	.0026
		Peripheral - Rough	1.25 x D	.3 x D	5	300	.0011	.0016	.0022	.0027	.0033
		Finish	1.5 x D	.01 x D	5	375	.0014	.0020	.0027	.0034	.0041

D = Tool Diameter

Information on tips and adjustments can be found in our Technical Resources section beginning on page 125.

IMCO POW-R-PATH ENDMILLS

IPC7 - 7 Flute

- For high-efficiency machining (HEM) in materials ranging from low-carbon steels to hightemp alloys
- Imco's unique Chip Management System eliminates long, stringy chips when taking deep cuts in a variety of materials.
- Seven flutes allow higher cutting-edge engagement for high metal removal rates and amazing finish quality
- Get straighter walls in deep cuts, great metal removal rates and faster cycle times with IPT7's wide-core strength
- Advanced AlCrNX coating keeps tool working cooler, longer in a variety of ferrous materials



Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number
3/8	3/8	1-1/8	3	IMC-63630-R	
3/8	3/8	1-1/2	3-1/2	IMC-63631-R	
1/2	1/2	1-1/4	3	IMC-63632-R	IMC-63633-R
1/2	1/2	1-1/2	3-1/2	IMC-63634-R	IMC-63635-R
1/2	1/2	1-3/4	3-1/2	IMC-63636-R	IMC-63637-R
1/2	1/2	2	4	IMC-63638-R	IMC-63639-R
5/8	5/8	1-1/4	3-1/2	IMC-63640-R	IMC-63641-R
5/8	5/8	1-9/16	3-1/2	IMC-63642-R	IMC-63643-R
5/8	5/8	1-7/8	4	IMC-63644-R	IMC-63645-R
5/8	5/8	2-3/16	4	IMC-63646-R	IMC-63647-R
5/8	5/8	2-1/2	5	IMC-63648-R	IMC-63649-R
3/4	3/4	1-1/2	4	IMC-63650-R	IMC-63651-R
3/4	3/4	1-7/8	4	IMC-63652-R	IMC-63653-R
3/4	3/4	2-1/4	5	IMC-63654-R	IMC-63655-R
3/4	3/4	2-5/8	5	IMC-63656-R	IMC-63657-R
3/4	3/4	3	6	IMC-63658-R	IMC-63659-R
1	1	2	4-1/2	IMC-63660-R	IMC-63661-R
1	1	2-1/2	5	IMC-63662-R	IMC-63663-R
1	1	3	6	IMC-63664-R	IMC-63665-R
1	1	3-1/2	6	IMC-63666-R	IMC-63667-R
1	1	4	7	IMC-63668-R	IMC-63669-R





IPT7 - 7 Flute

- For high-efficiency machining (HEM) in materials ranging from low-carbon steels to hightemp alloys
- Seven flutes allow higher cutting-edge engagement for high metal removal rates and amazing finish quality
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- Advanced AlCrNX coating keeps tool working cooler, longer in a variety of ferrous materials

Square Corner



Cutter Dia	Shank Dia	LOC	OAL	Part Number
3/16	3/16	3/8	2	IMC-63476
3/16	3/16	9/16	2	IMC-63479
3/16	3/16	3/4	2-1/2	IMC-63482
1/4	1/4	1/2	2	IMC-63485
1/4	1/4	3/4	2-1/2	IMC-63489
1/4	1/4	1	3	IMC-63493
3/8	3/8	3/4	2-1/2	IMC-63497
3/8	3/8	15/16	2-1/2	IMC-63502
3/8	3/8	1-1/8	3	IMC-63507
3/8	3/8	1-1/2	3-1/2	IMC-63512
1/2	1/2	1	3	IMC-63516
1/2	1/2	1-1/4	3	IMC-63521
1/2	1/2	1-1/2	3-1/2	IMC-63526
1/2	1/2	1-3/4	3-1/2	IMC-63531
1/2	1/2	2	4	IMC-63536
1/2	1/2	2-1/4	4	IMC-63541
5/8	5/8	1-1/4	3-1/2	IMC-63546
5/8	5/8	1-9/16	3-1/2	IMC-63552
5/8	5/8	1-7/8	4	IMC-63558
5/8	5/8	2-3/16	4	IMC-63564
5/8	5/8	2-1/2	5	IMC-63568
3/4	3/4	1-1/2	4	IMC-63572
3/4	3/4	1-7/8	4	IMC-63578
3/4	3/4	2-1/4	5	IMC-63585
3/4	3/4	2-5/8	5	IMC-63592
3/4	3/4	3	6	IMC-63597
1	1	2	4-1/2	IMC-63601
1	1	2-1/2	5	IMC-63608
1	1	3	6	IMC-63615
1	1	3-1/2	6	IMC-63619
1	1	4	7	IMC-63623

IMCO POW·R·PATH ENDMILLS

IPT7 - 7 Flute

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- Seven flutes allow higher cutting-edge engagement for high metal removal rates and amazing finish quality
- Get straighter walls in deep cuts, great metal removal rates and faster cycle times with IPT7's wide-core strength
- Advanced AlCrNX coating keeps tool working cooler, longer in a variety of ferrous materials



Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.090R Part Number
3/16	3/16	3/8	2	IMC-63477-R	IMC-63478-R		
3/16	3/16	9/16	2	IMC-63480-R	IMC-63481-R		
3/16	3/16	3/4	2-1/2	IMC-63483-R	IMC-63484-R		
1/4	1/4	1/2	2	IMC-63486-R	IMC-63487-R	IMC-63488-R	
1/4	1/4	3/4	2-1/2	IMC-63490-R	IMC-63491-R	IMC-63492-R	
1/4	1/4	1	3	IMC-63494-R	IMC-63495-R	IMC-63496-R	
3/8	3/8	3/4	2-1/2	IMC-63498-R	IMC-63499-R	IMC-63500-R	IMC-63501-R
3/8	3/8	15/16	2-1/2	IMC-63503-R	IMC-63504-R	IMC-63505-R	IMC-63506-R
3/8	3/8	1-1/8	3	IMC-63508-R	IMC-63509-R	IMC-63510-R	IMC-63511-R
3/8	3/8	1-1/2	3-1/2	IMC-63513-R	IMC-63514-R	IMC-63515-R	
1/2	1/2	1	3		IMC-63517-R	IMC-63518-R	IMC-63519-R
1/2	1/2	1-1/4	3		IMC-63522-R	IMC-63523-R	IMC-63524-R
1/2	1/2	1-1/2	3-1/2		IMC-63527-R	IMC-63528-R	IMC-63529-R
1/2	1/2	1-3/4	3-1/2		IMC-63532-R	IMC-63533-R	IMC-63534-R
1/2	1/2	2	4		IMC-63537-R	IMC-63538-R	IMC-63539-R
1/2	1/2	2-1/4	4		IMC-63542-R	IMC-63543-R	IMC-63544-R
5/8	5/8	1-1/4	3-1/2		IMC-63547-R	IMC-63548-R	IMC-63549-R
5/8	5/8	1-9/16	3-1/2		IMC-63553-R	IMC-63554-R	IMC-63555-R
5/8	5/8	1-7/8	4		IMC-63559-R	IMC-63560-R	IMC-63561-R
5/8	5/8	2-3/16	4		IMC-63565-R	IMC-63566-R	IMC-63567-R
5/8	5/8	2-1/2	5		IMC-63569-R	IMC-63570-R	IMC-63571-R
3/4	3/4	1-1/2	4		IMC-63573-R	IMC-63574-R	IMC-63575-R
3/4	3/4	1-7/8	4		IMC-63579-R	IMC-63580-R	IMC-63581-R
3/4	3/4	2-1/4	5		IMC-63586-R	IMC-63587-R	IMC-63588-R
3/4	3/4	2-5/8	5		IMC-63593-R	IMC-63594-R	IMC-63595-R
3/4	3/4	3	6		IMC-63598-R	IMC-63599-R	IMC-63600-R
1	1	2	4-1/2		IMC-63602-R	IMC-63603-R	IMC-63604-R
1	1	2-1/2	5		IMC-63609-R	IMC-63610-R	IMC-63611-R
1	1	3	6		IMC-63616-R	IMC-63617-R	IMC-63618-R
1	1	3-1/2	6		IMC-63620-R	IMC-63621-R	IMC-63622-R
1	1	4	7		IMC-63624-R	IMC-63625-R	IMC-63626-R



IPT7 - 7 Flute



- For high-efficiency machining (HEM) in materials ranging from low-carbon steels to hightemp alloys
- Seven flutes allow higher cutting-edge engagement for high metal removal rates and amazing finish quality
- Get straighter walls in deep cuts, great metal removal rates and faster cycle times with IPT7's wide-core strength
- Advanced AlCrNX coating keeps tool working cooler, longer in a variety of ferrous materials



Corner Radius

.125R Part Number	.187R Part Number	.250R Part Number	OAL	LOC	Shank Dia	Cutter Dia
			2	3/8	3/16	3/16
			2	9/16	3/16	3/16
			2-1/2	3/4	3/16	3/16
			2	1/2	1/4	1/4
			2-1/2	3/4	1/4	1/4
			3	1	1/4	1/4
			2-1/2	3/4	3/8	3/8
			2-1/2	15/16	3/8	3/8
			3	1-1/8	3/8	3/8
			3-1/2	1-1/2	3/8	3/8
IMC-63520-R			3	1	1/2	1/2
IMC-63525-R			3	1-1/4	1/2	1/2
IMC-63530-R			3-1/2	1-1/2	1/2	1/2
IMC-63535-R			3-1/2	1-3/4	1/2	1/2
IMC-63540-R			4	2	1/2	1/2
IMC-63545-R			4	2-1/4	1/2	1/2
IMC-63550-R	IMC-63551-R		3-1/2	1-1/4	5/8	5/8
IMC-63556-R	IMC-63557-R		3-1/2	1-9/16	5/8	5/8
IMC-63562-R	IMC-63563-R		4	1-7/8	5/8	5/8
			4	2-3/16	5/8	5/8
			5	2-1/2	5/8	5/8
IMC-63576-R	IMC-63577-R		4	1-1/2	3/4	3/4
IMC-63582-R	IMC-63583-R	IMC-63584-R	4	1-7/8	3/4	3/4
IMC-63589-R	IMC-63590-R	IMC-63591-R	5	2-1/4	3/4	3/4
IMC-63596-R			5	2-5/8	3/4	3/4
			6	3	3/4	3/4
IMC-63605-R	IMC-63606-R	IMC-63607-R	4-1/2	2	1	1
IMC-63612-R	IMC-63613-R	IMC-63614-R	5	2-1/2	1	1
			6	3	1	1
			6	3-1/2	1	1
			7	4	1	1

IMCO POW-R-PATH ENDMILLS

IPC9 - 9 Flute

- For high-efficiency machining (HEM) in materials ranging from low-carbon steels to hightemp alloys
- Nine high-strength flutes for higher cutting-edge engagement, more metal removal and longer tool life
- Special flute design for reliable chip evacuation in any material, making it the ultimate cutting tool with universal application
- Advanced AlCrNX coating keeps tool working cooler, longer in a variety of ferrous materials



Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	.030R Part Number	.090R Part Number
1/2	1/2	1	3	IMC-63831-R	IMC-63832-R
1/2	1/2	1-1/4	3	IMC-63833-R	IMC-63834-R
1/2	1/2	1-1/2	3-1/2	IMC-63835-R	IMC-63836-R
1/2	1/2	1-3/4	3-1/2	IMC-63837-R	IMC-63838-R
5/8	5/8	1-1/4	3-1/2	IMC-63839-R	IMC-63840-R
5/8	5/8	1-9/16	3-1/2	IMC-63841-R	IMC-63842-R
5/8	5/8	1-7/8	4	IMC-63843-R	IMC-63844-R
5/8	5/8	2-3/16	4	IMC-63845-R	IMC-63846-R
3/4	3/4	1-1/2	4	IMC-63847-R	IMC-63848-R
3/4	3/4	1-7/8	4	IMC-63849-R	IMC-63850-R
3/4	3/4	2-1/4	5	IMC-63851-R	IMC-63852-R
3/4	3/4	2-5/8	5	IMC-63853-R	IMC-63854-R
1	1	2	4-1/2	IMC-63855-R	IMC-63856-R
1	1	2-1/2	5	IMC-63857-R	IMC-63858-R
1	1	3	6	IMC-63859-R	IMC-63860-R
1	1	3-1/2	6	IMC-63861-R	IMC-63862-R



IMCO POW-R-PATH ENDMILLS

IPT9 - 9 Flute



- For high-efficiency machining (HEM) in materials ranging from low-carbon steels to hightemp alloys
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Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.125R Part Number
1/4	1/4	1/2	2	IMC-63932-R	IMC-63933-R		
1/4	1/4	5/8	2-1/2	IMC-63934-R	IMC-63935-R		
1/4	1/4	3/4	2-1/2	IMC-63936-R	IMC-63937-R		
1/4	1/4	7/8	3	IMC-63938-R	IMC-63939-R		
3/8	3/8	3/4	2-1/2	IMC-63940-R	IMC-63941-R		
3/8	3/8	15/16	2-1/2	IMC-63942-R	IMC-63943-R		
3/8	3/8	1-1/8	3	IMC-63944-R	IMC-63945-R		
3/8	3/8	1-5/16	3-1/2	IMC-63946-R	IMC-63947-R		
1/2	1/2	1	3		IMC-63948-R	IMC-63949-R	
1/2	1/2	1-1/4	3-1/4		IMC-63950-R	IMC-63951-R	
1/2	1/2	1-1/2	3-1/2		IMC-63952-R	IMC-63953-R	
1/2	1/2	1-3/4	4		IMC-63954-R	IMC-63955-R	
5/8	5/8	1-1/4	3-1/2		IMC-63956-R	IMC-63957-R	
5/8	5/8	1-9/16	4		IMC-63958-R	IMC-63959-R	
5/8	5/8	1-7/8	4		IMC-63960-R	IMC-63961-R	
5/8	5/8	2-3/16	4-1/2		IMC-63962-R	IMC-63963-R	
3/4	3/4	1-1/2	4		IMC-63964-R	IMC-63965-R	IMC-63966-R
3/4	3/4	1-7/8	4-1/2		IMC-63967-R	IMC-63968-R	IMC-63969-R
3/4	3/4	2-1/4	5		IMC-63970-R	IMC-63971-R	IMC-63972-R
3/4	3/4	2-5/8	5		IMC-63973-R	IMC-63974-R	IMC-63975-R
1	1	2	5		IMC-63976-R	IMC-63977-R	IMC-63978-R
1	1	2-1/2	5-1/2		IMC-63979-R	IMC-63980-R	IMC-63981-R
1	1	3	6		IMC-63982-R	IMC-63983-R	IMC-63984-R
1	1	3-1/2	6-1/2		IMC-63985-R	IMC-63986-R	IMC-63987-R

Application Guide IPC7/IPT7 Pow-R-Path - Speeds & Feeds

ISO Classification	Work Material	Type of Cut	Axial DOC	Radial DOC	Number of Flutes	Speed (SFM)	Feed (Inches per Tooth)						
							3/16	1/4	3/8	1/2	5/8	3/4	1
K	Cast Iron - Gray ASTM-A48 Class 20, 25, 30, 35 & 40	Peripheral - HEM*	<=3 x D	.1 x D	7	400	0.0027	0.0036	0.0054	0.0072	0.0090	0.0108	0.0144
		Peripheral - HEM*	>3xD-4xD	.08 x D	7	400	0.0024	0.0032	0.0049	0.0065	0.0081	0.0097	0.0130
		Peripheral - HEM*	>4xD-5xD	.08 x D	7	390	0.0022	0.0029	0.0043	0.0058	0.0072	0.0086	0.0115
		Finish	3 x D	.015 x D	7	450	0.0010	0.0013	0.0020	0.0026	0.0033	0.0039	0.0052
	Cast Iron Malleable	Peripheral - HEM*	<=3 x D	.08 x D	7	390	0.0022	0.0029	0.0044	0.0058	0.0073	0.0087	0.0116
		Peripheral - HEM*	>3xD-4xD	.08 x D	7	390	0.0020	0.0026	0.0039	0.0052	0.0065	0.0078	0.0104
P	Low Carbon Steel ≤ 38 Rc 1018, 1020, 12L14, 5120, 8620	Peripheral - HEM*	<=3 x D	.08 x D	7	485	0.0028	0.0038	0.0056	0.0075	0.0094	0.0113	0.0150
		Peripheral - HEM*	>3xD-4xD	.08 x D	7	485	0.0025	0.0034	0.0051	0.0068	0.0084	0.0101	0.0135
		Peripheral - HEM*	>4xD-5xD	.08 x D	7	465	0.0023	0.0030	0.0045	0.0060	0.0075	0.0090	0.0120
		Finish	3 x D	.015 x D	7	420	0.0011	0.0014	0.0021	0.0028	0.0035	0.0042	0.0056
	Medium Carbon Steels ≤ 48 Rc 1045, 4140, 4340, 5140	Peripheral - HEM*	<=3 x D	.08 x D	7	450	0.0027	0.0036	0.0053	0.0071	0.0089	0.0107	0.0142
		Peripheral - HEM*	>3xD-4xD	.08 x D	7	450	0.0024	0.0032	0.0048	0.0064	0.0080	0.0096	0.0128
		Peripheral - HEM*	>4xD-5xD	.08 x D	7	425	0.0021	0.0028	0.0043	0.0057	0.0071	0.0085	0.0114
		Finish	3 x D	.015 x D	7	390	0.0009	0.0013	0.0019	0.0025	0.0031	0.0038	0.0050
	Tool & Die Steels ≤ 48 Rc A2, D2, O1, S7, P20, H13	Peripheral - HEM*	<=3 x D	.08 x D	7	420	0.0024	0.0032	0.0048	0.0064	0.0080	0.0096	0.0128
		Peripheral - HEM*	>3xD-4xD	.08 x D	7	420	0.0022	0.0029	0.0043	0.0058	0.0072	0.0086	0.0115
		Peripheral - HEM*	>4xD-5xD	.08 x D	7	395	0.0019	0.0026	0.0038	0.0051	0.0064	0.0077	0.0102
		Finish	3 x D	.015 x D	7	365	0.0008	0.0011	0.0016	0.0021	0.0026	0.0032	0.0042
M	Austenitic Stainless Steels, FeNi Alloys 303, 304, 316, Invar, Kovar	Peripheral - HEM*	<=3 x D	.08 x D	7	450	0.0024	0.0032	0.0048	0.0064	0.0080	0.0096	0.0128
		Peripheral - HEM*	>3xD-4xD	.08 x D	7	440	0.0022	0.0029	0.0043	0.0058	0.0072	0.0086	0.0115
		Peripheral - HEM*	>4xD-5xD	.07 x D	7	425	0.0019	0.0026	0.0038	0.0051	0.0064	0.0077	0.0102
		Finish	3 x D	.015 x D	7	390	0.0009	0.0012	0.0018	0.0024	0.0030	0.0036	0.0048
	Martensitic & Ferritic Stainless Steels 410, 416, 440	Peripheral - HEM*	<=3 x D	.08 x D	7	450	0.0028	0.0038	0.0056	0.0075	0.0094	0.0113	0.0150
		Peripheral - HEM*	>3xD-4xD	.08 x D	7	450	0.0025	0.0034	0.0051	0.0068	0.0084	0.0101	0.0135
		Peripheral - HEM*	>4xD-5xD	.08 x D	7	425	0.0023	0.0030	0.0045	0.0060	0.0075	0.0090	0.0120
		Finish	3 x D	.015 x D	7	390	0.0009	0.0013	0.0019	0.0025	0.0031	0.0038	0.0050
	Precipitation Hardening Stainless Steels 17-4, 15-5, 13-8	Peripheral - HEM*	<=3 x D	.08 x D	7	440	0.0023	0.0031	0.0047	0.0062	0.0078	0.0093	0.0124
		Peripheral - HEM*	>3xD-4xD	.08 x D	7	440	0.0021	0.0028	0.0042	0.0056	0.0070	0.0084	0.0112
		Peripheral - HEM*	>4xD-5xD	.07 x D	7	415	0.0019	0.0025	0.0037	0.0050	0.0062	0.0074	0.0099
		Finish	3 x D	.015 x D	7	380	0.0008	0.0010	0.0015	0.0020	0.0025	0.0030	0.0040
S	Titanium Alloys 6Al-4V, 6-2-4	Peripheral - HEM*	<=3 x D	.1 x D	7	405	0.0015	0.0021	0.0031	0.0041	0.0051	0.0062	0.0082
		Peripheral - HEM*	>3xD-4xD	.08 x D	7	405	0.0014	0.0018	0.0028	0.0037	0.0046	0.0055	0.0074
		Peripheral - HEM*	>4xD-5xD	.08 x D	7	390	0.0012	0.0016	0.0025	0.0033	0.0041	0.0049	0.0066
		Finish	3 x D	.015 x D	7	350	0.0006	0.0008	0.0012	0.0016	0.0020	0.0024	0.0032
	Difficult to Machine Titanium Alloys 10-2-3	Peripheral - HEM*	<=2.5 x D	.08 x D	7	335	0.0015	0.0020	0.0030	0.0040	0.0050	0.0060	0.0080
		Peripheral - HEM*	>2.5xD-3.5xD	.07 x D	7	325	0.0014	0.0018	0.0027	0.0036	0.0045	0.0054	0.0072
		Peripheral - HEM*	>3.5xD-4xD	.06 x D	7	305	0.0012	0.0016	0.0024	0.0032	0.0040	0.0048	0.0064
		Finish	3 x D	.01 x D	7	290	0.0005	0.0007	0.0011	0.0014	0.0018	0.0021	0.0028
	Hastalloy, Waspalloy	Peripheral - HEM*	<=1.5 x D	.08 x D	7	100	0.0035	0.0047	0.0071	0.0094	0.0118	0.0141	0.0188
		Peripheral - HEM*	>1.5xD-2.5xD	.08 x D	7	95	0.0032	0.0042	0.0063	0.0085	0.0106	0.0127	0.0169
		Peripheral - HEM*	>2.5xD-3.5xD	.06 x D	7	85	0.0028	0.0038	0.0056	0.0075	0.0094	0.0113	0.0150
		Finish	2 x D	.01 x D	7	90	0.0019	0.0025	0.0038	0.0050	0.0063	0.0075	0.0100
	Inconel 718, Rene 88	Peripheral - HEM*	<=1.5 x D	.07 x D	7	95	0.0035	0.0047	0.0070	0.0093	0.0116	0.0140	0.0186
		Peripheral - HEM*	>1.5xD-2.5xD	.06 x D	7	90	0.0031	0.0042	0.0063	0.0084	0.0105	0.0126	0.0167
		Peripheral - HEM*	>2.5xD-3xD	.06 x D	7	85	0.0028	0.0037	0.0056	0.0074	0.0093	0.0112	0.0149
		Finish	2 x D	.01 x D	7	85	0.0018	0.0024	0.0036	0.0048	0.0060	0.0072	0.0096

Application Guide IPC9 / IPT9 Pow-R-Path - Speeds & Feeds

ISO Classification	Work Material	Type of Cut	Axial DOC	Radial DOC	Number of Flutes	Speed (SFM)	Feed (MM per Tooth)					
							1/4	3/8	1/2	5/8	3/4	1
K	Cast Iron - Gray ASTM-A48 Class 20, 25, 30, 35 & 40	Peripheral - HEM*	<=3 x D	.1 x D	9	400	0.0036	0.0054	0.0072	0.0090	0.0108	0.0144
		Peripheral - HEM*	>3xD-4xD	.08 x D	9	400	0.0032	0.0049	0.0065	0.0081	0.0097	0.0130
		Peripheral - HEM*	>4xD-5xD	.08 x D	9	390	0.0029	0.0043	0.0058	0.0072	0.0086	0.0115
		Finish	3 x D	.015 x D	9	450	0.0013	0.0020	0.0026	0.0033	0.0039	0.0052
	Cast Iron Malleable	Peripheral - HEM*	<=3 x D	.08 x D	9	390	0.0029	0.0044	0.0058	0.0073	0.0087	0.0116
		Peripheral - HEM*	>3xD-4xD	.08 x D	9	390	0.0026	0.0039	0.0052	0.0065	0.0078	0.0104
P	Low Carbon Steel ≤ 38 Rc 1018, 1020, 12L14, 5120, 8620	Peripheral - HEM*	<=3 x D	.08 x D	9	485	0.0038	0.0056	0.0075	0.0094	0.0113	0.0150
		Peripheral - HEM*	>3xD-4xD	.08 x D	9	485	0.0034	0.0051	0.0068	0.0084	0.0101	0.0135
		Peripheral - HEM*	>4xD-5xD	.08 x D	9	465	0.0030	0.0045	0.0060	0.0075	0.0090	0.0120
		Finish	3 x D	.015 x D	9	420	0.0014	0.0021	0.0028	0.0035	0.0042	0.0056
	Medium Carbon Steels ≤ 48 Rc 1045, 4140, 4340, 5140	Peripheral - HEM*	<=3 x D	.08 x D	9	450	0.0036	0.0053	0.0071	0.0089	0.0107	0.0142
		Peripheral - HEM*	>3xD-4xD	.08 x D	9	450	0.0032	0.0048	0.0064	0.0080	0.0096	0.0128
		Peripheral - HEM*	>4xD-5xD	.08 x D	9	425	0.0028	0.0043	0.0057	0.0071	0.0085	0.0114
		Finish	3 x D	.015 x D	9	390	0.0013	0.0019	0.0025	0.0031	0.0038	0.0050
	Tool & Die Steels ≤ 48 Rc A2, D2, O1, S7, P20, H13	Peripheral - HEM*	<=3 x D	.08 x D	9	420	0.0032	0.0048	0.0064	0.0080	0.0096	0.0128
		Peripheral - HEM*	>3xD-4xD	.08 x D	9	420	0.0029	0.0043	0.0058	0.0072	0.0086	0.0115
		Peripheral - HEM*	>4xD-5xD	.08 x D	9	395	0.0026	0.0038	0.0051	0.0064	0.0077	0.0102
		Finish	3 x D	.015 x D	9	365	0.0011	0.0016	0.0021	0.0026	0.0032	0.0042
M	Austenitic Stainless Steels, FeNi Alloys 303, 304, 316, Invar, Kovar	Peripheral - HEM*	<=3 x D	.08 x D	9	450	0.0032	0.0048	0.0064	0.0080	0.0096	0.0128
		Peripheral - HEM*	>3xD-4xD	.08 x D	9	440	0.0029	0.0043	0.0058	0.0072	0.0086	0.0115
		Peripheral - HEM*	>4xD-5xD	.07 x D	9	425	0.0026	0.0038	0.0051	0.0064	0.0077	0.0102
		Finish	3 x D	.015 x D	9	390	0.0012	0.0018	0.0024	0.0030	0.0036	0.0048
	Martensitic & Ferritic Stainless Steels 410, 416, 440	Peripheral - HEM*	<=3 x D	.08 x D	9	450	0.0038	0.0056	0.0075	0.0094	0.0113	0.0150
		Peripheral - HEM*	>3xD-4xD	.08 x D	9	450	0.0034	0.0051	0.0068	0.0084	0.0101	0.0135
		Peripheral - HEM*	>4xD-5xD	.08 x D	9	425	0.0030	0.0045	0.0060	0.0075	0.0090	0.0120
		Finish	3 x D	.015 x D	9	390	0.0013	0.0019	0.0025	0.0031	0.0038	0.0050
	Precipitation Hardening Stainless Steels 17-4, 15-5, 13-8	Peripheral - HEM*	<=3 x D	.08 x D	9	440	0.0031	0.0047	0.0062	0.0078	0.0093	0.0124
		Peripheral - HEM*	>3xD-4xD	.08 x D	9	440	0.0028	0.0042	0.0056	0.0070	0.0084	0.0112
		Peripheral - HEM*	>4xD-5xD	.07 x D	9	415	0.0025	0.0037	0.0050	0.0062	0.0074	0.0099
		Finish	3 x D	.015 x D	9	380	0.0010	0.0015	0.0020	0.0025	0.0030	0.0040
S	Titanium Alloys 6Al-4V, 6-2-4	Peripheral - HEM*	<=3 x D	.1 x D	9	405	0.0021	0.0031	0.0041	0.0051	0.0062	0.0082
		Peripheral - HEM*	>3xD-4xD	.08 x D	9	405	0.0018	0.0028	0.0037	0.0046	0.0055	0.0074
		Peripheral - HEM*	>4xD-5xD	.08 x D	9	390	0.0016	0.0025	0.0033	0.0041	0.0049	0.0066
		Finish	3 x D	.015 x D	9	350	0.0008	0.0012	0.0016	0.0020	0.0024	0.0032
	Difficult to Machine Titanium Alloys 10-2-3	Peripheral - HEM*	<=2.5 x D	.08 x D	9	335	0.0020	0.0030	0.0040	0.0050	0.0060	0.0080
		Peripheral - HEM*	>2.5xD-3.5xD	.07 x D	9	325	0.0018	0.0027	0.0036	0.0045	0.0054	0.0072
		Peripheral - HEM*	>3.5xD-4xD	.06 x D	9	305	0.0016	0.0024	0.0032	0.0040	0.0048	0.0064
		Finish	3 x D	.01 x D	9	290	0.0007	0.0011	0.0014	0.0018	0.0021	0.0028
	Hastalloy, Waspalloy	Peripheral - HEM*	<=1.5 x D	.08 x D	9	100	0.0045	0.0068	0.0090	0.0113	0.0135	0.0180
		Peripheral - HEM*	>1.5xD-2.5xD	.08 x D	9	95	0.0041	0.0061	0.0081	0.0101	0.0122	0.0162
		Peripheral - HEM*	>2.5xD-3.5xD	.06 x D	9	85	0.0036	0.0054	0.0072	0.0090	0.0108	0.0144
		Finish	2 x D	.01 x D	9	90	0.0024	0.0036	0.0048	0.0060	0.0072	0.0096
	Inconel 718, Rene 88	Peripheral - HEM*	<=1.5 x D	.07 x D	9	95	0.0046	0.0068	0.0091	0.0114	0.0137	0.0182
		Peripheral - HEM*	>1.5xD-2.5xD	.06 x D	9	90	0.0041	0.0061	0.0082	0.0102	0.0123	0.0164
		Peripheral - HEM*	>2.5xD-3xD	.06 x D	9	85	0.0036	0.0055	0.0073	0.0091	0.0109	0.0146
		Finish	2 x D	.01 x D	9	85	0.0023	0.0035	0.0046	0.0058	0.0069	0.0092

M725/M726 - 5/6 Flute

- Recommended for milling work in hardened steels and high-temp alloys.
- Rugged ultra-fine grain carbide core for strength and durability when machining in Inconel, Hastalloy and other high-temp alloys.
- TiAlN coating protects tool in high heat.



Square End

Cutter Dia	Shank Dia	LOC	OAL	Flutes	Part Number
1/8	1/8	1/4	1-1/2	5	IMC-69050
1/8	1/8	1/2	1-1/2	5	IMC-69052
3/16	3/16	5/16	2	5	IMC-69054
3/16	3/16	9/16	2	5	IMC-69056
1/4	1/4	3/4	2-1/2	6	IMC-69058
1/4	1/4	1-1/4	3	6	IMC-69061
3/8	3/8	7/8	2-1/2	6	IMC-69070
3/8	3/8	1-1/4	3	6	IMC-69073
3/8	3/8	2	4	6	IMC-69076
1/2	1/2	1	3	6	IMC-69079
1/2	1/2	1-1/4	3	6	IMC-69083
1/2	1/2	1-5/8	3-1/2	6	IMC-69087
1/2	1/2	2-1/8	4	6	IMC-69091
1/2	1/2	2-5/8	5	6	IMC-69095
5/8	5/8	1-3/8	3-1/2	6	IMC-69099
5/8	5/8	1-7/8	4	6	IMC-69103
5/8	5/8	2-5/8	5	6	IMC-69107
3/4	3/4	1-5/8	4	6	IMC-69111
3/4	3/4	2-5/8	5	6	IMC-69115
3/4	3/4	3-3/8	6	6	IMC-69119

Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	Flutes	.015R Part Number	.030R Part Number	.060R Part Number
1/8	1/8	1/4	1-1/2	5	IMC-69051-R		
1/8	1/8	1/2	1-1/2	5	IMC-69053-R		
3/16	3/16	5/16	2	5	IMC-69055-R		
3/16	3/16	9/16	2	5	IMC-69057-R		
1/4	1/4	3/4	2-1/2	6	IMC-69059-R	IMC-69060-R	
1/4	1/4	1-1/4	3	6	IMC-69062-R	IMC-69063-R	
3/8	3/8	7/8	2-1/2	6	IMC-69071-R	IMC-69072-R	
3/8	3/8	1-1/4	3	6	IMC-69074-R	IMC-69075-R	
3/8	3/8	2	4	6	IMC-69077-R	IMC-69078-R	
1/2	1/2	1	3	6	IMC-69080-R	IMC-69081-R	IMC-69082-R
1/2	1/2	1-1/4	3	6	IMC-69084-R	IMC-69085-R	IMC-69086-R
1/2	1/2	1-5/8	3-1/2	6	IMC-69088-R	IMC-69089-R	IMC-69090-R
1/2	1/2	2-1/8	4	6	IMC-69092-R	IMC-69093-R	IMC-69094-R
1/2	1/2	2-5/8	5	6	IMC-69096-R	IMC-69097-R	IMC-69098-R
5/8	5/8	1-3/8	3-1/2	6		IMC-69101-R	IMC-69102-R
5/8	5/8	1-7/8	4	6		IMC-69105-R	IMC-69106-R
5/8	5/8	2-5/8	5	6		IMC-69109-R	IMC-69110-R
3/4	3/4	1-5/8	4	6		IMC-69113-R	IMC-69114-R
3/4	3/4	2-5/8	5	6		IMC-69117-R	IMC-69118-R
3/4	3/4	3-3/8	6	6		IMC-69121-R	IMC-69122-R





Application Guide M725/M726 - Speeds & Feeds

ISO Code	No. of Flutes	Type of Cut	Tool Dia.	Axial Max	Radial Max	Speed (SFM)	RPM	IPT	IPM
H 51 HRC-63 HRC	5	Rough	1/8	.1250	.0075	350	10,696	.00035	18.7
		Rough < 10,000		.1250	.0075	325	9,932	.00035	17.4
		Finish		.2500	.001	300	9,168	.00030	13.7
	5	Rough	3/16	.1875	.0130	250	5,093	.00070	17.8
		Finish		.3750	.0015	300	6,112	.00040	12.2
	6	Rough	1/4	.2500	.0150	400	6,112	.00100	36.6
		Finish		.5000	.0020	300	4,584	.00050	13.8
	6	Rough	5/16	.3125	.0220	400	4,890	.00125	36.6
		Finish		.6250	.0020	300	3,667	.00060	13.2
	6	Rough	3/8	.3750	.0300	400	4,074	.00150	36.6
Finish		.7500		.0030	300	3,056	.00070	12.8	
6	Rough	1/2	.5000	.0400	400	3,056	.00200	36.6	
	Finish		.000	.0030	300	2,292	.00100	13.7	
6	Rough	5/8	.6250	.0500	400	2,445	.00250	36.6	
	Finish		.250	.0050	300	1,833	.00130	14.3	
6	Rough	3/4	.7500	.0600	400	2,037	.00300	36.6	
	Finish		1.500	.0050	300	1,528	.00150	13.7	
6	Rough	1	1.000	.0800	400	1,528	.00400	36.6	
	Finish		2.000	.0080	300	1,146	.00200	13.7	
K H 43 HRC-50 HRC	5	Rough	1/8	.1250	.010	500	15,280	.0006	45.8
		Rough < 10,000		.1250	.010	325	9,932	.0006	29.8
		Finish		.2500	.001	400	12,224	.0003	18.3
		Finish < 10,000		.2500	.001	325	9,932	.0003	14.9
	5	Rough	3/16	.1875	.015	500	10,186	.0009	45.8
		Finish		.3750	.0015	400	8,150	.0005	20.4
	6	Rough	1/4	.2500	.020	500	7,640	.0012	55.0
		Finish		.5000	.003	400	6,112	.0007	25.7
	6	Rough	5/16	.3125	.025	500	6,112	.0014	51.3
		Finish		.6250	.003	400	4,889	.0007	20.5
6	Rough	3/8	.7500	.030	500	5,093	.0017	52.0	
	Finish		.7500	.005	400	4,074	.0010	24.4	
6	Rough	1/2	.5000	.040	500	3,820	.0023	52.7	
	Finish		1.0000	.007	400	3,056	.0014	25.6	
6	Rough	5/8	.6250	.050	500	3,056	.0029	53.2	
	Finish		1.2500	.008	400	2,445	.0018	26.4	
6	Rough	3/4	.7500	.060	500	2,547	.0034	52.0	
	Finish		1.5000	.009	400	2,037	.0020	24.4	
6	Rough	1	1.0000	.080	500	1,910	.0046	52.7	
	Finish		2.0000	.010	400	1,528	.0023	21.0	
P M 36 HRC-42 HRC	5	Rough	1/8	.1250	.0100	600	18,336	.0010	91.7
		Rough < 10,000		.1250	.0100	325	9,932	.0010	49.6
		Finish		.2500	.0015	450	13,752	.0005	34.4
		Finish < 10,000		.2500	.0015	325	9,932	.0005	24.8
	5	Rough	3/16	.1875	.0150	600	12,224	.0013	79.5
		Finish		.3750	.0020	450	9,677	.0013	63.0
	6	Rough	1/4	.2500	.0250	600	9,168	.0008	36.7
		Finish		.5000	.0030	500	7,640	.0010	45.8
	6	Rough	5/16	.3125	.0310	600	7,334	.0025	110.0
		Finish		.6250	.0030	500	6,112	.0013	47.6
6	Rough	3/8	.3750	.0370	600	6,112	.0030	110.0	
	Finish		.7500	.0030	500	5,093	.0015	45.8	
6	Rough	1/2	.5000	.0500	600	4,584	.0040	110.0	
	Finish		1.0000	.0050	500	3,820	.0020	45.8	
6	Rough	5/8	.6250	.0625	600	3,667	.0050	110.0	
	Finish		1.2500	.0050	500	3,056	.0025	45.8	
6	Rough	3/4	.7500	.0750	600	3,056	.0060	110.0	
	Finish		1.5000	.0050	500	2,546	.0030	45.8	
6	Rough	1	1.0000	.1000	600	2,292	.0080	110.0	
	Finish		2.0000	.0070	500	1,910	.0040	45.8	

M806 - 6 Flute

- Designed specifically for higher productivity in all hi-temp alloys.
- Optimized geometries, advanced chip management and proven performance.
- Best choice for success in difficult-to-machine metals.
- Advanced AlCrNX coating keeps tool working cooler, longer in hi-temp alloys.



Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	Shank Style	.015R Part Number	.030R Part Number
1/4	1/4	3/8	2	Plain	IMC-68731	
1/4	1/4	3/4	2-1/2	Plain	IMC-68732	
5/16	5/16	7/16	2	Plain	IMC-68733	
5/16	5/16	13/16	2-1/2	Plain	IMC-68734	
3/8	3/8	1/2	2	Plain		IMC-68735
3/8	3/8	7/8	2-1/2	Plain		IMC-68736
3/8	3/8	7/8	2-1/2	Weldon		IMC-68737
3/8	3/8	1-1/4	3	Plain		IMC-68738
3/8	3/8	1-1/4	3	Weldon		IMC-68739
1/2	1/2	5/8	2-1/2	Plain		IMC-68740
1/2	1/2	1	3	Plain		IMC-68891
1/2	1/2	1	3	Weldon		IMC-68892
1/2	1/2	1-1/4	3	Plain		IMC-68741
1/2	1/2	1-1/4	3	Weldon		IMC-68742
1/2	1/2	1-5/8	3-1/2	Plain		IMC-68743
1/2	1/2	1-5/8	3-1/2	Weldon		IMC-68744
1/2	1/2	3/4	3	Plain		IMC-68745
5/8	5/8	1-3/8	3-1/2	Plain		IMC-68746
5/8	5/8	1-3/8	3-1/2	Weldon		IMC-68747
5/8	5/8	2	4	Plain		IMC-68748
5/8	5/8	2	4	Weldon		IMC-68749
3/4	3/4	1	3	Plain		IMC-68750
3/4	3/4	1-5/8	4	Plain		IMC-68751
3/4	3/4	1-5/8	4	Weldon		IMC-68752
3/4	3/4	2-3/8	5	Plain		IMC-68753
3/4	3/4	2-3/8	5	Weldon		IMC-68754
3/4	3/4	1-1/2	4	Plain		IMC-68755
1	1	1-1/2	4	Weldon		IMC-68756
1	1	2-1/2	5	Plain		IMC-68757
1	1	2-1/2	5	Weldon		IMC-68758





	Type of Cut	INCH						METRIC							
		EM Dia.	Axial Depth	Radial Depth	Speed (SFM)	RPM	IPT	IPM	EM Dia.	Axial Depth	Radial Depth	Speed (M/Min)	RPM	MMPT	MM/Min
S	Rough Slot	1/4	1.25 x D 0.165	.2 x D	80	1222	0.0008	5.87	6,0	1.25 x D 4.15	.2 x D	24.38	1239	0.019	141.2
					80	1222	0.00050	3.67				24.38	1239	0.0127	94.4
	Rough Slot	5/16	1.25 x D 0.205	.2 x D	80	978	0.0010	5.87	8,0	1.25 x D 5.20	.2 x D	24.38	970	0.025	145.5
					80	978	0.00063	3.67				24.38	970	0.0160	93.1
	Rough Slot	3/8	1.25 x D 0.250	.2 x D	80	815	0.0012	5.87	10,0	1.25 x D 6.35	.2 x D	24.38	776	0.031	144.3
					80	815	0.00075	3.67				24.38	776	0.0190	88.5
	Rough Slot	1/2	1.25 x D 0.330	.2 x D	80	611	0.0016	5.87	12,0	1.25 x D 8.35	.2 x D	24.38	647	0.037	143.6
80					611	0.00100	3.67	24.38				647	0.0254	98.5	
Rough Slot	5/8	1.25 x D 0.415	.2 x D	80	489	0.0020	5.87	16,0	1.25 x D 10.50	.2 x D	24.38	485	0.050	145.5	
				80	489	0.00125	3.67				24.38	485	0.0317	92.2	
Rough Slot	3/4	1.25 x D 1.500	.2 x D	80	407	0.0024	5.87	20,0	1.25 x D 12.70	.2 x D	24.38	388	0.061	142.1	
				80	407	0.00150	3.67				24.38	388	0.0380	88.4	
Rough Slot	1	1.25 x D 1.665	.2 x D	80	306	0.0032	5.87	25,0	1.25 x D 16.90	.2 x D	24.38	310	0.080	148.8	
				80	306	0.00200	3.67				24.38	310	0.0508	94.4	

M525 - 5 Flute

- Recommended for roughing, slotting, pocketing and even finishing.
- For high performance and high-efficiency machining in materials ranging from titanium to low carbon steels.
- TiAINX coating protects tool in high heat.



Square End

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/8	1/8	1/4	1-1/2	IMC-65001
1/8	1/8	1/2	1-1/2	IMC-65005
1/8	1/8	3/4	2-1/2	IMC-65009
3/16	3/16	5/16	2	IMC-65013
3/16	3/16	9/16	2	IMC-65017
3/16	3/16	3/4	2-1/2	IMC-65021
1/4	1/4	3/8	2	IMC-65025
1/4	1/4	3/4	2-1/2	IMC-65049
1/4	1/4	1-1/8	3	IMC-65055
5/16	5/16	7/16	2	IMC-65061
5/16	5/16	13/16	2-1/2	IMC-65067
5/16	5/16	1-1/4	3	IMC-65073
5/16	5/16	2-1/8	4	IMC-65079
3/8	3/8	1/2	2	IMC-65085
3/8	3/8	1	2-1/2	IMC-65133
3/8	3/8	1-1/4	3	IMC-65141
3/8	3/8	1-5/8	3-1/2	IMC-65149
3/8	3/8	1-5/8	4	IMC-65157
3/8	3/8	1-5/8	6	IMC-65165
3/8	3/8	2	4	IMC-65173
3/8	3/8	2-1/2	6	IMC-65181
7/16	7/16	5/8	2-1/2	IMC-65189
7/16	7/16	1	2-3/4	IMC-65197
7/16	7/16	2	4	IMC-65205
1/2	1/2	5/8	2-1/2	IMC-65213
1/2	1/2	1	3	IMC-65258
1/2	1/2	1-1/4	3	IMC-65267
1/2	1/2	1-5/8	4	IMC-65276
1/2	1/2	1-5/8	6	IMC-65285
1/2	1/2	2-1/8	4	IMC-65294
1/2	1/2	2-5/8	5	IMC-65303
1/2	1/2	3-1/4	6	IMC-65312



Square End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	Part Number
5/8	5/8	3/4	3	IMC-65321
5/8	5/8	1-5/8	3-1/2	IMC-65361
5/8	5/8	2-1/8	4	IMC-65371
5/8	5/8	2-1/8	6	IMC-65381
5/8	5/8	2-5/8	5	IMC-65391
5/8	5/8	3-1/4	6	IMC-65401
5/8	5/8	4	6	IMC-65411
3/4	3/4	1	3	IMC-65421
3/4	3/4	1-5/8	4	IMC-65461
3/4	3/4	2-3/8	5	IMC-65471
3/4	3/4	2-3/8	6	IMC-65481
3/4	3/4	3-1/4	6	IMC-65491
3/4	3/4	4-1/8	7	IMC-65501
1	1	1-3/4	4	IMC-65555
1	1	2-5/8	5	IMC-65566
1	1	3-1/4	6	IMC-65588
1	1	4-1/4	7	IMC-65599
1-1/4	1-1/4	2	4-1/2	IMC-65643
1-1/4	1-1/4	3-1/4	6	IMC-65654
1-1/4	1-1/4	5	8	IMC-65665



M525 - 5 Flute

- Recommended for roughing, slotting, pocketing and even finishing.
- For high performance and high-efficiency machining in materials ranging from titanium to low carbon steels.
- TiAlN coating protects tool in high heat.

Ball End

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/8	1/8	1/4	1-1/2	IMC-65004-B
1/8	1/8	1/2	1-1/2	IMC-65008-B
1/8	1/8	3/4	2-1/2	IMC-65012-B
3/16	3/16	5/16	2	IMC-65016-B
3/16	3/16	9/16	2	IMC-65020-B
3/16	3/16	3/4	2-1/2	IMC-65024-B
1/4	1/4	3/8	2	IMC-65030-B
1/4	1/4	3/4	2-1/2	IMC-65054-B
1/4	1/4	1-1/8	3	IMC-65060-B
5/16	5/16	7/16	2	IMC-65066-B
5/16	5/16	13/16	2-1/2	IMC-65072-B
5/16	5/16	1-1/4	3	IMC-65078-B
5/16	5/16	2-1/8	4	IMC-65084-B
3/8	3/8	1/2	2	IMC-65092-B
3/8	3/8	1	2-1/2	IMC-65140-B
3/8	3/8	1-1/4	3	IMC-65148-B
3/8	3/8	1-5/8	3-1/2	IMC-65156-B
3/8	3/8	1-5/8	4	IMC-65164-B
3/8	3/8	1-5/8	6	IMC-65172-B
3/8	3/8	2	4	IMC-65180-B
3/8	3/8	2-1/2	6	IMC-65188-B
7/16	7/16	5/8	2-1/2	IMC-65196-B
7/16	7/16	1	2-3/4	IMC-65204-B
7/16	7/16	2	4	IMC-65212-B



Ball End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/2	1/2	5/8	2-1/2	IMC-65221-B
1/2	1/2	1	3	IMC-65266-B
1/2	1/2	1-1/4	3	IMC-65275-B
1/2	1/2	1-5/8	4	IMC-65284-B
1/2	1/2	1-5/8	6	IMC-65293-B
1/2	1/2	2-1/8	4	IMC-65302-B
1/2	1/2	2-5/8	5	IMC-65311-B
1/2	1/2	3-1/4	6	IMC-65320-B
5/8	5/8	3/4	3	IMC-65330-B
5/8	5/8	1-5/8	3-1/2	IMC-65370-B
5/8	5/8	2-1/8	4	IMC-65380-B
5/8	5/8	2-1/8	6	IMC-65390-B
5/8	5/8	2-5/8	5	IMC-65400-B
5/8	5/8	3-1/4	6	IMC-65410-B
5/8	5/8	4	6	IMC-65420-B
3/4	3/4	1	3	IMC-65430-B
3/4	3/4	1-5/8	4	IMC-65470-B
3/4	3/4	2-3/8	5	IMC-65480-B
3/4	3/4	2-3/8	6	IMC-65490-B
3/4	3/4	3-1/4	6	IMC-65500-B
3/4	3/4	4-1/8	7	IMC-65510-B
1	1	1-3/4	4	IMC-65565-B
1	1	2-5/8	5	IMC-65576-B
1	1	3-1/4	6	IMC-65598-B
1	1	4-1/4	7	IMC-65609-B
1-1/4	1-1/4	2	4-1/2	IMC-65653-B
1-1/4	1-1/4	3-1/4	6	IMC-65664-B
1-1/4	1-1/4	5	8	IMC-65675-B

M525 - 5 Flute

- Recommended for roughing, slotting, pocketing and even finishing.
- For high performance and high-efficiency machining in materials ranging from titanium to low carbon steels.
- TiAlNX coating protects tool in high heat.



Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.090R Part Number	.120R Part Number
1/8	1/8	1/4	1-1/2	IMC-65002-R	IMC-65003-R			
1/8	1/8	1/2	1-1/2	IMC-65006-R	IMC-65007-R			
1/8	1/8	3/4	2-1/2	IMC-65010-R	IMC-65011-R			
3/16	3/16	5/16	2	IMC-65014-R	IMC-65015-R			
3/16	3/16	9/16	2	IMC-65018-R	IMC-65019-R			
3/16	3/16	3/4	2-1/2	IMC-65022-R	IMC-65023-R			
1/4	1/4	3/8	2	IMC-65026-R	IMC-65027-R	IMC-65028-R	IMC-65029-R	
1/4	1/4	3/4	2-1/2	IMC-65050-R	IMC-65051-R	IMC-65052-R	IMC-65053-R	
1/4	1/4	1-1/8	3	IMC-65056-R	IMC-65057-R	IMC-65058-R	IMC-65059-R	
5/16	5/16	7/16	2	IMC-65062-R	IMC-65063-R	IMC-65064-R	IMC-65065-R	
5/16	5/16	13/16	2-1/2	IMC-65068-R	IMC-65069-R	IMC-65070-R	IMC-65071-R	
5/16	5/16	1-1/4	3	IMC-65074-R	IMC-65075-R	IMC-65076-R	IMC-65077-R	
5/16	5/16	2-1/8	4	IMC-65080-R	IMC-65081-R	IMC-65082-R	IMC-65083-R	
3/8	3/8	1/2	2	IMC-65086-R	IMC-65087-R	IMC-65088-R	IMC-65089-R	IMC-65090-R
3/8	3/8	1	2-1/2	IMC-65134-R	IMC-65135-R	IMC-65136-R	IMC-65137-R	IMC-65138-R
3/8	3/8	1-1/4	3	IMC-65142-R	IMC-65143-R	IMC-65144-R	IMC-65145-R	IMC-65146-R
3/8	3/8	1-5/8	3-1/2	IMC-65150-R	IMC-65151-R	IMC-65152-R	IMC-65153-R	IMC-65154-R
3/8	3/8	1-5/8	4	IMC-65158-R	IMC-65159-R	IMC-65160-R	IMC-65161-R	IMC-65162-R
3/8	3/8	1-5/8	6	IMC-65166-R	IMC-65167-R	IMC-65168-R	IMC-65169-R	IMC-65170-R
3/8	3/8	2	4	IMC-65174-R	IMC-65175-R	IMC-65176-R	IMC-65177-R	IMC-65178-R
3/8	3/8	2-1/2	6	IMC-65182-R	IMC-65183-R	IMC-65184-R	IMC-65185-R	IMC-65186-R
7/16	7/16	5/8	2-1/2	IMC-65190-R	IMC-65191-R	IMC-65192-R	IMC-65193-R	IMC-65194-R
7/16	7/16	1	2-3/4	IMC-65198-R	IMC-65199-R	IMC-65200-R	IMC-65201-R	IMC-65202-R
7/16	7/16	2	4	IMC-65206-R	IMC-65207-R	IMC-65208-R	IMC-65209-R	IMC-65210-R





M52S - 5 Flute

- Recommended for roughing, slotting, pocketing and even finishing.
- For high performance and high-efficiency machining in materials ranging from titanium to low carbon steels.
- TiAlN coating protects tool in high heat.



Corner Radius (cont.)

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.090R Part Number	.120R Part Number
1/2	1/2	5/8	2-1/2	IMC-65214-R	IMC-65215-R	IMC-65216-R	IMC-65217-R	IMC-65218-R
1/2	1/2	1	3	IMC-65259-R	IMC-65260-R	IMC-65261-R	IMC-65262-R	IMC-65263-R
1/2	1/2	1-1/4	3	IMC-65268-R	IMC-65269-R	IMC-65270-R	IMC-65271-R	IMC-65272-R
1/2	1/2	1-5/8	4	IMC-65277-R	IMC-65278-R	IMC-65279-R	IMC-65280-R	IMC-65281-R
1/2	1/2	1-5/8	6	IMC-65286-R	IMC-65287-R	IMC-65288-R	IMC-65289-R	IMC-65290-R
1/2	1/2	2-1/8	4	IMC-65295-R	IMC-65296-R	IMC-65297-R	IMC-65298-R	IMC-65299-R
1/2	1/2	2-5/8	5	IMC-65304-R	IMC-65305-R	IMC-65306-R	IMC-65307-R	IMC-65308-R
1/2	1/2	3-1/4	6	IMC-65313-R	IMC-65314-R	IMC-65315-R	IMC-65316-R	IMC-65317-R
5/8	5/8	3/4	3	IMC-65322-R	IMC-65323-R	IMC-65324-R	IMC-65325-R	IMC-65326-R
5/8	5/8	1-5/8	3-1/2	IMC-65362-R	IMC-65363-R	IMC-65364-R	IMC-65365-R	IMC-65366-R
5/8	5/8	2-1/8	4	IMC-65372-R	IMC-65373-R	IMC-65374-R	IMC-65375-R	IMC-65376-R
5/8	5/8	2-1/8	6	IMC-65382-R	IMC-65383-R	IMC-65384-R	IMC-65385-R	IMC-65386-R
5/8	5/8	2-5/8	5	IMC-65392-R	IMC-65393-R	IMC-65394-R	IMC-65395-R	IMC-65396-R
5/8	5/8	3-1/4	6	IMC-65402-R	IMC-65403-R	IMC-65404-R	IMC-65405-R	IMC-65406-R
5/8	5/8	4	6	IMC-65412-R	IMC-65413-R	IMC-65414-R	IMC-65415-R	IMC-65416-R
3/4	3/4	1	3	IMC-65422-R	IMC-65423-R	IMC-65424-R	IMC-65425-R	IMC-65426-R
3/4	3/4	1-5/8	4	IMC-65462-R	IMC-65463-R	IMC-65464-R	IMC-65465-R	IMC-65466-R
3/4	3/4	2-3/8	5	IMC-65472-R	IMC-65473-R	IMC-65474-R	IMC-65475-R	IMC-65476-R
3/4	3/4	2-3/8	6	IMC-65482-R	IMC-65483-R	IMC-65484-R	IMC-65485-R	IMC-65486-R
3/4	3/4	3-1/4	6	IMC-65492-R	IMC-65493-R	IMC-65494-R	IMC-65495-R	IMC-65496-R
3/4	3/4	4-1/8	7	IMC-65502-R	IMC-65503-R	IMC-65504-R	IMC-65505-R	IMC-65506-R
1	1	1-3/4	4	IMC-65556-R	IMC-65557-R	IMC-65558-R	IMC-65559-R	IMC-65560-R
1	1	2-5/8	5	IMC-65567-R	IMC-65568-R	IMC-65569-R	IMC-65570-R	IMC-65571-R
1	1	3-1/4	6	IMC-65589-R	IMC-65590-R	IMC-65591-R	IMC-65592-R	IMC-65593-R
1	1	4-1/4	7	IMC-65600-R	IMC-65601-R	IMC-65602-R	IMC-65603-R	IMC-65604-R
1-1/4	1-1/4	2	4-1/2	IMC-65644-R	IMC-65645-R	IMC-65646-R	IMC-65647-R	IMC-65648-R
1-1/4	1-1/4	3-1/4	6	IMC-65655-R	IMC-65656-R	IMC-65657-R	IMC-65658-R	IMC-65659-R
1-1/4	1-1/4	5	8	IMC-65666-R	IMC-65667-R	IMC-65668-R	IMC-65669-R	IMC-65670-R

Application Guide enDuro - Speeds & Feeds



ISO Classification	Work Material	Type of Cut	Axial DOC	Radial DOC	No. of Flutes	Speed (SFM)	Feed (Inches per Tooth)						
							1/8	1/4	3/8	1/2	5/8	3/4	1
S	Titanium Alloys 6Al-4V, 6-2-4	Slotting	.5 x D	1 x D	5	250	.0005	.0009	.0014	.0018	.0023	.0028	.0037
		Peripheral - Rough	1 x D	.3 x D	5	300	.0006	.0013	.0019	.0025	.0031	.0038	.0050
		Peripheral - HEM*	1.5 x D	.1 x D	5	425	.0012	.0024	.0036	.0048	.0060	.0072	.0096
		Finish	1.5 x D	.01 x D	5	300	.0012	.0023	.0035	.0046	.0058	.0069	.0092
	Difficult to Machine Titanium Alloys 10-2-3	Slotting	.25 x D	1 x D	5	200	.0003	.0007	.0010	.0014	.0017	.0020	.0027
		Peripheral - Rough	1 x D	.25 x D	5	250	.0005	.0010	.0015	.0020	.0025	.0029	.0039
		Peripheral - HEM*	1.5 x D	.1 x D	5	300	.0009	.0018	.0027	.0035	.0044	.0053	.0071
		Finish	1.5 x D	.01 x D	5	250	.0009	.0017	.0026	.0034	.0043	.0051	.0068
M	Austenitic Stainless Steels, FeNi Alloys 303, 304, 316, Invar, Kovar	Slotting	.5 x D	1 x D	5	275	.0006	.0012	.0018	.0024	.0030	.0036	.0048
		Peripheral - Rough	1.25 x D	.3 x D	5	350	.0008	.0016	.0025	.0033	.0041	.0049	.0065
		Peripheral - HEM*	2 x D	.1 x D	5	475	.0016	.0031	.0047	.0063	.0078	.0094	.0125
		Finish	2 x D	.01 x D	5	350	.0015	.0030	.0045	.0060	.0075	.0090	.0121
	Precipitation Hardening Stainless Steels 17-4, 15-5, 13-8	Slotting	.5 x D	1 x D	5	250	.0005	.0010	.0015	.0020	.0025	.0030	.0040
		Peripheral - Rough	1.25 x D	.3 x D	5	325	.0007	.0014	.0020	.0027	.0034	.0041	.0055
		Peripheral - HEM*	1.5 x D	.1 x D	5	450	.0013	.0026	.0039	.0052	.0065	.0078	.0104
		Finish	1.5 x D	.01 x D	5	325	.0013	.0025	.0038	.0050	.0063	.0075	.0101
P	Martensitic & Ferritic Stainless Steels 410, 416, 440	Slotting	.5 x D	1 x D	5	300	.0006	.0013	.0019	.0026	.0032	.0038	.0051
		Peripheral - Rough	1.25 x D	.3 x D	5	375	.0009	.0017	.0026	.0035	.0044	.0052	.0070
		Peripheral - HEM*	2 x D	.15 x D	5	500	.0014	.0028	.0042	.0056	.0070	.0084	.0112
		Finish	2 x D	.01 x D	5	375	.0016	.0032	.0048	.0064	.0080	.0096	.0129
	Low Carbon Steels 1018, 1020, 12L14, 5120, 8620	Slotting	.5 x D	1 x D	5	325	.0007	.0014	.0021	.0028	.0035	.0042	.0056
		Peripheral - Rough	1.25 x D	.3 x D	5	400	.0010	.0019	.0029	.0038	.0048	.0057	.0076
		Peripheral - HEM*	2 x	.15 x D	5	525	.0015	.0031	.0046	.0061	.0077	.0092	.0123
		Finish	2 x	.01 x D	5	400	.0018	.0035	.0053	.0070	.0088	.0106	.0141
	Medium Carbon Steels ≤ 48 HRC 1045, 4140, 4340, 5140	Slotting	.5 x D	1 x D	5	300	.0006	.0013	.0019	.0026	.0032	.0038	.0051
		Peripheral - Rough	1.25 x D	.3 x D	5	375	.0009	.0017	.0026	.0035	.0044	.0052	.0070
		Peripheral - HEM*	2 x D	.15 x D	5	500	.0014	.0028	.0042	.0056	.0070	.0084	.0112
		Finish	2 x D	.01 x D	5	375	.0016	.0032	.0048	.0064	.0080	.0096	.0129
	Tool and Die Steels ≤ 48 Rc A2, D2, O1, S7, P20, H13	Slotting	.5 x D	1 x D	5	275	.0005	.0011	.0016	.0022	.0027	.0032	.0043
		Peripheral - Rough	1.25 x D	.3 x D	5	350	.0007	.0015	.0022	.0029	.0037	.0044	.0059
		Peripheral - HEM*	2 x D	.15 x D	5	475	.0012	.0024	.0035	.0047	.0059	.0071	.0095
		Finish	2 x D	.01 x D	5	350	.0014	.0027	.0041	.0054	.0068	.0081	.0109
K	Cast Iron Gray ASTM-A48 Class 20, 25, 30, 35 & 40	Slotting	.5 x D	1 x D	5	300	.0006	.0012	.0018	.0024	.0030	.0036	.0048
		Peripheral - Rough	1.25 x D	.3 x D	5	375	.0008	.0016	.0025	.0033	.0041	.0049	.0065
		Peripheral - HEM*	2 x D	.15 x D	5	500	.0013	.0026	.0039	.0053	.0066	.0079	.0105
		Finish	2 x D	.01 x D	5	375	.0015	.0030	.0045	.0060	.0075	.0090	.0121
	Cast Iron Malleable	Slotting	.5 x D	1 x D	5	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040
		Peripheral - Rough	1.25 x D	.3 x D	5	350	.0007	.0014	.0020	.0027	.0034	.0041	.0055
		Peripheral - HEM*	2 x D	.15 x D	5	475	.0011	.0022	.0033	.0044	.0055	.0066	.0088
		Finish	2 x D	.01 x D	5	350	.0013	.0025	.0038	.0050	.0063	.0075	.0101

D = Tool diameter *HEM= High-efficiency machining

M203 - 3 Flute



- Superior toughing tool and finisher
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Square End

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/8	1/8	1/4	1-1/2	IMC-32520
1/8	1/8	3/8	1-1/2	IMC-33246
3/16	3/16	5/16	2	IMC-32521
3/16	3/16	9/16	2	IMC-33248
1/4	1/4	3/8	2-1/2	IMC-32986
1/4	1/4	3/4	2-1/2	IMC-32992
1/4	1/4	1-1/4	3	IMC-33009
5/16	5/16	7/16	2-1/2	IMC-32987
5/16	5/16	13/16	2-1/2	IMC-33250
5/16	5/16	1-3/8	3	IMC-34454
3/8	3/8	1/2	2-1/2	IMC-32988
3/8	3/8	1	2-1/2	IMC-32993
3/8	3/8	1-1/2	3-1/4	IMC-32998
3/8	3/8	2	4	IMC-33003
1/2	1/2	5/8	3	IMC-32989
1/2	1/2	1-1/4	3	IMC-32994
1/2	1/2	2	4	IMC-32999
1/2	1/2	2-1/2	5	IMC-33004
1/2	1/2	3-1/8	6	IMC-33013
5/8	5/8	3/4	3-1/2	IMC-32990
5/8	5/8	1-5/8	3-1/2	IMC-32995
5/8	5/8	2-1/2	5	IMC-33006
5/8	5/8	3-3/4	6	IMC-33015
3/4	3/4	1	4	IMC-32991
3/4	3/4	1-5/8	4	IMC-32996
3/4	3/4	2-1/2	5	IMC-33001
3/4	3/4	3-1/4	6	IMC-33007
3/4	3/4	4	6-1/2	IMC-33010
1	1	1-1/4	4	IMC-33137
1	1	2	4	IMC-32997
1	1	2-5/8	5	IMC-33002
1	1	3-1/4	6	IMC-33008
1	1	4-1/8	7	IMC-33012



Square End - Weldon Shank

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/4	1/4	3/4	2-1/2	IMC-32634
1/4	1/4	1-1/4	3	IMC-33011
5/16	5/16	13/16	2-1/2	IMC-32736
5/16	5/16	1-3/8	3	IMC-34455
3/8	3/8	7/8	2-1/2	IMC-32635
3/8	3/8	1-1/2	3-1/4	IMC-32702
3/8	3/8	2	4	IMC-32716
1/2	1/2	1-1/4	3-1/4	IMC-32637
1/2	1/2	2	4	IMC-32703
1/2	1/2	2-1/2	5	IMC-32718
1/2	1/2	3-1/8	6	IMC-32830
5/8	5/8	1-1/4	3-1/2	IMC-32638
5/8	5/8	2-1/2	5	IMC-32720
5/8	5/8	3-3/4	6	IMC-32835
3/4	3/4	1-5/8	4	IMC-32639
3/4	3/4	2-1/2	5	IMC-32704
3/4	3/4	3-1/4	6	IMC-32724
3/4	3/4	4	6-1/2	IMC-32728
1	1	2	4-1/2	IMC-32701
1	1	2-5/8	5	IMC-32714
1	1	3-1/4	6	IMC-32726
1	1	4-1/8	7	IMC-32735



M203 - 3 Flute

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Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.090R Part Number	.120R Part Number
1/8	1/8	3/8	1-1/2	IMC-34384-R				
3/16	3/16	9/16	2	IMC-34385-R				
1/4	1/4	3/8	2-1/2	IMC-33601-R	IMC-33602-R			
1/4	1/4	3/4	2-1/2	IMC-34386-R	IMC-34388-R			
1/4	1/4	1-1/4	3	IMC-34435-R	IMC-34438-R			
5/16	5/16	13/16	2-1/2	IMC-34450-R	IMC-34452-R	IMC-38258-R		
5/16	5/16	1-3/8	3		IMC-38031-R	IMC-38260-R		
3/8	3/8	1/2	2-1/2	IMC-33603-R	IMC-33604-R	IMC-33605-R		
3/8	3/8	1	2-1/2	IMC-34458-R	IMC-34460-R	IMC-38261-R		
3/8	3/8	1-1/2	3-1/4	IMC-34462-R	IMC-34480-R	IMC-38262-R		
3/8	3/8	2	4	IMC-34484-R	IMC-34488-R	IMC-38263-R		
1/2	1/2	5/8	3	IMC-33606-R	IMC-33607-R	IMC-33608-R	IMC-33609-R	IMC-33610-R
1/2	1/2	1-1/4	3	IMC-34492-R	IMC-34522-R	IMC-34526-R	IMC-38022-R	IMC-38025-R
1/2	1/2	2	4		IMC-34531-R	IMC-34534-R	IMC-34537-R	IMC-38032-R
1/2	1/2	2-1/2	5		IMC-34539-R	IMC-38038-R	IMC-38039-R	IMC-38040-R
1/2	1/2	3-1/8	6		IMC-34543-R	IMC-38045-R	IMC-38046-R	IMC-38047-R
5/8	5/8	1-5/8	3-1/2		IMC-34545-R	IMC-38264-R	IMC-38265-R	IMC-38266-R
5/8	5/8	2-1/2	5		IMC-34549-R	IMC-38267-R	IMC-38268-R	IMC-38269-R
5/8	5/8	3-3/4	6		IMC-34551-R	IMC-38270-R	IMC-38271-R	IMC-38272-R
3/4	3/4	1	4		IMC-33611-R	IMC-33612-R	IMC-33613-R	IMC-33614-R
3/4	3/4	1-5/8	4		IMC-34553-R	IMC-34555-R	IMC-38027-R	IMC-38028-R
3/4	3/4	2-1/2	5		IMC-34558-R	IMC-38034-R	IMC-38035-R	IMC-38036-R
3/4	3/4	3-1/4	6		IMC-34560-R	IMC-38041-R	IMC-38042-R	IMC-38043-R
1	1	2	4		IMC-34562-R	IMC-34563-R	IMC-38029-R	IMC-38030-R
1	1	2-5/8	5		IMC-34568-R	IMC-38037-R	IMC-38282-R	IMC-38283-R
1	1	3-1/4	6		IMC-34584-R	IMC-38044-R	IMC-38287-R	IMC-38288-R
1	1	4-1/8	7		IMC-38048-R	IMC-38049-R	IMC-38292-R	IMC-38293-R





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Corner Radius - Weldon Shank

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.090R Part Number	.120R Part Number
1/4	1/4	3/4	2-1/2	IMC-34387-R	IMC-34389-R			
1/4	1/4	1-1/4	3	IMC-34437-R	IMC-34447-R			
5/16	5/16	13/16	2-1/2	IMC-34451-R	IMC-34453-R	IMC-38318-R		
5/16	5/16	1-3/8	3		IMC-38319-R	IMC-38056-R		
3/8	3/8	7/8	2-1/2	IMC-34459-R	IMC-34461-R	IMC-38320-R		
3/8	3/8	1-1/2	3-1/4	IMC-34463-R	IMC-34482-R	IMC-38321-R		
3/8	3/8	2	4	IMC-34486-R	IMC-34490-R	IMC-38322-R		
1/2	1/2	1-1/4	3-1/4	IMC-34494-R	IMC-34523-R	IMC-34527-R	IMC-38050-R	IMC-38051-R
1/2	1/2	2	4	IMC-34533-R	IMC-34535-R	IMC-34538-R	IMC-38057-R	IMC-38058-R
1/2	1/2	2-1/2	5		IMC-34541-R	IMC-38063-R	IMC-38064-R	IMC-38065-R
1/2	1/2	3-1/8	6		IMC-34544-R	IMC-38070-R	IMC-38071-R	IMC-38072-R
5/8	5/8	1-1/4	3-1/2		IMC-34546-R	IMC-38323-R	IMC-38324-R	IMC-38325-R
5/8	5/8	2-1/2	5		IMC-34550-R	IMC-38328-R	IMC-38329-R	IMC-38330-R
5/8	5/8	3-3/4	6		IMC-34552-R	IMC-38332-R	IMC-38333-R	IMC-38335-R
3/4	3/4	1-5/8	4		IMC-34554-R	IMC-34557-R	IMC-38052-R	IMC-38053-R
3/4	3/4	2-1/2	5		IMC-34559-R	IMC-38059-R	IMC-38060-R	IMC-38061-R
3/4	3/4	3-1/4	6		IMC-34561-R	IMC-38066-R	IMC-38067-R	IMC-38068-R
1	1	2	4-1/2		IMC-38054-R	IMC-38055-R	IMC-38376-R	IMC-38377-R
1	1	2-5/8	5		IMC-34569-R	IMC-38062-R	IMC-38346-R	IMC-38347-R
1	1	3-1/4	6		IMC-34586-R	IMC-38069-R	IMC-38351-R	IMC-38352-R
1	1	4-1/8	7		IMC-38073-R	IMC-38074-R	IMC-38356-R	IMC-38357-R



IMCO STREAKERS

M202 - 2 Flute

- Superior toughing tool and finisher
- For high performance milling in all types of aluminum and non-ferrous metals.
- Unique cutting-edge geometry, designed for really aggressive chip loads



Square End

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/8	1/8	1/4	1-1/2	IMC-32941
1/8	1/8	3/8	1-1/2	IMC-32949
3/16	3/16	5/16	2	IMC-32942
3/16	3/16	9/16	2	IMC-32950
1/4	1/4	3/8	2-1/2	IMC-32943
1/4	1/4	3/4	2-1/2	IMC-32951
1/4	1/4	1-1/4	3	IMC-32957
5/16	5/16	7/16	2-1/2	IMC-32944
5/16	5/16	13/16	2-1/2	IMC-32952
5/16	5/16	1-3/8	3	IMC-32958
3/8	3/8	1/2	2-1/2	IMC-32945
3/8	3/8	1	2-1/2	IMC-32953
3/8	3/8	1-1/2	3-1/4	IMC-32959
3/8	3/8	2	4	IMC-32964
1/2	1/2	5/8	3	IMC-32946
1/2	1/2	1-1/4	3	IMC-90358
1/2	1/2	2	4	IMC-32960
1/2	1/2	2-1/2	5	IMC-32965
1/2	1/2	3-1/8	6	IMC-38390
5/8	5/8	3/4	3-1/2	IMC-32947
5/8	5/8	1-5/8	3-1/2	IMC-32954
5/8	5/8	2-1/2	5	IMC-32966
5/8	5/8	3-3/4	6	IMC-38504
3/4	3/4	1	4	IMC-32948
3/4	3/4	1-5/8	4	IMC-32955
3/4	3/4	2-1/2	5	IMC-32962
3/4	3/4	3-1/4	6	IMC-32968
1	1	1-1/4	4	IMC-33143
1	1	2	4	IMC-32956
1	1	2-5/8	5	IMC-32963
1	1	3-1/4	6	IMC-32969



Square End - Weldon Shank

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/4	1/4	3/4	2-1/2	IMC-32430
1/4	1/4	1-1/4	3	IMC-32444
5/16	5/16	13/16	2-1/2	IMC-32431
5/16	5/16	1-3/8	3	IMC-32445
3/8	3/8	7/8	2-1/2	IMC-32432
3/8	3/8	1-1/2	3-1/4	IMC-32446
3/8	3/8	2	4	IMC-32510
1/2	1/2	1	3	IMC-32434
1/2	1/2	1-1/4	3-1/4	IMC-32606
1/2	1/2	2	4	IMC-32447
1/2	1/2	2-1/2	5	IMC-32512
1/2	1/2	3-1/8	6	IMC-38391
5/8	5/8	1-1/4	3-1/2	IMC-32436
5/8	5/8	2-1/2	5	IMC-32514
5/8	5/8	3-3/4	6	IMC-38505
3/4	3/4	1-5/8	4	IMC-32504
3/4	3/4	2-1/2	5	IMC-32506
3/4	3/4	3-1/4	6	IMC-32516
1	1	2	4-1/2	IMC-32450
1	1	2-5/8	5	IMC-32508
1	1	3-1/4	6	IMC-32518





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Ball End

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/8	1/8	3/8	1-1/2	IMC-33446-B
3/16	3/16	9/16	2	IMC-33448-B
1/4	1/4	3/4	2-1/2	IMC-32980-B
5/16	5/16	13/16	2-1/2	IMC-32981-B
3/8	3/8	1	2-1/2	IMC-32982-B
1/2	1/2	1-1/4	3	IMC-32983-B
5/8	5/8	1-5/8	3-1/2	IMC-32984-B
3/4	3/4	1-5/8	4	IMC-32985-B



Ball End - Weldon Shank

Cutter Dia	Shank Dia	LOC	OAL	Part Number
1/4	1/4	3/4	2-1/2	IMC-32595-B
5/16	5/16	13/16	2-1/2	IMC-32596-B
3/8	3/8	7/8	2-1/2	IMC-32597-B
1/2	1/2	1-1/4	3-1/4	IMC-32598-B
5/8	5/8	1-1/4	3-1/2	IMC-32599-B
3/4	3/4	1-5/8	4	IMC-32608-B



Corner Radius

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.090R Part Number	.125R Part Number
1/8	1/8	3/8	1-1/2	IMC-33526-R				
3/16	3/16	9/16	2	IMC-33542-R				
1/4	1/4	3/4	2-1/2	IMC-33544-R	IMC-33548-R			
1/4	1/4	1-1/4	3	IMC-33552-R	IMC-34382-R			
5/16	5/16	13/16	2-1/2	IMC-33629-R	IMC-34362-R	IMC-38381-R		
5/16	5/16	1-3/8	3		IMC-38079-R	IMC-38383-R		
3/8	3/8	1	2-1/2	IMC-33648-R	IMC-33689-R	IMC-38385-R		
3/8	3/8	1-1/2	3-1/4	IMC-33693-R	IMC-33886-R	IMC-38386-R		
3/8	3/8	2	4	IMC-34100-R	IMC-34144-R	IMC-38388-R		
1/2	1/2	1-1/4	3	IMC-34146-R	IMC-34161-R	IMC-34196-R	IMC-38075-R	IMC-38076-R
1/2	1/2	2	4	IMC-34198-R	IMC-34204-R	IMC-34206-R	IMC-38080-R	IMC-38081-R
1/2	1/2	2-1/2	5		IMC-34235-R	IMC-38085-R	IMC-38086-R	IMC-38087-R
1/2	1/2	3-1/8	6		IMC-38392-R	IMC-38394-R	IMC-38397-R	IMC-38399-R
5/8	5/8	1-5/8	3-1/2		IMC-34237-R	IMC-38490-R	IMC-38492-R	IMC-38494-R
5/8	5/8	2-1/2	5		IMC-34243-R	IMC-38496-R	IMC-38500-R	IMC-38502-R
5/8	5/8	3-3/4	6		IMC-38506-R	IMC-38508-R	IMC-38510-R	IMC-38512-R
3/4	3/4	1-5/8	4		IMC-34245-R	IMC-34262-R	IMC-38077-R	IMC-38078-R
3/4	3/4	2-1/2	5		IMC-34343-R	IMC-38082-R	IMC-38083-R	IMC-38084-R
3/4	3/4	3-1/4	6		IMC-34345-R	IMC-38088-R	IMC-38089-R	IMC-38090-R
1	1	2	4		IMC-34351-R	IMC-34353-R	IMC-38526-R	IMC-38528-R
1	1	2-5/8	5		IMC-34352-R	IMC-34355-R	IMC-38536-R	IMC-38538-R
1	1	3-1/4	6		IMC-34357-R	IMC-38091-R	IMC-38546-R	IMC-38548-R



IMCO STREAKERS

M202 - 2 Flute

- Superior toughing tool and finisher
- For high performance milling in all types of aluminum and non-ferrous metals.
- Unique cutting-edge geometry, designed for really aggressive chip loads



Corner Radius - Weldon Shank

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.030R Part Number	.060R Part Number	.090R Part Number	.125R Part Number
1/4	1/4	3/4	2-1/2	IMC-33546-R	IMC-33550-R			
1/4	1/4	1-1/4	3	IMC-33566-R	IMC-34383-R			
5/16	5/16	13/16	2-1/2	IMC-33630-R	IMC-34363-R	IMC-38382-R		
5/16	5/16	1-3/8	3		IMC-38098-R	IMC-38384-R		
3/8	3/8	7/8	2-1/2	IMC-33649-R	IMC-33691-R	IMC-33692-R		
3/8	3/8	1-1/2	3-1/4	IMC-33694-R	IMC-33887-R	IMC-38387-R		
3/8	3/8	2	4	IMC-34101-R	IMC-34145-R	IMC-38389-R		
1/2	1/2	1	3		IMC-34359-R			
1/2	1/2	1-1/4	3-1/4	IMC-34147-R	IMC-34162-R	IMC-34197-R	IMC-38092-R	
1/2	1/2	2	4	IMC-34199-R	IMC-34205-R	IMC-34207-R	IMC-38099-R	IMC-38100-R
1/2	1/2	2-1/2	5		IMC-34236-R	IMC-38104-R	IMC-38105-R	IMC-38106-R
1/2	1/2	3-1/8	6		IMC-38393-R	IMC-38395-R	IMC-38398-R	IMC-38400-R
5/8	5/8	1-1/4	3-1/2		IMC-34238-R	IMC-38485-R	IMC-38487-R	IMC-38489-R
5/8	5/8	2-1/2	5		IMC-34244-R	IMC-38498-R	IMC-38501-R	IMC-38503-R
5/8	5/8	3-3/4	6		IMC-38507-R	IMC-38509-R	IMC-38511-R	IMC-38513-R
3/4	3/4	1-5/8	4		IMC-34246-R	IMC-34263-R	IMC-38094-R	IMC-38095-R
3/4	3/4	2-1/2	5		IMC-34344-R	IMC-38101-R	IMC-38102-R	IMC-38103-R
3/4	3/4	3-1/4	6		IMC-34346-R	IMC-38107-R	IMC-38108-R	IMC-38109-R
1	1	2	4-1/2		IMC-38096-R	IMC-38097-R	IMC-38527-R	IMC-38529-R
1	1	2-5/8	5		IMC-34354-R	IMC-34356-R	IMC-38537-R	IMC-38539-R
1	1	3-1/4	6		IMC-34358-R	IMC-38110-R	IMC-38547-R	IMC-38549-R



Application Guide Streakers - Speeds & Feeds



ISO Classification	Work Material	Type of Cut	Axial DOC	Radial DOC	Number of Flutes	Speed (SFM)	Feed (Inch per Tooth)						
							1/8	1/4	3/8	1/2	5/8	3/4	1
N	Aluminum Alloys 2024, 6061, 7075	Slotting	1 x D	1 x D	2	1000	.0015	.0030	.0045	.0060	.0075	.0090	.0120
			.75 x D	1 x D	3	1000	.0013	.0026	.0039	.0052	.0065	.0078	.0104
		Peripheral - Rough	1 x D	.75 x D	2	1200	.0019	.0038	.0056	.0075	.0094	.0113	.0150
					3	1200	.0016	.0033	.0049	.0065	.0081	.0098	.0130
		Peripheral - Finish	1.5 x D	.01 x D	2	1400	.0024	.0047	.0071	.0094	.0118	.0141	.0188
					3	1400	.0020	.0041	.0061	.0082	.0102	.0122	.0163
	High Silicon-Aluminum A380, A390	Slotting	.75 x D	1 x D	2	800	.0013	.0026	.0039	.0052	.0065	.0078	.0104
			.5 x D	1 x D	3	800	.0011	.0022	.0033	.0044	.0055	.0066	.0088
		Peripheral - Rough	1 x D	.5 x D	2	1000	.0016	.0033	.0049	.0065	.0081	.0098	.0130
					3	1000	.0014	.0028	.0041	.0055	.0069	.0083	.0110
		Peripheral - Finish	1.5 x D	.01 x D	2	1200	.0020	.0041	.0061	.0082	.0102	.0122	.0163
					3	1200	.0017	.0035	.0052	.0069	.0086	.0104	.0138
	Magnesium Alloys	Slotting	1 x D	1 x D	2	1000	.0015	.0030	.0045	.0060	.0075	.0090	.0120
			.75 x D	1 x D	3	1000	.0013	.0026	.0039	.0052	.0065	.0078	.0104
		Peripheral - Rough	1 x D	.75 x D	2	1200	.0019	.0038	.0056	.0075	.0094	.0113	.0150
					3	1200	.0016	.0033	.0049	.0065	.0081	.0098	.0130
		Peripheral - Finish	1.5 x D	.01 x D	2	1400	.0024	.0047	.0071	.0094	.0118	.0141	.0188
					3	1400	.0020	.0041	.0061	.0082	.0102	.0122	.0163
	Copper Alloys, Brass, Bronze	Slotting	.75 x D	1 x D	2	800	.0013	.0026	.0039	.0052	.0065	.0078	.0104
					3	800	.0011	.0022	.0033	.0044	.0055	.0066	.0088
		Peripheral - Rough	1 x D	.75 x D	2	1000	.0016	.0033	.0049	.0065	.0081	.0098	.0130
					3	1000	.0014	.0028	.0041	.0055	.0069	.0083	.0110
		Peripheral - Finish	1.5 x D	.01 x D	2	1200	.0020	.0041	.0061	.0082	.0102	.0122	.0163
					3	1200	.0017	.0035	.0052	.0069	.0086	.0104	.0138
Composites, Plastics, Fiberglass	Slotting	1 x D	1 x D	2	800	.0013	.0026	.0039	.0052	.0065	.0078	.0104	
				3	800	.0011	.0022	.0033	.0044	.0055	.0066	.0088	
	Peripheral - Rough	1 x D	.75 x D	2	1000	.0016	.0033	.0049	.0065	.0081	.0098	.0130	
				3	1000	.0014	.0028	.0041	.0055	.0069	.0083	.0110	
	Peripheral - Finish	1.5 x D	.01 x D	2	1200	.0020	.0041	.0061	.0082	.0102	.0122	.0163	
				3	1200	.0017	.0035	.0052	.0069	.0086	.0104	.0138	

IMCO CARBIDE END MILLS

E14 - 4 Flute

- General purpose end mills for slotting, profiling and contour milling.
- Use in general milling applications in low to medium carbon steels, cast iron, easy to machine stainless steels, composites, plastics, and graphite.



Square End

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
1/32	1/8	1/16	1-1/2	IMC-30891	IMC-34698
1/32	1/8	3/32	1-1/2	IMC-99345	IMC-30701
3/64	1/8	3/32	1-1/2	IMC-30892	IMC-34701
3/64	1/8	9/64	1-1/2	IMC-30537	IMC-30703
1/16	1/8	1/8	1-1/2	IMC-30529	IMC-31503
1/16	1/8	3/16	1-1/2	IMC-30800	IMC-30705
1/16	1/8	1/4	1-1/2	IMC-90695	IMC-90694
5/64	1/8	1/4	1-1/2	IMC-30506	IMC-30707
3/32	1/8	3/16	1-1/2	IMC-31545	IMC-31505
3/32	1/8	3/8	1-1/2	IMC-30531	IMC-30709
7/64	1/8	3/8	1-1/2	IMC-30458	IMC-30711
1/8	1/8	1/4	1-1/2	IMC-97871	IMC-31507
1/8	1/8	1/2	1-1/2	IMC-30521	IMC-30713
1/8	1/8	5/8	2	IMC-62107	
1/8	1/8	3/4	2-1/4	IMC-30417	IMC-37708
1/8	1/8	1	3	IMC-97847	IMC-34108
9/64	3/16	9/16	2	IMC-30500	IMC-30715
5/32	3/16	5/16	2	IMC-39757	IMC-31509
5/32	3/16	9/16	2	IMC-30501	IMC-30717
11/64	3/16	5/8	2	IMC-30507	IMC-30719
3/16	3/16	3/8	2	IMC-31548	IMC-31511
3/16	3/16	5/8	2	IMC-30520	IMC-30721
3/16	3/16	3/4	2-1/2	IMC-37793	IMC-37712
3/16	3/16	1	4	IMC-62110	
3/16	3/16	1-1/8	3	IMC-34115	IMC-34112
13/64	1/4	5/8	2-1/2	IMC-30469	
7/32	1/4	7/16	2	IMC-39759	
7/32	1/4	5/8	2-1/2	IMC-30546	IMC-30725
15/64	1/4	3/4	2-1/2	IMC-30972	



Square End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
1/4	1/4	1/2	2	IMC-31595	IMC-31515
1/4	1/4	3/4	2-1/2	IMC-98955	IMC-30729
1/4	1/4	1	4	IMC-62111	IMC-62106
1/4	1/4	1-1/8	3	IMC-99336	IMC-37716
1/4	1/4	1-1/2	4	IMC-98978	IMC-34116
1/4	1/4	1-1/2	6	IMC-39772	IMC-31163
17/64	5/16	3/4	2-1/2	IMC-30976	
9/32	5/16	3/4	2-1/2	IMC-96156	IMC-30733
19/64	5/16	13/16	2-1/2	IMC-30979	
5/16	5/16	1/2	2	IMC-30534	IMC-31517
5/16	5/16	13/16	2-1/2	IMC-30898	IMC-30737
5/16	5/16	1	4	IMC-62114	
5/16	5/16	1-1/8	3	IMC-30461	IMC-37720
5/16	5/16	1-5/8	4	IMC-34123	IMC-34120
21/64	3/8	1	2-1/2	IMC-31003	
11/32	3/8	1	2-1/2	IMC-30463	IMC-30741
23/64	3/8	1	2-1/2	IMC-31004	
3/8	3/8	5/8	2	IMC-31549	IMC-31519
3/8	3/8	1	2-1/2	IMC-98244	IMC-30745
3/8	3/8	1	4	IMC-62115	
3/8	3/8	1-1/8	3	IMC-37727	IMC-37724
3/8	3/8	1-1/2	6	IMC-97850	IMC-31135
3/8	3/8	1-3/4	4	IMC-34136	IMC-34124
25/64	7/16	1	2-3/4	IMC-31024	
13/32	7/16	1	2-3/4	IMC-31026	IMC-30749
27/64	7/16	1	2-3/4	IMC-31028	
7/16	7/16	1	2-3/4	IMC-31040	IMC-30772
7/16	7/16	2	4	IMC-37731	IMC-37728
29/64	1/2	1	3	IMC-30475	
15/32	1/2	1	3	IMC-31030	
31/64	1/2	1	3	IMC-99106	



E14 - 4 Flute

- General purpose end mills for slotting, profiling and contour milling.
- Use in general milling applications in low to medium carbon steels, cast iron, easy to machine stainless steels, composites, plastics, and graphite.



Square End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
1/2	1/2	5/8	2-1/2	IMC-31546	IMC-31523
1/2	1/2	1	3	IMC-98245	IMC-30761
1/2	1/2	1	4	IMC-62160	
1/2	1/2	1-1/2	6	IMC-31150	IMC-31147
1/2	1/2	2	4	IMC-37735	IMC-37732
1/2	1/2	3	6	IMC-34135	IMC-34132
9/16	9/16	1-1/4	3-1/2	IMC-30996	IMC-30763
5/8	5/8	3/4	3	IMC-39771	
5/8	5/8	1-1/4	3-1/2	IMC-30555	IMC-30765
5/8	5/8	2	6	IMC-31130	
5/8	5/8	2-1/4	5	IMC-30561	IMC-37740
5/8	5/8	3	6	IMC-34143	IMC-34140
11/16	3/4	1-1/2	4	IMC-31032	
3/4	3/4	1	3	IMC-30435	IMC-31527
3/4	3/4	1-1/2	4	IMC-98956	IMC-30769
3/4	3/4	2	6	IMC-31132	
3/4	3/4	2-1/4	5	IMC-37751	IMC-37748
3/4	3/4	3	6	IMC-34151	IMC-34148
13/16	7/8	1-1/2	4	IMC-31034	
7/8	7/8	1-1/2	4	IMC-30523	IMC-30773
15/16	1	1-1/2	4	IMC-31038	
1	1	1-1/2	4	IMC-98957	IMC-30777
1	1	2-1/4	5	IMC-37767	IMC-37764
1	1	3	6	IMC-34167	IMC-34164

IMCO CARBIDE END MILLS

E14 - 4 Flute

- General purpose end mills for slotting, profiling and contour milling.
- Use in general milling applications in low to medium carbon steels, cast iron, easy to machine stainless steels, composites, plastics, and graphite.



Ball End

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
1/32	1/8	1/16	1-1/2	IMC-31774-B	IMC-31699-B
1/32	1/8	3/32	1-1/2	IMC-30559-B	IMC-30901-B
3/64	1/8	3/32	1-1/2	IMC-31775-B	IMC-31701-B
3/64	1/8	9/64	1-1/2	IMC-30539-B	IMC-30903-B
1/16	1/8	1/8	1-1/2	IMC-30530-B	IMC-31703-B
1/16	1/8	3/16	1-1/2	IMC-97852-B	IMC-30905-B
5/64	1/8	1/4	1-1/2	IMC-30482-B	IMC-30907-B
3/32	1/8	3/16	1-1/2	IMC-31700-B	IMC-31705-B
3/32	1/8	3/8	1-1/2	IMC-30992-B	IMC-30909-B
7/64	1/8	3/8	1-1/2	IMC-30405-B	IMC-30911-B
1/8	1/8	1/4	1-1/2	IMC-31747-B	
1/8	1/8	1/2	1-1/2	IMC-30997-B	IMC-30913-B
1/8	1/8	5/8	2	IMC-37897-B	
1/8	1/8	3/4	2-1/4	IMC-37911-B	IMC-37908-B
1/8	1/8	1	3	IMC-97842-B	IMC-34308-B
9/64	3/16	9/16	2	IMC-31044-B	
5/32	3/16	5/16	2	IMC-30465-B	
5/32	3/16	9/16	2	IMC-30468-B	IMC-30917-B
3/16	3/16	3/8	2	IMC-31746-B	
3/16	3/16	5/8	2	IMC-30524-B	IMC-30921-B
3/16	3/16	3/4	2-1/2	IMC-37915-B	IMC-37912-B
3/16	3/16	1	4	IMC-37898-B	
3/16	3/16	1-1/8	3	IMC-37938-B	IMC-34312-B
7/32	1/4	5/8	2-1/2	IMC-31046-B	IMC-30925-B
1/4	1/4	1/2	2	IMC-31745-B	
1/4	1/4	3/4	2-1/2	IMC-30998-B	IMC-30929-B
1/4	1/4	1	4	IMC-37899-B	
1/4	1/4	1-1/8	3	IMC-37919-B	IMC-37916-B
1/4	1/4	1-1/2	4	IMC-96411-B	IMC-34316-B
1/4	1/4	1-1/2	6	IMC-97844-B	IMC-31363-B
9/32	5/16	3/4	2-1/2	IMC-30464-B	IMC-30933-B



Ball End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
5/16	5/16	1/2	2	IMC-31744-B	
5/16	5/16	13/16	2-1/2	IMC-30525-B	IMC-30937-B
5/16	5/16	1	4	IMC-37900-B	
5/16	5/16	1-1/8	3	IMC-34323-B	IMC-37920-B
5/16	5/16	1-5/8	4	IMC-34361-B	IMC-34320-B
11/32	3/8	1	2-1/2	IMC-30408-B	
3/8	3/8	5/8	2	IMC-31749-B	
3/8	3/8	1	2-1/2	IMC-98262-B	IMC-30945-B
3/8	3/8	1	4	IMC-37901-B	
3/8	3/8	1-1/8	3	IMC-37927-B	IMC-37924-B
3/8	3/8	1-1/2	6	IMC-97845-B	IMC-31335-B
3/8	3/8	1-3/4	4	IMC-34335-B	IMC-34324-B
7/16	7/16	1	2-3/4	IMC-31052-B	IMC-30900-B
7/16	7/16	2	4	IMC-30485-B	
7/16	7/16	3	6	IMC-30487-B	
1/2	1/2	5/8	2-1/2	IMC-31743-B	
1/2	1/2	1	3	IMC-97922-B	IMC-30961-B
1/2	1/2	1	4	IMC-37902-B	
1/2	1/2	1-1/2	6	IMC-97846-B	IMC-31347-B
1/2	1/2	2	4	IMC-37935-B	IMC-37932-B
1/2	1/2	3	6	IMC-30473-B	IMC-34332-B
9/16	9/16	1-1/4	3-1/2	IMC-30409-B	
5/8	5/8	1-1/4	3-1/2	IMC-30991-B	IMC-30965-B
5/8	5/8	2-1/4	5	IMC-30486-B	IMC-37940-B
5/8	5/8	3	6	IMC-30488-B	IMC-34340-B
11/16	3/4	1-1/2	4	IMC-31050-B	
3/4	3/4	1-1/2	4	IMC-95757-B	IMC-30969-B
3/4	3/4	2-1/4	5	IMC-37937-B	IMC-37948-B
3/4	3/4	3	6	IMC-30474-B	IMC-34348-B
7/8	7/8	1-1/2	4	IMC-30527-B	
1	1	1-1/2	4	IMC-30528-B	IMC-30977-B
1	1	2-1/4	5	IMC-37967-B	IMC-37964-B
1	1	3	6	IMC-30476-B	IMC-34364-B



E14 - 4 Flute

- General purpose end mills for slotting, profiling and contour milling.
- Use in general milling applications in low to medium carbon steels, cast iron, easy to machine stainless steels, composites, plastics, and graphite.

Corner Radius



Cutter Dia	Shank Dia	LOC	OAL	Radius	AlTiN Part Number
1/8	1/8	1/2	1-1/2	0.015	IMC-97662-R
1/8	1/8	1/2	1-1/2	0.020	IMC-90523-R
3/16	3/16	5/8	2	0.015	IMC-39694-R
3/16	3/16	5/8	2	0.020	IMC-39695-R
3/16	3/16	5/8	2	0.030	IMC-39601-R
1/4	1/4	3/4	2-1/2	0.015	IMC-30519-R
1/4	1/4	3/4	2-1/2	0.020	IMC-39513-R
1/4	1/4	3/4	2-1/2	0.030	IMC-39604-R
1/4	1/4	3/4	2-1/2	0.045	IMC-39696-R
5/16	5/16	13/16	2-1/2	0.015	IMC-39697-R
5/16	5/16	13/16	2-1/2	0.020	IMC-39698-R
5/16	5/16	13/16	2-1/2	0.030	IMC-39700-R
5/16	5/16	13/16	2-1/2	0.045	IMC-39701-R
3/8	3/8	1	2-1/2	0.015	IMC-37443-R
3/8	3/8	1	2-1/2	0.020	IMC-37444-R
3/8	3/8	1	2-1/2	0.030	IMC-37445-R
3/8	3/8	1	2-1/2	0.045	IMC-37446-R
3/8	3/8	1	2-1/2	0.060	IMC-37447-R
3/8	3/8	1	2-1/2	0.090	IMC-37448-R
1/2	1/2	1	3	0.015	IMC-37449-R
1/2	1/2	1	3	0.020	IMC-37450-R
1/2	1/2	1	3	0.030	IMC-37451-R
1/2	1/2	1	3	0.045	IMC-37452-R
1/2	1/2	1	3	0.060	IMC-37453-R
1/2	1/2	1	3	0.090	IMC-37454-R
5/8	5/8	1-1/4	3-1/2	0.030	IMC-37458-R
5/8	5/8	1-1/4	3-1/2	0.060	IMC-37460-R
3/4	3/4	1-1/2	4	0.030	IMC-37464-R
3/4	3/4	1-1/2	4	0.060	IMC-37466-R
3/4	3/4	1-1/2	4	0.090	IMC-37467-R

IMCO CARBIDE END MILLS

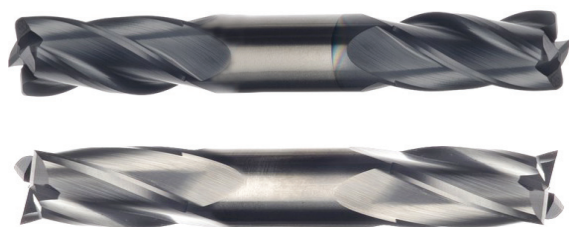
E24 - 4 Flute Double Ended

- General purpose end mills for slotting, profiling and contour milling.
- Use in general milling applications in low to medium carbon steels, cast iron, easy to machine stainless steels, composites, plastics, and graphite.



Square End

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
1/32	1/8	1/16	1-1/2	IMC-30410	IMC-31930
3/64	1/8	3/32	1-1/2	IMC-31900	IMC-31931
1/16	1/8	1/8	1-1/2	IMC-31985	IMC-31903
5/64	1/8	1/8	1-1/2	IMC-31949	IMC-31932
3/32	1/8	3/16	1-1/2	IMC-31927	IMC-31905
7/64	1/8	3/16	1-1/2	IMC-31957	IMC-31933
1/8	1/8	1/4	1-1/2	IMC-99125	IMC-31907
1/8	1/8	3/8	2		IMC-33380
9/64	3/16	5/16	2	IMC-31926	IMC-31934
5/32	3/16	5/16	2	IMC-31995	IMC-31909
11/64	3/16	5/16	2	IMC-31958	IMC-31935
3/16	3/16	3/8	2	IMC-99331	IMC-31911
3/16	3/16	1/2	2-1/2		IMC-33382
7/32	1/4	1/2	2-1/2	IMC-31959	IMC-31913
1/4	1/4	1/2	2-1/2	IMC-31990	IMC-31915
1/4	1/4	5/8	3		IMC-33384
5/16	5/16	1/2	2-1/2	IMC-31991	IMC-31917
3/8	3/8	9/16	2-1/2	IMC-31929	IMC-31919
3/8	3/8	3/4	3-1/2		IMC-33386
1/2	1/2	5/8	3	IMC-31998	IMC-31923
1/2	1/2	1	4		IMC-33388



Ball End

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number
1/32	1/8	1/16	1-1/2	IMC-32083-B
3/64	1/8	3/32	1-1/2	IMC-32182-B
1/16	1/8	1/8	1-1/2	IMC-32181-B
5/64	1/8	1/8	1-1/2	IMC-32085-B
3/32	1/8	3/16	1-1/2	IMC-32086-B
1/8	1/8	1/4	1-1/2	IMC-32139-B
5/32	3/16	5/16	2	IMC-32090-B
3/16	3/16	3/8	2	IMC-32138-B
1/4	1/4	1/2	2-1/2	IMC-32137-B
5/16	5/16	1/2	2-1/2	IMC-32140-B
3/8	3/8	9/16	2-1/2	IMC-32200-B
1/2	1/2	5/8	3	IMC-32201-B



Application Guide 4FL CARB EM - Speeds & Feeds



Work Material	Type of Cut	Axial DOC	Radial DOC	Speed (SFM)			Feed (Inches per Tooth)							Speed (m/min)			Feed (mm per Tooth)						
				MG	TiCN	AlTiN	1/8	1/4	3/8	1/2	5/8	3/4	1	MG	TiCN	AlTiN	3,0	6,0	9,0	12,0	16,0	19,0	25,0
Composites, Plastics	Slot	.5 x D	1 x D	300	350	350	.0008	.0015	.0022	.0030	.0037	.0047	.0060	91	107	107	.0203	.0381	.0559	.0762	.0940	.1194	.1524
	Rough	1 x D	.5 x D	375	450	450	.0009	.0018	.0027	.0035	.0045	.0055	.0070	114	137	137	.0229	.0457	.0686	.0889	.1143	.1397	.1778
	Finish	1.5 x D	.01 x D	450	650	650	.0009	.0018	.0027	.0035	.0045	.0055	.0070	137	198	198	.0229	.0457	.0686	.0889	.1143	.1397	.1778
Graphite	Slot	.5 x D	1 x D	350	400	450	.0008	.0015	.0023	.0030	.0037	.0045	.0060	107	122	137	.0203	.0381	.0584	.0762	.0940	.1143	.1524
	Rough	1 x D	.5 x D	425	475	525	.0009	.0017	.0026	.0035	.0043	.0053	.0070	130	145	160	.0229	.0432	.0660	.0889	.1092	.1346	.1778
	Finish	1.5 x D	.01 x D	500	550	600	.0010	.0019	.0028	.0038	.0047	.0057	.0076	152	168	183	.0254	.0483	.0711	.0965	.1194	.1448	.1930
Cast Iron - Gray	Slot	.5 x D	1 x D	200	350	350	.0004	.0007	.0011	.0015	.0019	.0023	.0030	61	107	107	.0102	.0178	.0279	.0381	.0483	.0584	.0762
	Rough	1 x D	.5 x D	250	400	400	.0005	.0010	.0015	.0020	.0025	.0030	.0040	76	122	122	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Finish	1.5 x D	.01 x D	300	450	450	.0007	.0015	.0022	.0030	.0038	.0045	.0060	91	137	137	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Cast Iron - Ductile	Slot	.5 x D	1 x D	200	250	250	.0004	.0007	.0011	.0015	.0018	.0023	.0030	61	76	76	.0102	.0178	.0279	.0381	.0457	.0584	.0762
	Rough	1 x D	.5 x D	250	275	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040	76	84	84	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Finish	1.5 x D	.01 x D	275	325	325	.0006	.0012	.0018	.0023	.0028	.0034	.0046	84	99	99	.0152	.0305	.0457	.0584	.0711	.0864	.1168
Low Carbon Steel ≤ 38 HRc 1018, 12L14, 8620	Slot	.5 x D	1 x D	250	275	300	.0005	.0010	.0015	.0020	.0025	.0030	.0040	76	84	91	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Rough	1 x D	.5 x D	275	300	325	.0006	.0012	.0018	.0025	.0031	.0037	.0050	84	91	99	.0152	.0305	.0457	.0635	.0787	.0940	.1270
	Finish	1.5 x D	.01 x D	300	325	350	.0007	.0015	.0022	.0030	.0038	.0045	.0060	91	99	107	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Medium Carbon Steels ≤ 38 HRc 4140, 4340	Slot	.5 x D	1 x D	225	250	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040	69	76	84	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Rough	1 x D	.5 x D	250	275	300	.0006	.0012	.0018	.0025	.0031	.0037	.0050	76	84	91	.0152	.0305	.0457	.0635	.0787	.0940	.1270
	Finish	1.5 x D	.01 x D	275	300	325	.0007	.0015	.0022	.0030	.0038	.0045	.0060	84	91	99	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Tool & Die Steels ≤ 38 HRc A2, D2, H13, P20	Slot	.5 x D	1 x D	225	250	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040	69	76	84	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Rough	1 x D	.5 x D	250	275	300	.0006	.0012	.0018	.0025	.0031	.0037	.0050	76	84	91	.0152	.0305	.0457	.0635	.0787	.0940	.1270
	Finish	1.5 x D	.01 x D	275	300	325	.0007	.0015	.0022	.0030	.0038	.0045	.0060	84	91	99	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Tool & Die Steels 39 - 48 HRc A2, D2, H13, P20	Slot	.25 x D	1 x D	175	200	225	.0002	.0005	.0007	.0010	.0012	.0015	.0020	53	61	69	.0051	.0127	.0178	.0254	.0305	.0381	.0508
	Rough	1 x D	.25 x D	200	225	250	.0003	.0007	.0011	.0015	.0019	.0022	.0030	61	69	76	.0076	.0178	.0279	.0381	.0483	.0559	.0762
	Finish	1.5 x D	.01 x D	225	250	275	.0004	.0009	.0014	.0018	.0023	.0027	.0036	69	76	84	.0102	.0229	.0356	.0457	.0584	.0686	.0914
Easy to Machine Stainless Steel 416, 410, 302, 303	Slot	.5 x D	1 x D	200	250	250	.0003	.0007	.0011	.0015	.0019	.0023	.0030	61	76	76	.0076	.0178	.0279	.0381	.0483	.0584	.0762
	Rough	1 x D	.5 x D	250	275	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040	76	84	84	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Finish	1.5 x D	.01 x D	300	325	325	.0006	.0012	.0018	.0025	.0031	.0038	.0050	91	99	99	.0152	.0305	.0457	.0635	.0787	.0965	.1270
Moderate Machining Stainless Steels 304, 316, Invar, Kovar	Slot	.5 x D	1 x D	200	225	250	.0003	.0005	.0008	.0010	.0012	.0015	.0020	61	69	76	.0064	.0127	.0191	.0254	.0305	.0381	.0508
	Rough	1 x D	.5 x D	250	275	300	.0003	.0007	.0011	.0015	.0019	.0022	.0030	76	84	91	.0076	.0178	.0279	.0381	.0483	.0559	.0762
	Finish	1.5 x D	.01 x D	300	325	350	.0004	.0009	.0014	.0018	.0023	.0027	.0036	91	99	107	.0102	.0229	.0356	.0457	.0584	.0686	.0914

D = tool diameter Reduce feed rates by 20% when using long length tools Starting parameters shown

IMCO CARBIDE END MILLS

E12 - 2 Flute

- General purpose end mills for plunging, slotting, contouring and heavy peripheral cuts.
- Use in general milling applications in low to medium carbon steels, cast iron, easy to machine stainless steels, composites, plastics, graphite, aluminum and aluminum alloys, copper alloys, brass and bronze.



Square End

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
1/64	1/8	1/32	1-1/2	IMC-90655	IMC-90638
1/64	1/8	3/64	1-1/2	IMC-90656	IMC-90639
1/32	1/8	1/16	1-1/2	IMC-38923	IMC-34696
1/32	1/8	3/32	1-1/2	IMC-30509	IMC-30601
3/64	1/8	3/32	1-1/2	IMC-39093	IMC-34699
3/64	1/8	9/64	1-1/2	IMC-35603	IMC-30603
1/16	1/8	1/8	1-1/2	IMC-39104	IMC-31403
1/16	1/8	3/16	1-1/2	IMC-30336	IMC-30605
1/16	1/8	1/4	1-1/2	IMC-90658	IMC-90653
5/64	1/8	1/4	1-1/2	IMC-30337	IMC-30607
3/32	1/8	3/16	1-1/2	IMC-39105	IMC-31405
3/32	1/8	3/8	1-1/2	IMC-30338	IMC-30609
7/64	1/8	3/8	1-1/2	IMC-30339	IMC-30611
1/8	1/8	1/4	1-1/2	IMC-90088	IMC-31407
1/8	1/8	1/2	1-1/2	IMC-96342	IMC-30613
1/8	1/8	5/8	2	IMC-62093	
1/8	1/8	3/4	2-1/4	IMC-36610	IMC-37608
1/8	1/8	1	3	IMC-34015	IMC-34008
9/64	3/16	9/16	2	IMC-30344	IMC-30615
5/32	3/16	5/16	2	IMC-39129	IMC-31409
5/32	3/16	9/16	2	IMC-30503	IMC-30617
11/64	3/16	5/8	2	IMC-30345	IMC-30619
3/16	3/16	3/8	2	IMC-39131	IMC-31411
3/16	3/16	5/8	2	IMC-30554	IMC-30621
3/16	3/16	3/4	2-1/2	IMC-36619	IMC-37612
3/16	3/16	1	4	IMC-62094	
3/16	3/16	1-1/8	3	IMC-34023	IMC-34012



Square End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
13/64	1/4	5/8	2-1/2	IMC-97907	IMC-30623
7/32	1/4	7/16	2	IMC-39153	
7/32	1/4	5/8	2-1/2	IMC-30348	IMC-30625
15/64	1/4	3/4	2-1/2	IMC-30510	
1/4	1/4	1/2	2	IMC-39154	IMC-31415
1/4	1/4	3/4	2-1/2	IMC-30553	IMC-30629
1/4	1/4	1	4	IMC-62095	IMC-62089
1/4	1/4	1-1/8	3	IMC-36645	IMC-37616
1/4	1/4	1-1/2	4	IMC-34035	IMC-34016
1/4	1/4	1-1/2	6	IMC-39203	IMC-31063
17/64	5/16	3/4	2-1/2	IMC-30511	
9/32	5/16	3/4	2-1/2	IMC-30504	IMC-30633
19/64	5/16	13/16	2-1/2	IMC-30512	
5/16	5/16	1/2	2	IMC-39155	IMC-31417
5/16	5/16	13/16	2-1/2	IMC-30557	IMC-30637
5/16	5/16	1-1/8	3	IMC-36640	IMC-37620
5/16	5/16	1-5/8	4	IMC-34036	IMC-34020
11/32	3/8	1	2-1/2	IMC-30331	IMC-30641
3/8	3/8	5/8	2	IMC-39156	IMC-31419
3/8	3/8	1	2-1/2	IMC-30556	IMC-30645
3/8	3/8	1	4	IMC-62097	
3/8	3/8	1-1/8	3	IMC-36646	IMC-37624
3/8	3/8	1-1/2	6	IMC-30470	IMC-31035
3/8	3/8	1-3/4	4	IMC-34037	IMC-34024
13/32	7/16	1	2-3/4	IMC-30332	
7/16	7/16	1	2-3/4	IMC-99467	IMC-30672
7/16	7/16	2	4	IMC-99468	IMC-37628



E12 - 2 Flute

- General purpose end mills for plunging, slotting, contouring and heavy peripheral cuts.
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Square End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
15/32	1/2	1	3	IMC-30333	
1/2	1/2	5/8	2-1/2	IMC-39158	IMC-31423
1/2	1/2	1	3	IMC-30552	IMC-30661
1/2	1/2	1	4	IMC-62098	
1/2	1/2	1-1/2	6	IMC-39205	IMC-31047
1/2	1/2	2	4	IMC-36647	IMC-37632
1/2	1/2	3	6	IMC-34039	IMC-34032
9/16	9/16	1-1/4	3-1/2	IMC-30505	IMC-30663
5/8	5/8	1-1/4	3-1/2	IMC-30532	IMC-30665
5/8	5/8	2-1/4	5	IMC-36648	IMC-37640
5/8	5/8	3	6	IMC-34043	IMC-34040
3/4	3/4	1-1/2	4	IMC-30700	IMC-30669
3/4	3/4	2-1/4	5	IMC-36649	IMC-37648
3/4	3/4	3	6	IMC-34044	IMC-34048
1	1	1-1/2	4	IMC-30679	IMC-30677
1	1	2-1/4	5	IMC-36650	IMC-37664
1	1	3	6	IMC-34045	IMC-34064

IMCO CARBIDE END MILLS

E12 - 2 Flute

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Ball End

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
1/32	1/8	1/16	1-1/2	IMC-30372-B	IMC-31601-B
1/32	1/8	3/32	1-1/2	IMC-30303-B	IMC-30801-B
3/64	1/8	3/32	1-1/2	IMC-30373-B	IMC-31602-B
3/64	1/8	9/64	1-1/2	IMC-30302-B	IMC-30803-B
1/16	1/8	1/8	1-1/2	IMC-30374-B	IMC-31603-B
1/16	1/8	3/16	1-1/2	IMC-30433-B	IMC-30805-B
5/64	1/8	1/4	1-1/2	IMC-30349-B	IMC-30807-B
3/32	1/8	3/16	1-1/2	IMC-30375-B	IMC-31605-B
3/32	1/8	3/8	1-1/2	IMC-30350-B	IMC-30809-B
7/64	1/8	3/8	1-1/2	IMC-30351-B	IMC-30811-B
1/8	1/8	1/4	1-1/2	IMC-31956-B	IMC-31607-B
1/8	1/8	1/2	1-1/2	IMC-30993-B	IMC-30813-B
1/8	1/8	5/8	2	IMC-37880-B	
1/8	1/8	3/4	2-1/4	IMC-30385-B	IMC-37808-B
1/8	1/8	1	3	IMC-31291-B	IMC-34208-B
9/64	3/16	9/16	2	IMC-90177-B	IMC-30815-B
5/32	3/16	5/16	2	IMC-30403-B	
5/32	3/16	9/16	2	IMC-30354-B	IMC-30817-B
3/16	3/16	3/8	2	IMC-30378-B	
3/16	3/16	5/8	2	IMC-90087-B	IMC-30821-B
3/16	3/16	3/4	2-1/2	IMC-30386-B	IMC-37812-B
3/16	3/16	1	4	IMC-37881-B	
3/16	3/16	1-1/8	3	IMC-90081-B	IMC-34212-B
7/32	1/4	5/8	2-1/2	IMC-30355-B	IMC-30825-B
1/4	1/4	1/2	2	IMC-30563-B	
1/4	1/4	3/4	2-1/2	IMC-30994-B	IMC-30829-B
1/4	1/4	1	4	IMC-37882-B	
1/4	1/4	1-1/8	3	IMC-30387-B	IMC-37816-B
1/4	1/4	1-1/2	4	IMC-90082-B	IMC-34216-B
1/4	1/4	1-1/2	6	IMC-34168-B	IMC-31263-B
9/32	5/16	3/4	2-1/2	IMC-30356-B	



Ball End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
5/16	5/16	1/2	2	IMC-30380-B	
5/16	5/16	13/16	2-1/2	IMC-30562-B	IMC-30837-B
5/16	5/16	1-1/8	3	IMC-20561-B	IMC-37820-B
5/16	5/16	1-5/8	4	IMC-31292-B	IMC-34220-B
11/32	3/8	1	2-1/2	IMC-30357-B	
3/8	3/8	5/8	2	IMC-30564-B	
3/8	3/8	1	2-1/2	IMC-30995-B	IMC-30845-B
3/8	3/8	1	4	IMC-37884-B	
3/8	3/8	1-1/8	3	IMC-30390-B	IMC-37824-B
3/8	3/8	1-1/2	6	IMC-34170-B	IMC-31235-B
3/8	3/8	1-3/4	4	IMC-31293-B	IMC-34224-B
7/16	7/16	1	2-3/4	IMC-30362-B	IMC-30879-B
7/16	7/16	2	4	IMC-30391-B	
1/2	1/2	5/8	2-1/2	IMC-31630-B	
1/2	1/2	1	3	IMC-97921-B	IMC-30861-B
1/2	1/2	1	4	IMC-37885-B	IMC-90503-B
1/2	1/2	1-1/2	6	IMC-34172-B	IMC-31247-B
1/2	1/2	2	4	IMC-30392-B	IMC-37832-B
1/2	1/2	3	6	IMC-31295-B	IMC-34232-B
9/16	9/16	1-1/4	3-1/2	IMC-30248-B	IMC-30863-B
5/8	5/8	1-1/4	3-1/2	IMC-30366-B	IMC-30865-B
5/8	5/8	2-1/4	5	IMC-30393-B	IMC-37840-B
5/8	5/8	3	6	IMC-31296-B	IMC-34240-B
3/4	3/4	1-1/2	4	IMC-30872-B	IMC-30869-B
3/4	3/4	2-1/4	5	IMC-30396-B	IMC-37848-B
3/4	3/4	3	6	IMC-31297-B	IMC-34248-B
1	1	1-1/2	4	IMC-30369-B	IMC-30877-B
1	1	2-1/4	5	IMC-30397-B	IMC-37864-B
1	1	3	6	IMC-31298-B	IMC-34264-B



E12 - 2 Flute

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Corner Radius



Cutter Dia	Shank Dia	LOC	OAL	Radius	AlTiN Part Number
1/8	1/8	1/2	1-1/2	0.015	IMC-34071-R
3/16	3/16	5/8	2	0.020	IMC-34072-R
3/16	3/16	5/8	2	0.030	IMC-34073-R
1/4	1/4	3/4	2-1/2	0.020	IMC-34074-R
1/4	1/4	3/4	2-1/2	0.030	IMC-34075-R
5/16	5/16	13/16	2-1/2	0.020	IMC-34076-R
5/16	5/16	13/16	2-1/2	0.030	IMC-34077-R
3/8	3/8	1	2-1/2	0.020	IMC-34104-R
3/8	3/8	1	2-1/2	0.030	IMC-34105-R
1/2	1/2	1	3	0.030	IMC-34107-R
1/2	1/2	1	3	0.060	IMC-34190-R

IMCO CARBIDE END MILLS

E22 - 2 Flute Double Ended

- General purpose end mills for plunging, slotting, contouring and heavy peripheral cuts.
- Use in general milling applications in low to medium carbon steels, cast iron, easy to machine stainless steels, composites, plastics, graphite, aluminum and aluminum alloys, copper alloys, brass and bronze.



Square End

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number	Uncoated Part Number
1/32	1/8	1/16	1-1/2	IMC-31802	IMC-31830
3/64	1/8	3/32	1-1/2	IMC-31826	IMC-31831
1/16	1/8	1/8	1-1/2	IMC-31827	IMC-31803
5/64	1/8	1/8	1-1/2	IMC-31828	IMC-31832
3/32	1/8	3/16	1-1/2	IMC-31829	IMC-31805
7/64	1/8	3/16	1-1/2	IMC-31849	IMC-31833
1/8	1/8	1/4	1-1/2	IMC-31857	IMC-31807
5/32	3/16	5/16	2	IMC-31858	IMC-31809
3/16	3/16	3/8	2	IMC-31860	IMC-31811
7/32	1/4	1/2	2-1/2	IMC-31861	IMC-31813
1/4	1/4	1/2	2-1/2	IMC-31873	IMC-31815
5/16	5/16	1/2	2-1/2	IMC-31882	IMC-31817
3/8	3/8	9/16	2-1/2	IMC-31881	IMC-31819
1/2	1/2	5/8	3	IMC-31885	IMC-31823



Ball End

Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number
1/32	1/8	1/16	1-1/2	IMC-32001-B
3/64	1/8	3/32	1-1/2	IMC-32002-B
1/16	1/8	1/8	1-1/2	IMC-32037-B
3/32	1/8	3/16	1-1/2	IMC-30480-B
1/8	1/8	1/4	1-1/2	IMC-30579-B
3/16	3/16	3/8	2	IMC-30577-B
1/4	1/4	1/2	2-1/2	IMC-32082-B
3/8	3/8	9/16	2-1/2	IMC-32095-B
1/2	1/2	5/8	3	IMC-32097-B



Application Guide 2FL CARB EM - Speeds & Feeds



Work Material	Type of Cut	Axial DOC	Radial DOC	Speed (SFM)			Feed (Inches per Tooth)						Speed (m/min)			Feed (mm per Tooth)							
				MG	TiCN	AlTiN	1/8	1/4	3/8	1/2	5/8	3/4	1	MG	TiCN	AlTiN	3,0	6,0	9,0	12,0	16,0	19,0	25,0
Aluminum Alloys 2024, 6061, 7075	Slot	.5 x D	1 x D	350	550	550	.0008	.0015	.0022	.0030	.0037	.0047	.0060	107	168	168	.0203	.0381	.0559	.0762	.0940	.1194	.1524
	Rough	1 x D	.5 x D	450	650	650	.0010	.0020	.0030	.0040	.0050	.0060	.0080	137	198	198	.0254	.0508	.0762	.1016	.1270	.1524	.2032
	Finish	1.5 x D	.01 x D	550	750	750	.0010	.0020	.0030	.0040	.0050	.0060	.0080	168	229	229	.0254	.0508	.0762	.1016	.1270	.1524	.2032
Copper Alloys Brass & Bronze	Slot	.5 x D	1 x D	275	350	350	.0006	.0012	.0018	.0025	.0030	.0039	.0050	84	107	107	.0152	.0305	.0457	.0635	.0762	.0991	.1270
	Rough	1 x D	.5 x D	300	400	400	.0008	.0015	.0022	.0030	.0037	.0047	.0060	91	122	122	.0203	.0381	.0559	.0762	.0940	.1194	.1524
	Finish	1.5 x D	.01 x D	350	450	450	.0009	.0017	.0026	.0035	.0045	.0055	.0070	107	137	137	.0229	.0432	.0660	.0889	.1143	.1397	.1778
Composites, Plastics	Slot	.5 x D	1 x D	300	350	350	.0008	.0015	.0022	.0030	.0037	.0047	.0060	91	107	107	.0203	.0381	.0559	.0762	.0940	.1194	.1524
	Rough	1 x D	.5 x D	375	450	450	.0009	.0018	.0027	.0035	.0045	.0055	.0070	114	137	137	.0229	.0457	.0686	.0889	.1143	.1397	.1778
	Finish	1.5 x D	.01 x D	450	650	650	.0009	.0018	.0027	.0035	.0045	.0055	.0070	137	198	198	.0229	.0457	.0686	.0889	.1143	.1397	.1778
Magnesium Alloys	Slot	.5 x D	1 x D	350	550	550	.0008	.0015	.0022	.0030	.0037	.0047	.0060	107	168	168	.0203	.0381	.0559	.0762	.0940	.1194	.1524
	Rough	1 x D	.5 x D	450	650	650	.0010	.0020	.0030	.0040	.0050	.0060	.0080	137	198	198	.0254	.0508	.0762	.1016	.1270	.1524	.2032
	Finish	1.5 x D	.01 x D	550	750	750	.0010	.0020	.0030	.0040	.0050	.0060	.0080	168	229	229	.0254	.0508	.0762	.1016	.1270	.1524	.2032
Graphite	Slot	.5 x D	1 x D	350	400	450	.0008	.0015	.0023	.0030	.0037	.0045	.0060	107	122	137	.0203	.0381	.0584	.0762	.0940	.1143	.1524
	Rough	1 x D	.5 x D	425	475	525	.0009	.0017	.0026	.0035	.0043	.0053	.0070	130	145	160	.0229	.0432	.0660	.0889	.1092	.1346	.1778
	Finish	1.5 x D	.01 x D	500	550	600	.0010	.0019	.0028	.0038	.0047	.0057	.0076	152	168	183	.0254	.0483	.0711	.0965	.1194	.1448	.1930
Cast Iron - Gray	Slot	.5 x D	1 x D	200	350	350	.0004	.0007	.0011	.0015	.0019	.0023	.0030	61	107	107	.0102	.0178	.0279	.0381	.0483	.0584	.0762
	Rough	1 x D	.5 x D	250	400	400	.0005	.0010	.0015	.0020	.0025	.0030	.0040	76	122	122	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Finish	1.5 x D	.01 x D	300	450	450	.0007	.0015	.0022	.0030	.0038	.0045	.0060	91	137	137	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Cast Iron - Ductile	Slot	.5 x D	1 x D	200	250	250	.0004	.0007	.0011	.0015	.0018	.0023	.0030	61	76	76	.0102	.0178	.0279	.0381	.0457	.0584	.0762
	Rough	1 x D	.5 x D	250	275	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040	76	84	84	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Finish	1.5 x D	.01 x D	275	325	325	.0006	.0012	.0018	.0023	.0028	.0034	.0046	84	99	99	.0152	.0305	.0457	.0584	.0711	.0864	.1168
Low Carbon Steel ≤ 38 HRC 1018, 12L14, 8620	Slot	.5 x D	1 x D	250	275	300	.0005	.0010	.0015	.0020	.0025	.0030	.0040	76	84	91	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Rough	1 x D	.5 x D	275	300	325	.0006	.0012	.0018	.0025	.0031	.0037	.0050	84	91	99	.0152	.0305	.0457	.0635	.0787	.0940	.1270
	Finish	1.5 x D	.01 x D	300	325	350	.0007	.0015	.0022	.0030	.0038	.0045	.0060	91	99	107	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Medium Carbon Steels ≤ 38 HRC 4140, 4340	Slot	.5 x D	1 x D	225	250	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040	69	76	84	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Rough	1 x D	.5 x D	250	275	300	.0006	.0012	.0018	.0025	.0031	.0037	.0050	76	84	91	.0152	.0305	.0457	.0635	.0787	.0940	.1270
	Finish	1.5 x D	.01 x D	275	300	325	.0007	.0015	.0022	.0030	.0038	.0045	.0060	84	91	99	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Tool & Die Steels ≤ 38 HRC A2, D2, H13, P20	Slot	.5 x D	1 x D	225	250	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040	69	76	84	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Rough	1 x D	.5 x D	250	275	300	.0006	.0012	.0018	.0025	.0031	.0037	.0050	76	84	91	.0152	.0305	.0457	.0635	.0787	.0940	.1270
	Finish	1.5 x D	.01 x D	275	300	325	.0007	.0015	.0022	.0030	.0038	.0045	.0060	84	91	99	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Easy to Machine Stainless Steel 416, 410, 302, 303	Slot	.5 x D	1 x D	200	250	250	.0003	.0007	.0011	.0015	.0019	.0023	.0030	61	76	76	.0076	.0178	.0279	.0381	.0483	.0584	.0762
	Rough	1 x D	.5 x D	250	275	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040	76	84	84	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Finish	1.5 x D	.01 x D	300	325	325	.0006	.0012	.0018	.0025	.0031	.0038	.0050	91	99	99	.0152	.0305	.0457	.0635	.0787	.0965	.1270
Moderate Machining Stainless Steels 304, 316, Invar, Kovar	Slot	.5 x D	1 x D	200	225	250	.0003	.0005	.0008	.0010	.0012	.0015	.0020	61	69	76	.0064	.0127	.0191	.0254	.0305	.0381	.0508
	Rough	1 x D	.5 x D	250	275	300	.0003	.0007	.0011	.0015	.0019	.0022	.0030	76	84	91	.0076	.0178	.0279	.0381	.0483	.0559	.0762
	Finish	1.5 x D	.01 x D	300	325	350	.0004	.0009	.0014	.0018	.0023	.0027	.0036	91	99	107	.0102	.0229	.0356	.0457	.0584	.0686	.0914

D = tool diameter Reduce feed rates by 20% when using long length tools Starting parameters shown

IMCO ROUGHER/FINISHER END MILLS

M104 - 4 Serrated Flute

- Unique chipbreaker geometry delivers higher productivity with less horsepower
- Flute design reduces cutting forces, creating smaller chips that can be removed faster
- Used in carbon & tool steels and cast irons



Cutter Dia	Shank Dia	LOC	OAL	AlTiN Part Number
1/8	1/8	1/4	1-1/2	IMC-33290
1/8	1/8	1/2	1-1/2	IMC-30423
3/16	3/16	3/8	2	IMC-33296
3/16	3/16	5/8	2	IMC-30462
1/4	1/4	1/2	2	IMC-91779
1/4	1/4	3/4	2-1/2	IMC-98991
1/4	1/4	1-1/8	3	IMC-33299
5/16	5/16	1/2	2	IMC-33163
5/16	5/16	13/16	2-1/2	IMC-30551
5/16	5/16	1-1/8	3	IMC-33101
3/8	3/8	5/8	2	IMC-33103
3/8	3/8	1	2-1/2	IMC-33153
3/8	3/8	1-1/8	3	IMC-33300
1/2	1/2	5/8	2-1/2	IMC-33181
1/2	1/2	1	3	IMC-98961
1/2	1/2	2	4	IMC-30434
5/8	5/8	1-1/4	3-1/2	IMC-33157
5/8	5/8	2-1/4	5	IMC-97343
3/4	3/4	1	3	IMC-33297
3/4	3/4	1-1/2	4	IMC-33159
3/4	3/4	2-1/4	5	IMC-33301
1	1	1-1/2	4	IMC-33161
1	1	2-1/4	5	IMC-33302



IMCO ROUGHER/FINISHER END MILLS

Application Guide Rougher/Finisher - Speeds & Feeds



Work Material	Type of Cut	Axial DOC	Radial DOC	No. of Flutes	Speed (SFM)	Feed (Inches Per Tooth)							Speed (m/min)	Feed (mm Per Tooth)						
						1/8	1/4	3/8	1/2	5/8	3/4	1		3,0	6,0	9,0	12,0	16,0	19,0	25,0
Low Carbon Steels ≤ 38 HRC 1018, 12L14, 8620	Slot	1 x D	1 x D	4	350	.0006	.0012	.0018	.0025	.0031	.0037	.0050	107	.0152	.0305	.0457	.0635	.0787	.0940	.1270
	Rough	1 x D	.5 x D	4	425	.0007	.0015	.0022	.0030	.0037	.0045	.0060	130	.0178	.0381	.0559	.0762	.0940	.1143	.1524
Medium Carbon Steels ≤ 38 HRC 4140, 4340	Slot	.75 x D	1 x D	4	275	.0006	.0012	.0019	.0025	.0032	.0039	.0050	84	.0152	.0305	.0483	.0635	.0813	.0991	.1270
	Rough	1 x D	.5 x D	4	350	.0007	.0015	.0022	.0030	.0038	.0045	.0060	107	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Tool and Die Steels ≤ 38 HRC A2, D2, O1, S7, P20, H13	Slot	.75 x D	1 x D	4	275	.0006	.0012	.0019	.0025	.0032	.0039	.0050	84	.0152	.0305	.0483	.0635	.0813	.0991	.1270
	Rough	1 x D	.5 x D	4	350	.0007	.0015	.0022	.0030	.0038	.0045	.0060	107	.0178	.0381	.0559	.0762	.0965	.1143	.1524
Cast Iron - Gray	Slot	1 x D	1 x D	4	350	.0006	.0012	.0018	.0023	.0029	.0035	.0046	107	.0152	.0305	.0457	.0584	.0737	.0889	.1168
	Rough	1 x D	.5 x D	4	450	.0007	.0014	.0021	.0028	.0035	.0042	.0056	137	.0178	.0356	.0533	.0711	.0889	.1067	.1422
Cast Iron - Ductile	Slot	.75 x D	1 x D	4	275	.0005	.0010	.0015	.0020	.0025	.0030	.0040	84	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Rough	1 x D	.5 x D	4	375	.0006	.0012	.0018	.0025	.0031	.0038	.0050	114	.0152	.0305	.0457	.0635	.0787	.0965	.1270
Cast Iron - Malleable	Slot	.5 x D	1 x D	4	225	.0003	.0006	.0009	.0012	.0015	.0018	.0024	69	.0076	.0152	.0229	.0305	.0381	.0457	.0610
	Rough	1 x D	.5 x D	4	300	.0005	.0010	.0015	.0020	.0025	.0030	.0040	91	.0127	.0254	.0381	.0508	.0635	.0762	.1016

D = tool diameter Reduce feed rates by 20% when using long length tools Starting parameters shown

FULLERTON CARBIDE END MILLS

Series 3200

- General purpose, premium quality solid carbide end mill
- Square End, 4 Flute, 30° Helix
- Center Cutting, Right Hand Spiral, Right Hand Cut



4SE Square End

Cutter Dia	Shank Dia	LOC	OAL	Part Number	TiAIN Part Number
1/64	0.1250	0.0469	1.500	FUL-32001	FUL-30604
1/32	0.1250	0.0625	1.500	FUL-32139	FUL-32822
1/32	0.1250	0.0938	1.500	FUL-32002	FUL-30605
3/64	0.1250	0.1250	1.500	FUL-32140	FUL-32823
3/64	0.1250	0.1875	1.500	FUL-32003	FUL-30606
1/16	0.1250	0.1250	1.500	FUL-32141	FUL-32824
1/16	0.1250	0.2500	1.500	FUL-32004	FUL-30607
5/64	0.1250	0.1250	1.500	FUL-32142	FUL-32825
5/64	0.1250	0.2500	1.500	FUL-32005	FUL-30608
3/32	0.1250	0.1875	1.500	FUL-32143	FUL-32826
3/32	0.1250	0.3750	1.500	FUL-32006	FUL-30609
7/64	0.1250	0.1875	1.500	FUL-32144	FUL-32827
7/64	0.1250	0.5000	1.500	FUL-32007	FUL-30610
1/8	0.1250	0.2500	1.500	FUL-32145	FUL-32828
1/8	0.1250	0.5000	1.500	FUL-32008	FUL-30611
1/8	0.1250	0.7500	3.000	FUL-30232	FUL-30030
1/8	0.1250	1.0000	3.000	FUL-32252	FUL-30031
9/64	0.1875	0.5625	2.000	FUL-32009	FUL-30612
5/32	0.1875	0.3750	2.000	FUL-32146	FUL-32829
5/32	0.1875	0.5625	2.000	FUL-32010	FUL-30613
11/64	0.1875	0.5625	2.000	FUL-32650	FUL-30614
3/16	0.1875	0.3750	2.000	FUL-32147	FUL-32830
3/16	0.1875	0.6250	2.000	FUL-32011	FUL-30615
3/16	0.1875	1.2500	3.000	FUL-32253	FUL-30032
3/16	0.1875	1.0000	4.000	FUL-30238	FUL-30033

4SE Square End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	Part Number	TiAIN Part Number
13/64	0.2500	0.6250	2.500	FUL-32667	FUL-30616
7/32	0.2500	0.6250	2.500	FUL-32012	FUL-30617
15/64	0.2500	0.7500	2.500	FUL-32666	FUL-30618
1/4	0.2500	0.5000	2.000	FUL-32148	FUL-32831
1/4	0.2500	0.7500	2.500	FUL-32013	FUL-30619
1/4	0.2500	1.1250	3.000	FUL-32550	FUL-30034
1/4	0.2500	1.0000	4.000	FUL-30200	FUL-30035
1/4	0.2500	1.5000	4.000	FUL-32254	FUL-30036
1/4	0.2500	1.5000	6.000	FUL-32551	FUL-30037
17/64	0.3125	0.8750	2.500	FUL-32918	FUL-30620
9/32	0.3125	0.8750	2.500	FUL-32014	FUL-30621
19/64	0.3125	0.8750	2.500	FUL-32919	FUL-30622
5/16	0.3125	0.5000	2.500	FUL-32149	FUL-32832
5/16	0.3125	0.8750	2.500	FUL-32015	FUL-30623
5/16	0.3125	1.1250	3.000	FUL-32574	FUL-30038
5/16	0.3125	1.0000	4.000	FUL-30201	FUL-30039
5/16	0.3125	1.6250	4.000	FUL-32255	FUL-30040
5/16	0.3125	1.5000	6.000	FUL-32552	FUL-30041
21/64	0.3750	0.8750	2.500	FUL-32920	FUL-30624
11/32	0.3750	0.8750	2.500	FUL-32016	FUL-30625
23/64	0.3750	1.0000	2.500	FUL-32921	FUL-30626
3/8	0.3750	0.6250	2.500	FUL-32150	FUL-32833
3/8	0.3750	1.0000	2.500	FUL-32017	FUL-30627



Series 3200R



- General purpose, premium quality solid carbide end mill
- Radius End, 4 Flute, 30° Helix
- Center Cutting, Right Hand Spiral, Right Hand Cut



4SE Corner Radius - Uncoated

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.020R Part Number	.030R Part Number	.045R Part Number	.060R Part Number	.090R Part Number	.125R Part Number
1/8"	0.1250	0.5000	1.5000	FUL-33700-R	FUL-33709-R					
3/16"	0.1875	0.6250	2.0000	FUL-33701-R	FUL-33710-R	FUL-33718-R				
1/4"	0.2500	0.7500	2.5000	FUL-33702-R	FUL-33711-R	FUL-33719-R	FUL-33726-R			
5/16"	0.3125	0.8750	2.5000	FUL-33703-R	FUL-33712-R	FUL-33720-R	FUL-33727-R			
3/8"	0.3750	1.0000	2.5000	FUL-33704-R	FUL-33713-R	FUL-33721-R	FUL-33728-R	FUL-33733-R		
1/2"	0.5000	1.0000	3.0000	FUL-33705-R	FUL-33714-R	FUL-33722-R	FUL-33729-R	FUL-33734-R	FUL-33738-R	FUL-33742-R
5/8"	0.6250	1.5000	3.5000	FUL-33706-R	FUL-33715-R	FUL-33723-R	FUL-33730-R	FUL-33735-R	FUL-33739-R	FUL-33802-R
3/4"	0.7500	1.5000	4.0000	FUL-33707-R	FUL-33716-R	FUL-33724-R	FUL-33731-R	FUL-33736-R	FUL-33740-R	FUL-33743-R
1"	1.0000	1.5000	4.0000	FUL-33708-R	FUL-33717-R	FUL-33725-R	FUL-33732-R	FUL-33737-R	FUL-33741-R	FUL-33744-R



4SE Corner Radius - TiAlN Coated

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.020R Part Number	.030R Part Number	.045R Part Number	.060R Part Number	.090R Part Number	.125R Part Number
1/8"	0.1250	0.5000	1.5000	FUL-33804	FUL-33813-R					
3/16"	0.1875	0.6250	2.0000	FUL-33805	FUL-33814-R	FUL-33822-R				
1/4"	0.2500	0.7500	2.5000	FUL-33806	FUL-33815-R	FUL-33790-R	FUL-33827-R			
5/16"	0.3125	0.8750	2.5000	FUL-33807	FUL-33816-R	FUL-33823-R	FUL-33828-R			
3/8"	0.3750	1.0000	2.5000	FUL-33808	FUL-33817-R	FUL-33791-R	FUL-33829-R	FUL-33792-R		
1/2"	0.5000	1.0000	3.0000	FUL-33809	FUL-33818-R	FUL-33793-R	FUL-33830-R	FUL-33794-R	FUL-33837-R	FUL-33841
5/8"	0.6250	1.5000	3.5000	FUL-33810	FUL-33819-R	FUL-33824-R	FUL-33831-R	FUL-33834-R	FUL-33838	FUL-33842
3/4"	0.7500	1.5000	4.0000	FUL-33811	FUL-33820-R	FUL-33825-R	FUL-33832-R	FUL-33835-R	FUL-33839	FUL-33843
1"	1.0000	1.5000	4.0000	FUL-33812	FUL-33821-R	FUL-33826-R	FUL-33833-R	FUL-33836-R	FUL-33840	FUL-33844

FULLERTON CARBIDE END MILLS

Series 3215

- General purpose, premium quality solid carbide end mill
- Square End, 2 Flute, 30° Helix
- Center Cutting, Right Hand Spiral, Right Hand Cut



2SE Square End

Cutter Dia	Shank Dia	LOC	OAL	Part Number	TiAlN Part Number
1/64	0.1250	0.0469	1.5000	FUL-32058	FUL-30642
1/32	0.1250	0.0625	1.5000	FUL-32113	FUL-32839
1/32	0.1250	0.0938	1.5000	FUL-32059	FUL-30643
3/64	0.1250	0.1250	1.5000	FUL-32172	FUL-32840
3/64	0.1250	0.1875	1.5000	FUL-32060	FUL-30644
1/16	0.1250	0.1250	1.5000	FUL-32173	FUL-32841
1/16	0.1250	0.2500	1.5000	FUL-32061	FUL-30645
5/64	0.1250	0.1250	1.5000	FUL-32174	FUL-32842
5/64	0.1250	0.2500	1.5000	FUL-32062	FUL-30646
3/32	0.1250	0.1875	1.5000	FUL-32175	FUL-32843
3/32	0.1250	0.3750	1.5000	FUL-32063	FUL-30647
7/64	0.1250	0.1875	1.5000	FUL-32176	FUL-32844
7/64	0.1250	0.5000	1.5000	FUL-32064	FUL-30648
1/8	0.1250	0.2500	1.5000	FUL-32177	FUL-32845
1/8	0.1250	0.5000	1.5000	FUL-32065	FUL-30649
1/8	0.1250	0.7500	3.0000	FUL-30233	FUL-30108
1/8	0.1250	1.0000	3.0000	FUL-32292	FUL-30109
9/64	0.1875	0.5625	2.0000	FUL-32066	FUL-30650
5/32	0.1875	0.3750	2.0000	FUL-32178	FUL-32846
5/32	0.1875	0.5625	2.0000	FUL-32067	FUL-30651
11/64	0.1875	0.5625	2.0000	FUL-32654	FUL-30652
3/16	0.1875	0.3750	2.0000	FUL-32179	FUL-32847
3/16	0.1875	0.6250	2.0000	FUL-32068	FUL-30653
3/16	0.1875	1.2500	3.0000	FUL-32293	FUL-30110
3/16	0.1875	1.0000	4.0000	FUL-30242	FUL-30111
13/64	0.2500	0.6250	2.5000	FUL-32655	FUL-30654
7/32	0.2500	0.6250	2.5000	FUL-32069	FUL-30655
15/64	0.2500	0.7500	2.5000	FUL-32656	FUL-30656
1/4	0.2500	0.5000	2.0000	FUL-32180	FUL-32848
1/4	0.2500	0.7500	2.5000	FUL-32070	FUL-30657
1/4	0.2500	1.1250	3.0000	FUL-32562	FUL-30112
1/4	0.2500	1.0000	4.0000	FUL-30210	FUL-30113
1/4	0.2500	1.5000	4.0000	FUL-32294	FUL-30114
1/4	0.2500	1.5000	6.0000	FUL-32563	FUL-30115



2SE Square End (cont.)

Cutter Dia	Shank Dia	LOC	OAL	Part Number	TiAlN Part Number
17/64	0.3125	0.8750	2.5000	FUL-32940	FUL-30658
9/32	0.3125	0.8750	2.5000	FUL-32071	FUL-30659
19/64	0.3125	0.8750	2.5000	FUL-32941	FUL-30660
5/16	0.3125	0.5000	2.5000	FUL-32181	FUL-32849
5/16	0.3125	0.8750	2.5000	FUL-32072	FUL-30661
5/16	0.3125	1.1250	3.0000	FUL-32576	FUL-30116
5/16	0.3125	1.0000	4.0000	FUL-30211	FUL-30117
5/16	0.3125	1.6250	4.0000	FUL-32295	FUL-30118
5/16	0.3125	1.5000	6.0000	FUL-32564	FUL-30119
21/64	0.3750	0.8750	2.5000	FUL-32942	FUL-30662
11/32	0.3750	0.8750	2.5000	FUL-32073	FUL-30663
23/64	0.3750	1.0000	2.5000	FUL-32943	FUL-30664
3/8	0.3750	0.6250	2.5000	FUL-32182	FUL-32850
3/8	0.3750	1.0000	2.5000	FUL-32074	FUL-30665
3/8	0.3750	1.1250	3.0000	FUL-32580	FUL-30120
3/8	0.3750	1.0000	4.0000	FUL-30212	FUL-30121
3/8	0.3750	1.5000	4.0000	FUL-30222	FUL-30122
3/8	0.3750	2.0000	4.0000	FUL-32296	FUL-30123
3/8	0.3750	1.5000	6.0000	FUL-32565	FUL-30124
3/8	0.3750	3.0000	6.0000	FUL-32297	FUL-30125
25/64	0.4375	1.0000	2.7500	FUL-32944	FUL-30666
13/32	0.4375	1.0000	2.7500	FUL-32901	FUL-30667
27/64	0.4375	1.0000	2.7500	FUL-32945	FUL-30668
7/16	0.4375	0.7500	2.7500	FUL-32183	FUL-32851
7/16	0.4375	1.0000	2.7500	FUL-32075	FUL-30669
7/16	0.4375	1.0000	4.0000	FUL-30213	FUL-30126
7/16	0.4375	2.0000	4.0000	FUL-32298	FUL-30127
7/16	0.4375	1.5000	6.0000	FUL-32566	FUL-30128
7/16	0.4375	3.0000	6.0000	FUL-32299	FUL-30129
29/64	0.5000	1.0000	3.0000	FUL-32946	FUL-30670
15/32	0.5000	1.0000	3.0000	FUL-32911	FUL-30671
31/64	0.5000	1.0000	3.0000	FUL-32947	FUL-30672

Series 3215



- General purpose, premium quality solid carbide end mill
- Square End, 2 Flute, 30° Helix
- Center Cutting, Right Hand Spiral, Right Hand Cut

2SE Square End (cont.)



Cutter Dia	Shank Dia	LOC	OAL	Part Number	TiAlN Part Number
1/2	0.5000	0.7500	3.0000	FUL-32184	FUL-32852
1/2	0.5000	1.0000	3.0000	FUL-32076	FUL-30673
1/2	0.5000	1.0000	4.0000	FUL-30214	FUL-30130
1/2	0.5000	1.5000	4.0000	FUL-32584	FUL-30131
1/2	0.5000	2.0000	4.0000	FUL-32300	FUL-30132
1/2	0.5000	1.5000	6.0000	FUL-32567	FUL-30133
1/2	0.5000	3.0000	6.0000	FUL-32301	FUL-30134
9/16	0.5625	1.2500	3.5000	FUL-32077	FUL-30674
5/8	0.6250	1.0000	3.5000	FUL-32185	FUL-32853
5/8	0.6250	1.5000	3.5000	FUL-32078	FUL-30675
5/8	0.6250	2.5000	5.0000	FUL-32302	FUL-30135
5/8	0.6250	1.5000	6.0000	FUL-30225	FUL-30136
5/8	0.6250	3.0000	6.0000	FUL-32303	FUL-30137
11/16	0.7500	1.5000	4.0000	FUL-32079	FUL-30676
3/4	0.7500	1.0000	4.0000	FUL-32186	FUL-32854
3/4	0.7500	1.5000	4.0000	FUL-32080	FUL-30677
3/4	0.7500	2.5000	5.0000	FUL-32304	FUL-30138
3/4	0.7500	1.5000	6.0000	FUL-30227	FUL-30139
3/4	0.7500	3.0000	6.0000	FUL-32305	FUL-30140
7/8	0.8750	1.5000	4.0000	FUL-32081	FUL-30678
1	1.0000	1.0000	4.0000	FUL-32187	FUL-32855
1	1.0000	1.5000	4.0000	FUL-32082	FUL-30679
1	1.0000	2.0000	4.5000	FUL-32306	FUL-30141
1	1.0000	2.5000	5.0000	FUL-32307	FUL-30142
1	1.0000	3.0000	6.0000	FUL-32308	FUL-30143

FULLERTON CARBIDE END MILLS

Series 3215R

- General purpose, premium quality solid carbide end mill
- Radius End, 2 Flute, 30° Helix
- Center Cutting, Right Hand Spiral, Right Hand Cut



2SE Corner Radius - Uncoated

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.020R Part Number	.030R Part Number	.045R Part Number	.060R Part Number	.090R Part Number	.125R Part Number
1/8"	0.1250	0.5000	1.5000	FUL-33745	FUL-33754					
3/16"	0.1875	0.6250	2.0000	FUL-33746	FUL-33755	FUL-33763				
1/4"	0.2500	0.7500	2.5000	FUL-33747	FUL-33756	FUL-33764	FUL-33771			
5/16"	0.3125	0.8750	2.5000	FUL-33748	FUL-33757	FUL-33765	FUL-33772			
3/8"	0.3750	1.0000	2.5000	FUL-33749	FUL-33758	FUL-33766	FUL-33773	FUL-33778		
1/2"	0.5000	1.0000	3.0000	FUL-33750	FUL-33759	FUL-33767	FUL-33774	FUL-33779	FUL-33783	FUL-33787
5/8"	0.6250	1.5000	3.5000	FUL-33751	FUL-33760	FUL-33768	FUL-33775	FUL-33780	FUL-33784	FUL-33803
3/4"	0.7500	1.5000	4.0000	FUL-33752	FUL-33761	FUL-33769	FUL-33776	FUL-33781	FUL-33785	FUL-33788
1"	1.0000	1.5000	4.0000	FUL-33753	FUL-33762	FUL-33770	FUL-33777	FUL-33782	FUL-33786	FUL-33789



2SE Corner Radius - TiAlN Coated

Cutter Dia	Shank Dia	LOC	OAL	.015R Part Number	.020R Part Number	.030R Part Number	.045R Part Number	.060R Part Number	.090R Part Number	.125R Part Number
1/8"	0.1250	0.5000	1.5000	FUL-33845	FUL-33854					
3/16"	0.1875	0.6250	2.0000	FUL-33846	FUL-33855	FUL-33863				
1/4"	0.2500	0.7500	2.5000	FUL-33847	FUL-33856	FUL-33864	FUL-33871			
5/16"	0.3125	0.8750	2.5000	FUL-33848	FUL-33857	FUL-33865	FUL-33872			
3/8"	0.3750	1.0000	2.5000	FUL-33849	FUL-33858	FUL-33866	FUL-33873	FUL-33878		
1/2"	0.5000	1.0000	3.0000	FUL-33850	FUL-33859	FUL-33867	FUL-33874	FUL-33879	FUL-33883	FUL-33887
5/8"	0.6250	1.5000	3.5000	FUL-33851	FUL-33860	FUL-33868	FUL-33875	FUL-33880	FUL-33884	FUL-33888
3/4"	0.7500	1.5000	4.0000	FUL-33852	FUL-33861	FUL-33869	FUL-33876	FUL-33881	FUL-33885	FUL-33889
1"	1.0000	1.5000	4.0000	FUL-33853	FUL-33862	FUL-33870	FUL-33877	FUL-33882	FUL-33886	FUL-33890

Series 3975



- Designed for high volume material removal
- 30° RH Spiral
- Designed to cut mild steels, steel alloys, stainless steel and hardened steel.

Hogger End Mills



Cutting Dia.	Cutting Length	Shank Dia.	OAL	Flutes	Corner Radius	Part Number
1/4"	3/4"	1/4"	2-1/2"	3	.0310"	FUL-39600
5/16"	13/16"	5/16"	2-1/2"	3	.0390"	FUL-39601
3/8"	1"	3/8"	2-1/2"	3	.0470"	FUL-39602
1/2"	1"	1/2"	3"	4	.0625"	FUL-39604
5/8"	1-1/2"	5/8"	3-1/2"	4	.0781"	FUL-39605
3/4"	1-1/2"	3/4"	4"	4	.0938"	FUL-39606

COBALT END MILLS

Multiple Flute, Single Ended

· Used for general purpose milling in most materials of medium and tough alloy materials such as stainless steel, nickel base alloy, brass, iron, etc.



Part Number	Size	Shank	LOC	OAL	Flutes
CC-1204	1/8	3/8	3/8	2-5/16	4F
CC-1204-AITiN	1/8	3/8	3/8	2-5/16	4F
CC-1204-L	1/8	3/8	3/4	2-5/8	4F
CC-1204-L-AITiN	1/8	3/8	3/4	2-5/8	4F
CC-1205	5/32	3/8	7/16	2-5/16	4F
CC-1205-AITiN	5/32	3/8	7/16	2-5/16	4F
CC-1205-L	5/32	3/8	3/4	2-5/8	4F
CC-1205-L-AITiN	5/32	3/8	3/4	2-5/8	4F
CC-1206	3/16	3/8	1/2	2-3/8	4F
CC-1206-AITiN	3/16	3/8	1/2	2-3/8	4F
CC-1206-L	3/16	3/8	3/4	2-5/8	4F
CC-1206-L-AITiN	3/16	3/8	3/4	2-5/8	4F
CC-1207	7/32	3/8	1/2	2-3/8	4F
CC-1207-AITiN	7/32	3/8	1/2	2-3/8	4F
CC-1207-L	7/32	3/8	1-1/4	3-1/8	4F
CC-1207-L-AITiN	7/32	3/8	1-1/4	3-1/8	4F
CC-1208	1/4	3/8	5/8	2-7/16	4F
CC-1208-AITiN	1/4	3/8	5/8	2-7/16	4F
CC-1208-L	1/4	3/8	1-1/4	3-1/16	4F
CC-1208-L-AITiN	1/4	3/8	1-1/4	3-1/16	4F
CC-1209	9/32	3/8	11/16	2-1/2	4F
CC-1209-AITiN	9/32	3/8	11/16	2-1/2	4F
CC-1209-L	9/32	3/8	1-3/8	3-1/8	4F
CC-1209-L-AITiN	9/32	3/8	1-3/8	3-1/8	4F
CC-1210	5/16	3/8	3/4	2-1/2	4F
CC-1210-AITiN	5/16	3/8	3/4	2-1/2	4F
CC-1210-L	5/16	3/8	1-3/8	3-1/8	4F
CC-1210-L-AITiN	5/16	3/8	1-3/8	3-1/8	4F



Part Number	Size	Shank	LOC	OAL	Flutes
CC-1211	11/32	3/8	3/4	2-1/2	4F
CC-1211-AITiN	11/32	3/8	3/4	2-1/2	4F
CC-1211-L	11/32	3/8	1-1/2	3-1/4	4F
CC-1211-L-AITiN	11/32	3/8	1-1/2	3-1/4	4F
CC-1212	3/8	3/8	3/4	2-1/2	4F
CC-1212-AITiN	3/8	3/8	3/4	2-1/2	4F
CC-1212-L	3/8	3/8	1-1/2	3-1/4	4F
CC-1212-L-AITiN	3/8	3/8	1-1/2	3-1/4	4F
CC-1213	13/32	3/8	1	2-11/16	4F
CC-1213-AITiN	13/32	3/8	1	2-11/16	4F
CC-1214	7/16	3/8	1	2-11/16	4F
CC-1214-AITiN	7/16	3/8	1	2-11/16	4F
CC-1614-L	7/16	1/2	1-3/4	3-3/4	4F
CC-1614-L-AITiN	7/16	1/2	1-3/4	3-3/4	4F
CC-1615	15/32	1/2	1-1/4	3-1/4	4F
CC-1615-AITiN	15/32	1/2	1-1/4	3-1/4	4F
CC-1616	1/2	1/2	1-1/4	3-1/4	4F
CC-1616-AITiN	1/2	1/2	1-1/4	3-1/4	4F
CC-1616-L	1/2	1/2	2	4	4F
CC-1616-L-AITiN	1/2	1/2	2	4	4F
CC-1617	17/32	1/2	1-3/8	3-3/8	4F
CC-1617-AITiN	17/32	1/2	1-3/8	3-3/8	4F
CC-1618	9/16	1/2	1-3/8	3-3/8	4F
CC-1618-AITiN	9/16	1/2	1-3/8	3-3/8	4F
CC-1618-L	9/16	1/2	2-1/2	4-1/2	4F
CC-1618-L-AITiN	9/16	1/2	2-1/2	4-1/2	4F



Multiple Flute, Single Ended

· Used for general purpose milling in most materials of medium and tough alloy materials such as stainless steel, nickel base alloy, brass, iron, etc.

Part Number	Size	Shank	LOC	OAL	Flutes
CC-1619	19/32	1/2	1-3/8	3-3/8	4F
CC-1619-AITiN	19/32	1/2	1-3/8	3-3/8	4F
CC-1620	5/8	1/2	1-3/8	3-3/8	4F
CC-1620-AITiN	5/8	1/2	1-3/8	3-3/8	4F
CC-2020	5/8	5/8	1-5/8	3-3/4	4F
CC-2020-AITiN	5/8	5/8	1-5/8	3-3/4	4F
CC-2020-L	5/8	5/8	2-1/2	4-5/8	4F
CC-2020-L-AITiN	5/8	5/8	2-1/2	4-5/8	4F
CC-2022	11/16	5/8	1-5/8	3-3/4	4F
CC-2022-AITiN	11/16	5/8	1-5/8	3-3/4	4F
CC-2024	3/4	5/8	1-5/8	3-3/4	4F
CC-2024-AITiN	3/4	5/8	1-5/8	3-3/4	4F
CC-2424	3/4	3/4	1-5/8	3-3/4	4F
CC-2424-AITiN	3/4	3/4	1-5/8	3-3/4	4F
CC-2424-L	3/4	3/4	3	5-1/4	4F
CC-2424-L-AITiN	3/4	3/4	3	5-1/4	4F
CC-2426	13/16	3/4	1-7/8	4-1/8	4F
CC-2426-AITiN	13/16	3/4	1-7/8	4-1/8	4F
CC-2428	7/8	3/4	1-7/8	4-1/8	4F
CC-2428-AITiN	7/8	3/4	1-7/8	4-1/8	4F
CC-2430	15/16	3/4	1-7/8	4-1/8	4F
CC-2430-AITiN	15/16	3/4	1-7/8	4-1/8	4F
CC-2432	1	3/4	1-7/8	4-1/8	4F
CC-2432-AITiN	1	3/4	1-7/8	4-1/8	4F
CC-2434	1-1/16	3/4	1-5/8	3-7/8	6F
CC-2434-AITiN	1-1/16	3/4	1-5/8	3-7/8	6F
CC-2436	1-1/8	3/4	1-5/8	3-7/8	6F
CC-2436-AITiN	1-1/8	3/4	1-5/8	3-7/8	6F



Part Number	Size	Shank	LOC	OAL	Flutes
CC-2438	1-3/16	3/4	1-5/8	3-7/8	6F
CC-2438-AITiN	1-3/16	3/4	1-5/8	3-7/8	6F
CC-2440	1-1/4	3/4	1-5/8	3-7/8	6F
CC-2440-AITiN	1-1/4	3/4	1-5/8	3-7/8	6F
CC-2828	7/8	7/8	1-7/8	4-1/8	4F
CC-2828-AITiN	7/8	7/8	1-7/8	4-1/8	4F
CC-2828-L	7/8	7/8	3-1/2	5-3/4	4F
CC-2828-L-AITiN	7/8	7/8	3-1/2	5-3/4	4F
CC-2830	15/16	7/8	1-7/8	4-1/8	4F
CC-2830-AITiN	15/16	7/8	1-7/8	4-1/8	4F
CC-3232	1	1	2	4-1/2	4F
CC-3232-AITiN	1	1	2	4-1/2	4F
CC-3232-L	1	1	4	6-1/2	4F
CC-3232-L-AITiN	1	1	4	6-1/2	4F
CC-3236	1-1/8	1	2	4-1/2	4F
CC-3236-AITiN	1-1/8	1	2	4-1/2	4F
CC-3240	1-1/4	1	2	4-1/2	6F
CC-3240-AITiN	1-1/4	1	2	4-1/2	6F
CC-4040	1-1/4	1-1/4	2	4-1/2	4F
CC-4040-AITiN	1-1/4	1-1/4	2	4-1/2	4F
CC-4040-L	1-1/4	1-1/4	4	6-1/2	4F
CC-4040-L-AITiN	1-1/4	1-1/4	4	6-1/2	4F
CC-4048	1-1/2	1-1/4	2	4-1/2	4F
CC-4048-AITiN	1-1/2	1-1/4	2	4-1/2	4F
CC-4048-L	1-1/2	1-1/4	4	6-1/2	4F
CC-4048-L-AITiN	1-1/2	1-1/4	4	6-1/2	4F

COBALT ROUGHING MILLS

Coarse Pitch Rougher, Multiple Flute

- Due to the sinusoidal form on cutting edge, small chips are produced which allow faster feed rates than conventional end mills.
- A rough finish is produced which will require a finishing pass.
- Used in difficult and abrasive materials and tough alloy materials, such as stainless steel, nickel base alloy, brass, iron etc.



Size	Shank	LOC	OAL	Flutes	Part Number
3/16	3/8	1/2	2-3/8	4	CRP-1206
1/4	3/8	5/8	2-7/16	4	CRP-1208
1/4	3/8	1-1/8	2-15/16	4	CRP-1208-L
1/4	3/8	1-1/4	3-1/16	4	CRP-1208-LL
5/16	3/8	3/4	2-1/2	4	CRP-1210
5/16	3/8	1-3/8	3-1/8	4	CRP-1210-L
3/8	3/8	3/4	2-1/2	4	CRP-1212
3/8	3/8	1-1/2	3-1/4	4	CRP-1212-L
7/16	3/8	1	2-11/16	4	CRP-1214
1/2	1/2	1-1/4	3-1/4	4	CRP-1616
1/2	1/2	2	4	4	CRP-1616-L
1/2	1/2	1-5/8	3-5/8	4	CRP-1616-M
1/2	1/2	1	3	4	CRPS-1616
9/16	1/2	1-3/8	3-3/8	4	CRP-1618
5/8	5/8	1-5/8	3-3/4	4	CRP-2020
5/8	5/8	2-1/2	4-5/8	4	CRP-2020-L
5/8	5/8	3/4	2-7/8	4	CRPS-2020
11/16	5/8	1-5/8	3-3/4	4	CRP-2022
3/4	5/8	1-5/8	3-7/8	4	CRP-2024
3/4	3/4	1-5/8	3-7/8	4	CRP-2424
3/4	3/4	3	5-1/4	4	CRP-2424-L
3/4	3/4	2-1/2	4-3/4	4	CRP-2424-M
3/4	3/4	3/4	3	4	CRPS-2424
13/16	3/4	1-7/8	4-1/8	4	CRP-2426
7/8	3/4	1-7/8	4-1/8	5	CRP-2428
7/8	3/4	3-1/2	5-3/4	5	CRP-2428-L
7/8	7/8	1-7/8	4-1/8	5	CRP-2828
7/8	7/8	3-1/2	5-3/4	5	CRP-2828-L



Size	Shank	LOC	OAL	Flutes	Part Number
1	3/4	3/4	3	5	CRPS-2432
1	3/4	1-1/2	3-3/4	5	CRP-2432
1	3/4	2	4-1/4	5	CRP-2432-M
1	1	2	4-1/2	5	CRP-3232
1	1	6	8-1/2	5	CRP-3232-E
1	1	4	6-1/2	5	CRP-3232-L
1	1	3	5-1/2	5	CRP-3232-M
1	1	1-5/8	4-1/8	5	CRPS-3232
1-1/8	1	2	4-1/2	6	CRP-3236
1-1/4	3/4	1-1/2	3-3/4	6	CRP-2440
1-1/4	3/4	2	4-1/2	6	CRP-2440-M
1-1/4	1-1/4	2	4-1/2	6	CRP-4040
1-1/4	1-1/4	6	8-1/2	6	CRP-4040-E
1-1/4	1-1/4	4	6-1/2	6	CRP-4040-L
1-1/4	1-1/4	3	5-1/2	6	CRP-4040-M
1-1/4	3/4	3/4	3	6	CRPS-2440
1-1/2	3/4	1-1/2	3-3/4	6	CRP-2448
1-1/2	1-1/4	2	4-1/2	6	CRP-4048
1-1/2	1-1/4	5	7-1/2	6	CRP-4048-E
1-1/2	1-1/4	8	10-1/2	6	CRP-4048-EE
1-1/2	1-1/4	4	6-1/2	6	CRP-4048-L
1-1/2	1-1/4	3	5-1/2	6	CRP-4048-M
1-1/2	3/4	3/4	3	6	CRPS-2448
1-3/4	1-1/4	2-1/2	5-1/4	6	CRP-4056
1-3/4	1-1/4	4	6-1/2	6	CRP-4056-L
2	1-1/4	2	4-1/2	8	CRP-4064
2	2	6	9-3/4	8	CRP-6464-L
2	2	4	7-3/4	8	CRP-6464-M
2	3/4	3/4	3	8	CRPS-2464

COBALT ROUGHING MILLS



Fine Pitch Rougher, Multiple Flute

- Due to the finer sinusoidal form on cutting edge, finer chips are produced than coarse pitch, which are easier flushed away and reduce re-cutting and packing.
- A rough finish is produced which may require a finishing pass.
- These will not plunge cut.

Size	Shank	LOC	OAL	Flutes	Part Number
3/16	3/8	1/2	2-3/8	4	CFP-1206
1/4	3/8	5/8	2-7/16	4	CFP-1208
5/16	3/8	3/4	2-1/2	4	CFP-1210
5/16	3/8	1-3/8	3-1/8	4	CFP-1210-L
3/8	3/8	3/4	2-1/2	4	CFP-1212
7/16	3/8	1	2-11/16	4	CFP-1214
1/2	1/2	5/8	2-5/8	4	CFPS-1616-2
1/2	1/2	1	3	4	CFPS-1616
1/2	1/2	1-1/4	3-1/4	4	CFP-1616
1/2	1/2	1-5/8	3-5/8	4	CFP-1616-M
1/2	1/2	2	4	4	CFP-1616-L
1/2	1/2	2-1/2	4-1/2	4	CFP-1616-LL
1/2	1/2	3	5	4	CFP-1616-E
9/16	1/2	1-3/8	3-3/8	4	CFP-1618
5/8	5/8	3/4	2-7/8	4	CFPS-2020
5/8	5/8	1-1/4	3-3/4	4	CFP-2020-2
5/8	5/8	1-5/8	3-3/4	4	CFP-2020
5/8	5/8	2-1/8	4-1/4	4	CFP-2020-M
5/8	5/8	2-1/2	4-5/8	4	CFP-2020-L
5/8	5/8	3-1/8	5-1/4	4	CFP-2020-E
11/16	5/8	1-5/8	3-3/4	4	CFP-2022
3/4	3/4	3/4	3	4	CFPS-2424
3/4	3/4	1-1/4	3-1/2	4	CFP-2424-2
3/4	3/4	1-5/8	3-7/8	4	CFP-2424
3/4	3/4	2-1/2	4-3/4	4	CFP-2424-M
3/4	3/4	3	5-1/4	4	CFP-2424-L
3/4	3/4	4-1/8	6-3/8	4	CFP-2424-E



Size	Shank	LOC	OAL	Flutes	Part Number
3/4	5/8	1-5/8	3-7/8	4	CFP-2024
13/16	3/4	1-7/8	4-1/8	5	CFP-2426
7/8	3/4	1-1/8	3-3/8	5	CFPS-2428
7/8	3/4	1-7/8	4-1/8	5	CFP-2428
7/8	3/4	3-1/2	5-3/4	5	CFP-2428-L
7/8	3/4	1-7/8	4-1/8	5	CFP-2828
7/8	3/4	3-1/2	5-3/4	5	CFP-2828-L
1	3/4	1-1/2	3-3/4	5	CFP-2432
1	3/4	1-1/8	3-3/8	5	CFPS-2432
1	3/4	2	4-1/4	5	CFP-2432-M
1	3/4	4	6-1/4	5	CFP-2432-L
1	1	1-1/8	3-5/8	5	CFPS-3232-2
1	1	2	4-1/2	5	CFP-3232
1	1	1-5/8	4-1/8	5	CFPS-3232
1	1	3	5-1/2	5	CFP-3232-M
1	1	4	6-1/2	5	CFP-3232-L
1	1	6	8-1/2	5	CFP-3232-E
1-1/8	3/4	1-1/8	3-3/8	6	CFPS-2436
1-1/8	3/4	2	4-1/4	6	CFP-2436
1-1/8	1	2	4-1/2	6	CFP-3236
1-1/8	1	3-1/2	6	6	CFP-3236-L
1-1/4	3/4	1-1/8	3-3/8	6	CFPS-2440
1-1/4	3/4	2	4-1/2	6	CFP-2440-M
1-1/4	1-1/4	2	4-1/2	6	CFP-4040
1-1/4	1-1/4	3	5-1/2	6	CFP-4040-M
1-1/4	1-1/4	4	6-1/2	6	CFP-4040-L
1-1/4	1-1/4	6	8-1/2	6	CFP-4040-E

SPOTTING DRILLS



YG1 - NC Spotting Cobalt 8% HSS NC-Spotting Drills 90°

Dia.	Flute Length	OAL	Part Number
1/8	0.472	1.93	YG1-0081L
3/16	0.590	2.44	YG1-0121L
1/4	0.669	2.76	YG1-0161L
5/16	0.984	3.11	YG1-0201L
3/8	0.827	3.50	YG1-0241L
1/2	0.984	4.02	YG1-0321L
5/8	1.575	4.53	YG1-0401L
3/4	1.968	5.16	YG1-0481L
1	1.968	6.14	YG1-0641L



YG1 - NC Spotting Cobalt 8% HSS NC-Spotting Drills 120°

Dia.	Flute Length	OAL	Part Number
1/8	0.472	1.93	YG1-2081L
3/16	0.590	2.44	YG1-2121L
1/4	0.669	2.76	YG1-2161L
5/16	0.984	3.11	YG1-2201L
3/8	0.827	3.50	YG1-2241L
1/2	0.984	4.02	YG1-2321L
5/8	1.575	4.53	YG1-2401L
3/4	1.968	5.16	YG1-2481L
1	1.968	6.14	YG1-2641L



Everede Spot Drill - Body

Description	EDP
3/8 90° Spot Drill Holder	EVE-20378
5/8 90° Spot Drill Body	EVE-20362
5/8 142° Spot Drill Body	EVE-20427

Everede Spot Drill - Inserts

Part Number	EDP
90° Spot Drill Insert	EVE-20057
142° Spot Drill Insert	EVE-20063

Everede Spot Drill - Kits

Part Number	EDP
3/8 90° Spot Drill Kit	EVE-20381
5/8 90° Spot Drill Kit	EVE-20365
5/8 142° Spot Drill Kit	EVE-20408



Imco - D23 Solid Carbide - 2 Helical Flutes

Cutter Dia. Inch (d1)	Dec Equiv	Flute Length (L2)	OAL (L1)	90° Part Number	120° Part Number
1/8	.1250	9/16	1-1/2	IMC - 40201	IMC - 40789
3/16	.1875	3/4	2	IMC - 40204	IMC - 40790
1/4	.2500	1	2-1/2	IMC - 40207	IMC - 40791
1/4	.2500	1	6	IMC - 40210	IMC - 40792
5/16	.3125	1	2-1/2	IMC - 40213	IMC - 40793
5/16	.3125	1	6	IMC - 40216	IMC - 40794
3/8	.3750	1	2-1/2	IMC - 40219	IMC - 40795
3/8	.3750	1	6	IMC - 40222	IMC - 40796
1/2	.5000	1-1/2	3	IMC - 40225	IMC - 40797
1/2	.5000	1-1/2	6	IMC - 40228	IMC - 40798
5/8	.6250	1-1/2	6	IMC - 40231	IMC - 40799
3/4	.7500	1-1/2	6	IMC - 40234	IMC - 40800

Carbide Drill Mills

Micrograin Carbide · 30° Right Hand Helix
 Drill Mill performs drilling, spotting, countersinking, chamfering, slotting, side milling, profile milling, "V" grooving and other drilling & milling operations with the same tool in vertical machine applications.

Internal Tool 2 Flute Drill Mill - AlTiN Coated



Cutter Dia	Shank Dia	LOC	OAL	60°	82°	90°	120°
1/8"	1/8"	5/8"	2"	INT-492015-C	INT-492010-C	INT-492005-C	INT-492000-C
3/16"	3/16"	3/4"	2-1/2"	INT-492065-C	INT-492060-C	INT-492055-C	INT-492050-C
1/4"	1/4"	1"	3"	INT-492165-C	INT-492160-C	INT-492155-C	INT-492150-C
5/16"	5/16"	1"	3"	INT-492265-C	INT-492260-C	INT-492255-C	INT-492250-C
3/8"	3/8"	1"	3"	INT-492365-C	INT-492360-C	INT-492355-C	INT-492350-C
7/16"	7/16"	1"	3"	INT-492465-C	INT-492460-C	INT-492455-C	INT-492450-C
1/2"	1/2"	1"	3"	INT-492565-C	INT-492560-C	INT-492555-C	INT-492550-C

Morse - 2 Flute 90° Point Angle



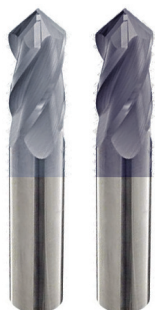
Dia	Shank Dia	LOC	OAL	TiCN Part Number	TiAlN Part Number
1/8	1/8	1/2	1-1/2	MOR-95320	MOR-95340
3/16	3/16	5/8	2	MOR-95322	MOR-95342
1/4	1/4	3/4	2-1/2	MOR-95324	MOR-95344
5/16	5/16	13/16	2-1/2	MOR-95327	MOR-95347
3/8	3/8	1	2-1/2	MOR-95328	MOR-95348
7/16	7/16	1	2-1/2	MOR-95330	MOR-95350
1/2	1/2	1	3	MOR-95331	MOR-95351

Internal Tool 4 Flute Drill Mill - AlTiN Coated



Cutter Dia	Shank Dia	LOC	OAL	60°	82°	90°	120°
1/8"	1/8"	5/8"	2"	INT-491015-C	INT-491010-C	INT-491005-C	INT-491000-C
3/16"	3/16"	3/4"	2-1/2"	INT-491065-C	INT-491060-C	INT-491055-C	INT-491050-C
1/4"	1/4"	1"	3"	INT-491165-C	INT-491160-C	INT-491155-C	INT-491150-C
5/16"	5/16"	1"	3"	INT-491265-C	INT-491260-C	INT-491255-C	INT-491250-C
3/8"	3/8"	1"	3"	INT-491365-C	INT-491360-C	INT-491355-C	INT-491350-C
7/16"	7/16"	1"	3"	INT-491465-C	INT-491460-C	INT-491455-C	INT-491450-C
1/2"	1/2"	1"	3"	INT-491565-C	INT-491560-C	INT-491555-C	INT-491550-C

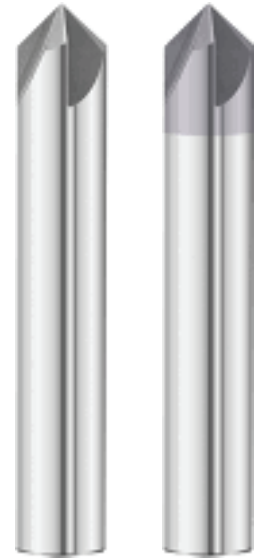
Morse - 4 Flute 90° Point Angle



Dia	Shank Dia	LOC	OAL	TiAlN Part Number
1/8	1/8	1/2	1-1/2	MOR-95372
3/16	3/16	5/8	2	MOR-95373
1/4	1/4	3/4	2-1/2	MOR-95374
3/8	3/8	1	2-1/2	MOR-95375
1/2	1/2	1	3	MOR-95376

90° Angle - Four Straight Flutes Solid Dura-Carb End Mill

Cutting Diameter	Cutting Length	Shank Diameter	Non-Cutting Tip Diameter	Overall Length	3750 Part Number	3750 TiAlN Part Number
1/8"	.0625"	1/8"	.020"	1-1/2"	FUL-36158	FUL-36159
3/16"	.0938"	3/16"	.020"	2"	FUL-36171	FUL-36172
1/4"	.1250"	1/4"	.025"	2-1/2"	FUL-36146	FUL-36088
3/8"	.1870"	3/8"	.030"	2-1/2"	FUL-36148	FUL-36090
1/2"	.2500"	1/2"	.035"	3"	FUL-36150	FUL-36092
3/4"	.3750"	3/4"	.045"	4"	FUL-36175	FUL-36176



90° Angle - Two Straight Flutes Solid Dura-Carb End Mill

Cutting Diameter	Cutting Length	Shank Diameter	Non-Cutting Tip Diameter	Overall Length	3762 Part Number	3762 TiAlN Part Number
1/8"	.0625"	1/8"	.020"	1-1/2"	FUL-36160	FUL-36161
3/16"	.0938"	3/16"	.020"	2"	FUL-36173	FUL-36174
1/4"	.1250"	1/4"	.025"	2-1/2"	FUL-36147	FUL-36089
3/8"	.1870"	3/8"	.030"	2-1/2"	FUL-36149	FUL-36091
1/2"	.2500"	1/2"	.035"	3"	FUL-36151	FUL-36093
3/4"	.3750"	3/4"	.045"	4"	FUL-36177	FUL-36178





Corner Rounding, 2 Flute, Double End

- Can provide uniform finish on corners.
- Radius is form relieved.
- Made from premium submicron grain carbide.



Radius	DIA	Shank	OAL	Part Number
0.010	0.047	1/8	1-1/2	BRMG-4010-S
0.010	0.105	1/8	1-1/2	BRMG-4010
0.015	0.047	1/8	1-1/2	BRMG-4015-S
0.015	0.095	1/8	1-1/2	BRMG-4015
0.020	0.047	1/8	1-1/2	BRMG-4020-S
0.020	0.085	1/8	1-1/2	BRMG-4020
0.025	0.075	1/8	1-1/2	BRMG-4025
0.031	0.047	1/8	1-1/2	BRMG-4031-S
0.031	0.063	1/8	1-1/2	BRMG-4031
0.035	0.055	1/8	1-1/2	BRMG-4035
0.039	0.047	1/8	1-1/2	BRMG-4039
0.047	0.047	3/16	2	BRMG-6047-S
0.047	0.094	3/16	2	BRMG-6047
0.050	0.088	3/16	2	BRMG-6050
0.055	0.078	3/16	2	BRMG-6055
0.062	0.047	3/16	2	BRMG-6062-S
0.062	0.064	3/16	2	BRMG-6062
0.072	0.106	1/4	2-1/2	BRMG-8072
0.078	0.047	1/4	2	BRMG-8078-S
0.078	0.094	1/4	2-1/2	BRMG-8078
0.093	0.064	1/4	2-1/2	BRMG-8093
0.094	0.047	1/4	2	BRMG-8094-S
0.100	0.050	1/4	2-1/2	BRMG-8100
0.109	0.095	5/16	2-1/2	BRMG-10109
0.118	0.077	5/16	2-1/2	BRMG-10118
0.125	0.063	5/16	2-1/2	BRMG-10125
0.140	0.095	3/8	2-1/2	BRMG-12140
0.156	0.063	3/8	2-1/2	BRMG-12156

COUNTERSINKS

HSS Single Flute

Size	Shank	OAL	60° Part Number	82° Part Number	90° Part Number	100° Part Number
1/8	1/8	1-1/4	CSINK-53186	CSINK-53188	CSINK-53189	CSINK-53180
3/16	3/16	1-3/8	CSINK-53176	CSINK-53178	CSINK-53179	CSINK-53170
1/4	1/4	1-1/2	CSINK-53146	CSINK-53148	CSINK-53149	CSINK-53140
3/8	1/4	1-3/4	CSINK-53386	CSINK-53388	CSINK-53389	CSINK-53380
1/2	1/4	2	CSINK-53126	CSINK-53128	CSINK-53129	CSINK-53120
5/8	3/8	2-1/4	CSINK-53586	CSINK-53588	CSINK-53589	CSINK-53580
3/4	1/2	2-5/8	CSINK-53346	CSINK-53348	CSINK-53349	CSINK-53340
1	1/2	2-3/4	CSINK-53106	CSINK-53108	CSINK-53109	CSINK-53100
1-1/4	1/2	3	CSINK-53246	CSINK-53248	CSINK-53249	CSINK-53240
1-1/2	3/4	3-1/4	CSINK-53226	CSINK-53228	CSINK-53229	CSINK-53220
1-3/4	3/4	3-1/2	CSINK-53446	CSINK-53448	CSINK-53449	CSINK-53440
2	3/4	3-3/4	CSINK-53206	CSINK-53208	CSINK-53209	CSINK-53200



HSS 3 Flute

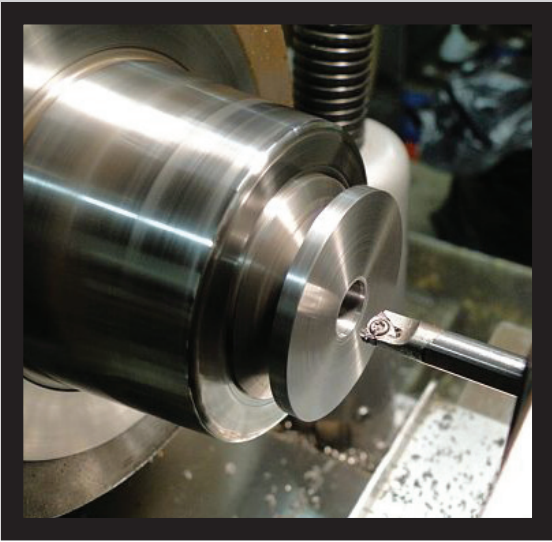
Size	Shank	OAL	60° Part Number	82° Part Number	90° Part Number	100° Part Number
1/4	1/4	1-1/2	CSINK-50146	CSINK-50148	CSINK-50149	CSINK-50140
3/8	1/4	1-3/4	CSINK-50386	CSINK-50388	CSINK-50389	CSINK-50380
1/2	1/4	2	CSINK-50126	CSINK-50128	CSINK-50129	CSINK-50120
5/8	3/8	2-1/4	CSINK-50586	CSINK-50588	CSINK-50589	CSINK-50580
3/4	1/2	2-5/8	CSINK-50346	CSINK-50348	CSINK-50349	CSINK-50340
1	1/2	2-3/4	CSINK-51006	CSINK-51008	CSINK-51009	CSINK-51000
1-1/4	1/2	3	CSINK-51256	CSINK-51258	CSINK-51259	CSINK-51250
1-1/2	3/4	3-1/4	CSINK-51506	CSINK-51508	CSINK-51509	CSINK-51500
1-3/4	3/4	3-1/2	CSINK-51756	CSINK-51758	CSINK-51759	CSINK-51750
2	3/4	3-3/4	CSINK-52306	CSINK-52308	CSINK-52309	CSINK-52300



HSS 6 Flute



Size	Shank	OAL	60° Part Number	82° Part Number	90° Part Number	100° Part Number
1/8	1/8	1-1/4	CSINK-55000	CSINK-55020	CSINK-55040	CSINK-55060
3/16	3/16	1-3/8	CSINK-55001	CSINK-55021	CSINK-55041	CSINK-55061
1/4	1/4	1-1/2	CSINK-55002	CSINK-55022	CSINK-55042	CSINK-55062
5/16	1/4	1-3/4	CSINK-55003	CSINK-55023	CSINK-55043	CSINK-55063
3/8	1/4	1-3/4	CSINK-55004	CSINK-55024	CSINK-55044	CSINK-55064
1/2	1/4	2	CSINK-55005	CSINK-55025	CSINK-55045	CSINK-55065
1/2	3/8	2	CSINK-55006	CSINK-55026	CSINK-55046	CSINK-55066
5/8	1/4	2-1/4	CSINK-55007	CSINK-55027	CSINK-55047	CSINK-55067
5/8	3/8	2-1/4	CSINK-55008	CSINK-55028	CSINK-55048	CSINK-55068
3/4	1/2	2-5/8	CSINK-55009	CSINK-55029	CSINK-55049	CSINK-55069
7/8	1/2	2-3/4	CSINK-55010	CSINK-55030	CSINK-55050	CSINK-55070
1	1/2	2-3/4	CSINK-55011	CSINK-55031	CSINK-55051	CSINK-55071
1-1/4	1/2	2-3/4	CSINK-55012	CSINK-55032	CSINK-55052	CSINK-55072
1-1/2	3/4	2-7/8	CSINK-55013	CSINK-55033	CSINK-55053	CSINK-55073
1-3/4	3/4	3	CSINK-55014	CSINK-55034	CSINK-55054	CSINK-55074
2	3/4	3-1/4	CSINK-55015	CSINK-55035	CSINK-55055	CSINK-55075
2-1/2	1	5	CSINK-55016	CSINK-55036	CSINK-55056	CSINK-55076
3	1	5-1/4	CSINK-55017	CSINK-55037	CSINK-55057	CSINK-55077





Turning

- 170 Iscar Turning Inserts
- 181 Mitsubishi Turning Inserts
- 186 Korloy Turning Inserts
- 189 Turning Holders
- 194 Boring Bars
- 198 Tool Holder Bushings
- 199 Turning Holder Hardware

Threading

- 200 Iscar Threading Inserts
- 202 Carmex Precision Threading Inserts
- 204 Threading Bars
- 205 Threading Tool Holders
- 205 Threading Hardware
- 207 Threadmills
- 208 Iscar PENTA Threading Inserts
- 209 Iscar PENTA Holders
- 210 Iscar DECA Threading Inserts
- 210 Iscar DECA Threading Holders

Milling

- 211 Iscar Milling Inserts
- 217 Mitsubishi Milling Inserts
- 219 Korloy Milling Inserts

Parting & Grooving

- 220 Iscar Parting & Grooving Inserts
- 236 Iscar Parting & Grooving Holders
- 247 Iscar Parting & Grooving Bars
- 249 Iscar Parting & Grooving Blades
- 253 Iscar Parting & Grooving Adapters
- 257 Iscar Blocks

Drilling

- 258 Iscar DR Twist Drills 2xD
- 260 Iscar DR Twist Drills 3xD
- 261 Iscar DR Twist Drills 4xD
- 263 Iscar DR Twist Drills 5xD
- 264 Iscar DR Inserts
- 265 Mitsubishi MVX Drills
- 267 Mitsubishi MVX Inserts
- 268 Iscar SUMOCHAM Drills 3D
- 270 Iscar SUMOCHAM Drills 5D
- 272 Iscar SUMOCHAM Inserts

Tool Flo Inserts

- 278 Tool-Flo Grooving Inserts
- 280 Tool-Flo Grooving Inserts
w/ ChipBreaker
- 281 Tool-Flo Deep Grooving Inserts
- 281 Tool-Flo Deep Grooving Inserts
w/ ChipBreaker
- 282 Tool-Flo Full Nose Radius
- 283 Tool-Flo Full Nose Radius
w/ Chipbreaker
- 283 Tool-Flo Threading Inserts
- 284 Top Notch Holders
- 284 Top Notch Grooving Bars

K-Tool

- 285 K-Tool Inserts
- 288 K-Tool Spot Drills
- 289 K-Tool Flat Bottom Drills
- 291 K-Tool Drill Mills
- 292 K-Tool Radius Mills
- 293 K-Tool Super Alloy Mills
- 293 K-Tool Screws

Internal Tool

- 294 INT Carbide Boring Tools
- 296 INT Carbide MAX-BORE Boring Tools
- 298 INT Carbide Grooving Tools
- 299 INT Carbide Full Radius Grooving Tools
- 301 INT Right Hand Threading Tools

Insert Descriptions

- 302 Iscar Grades
- 305 Iscar Breakers
- 306 Mitsubishi Grades
- 309 Mitsubishi Breakers
- 312 Korloy Grades
- 313 Korloy Breakers
- 315 Tool Flo Grades
- 315 K-Tool Grades

ISCAR TURNING INSERTS

CCGT-AS

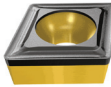
· 80° rhombic 7° positive flank, very positive rake angle and sharp cutting edge, for machining aluminum.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CCGT 2-.004-AS	IC20	0.004	0.250	0.094	5540029
CCGT 2-0-AS	IC20	0.008	0.250	0.094	5540010
CCGT 2-1-AS	IC20	0.016	0.250	0.094	5599989
CCGT 3-.004-AS	IC20	0.004	0.375	0.156	5540030
CCGT 3-0-AS	IC20	0.008	0.375	0.156	5540020
CCGT 3-1-AS	IC20	0.016	0.375	0.156	5540004
CCGT 3-2-AS	IC20	0.031	0.375	0.156	5540018
CCGT 431-AS	IC20	0.008	0.500	0.187	5540003
CCGT 432-AS	IC20	0.016	0.500	0.187	5540002

CCMT-14

· 80° rhombic 7° positive flank inserts used for semi-finish and finish turning. Chip breaking in moderate feed range. Positive rake, low cutting forces. Used for a wide range of materials including soft and exotic alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CCMT 2-1-14	IC5005	0.016	0.248	0.094	5550208
CCMT 2-1-14	IC830	0.016	0.248	0.094	5567367
CCMT 2-1-14	IC907	0.016	0.248	0.094	5596401
CCMT 3-1-14	IC20	0.016	0.382	0.156	5500020
CCMT 3-1-14	IC8250	0.016	0.382	0.156	5550217
CCMT 3-1-14	IC907	0.016	0.382	0.156	5596411
CCMT 3-2-14	IC20	0.031	0.382	0.156	5500027
CCMT 3-2-14	IC8250	0.031	0.382	0.156	5508091
CCMT 3-2-14	IC830	0.031	0.382	0.156	5567368
CCMT 3-2-14	IC9250	0.031	0.382	0.156	5507534
CCMT 432-14	IC830	0.031	0.508	0.187	5568582

CCMT-PF

· 80° rhombic, 7° positive flank inserts. Used for semi-finishing and finishing applications on soft materials and exotic alloys. Positive rake angle, low cutting forces.



Designation	Radius	Inscribed Diameter	Thickness	Grade	Part Number
CCMT 2-0-PF	IC6025	0.008	0.248	0.094	5566971
CCMT 2-0-PF	IC807	0.008	0.248	0.094	5550207
CCMT 2-0-PF	IC830	0.008	0.248	0.094	3308106
CCMT 2-0-PF	IC907	0.008	0.248	0.094	5592941
CCMT 2-1-PF	IC6025	0.016	0.248	0.094	5566973
CCMT 2-1-PF	IC830	0.016	0.248	0.094	5568585
CCMT 2-1-PF	IC907	0.016	0.248	0.094	5594731
CCMT 3-0-PF	IC3028	0.008	0.382	0.156	5505442
CCMT 3-0-PF	IC830	0.008	0.382	0.156	5568616
CCMT 3-1-PF	IC6025	0.016	0.382	0.156	5566993
CCMT 3-1-PF	IC806	0.016	0.382	0.156	5566754
CCMT 3-1-PF	IC830	0.016	0.382	0.156	5568600
CCMT 3-1-PF	IC907	0.016	0.382	0.156	5592971

CCMT-SM

· Single-sided turning inserts for semi-finishing and finishing. Chip breaking in moderate feed range. Positive rake, low cutting forces. Used for soft materials and exotic alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CCMT 2-0-SM	IC9250	0.008	0.254	0.094	5591636
CCMT 2-1-SM	IC807	0.016	0.254	0.094	5550211
CCMT 2-1-SM	IC8150	0.016	0.254	0.094	5508201
CCMT 2-1-SM	IC907	0.016	0.254	0.094	5504873
CCMT 2-1-SM	IC9250	0.016	0.254	0.094	5507292
CCMT 2-2-SM	IC907	0.031	0.254	0.094	5595403
CCMT 3-0-SM	IC907	0.008	0.382	0.156	5505011
CCMT 3-0-SM	IC9250	0.008	0.382	0.156	5507017
CCMT 3-1-SM	IC6025	0.016	0.382	0.156	5566931
CCMT 3-1-SM	IC807	0.016	0.382	0.156	5507890
CCMT 3-1-SM	IC8250	0.016	0.382	0.156	5508089
CCMT 3-1-SM	IC830	0.016	0.382	0.156	5509500
CCMT 3-1-SM	IC907	0.016	0.382	0.156	5504773
CCMT 3-1-SM	IC9150	0.016	0.382	0.156	5507221
CCMT 3-1-SM	IC9250	0.016	0.382	0.156	5507275
CCMT 3-2-SM	IC6025	0.031	0.382	0.156	5566935
CCMT 3-2-SM	IC807	0.031	0.382	0.156	5550221
CCMT 3-2-SM	IC8250	0.031	0.382	0.156	5508090
CCMT 3-2-SM	IC907	0.031	0.382	0.156	5504774
CCMT 3-2-SM	IC9150	0.031	0.382	0.156	5507222
CCMT 3-2-SM	IC9250	0.031	0.382	0.156	5507018
CCMT 432-SM	IC8250	0.031	0.508	0.187	5508093

CNGG-SF

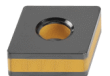
· Double-sided 80° rhombic inserts for superfinishing. Controls chip flow at very low feed and depth of cut. Excellent crater wear resistance.



Designation	Radius	Inscribed Diameter	Thickness	Grade	Part Number
CNGG 430	0.004	0.508	0.187	IC907	5508250
CNGG 430.5	0.008	0.508	0.187	IC907	5507741
CNGG 431	0.016	0.508	0.187	IC907	5507738

CNMA

· Double-sided 80° rhombic inserts, used for short chipping materials such as cast iron.



Designation	Radius	Inscribed Diameter	Thickness	Grade	Part Number
CNMA 431	0.016	0.508	0.187	IC5010	5508250
CNMA 432	0.031	0.508	0.187	IC5010	5507741
CNMA 433	0.047	0.508	0.187	IC5010	5507738



CNMG-F3P

- Double-sided 80° rhombic insert, used for semi-finishing and finishing applications. Low cutting forces due to very sharp edge and positive rake.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 332-F3P	IC8150	0.031	0.381	0.187	5510336
CNMG 332-F3P	IC8250	0.031	0.381	0.187	5510337
CNMG 432-F3P	IC6025	0.031	0.500	0.187	5510320

CNMG-F3M

- Double-sided 80° rhombic inserts for stainless steel finishing applications.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 331-F3M	IC6015	0.016	0.375	0.187	5567819
CNMG 331-F3M	IC6025	0.016	0.375	0.187	5567820
CNMG 332-F3M	IC6015	0.031	0.375	0.187	5567821
CNMG 431-F3M	IC6015	0.016	0.500	0.187	5567691
CNMG 431-F3M	IC6025	0.016	0.500	0.187	5567692
CNMG 432-F3M	IC6025	0.031	0.500	0.187	5567824

CNMG-GN

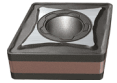
- Double-sided 80° rhombic inserts, secure cutting edge, for medium- and semi roughing on steel and cast iron.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 431-GN	IC428	0.016	0.500	0.187	5507548
CNMG 431-GN	IC8150	0.016	0.500	0.187	5507843
CNMG 431-GN	IC830	0.016	0.500	0.187	3308132
CNMG 431-GN	IC9150	0.016	0.500	0.187	5591626
CNMG 431-GN	IC9250	0.016	0.500	0.187	5507320
CNMG 432-GN	IC6015	0.031	0.500	0.187	5509360
CNMG 432-GN	IC8150	0.031	0.500	0.187	5507756
CNMG 432-GN	IC8250	0.031	0.500	0.187	5507802
CNMG 432-GN	IC830	0.031	0.500	0.187	5509498
CNMG 432-GN	IC9150	0.031	0.500	0.187	5506970
CNMG 432-GN	IC9250	0.031	0.500	0.187	5506974
CNMG 433-GN	IC3028	0.047	0.500	0.187	5503835
CNMG 433-GN	IC8150	0.047	0.500	0.187	5507834
CNMG 433-GN	IC830	0.047	0.500	0.187	5568603
CNMG 433-GN	IC9250	0.047	0.500	0.187	5507308
CNMG 543-GN	IC830	0.047	0.625	0.250	3308163
CNMG 543-GN	IC9250	0.047	0.625	0.250	5592416
CNMG 643-GN	IC830	0.047	0.750	0.250	5568596

CNMG-M3M

- Double-sided 80° rhombic inserts, first choice for machining stainless and low carbon steel. Positive rake angle, low cutting forces, providing very reliable performance and excellent tool life.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 331-M3M	IC6015	0.016	0.375	0.187	5510330
CNMG 331-M3M	IC6025	0.016	0.375	0.187	5510331
CNMG 332-M3M	IC6015	0.031	0.375	0.187	5510332
CNMG 332-M3M	IC6025	0.031	0.375	0.187	5510333
CNMG 332-M3M	IC806	0.031	0.375	0.187	5566735
CNMG 432-M3M	IC6015	0.031	0.500	0.187	5510240
CNMG 432-M3M	IC6025	0.031	0.500	0.187	5510174
CNMG 432-M3M	IC804	0.031	0.500	0.187	5569183
CNMG 432-M3M	IC806	0.031	0.500	0.187	5566736
CNMG 433-M3M	IC6025	0.047	0.500	0.187	5560527
CNMG 544-M3M	IC6015	0.063	0.635	0.250	5510244

CNMG-M3P

- Double-sided 80° rhombic inserts, for medium machining conditions on steel. Low cutting forces due to positive rake, provide smooth cutting.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 331-M3P	IC8250	0.016	0.375	0.187	5567564
CNMG 332-M3P	IC8250	0.031	0.375	0.187	5567566
CNMG 431-M3P	IC8250	0.016	0.500	0.187	5567463
CNMG 432-M3P	IC8250	0.031	0.500	0.187	5566681

CNMG-NF

- Double-sided 80° rhombic insert, used for semi-finishing and finishing applications. Low cutting forces due to very sharp edge and positive rake.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 431-NF	IC8150	0.016	0.500	0.187	5509891
CNMG 431-NF	IC8250	0.016	0.500	0.187	5507822
CNMG 431-NF	IC907	0.016	0.500	0.187	5505280
CNMG 432-NF	IC8250	0.031	0.500	0.187	5508094
CNMG 432-NF	IC907	0.031	0.500	0.187	5595149
CNMG 432-NF	IC9250	0.031	0.500	0.187	5507354

ISCAR TURNING INSERTS

CNMG-NR

· Double-sided 80° rhombic inserts with a special chipformer for heavy machining.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 432-NR	IC5010	0.031	0.500	0.187	5507735
CNMG 432-NR	IC807	0.031	0.500	0.187	5550245
CNMG 432-NR	IC8250	0.031	0.500	0.187	5507815
CNMG 432-NR	IC907	0.031	0.500	0.187	5505376
CNMG 432-NR	IC9150	0.031	0.500	0.187	5507665
CNMG 432-NR	IC9250	0.031	0.500	0.187	5592326
CNMG 433-NR	IC5010	0.047	0.500	0.187	5508284
CNMG 433-NR	IC8250	0.047	0.500	0.187	5550252
CNMG 433-NR	IC830	0.047	0.500	0.187	3308148
CNMG 433-NR	IC8350	0.047	0.500	0.187	5508551
CNMG 433-NR	IC9350	0.047	0.500	0.187	5507242
CNMG 542-NR	IC8350	0.031	0.625	0.250	5507998
CNMG 544-NR	IC907	0.063	0.625	0.250	5505133
CNMG 643-NR	IC8250	0.047	0.750	0.250	5507696
CNMG 643-NR	IC907	0.047	0.750	0.250	5504872

CNMG-TF

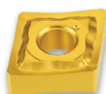
· Double-sided 80° rhombic inserts, positive rake angle that varies along the edge to negative in order to prevent chipping. Special design reduces cratering. Used for carbon and alloy steel, stainless steel and high temp. alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 321-TF	IC8250	0.016	0.375	0.125	5550240
CNMG 322-TF	IC8250	0.031	0.375	0.125	5550241
CNMG 431-TF	IC3028	0.016	0.500	0.187	5504415
CNMG 431-TF	IC807	0.016	0.500	0.187	5507865
CNMG 431-TF	IC8250	0.016	0.500	0.187	5507806
CNMG 431-TF	IC907	0.016	0.500	0.187	5592199
CNMG 431-TF	IC9150	0.016	0.500	0.187	5507657
CNMG 431-TF	IC9250	0.016	0.500	0.187	5507285
CNMG 432-TF	IC6025	0.031	0.500	0.187	5509912
CNMG 432-TF	IC806	0.031	0.500	0.187	5509897
CNMG 432-TF	IC807	0.031	0.500	0.187	5507750
CNMG 432-TF	IC8150	0.031	0.500	0.187	5507832
CNMG 432-TF	IC8250	0.031	0.500	0.187	5507754
CNMG 432-TF	IC830	0.031	0.500	0.187	5507752
CNMG 432-TF	IC907	0.031	0.500	0.187	5598518
CNMG 432-TF	IC908	0.031	0.500	0.187	5594061
CNMG 432-TF	IC9150	0.031	0.500	0.187	5506969
CNMG 432-TF	IC9250	0.031	0.500	0.187	5506975
CNMG 432-TF	IC9350	0.031	0.500	0.187	5507209
CNMG 433-TF	IC807	0.047	0.500	0.187	5507866
CNMG 433-TF	IC830	0.047	0.500	0.187	3308111
CNMG 433-TF	IC907	0.047	0.500	0.187	5505021
CNMG 433-TF	IC908	0.047	0.500	0.187	5590800
CNMG 542-TF	IC907	0.031	0.625	0.250	5505377

CNMG-PP

· Double-sided 80° rhombic inserts with a positive rake angle and sharp, positive radial edge. Used for machining very ductile materials like aluminum alloys, soft, low carbon steel, stainless steel, and high temperature alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 431-PP	IC10	0.016	0.500	0.187	5502848
CNMG 431-PP	IC6025	0.016	0.500	0.187	5509911
CNMG 431-PP	IC807	0.016	0.500	0.187	5507873
CNMG 431-PP	IC8250	0.016	0.500	0.187	5507813
CNMG 431-PP	IC830	0.016	0.500	0.187	5568612
CNMG 431-PP	IC907	0.016	0.500	0.187	5505454
CNMG 431-PP	IC9250	0.016	0.500	0.187	5507321
CNMG 432-PP	IC10	0.031	0.500	0.187	5502785
CNMG 432-PP	IC507	0.031	0.500	0.187	5504260
CNMG 432-PP	IC6015	0.031	0.500	0.187	5509359
CNMG 432-PP	IC6025	0.031	0.500	0.187	5509913
CNMG 432-PP	IC806	0.031	0.500	0.187	5509997
CNMG 432-PP	IC807	0.031	0.500	0.187	5507798
CNMG 432-PP	IC8150	0.031	0.500	0.187	5508206
CNMG 432-PP	IC8250	0.031	0.500	0.187	5507805
CNMG 432-PP	IC830	0.031	0.500	0.187	5509497
CNMG 432-PP	IC907	0.031	0.500	0.187	5591047
CNMG 432-PP	IC9250	0.031	0.500	0.187	5506976
CNMG 432-PP	IC9350	0.031	0.500	0.187	5507618
CNMG 433-PP	IC907	0.047	0.500	0.187	5505003
CNMG 643-PP	IC907	0.047	0.750	0.250	5506072

CNMG-WG

· Double-sided 80° rhombic wiper inserts for high surface finish at high feed turning. Three to five times better surface finish compared to standard turning inserts at the same feeds.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMG 432-WG	IC520N	0.031	0.500	0.187	5505277
CNMG 432-WG	IC8250	0.031	0.500	0.187	5550249
CNMG 432-WG	IC907	0.031	0.500	0.187	5505858
CNMG 432-WG	IC9150	0.031	0.500	0.187	5507419

CNMX-MPW

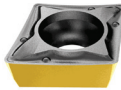
The insert has a very positive radial, helical cutting edge and a positive rake angle, which reduces the cutting forces. A wiper corner design produces a high surface finish even at high feed rates. Used for heavy machining applications.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CNMX 452-M4PW	IC807	0.031	0.500	0.267	5507985
CNMX 452-M4PW	IC8150	0.031	0.500	0.267	5507915
CNMX 452-M4PW	IC8250	0.031	0.500	0.267	5507914
CNMX 452-M4PW	IC8350	0.031	0.500	0.267	5507916
CNMX 452-M4PW	IC907	0.031	0.500	0.267	5507026
CNMX 452-M4PW	IC9150	0.031	0.500	0.267	5507338
CNMX 452-M4PW	IC9250	0.031	0.500	0.267	5507339
CNMX 453-M4PW	IC8150	0.047	0.500	0.267	5507917
CNMX 453-M4PW	IC9250	0.047	0.500	0.267	5507342
CNMX 454-M4PW	IC8350	0.063	0.500	0.267	5507761
CNMX 553-M4PW	IC8150	0.047	0.625	0.252	5507988

CPMT-PF

80° rhombic 11° positive flank inserts, for semi-finishing and finishing applications on soft materials and exotic alloys. Positive rake angle, low cutting forces.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
CPMT 2-1-PF	IC807	0.016	0.250	0.094	5550285
CPMT 2-1-PF	IC907	0.016	0.250	0.094	5505910
CPMT 3-1-PF	IC830	0.016	0.375	0.156	3308202
CPMT 3-1-PF	IC907	0.016	0.375	0.156	5505914
CPMT 3-2-PF	IC907	0.031	0.375	0.156	5505916

DCGT-AS

55° rhombic 7° positive flank, very positive rake angle and sharp cutting edge for machining aluminum.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DCGT 2-0-AS	IC20	0.008	0.250	0.094	5540007
DCGT 2-1-AS	IC20	0.016	0.250	0.094	5540009
DCGT 3-004-AS	IC20	0.004	0.375	0.156	5540032
DCGT 3-0-AS	IC20	0.008	0.375	0.156	5540013
DCGT 3-1-AS	IC20	0.016	0.375	0.156	5540001
DCGT 3-2-AS	IC20	0.031	0.375	0.156	5540006

DCMT

55° rhombic insert with 7° positive clearance, used for finishing applications.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DCMT 2-0	IC20N	0.008	0.250	0.094	5502669
DCMT 2-1	IC20N	0.016	0.250	0.094	5502718
DCMT 2-1	IC520N	0.016	0.250	0.094	5503777
DCMT 2-1	IC830	0.016	0.250	0.094	5568583
DCMT 3-2	IC520N	0.031	0.375	0.156	5503780

DCMT-14

55° rhombic 7° positive flank inserts, used for semi-finish and finish turning. Chip breaking in moderate feed range. Positive rake, low cutting forces. Used for a wide range of materials, including soft and exotic alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DCMT 3-1-14	IC20	0.016	0.375	0.156	5500340
DCMT 3-1-14	IC9150	0.016	0.375	0.156	5507536
DCMT 3-2-14	IC9150	0.031	0.375	0.156	5507578

DCMT-PF

55° rhombic 7° positive flank inserts. Used for semi-finishing and finishing applications on soft materials and exotic alloys. Positive rake angle, low cutting forces.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DCMT 2-004-PF	IC907	0.004	0.250	0.094	5506199
DCMT 2-1-PF	IC830	0.016	0.250	0.094	5568609
DCMT 2-2-PF	IC907	0.031	0.250	0.094	5590342
DCMT 3-0-PF	IC830	0.008	0.375	0.156	5568594
DCMT 3-0-PF	IC907	0.008	0.375	0.156	5598832
DCMT 3-1-PF	IC3028	0.016	0.375	0.156	5597698
DCMT 3-1-PF	IC6015	0.016	0.375	0.156	5566954
DCMT 3-1-PF	IC806	0.016	0.375	0.156	5566759
DCMT 3-1-PF	IC8250	0.016	0.375	0.156	5508073
DCMT 3-2-PF	IC830	0.031	0.375	0.156	5509503
DCMT 3-2-PF	IC907	0.031	0.375	0.156	5595131

ISCAR TURNING INSERTS

DCMT-SM

· 55° rhombic 7° positive flank inserts, used for semi-finish and finish turning. Chip breaking in moderate feed range. Positive rake, low cutting forces. Used for a wide range of materials, including soft and exotic alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DCMT 2-0-SM	IC907	0.008	0.250	0.094	5504903
DCMT 2-1-SM	IC806	0.016	0.250	0.094	5509906
DCMT 2-1-SM	IC907	0.016	0.250	0.094	5505156
DCMT 2-1-SM	IC9250	0.016	0.250	0.094	5507290
DCMT 2-2-SM	IC9250	0.031	0.250	0.094	5507291
DCMT 3-0-SM	IC530N	0.008	0.375	0.156	5591839
DCMT 3-0-SM	IC907	0.008	0.375	0.156	5505012
DCMT 3-1-SM	IC507	0.016	0.375	0.156	5504268
DCMT 3-1-SM	IC806	0.016	0.375	0.156	5509899
DCMT 3-1-SM	IC807	0.016	0.375	0.156	5508240
DCMT 3-1-SM	IC8150	0.016	0.375	0.156	5508212
DCMT 3-1-SM	IC8250	0.016	0.375	0.156	5508101
DCMT 3-1-SM	IC907	0.016	0.375	0.156	5504874
DCMT 3-2-SM	IC507	0.031	0.375	0.156	5504536
DCMT 3-2-SM	IC807	0.031	0.375	0.156	5508227
DCMT 3-2-SM	IC8150	0.031	0.375	0.156	5508214
DCMT 3-2-SM	IC907	0.031	0.375	0.156	5504875
DCMT 3-2-SM	IC9150	0.031	0.375	0.156	5506998

DNMG-F3M

· Double-sided 55° rhombic inserts, first choice for finish turning of stainless and low carbon steel. Positive rake angle, low cutting forces, providing very reliable performance and excellent tool life.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DNMG 431-F3M	IC6015	0.016	0.500	0.187	5567865
DNMG 431-F3M	IC6025	0.016	0.500	0.187	5567866
DNMG 431-F3M	IC806	0.016	0.500	0.187	5568857
DNMG 432-F3M	IC6015	0.031	0.500	0.187	5567867

DNMG-F3P

· Double-sided 55° rhombic insert, used for semi-finishing and finishing applications. Low cutting forces due to very sharp edge and positive rake.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DNMG 331-F3P	IC8250	0.016	0.375	0.187	5560577
DNMG 332-F3P	IC8250	0.031	0.375	0.187	5560579
DNMG 431-F3P	IC8250	0.016	0.500	0.187	5566821

DNMG-GN

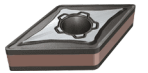
· Double-sided 55° rhombic inserts, secure cutting edge, for medium and semi-roughing on steel and cast iron.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DNMG 332-GN	IC8250	0.031	0.375	0.187	5508106
DNMG 333-GN	IC8250	0.047	0.375	0.187	5550318
DNMG 432-GN	IC3028	0.031	0.500	0.187	5504101
DNMG 432-GN	IC8150	0.031	0.500	0.187	5508220
DNMG 432-GN	IC8250	0.031	0.500	0.187	5508108
DNMG 432-GN	IC9150	0.031	0.500	0.187	5507358
DNMG 432-GN	IC9250	0.031	0.500	0.187	5507359
DNMG 433-GN	IC5010	0.047	0.500	0.187	5508752
DNMG 433-GN	IC8250	0.047	0.500	0.187	5508750

DNMG-M3M

· Double-sided 55° rhombic inserts, first choice for machining stainless and low carbon steel. Positive rake angle, low cutting forces, providing very reliable performance and excellent tool life.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DNMG 331-M3M	IC6025	0.016	0.375	0.187	5560575
DNMG 331-M3M	IC806	0.016	0.375	0.187	5566742
DNMG 332-M3M	IC6025	0.031	0.375	0.187	5510183
DNMG 432-M3M	IC6025	0.031	0.500	0.187	5510185
DNMG 433-M3M	IC806	0.047	0.500	0.187	5566746

DNMG-NF

· Double-sided 55° rhombic insert, used for semi-finishing and finishing applications. Low cutting forces due to very sharp edge and positive rake.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DNMG 330-NF	IC8150	0.008	0.375	0.187	5550312
DNMG 330-NF	IC907	0.008	0.375	0.187	5592414
DNMG 331-NF	IC8150	0.016	0.375	0.187	5508216
DNMG 331-NF	IC8250	0.016	0.375	0.187	5508104
DNMG 331-NF	IC907	0.016	0.375	0.187	5594179
DNMG 331-NF	IC9150	0.016	0.375	0.187	5507229
DNMG 332-NF	IC907	0.031	0.375	0.187	5505158
DNMG 431-NF	IC530N	0.016	0.500	0.187	5505382
DNMG 431-NF	IC907	0.016	0.500	0.187	5505714
DNMG 432-NF	IC9150	0.031	0.500	0.187	5507362



DNMG-PP

- Double-sided 55° rhombic inserts with a positive rake angle and sharp, positive radial edge. Used for machining very ductile materials such as aluminum alloys, soft, low carbon steel, stainless steel, and high temperature alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DNMG 331-PP	IC20	0.016	0.375	0.187	5502835
DNMG 331-PP	IC8250	0.016	0.375	0.187	5508710
DNMG 332-PP	IC8250	0.031	0.375	0.187	5550317
DNMG 432-PP	IC8250	0.031	0.500	0.187	5550323
DNMG 432-PP	IC830	0.031	0.500	0.187	3308128

DNMG-TF

- Double sided, positive rake angles to prevent strain hardening. Rake angle varies along the edge to negative in order to prevent chipping. Used for carbon and alloy steel, stainless steel and high temperature alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DNMG 331-TF	IC8250	0.016	0.375	0.187	5508105
DNMG 331-TF	IC9250	0.016	0.375	0.187	5591716
DNMG 431-TF	IC807	0.016	0.500	0.187	5550322
DNMG 431-TF	IC8250	0.016	0.500	0.187	5508107
DNMG 431-TF	IC830	0.016	0.500	0.187	3308144
DNMG 431-TF	IC907	0.016	0.500	0.187	5505137
DNMG 431-TF	IC9250	0.016	0.500	0.187	5507313
DNMG 432-TF	IC3028	0.031	0.500	0.187	5504838
DNMG 432-TF	IC6015	0.031	0.500	0.187	5509369
DNMG 432-TF	IC807	0.031	0.500	0.187	5508275
DNMG 432-TF	IC8250	0.031	0.500	0.187	5508086
DNMG 432-TF	IC907	0.031	0.500	0.187	5504876
DNMG 432-TF	IC9250	0.031	0.500	0.187	5507281

DNMX-M3P

- The insert has a very positive radial, helical cutting edge and a positive rake angle, which reduces the cutting forces.
- Used for medium machining application on steel.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
DNMX 442-M3P	IC806	0.031	0.500	0.250	5510113
DNMX 442-M3P	IC807	0.031	0.500	0.250	5507996
DNMX 442-M3P	IC8150	0.031	0.500	0.250	5507504
DNMX 442-M3P	IC8250	0.031	0.500	0.250	5507997
DNMX 443-M3P	IC807	0.047	0.500	0.250	5508538

LNMX-HT

- Tangential inserts with 4 cutting edges and a positive rake angle. Recommended for high machining rates on alloy and stainless steel and on cast iron.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
LNMX 110408R-HT	IC830	0.031	0.187	0.449	3308208
LNMX 110412L-HT	IC3028	0.047	0.187	0.449	5506359
LNMX 110412R-HT	IC908	0.047	0.187	0.449	5506353
LNMX 150608R-HT	IC8250	0.031	0.252	0.528	5508114
LNMX 150608R-HT	IC907	0.031	0.252	0.528	5506191
LNMX 150608R-HT	IC9250	0.031	0.252	0.528	5506934
LNMX 150608R-HT	IC9350	0.031	0.252	0.528	5506962
LNMX 150612L-HT	IC3028	0.047	0.252	0.528	5506138
LNMX 150612L-HT	IC907	0.047	0.252	0.528	5506188
LNMX 150612R-HT	IC3028	0.047	0.252	0.528	5506134
LNMX 150612R-HT	IC907	0.047	0.252	0.528	5506187
LNMX 150612R-HT	IC9150	0.047	0.252	0.528	5506922
LNMX 150616R-HT	IC907	0.063	0.252	0.528	5506183
LNMX 150616R-HT	IC908	0.063	0.252	0.528	5506185
LNMX 150616R-HT	IC9250	0.063	0.252	0.528	5506938

ISCAR TURNING INSERTS

RCMT-14

- Round inserts with a 7° positive flank for medium and finish profiling on a wide range of materials.



Designation	Grade	Hole	Inscribed Diameter	Thickness	Part Number
RCMT 0803MO-14	IC9250	0.134	0.315	0.125	5507579
RCMT 10T3MO-14	IC8250	0.173	0.394	0.156	5508261
RCMT 10T3MO-14	IC9250	0.173	0.394	0.156	5507580
RCMT 1204MO-14	IC806	0.217	0.472	0.187	5599230
RCMT 1204MO-14	IC9250	0.217	0.472	0.187	5507581

SNMG

- Double-Sided square inserts for machining a wide range of materials



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
SNMG 322-TF	IC9250	0.031	0.375	0.125	5507557
SNMG 432-EM-M	IC907	0.031	0.500	0.187	5506517
SNMG 432-GN	IC9250	0.031	0.500	0.187	5507284
SNMG 432-PP	IC3028	0.031	0.500	0.187	5504089
SNMG 432-VL	IC907	0.031	0.500	0.187	5506328
SNMG 433-TF	IC3028	0.047	0.500	0.187	5591367
SNMG 543-GN	IC830	0.047	0.625	0.250	3308155
SNMG 543-M3M	IC807	0.047	0.625	0.250	5569383
SNMG 643-GN	IC830	0.047	0.750	0.250	3308133

TCMT-14

- Triangular, 7° positive flank inserts, used for semi-finish and finish turning. Chip breaking in moderate feed range. Positive rake, low cutting forces. Used for a wide range of materials, including soft and exotic alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TCMT 3-1-14	IC20	0.016	0.375	0.156	5600282
TCMT 3-1-14	IC428	0.016	0.375	0.156	5501307

TCMT-19

- Triangular inserts with a 7° positive flat rake and a strong cutting edge for semi-roughing applications at medium to high feeds.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TCMT 2-1-19	IC50M	0.016	0.250	0.094	5600280
TCMT 3-2-19	IC20	0.031	0.375	0.156	5600284

TCMT-SM

- Single-sided turning inserts for semi-finishing and finishing. Chip breaking in moderate feed range. Positive rake, low cutting forces. Used for soft materials and exotic alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TCMT 2-1-SM	IC907	0.016	0.250	0.094	5504887
TCMT 2-2-SM	IC907	0.031	0.250	0.094	5505572
TCMT 3-1-SM	IC830	0.016	0.375	0.156	5568606
TCMT 3-1-SM	IC9250	0.016	0.375	0.156	5507286
TCMT 3-2-SM	IC830	0.031	0.375	0.156	5568613
TCMT 3-2-SM	IC907	0.031	0.375	0.156	5505283
TCMT 3-2-SM	IC9250	0.031	0.375	0.156	5506993

TNMG-GN

- Double sided for general application. Secure cutting edge. For medium and semi-roughing on steel and cast iron.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TNMG 322-GN	IC8250	0.031	0.375	0.125	5550457
TNMG 432-GN	IC8250	0.031	0.500	0.187	5508134
TNMG 432-GN	IC9250	0.031	0.500	0.187	5507280
TNMG 433-GN	IC3028	0.047	0.500	0.187	5591437
TNMG 543-GN	IC8250	0.047	0.625	0.250	5550476
TNMG 543-GN	IC9350	0.047	0.625	0.250	5507258

TNMG-PP

- Double sided, very positive rake, sharp and positive radial edge. For heat resistant alloys, stainless steel, aluminum alloys and soft low carbon steel



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TNMG 332-PP	IC9250	0.031	0.375	0.187	5591846
TNMG 431-PP	IC830	0.016	0.500	0.187	3308177
TNMG 432-PP	IC8150	0.031	0.500	0.187	5550469
TNMG 432-PP	IC8250	0.031	0.500	0.187	5550470

TNMG-TF

· Double sided, positive rake angles to prevent strain hardening. Rake angle varies along the edge to negative in order to prevent chipping. Used for carbon and alloy steel, stainless steel and high temperature alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TNMG 321-TF	IC9250	0.016	0.375	0.125	5507566
TNMG 322-TF	IC907	0.031	0.375	0.125	5505129
TNMG 331-TF	IC830	0.016	0.375	0.187	5568604
TNMG 331-TF	IC907	0.016	0.375	0.187	5505124
TNMG 331-TF	IC9250	0.016	0.375	0.187	5507282
TNMG 332-TF	IC830	0.031	0.375	0.187	3308089
TNMG 332-TF	IC907	0.031	0.375	0.187	5504912
TNMG 431-TF	IC8250	0.016	0.5	0.187	5550468
TNMG 431-TF	IC907	0.016	0.5	0.187	5505126
TNMG 432-TF	IC907	0.031	0.5	0.187	5505127
TNMG 432-TF	IC9250	0.031	0.5	0.187	5507315

TPGH

· Triangular 11° positive flank inserts with a ground chipformer. Used for finishing, provide excellent surface finish. Suitable for a wide range of materials.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TPGH 2-1-L	IC570	0.016	0.250	0.094	5503787
TPGH 321-L	IC20	0.016	0.375	0.125	5502157
TPGH 321-L	IC570	0.016	0.375	0.125	5503790
TPGH 322-L	IC20	0.031	0.375	0.125	5502162

TPGX

· Triangular 11° positive flank inserts with a ground chipformer. Used for finishing, provide excellent surface finish. Suitable for a wide range of materials.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TPGX 220-L	IC20	0.008	0.250	0.125	5591589
TPGX 220-L	IC20N	0.008	0.250	0.125	5504409
TPGX 220-L	IC908	0.008	0.250	0.125	5505573
TPGX 221-L	IC20N	0.016	0.250	0.125	5504410
TPGX 221-L	IC908	0.016	0.250	0.125	5505574
TPGX 730-L	IC20	0.008	0.219	0.094	5594309
TPGX 730-L	IC908	0.008	0.219	0.094	5505575
TPGX 731-L	IC20	0.016	0.219	0.094	5504406
TPGX 731-L	IC20N	0.016	0.219	0.094	5504408
TPGX 731-L	IC908	0.016	0.219	0.094	5505576

TPMR

· 11° positive triangular inserts. Positive chipformer, low cutting forces. Used for internal turning and for finishing.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TPMR 731	IC9250	0.016	0.219	0.094	5507594
TPMR 222	IC830	0.031	0.250	0.125	3308109
TPMR 222-PF	IC9250	0.016	0.250	0.125	5507008
TPMR 322	IC830	0.031	0.375	0.125	5568605

TPMT

· 11° positive triangular inserts. Positive chipformer, low cutting forces. Used for internal turning and for finishing.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
TPMT 2-0	IC830	0.008	0.250	0.094	3308201
TPMT 2-0	IC907	0.008	0.250	0.094	5505333
TPMT 2-1	IC830	0.016	0.250	0.094	5568601
TPMT 2-1	IC907	0.016	0.250	0.094	5505570
TPMT 2-1	IC9250	0.016	0.250	0.094	5507689
TPMT 321	IC20	0.016	0.375	0.125	5502201
TPMT 321	IC830	0.016	0.375	0.125	5568599
TPMT 321	IC907	0.016	0.375	0.125	5505522
TPMT 321	IC9150	0.016	0.375	0.125	5507647
TPMT 321	IC9250	0.016	0.375	0.125	5507317
TPMT 321	IC9350	0.016	0.375	0.125	5507627
TPMT 322	IC807	0.031	0.375	0.125	5550488
TPMT 322	IC830	0.031	0.375	0.125	5568592
TPMT 322	IC9150	0.031	0.375	0.125	5507648
TPMT 322	IC9250	0.031	0.375	0.125	5507592

VCGT-AS

· Used for machining aluminum with the very positive rake angle and sharp cutting edge.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
VCGT 220-AS	IC20	0.008	0.250	0.125	5540014
VCGT 221-AS	IC20	0.016	0.250	0.125	5540016
VCGT 33-.004-AS	IC20	0.004	0.375	0.125	5507684
VCGT 330-AS	IC20	0.008	0.375	0.125	5540033
VCGT 331-AS	IC20	0.016	0.375	0.125	5540005
VCGT 332-AS	IC20	0.031	0.375	0.125	5540008

ISCAR TURNING INSERTS

VC GT-PF

· Used for semi-finishing and finishing applications on soft materials and exotic alloys. Positive rake angle, low cutting forces.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
VC GT 130302-PF	IC830	0.008	0.313	0.125	3308114
VC GT 130304-PF	IC3028	0.016	0.313	0.125	5591739

VC MT-14

· Used for semi-finish and finish turning. Chip breaking in moderate feed range. Positive rake, low cutting forces. Used for a wide range of materials including soft and exotic alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
VC MT 331-14	IC20	0.016	0.375	0.187	5502397
VC MT 331-14	IC520N	0.016	0.375	0.187	5503781
VC MT 331-14	IC830	0.016	0.375	0.187	5568590
VC MT 332-14	IC20	0.031	0.375	0.187	5502403
VC MT 332-14	IC3028	0.031	0.375	0.187	5593367

VC MT-SM

· Single-sided turning inserts for semi-finishing and finishing. Chip breaking in moderate feed range. Positive rake, low cutting forces. Used for soft materials and exotic alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
VC MT 220-SM	IC907	0.008	0.250	0.125	5507351
VC MT 220-SM	IC908	0.008	0.250	0.125	5505696
VC MT 221-SM	IC908	0.016	0.250	0.125	5505695
VC MT 222-SM	IC908	0.031	0.250	0.125	5506483
VC MT 330-SM	IC807	0.008	0.375	0.187	5550497
VC MT 330-SM	IC907	0.008	0.375	0.187	5506235
VC MT 331-SM	IC807	0.016	0.375	0.187	5550498
VC MT 331-SM	IC907	0.016	0.375	0.187	5504877
VC MT 331-SM	IC9250	0.016	0.375	0.187	5507001
VC MT 332-SM	IC830	0.031	0.375	0.187	3308120
VC MT 332-SM	IC907	0.031	0.375	0.187	5504878

VN MG-F3P

· Double-sided 35° rhombic inserts for semi-finishing and finishing applications on steel.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
VN MG 331-F3P	IC8250	0.016	0.375	0.187	5560583
VN MG 332-F3P	IC8150	0.031	0.375	0.187	5560584
VN MG 332-F3P	IC8250	0.031	0.375	0.187	5560585

VN MG-M3M

· Double-sided 35° rhombic inserts, first choice for machining stainless and low carbon steel. Positive rake angle, low cutting forces, providing very reliable performance and excellent tool life.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
VN MG 331-M3M	IC6015	0.016	0.375	0.187	5560580
VN MG 331-M3M	IC6025	0.016	0.375	0.187	5560581
VN MG 332-M3M	IC6025	0.031	0.375	0.187	5510199

VN MG-NF

· Double sided for semi-finishing and finishing. Low cutting forces due to very sharp edge and positive rake.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
VN MG 2.5-0-NF	IC20N	0.008	0.281	0.156	5502809
VN MG 2.5-0-NF	IC830	0.008	0.281	0.156	5568617
VN MG 2.5-0-NF	IC907	0.008	0.281	0.156	5505157
VN MG 2.5-0-NF	IC9150	0.008	0.281	0.156	5592236
VN MG 2.5-0-NF	IC9250	0.008	0.281	0.156	5507310
VN MG 2.5-1-NF	IC20N	0.016	0.281	0.156	5502810
VN MG 2.5-1-NF	IC507	0.016	0.281	0.156	5504265
VN MG 2.5-1-NF	IC530N	0.016	0.281	0.156	5592169
VN MG 2.5-1-NF	IC6025	0.016	0.281	0.156	5566948
VN MG 2.5-1-NF	IC807	0.016	0.281	0.156	5508221
VN MG 2.5-1-NF	IC8250	0.016	0.281	0.156	5508144
VN MG 2.5-1-NF	IC830	0.016	0.281	0.156	5509502
VN MG 2.5-1-NF	IC907	0.016	0.281	0.156	5504880
VN MG 2.5-1-NF	IC9150	0.016	0.281	0.156	5507217
VN MG 2.5-1-NF	IC9250	0.016	0.281	0.156	5507273
VN MG 2.5-2-NF	IC30N	0.031	0.281	0.156	5502920
VN MG 2.5-2-NF	IC6025	0.031	0.281	0.156	5566963
VN MG 2.5-2-NF	IC807	0.031	0.281	0.156	5550504
VN MG 2.5-2-NF	IC830	0.031	0.281	0.156	5568607
VN MG 2.5-2-NF	IC907	0.031	0.281	0.156	5505753
VN MG 2.5-2-NF	IC9150	0.031	0.281	0.156	5507220
VN MG 2.5-2-NF	IC9250	0.031	0.281	0.156	5507274
VN MG 331-NF	IC8250	0.016	0.375	0.187	5508147
VN MG 331-NF	IC830	0.016	0.375	0.187	3308115
VN MG 331-NF	IC907	0.016	0.375	0.187	5505285
VN MG 331-NF	IC9150	0.016	0.375	0.187	5507396
VN MG 331-NF	IC9250	0.016	0.375	0.187	5507370
VN MG 332-NF	IC20	0.031	0.375	0.187	5507539
VN MG 332-NF	IC8250	0.031	0.375	0.187	5598220
VN MG 332-NF	IC9250	0.031	0.375	0.187	5507540



VNMG-TF

· Double sided, positive rake angles to prevent strain hardening. Rake angle varies along the edge to negative in order to prevent chipping. Used for carbon and alloy steel, stainless steel and high temperature alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
VNMG 332-TF	IC8250	0.031	0.375	0.187	5508146
VNMG 332-TF	IC830	0.031	0.375	0.187	3313411
VNMG 332-TF	IC907	0.031	0.375	0.187	5505130
VNMG 332-TF	IC9150	0.031	0.375	0.187	5591386
VNMG 332-TF	IC9250	0.031	0.375	0.187	5507555
VNMG 432-TF	IC9250	0.031	0.500	0.187	5507599

WBMT

· Trigon 5° positive flank inserts with a ground chipformer. Used for finishing on miniature boring bars, provide excellent surface finish.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
WBMT 52.004L	IC908	0.004	0.156	0.063	5506174
WBMT 520L	IC30N	0.008	0.156	0.063	5503015
WBMT 520L	IC354	0.008	0.156	0.063	5503038
WBMT 520L	IC530N	0.008	0.156	0.063	5503223
WBMT 520L	IC830	0.008	0.156	0.063	5509501

WNMG-GN

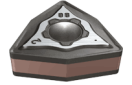
· Double sided for general application. Secure cutting edge. For medium and semi-roughing on steel and cast iron.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
WNMG 3-1-GN	IC3028	0.016	0.375	0.156	5504371
WNMG 3-2-GN	IC830	0.031	0.375	0.156	3308092
WNMG 3-2-GN	IC9250	0.031	0.375	0.156	5591946
WNMG 331-GN	IC9025	0.016	0.375	0.187	5504697
WNMG 332-GN	IC9250	0.031	0.375	0.187	5591406
WNMG 432-GN	IC830	0.031	0.500	0.187	5509504
WNMG 432-GN	IC5005	0.031	0.500	0.187	5507731
WNMG 432-GN	IC5010	0.031	0.500	0.187	5507746
WNMG 432-GN	IC8150	0.031	0.500	0.187	5507831
WNMG 432-GN	IC8250	0.031	0.500	0.187	5507801
WNMG 432-GN	IC9150	0.031	0.500	0.187	5506967
WNMG 432-GN	IC9250	0.031	0.500	0.187	5506971
WNMG 433-GN	IC5005	0.047	0.500	0.187	5508056
WNMG 433-GN	IC8150	0.047	0.500	0.187	5507757
WNMG 433-GN	IC830	0.047	0.500	0.187	3308135
WNMG 433-GN	IC9150	0.047	0.500	0.187	5507148
WNMG 433-GN	IC9250	0.047	0.500	0.187	5507368

WNMG-M3M

· Double-sided trigon inserts, first choice for machining stainless and low carbon steel. Positive rake angle, low cutting forces, providing very reliable performance and excellent tool life.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
WNMG 332-M3M	IC6025	0.031	0.375	0.187	5510200
WNMG 332-M3M	IC806	0.031	0.375	0.187	5566738
WNMG 431-M3M	IC807	0.016	0.500	0.187	5569369
WNMG 432-M3M	IC6025	0.031	0.500	0.187	5510202
WNMG 432-M3M	IC804	0.031	0.500	0.187	5569185

WNMG-NF

· Double sided trigon wiper insert for semi-finishing and finishing applications. Low cutting forces due to very sharp edge and positive rake.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
WNMG 3-.004-NF	IC908	0.004	0.375	0.156	5591352
WNMG 3-0-NF	IC10	0.008	0.375	0.156	5502779
WNMG 3-0-NF	IC907	0.008	0.375	0.156	5591780
WNMG 3-1-NF	IC507	0.016	0.375	0.156	5504264
WNMG 3-1-NF	IC907	0.016	0.375	0.156	5504879
WNMG 3-2-NF	IC9015	0.031	0.375	0.156	5504497
WNMG 330-NF	IC907	0.008	0.375	0.187	5506230
WNMG 331-NF	IC907	0.016	0.375	0.187	5506231
WNMG 432-NF	IC530N	0.031	0.500	0.187	5503666

WNMG-NR

· Double sided with a special chipformer for heavy machining for roughing applications

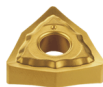


Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
WNMG 432-NR	IC4028	0.031	0.500	0.187	5505536
WNMG 432-NR	IC8250	0.031	0.500	0.187	5508277
WNMG 433-NR	IC8150	0.047	0.500	0.187	5507846
WNMG 433-NR	IC8250	0.047	0.500	0.187	5550543
WNMG 433-NR	IC907	0.047	0.500	0.187	5597090

ISCAR TURNING INSERTS

WNMG-PP

· Double sided, very positive rake, sharp and positive radial edge. For heat resistant alloys, stainless steel, aluminum alloys and soft low carbon steel.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
WNMG 3-1-PP	IC9150	0.016	0.375	0.156	5592216
WNMG 3-2-PP	IC3028	0.031	0.375	0.156	5503829
WNMG 3-2-PP	IC907	0.031	0.375	0.156	5504824
WNMG 3-2-PP	IC9350	0.031	0.375	0.156	5507630
WNMG 331-PP	IC907	0.016	0.375	0.187	5506170
WNMG 332-PP	IC907	0.031	0.375	0.187	5506167
WNMG 431-PP	IC10	0.016	0.500	0.187	5502869
WNMG 431-PP	IC6025	0.016	0.500	0.187	5509920
WNMG 431-PP	IC807	0.016	0.500	0.187	5508273
WNMG 431-PP	IC830	0.016	0.500	0.187	5568615
WNMG 431-PP	IC907	0.016	0.500	0.187	5505520
WNMG 431-PP	IC9250	0.016	0.500	0.187	5591996
WNMG 432-PP	IC3028	0.031	0.500	0.187	5503832
WNMG 432-PP	IC6015	0.031	0.500	0.187	5509366
WNMG 432-PP	IC6025	0.031	0.500	0.187	5509922
WNMG 432-PP	IC807	0.031	0.500	0.187	5507868
WNMG 432-PP	IC8150	0.031	0.500	0.187	5508177
WNMG 432-PP	IC830	0.031	0.500	0.187	5567679
WNMG 432-PP	IC907	0.031	0.500	0.187	5504825

WNMG-TF

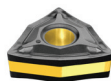
· Double sided, positive rake angles to prevent strain hardening. Rake angle varies along the edge to negative in order to prevent chipping. Used for carbon and alloy steel, stainless steel and high temperature alloys.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
WNMG 3-1-TF	IC20	0.016	0.375	0.156	5503795
WNMG 3-1-TF	IC3028	0.016	0.375	0.156	5504429
WNMG 3-2-TF	IC3028	0.031	0.375	0.156	5504426
WNMG 3-2-TF	IC807	0.031	0.375	0.156	5507867
WNMG 3-2-TF	IC907	0.031	0.375	0.156	5505153
WNMG 3-2-TF	IC9250	0.031	0.375	0.156	5507283
WNMG 332-TF	IC8250	0.031	0.375	0.187	5507825
WNMG 332-TF	IC830	0.031	0.375	0.187	3308167
WNMG 332-TF	IC907	0.031	0.375	0.187	5594751
WNMG 332-TF	IC9250	0.031	0.375	0.187	5591976
WNMG 3-3-TF	IC907	0.047	0.375	0.156	5505135
WNMG 431-TF	IC8250	0.016	0.500	0.187	5507807
WNMG 431-TF	IC830	0.016	0.500	0.187	3308122
WNMG 431-TF	IC907	0.016	0.500	0.187	5505131
WNMG 431-TF	IC9250	0.016	0.500	0.187	5507309
WNMG 432-TF	IC3028	0.031	0.500	0.187	5503971
WNMG 432-TF	IC6025	0.031	0.500	0.187	5509921
WNMG 432-TF	IC806	0.031	0.500	0.187	5509902
WNMG 432-TF	IC807	0.031	0.500	0.187	5507751
WNMG 432-TF	IC8250	0.031	0.500	0.187	5507755
WNMG 432-TF	IC907	0.031	0.500	0.187	5596898
WNMG 432-TF	IC908	0.031	0.500	0.187	5594071
WNMG 432-TF	IC9250	0.031	0.500	0.187	5506972

WNMG-WG

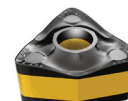
· Double sided trigon wiper insert for high surface finish at high feed turning.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
WNMG 3-1-WG	IC530N	0.016	0.375	0.156	5503723
WNMG 3-1-WG	IC9250	0.016	0.375	0.156	5507288
WNMG 3-2-WG	IC3028	0.031	0.375	0.156	5503905
WNMG 3-2-WG	IC907	0.031	0.375	0.156	5506166
WNMG 3-2-WG	IC9250	0.031	0.375	0.156	5507289
WNMG 432-WG	IC520N	0.031	0.500	0.187	5505278
WNMG 432-WG	IC9250	0.031	0.500	0.187	5592006
WNMG 433-WG	IC9025	0.047	0.500	0.187	5505009
WNMG 433-WG	IC9150	0.047	0.500	0.187	5507298

WNMX-M3/4PW

· The insert has a very positive radial, helical cutting edge and a positive rake angle, which reduces the cutting forces. A wiper corner design produces a high surface finish even at high feed rates. Used for heavy machining applications.



Designation	Grade	Radius	Inscribed Diameter	Thickness	Part Number
WNMX 342-M3PW	IC807	0.031	0.375	0.174	5507992
WNMX 342-M3PW	IC8150	0.031	0.375	0.174	5507993
WNMX 452-M4PW	IC807	0.031	0.500	0.267	5507994
WNMX 452-M4PW	IC8150	0.031	0.500	0.267	5507995
WNMX 453-M4PW	IC8250	0.047	0.500	0.267	5508506
WNMX 454-M4PW	IC8150	0.063	0.500	0.267	5508505



CCGT-FJ

· Used for finishing difficult to cut materials.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CCGT21.50.5FJ-P	0.008	0.250	0.094	RT9005	MIT-251272
CCGT21.5V5FJ	0.002	0.250	0.094	VP10RT	MIT-251328
CCGT32.50.2FJ	0.004	0.375	0.156	VP10RT	MIT-198205
CCGT32.50.5FJ	0.008	0.375	0.156	VP10RT	MIT-198213
CCGT32.50.5FJ-P	0.008	0.375	0.156	RT9005	MIT-251184
CCGT32.51FJ-P	0.016	0.375	0.156	RT9005	MIT-251221
CCGT32.5V5FJ	0.002	0.375	0.156	VP10RT	MIT-251361

CCMT

· Used for medium cutting of steel, stainless steel, cast iron and heat resistant alloy.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CCMT21.50.5	0.008	0.250	0.094	UE6020	MIT-186415
CCMT21.50.5	0.008	0.250	0.094	US735	MIT-117054
CCMT21.51	0.016	0.250	0.094	UE6110	MIT-407257
CCMT21.51	0.016	0.250	0.094	US735	MIT-100549
CCMT21.52	0.031	0.250	0.094	US735	MIT-100559
CCMT32.50.5	0.008	0.375	0.156	US735	MIT-117061
CCMT32.51	0.016	0.375	0.156	UE6020	MIT-186458
CCMT32.51	0.016	0.375	0.156	UE6110	MIT-407290
CCMT32.51	0.016	0.375	0.156	US735	MIT-100580
CCMT32.52	0.031	0.375	0.156	UC6010	MIT-100588
CCMT32.52	0.031	0.375	0.156	UE6110	MIT-407302
CCMT32.52	0.031	0.375	0.156	US735	MIT-100591

CCMT-FP

· First recommendation for finishing carbon steel and alloy steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CCMT32.51FP	0.016	0.375	0.156	MC6025	MIT-658179
CCMT32.52FP	0.031	0.375	0.156	MC6025	MIT-658187

CCMT-LM

· First recommendation for light cutting of stainless steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CCMT32.51LM	0.016	0.375	0.156	MC7025	MIT-659163
CCMT32.52LM	0.031	0.375	0.156	MC7025	MIT-659171

CCMT-MM

· Double sided chipbreaker with high rake angles to reduce burr formation.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CCMT21.51MM	0.016	0.250	0.094	MP7035	MIT-692721
CCMT32.51MM	0.016	0.375	0.156	MC7025	MIT-660244
CCMT32.51MM	0.016	0.375	0.156	MP7035	MIT-692748
CCMT32.52MM	0.031	0.375	0.156	MC7025	MIT-660252
CCMT32.52MM	0.031	0.375	0.156	MP7035	MIT-692756

CCMT-SW

· Wiper insert for light cutting of carbon steel and alloy steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CCMT21.50.5SW	0.008	0.250	0.094	VP25N	MIT-197624
CCMT21.51SW	0.016	0.250	0.094	VP25N	MIT-197659
CCMT32.50.5SW	0.008	0.375	0.156	UE6020	MIT-197667
CCMT32.50.5SW	0.008	0.375	0.156	US7020	MIT-197675
CCMT32.50.5SW	0.008	0.375	0.156	VP25N	MIT-197683
CCMT32.51SW	0.016	0.375	0.156	VP25N	MIT-197712

CNMG-GH

· Double sided chipbreaker for semi-heavy machining for roughing applications



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG432GH	0.031	0.500	0.187	UE6110	MIT-384892
CNMG432GH	0.031	0.500	0.187	UE6020	MIT-170974
CNMG432GH	0.031	0.500	0.187	UE6035	MIT-116233
CNMG432GH	0.031	0.500	0.187	US735	MIT-100903
CNMG433GH	0.047	0.500	0.187	UE6110	MIT-384905
CNMG433GH	0.047	0.500	0.187	UE6020	MIT-174203
CNMG433GH	0.047	0.500	0.187	US735	MIT-100991
CNMG543GH	0.047	0.625	0.250	UE6110	MIT-384913
CNMG543GH	0.047	0.625	0.250	UE6020	MIT-174254
CNMG543GH	0.047	0.625	0.250	US735	MIT-101077
CNMG644GH	0.063	0.750	0.250	UE6110	MIT-384948
CNMG644GH	0.063	0.750	0.250	UE6020	MIT-182529
CNMG644GH	0.063	0.750	0.250	US735	MIT-101215

MITSUBISHI TURNING INSERTS

CNMG-GJ

· Double sided chipbreaker with sharpness and strength. For semi-heavy cutting of difficult to cut materials.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG432GJ	0.031	0.500	0.187	VP10RT	MIT-198088
CNMG432GJ	0.031	0.500	0.187	VP15TF	MIT-231992
CNMG433GJ	0.047	0.500	0.187	VP10RT	MIT-197982
CNMG433GJ	0.047	0.500	0.187	VP15TF	MIT-232004
CNMG643GJ	0.047	0.750	0.250	VP10RT	MIT-209605

CNMG-LP

· First recommendation for light cutting of carbon steel and alloy steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG431LP	0.016	0.500	0.187	MC6025	MIT-618353
CNMG431LP	0.016	0.500	0.187	MP3025	MIT-602394
CNMG432LP	0.031	0.500	0.187	MC6015	MIT-840798
CNMG432LP	0.031	0.500	0.187	MP3025	MIT-602407
CNMG432LP	0.031	0.500	0.187	UE6105	MIT-620963
CNMG432LP	0.031	0.750	0.250	MC6015	MIT-840801

CNMG-MA

· Double sided for general application. For medium and semi-roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG431MA	0.016	0.500	0.187	UE6110	MIT-383638
CNMG431MA	0.016	0.500	0.187	UE6020	MIT-174140
CNMG431MA	0.016	0.500	0.187	US735	MIT-100824
CNMG431MA	0.016	0.500	0.187	VP15TF	MIT-386741
CNMG432MA	0.031	0.500	0.187	UE6020	MIT-174182
CNMG432MA	0.031	0.500	0.187	UE6110	MIT-383689
CNMG432MA	0.031	0.500	0.187	US735	MIT-100916
CNMG433MA	0.047	0.500	0.187	UE6110	MIT-383697
CNMG433MA	0.047	0.500	0.187	UE6020	MIT-174211
CNMG433MA	0.047	0.500	0.187	UE6035	MIT-116308
CNMG433MA	0.047	0.500	0.187	US735	MIT-101000
CNMG543MA	0.047	0.625	0.250	UE6110	MIT-383726
CNMG543MA	0.047	0.625	0.250	UE6020	MIT-174262
CNMG543MA	0.047	0.625	0.250	UE6035	MIT-116310
CNMG543MA	0.047	0.625	0.250	US735	MIT-101083
CNMG643MA	0.047	0.750	0.250	UE6110	MIT-383742
CNMG643MA	0.047	0.750	0.250	UE6020	MIT-175046
CNMG643MA	0.047	0.750	0.250	UE6035	MIT-116312
CNMG643MA	0.047	0.750	0.250	US735	MIT-101180

CNMG-MJ

· First recommendation for light cutting of difficult to cut materials.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG431MJ	0.016	0.500	0.187	VP05RT	MIT-259688
CNMG432MJ	0.031	0.500	0.187	VP10RT	MIT-259725

CNMG-MK

· First recommendation for medium cutting cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG431MK	0.016	0.500	0.187	MC5015	MIT-689119
CNMG432MK	0.031	0.500	0.187	MC5005	MIT-687754
CNMG432MK	0.031	0.500	0.187	MC5015	MIT-659127

CNMG-MS

· Double sided, positive rake angles. Used for medium cutting of stainless steel, mild steel and difficult to cut materials.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG322MS	0.031	0.375	0.125	UE6110	MIT-425885
CNMG322MS	0.031	0.375	0.125	US735	MIT-112048
CNMG431MS	0.016	0.500	0.187	UE6110	MIT-385588
CNMG431MS	0.016	0.500	0.187	UE6020	MIT-186706
CNMG431MS	0.016	0.500	0.187	US735	MIT-100834
CNMG431MS	0.016	0.500	0.187	VP15TF	MIT-231811
CNMG432MS	0.031	0.500	0.187	UE6020	MIT-186714
CNMG432MS	0.031	0.500	0.187	UE6110	MIT-385596
CNMG432MS	0.031	0.500	0.187	VP10RT	MIT-230236
CNMG432MS	0.031	0.500	0.187	US735	MIT-100930

CNMG-RK

· First recommendation for rough cutting of cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG432RK	0.031	0.500	0.187	MC5015	MIT-689311
CNMG433RK	0.047	0.500	0.187	MC5005	MIT-689320
CNMG543RK	0.031	0.625	0.250	MC5015	MIT-808827

CNMG-SA

· Alternative breaker for light cutting of carbon steel and alloy steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG431SA	0.016	0.500	0.187	US735	MIT-100843
CNMG432SA	0.031	0.500	0.187	UE6020	MIT-174191
CNMG432SA	0.031	0.500	0.187	UE6110	MIT-384657
CNMG432SA	0.031	0.500	0.187	US735	MIT-100944

CPMT-MQ

· Medium cutting of carbon steel, alloy steel, and stainless steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CPMT21.51MQ	0.016	0.250	0.094	US735	MIT-111134
CPMT21.52MQ	0.031	0.250	0.094	US735	MIT-111142
CPMT32.51MQ	0.016	0.375	0.125	UE6110	MIT-560083

DCMT

· Used for medium cutting of steel, stainless steel, cast iron and heat resistant alloy.



Designation	Radius	Diameter	Thickness	Grade	Part Number
DCMT21.50.5	0.008	0.250	0.094	US735	MIT-117085
DCMT32.50.5	0.008	0.375	0.156	US735	MIT-117091
DCMT32.51	0.016	0.375	0.156	UE6020	MIT-186538
DCMT32.51	0.016	0.375	0.156	UE6105	MIT-526766
DCMT32.51	0.016	0.375	0.156	US735	MIT-101505
DCMT32.52	0.031	0.375	0.156	UE6020	MIT-186546
DCMT32.52	0.031	0.375	0.156	UE6110	MIT-407396

DCMT-MV

· Double sided, positive rake for carbon steel, alloy steel, mild steel and stainless steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
DCMT21.51MV	0.016	0.250	0.094	US735	MIT-265017
DCMT21.52MV	0.031	0.250	0.094	AP25N	MIT-228662
DCMT21.52MV	0.031	0.250	0.094	UE6020	MIT-294432
DCMT21.52MV	0.031	0.250	0.094	US735	MIT-265025
DCMT21.52MV	0.031	0.250	0.094	VP15TF	MIT-314763
DCMT32.51MV	0.016	0.375	0.156	US735	MIT-265033
DCMT32.52MV	0.031	0.375	0.156	US7020	MIT-178301
DCMT32.52MV	0.031	0.375	0.156	US735	MIT-265041

DCMT-SV

· Light cutting for carbon steel, alloy steel, mild steel and stainless steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
DCMT21.50.5SV	0.008	0.250	0.094	US735	MIT-301217
DCMT21.50.5SV	0.008	0.250	0.094	VP15TF	MIT-316531
DCMT21.51SV	0.016	0.250	0.094	US735	MIT-301225
DCMT21.52SV	0.031	0.250	0.094	US735	MIT-301233
DCMT32.50.5SV	0.008	0.375	0.156	UE6020	MIT-301250
DCMT32.51SV	0.016	0.375	0.156	VP15TF	MIT-314827
DCMT32.52SV	0.031	0.375	0.156	VP15TF	MIT-303968

DNMG-MA

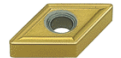
· Double sided for general application. For medium and semi-roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
DNMG332MA	0.031	0.375	0.187	UE6110	MIT-385705
DNMG332MA	0.031	0.375	0.187	US735	MIT-137912
DNMG432MA	0.031	0.500	0.187	UE6110	MIT-383777
DNMG432MA	0.031	0.500	0.187	UE6020	MIT-174351
DNMG432MA	0.031	0.500	0.187	US735	MIT-101841
DNMG433MA	0.047	0.500	0.187	UE6110	MIT-383785
DNMG433MA	0.047	0.500	0.187	UE6020	MIT-174385
DNMG433MA	0.047	0.500	0.187	UE6035	MIT-116315
DNMG433MA	0.047	0.500	0.187	US735	MIT-101900
DNMG443MA	0.047	0.500	0.187	UE6110	MIT-383814
DNMG443MA	0.047	0.500	0.187	UE6020	MIT-277587

DNMG-MS

· Double sided, positive rake angles. Used for medium cutting of stainless steel, mild steel and difficult to cut materials



Designation	Radius	Diameter	Thickness	Grade	Part Number
DNMG431MS	0.016	0.500	0.187	UE6020	MIT-186722
DNMG431MS	0.016	0.500	0.187	US735	MIT-101773
DNMG431MS	0.016	0.500	0.187	VP10RT	MIT-231853
DNMG432MS	0.031	0.500	0.187	UE6110	MIT-385625
DNMG432MS	0.031	0.500	0.187	UE6020	MIT-186731
DNMG432MS	0.031	0.500	0.187	US735	MIT-101852
DNMG432MS	0.031	0.500	0.187	VP10RT	MIT-215909

TCMT

· Used for medium cutting of steel, stainless steel, cast iron and heat resistant alloy.



Designation	Radius	Diameter	Thickness	Grade	Part Number
TCMT21.50.5	0.008	0.250	0.094	VP15TF	MIT-512971
TCMT21.51	0.016	0.250	0.094	VP15TF	MIT-512989
TCMT21.52	0.031	0.250	0.094	VP15TF	MIT-512997
TCMT32.51	0.016	0.375	0.156	VP15TF	MIT-513009
TCMT32.52	0.031	0.375	0.156	VP15TF	MIT-513017

MITSUBISHI TURNING INSERTS

TNMG

· Used for medium cutting of steel, stainless steel, cast iron and heat resistant alloy.



Designation	Radius	Diameter	Thickness	Grade	Part Number
TNMG321	0.016	0.375	0.125	MC6015	MIT-10518984
TNMG322	0.031	0.375	0.125	MC6015	MIT-842291

TNMG-LK

· First recommendation for light cutting of cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
TNMG331LK	0.016	0.375	0.125	MC5005	MIT-687682
TNMG332LK	0.031	0.375	0.125	MC5005	MIT-687691

TNMG-MA

· Double sided for general application. For medium and semi-roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
TNMG321MA	0.016	0.375	0.125	UE6020	MIT-253016
TNMG322MA	0.031	0.375	0.125	UE6020	MIT-253024
TNMG322MA	0.031	0.375	0.125	UE6035	MIT-116323
TNMG331MA	0.016	0.375	0.125	UE6110	MIT-383873
TNMG331MA	0.016	0.375	0.125	UE6020	MIT-174570
TNMG331MA	0.016	0.375	0.125	UE6035	MIT-279241
TNMG331MA	0.016	0.375	0.125	US735	MIT-107543
TNMG332MA	0.031	0.375	0.125	UE6110	MIT-383881
TNMG332MA	0.031	0.375	0.125	UE6020	MIT-174609
TNMG332MA	0.031	0.375	0.125	UE6035	MIT-116324
TNMG332MA	0.031	0.375	0.125	US735	MIT-107616
TNMG333MA	0.047	0.375	0.125	UE6110	MIT-383890
TNMG333MA	0.047	0.375	0.125	UE6020	MIT-174633
TNMG333MA	0.047	0.375	0.125	UE6035	MIT-116325
TNMG333MA	0.047	0.375	0.125	US735	MIT-107670
TNMG432MA	0.031	0.500	0.187	UE6110	MIT-383902
TNMG432MA	0.031	0.500	0.187	UE6020	MIT-174692
TNMG432MA	0.031	0.500	0.187	UE6035	MIT-116326
TNMG432MA	0.031	0.500	0.187	US735	MIT-107778
TNMG433MA	0.047	0.500	0.187	UE6110	MIT-383911
TNMG433MA	0.047	0.500	0.187	UE6020	MIT-174730
TNMG433MA	0.047	0.500	0.187	UE6035	MIT-116327
TNMG433MA	0.047	0.500	0.187	US735	MIT-111737

TNMG-MH

· Double sided for general application. For medium heavy cutting on mild steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
TNMG331MH	0.016	0.375	0.187	UE6110	MIT-384112
TNMG331MH	0.016	0.375	0.187	UE6020	MIT-174588
TNMG332MH	0.031	0.375	0.187	UE6110	MIT-384121
TNMG332MH	0.031	0.375	0.187	UE6020	MIT-174617
TNMG332MH	0.031	0.375	0.187	UE6035	MIT-279451

TNMG-MP

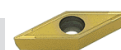
· Alternative breaker for medium cutting of carbon steel and alloy steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
TNMG331MP	0.016	0.375	0.187	MC6015	MIT-841150
TNMG331MP	0.016	0.375	0.187	UE6105	MIT-512241
TNMG332MP	0.031	0.375	0.187	MC6025	MIT-618687
TNMG432MP	0.031	0.500	0.187	MC6025	MIT-618708
TNMG433MP	0.048	0.500	0.187	MC6025	MIT-618716

VCMT

· Used for medium cutting of steel, stainless steel, cast iron and heat resistant alloy.



Designation	Radius	Diameter	Thickness	Grade	Part Number
VCMT221	0.016	0.250	0.125	AP25N	MIT-130147
VCMT221	0.016	0.250	0.125	UE6110	MIT-407556
VCMT221	0.016	0.250	0.125	US735	MIT-174959
VCMT331	0.016	0.375	0.187	AP25N	MIT-130155
VCMT331	0.016	0.375	0.187	UE6110	MIT-407564
VCMT331	0.016	0.375	0.187	US735	MIT-108907
VCMT332	0.031	0.375	0.187	UE6105	MIT-526951
VCMT332	0.031	0.375	0.187	UE6110	MIT-407572
VCMT332	0.031	0.375	0.187	US735	MIT-108920

VNMG-LK

· First recommendation for light cutting of cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
VNMG331LK	0.016	0.375	0.187	MC5005	MIT-687703
VNMG331LK	0.016	0.375	0.187	MC5015	MIT-689071
VNMG332LK	0.031	0.375	0.187	MC5005	MIT-687711
VNMG332LK	0.031	0.375	0.187	MC5015	MIT-689080

VNMG-MA

· First recommendation for medium cutting of carbon steel and alloy steel. First recommendation for finish to light cutting of cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
VNMG331MA	0.016	0.375	0.187	MC6025	MIT-645781
VNMG331MA	0.016	0.375	0.187	US735	MIT-108979
VNMG332MA	0.031	0.375	0.187	MC6025	MIT-645829
VNMG332MA	0.031	0.375	0.187	US735	MIT-109012
VNMG332MA	0.031	0.375	0.187	UE6110	MIT-383937

VNMG-MS

· Double sided, positive rake angles. Used for medium cutting of stainless steel, mild steel and difficult to cut materials.



Designation	Radius	Diameter	Thickness	Grade	Part Number
VNMG331MS	0.016	0.375	0.187	MP9015	MIT-802759
VNMG331MS	0.016	0.375	0.187	US735	MIT-108985
VNMG331MS	0.016	0.375	0.187	VP10RT	MIT-231976
VNMG332MS	0.031	0.375	0.187	MP9015	MIT-802767
VNMG332MS	0.031	0.375	0.187	US735	MIT-109018

WCMT

· Double sided, positive rake angles. Used for medium cutting.



Designation	Radius	Diameter	Thickness	Grade	Part Number
WCMT1.210.5	0.008	0.156	0.063	MP3025	MIT-602992
WCMT1.210.5	0.008	0.156	0.063	RT9010	MIT-383208
WCMT1.210.5	0.008	0.156	0.063	UE6110	MIT-426239
WCMT1.210.5	0.008	0.156	0.063	US735	MIT-109042
WCMT1.211	0.016	0.156	0.063	US735	MIT-109046
WCMT1.51.50.5	0.008	0.187	0.094	US735	MIT-109033
WCMT1.51.51	0.016	0.187	0.094	US735	MIT-109037
WCMT21.50.5	0.008	0.250	0.094	US735	MIT-109050
WCMT21.51	0.016	0.250	0.094	RT9010	MIT-383232
WCMT21.51	0.016	0.250	0.094	US735	MIT-109054
WCMT21.52	0.031	0.250	0.094	UE6020	MIT-182043
WCMT32.51	0.016	0.375	0.156	US735	MIT-109058
WCMT32.52	0.031	0.375	0.156	UE6020	MIT-182060
WCMT32.52	0.031	0.375	0.156	US735	MIT-109062

WNMG-GH

· Double sided chipbreaker for semi-heavy machining for roughing applications.



Designation	Radius	Diameter	Thickness	Grade	Part Number
WNMG432GH	0.031	0.500	0.187	UC5115	MIT-291426
WNMG432GH	0.031	0.500	0.187	UC6010	MIT-109146
WNMG432GH	0.031	0.500	0.187	UE6105	MIT-484797
WNMG432GH	0.031	0.500	0.187	UC5115	MIT-291451

WNMG-MA

· Double sided for general application. For medium and semi-roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
WNMG32.51MA	0.016	0.375	0.156	UE6110	MIT-426319
WNMG32.52MA	0.031	0.375	0.156	UE6110	MIT-426351
WNMG32.53MA	0.047	0.375	0.156	UE6110	MIT-426394
WNMG332MA	0.031	0.375	0.187	UE6110	MIT-385764
WNMG332MA	0.031	0.375	0.187	UE6020	MIT-183687
WNMG332MA	0.031	0.375	0.187	UE6105	MIT-484640
WNMG332MA	0.031	0.375	0.187	US735	MIT-142527
WNMG431MA	0.016	0.500	0.187	UE6110	MIT-383945
WNMG431MA	0.016	0.500	0.187	UE6020	MIT-174828
WNMG431MA	0.016	0.500	0.187	US735	MIT-109118
WNMG432MA	0.031	0.500	0.187	UE6110	MIT-383953
WNMG432MA	0.031	0.500	0.187	UE6020	MIT-174861
WNMG432MA	0.031	0.500	0.187	UE6035	MIT-116332
WNMG432MA	0.031	0.500	0.187	US735	MIT-109157
WNMG433MA	0.047	0.500	0.187	UE6110	MIT-383961
WNMG433MA	0.047	0.500	0.187	UE6020	MIT-174916
WNMG433MA	0.047	0.500	0.187	UE6035	MIT-116333
WNMG433MA	0.047	0.500	0.187	US735	MIT-109190

WNMG-MS

· Double sided, positive rake angles. Used for cutting of stainless steel, mild steel and difficult to cut materials.



Designation	Radius	Diameter	Thickness	Grade	Part Number
WNMG331MS	0.016	0.375	0.187	UE6110	MIT-426423
WNMG331MS	0.016	0.375	0.187	US735	MIT-112067
WNMG431MS	0.016	0.500	0.187	UE6110	MIT-385684
WNMG431MS	0.016	0.500	0.187	UE6020	MIT-186773
WNMG431MS	0.016	0.500	0.187	US735	MIT-109124
WNMG431MS	0.016	0.500	0.187	VP10RT	MIT-249148
WNMG432MS	0.031	0.500	0.187	UE6110	MIT-385692
WNMG432MS	0.031	0.500	0.187	UE6020	MIT-186781
WNMG432MS	0.031	0.500	0.187	US735	MIT-109166
WNMG432MS	0.031	0.500	0.187	VP10RT	MIT-238609
WNMG433MS	0.047	0.500	0.187	US735	MIT-109195
WNMG433MS	0.047	0.500	0.187	VP10RT	MIT-493538

KORLOY TURNING INSERTS

CCMT-HMP

· Excellent chip control at wide range of cutting conditions. For medium cutting of stainless steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CCMT21.50.5-HMP	0.008	0.250	0.094	NC3030	1-02-025130
CCMT21.50.5-HMP	0.008	0.250	0.094	NC3120	1-02-025912
CCMT21.50.5-HMP	0.008	0.250	0.094	NC9025	1-02-034289
CCMT21.51-HMP	0.016	0.250	0.094	NC3010	1-02-026718
CCMT21.51-HMP	0.016	0.250	0.094	NC3030	1-02-023148
CCMT21.51-HMP	0.016	0.250	0.094	NC3120	1-02-025399
CCMT21.51-HMP	0.016	0.250	0.094	NC9020	1-02-014505
CCMT21.51-HMP	0.016	0.250	0.094	NC9025	1-02-034222
CCMT21.52-HMP	0.031	0.250	0.094	NC3030	1-02-023825
CCMT21.52-HMP	0.031	0.250	0.094	NC3120	1-02-025663
CCMT21.52-HMP	0.031	0.250	0.094	NC6010	1-02-017035
CCMT21.52-HMP	0.031	0.250	0.094	NC9020	1-02-014506
CCMT21.52-HMP	0.031	0.250	0.094	NC9025	1-02-034486
CCMT21.52-HMP	0.031	0.250	0.094	PC5300	1-02-039724
CCMT32.50.5-HMP	0.008	0.375	0.156	PC5300	1-02-040142
CCMT32.50.5-HMP	0.008	0.375	0.156	PC8110	1-02-035228
CCMT32.51-HMP	0.016	0.375	0.156	NC3010	1-02-027873
CCMT32.51-HMP	0.016	0.375	0.156	NC3020	1-02-016046
CCMT32.51-HMP	0.016	0.375	0.156	NC3030	1-02-023126
CCMT32.51-HMP	0.016	0.375	0.156	NC3120	1-02-025664
CCMT32.51-HMP	0.016	0.375	0.156	NC6110	1-02-025783
CCMT32.51-HMP	0.016	0.375	0.156	NC9020	1-02-014498
CCMT32.51-HMP	0.016	0.375	0.156	NC9025	1-02-034221
CCMT32.52-HMP	0.031	0.375	0.156	NC3010	1-02-027680
CCMT32.52-HMP	0.031	0.375	0.156	NC3020	1-02-016048
CCMT32.52-HMP	0.031	0.375	0.156	NC3030	1-02-023043
CCMT431-HMP	0.016	0.500	0.187	NC3030	1-02-026206
CCMT431-HMP	0.016	0.500	0.187	NC6110	1-02-026143
CCMT432-HMP	0.031	0.500	0.187	NC3030	1-02-023637
CCMT432-HMP	0.031	0.500	0.187	NC3120	1-02-025666
CCMT432-HMP	0.031	0.500	0.187	NC6110	1-02-026144
CCMT432-HMP	0.031	0.500	0.187	NC9020	1-02-014500
CCMT432-HMP	0.031	0.500	0.187	NC9025	1-02-034575
CCMT432-HMP	0.031	0.500	0.187	PC5300	1-02-037141

CNMG-HA

· Used for light alloy, stainless steel machining. Sharp cutting edge generates low cutting force.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG431-HA	0.016	0.500	0.187	H01	1-03-009392
CNMG431-HA	0.016	0.500	0.187	NC3020	1-02-016061
CNMG431-HA	0.016	0.500	0.187	PC5300	1-02-036396
CNMG432-HA	0.031	0.500	0.187	H01	1-03-009393
CNMG432-HA	0.031	0.500	0.187	PC5300	1-02-036397
CNMG432-HA	0.031	0.500	0.187	PC8110	1-02-034716
CNMG432-HA	0.031	0.500	0.187	PC9030	1-02-012927

CNMG-HM

· For medium cutting, medium finishing and medium roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG 431-HM	0.016	0.500	0.187	NC3010	1-02-027878
CNMG 431-HM	0.016	0.500	0.187	NC3030	1-02-025131
CNMG432-HM	0.031	0.500	0.187	NC3010	1-02-025344
CNMG432-HM	0.031	0.500	0.187	NC3030	1-02-021868
CNMG432-HM	0.031	0.500	0.187	NC305K	1-02-002463
CNMG432-HM	0.031	0.500	0.187	NC3120	1-02-025439
CNMG432-HM	0.031	0.500	0.187	NC6010	1-02-017041
CNMG432-HM	0.031	0.500	0.187	NC6110	1-02-025339
CNMG432-HM	0.031	0.500	0.187	NC9020	1-02-014140
CNMG432-HM	0.031	0.500	0.187	NC9025	1-02-035083
CNMG432-HM	0.031	0.500	0.187	PC8110	1-02-035183
CNMG432-HM	0.031	0.500	0.187	PC9030	1-02-012827

CNMG-HS

· For medium cutting of stainless steel, high rake angle.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG 431-HS	0.016	0.500	0.187	NC9020	1-02-015363
CNMG 431-HS	0.016	0.500	0.187	PC8110	1-02-034750
CNMG432-HS	0.031	0.500	0.187	NC9020	1-02-014707
CNMG432-HS	0.031	0.500	0.187	NC9025	1-02-034233
CNMG432-HS	0.031	0.500	0.187	PC5300	1-02-036399
CNMG432-HS	0.031	0.500	0.187	PC8110	1-02-034692

CNMG-VM

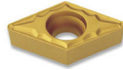
· For medium cutting, wide available chip control range from finishing to roughing.



Designation	Radius	Diameter	Thickness	Grade	Part Number
CNMG 431-VM	0.016	0.500	0.187	PC5300	1-02-040144
CNMG 432-VM	0.031	0.500	0.187	NC3220	1-02-044833
CNMG432-VM	0.031	0.500	0.187	NC5330	1-02-039095
CNMG432-VM	0.031	0.500	0.187	PC5300	1-02-036484
CNMG432-VM	0.031	0.500	0.187	PC8110	1-02-034693

DCMT-HMP

· Excellent chip control at wide range of cutting conditions. For medium cutting of stainless steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
DCMT21.50.5-HMP	0.008	0.250	0.094	NC3010	1-02-031228
DCMT21.50.5-HMP	0.008	0.250	0.094	NC3120	1-02-026067
DCMT21.51-HMP	0.016	0.250	0.094	NC3030	1-02-023638
DCMT21.51-HMP	0.016	0.250	0.094	NC3120	1-02-025630
DCMT21.52-HMP	0.031	0.250	0.094	NC3120	1-02-025631
DCMT32.50.5-HMP	0.008	0.375	0.156	PC9030	1-02-015419
DCMT32.51-HMP	0.016	0.375	0.156	NC3010	1-02-027875
DCMT32.51-HMP	0.016	0.375	0.156	NC3030	1-02-023912
DCMT32.51-HMP	0.016	0.375	0.156	NC3120	1-02-025438
DCMT32.51-HMP	0.016	0.375	0.156	PC5300	1-02-036393
DCMT32.51-HMP	0.016	0.375	0.156	PC9030	1-02-014277
DCMT32.52-HMP	0.031	0.375	0.156	NC3030	1-02-023149
DCMT32.52-HMP	0.031	0.375	0.156	NC3120	1-02-025400

DNMG-HA

· Used for light alloy, stainless steel machining. Sharp cutting edge generates low cutting force.



Designation	Radius	Diameter	Thickness	Grade	Part Number
DNMG431-HA	0.016	0.500	0.187	NC3120	1-02-027117
DNMG431-HA	0.016	0.500	0.187	NC9020	1-02-018284
DNMG431-HA	0.016	0.500	0.187	NC9025	1-02-034605
DNMG431-HA	0.016	0.500	0.187	PC5300	1-02-040151
DNMG431-HA	0.016	0.500	0.187	PC8110	1-02-034757
DNMG431-HA	0.016	0.500	0.187	PC9030	1-02-013986
DNMG432-HA	0.031	0.500	0.187	H01	1-03-012215
DNMG432-HA	0.031	0.500	0.187	NC3120	1-02-032478
DNMG432-HA	0.031	0.500	0.187	NC9020	1-02-018323
DNMG432-HA	0.031	0.500	0.187	NC9025	1-02-034448
DNMG432-HA	0.031	0.500	0.187	PC5300	1-02-037117
DNMG432-HA	0.031	0.500	0.187	PC9030	1-02-013988

DNMG-HM

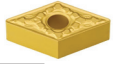
· For medium cutting, medium finishing and medium roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
DNMG431-HM	0.016	0.500	0.187	NC3010	1-02-029015
DNMG431-HM	0.016	0.500	0.187	NC3030	1-02-024366
DNMG432-HM	0.031	0.500	0.187	NC3010	1-02-026177
DNMG432-HM	0.031	0.500	0.187	NC3030	1-02-024576

DNMG-VM

· For medium cutting, medium finishing and medium roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
DNMG431-VM	0.016	0.500	0.187	PC5300	1-02-040152
DNMG432-VM	0.031	0.500	0.187	NC3220	1-02-045148
DNMG432-VM	0.031	0.500	0.187	PC5300	1-02-039830
DNMG433-VM	0.047	0.500	0.187	NC3220	1-02-047653

TCMT-HMP

· Excellent chip control at wide range of cutting conditions. For medium cutting of stainless steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
TCMT21.51-HMP	0.016	0.250	0.094	NC3010	1-02-029586
TCMT21.51-HMP	0.016	0.250	0.094	NC3030	1-02-024191
TCMT21.51-HMP	0.016	0.250	0.094	NC3120	1-02-025699
TCMT21.51-HMP	0.016	0.250	0.094	NC6110	1-02-027914
TCMT21.52-HMP	0.031	0.250	0.094	NC3015	1-02-016840
TCMT21.52-HMP	0.031	0.250	0.094	NC3030	1-02-025301
TCMT21.52-HMP	0.031	0.250	0.094	NC3120	1-02-025829
TCMT21.52-HMP	0.031	0.250	0.094	NC9020	1-02-016841
TCMT32.51-HMP	0.016	0.375	0.156	NC3030	1-02-025305
TCMT32.51-HMP	0.016	0.375	0.156	NC6110	1-02-026159
TCMT32.51-HMP	0.016	0.375	0.156	NC9020	1-02-014511
TCMT32.51-HMP	0.016	0.375	0.156	NC9025	1-02-034979
TCMT32.52-HMP	0.031	0.375	0.156	NC3010	1-02-027656
TCMT32.52-HMP	0.031	0.375	0.156	NC3030	1-02-024414
TCMT32.52-HMP	0.031	0.375	0.156	NC3120	1-02-025643
TCMT32.52-HMP	0.031	0.375	0.156	NC9020	1-02-014512

TNMG-HM

· For medium cutting, medium finishing and medium roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
TNMG331-HM	0.016	0.375	0.125	NC3030	1-02-025302
TNMG332-HM	0.031	0.375	0.125	NC3020	1-02-016240
TNMG332-HM	0.031	0.375	0.125	NC3030	1-02-021874
TNMG332-HM	0.031	0.375	0.125	NC3120	1-02-025644
TNMG431-HM	0.016	0.500	0.187	NC3020	1-02-016245
TNMG431-HM	0.016	0.500	0.187	NC3030	1-02-023488
TNMG432-HM	0.031	0.500	0.187	NC3010	1-02-025781
TNMG432-HM	0.031	0.500	0.187	NC3020	1-02-016252
TNMG432-HM	0.031	0.500	0.187	NC3030	1-02-022029

KORLOY TURNING INSERTS

TNMG-VM

· For medium cutting, medium finishing and medium roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
TNMG332-VM	0.031	0.375	0.125	NC3220	1-02-044835
TNMG431-VM	0.016	0.500	0.187	NC3120	1-02-029656
TNMG431-VM	0.016	0.500	0.187	NC5300	1-02-040164

VCGT-AK

· For aluminum cutting. High rake angle and low resistance cutting edge secures long tool life in continuous cutting.



Designation	Radius	Diameter	Thickness	Grade	Part Number
VCGT330.5-AK	0.008	0.375	0.187	H01	1-03-003495
VCGT331-AK	0.016	0.375	0.187	H01	1-03-003503
VCGT332-AK	0.031	0.375	0.187	H01	1-03-003518
VCGT333-AK	0.047	0.375	0.187	H01	1-03-003529

VCMT-HMP

· Excellent chip control at wide range of cutting conditions. For medium cutting of stainless steel.



Designation	Radius	Diameter	Thickness	Grade	Part Number
VCMT331-HMP	0.016	0.375	0.187	NC3120	1-02-025423
VCMT332-HMP	0.031	0.375	0.187	NC3020	1-02-016568
VCMT332-HMP	0.031	0.375	0.187	NC3120	1-02-025709

VNMG-HM

· For medium cutting, medium finishing and medium roughing steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
VNMG331-HM	0.016	0.375	0.187	NC3010	1-02-027422
VNMG331-HM	0.016	0.375	0.187	NC3020	1-02-016286
VNMG331-HM	0.016	0.375	0.187	NC3030	1-02-025793
VNMG332-HM	0.031	0.375	0.187	NC3010	1-02-025598
VNMG332-HM	0.031	0.375	0.187	NC3020	1-02-016290
VNMG332-HM	0.031	0.375	0.187	NC3030	1-02-024479
VNMG332-HM	0.031	0.375	0.187	NC3120	1-02-025972
VNMG332-HM	0.031	0.375	0.187	NC9020	1-02-014517
VNMG332-HM	0.031	0.375	0.187	PC9030	1-02-013586
VNMG432-HM	0.031	0.375	0.187	NC3030	1-02-036615
VNMG432-HM	0.031	0.375	0.187	NC3120	1-02-025507

VNMG-VF

· Good chip control quality on varied depth of cut. Used for finishing.



Designation	Radius	Diameter	Thickness	Grade	Part Number
VNMG331-VF	0.016	0.375	0.187	NC3010	1-02-024873
VNMG331-VF	0.016	0.375	0.187	NC3030	1-02-022624
VNMG332-VF	0.031	0.375	0.187	NC3030	1-02-022628

WCMT-C20

· For medium cutting, suitable for interrupted cutting and cast iron machining.



Designation	Radius	Diameter	Thickness	Grade	Part Number
WCMT1.81.52-C20	0.031	0.218	0.094	NCM325	1-02-005868
WCMT2.522-C20	0.031	0.312	0.094	PC3500	1-02-035751
WCMT21.52-C20	0.031	0.312	0.094	NCM325	1-02-005885
WCMT32.52-C20	0.031	0.375	0.156	NCM325	1-02-005905
WCMT432-C20	0.031	0.500	0.187	NCM325	1-02-005911
WCMT433-C20	0.031	0.500	0.187	NCM325	1-02-005920

WNMG-HA

· Used for light alloy, stainless steel machining. Sharp cutting edge generates low cutting force.



Designation	Radius	Diameter	Thickness	Grade	Part Number
WNMG331-HA	0.016	0.375	0.187	PC8110	1-02-034701
WNMG431-HA	0.016	0.500	0.187	H01	1-03-009397
WNMG432-HA	0.031	0.500	0.187	H01	1-03-009399

WNMG-HM

· For medium cutting, medium finishing and medium roughing on steel and cast iron.



Designation	Radius	Diameter	Thickness	Grade	Part Number
WNMG331-HM	0.016	0.375	0.187	NC3030	1-02-026509
WNMG331-HM	0.016	0.375	0.187	NC3120	1-02-026137
WNMG332-HM	0.031	0.375	0.187	NC3010	1-02-025357
WNMG332-HM	0.031	0.375	0.187	NC3030	1-02-026448
WNMG332-HM	0.031	0.375	0.187	NC3120	1-02-025737
WNMG431-HM	0.016	0.500	0.187	NC3030	1-02-025197
WNMG431-HM	0.016	0.500	0.187	NC3120	1-02-025386
WNMG432-HM	0.031	0.500	0.187	NC3010	1-02-025349
WNMG432-HM	0.031	0.500	0.187	NC3030	1-02-022411
WNMG432-HM	0.031	0.500	0.187	NC6110	1-02-025334
WNMG432-HM	0.031	0.500	0.187	NC9020	1-02-014519
WNMG433-HM	0.047	0.500	0.187	NC3120	1-02-025976
WNMG433-HM	0.047	0.500	0.187	PC9030	1-02-015967

TURNING TOOL HOLDERS

CCMT Tool Holders - SCLCR

· 5° End or Side Cutting Angle

· SC for Positive 80° Diamond CC_T Inserts



Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
SCLCR 06-2	CC_T 21.5_	0.375	0.375	0.500	3.50	SCLCR 06-2
SCLCR 08-3	CC_T 32.5_	0.500	0.500	0.625	4.00	SCLCR 08-3
SCLCR 10-3	CC_T 32.5_	0.625	0.625	0.750	4.50	SCLCR 10-3
SCLCR 12-3	CC_T 32.5_	0.750	0.750	1.000	4.50	SCLCR 12-3
SCLCR 12-4	CC_T 43_	0.750	0.750	1.000	4.50	SCLCR 12-4
SCLCR 16-3	CC_T 32.5_	1.000	1.000	1.250	6.00	SCLCR 16-3
SCLCR 16-4	CC_T 43_	1.000	1.000	1.250	6.00	SCLCR 16-4

CNMG Tool Holders - MCLNR

· 5° End or Side Cutting Angle

· MC for Negative 80° Diamond CNM_ Inserts



Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
MCLNR 12-4	CNM_ 43_	0.75	0.75	1.00	4.5	MCLNR 12-4
MCLNR 16-4	CNM_ 43_	1.00	1.00	1.25	6.0	MCLNR 16-4
MCLNR 16-5	CNM_ 54_	1.00	1.00	1.25	6.0	MCLNR 16-5
MCLNR 20-4	CNM_ 43_	1.25	1.25	1.50	6.0	MCLNR 20-4
MCLNR 20-5	CNM_ 54_	1.25	1.25	1.50	6.0	MCLNR 20-5

CNMG Tool Holders - MCKNR

· 5° End or Side Cutting Angle

· MC for Negative 55° Diamond CNM_ Inserts



Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
MCKNR 12-4	CNM_ 43_	0.75	0.75	1.00	4.5	MCKNR 12-4
MCKNR 16-4	CNM_ 43_	1.00	1.00	1.25	6.0	MCKNR 16-4
MCKNR 20-4	CNM_ 43_	1.25	1.25	1.50	6.0	MCKNR 20-5

Holders available in left hand as well

TURNING TOOL HOLDERS

CNMG Tool Holders - DCLNR

- R-Clamp Toolholder with 95° lead angle
- DCLN for Negative 80° Diamond CNM_ Inserts

Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
DCLNR 12-4	CNM_ 43_	0.750	0.750	1.00	4.50	3602092
DCLNR 16-4	CNM_ 43_	1.000	1.000	1.25	6.00	3602094
DCLNR 16-5	CNM_ 54_	1.000	1.000	1.25	6.00	3602755
DCLNR 20-4	CNM_ 43_	1.250	1.250	1.50	6.00	3602637
DCLNR 20-6	CNM_ 64_	1.250	1.250	1.50	6.00	3602763



CNMG Tool Holders - DCLNR

- Double Clamp Toolholder with 95° lead angle
- DCLN for Negative 80° Diamond CNM_ Inserts

Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
DCLNR 123	CNM_ 33_	0.750	0.750	1.00	4.50	MIT-371080
DCLNR 124	CNM_ 43_	0.750	0.750	1.00	4.50	MIT-371101
DCLNR 164	CNM_ 43_	1.000	1.000	1.25	6.00	MIT-371389
DCLNR 204	CNM_ 43_	1.250	1.250	1.50	6.00	MIT-371670



DCMT Tool Holders - SDJCR

- 3° Side Cutting Angle
- SD for Positive 55° Diamond DCMT Inserts

Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
SDJCR 06-2	DCMT 21.5_	0.375	0.375	0.500	3.50	SDJCR 06-2
SDJCR 08-3	DCMT 32.5_	0.500	0.500	0.625	4.00	SDJCR 08-3
SDJCR 10-3	DCMT 32.5_	0.625	0.625	0.750	4.50	SDJCR 10-3
SDJCR 12-3	DCMT 32.5_	0.750	0.750	0.875	4.50	SDJCR 12-3
SDJCR 16-3	DCMT 32.5_	1.000	1.000	1.250	6.00	SDJCR 16-3



Holders available in left hand as well

TURNING TOOL HOLDERS

DNMG Tool Holders - MDJNR

- 3° Side Cutting Edge Angle
- MD for Negative 55° Diamond DNM_ Inserts



Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
MDJNR 12-4	DNM_ 43_	0.750	0.750	1.00	4.5	MDJNR 12-4
MDJNR 16-4	DNM_ 43_	1.000	1.000	1.25	6.0	MDJNR 16-4
MDJNR 20-4	DNM_ 43_	1.250	1.250	1.50	6.0	MDJNR 20-4
MDJNR 24-4	DNM_ 43_	1.500	1.500	2.00	6.0	MDJNR 24-4

DNMG Tool Holders - DDJNR

- Double Clamp with 93° lead angle
- DDJN for Negative 55° Diamond DNM_ Inserts



Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
DDJNR-123	DNM_ 33_	0.750	0.750	1.00	4.5	MIT-371143
DDJNR-124	DNM_ 43_	0.750	0.750	1.00	4.5	MIT-371160
DDJNR-164	DNM_ 43_	1.000	1.000	1.25	6.0	MIT-371442
DDJNR-204	DNM_ 43_	1.250	1.250	1.50	6.0	MIT-371696

SNMG Tool Holders - MSDNN

- 45° Side Cutting Edge Angle
- MS for Negative Square SNM_ Inserts



Description	Applicable Insert	Shank Height	Shank Width	OAL	Part Number
MSDNN 12-4	SNM_ 43_	0.750	0.750	4.5	MSDNN 12-4
MSDNN 16-4	SNM_ 43_	1.000	1.000	6.0	MSDNN 16-4

Holders available in left hand as well

TURNING TOOL HOLDERS

VCMT Tool Holders - SVJCR

- 3° Side Cutting Edge Angle
- SV for Positive 35° Diamond VC_T Inserts

Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
SVJCR 08-2	VC_T 22_	0.500	0.500	0.500	4.0	SVJCR 08-2
SVJCR 12-3	VC_T 33_	0.750	0.750	1.000	4.5	SVJCR 12-3
SVJCR 16-3	VC_T 33_	1.000	1.000	1.250	5.0	SVJCR 16-3



VNMG Tool Holders - MVJNR

- 3° Side Cutting Edge Angle
- MV for Positive 35° Diamond VNM_ Inserts

Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
MVJNR 12-3	VNM_ 33_	0.750	0.750	1.00	4.5	MVJNR 12-3
MVJNR 16-3	VNM_ 33_	1.000	1.000	1.25	6.0	MVJNR 16-3
MVJNR 16-4	VNM_ 43_	1.000	1.000	1.25	6.0	MVJNR 16-4



VNMG Tool Holders - DVJNR

- Double Clamp with 93° lead angle
- DVJN for Positive 35° Diamond VNM_ Inserts

Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
DVJNR-123	VNM_ 33_	0.750	0.750	1.00	4.5	MIT-371274
DVJNR-163	VNM_ 33_	1.000	1.000	1.25	6.0	MIT-371581
DVJNR-203	VNM_ 33_	1.250	1.250	1.50	6.0	MIT-430166



Holders available in left hand as well

TURNING TOOL HOLDERS

WNMG Tool Holders - MWLNR

- 5° End or Side Cutting Edge Angle
- MW for Negative 80° Trigon WNM_ Inserts



Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
MWLNR 12-3	WNM_ 33_	0.750	0.750	1.00	4.5	MWLNR 12-3
MWLNR 12-4	WNM_ 43_	0.750	0.750	1.00	4.5	MWLNR 12-4
MWLNR 16-3	WNM_ 33_	1.000	1.000	1.25	6.0	MWLNR 16-3
MWLNR 16-4	WNM_ 43_	1.000	1.000	1.25	6.0	MWLNR 16-4

WNMG Tool Holders - DWLNR

- R-Clamp Toolholder with 95° lead angle
- DWLN for Negative 80° Trigon WNM_ Inserts



Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
DWLNR 12-3	WNM_ 33_	0.750	0.750	1.00	4.5	3602595
DWLNR 12-4	WNM_ 43_	0.750	0.750	1.00	4.5	3602108
DWLNR 16-3	WNM_ 33_	1.000	1.000	1.25	6.0	3602596
DWLNR 16-4	WNM_ 43_	1.000	1.000	1.25	6.0	3602110

WNMG Tool Holders - DWLNR

- Double Clamp Toolholder with 95° lead angle
- DWLN for Negative 80° Trigon WNM_ Inserts



Description	Applicable Insert	Shank Height	Shank Width	HEAD	OAL	Part Number
DWLNR 123	WNM_ 33_	0.750	0.750	1.00	4.5	MIT-371320
DWLNR 124	WNM_ 43_	0.750	0.750	1.00	4.5	MIT-371346
DWLNR 163	WNM_ 33_	1.000	1.000	1.25	6.0	MIT-371637
DWLNR 164	WNM_ 43_	1.000	1.000	1.25	6.0	MIT-371653

Holders available in left hand as well

BORING BARS

House Brand CCMT Steel Boring Bars

Part Number	Description
S-SCLCR 5-2	5/16" CCMT BORING BAR
S-SCLCR 6-2	3/8" CCMT BORING BAR
S-SCLCR 8-2	1/2" CCMT BORING BAR
S-SCLCR 8-3	1/2" CCMT BORING BAR
S-SCLCR 10-3	5/8" CCMT BORING BAR
S-SCLCR 12-3	3/4" CCMT BORING BAR
S-SCLCR 16-3	1" CCMT BORING BAR



Ultra-Dex CNMG Steel Boring Bars

Part Number	Description
S12R-MCLNR3	3/4" CNMG BORING BAR
S16S-MCLNR4	1" CNMG BORING BAR
S20S-MCLNR4	1-1/4" CNMG BORING BAR
S24U-MCLNR4	1-1/2" CNMG BORING BAR
S32V-MCLNR4	2" CNMG BORING BAR

Ultra-Dex CCMT Steel Boring Bars

Part Number	Description
S06K-SCLCR2	3/8" CCMT BORING BAR
S08M-SCLCR3	1/2" CCMT BORING BAR
S10Q-SCLCR3	5/8" CCMT BORING BAR
S12Q-SCLCR3	3/4" CCMT BORING BAR
S16R-SCLCR3	1" CCMT BORING BAR



Ultra-Dex CNMG Steel Coolant Thru Boring Bars

Part Number	Description
A12R-MCLNR3	3/4" CNMG BORING BAR
A16S-MCLNR4	1" CNMG BORING BAR
A20S-MCLNR4	1-1/4" CNMG BORING BAR
A24U-MCLNR4	1-1/2" CNMG BORING BAR
A32V-MCLNR4	2" CNMG BORING BAR

Ultra-Dex CCMT Steel Coolant Thru Boring Bars

Part Number	Description
A06K-SCLCR2	3/8" CCMT BORING BAR
A08M-SCLCR3	1/2" CCMT BORING BAR
A10Q-SCLCR3	5/8" CCMT BORING BAR
A12Q-SCLCR3	3/4" CCMT BORING BAR
A16R-SCLCR3	1" CCMT BORING BAR



Ultra-Dex CNMG Carbide Coolant Thru Boring Bars

Part Number	Description
E12Q-MCLNR3	3/4" CNMG BORING BAR
E16R-MCLNR4	1" CNMG BORING BAR
E20U-MCLNR4	1-1/4" CNMG BORING BAR
E24U-MCLNR4	1-1/2" CNMG BORING BAR

Ultra-Dex CCMT Carbide Coolant Thru Boring Bars

Part Number	Description
E06M-SCLCR2	3/8" CCMT BORING BAR
E08R-SCLCR3	1/2" CCMT BORING BAR
E10Q-SCLCR3	5/8" CCMT BORING BAR
E12Q-SCLCR3	3/4" CCMT BORING BAR
E16R-SCLCR3	1" CCMT BORING BAR



Boring bars available in left hand as well

Ultra-Dex DCMT Steel Boring Bars

Part Number	Description
S06K-SDUCR2	3/8" DCMT BORING BAR
S08M-SDUCR2	1/2" DCMT BORING BAR
S10Q-SDUCR2	5/8" DCMT BORING BAR
S12Q-SDUCR3	3/4" DCMT BORING BAR
S16R-SDUCR3	1" DCMT BORING BAR



Ultra-Dex DNMG Steel Boring Bars

Part Number	Description
S12R-MDUNR3	3/4" DNMG BORING BAR
S16S-MDUNR3	1" DNMG BORING BAR
S20T-MDUNR3	1-1/4" DNMG BORING BAR
S20T-MDUNR4	1-1/4" DNMG BORING BAR
S24U-MDUNR4	1-1/2" DNMG BORING BAR

Ultra-Dex DCMT Steel Coolant Thru Boring Bars

Part Number	Description
A06K-SDUCR2	3/8" DCMT BORING BAR
A08M-SDUCR2	1/2" DCMT BORING BAR
A10Q-SDUCR2	5/8" DCMT BORING BAR
A12Q-SDUCR3	3/4" DCMT BORING BAR
A16R-SDUCR3	1" DCMT BORING BAR



Ultra-Dex DNMG Steel Coolant Thru Boring Bars

Part Number	Description
A12R-MDUNR3	3/4" DNMG BORING BAR
A16S-MDUNR3	1" DNMG BORING BAR
A20T-MDUNR3	1-1/4" DNMG BORING BAR
A20T-MDUNR4	1-1/4" DNMG BORING BAR
A24U-MDUNR4	1-1/2" DNMG BORING BAR

Ultra-Dex DCMT Carbide Coolant Thru Boring Bars

Part Number	Description
E06M-SDUCR2	3/8" DCMT BORING BAR
E08R-SDUCR2	1/2" DCMT BORING BAR
E10Q-SDUCR2	5/8" DCMT BORING BAR
E12Q-SDUCR3	3/4" DCMT BORING BAR
E16R-SDUCR3	1" DCMT BORING BAR



Boring bars available in left hand as well

BORING BARS

Ultra-Dex TCMT Steel Boring Bars

Part Number	Description
S06K-STUCR2	3/8" TCMT BORING BAR
S08M-STUCR3	1/2" TCMT BORING BAR
S10Q-STUCR2	5/8" TCMT BORING BAR
S12Q-STUCR3	3/4" TCMT BORING BAR
S16R-STUCR3	1" TCMT BORING BAR



Toolmex VNMG Steel Boring Bars

Part Number	Description
S-MVUNR 16-3	1" VNMG BORING BAR
S-MVUNR 20-3	1-1/4" VNMG BORING BAR
S-MVUNR 24-3	1-1/2" VNMG BORING BAR
S-MVUNR 28-4	1-3/4" VNMG BORING BAR
S-MVUNR 32-4	2" VNMG BORING BAR



Ultra-Dex TCMT Steel Coolant Thru Boring Bars

Part Number	Description
A06K-STUCR2	3/8" TCMT BORING BAR
A08M-STUCR3	1/2" TCMT BORING BAR
A10Q-STUCR2	5/8" TCMT BORING BAR
A12Q-STUCR3	3/4" TCMT BORING BAR
A16R-STUCR3	1" TCMT BORING BAR



Ultra-Dex VNMG Steel Boring Bars

Part Number	Description
S16S MVUNR3	1" VNMG BORING BAR
S20T MVUNR3	1-1/4" VNMG BORING BAR
S24U MVUNR3	1-1/2" VNMG BORING BAR



Ultra-Dex TCMT Carbide Coolant Thru Boring Bars

Part Number	Description
E06M-STUCR2	3/8" TCMT BORING BAR
E08R-STUCR3	1/2" TCMT BORING BAR
E10Q-STUCR2	5/8" TCMT BORING BAR
E12Q-STUCR3	3/4" TCMT BORING BAR
E16R-STUCR3	1" TCMT BORING BAR



Iscar WB_T Boring Bars

Part Number	Description
3601806	1/4" WB_T STEEL BORING BAR
3601807	5/16" WB_T STEEL BORING BAR
3601955	1/4" WB_T CARBIDE BORING BAR
3601956	5/16" WB_T CARBIDE BORING BAR



Mitsubishi WC_T Boring Bars

Part Number	Description
MIT-103256	3/16" WC_T HEAVY METAL BORING BAR
MIT-103258	1/4" WC_T HEAVY METAL BORING BAR
MIT-103259	5/16" WC_T HEAVY METAL BORING BAR
MIT-103260	5/16" WC_T HEAVY METAL BORING BAR W/C
MIT-103261	3/8" WC_T HEAVY METAL BORING BAR
MIT-103263	1/2" WC_T HEAVY METAL BORING BAR
MIT-103265	5/8" WC_T HEAVY METAL BORING BAR
MIT-110150	5/8" WC_T HEAVY METAL BORING BAR W/C
MIT-103266	3/4" WC_T HEAVY METAL BORING BAR



Boring bars available in left hand as well

Ultra-Dex WCMT Steel Boring Bars

Part Number	Description
S06K-SWLCR2	3/8" WCMT BORING BAR
S08M-SWLCR2	1/2" WCMT BORING BAR
S10Q-SWLCR3	5/8" WCMT BORING BAR
S12Q-SWLCR3	3/4" WCMT BORING BAR
S16R-SWLCR3	1" WCMT BORING BAR



Ultra-Dex WNMG Steel Boring Bars

Part Number	Description
S12R-MWLN3	3/4" WNMG BORING BAR
S16S-MWLN4	1" WNMG BORING BAR
S20S-MWLN4	1-1/4" WNMG BORING BAR
S24U-MWLN4	1-1/2" WNMG BORING BAR
S32V-MWLN4	2" WNMG BORING BAR



Ultra-Dex WCMT Steel Coolant Thru Boring Bars

Part Number	Description
A06K-SWLCR2	3/8" WCMT BORING BAR
A08M-SWLCR2	1/2" WCMT BORING BAR
A10Q-SWLCR3	5/8" WCMT BORING BAR
A12Q-SWLCR3	3/4" WCMT BORING BAR
A16R-SWLCR3	1" WCMT BORING BAR



Ultra-Dex WNMG Steel Coolant Thru Boring Bars

Part Number	Description
A12R-MWLN3	3/4" WNMG BORING BAR
A16S-MWLN4	1" WNMG BORING BAR
A20S-MWLN4	1-1/4" WNMG BORING BAR
A24U-MWLN4	1-1/2" WNMG BORING BAR
A32V-MWLN4	2" WNMG BORING BAR



Ultra-Dex WCMT Carbide Coolant Thru Boring Bars

Part Number	Description
E06M-SWLCR2	3/8" WCMT BORING BAR
E08R-SWLCR2	1/2" WCMT BORING BAR
E10Q-SWLCR3	5/8" WCMT BORING BAR
E12Q-SWLCR3	3/4" WCMT BORING BAR
E16R-SWLCR3	1" WCMT BORING BAR



Ultra-Dex WNMG Carbide Coolant Thru Boring Bars

Part Number	Description
E12Q-MWLN3	3/4" WNMG BORING BAR
E16R-MWLN4	1" WNMG BORING BAR
E20U-MWLN4	1-1/4" WNMG BORING BAR
E24U-MWLN4	1-1/2" WNMG BORING BAR

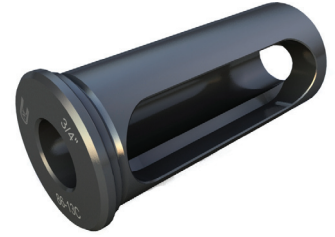


Boring bars available in left hand as well

TOOL HOLDER BUSHINGS

Tool Holder Bushing Type "C"

- Designed for universal use on all CNC Turning Machines
- Adapt a wide variety of Boring Bars, Drills, Reamers and Shank Type Tools



Description	Length of Slot	Length Under Head	# of Slots	Part Number
3/4" x 1/4" "C" TOOL HOLDER BUSHING	1-1/2"	2"	1	BBC0750250
3/4" x 5/16" "C" TOOL HOLDER BUSHING	1-1/2"	2"	1	BBC0750312
3/4" x 3/8" "C" TOOL HOLDER BUSHING	1-1/2"	2"	1	BBC0750375
3/4" x 1/2" "C" TOOL HOLDER BUSHING	1-1/2"	2"	1	BBC0750500
3/4 x 5/8 "C" TOOL HOLDER BUSHING	1-1/2"	2"	1	BBC0750625
1" x 1/4" "C" TOOL HOLDER BUSHING	2-3/8"	2-3/4"	1	BBC1000250
1" x 5/16" "C" TOOL HOLDER BUSHING	2-3/8"	2-3/4"	1	BBC1000312
1" x 3/8" "C" TOOL HOLDER BUSHING	2-3/8"	2-3/4"	1	BBC1000375
1" x 1/2" "C" TOOL HOLDER BUSHING	2-3/8"	2-3/4"	1	BBC1000500
1" x 5/8" "C" TOOL HOLDER BUSHING	2-3/8"	2-3/4"	1	BBC1000625
1" x 3/4" "C" TOOL HOLDER BUSHING	2-3/8"	2-3/4"	1	BBC1000750
1-1/4" x 3/8" "C" TOOL HOLDER BUSHING	2-3/4"	3-1/4"	1	BBC1250375
1-1/4" x 1/2" "C" TOOL HOLDER BUSHING	2-3/4"	3-1/4"	1	BBC1250500
1-1/4" x 5/8" "C" TOOL HOLDER BUSHING	2-3/4"	3-1/4"	1	BBC1250625
1-1/4" x 3/4" "C" TOOL HOLDER BUSHING	2-3/4"	3-1/4"	1	BBC1250750
1-1/4 x 7/8 "C" TOOL HOLDER BUSHING	2-3/4"	3-1/4"	1	BBC1250875
1-1/4" x 1" "C" TOOL HOLDER BUSHING	2-3/4"	3-1/4"	1	BBC1251000
1-1/2" x 3/8" "C" TOOL HOLDER BUSHING	3"	3-3/8"	1	BBC1500375
1-1/2" x 1/2" "C" TOOL HOLDER BUSHING	3"	3-3/8"	1	BBC1500500
1-1/2" x 5/8" "C" TOOL HOLDER BUSHING	3"	3-3/8"	1	BBC1500625
1-1/2" x 3/4" "C" TOOL HOLDER BUSHING	3"	3-3/8"	1	BBC1500750
1-1/2" x 7/8" "C" TOOL HOLDER BUSHING	3"	3-3/8"	1	BBC1500875
1-1/2" x 1" "C" TOOL HOLDER BUSHING	3"	3-3/8"	1	BBC1501000
1-1/2" x 1-1/4" "C" TOOL HOLDER BUSHING	3"	3-3/8"	1	BBC1501250

Clamps



Part Number	A	C	D	Thread
CL-6	0.31	0.58	0.44	10-32
CL-7	0.31	0.64	0.31	10-32
CL-9	0.43	0.75	0.66	5/16-24
CL-12	0.43	0.88	0.66	5/16-24
CL-20	0.37	0.73	0.38	1/4-28
CL-30	0.43	1	0.66	5/16-24

Cam Pin



Part Number	Insert IC	Length	Hex Top	Hex Bottom
LP-55	1/2	0.71	3/32	1/8
LP-59	3/8	0.45	3/32	1/8

Clamps - Top Notch



Part Number	A	B	C	D
TF-72	0.86	0.43	0.37	0.31
TF-73	0.86	0.43	0.37	0.31
TF-74	0.53	0.34	0.28	0.24

Lock Pin



Part Number	Insert IC	Length	Hex	Thread
NL-34L	3/8	0.51	5/64	10-32
NL-43	1/2	0.42	3/32	10-32
NL-46	1/2	0.67	3/32	1/4-28
NL-58	5/8	0.86	1/8	5/16-24

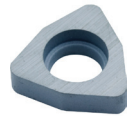
Screws - Socket Head Cap

Part Number	Length	Thread
S-310	1/2	6-32
S-412	3/4	10-32



Shim Seats

Part Number	Insert IC	Thickness	Radius
ICSN-422	1/2	1/8	1/32
ICSN-433	1/2	3/16	3/64
ICSN-533	5/8	3/16	3/64
IDSN-322	3/8	1/8	1/32
IDSN-433	1/2	3/16	3/64
ITSN-333	3/8	3/16	3/64
ITSN-433	1/2	3/16	3/64
IVSN-322	3/8	1/8	1/32
IWSN-322	3/8	1/8	1/32
IWSN-433	1/2	3/16	3/64



Screws - Differential

Part Number	A	B	C	Hex
XNS-35	0.59	0.22	0.22	3/32
XNS-37	0.84	0.31	0.31	3/32
XNS-46	0.75	0.31	0.31	1/8
XNS-47	0.81	0.28	0.28	1/8
XNS-48	1.00	0.37	0.37	1/8
XNS-59	1.12	0.47	0.41	5/32
XNS-510	1.25	0.50	0.50	5/32



Screws - Torx

Part Number	Head Diameter	Head Angle	Torx
M3.5-0.6 x .315	0.209	60	T-15
M3.5-0.6 x .472	0.209	60	T-15



ISCAR THREADING INSERTS

Inserts - Partial Profile 55°

· Laydown Threading Inserts for Steam, Gas and Water Pipes - Dry Seal.
ERM / IRM - Ground Profile with Chipformer



Designation	Pitch mm	Pitch TPI	Grade	Part Number
08IR A 55	0.5 - 1.5	48-16	IC908	5990416
11IR A 55	0.5 - 1.5	48-16	IC908	5902147
16ERM AG 55	0.5 - 3.0	48-8	IC808	5921253
16ERM AG 55	0.5 - 3.0	48-8	IC908	5921213
16IR AG 55	0.5 - 3.0	48-8	IC908	5901913
16IRM AG 55	0.5 - 3.0	48-8	IC908	5921215

Inserts - Partial Profile 60°

· Laydown Threading Inserts for General Industry.
ERM / IRM - Ground Profile with Chipformer



Designation	Pitch mm	Pitch TPI	Grade	Part Number
06IRM A 60	0.5 - 1.5	48-16	IC228	5920245
08IRM A 60	0.5 - 1.5	48-16	IC808	5903377
08IRM A 60	0.5 - 1.5	48-16	IC908	5921209
11IL A 60	0.5 - 1.5	48-16	IC908	5902104
11IR A 60	0.5 - 1.5	48-16	IC908	5901906
11IRM A 60	0.5 - 1.5	48-16	IC808	5921250
11IRM A 60	0.5 - 1.5	48-16	IC908	5921210
16EL AG 60	0.5 - 3.0	48-8	IC908	5902119
16ERM A 60	0.5 - 1.5	48-16	IC808	5903373
16ERM A 60	0.5 - 1.5	48-16	IC908	5921206
16ERM AG 60	0.5 - 3.0	48-8	IC808	5903266
16ERM AG 60	0.5 - 3.0	48-8	IC908	5901519
16ERM G 60	1.75 - 3.0	14-8	IC808	5921252
16IL AG 60	0.5 - 3.0	48-8	IC908	5902121
16IR AG 60	0.5 - 3.0	48-8	IC908	5901910
16IRM A 60	0.5 - 1.5	48-16	IC908	5902389
16IRM AG 60	0.5 - 3.0	48-8	IC808	5921236
16IRM AG 60	0.5 - 3.0	48-8	IC908	5901523
22ERM N 60	3.5 - 5.0	7-5	IC908	5921208
22IRM N 60	3.5 - 5.0	7-5	IC808	5903341
22IRM N 60	3.5 - 5.0	7-5	IC908	5921212

Inserts - ISO

· Laydown Threading Inserts, for Aviation and Aerospace Industry
ERM / IRM - Ground Profile with Chipformer



Designation	Pitch mm	Grade	Part Number
11IR 1.50 ISO	1.50	IC908	5901919
11IR 2.00 ISO	2.00	IC908	5902154
16ER 1.00 ISO	1.00	IC908	5901951
16ERM 0.75 ISO	.750	IC908	5921221
16ERM 1.00 ISO	1.00	IC808	5921240
16ERM 1.00 ISO	1.00	IC908	5901517
16ERM 1.25 ISO	1.25	IC808	5921249
16ERM 1.25 ISO	1.25	IC908	5901562
16ERM 1.50 ISO	1.50	IC808	5903267
16ERM 1.50 ISO	1.50	IC908	5992237
16ERM 1.75 ISO	1.75	IC808	5903359
16ERM 1.75 ISO	1.75	IC908	5901563
16ERM 2.00 ISO	2.00	IC908	5992257
16ERM 2.50 ISO	2.50	IC808	5921254
16ERM 2.50 ISO	2.50	IC908	5901564
16ERM 3.00 ISO	3.00	IC808	5921248
16ERM 3.00 ISO	3.00	IC908	5901518
16IRM 1.00 ISO	1.00	IC908	5901520
16IRM 1.25 ISO	1.25	IC908	5901574
16IRM 1.50 ISO	1.50	IC808	5921237
16IRM 1.50 ISO	1.50	IC908	5992247
16IRM 1.75 ISO	1.75	IC908	5901575
16IRM 2.00 ISO	2.00	IC908	5992277
16IRM 2.50 ISO	2.50	IC908	5901576
16IRM 3.00 ISO	3.00	IC908	5901521

Inserts - NPTF

· Laydown Threading Inserts for Steam, Gas and Water Pipes
ERM / IRM - Ground Profile with Chipformer



Designation	TPI	Grade	Part Number
11IR 18 NPTF	18.0	IC908	5902325
16ER 11.5 NPTF	11.5	IC908	5902314
16ER 14 NPTF	14.0	IC908	5902315
16ER 18 NPTF	18.0	IC908	5902409
16ER 27 NPTF	27.0	IC908	5902408
16IR 14 NPTF	14.0	IC908	5902515

Inserts - NPT

· Laydown Threading Inserts for Steam, Gas and Water Pipes
ERM / IRM - Ground Profile with Chipformer



Designation	TPI	Grade	Part Number
06IR 27 NPT	27.0	IC228	5901382
08IR 18 NPT	18.0	IC228	5996066
08IR 18 NPT	18.0	IC908	5990071
11IR 14 NPT	14.0	IC908	5902030
11IR 18 NPT	18.0	IC908	5902041
16ER 18 NPT	18.0	IC908	5902115
16ER 27 NPT	27.0	IC908	5902132
16ERM 8 NPT	8.0	IC908	5901571
16ERM 11.5 NPT	11.5	IC908	5901572
16ERM 14 NPT	14.0	IC808	5903370
16ERM 14 NPT	14.0	IC908	5901573
16ERM 18 NPT	18.0	IC908	5902382
16IRM 8 NPT	8.0	IC908	5901583
16IRM 11.5 NPT	11.5	IC808	5921242
16IRM 11.5 NPT	11.5	IC908	5901584
16IRM 14 NPT	14.0	IC808	5921256
16IRM 14 NPT	14.0	IC908	5901585

Inserts - UNJ

· Laydown Threading Inserts, for Aviation and Aerospace Industry



Designation	TPI	Grade	Part Number
16ER 8 UNJ	8.0	IC908	5994680
16ER 12 UNJ	12.0	IC908	5902365
16ER 14 UNJ	14.0	IC908	5995090
16ER 16 UNJ	16.0	IC908	5995220
16ER 18 UNJ	18.0	IC908	5902127
16ER 20 UNJ	20.0	IC908	5902148
16ER 24 UNJ	24.0	IC908	5902166
16ER 28 UNJ	28.0	IC908	5902243
16ER 32 UNJ	32.0	IC908	5902244
16IR 12 UNJ	12.0	IC908	5902198
16IR 16 UNJ	16.0	IC908	5902199

Inserts - UN

· Laydown Threading Inserts, for General Industry
ERM / IRM - Ground Profile with Chipformer



Designation	TPI	Grade	Part Number
11IR 14 UN	14.0	IC908	5902176
11IR 16 UN	16.0	IC908	5902177
11IR 18 UN	18.0	IC908	5902178
11IR 20 UN	20.0	IC908	5902165
11IR 24 UN	24.0	IC908	5902506
16ER 9 UN	9.0	IC908	5902143
16ER 10 UN	10.0	IC908	5901996
16ER 11 UN	11.0	IC908	5902596
16ER 14 UN	14.0	IC908	5993258
16ER 24 UN	24.0	IC908	5901966
16ER 28 UN	28.0	IC908	5902002
16ER 32 UN	32.0	IC908	5902004
16ER 40 UN	40.0	IC908	5902008
16ER 56 UN	56.0	IC908	5902012
16ERB 11 UN	11.0	IC908	5902811
16ERM 8 UN	8.0	IC808	5903372
16ERM 8 UN	8.0	IC908	5902383
16ERM 12 UN	12.0	IC808	5921246
16ERM 12 UN	12.0	IC908	5901567
16ERM 13 UN	13.0	IC908	5902339
16ERM 14 UN	14.0	IC808	5903371
16ERM 14 UN	14.0	IC908	5902294
16ERM 16 UN	16.0	IC808	5921255
16ERM 16 UN	16.0	IC908	5901568
16ERM 18 UN	18.0	IC808	5903367
16ERM 18 UN	18.0	IC908	5901569
16ERM 20 UN	20.0	IC808	5903369
16ERM 20 UN	20.0	IC908	5901570
16ERM 24 UN	24.0	IC908	5902384
16IR 10 UN	10.0	IC908	5902017
16IR 24 UN	24.0	IC908	5902499
16IR 28 UN	28.0	IC908	5902461
16IRM 8 UN	8.0	IC908	5902387
16IRM 12 UN	12.0	IC808	5921251
16IRM 12 UN	12.0	IC908	5901579
16IRM 14 UN	14.0	IC808	5990323
16IRM 14 UN	14.0	IC908	5902295
16IRM 16 UN	16.0	IC908	5901580
16IRM 18 UN	18.0	IC908	5901581
16IRM 20 UN	20.0	IC908	5901582

CARMEX PRECISION THREADING INSERTS

Inserts - Partial Profile 60°

· Laydown Threading Inserts for General Industry.
ERB / IRB - Ground Profile with Sintered Chip-Breaker



Designation	Pitch mm	Pitch TPI	Grade	Part Number
061R A60	0.5 - 1.25	48-20	BMA	061R A60 BMA
081L A60	0.5 - 1.5	48-16	BMA	081L A60 BMA
081R A60	0.5 - 1.5	48-16	BMA	081R A60 BMA
111L A60	0.5 - 1.5	48-16	BMA	111L A60 BMA
111R A60	0.5 - 1.5	48-16	BMA	111R A60 BMA
16ER AG60	0.5 - 3.0	48-8	BMA	16ER AG60 BMA
16ER G60	1.75 - 3.0	14-8	BMA	16ER G60 BMA
16ERB AG60	0.5 - 3.0	48-8	BMA	16ERB AG60 BMA
161L G60	1.75 - 3.0	14-8	BMA	161L G60 BMA
161R AG60	0.5 - 3.0	48-8	BMA	161R AG60 BMA
161R G60	1.75 - 3.0	14-8	BMA	161R G60 BMA
161RB AG60	0.5 - 3.0	48-8	BMA	161RB AG60 BMA
22ER N60	3.5 - 5.0	7-5	BMA	22ER N60 BMA
221L N60	3.5 - 5.0	7-5	BMA	221L N60 BMA

Inserts - ISO

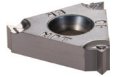
· Laydown Threading Inserts, for Aviation and Aerospace Industry
ERB / IRB - Ground Profile with Chipformer



Designation	Pitch mm	Grade	Part Number
081R 1.75 ISO	1.75	BMA	081R 1.75 ISO BMA
111L 1.0 ISO	1.00	BMA	111L 1.0 ISO BMA
111R 1.0 ISO	1.00	BMA	111R 1.0 ISO BMA
111R 2.0 ISO	2.00	BMA	111R 2.0 ISO BMA
16ER .45 ISO	0.45	BMA	16ER .45 ISO BMA
16ER .8 ISO	0.80	BMA	16ER .8 ISO BMA
16ER 2.0 ISO	2.00	BMA	16ER 2.0 ISO BMA
16ERB 2.0 ISO	2.00	BMA	16ERB 2.0 ISO BMA
161R 3.5 ISO	3.50	BMA	161R 3.5 ISO BMA
161RB 1.0 ISO	1.00	BMA	161RB 1.0 ISO BMA
161RB 1.5 ISO	1.50	BMA	161RB 1.5 ISO BMA
161RB 2.0 ISO	2.00	BMA	161RB 2.0 ISO BMA
22ER 4.0 ISO	4.00	BMA	22ER 4.0 ISO BMA
221R 4.0 ISO	4.00	BMA	221R 4.0 ISO BMA

Inserts - NPT

· Laydown Threading Inserts for Steam, Gas and Water Pipes
ERB / IRB - Ground Profile with Chipformer



Designation	TPI	Grade	Part Number
081R 18NPT	18.0	BMA	081R 18NPT BMA
081R 27NPT	27.0	BMA	081R 27NPT BMA
11EL 18NPT	18.0	BMA	11EL 18NPT BMA
111L 14NPT	14.0	BMA	111L 14NPT BMA
111L 18NPT	18.0	BMA	111L 18NPT BMA
111R 14NPT	14.0	BMA	111R 14NPT BMA
111R 18NPT	18.0	BMA	111R 18NPT BMA
16ER 14NPT	14.0	BMA	16ER 14NPT BMA
16EL 14NPT	14.0	BMA	16EL 14NPT BMA
16EL 18NPT	18.0	BMA	16EL 18NPT BMA
16ER 14NPT	14.0	BMA	16ER 14NPT BMA
16ER 18NPT	18.0	BMA	16ER 18NPT BMA
16ER 27NPT BMA	27.0	BMA	16ER 27NPT BMA
16ERB 11.5NPT	11.5	BMA	16ERB 11.5NPT BMA
16ERB 14NPT	14.0	BMA	16ERB 14NPT BMA
16ERB 18NPT	18.0	BMA	16ERB 18NPT BMA
161L 14NPT	14.0	BMA	161L 14NPT BMA
161R 14NPT	14.0	BMA	161R 14NPT BMA
161RB 11.5NPT	11.5	BMA	161RB 11.5NPT BMA
161RB 14NPT	14.0	BMA	161RB 14NPT BMA

Inserts - NPTF

· Laydown Threading Inserts for Steam,
Gas and Water Pipes - Dry Seal



Designation	TPI	Grade	Part Number
081R 18NPTF	18.0	BMA	081R 18NPTF BMA
111R 14NPTF	14.0	BMA	111R 14NPTF BMA
16ER 11.5 NPTF	11.5	BMA	16ER 11.5 NPTF BMA
16ER 14 NPTF	14.0	BMA	16ER 14NPTF BMA
16ER 18NPTF	18.0	BMA	16ER 18NPTF BMA
16ER 27NPTF	27.0	BMA	16ER 27NPTF BMA
161R 11.5NPTF	11.5	BMA	161R 11.5 NPTF BMA
161R 14 NPTF	14.0	BMA	161R 14 NPTF BMA

CARMEX PRECISION THREADING INSERTS

Inserts - UN

· Laydown Threading Inserts, for General Industry
ERB / IRB - Ground Profile with Chipformer



Designation	TPI	Grade	Part Number
061R 24UN	24.0	BMA	061R 24UN BMA
081R 16UN	16.0	BMA	081R 16UN BMA
081R 18UN	18.0	BMA	081R 18UN BMA
081R 20UN	20.0	BMA	081R 20UN BMA
081R 24UN	24.0	BMA	081R 24UN BMA
081R 28UN	28.0	BMA	081R 28UN BMA
081R 32UN	32.0	BMA	081R 32UN BMA
111R 11UN	11.0	BMA	111R 11UN BMA
111R 12UN	12.0	BMA	111R 12UN BMA
111R 13UN	13.0	BMA	111R 13UN BMA
111R 16UN	16.0	BMA	111R 16UN BMA
111R 18UN	18.0	BMA	111R 18UN BMA
111R 20UN	20.0	BMA	111R 20UN BMA
111R 24UN	24.0	BMA	111R 24UN BMA
111R 28UN	28.0	BMA	111R 28UN BMA
16ER 8UN	8.0	BMA	16ER 8UN BMA
16ER 10UN	10.0	BMA	16ER 10UN BMA
16ER 13UN	13.0	BMA	16ER 13UN BMA
16ER 18UN	18.0	BMA	16ER 18UN BMA
16ER 20UN	20.0	BMA	16ER 20UN BMA
16ER 27UN	27.0	BMA	16ER 27UN BMA
16ER 32UN	32.0	BMA	16ER 32UN BMA
16ERB 12UN	12.0	BMA	16ERB 12UN BMA
16ERB 14UN	14.0	BMA	16ERB 14UN BMA
16ERB 16UN	16.0	BMA	16ERB 16UN BMA
16ERB 18UN	18.0	BMA	16ERB 18UN BMA
16ERB 20UN	20.0	BMA	16ERB 20UN BMA
16ERB 24UN	24.0	BMA	16ERB 24UN BMA
161R 32UN	32.0	BMA	161R 32UN BMA
161RB 8UN	8.0	BMA	161RB 8UN BMA
161RB 12UN	12.0	BMA	161RB 12UN BMA
161RB 14UN	14.0	BMA	161RB 14UN BMA
161RB 16UN	16.0	BMA	161RB 16UN BMA
161RB 18UN	18.0	BMA	161RB 18UN BMA
161RB 20UN	20.0	BMA	161RB 20UN BMA
161RB 24UN	24.0	BMA	161RB 24UN BMA
27ER 4UN	4.0	BMA	27ER 4UN BMA
27ER 4.5UN	4.5	BMA	27ER 4.5UN BMA
271R 4UN	4.0	BMA	271R 4UN BMA
271R 4.5UN	4.5	BMA	271R 4.5UN BMA
221L 6UN	6.0	BMA	221L 6UN BMA
221R 5UN	5.0	BMA	221R 5UN BMA
221R 6UN	6.0	BMA	221R 6UN BMA

Inserts - UNJ

· Laydown Threading Inserts, for General Industry
ERB / IRB - Ground Profile with Chipformer



Designation	TPI	Grade	Part Number
16ER 8UNJ	8.0	BMA	16ER 8UNJ BMA
16ER 12UNJ	12.0	BMA	16ER 12UNJ BMA
16ER 14UNJ	14.0	BMA	16ER 14UNJ BMA

THREADING BARS



Internal Tool Holders - RH

Designation	Shank	Reduced Diameter	OAL	Min Bore	Part Number
SIR 0205 H06	0.500	0.200	4.00	0.240	SIR 0205 H06
SIR 0265 K08	0.625	0.260	5.00	0.315	SIR 0265 K08
SIR 0375 H11	0.375	0.375	4.00	0.470	SIR 0375 H11
SIR 0375 K11	0.625	0.375	4.00	0.470	SIR 0375 K11
SIR 0500 L11	0.625	0.500	5.50	0.630	SIR 0500 L11
SIR 0500 M16	0.625	0.500	6.00	0.640	SIR 0500 M16
SIR 0625 P16	0.750	0.625	7.00	0.750	SIR 0625 P16
SIR 0750 P16	0.750	0.750	7.00	0.900	SIR 0750 P16
SIR 0750 P22	0.750	0.750	7.00	0.900	SIR 0750 P22
SIR 1000 R16	1.000	1.000	8.00	1.160	SIR 1000 R16
SIR 1000 R22	1.000	1.000	8.00	1.160	SIR 1000 R22
SIR 1250 S16	1.250	1.250	10.00	1.500	SIR 1250 S16
SIR 1500 T16	1.500	1.500	12.000	1.650	SIR 1500 T16
SIR 1500 T22	1.500	1.500	12.00	1.750	SIR 1500 T22

Internal Tool Holders - LH

Designation	Shank	Reduced Diameter	OAL	Min Bore	Part Number
SIL 0265 K08	0.625	0.260	5.00	0.315	SIL 0265 K08
SIL 0375 H11	0.375	0.375	4.00	0.470	SIL 0375 H11
SIL 0375 K11	0.625	0.375	4.00	0.470	SIL 0375 K11
SIL 0500 L11	0.625	0.500	5.50	0.630	SIL 0500 L11
SIL 0500 M16	0.625	0.500	6.00	0.640	SIL 0500 M16
SIL 0625 P16	0.750	0.625	7.00	0.750	SIL 0625 P16
SIL 0750 P16	0.750	0.750	7.00	0.900	SIL 0750 P16
SIL 0750 P22	0.750	0.750	7.00	0.900	SIL 0750 P22
SIL 1000 R16	1.000	1.000	8.00	1.160	SIL 1000 R16
SIL 1000 R22	1.000	1.000	8.00	1.160	SIL 1000 R22
SIL 1250 S16	1.250	1.250	10.00	1.500	SIL 1250 S16
SIL 1250 S22	1.250	1.250	10.000	1.500	SIL 1250 S22
SIL 1250 S27	1.250	1.250	10.00	1.560	SIL 1250 S27



Internal Tool Holders - RH

Designation	Shank	Reduced Diameter	OAL	Min Bore	Part Number
SIR 0205 H06	0.500	0.200	4.00	0.240	3800133
SIR 0265 K08	0.625	0.260	5.00	0.315	3800137
SIR 0500 L11	0.625	0.500	5.50	0.630	3800106
SIR 0500 M16	0.625	0.500	6.00	0.640	3800127
SIR 0625 P16	0.750	0.625	7.00	0.750	3800111
SIR 0750 P16	0.750	0.750	7.00	0.900	3800072
SIR 0750 P22	0.750	0.750	7.00	0.900	3800107
SIR 1000 R16	1.000	1.000	8.00	1.160	3800074
SIR 1000 R22	1.000	1.000	8.00	1.160	3800076
SIR 2000 U27	2.000	2.000	14	2.300	3800164

Internal Tool Holders - LH

Designation	Shank	Reduced Diameter	OAL	Min Bore	Part Number
SIL 0375 K11	0.625	0.375	5.00	0.470	3800126
SIR 0500 M16	0.625	0.500	6.00	0.640	3800130
SIR 0750 P16	0.750	0.750	7.00	0.900	3800073
SIR 1250 R16	1.250	1.250	10.00	1.400	3800146

THREADING HOLDERS & HARDWARE



External Tool Holders - RH

Designation	Shank	OAL	Insert to Shank	Part Number
SER 0500 F16	0.500	3.250	0.625	SER 0500 F16
SER 0625 H16	0.625	4.000	0.625	SER 0625 H16
SER 0750 K16	0.750	5.000	0.750	SER 0750 K16
SER 1000 M16	1.000	6.000	1.000	SER 1000 M16
SER 1000 M22	1.000	6.000	1.000	SER 1000 M22
SER 1000 M27	1.000	6.000	1.000	SER 1000 M27

External Tool Holders - LH

Designation	Shank	OAL	Insert to Shank	Part Number
SEL 0500 F16	0.500	3.250	0.625	SEL 0500 F16
SEL 0625 H16	0.625	4.000	0.625	SEL 0625 H16
SEL 0750 K16	0.750	5.000	0.750	SEL 0750 K16
SEL 1000 M16	1.000	6.000	1.000	SEL 1000 M16
SEL 1000 M22	1.000	6.000	1.000	SEL 1000 M22



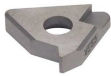
External Tool Holders - RH

Designation	Shank	OAL	Insert to Shank	Part Number
SER 0500 F16	0.500	3.250	0.625	3800026
SER 0625 H16	0.625	4.000	0.625	3800047
SER 0750 K16	0.750	5.000	0.750	3800027
SER 1000 M16	1.000	6.000	1.000	3900029
SER 1000 M22	1.000	6.000	1.000	3800031

External Tool Holders - LH

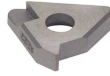
Designation	Shank	OAL	Insert to Shank	Part Number
SEL 0500 F16	0.500	3.250	0.625	3800205
SEL 0750 K16	0.750	5.000	0.750	3800028
SEL 1000 M16	1.000	6.000	1.000	3800030

AE Anvils



Part Number
AE16
AE16+0.5
AE16+2.5
AE16+3.5
AE16+4.5
AE16-1.5
AE22

AI Anvils



Part Number
AI16
AI16+0.5
AI16+2.5
AI16+3.5
AI16+4.5
AI16-1.5
AI22

Screws - Torx



Description	Thread Size	Overall Length	Torx	Part Number
S06 (SR 14-552)	M2 x .40	3.80mm	T-6	7000427
S08 (SR14-558)	M2 x .40	5.30mm	T-6	7060160
S11 SCREW	M2.5 x .45	6.70mm	T-8	7060157
S16 (SR14-576)	5 - 40	12.20mm	T-10	7060120
S22 SCREW	8 - 32	14.80mm	T-20	7060121
S27 SCREW	M5 x .80	22.0mm	T-20	S27

THREADMILLS

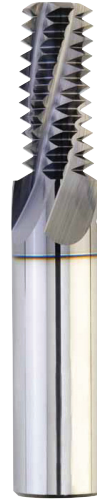
MORSE ALTiN Coated 10% Micrograin Carbide



Flute Geometry: Helical Flute
Reduce Tool Inventory: One Thread Mill Can Produce Internal & External Threads, Left Hand & Right Hand Threads, Multiple Thread Diameters of the Same Pitch

Fractional & Machine Screw

Size	Shank Dia.	Cutting Dia.	Length of Cut	OAL	# of Flutes	Part Number
6-32	1/8	0.100	0.218	2	3	TM-98600
8-36	1/8	0.115	0.250	2	3	TM-98601
8-32	1/8	0.115	0.250	2	3	TM-98602
10-24	3/16	0.120	0.312	2	3	TM-98603
10-32	3/16	0.120	0.312	2	3	TM-98604
1/4-20	3/16	0.180	0.500	2-1/2	3	TM-98605
1/4-28	3/16	0.180	0.500	2-1/2	3	TM-98606
5/16-18	1/4	0.240	0.625	2-1/2	3	TM-98607
5/16-24	1/4	0.240	0.625	2-1/2	3	TM-98608
3/8-16	5/16	0.290	0.750	3	4	TM-98609
3/8-24	5/16	0.290	0.750	3	4	TM-98610
7/16-14	3/8	0.340	0.875	3	4	TM-98611
7/16-20	3/8	0.340	0.875	3	4	TM-98612
1/2-13	3/8	0.350	0.875	3-1/2	4	TM-98613
1/2-20	3/8	0.350	0.875	3-1/2	4	TM-98614
9/16-12	1/2	0.370	0.875	3-1/2	4	TM-98615
9/16-18	1/2	0.370	0.875	3-1/2	4	TM-98616
5/8-11	1/2	0.470	1.250	3-1/2	5	TM-98617
5/8-18	1/2	0.470	1.250	3-1/2	5	TM-98618
3/4-10	1/2	0.495	1.250	3-1/2	5	TM-98619
3/4-16	1/2	0.495	1.250	3-1/2	5	TM-98620
7/8-9	5/8	0.620	1.250	3-1/2	5	TM-98621
7/8-14	5/8	0.620	1.250	3-1/2	5	TM-98622
1-8	3/4	0.620	1.375	4	5	TM-98623
1-12	3/4	0.620	1.375	4	5	TM-98624

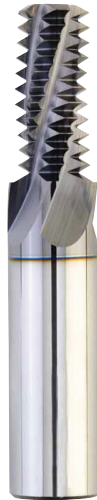




MORSE ALTiN Coated 10% Micrograin Carbide

Flute Geometry: Helical Flute
Reduce Tool Inventory: One Thread Mill Can Produce Internal & External Threads, Left Hand & Right Hand Threads, Multiple Thread Diameters of the Same Pitch

Metric



Size	Shank Dia.	Cutting Dia.	Length of Cut	OAL	# of Flutes	Part Number
M4x0.7	1/8	0.120	0.250	2	3	TM-98625
M4.5x0.75	1/8	0.120	0.250	2	3	TM-98626
M5x0.8	3/16	0.120	0.312	2	3	TM-98627
M6x1	3/16	0.170	0.500	2-1/2	3	TM-98628
M8x0.75	1/4	0.235	0.625	2-1/2	3	TM-98629
M8x1	1/4	0.235	0.625	2-1/2	3	TM-98630
M8x1.25	1/4	0.235	0.625	2-1/2	3	TM-98631
M10x1.25	5/16	0.300	0.750	3	4	TM-98632
M10x1.5	5/16	0.300	0.750	3	4	TM-98633
M12x1	3/8	0.360	0.875	3-1/2	4	TM-98634
M12x1.25	3/8	0.360	0.875	3-1/2	4	TM-98635
M12x1.75	3/8	0.360	0.875	3-1/2	4	TM-98636
M14x1.5	3/8	0.360	0.875	3-1/2	4	TM-98637
M16x2	1/2	0.470	1.250	3-1/2	5	TM-98638
M18x2.5	1/2	0.470	1.250	3-1/2	5	TM-98639
M20x3	5/8	0.470	1.250	3-1/2	5	TM-98640

Pipe Thread / NPTF



Size	Shank Dia.	Cutting Dia.	Length of Cut	OAL	# of Flutes	Part Number
1/16-27	1/4	0.245	0.437	2-1/2	3	TM-98648
1/8-27	5/16	0.310	0.437	2-1/2	4	TM-98649
1/4-18	3/8	0.370	0.625	3	4	TM-98658
3/8-18	3/8	0.370	0.625	3	4	TM-98659
1/2-14	1/2	0.495	0.875	3-1/2	4	TM-98652
3/4-14	1/2	0.495	0.875	3-1/2	4	TM-98653
1-11-1/2	3/4	0.620	1.125	4	5	TM-98654

Pipe Thread / NPT

Size	Shank Dia.	Cutting Dia.	Length of Cut	OAL	# of Flutes	Part Number
1/16-27	1/4	0.245	0.437	2-1/2	3	TM-98641
1/8-27	5/16	0.310	0.437	2-1/2	4	TM-98642
1/4-18	3/8	0.370	0.625	3	4	TM-98656
3/8-18	3/8	0.370	0.625	3	4	TM-98657
1/2-14	1/2	0.495	0.875	3-1/2	4	TM-98645
3/4-14	1/2	0.495	0.875	3-1/2	4	TM-98646
1-11-1/2	3/4	0.620	1.125	4	5	TM-98647

ISCAR PENTA INSERTS

Inserts - PENTA 24-UN

· Precision ground UN (UNC, UNF, UNEF), full profile, pentagonal, external threading inserts with a chipformer for general applications.



Designation	Pitch TPI	Radius	Grade	Part Number
PENTA 24-24-UN	24.0	0.005	IC908	6004687
PENTA 24-20-UN	20.0	0.006	IC908	6004688
PENTA 24-18-UN	18.0	0.007	IC908	6004689
PENTA 24-16-UN	16.0	0.008	IC908	6004690
PENTA 24-14-UN	14.0	0.009	IC908	6004691

Inserts - PENTA 24-NPT

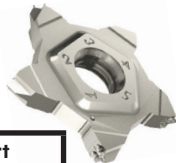
· Precision ground NPT (National Pipe Threads), full profile, pentagonal, external threading inserts with a chipformer for general applications. Used for steam, gas and water pipes.



Designation	Pitch TPI	Radius	Grade	Part Number
PENTA 24-18-NPT	18.0	0.003	IC908	6004685
PENTA 24-14-NPT	14.0	0.004	IC908	6004686

Inserts - PENTA 24-ISO

· Precision ground ISO metric full profile, pentagonal, external threading inserts with a chipformer for general applications.

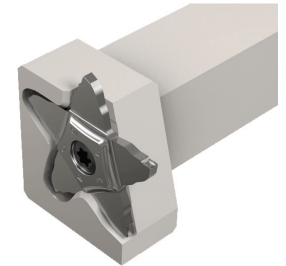
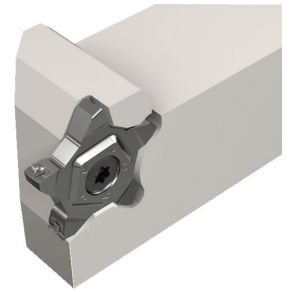


Designation	Pitch TPI	Radius	Grade	Part Number
PENTA 24-0.5-ISO	0.500	0.003	IC908	6004658
PENTA 24-0.75-ISO	0.750	0.004	IC908	6004678
PENTA 24-0.8-ISO	0.800	0.005	IC908	6004679
PENTA 24-1.0-ISO	1.000	0.006	IC908	6004657
PENTA 24-1.25-ISO	1.250	0.007	IC908	6004680
PENTA 24-1.5-ISO	1.500	0.009	IC908	6004614
PENTA 24-1.75-ISO	1.750	0.010	IC908	6004681
PENTA 24-2.0-ISO	2.000	0.011	IC908	6004682

Holder - PCHR/L-24

· Grooving, parting and recessing holders carrying inserts with 5 cutting edges.

Designation	Shank	Cutting Width Min	Cutting Width Max	Shank to Clamp Surface	Cutting Depth Max	OAL	Part Number
PCHR 9.5-24	0.375	0.020	0.125	0.220	0.256	5.000	2393364
PCHL 12.7-24	0.500	0.020	0.125	0.362	0.256	5.000	2301626
PCHR 12.7-24	0.500	0.020	0.125	0.362	0.256	5.000	2301625
PCHL 16-24	0.630	0.020	0.126	0.492	0.256	4.724	2301612
PCHR 16-24	0.630	0.020	0.126	0.492	0.256	4.724	2301623
PCHL 19-24	0.750	0.020	0.125	0.610	0.256	5.000	2301617
PCHR 19-24	0.750	0.020	0.125	0.610	0.256	5.000	2301627
PCHL 25.4-24	1.000	0.020	0.125	0.860	0.256	5.500	2301620
PCHR 25.4-24	1.000	0.020	0.125	0.860	0.256	5.500	2301628
PCHL 16-24-5	0.630	0.126	0.205	0.453	0.252	4.724	2302952
PCHR 16-24-5	0.630	0.126	0.205	0.453	0.252	4.724	2302951
PCHL 19-24-5	0.750	0.126	0.205	0.570	0.252	5.000	2302958
PCHR 19-24-5	0.750	0.126	0.205	0.570	0.252	5.000	2302957
PCHL 20-24-5	0.787	0.126	0.205	0.610	0.252	4.724	2302954
PCHR 20-24-5	0.787	0.126	0.205	0.610	0.252	4.724	2302953
PCHL 25-24-5	0.984	0.126	0.205	0.807	0.252	5.315	2302956
PCHR 25-24-5	0.984	0.126	0.205	0.807	0.252	5.315	2302955
PCHL 25.4-24-5	1.000	0.126	0.205	0.820	0.252	5.500	2302960
PCHR 25.4-24-5	1.000	0.126	0.205	0.820	0.252	5.500	2302959



Holder - PCHPR/L

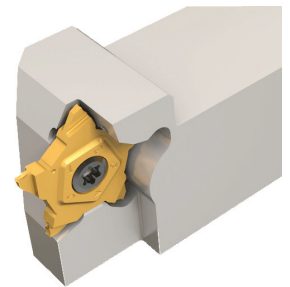
· Perpendicular PENTACUT holders carrying inserts with 5 cutting edges, for facing, grooving, parting and recessing.

Designation	Shank	Cutting Width Min	Cutting Width Max	Cutting Depth Max	Functional Height	Functional Width	Functional Length	Head Length	OAL	Part Number
PCHPL 16-24	0.630	0.020	.126	0.256	0.630	.059	0.930	0.453	4.724	2302430
PCHPL 19-24	0.750	0.020	.126	0.256	0.750	.060	1.100	0.450	5.000	2302458
PCHPR 16-24	0.630	0.020	.126	0.256	0.630	.059	0.930	0.453	4.724	2302429
PCHPR 19-24	0.750	0.020	.126	0.256	0.750	.060	1.100	0.450	5.000	2302457
PCHPL 25.4-24	1.000	0.020	.126	0.256	1.000	.060	1.300	0.450	5.500	2302460
PCHPR 25.4-24	1.000	0.020	.126	0.256	1.000	.060	1.300	0.450	5.500	2302459

Holder - PCHR/L-24-JHP

· Grooving, parting and recessing tools carrying PENTA inserts with channels for high pressure coolant.

Designation	Shank	Cutting Width Min	Cutting Width Max	Cutting Depth Max	Functional Width	Head Length	OAL	Part Number
PCHL 12.7-24-JHP	0.500	0.020	0.126	0.256	0.250	1.000	3.400	2302452
PCHR 12.7-24-JHP	0.500	0.020	0.126	0.256	0.250	1.000	3.400	2302451
PCHL 16-24-JHP	0.630	0.020	0.126	0.256	0.374	0.965	4.724	2302380
PCHR 16-24-JHP	0.630	0.020	0.126	0.256	0.374	0.965	4.724	2302379
PCHL 19-24-JHP	0.750	0.020	0.126	0.256	0.500	1.000	5.320	2302454
PCHR 19-24-JHP	0.750	0.020	0.126	0.256	0.500	1.000	5.320	2302453
PCHL 25.4-24-JHP	1.000	0.020	0.126	0.256	0.750	1.000	5.320	2302456
PCHR 25.4-24-JHP	1.000	0.020	0.126	0.256	0.750	1.000	5.320	2302455



ISCAR DECA THREAD INSERTS & HOLDER

DECA IQ Thread

Inserts - Partial Profile 55°

· External inserts with 10 threading corners and a 55° partial profile for general industry.

Designation	Pitch TPI	Cutting Width	Grade	Part Number
TTG-16E-A55	48-16	.083	IC908	5903486

Inserts - UN

· External American UN full profile (UN, UNC, UNF, UNEF) indexable threading inserts with 10 threading corners, for general industry.

Designation	Pitch TPI	Cutting Width	Grade	Part Number
TTG-16E-16-UN	16.0	.083	IC908	5903479
TTG-16E-18-UN	18.0	.083	IC908	5903481
TTG-16E-20-UN	20.0	.083	IC908	5903480
TTG-16E-24-UN	24.0	.083	IC908	5903482
TTG-16E-28-UN	28.0	.083	IC908	5903483
TTG-16E-32-UN	32.0	.083	IC908	5903484



Inserts - Partial Profile 60°

· External inserts with 10 threading corners and a 60° partial profile for general industry.

Designation	Pitch TPI	Cutting Width	Grade	Part Number
TTG-16E-A60	48-16	.083	IC908	5903485

Inserts - ISO

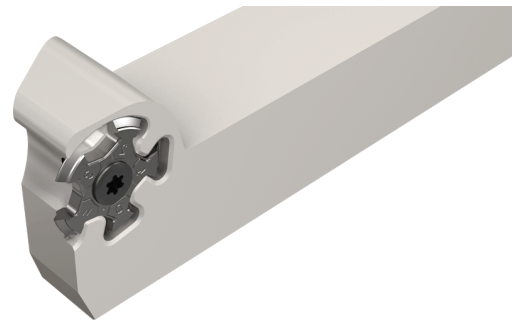
· External ISO Metric (DIN13 12-1986 class: 6G), indexable threading inserts with 10 threading corners, for general industry.

Designation	Pitch TPI	Cutting Width	Grade	Part Number
TTG-16E-0.50-ISO	.500	.083	IC908	5903475
TTG-16E-0.75-ISO	.750	.083	IC908	5903476
TTG-16E-1.00-ISO	1.000	.083	IC908	5903477
TTG-16E-1.25-ISO	1.250	.083	IC908	5903478
TTG-16E-1.50-ISO	1.500	.083	IC908	5903470

SER/L-TT-JHP

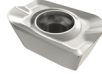
· External threading tools, carrying inserts with 10 threading corners.

Designation	Shank	Functional Width	Head Length	Overall Length	Part Number
SEL 0500 F16TT-JHP	.500"	.510"	.790"	3.250"	3302401
SER 0500 F16TT-JHP	.500"	.510"	.790"	3.250"	3800248
SEL 0625 H16TT-JHP	.625"	.630"	.790"	4.000"	3302402
SER 0625 H16TT-JHP	.625"	.630"	.790"	4.000"	3800257
SEL 0750 K16TT-JHP	.750"	.760"	.790"	5.000"	3302403
SER 0750 K16TT-JHP	.750"	.760"	.790"	5.000"	3800256
SEL 1000 M16TT-JHP	1.000"	1.010"	.790"	6.000"	3302405
SER 1000 M16TT-JHP	1.000"	1.010"	.790"	6.000"	3800255



ADKT - HM

· Milling Inserts with 2 Helical Cutting Edges and Various Corner Radii for General Use



Designation	Milling Height	Thickness	Radius	Grade	Part Number
ADKT-150516R-HM	0.545	0.220	0.063	IC250	5600633
ADKT-150516R-HM	0.545	0.220	0.063	IC830	5606505
ADKT-150516R-HM	0.545	0.220	0.063	IC928	5697878
ADKT-150532R-HM	0.539	0.220	0.126	IC328	5601349
ADKT-150532R-HM	0.539	0.220	0.126	IC830	5606507
ADKT-150540R-HM	0.537	0.220	0.157	IC328	5601697
ADKT-150564R-HM	0.537	0.220	0.157	IC328	5601351
ADKT-1505PDR-HM	0.541	0.222	0.031	IC328	5601150
ADKT-1505PDR-HM	0.541	0.222	0.031	IC908	5602360
ADKT-1505PDR-HM	0.541	0.222	0.031	IC928	5692407

ADKT - HM90

· Milling Inserts with 2 Helical Cutting Edges, for High 90° Shoulder Accuracy and General Use



Designation	Milling Height	Thickness	Radius	Grade	Part Number
HM90-ADKT-150516-PDR	0.559	0.233	0.063	IC908	5603474
HM90-ADKT-150532-PDR	0.551	0.230	0.126	IC908	5603477
HM90-ADKT-150550-PDR	0.543	0.226	0.197	IC908	5603479
HM90-ADKT-150564-PDR	0.538	0.222	0.252	IC908	5603480
HM90-ADKT-1505PDR	0.571	0.230	0.031	IC328	5602383
HM90-ADKT-1505PDR	0.571	0.230	0.031	IC4050	5602496
HM90-ADKT-1505PDR	0.571	0.230	0.031	IC808	5606328
HM90-ADKT-1505PDR	0.571	0.230	0.031	IC908	5602499

ADKT - HP

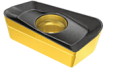
· Milling Inserts with .750" Cutting Edge, for General Use



Designation	Milling Height	Thickness	Radius	Grade	Part Number
HP-ADKT-190608PDTR	0.756	0.270	0.031	IC908	5604932
HP-ADKT-190608PDTR	0.756	0.270	0.031	IC928	5604920
HP-ADKT-190610PDTR	0.756	0.270	0.039	IC928	5604092
HP-ADKT-2207PDTR	0.890	0.295	0.031	IC328	5603001
HP-ADKT-2207PDTR	0.890	0.295	0.031	IC908	5603723
HP-ADKT-2207PDTR	0.890	0.295	0.031	IC928	5603722

ANKT - HP

· Milling Inserts with a .303" Helical Edge and Various Corner Radii for General Use



Designation	Milling Height	Thickness	Radius	Grade	Part Number
HP-ANKT-0702 PN-R	0.303	0.102	0.020	IC328	5604090
HP-ANKT-0702 PN-R	0.303	0.102	0.020	IC5400	5606670
HP-ANKT-0702 PN-R	0.303	0.102	0.020	IC808	5606595
HP-ANKT-0702 PN-R	0.303	0.102	0.020	IC928	5604091
HP-ANKT-070212PNTR	0.303	0.102	0.047	IC908	5604814
HP-ANKT-070212PNTR	0.303	0.102	0.047	IC928	5604815
HP-ANKT-070216PNTR	0.303	0.102	0.063	IC908	5604816
HP-ANKT-070216PNTR	0.303	0.102	0.063	IC928	5604817
HP-ANKT-0702PNTR	0.303	0.102	0.020	IC328	5604592
HP-ANKT-0702PNTR	0.303	0.102	0.020	IC928	5604340
HP-ANKT-0702PNTR	0.303	0.102	0.020	IC950	5604594

ANKX - H490

· Double-sided rectangular inserts with 4 helical cutting edges. Very strong construction, may be used for heavy applications.

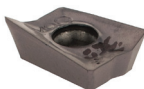


Designation	Length	Thickness	Radius	Grade	Part Number
H490-ANKX-090408PNTR	0.335	0.205	0.031	IC808	5606018
H490-ANKX-090408PNTR	0.335	0.205	0.031	IC830	5606020
H490-ANKX-120508PNTR	0.539	0.360	0.031	IC330	5606368
H490-ANKX-120508PNTR	0.539	0.360	0.031	IC808	5605566
H490-ANKX-120508PNTR	0.539	0.360	0.031	IC830	5605564
H490-ANKX-170604PNTR	0.657	0.409	0.016	IC830	5606355
H490-ANKX-170608PNTR	0.657	0.409	0.031	IC7150	5605452
H490-ANKX-170608PNTR	0.657	0.409	0.031	IC808	5606099
H490-ANKX-170608PNTR	0.657	0.409	0.031	IC928	5605206
H490-ANKX-170612PNTR	0.665	0.413	0.047	IC928	5605869
H490-ANKX-170616PNTR	0.665	0.413	0.063	IC928	5605870
H490-ANKX-1706PNTR-RM	0.657	0.409	0.031	IC808	5606911
H490-ANKX-1706PNTR-RM	0.657	0.409	0.031	IC830	5606345

ISCAR MILLING INSERTS

APCR - HM90

· Milling Inserts with Positive Helical Cutting Edges and Polished Rake, for Machining Aluminum and High Temperature Alloys



Designation	Length	Thickness	Radius	Grade	Part Number
HM90-APCR-100304PDR-DP	0.443	0.152	0.016	IC28	5603758
HM90-APCR-100304PDR-P	0.443	0.152	0.016	IC08	5602965
HM90-APCR-100304PDR-P	0.443	0.152	0.016	IC28	5602964
HM90-APCR-160504R-P	1.004	0.189	0.016	IC28	5603285
HM90-APCR-160508R-P	1.004	0.189	0.031	IC28	5603286
HM90-APCR-160516R-P	1.004	0.189	0.063	IC28	5603287
HM90-APCR-160520R-P	1.000	0.189	0.079	IC28	5603211
HM90-APCR-160532R-P	0.961	0.189	.126	IC28	5603290
HM90-APCR-220616R-P	1.169	0.272	0.063	IC28	5604912
HM90-APCR-220632R-P	1.157	0.260	0.126	IC28	5603467
HM90-APCR-220664R-P	1.055	0.236	0.252	IC28	5603466
HM90-APCT-100302R-PDR	0.459	0.139	0.008	IC28	5602958
HM90-APCT-100302R-PDR	0.459	0.139	0.008	IC928	5602960

APKT - 76

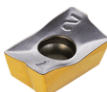
· Milling Inserts with 2 Helical Cutting Edges with Ribs Along Edge, for Interrupted Cut



Designation	Length	Thickness	Radius	Grade	Part Number
APKT-1003PDTR-76	0.433	0.137	0.020	IC328	5601196
APKT-1003PDTR-76	0.433	0.137	0.020	IC928	5602362
APKT-1003PDTR-76	0.433	0.137	0.020	IC950	5698508

APKT - HM90

· Milling Inserts with 2 Helical Cutting Edges, for High 90° Shoulder Accuracy and General Use



Designation	Length	Thickness	Radius	Grade	Part Number
HM90-APKT-100304PDR	0.451	0.139	0.016	IC328	5602962
HM90-APKT-100304PDR	0.451	0.139	0.016	IC908	5698901
HM90-APKT-100304PDR	0.451	0.139	0.016	IC928	5602963
HM90-APKT-100325PDR	0.409	0.139	0.098	IC908	5603495
HM90-APKT-100330PDR	0.409	0.139	0.118	IC908	5603497
HM90-APKT-1003PDR	0.451	0.139	0.031	IC5400	5606659
HM90-APKT-1003PDR	0.451	0.139	0.031	IC808	5606393
HM90-APKT-1003PDR	0.451	0.139	0.031	IC830	5606351
HM90-APKT-1003PDR	0.451	0.139	0.031	IC950	5602492
HM90-APKT-1003PDR	0.451	0.139	0.031	IC928	5602490
HM90-APKT-1003PDTR-8M	0.451	0.139	0.031	IC928	5698909

APKT - HM

· Milling Inserts with 2 Helical Cutting Edges, for General Use



Designation	Length	Thickness	Radius	Grade	Part Number
APKT-1003PDR-HM	0.431	0.140	0.020	IC20	5600047
APKT-1003PDR-HM	0.431	0.140	0.020	IC28	5600493
APKT-1003PDR-HM	0.431	0.140	0.020	IC328	5601148
APKT-1003PDR-HM	0.431	0.140	0.020	IC4050	5603414
APKT-1003PDR-HM	0.431	0.140	0.020	IC520M	5600049
APKT-1003PDR-HM	0.431	0.140	0.020	IC635	5600048
APKT-1003PDR-HM	0.431	0.140	0.020	IC928	5691218

APKT - RM

· Milling Inserts with Various Corner Radii and a Reinforced Cutting Edge, for Interrupted Cut and Heavy Machining



Designation	Length	Thickness	Radius	Grade	Part Number
APKT-100312TR-RM	0.413	0.137	0.047	IC328	5601637
APKT-100312TR-RM	0.413	0.137	0.047	IC928	5699148
APKT-100316PDTR-RM	0.429	0.137	0.063	IC50M	5601610
APKT-100316PDTR-RM	0.429	0.137	0.063	IC950	5605017
APKT-100320PDTR-RM	0.429	0.137	0.079	IC928	5691458
APKT-100332TR-RM	0.421	0.137	0.126	IC28	5601620
APKT-100332TR-RM	0.421	0.137	0.126	IC328	5601617
APKT-100340TR-RM	0.415	0.137	0.157	IC328	5602161
APKT-1003PDTR-RM	0.264	0.137	0.020	IC328	5601371
APKT-1003PDTR-RM	0.264	0.137	0.020	IC928	5602365
APKT-1003PDTR-RM	0.264	0.137	0.020	IC950	5601894

AXKT - 3M

· MILL2000 heavy duty design: dovetail section shape, helical cutting edge and positive rake angle. Enables secure clamping and high durability in rough applications.



Designation	Length	Thickness	Radius	Grade	Part Number
3M-AXKT-1304PDR	0.556	0.179	0.024	IC328	5601731
3M-AXKT-1304PDR	0.556	0.179	0.024	IC928	5602381
3M-AXKT-1304PDR	0.556	0.179	0.024	IC950	5601945
3M-AXKT-1304PDR-MM	0.556	0.179	0.024	IC950	5602541
3M-AXKT-2006PDTR	0.886	0.268	0.039	IC328	5602132
3M-AXKT-2006PDTR	0.886	0.268	0.039	IC928	5602399
3M-AXKT-2006PDTR-RM	0.882	0.268	0.039	IC928	5690450



AXCR - HM90

· Super Positive Milling Inserts with a Polished Rake, for Machining Aluminum



Designation	Length	Thickness	Radius	Grade	Part Number
HM90-AXCR-150504R-P	0.756	0.197	0.016	IC28	5603551
HM90-AXCR-150508R-P	0.756	0.197	0.031	IC28	5603552
HM90-AXCR-150520R-P	0.756	0.197	0.079	IC28	5603553
HM90-AXCR-150530R-P	0.756	0.197	0.118	IC28	5603554
HM90-AXCR-150532R-P	0.756	0.197	0.126	IC28	5603555

BCR - QT

· The DROPMILL insert has a straight cutting edge tangent to a round corner. It enables machining of a shoulder with a round corner. A protrusion on the bottom mounts in a mating slot in the pocket to maintain high edge location precision.



Designation	Length	Thickness	Radius	Grade	Part Number
BCR-D.75-QT	0.672	0.135	0.375	IC928	5604112
BCR-D1.00-QT	0.870	0.170	0.500	IC328	5603711
BCR-D1.00-QT	0.870	0.170	0.500	IC928	5604060
BCR-D1.25-QT	1.109	0.210	0.625	IC328	5603712
BCR-D1.25-QT	1.109	0.210	0.625	IC908	5604222
BCR-D1.50-QT	1.425	0.290	0.750	IC328	5603713

GSFN

· SELF-GRIP Slitting Inserts



Designation	Width	Radius	Grade	Part Number
GSFN-1.6	0.063	0.006	IC250	6001582
GSFN-1.6	0.063	0.006	IC328	6002472
GSFN-1.6	0.063	0.006	IC908	6092489
GSFN-2	0.079	0.008	IC328	6002434
GSFN-2.4	0.095	0.008	IC328	6002473
GSFN-3	0.119	0.008	IC50M	6000567
GSFN-3	0.119	0.008	IC908	6095369
GSFN-3.2	0.126	0.009	IC328	6002475
GSFN-4	0.159	0.012	IC328	6002436
GSFN-4.8	0.189	0.010	IC328	6002477
GSFN-5	0.196	0.010	IC328	6002437
GSFN-5	0.196	0.010	IC908	6002845
GSFN-5.2-1.5	0.206	0.059	IC328	6002605

HBF - QF

· BALLPLUS, 2 cutting edges (fully effective), 220° spherical cutting profile inserts. Used for high-quality finishing profiling, up and down ramping, steep profiles and undercutting



Designation	Diameter	Thickness	Radius	Grade	Part Number
HBF-D.50-QF	0.500	0.102	0.250	IC908	5604415
HBF-D.62-QF	0.500	0.133	0.312	IC908	5604416
HBR-D.50-QF	0.500	0.102	0.250	IC928	5604864
HBR-D.62-QF	0.625	0.133	0.312	IC908	5604297
HBR-D.75-QF	0.750	0.183	0.375	IC328	5605023
HBR-D.75-QF	0.750	0.183	0.375	IC928	5605030
HBR-D120-QF	12.0mm	2.60mm	6.0mm	IC328	5604865
HBR-D120-QF	12.0mm	2.60mm	6.0mm	IC908	5604245

HCR

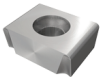
· Ball nose with 2 straight tangent cutting edges inserts (fully effective) for cavity profiling and shouldering. Due to its high accuracy (.0004"), can be used for roughing and finishing



Designation	Diameter	Thickness	Radius	Grade	Part Number
HCR-D.50-QF	0.500	0.102	0.250	IC908	5604283
HCR-D.50-QP	0.500	0.102	0.250	IC328	5605319
HCR-D.62-QF	0.625	0.132	0.312	IC908	5604420
HCR-D1.0-QP	1.000	0.212	0.500	IC328	5605325
HCR-D1.0-QP	1.000	0.212	0.500	IC928	5605326

LNET - TN

· Tangentially clamped inserts with 4 cutting edges for slotting and precision grooving cutters. The inserts have a chipformer that reduces the cutting forces and leaves a clean, undamaged surface.



Designation	Width & Tolerance	Length	Radius	Grade	Part Number
LNET-124004-TN	0.1575	0.500	0.016	IC928	5696610
LNET-124008-TN	0.1575	0.500	0.031	IC928	5698711
LNET-124508-TN	0.1772	0.500	0.031	IC328	5603020
LNET-124508-TN	0.1772	0.500	0.031	IC928	5603122
LNET-124804-TN	0.1870	0.500	0.016	IC928	5602996
LNET-125504-TN	0.2165	0.500	0.016	IC928	5603115
LNET-125708-TN	0.2264	0.500	0.031	IC928	5603117

ISCAR MILLING INSERTS

LNKX - PL

· Tangentially clamped inserts with a positive land. Can be used on steel, stainless steel and cast iron. Leaves sharp edges without chipping on cast iron components.



Designation	Length	Thickness	Radius	Grade	Part Number
LNKX-1506PN-N-PL	0.591	0.236	0.031	IC908	5603355
LNKX-1506PN-N-PL	0.591	0.236	0.031	IC910	5603233
LNKX-1506PN-N-PL	0.591	0.236	0.031	IC928	5603833

LNHT - HTP

· Tangentially clamped insert with 4 cutting edges used on plungers. The insert orientation on the tool results in excellent flatness.



Designation	Length	Width	Radius	Grade	Part Number
HTP-LNHT-1006 ER	0.413	0.256	0.039	IC330	5606360
HTP-LNHT-1006 ER	0.413	0.256	0.039	IC808	5606004
HTP-LNHT-1606 ER	0.413	0.256	0.039	IC328	5605790
HTP-LNHT-1606 ER	0.413	0.256	0.039	IC928	5605280

LNHT - T490

· Tangentially clamped inserts with 4 helical cutting edges. The unique pocket design, prevents insert pull-out and enables tools with larger core diameters compared with regular radially orientated inserts.



Designation	Length	Thickness	Radius	Grade	Part Number
T490-LNHT-080404PNR	0.338	0.296	0.016	IC808	5606320
T490-LNHT-080408PNR	0.338	0.293	0.031	IC830	5605887
T490-LNHT-080408PNR	0.338	0.282	0.031	IC808	5606321
T490-LNHT-080412PNR	0.338	0.270	0.047	IC830	5605890
T490-LNHT-080412PNR	0.338	0.270	0.047	IC330	5605895
T490-LNHT-080416PNR	0.338	0.265	0.063	IC808	5606322
T490-LNHT-0804PNR	0.338	0.293	0.016	IC830	5605374
T490-LNHT-130616PNTR	0.338	0.265	0.063	IC808	5606323
T490-LNHT-130631PNTR	0.544	0.507	0.063	IC830	5606065
T490-LNHT-1306PNTR	0.544	0.487	0.122	IC830	5606069
T490-LNHT-1306PNTR	0.544	0.487	0.122	IC808	5606033

LNMT - T490

· Tangentially clamped inserts with 4 helical cutting edges. The unique pocket design, prevents insert pull-out and enables tools with larger core diameters compared with regular radially orientated inserts.



Designation	Length	Thickness	Radius	Grade	Part Number
T490-LNMT-0804PNR	0.338	0.293	0.016	IC5400	5606664
T490-LNMT-0804PNR	0.338	0.293	0.016	IC808	5606106
T490-LNMT-0804PNR	0.338	0.293	0.016	IC830	5604098
T490-LNMT-130631PNTR	0.338	0.293	0.016	IC830	5606105
T490-LNMT-1306PNTR	0.541	0.490	0.122	IC830	5607269
T490-LNMT-1306PNTR	0.541	0.490	0.122	IC328	5695747
T490-LNMT-1306PNTR	0.541	0.490	0.122	IC808	5606324
T490-LNMT-1607PN-R	0.541	0.514	0.031	IC830	5606325

OEMT - 76

· Octagonal Milling Inserts for General Use



Designation	Milling Height	Diameter	Radius	Grade	Part Number
OEMT-060405AER-76	0.098	0.562	0.020	IC250	5601843
OEMT-060405AER-76	0.098	0.562	0.020	IC328	5601832
OEMT-060405AER-76	0.098	0.562	0.020	IC908	5603151
OEMT-060405AER-76	0.098	0.562	0.020	IC928	5698518

ONMU

· Octagonal double-sided inserts with 16 cutting edges



Designation	Milling Height	Inscribed Circle	Radius	Grade	Part Number
ONMU-050505-TN	0.138	0.512	0.020	IC810	5605623
ONMU-050505-TN-MM	0.138	0.512	0.020	IC5400	5606674
ONMU-050505-TN-MM	0.138	0.512	0.020	IC808	5606051
ONMU-080608-TN-MM	0.138	0.512	0.020	IC908	5605189

QDMT - M

· QUAD2000 square, positive, inserts for general use, on right or left-hand tools.



Designation	Length	Thickness	Radius	Grade	Part Number
QDMT-120516PDTN-M	0.500	0.197	0.063	IC928	5603736
QDMT-120516PDTN-M	0.500	0.197	0.063	IC910	5604476
QDMT-120516PNTN-M	0.500	0.197	0.063	IC908	5603738
QDMT-120532PDTN-M	0.500	0.197	0.126	IC928	5604490
QDMT-120532PDTN-M	0.500	0.197	0.126	IC328	5604487



QOMT - HQ

· QUAD2000 insert with 4 right- or left-hand cutting edges for general use.



Designation	Length	Thickness	Radius	Grade	Part Number
QOMT-060208TN-HQ	0.243	0.101	0.031	IC928	5602566
QOMT-060208TN-HQ	0.243	0.101	0.031	IC950	5602569
QOMT-060208TN-HQ	0.243	0.101	0.031	IC28	5602564

R90MT

· Round Milling Inserts with a Flat Rake for Profile Milling



Designation	Inscribed Circle	Thickness	Grade	Part Number
R90MT-1205-RM	0.472	0.197	IC928	5602116
R90MT-1205-RM	0.472	0.197	IC328	5698608
R90MT-43-RM	0.500	0.213	IC928	5602118
R90MT-43-RM	0.500	0.213	IC950	5602547
R90MT-43-RM	0.500	0.213	IC908	5602119

RCMT

· MILLSHRED, fully effective, serrated inserts with four indexing orientation options. Produces small chips for easy evacuation, even from deep cavities. Small cutting forces - therefore the required machining power is low.



Designation	Inscribed Circle	Thickness	Grade	Part Number
RCMT-1206-FW-F20	0.472	0.157	IC928	5605284
RCMT-1206-FW-F20	0.472	0.157	IC908	5605468
RCMT-1607-FW	0.630	0.197	IC928	5604132
RCMT-1607-FW-T20	0.630	0.197	IC908	5604605

SDMT - HQ

· Milling Inserts with Four Helical Cutting Edges, for General Use 90° Shoulder Milling



Designation	Length	Thickness	Radius	Grade	Part Number
SDMT-1205PDR-HQ-M	0.500	0.197	0.063	IC50M	5603669
SDMT-1205PDR-HQ-M	0.500	0.197	0.063	IC910	5693883
SDMT-1205PDR-HQ-M	0.500	0.197	0.063	IC928	5603672
SDMT-1205PDR-HQ-M	0.500	0.197	0.063	IC950	5603670
SDMT-1205PDR-HQ-M	0.500	0.197	0.063	IC635	5603673

SEKR - 76

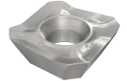
· Square milling inserts with ribs along edges - reducing heat transfer, used for 45° roughing applications.



Designation	Length	Thickness	Wiper	Grade	Part Number
SEKR-42AFN-76	0.500	0.125	0.071	IC928	5601218
SEKR-42AFN-76	0.500	0.125	0.071	IC950	5602380
SEKR-42AFN-76	0.500	0.125	0.071	IC928	5601878
SEKR-43AFN-76	0.500	0.187	0.071	IC328	5601810

SEKT - HM

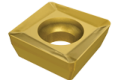
· Super Positive Square Milling Inserts, for 45° Finishing and Medium Machining of Soft Materials



Designation	Length	Thickness	Wiper	Grade	Part Number
SEKT-43AFR-HM	0.508	0.203	0.085	IC4050	5601265
SEKT-43AFR-HM	0.508	0.203	0.085	IC928	5603413
SEKT-43AFR-HM	0.508	0.203	0.085	IC635	5698628
SEKT-43AFR-RM	0.508	0.203	0.085	IC328	5601044

SPMT - HQ

· Square positive inserts, for right-hand tools for general use.



Designation	Length	Thickness	Radius	Grade	Part Number
SPMT-100408R-HQ-M	0.402	0.167	0.024	IC928	5603698
SPMT-100408R-HQ-M	0.402	0.167	0.024	IC328	5603699
SPMT-100408TR-HQ-M	0.402	0.167	0.024	IC950	5603693
SPMT-100408TR-HQ-M	0.402	0.167	0.024	IC950	5603697

ISCAR MILLING INSERTS

WOMT - FF

· Positive rake inserts for fast feed machining at small depth of cut. Designed with a cylinder on bottom that is seated in a mating hole in the pocket.



Designation	Inscribed Circle	Thickness	Grade	Part Number
FF-WOMT-060212T-M	0.388	0.106	IC908	5604584
FF-WOMT-09T320T	0.571	0.156	IC908	5603442
FF-WOMT-09T320T	0.571	0.156	IC928	5603325

WXCU - H600

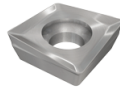
· Double-sided 6 cutting edged inserts, for Fast Feed machining.



Designation	Inscribed Circle	Thickness	Grade	Part Number
H600-WXCU-040310HP	0.246	0.122	IC830	5606381
H600-WXCU-040310T	0.246	0.122	IC808	5606379
H600-WXCU-040310T	0.246	0.122	IC830	5606380
H600-WXCU-05T312HP	0.328	0.165	IC330	5606362
H600-WXCU-05T312HP	0.328	0.165	IC830	5606000
H600-WXCU-05T312T	0.328	0.165	IC808	5606001
H600-WXCU-05T312T	0.328	0.165	IC830	5606349
H600-WXCU-080612HP	0.537	0.268	IC808	5606350
H600-WXCU-080612T	0.537	0.268	IC808	5605932
H600-WXCU-080612T	0.537	0.268	IC830	5606035

XPMT - HQ

· Square inserts with 2 right- or left-hand cutting edges for general use.



Designation	Length	Thickness	Radius	Grade	Part Number
XPMT-100408-HQ	0.402	0.162	0.024	IC328	5601222
XPMT-100408-HQ	0.402	0.162	0.024	IC950	5601223
XPMT-100408T-HQ	0.402	0.162	0.024	IC950	5602102



AOMT - M



Designation	Radius	Thickness	Grade	Part Number
AOMT123602PEER-M	0.008	0.142	VP15TF	MIT-291485
AOMT123604PEER-M	0.016	0.142	VP20RT	MIT-320160
AOMT123604PEER-M	0.016	0.142	VP15TF	MIT-291493
AOMT123608PEER-M	0.031	0.142	VP15TF	MIT-291506
AOMT123608PEER-M	0.031	0.142	VP20RT	MIT-320178
AOMT123608PEER-M	0.031	0.142	MP9130	MIT-801595
AOMT123612PEER-M	0.047	0.142	VP15TF	MIT-291522
AOMT123612PEER-M	0.047	0.142	VP20RT	MIT-320186
AOMT123616PEER-M	0.063	0.142	VP15TF	MIT-291531
AOMT123632PEER-M	0.125	0.142	VP15TF	MIT-291565
AOMT184804PEER-M	0.016	0.189	VP20RT	MIT-373202
AOMT184808PEER-M	0.031	0.189	VP15TF	MIT-359179
AOMT184816PEER-M	0.125	0.189	VP15TF	MIT-484931

AOMT - H



Designation	Radius	Thickness	Grade	Part Number
AOMT123608PEER-H	0.031	0.142	MP7130	MIT-800736
AOMT184808PEER-H	0.031	0.189	MC5020	MIT-528593
AOMT184808PEER-H	0.031	0.189	VP15TF	MIT-458548
AOMT184808PEER-H	0.031	0.189	MP6130	MIT-800470
AOMT184832PEER-H	0.125	0.189	VP20RT	MIT-492359
AOMT184864PEER-H	0.250	0.189	MP6130	MIT-800525

JDMT - JM



Designation	Radius	Thickness	Grade	Part Number
JDMT09T320ZDSR-JM	0.079	0.156	VP15TF	MIT-306894
JDMT09T320ZDSR-JM	0.079	0.156	VP30RT	MIT-308865
JDMT120420ZDSR-JM	0.079	0.187	VP15TF	MIT-308881
JDMT120420ZDSR-JM	0.079	0.187	VP30RT	MIT-308890
JDMT120420ZDSR-JM	0.079	0.187	MP7130	MIT-801106
JDMT120420ZDSR-JM	0.079	0.187	MP7140	MIT-801288

JDMW - FT



Designation	Radius	Thickness	Grade	Part Number
JDMW09T320ZDSR-FT	0.079	0.156	VP15TF	MIT-241007
JDMW09T320ZDSR-FT	0.079	0.156	VP30RT	MIT-241023
JDMW09T320ZDSR-FT	0.079	0.156	MP6120	MIT-670928
JDMW120420ZDSR-FT	0.079	0.187	VP15TF	MIT-229163
JDMW120420ZDSR-FT	0.079	0.187	VP30RT	MIT-229180
JDMW120420ZDSR-FT	0.079	0.187	MP6120	MIT-670936
JDMW120420ZDSR-FT	0.079	0.187	MP7140	MIT-801211
JDMW140520ZDSR-FT	0.079	0.219	VP15TF	MIT-229171
JDMW140520ZDSR-FT	0.079	0.219	VP30RT	MIT-240549
JDMW140520ZDSR-FT	0.079	0.219	FH7020	MIT-241040
JDMW140520ZDSR-FT	0.079	0.219	MP6120	MIT-670944

JOMW - FT



Designation	Radius	Thickness	Grade	Part Number
JOMW06T215ZZSR-FT	0.059	0.109	VP15TF	MIT-329050
JOMW06T215ZZSR-FT	0.059	0.109	VP30RT	MIT-329068
JOMW080320ZZSR-FT	0.079	0.125	VP15TF	MIT-240979
JOMW080320ZZSR-FT	0.079	0.125	VP30RT	MIT-240995

QOGT - G1



Designation	Radius	Thickness	Grade	Part Number
QOGT0934R-G1	0.016	0.134	HT110	MIT-212521
QOGT1651R-G1	0.016	0.200	HT110	MIT-212548
QOGT1959R-G1	0.016	0.232	HT110	MIT-212556

QOMT - M2



Designation	Radius	Thickness	Grade	Part Number
QOMT1443R-M2	0.031	0.169	VP15TF	MIT-189966
QOMT1959R-M2	0.031	0.232	VP15TF	MIT-189982

MITSUBISHI MILLING INSERTS

RPMT - JS



Designation	Inscribed Circle	Thickness	Grade	Part Number
RPMT120400E-JS	0.500	0.188	VP15TF	MIT-208178
RPMT1204M0E-JS	0.500	0.188	VP15TF	MIT-239943
RPMT150600E-JS	0.625	0.250	VP15TF	MIT-208186

SEEN



Designation	Radius	Thickness	Grade	Part Number
SEEN42AFFN1	0.039	0.125	HT110	MIT-104680
SEEN42AFTN1	0.039	0.125	NX2525	MIT-115883
SEEN42AFTN1	0.039	0.125	VP15TF	MIT-190326
SEEN42AFXN1	0.039	0.125	VP15TF	MIT-189721

XDGT



Designation	Radius	Thickness	Grade	Part Number
XDGT1550PDER-G08	0.031	0.197	VP15TF	MIT-237681
XDGT1550PDER-G16	0.063	0.197	VP15TF	MIT-237690
XDGT1550PDER-G30	0.118	0.197	VP15TF	MIT-237711
XDGT1550PDER-G50	0.197	0.197	VP15TF	MIT-237737

APKT - MM



Designation	Radius	Thickness	Grade	Part Number
APKT1604PDSR-MM	0.031	0.205	PC230	1-02-006708
APKT1604PDSR-MM	0.031	0.205	PC3500	1-02-034161
APKT1604PDSR-MM	0.031	0.205	PC5300	1-02-037070
APKT1604PDSR-MM	0.031	0.205	PC6510	1-02-019167
APKT1604PDSR-MM	0.031	0.205	PC9530	1-02-013191

APMT - MM



Designation	Radius	Thickness	Grade	Part Number
APMT160424R-MM	0.094	0.227	PC5300	1-02-038377
APMT160432R-MM	0.197	0.227	PC5300	1-02-038379
APMT1604PDSR-MM	0.031	0.227	NCM325	1-02-038269
APMT1604PDSR-MM	0.031	0.227	PC5300	1-02-038374

APXT - MM



Designation	Radius	Thickness	Grade	Part Number
APXT11T312R-MM	0.047	0.142	PC3535	1-02-023827
APXT11T324R-MM	0.094	0.142	PC3545	1-02-022871
APXT11T3PDSR-MM	0.019	0.142	PC3545	1-02-019467
APXT11T3PDSR-MM	0.019	0.142	PC3500	1-02-035514
APXT160416R-MM	0.063	0.227	PC3535	1-02-019950
APXT160416R-MM	0.063	0.227	PC3500	1-02-035482
APXT160432R-MM	0.125	0.227	PC9530	1-02-015916
APXT160432R-MM	0.125	0.227	PC6510	1-02-021554
APXT160432R-MM	0.125	0.227	PC3535	1-02-022477
APXT1604PDSR-MM	0.031	0.227	PC9530	1-02-013190
APXT1604PDSR-MM	0.031	0.227	PC3530	1-02-013720
APXT1604PDSR-MM	0.031	0.227	PC3545	1-02-018847

SECN

· ISO type rectangular milling insert with a 20° relief angle



Designation	Radius	Thickness	Grade	Part Number
SECN42AFEN-RH	0.125	0.091	PC6510	1-02-019439
SECN42AFEN	0.125	0.091	G10	1-03-001177
SECN42AFEN	0.125	0.091	H01	1-03-001178
SECN42AFSN	0.125	0.091	PC3525	1-02-027568
SECN42AFTN	0.125	0.091	G10	1-03-001184
SECN42AFTN	0.125	0.091	CN30	1-03-006372
SECN42AFTN-S20	0.125	0.091	PC9530	1-02-012824
SECN42AFTN-S20	0.125	0.091	PC8520	1-02-021608
SECN53AFTN-S20	0.187	0.094	PC9530	1-02-033227

ISCAR PARTING & GROOVING INSERTS

DG L/R - C

· First choice for the parting of bars, hard materials and tough applications. A positive rake, single cavity with negative land and shoulders, provides extra cutting edge strength. Medium-to-high feeds.



Designation	Width	Edge Angle	Radius	Grade	Part Number
DGL 3102C-6D	0.122	6.0°	0.008	IC328	6002451
DGL 3102C-6D	0.122	6.0°	0.008	IC908	6002949
DGL 3102C-15D	0.122	15.0°	0.008	IC328	6011368
DGL 4003C-4D	0.157	4.0°	0.012	IC328	6002470
DGR 2202C-6D	0.087	6.0°	0.008	IC328	6002454
DGR 3102-8D	0.122	8.0°	0.008	IC1028	6003050
DGR 3102C-15D	0.122	15.0°	0.008	IC1028	6003058
DGR 3102C-15D	0.122	15.0°	0.008	IC328	6011367
DGR 3102C-6D	0.122	6.0°	0.008	IC1028	6003047
DGR 3102C-6D	0.122	6.0°	0.008	IC20	6002348
DGR 3102C-6D	0.122	6.0°	0.008	IC328	6002439
DGR 3102C-6D	0.122	6.0°	0.008	IC354	6002350
DGR 3102C-6D	0.122	6.0°	0.008	IC908	6002968
DGR 3102C-8D	0.122	8.0°	0.008	IC328	6002525
DGR 4003C-4D	0.157	4.0°	0.012	IC328	6002465
DGR 4003C-4D	0.157	4.0°	0.012	IC354	6002368
DGR 4003C-4D	0.157	4.0°	0.012	IC830	6004522
DGR 4003C-4D	0.157	4.0°	0.012	IC908	6002952

DG L/R - ZS/S

· A chipformer for use at low feeds. Recommended for Cr-Ni alloys and low carbon steel, especially in the bearing industry and on similar, problematic materials. The tight chipformer ensures short, deformed chips.



Designation	Width	Edge Angle	Radius	Grade	Part Number
DGR 2002Z-6D	0.079	6.0°	0.008	IC908	6003283
DGR 2000ZS-6D	0.079	6.0°	0.001	IC908	6003285
DGR 2002ZS-15D	0.079	15.0°	0.001	IC908	6003286
DGR 3002Z-6D	0.118	6.0°	0.008	IC908	6003287
DGR 3000ZS-6D	0.118	6.0°	0.001	IC908	6003288

DG L/R - J/JS

· First choice for soft materials such as low carbon, alloy and austenitic stainless steel, parting of tubes, small diameters and thin-walled parts at low-to-medium feeds. Cutting edge with a positive rake. JS-type has a sharp corner.



Designation	Width	Edge Angle	Radius	Grade	Part Number
DGL 3100JS-6D	0.122	6.0°	0.001	IC908	6003028
DGL 1402J-8D	0.055	8.0°	0.006	IC328	6094307
DGL 3102J-6D	0.122	6.0°	0.008	IC328	6002469
DGL 3102J-15D	0.122	15.0°	0.008	IC328	6096565
DGR 1001J-8D	0.039	8.0°	0.003	IC328	6002654
DGR 1001J-8D	0.039	8.0°	0.003	IC908	6003034
DGR 1400JS-15D	0.055	15.0°	0.001	IC328	6002743
DGR 1402J-8D	0.055	8.0°	0.006	IC328	6094667
DGR 1500J-8D	0.059	8.0°	0.002	IC328	6094317
DGR 2200JS-15D	0.087	15.0°	0.001	IC20	6098696
DGR 2200JS-15D	0.087	15.0°	0.001	IC308	6002754
DGR 2200JS-15D	0.087	15.0°	0.001	IC328	6002583
DGR 2200JS-6D	0.087	6.0°	0.001	IC328	6002585
DGR 2200JS-6D	0.087	6.0°	0.001	IC354	6098516
DGR 2202J-15D	0.087	15.0°	0.008	IC1028	6003074
DGR 2202J-6D	0.087	6.0°	0.008	IC328	6002455
DGR 2202J-6D	0.087	6.0°	0.008	IC908	6002950
DGR 3100JS-15D	0.122	15.0°	0.001	IC328	6002579
DGR 3100JS-15D	0.122	15.0°	0.001	IC908	6003037
DGR 3100JS-6D	0.122	6.0°	0.001	IC328	6002581
DGR 3100JS-6D	0.122	6.0°	0.001	IC908	6095470
DGR 3102J-15D	0.122	15.0°	0.008	IC1028	6003057
DGR 3102J-15D	0.122	15.0°	0.008	IC908	6003038
DGR 3102J-6D	0.122	6.0°	0.008	IC20	6002354
DGR 3102J-6D	0.122	6.0°	0.008	IC328	6002453
DGR 3102J-6D	0.122	6.0°	0.008	IC830	6003673
DGR 3102J-6D	0.122	6.0°	0.008	IC908	6002967
DGR 5003J-4D	0.197	4.0°	0.012	IC328	6002482

DG N/NC - C

· Used for parting of bars, hard materials and tough applications. A positive rake, single cavity with a negative land and shoulders. Medium-to-high feeds. DGNC - with coolant holes.



Designation	Width	Radius	Grade	Part Number
DGN 2002C	0.079	0.008	IC328	6002506
DGN 2202C	0.087	0.008	IC328	6002421
DGN 3102C	0.122	0.008	IC1028	6003040
DGN 3102C	0.122	0.008	IC20	6002342
DGN 3102C	0.122	0.008	IC328	6002417
DGN 3102C	0.122	0.008	IC354	6002343
DGN 3102C	0.122	0.008	IC808	6003581
DGN 3102C	0.122	0.008	IC830	6011370
DGN 3102C	0.122	0.008	IC907	6003400
DGN 3102C	0.122	0.008	IC908	6002962
DGN 4003C	0.157	0.012	IC328	6002419
DGN 4003C	0.157	0.012	IC354	6002361
DGN 4003C	0.157	0.012	IC808	6011376
DGN 4003C	0.157	0.012	IC908	6002964
DGN 5003C	0.197	0.012	IC20	6002378
DGN 5003C	0.197	0.012	IC328	6002423
DGN 5003C	0.197	0.012	IC354	6002379
DGN 6303C	0.250	0.012	IC354	6002397
DGN 6303C	0.250	0.012	IC808	6004480
DGNC 3102C	0.122	0.008	IC808	6003576
DGNC 3102C	0.122	0.008	IC908	6003303

DG N/NM - J

· First choice for soft materials, parting of tubes, small diameters and thin-walled parts. General applications on low carbon, alloy and austenitic stainless steel. Low-to-medium feeds. DGNM - single-ended.



Designation	Width	Radius	Grade	Part Number
DGN 1402J	0.055	0.006	IC908	6002957
DGN 1402J	0.055	0.006	IC328	6091716
DGN 1502J	0.059	0.006	IC908	6002958
DGN 2202J	0.087	0.008	IC20	6002321
DGN 2202J	0.087	0.008	IC328	6002422
DGN 2202J	0.087	0.008	IC808	6011372
DGN 2202J	0.087	0.008	IC908	6002961
DGN 3102J	0.122	0.008	IC1028	6003039
DGN 3102J	0.122	0.008	IC328	6002418
DGN 3102J	0.122	0.008	IC354	6002346
DGN 3102J	0.122	0.008	IC808	6011371
DGN 3102J	0.122	0.008	IC830	6011369
DGN 3102J	0.122	0.008	IC908	6002963
DGN 4003J	0.157	0.012	IC328	6002420
DGN 5003J	0.197	0.012	IC328	6002424
DGNM 3202J	0.125	0.008	IC328	6003289

GDMW 2.4

· Utility, double-ended inserts. Used for external grooving and turning at low-to-medium feeds. For grooving, reduce cutting speed by 30% and feed by 50%.



Designation	Width	Radius	Grade	Part Number
GDMW 2.4	0.094	0.007	IC20N	6401924
GDMW 2.4	0.094	0.007	IC808	6404238
GDMW 2.4	0.094	0.007	IC830	6405001
GDMW 2.4	0.094	0.007	IC908	6403192

GEPI

· Precision double-ended inserts, used for internal and external grooving at low feeds in diameters from .49"



Designation	Width	Radius	Grade	Part Number
GEPI 1.96-0.10	0.077	0.004	IC528	6403352
GEPI 1.96-0.10	0.077	0.004	IC908	6403353
GEPI 1.96-0.15	0.077	0.006	IC908	6403355
GEPI 2.00-0.10	0.079	0.004	IC08	6403389
GEPI 2.22-0.10	0.087	0.004	IC908	6403367
GEPI 2.22-0.15	0.087	0.006	IC528	6403368
GEPI 2.39-0.10	0.094	0.004	IC528	6403369
GEPI 2.39-0.15	0.094	0.006	IC528	6403198
GEPI 2.47-0.20	0.097	0.008	IC908	6403201
GEPI 2.50-0.20	0.098	0.008	IC908	6403203
GEPI 2.70-0.20	0.106	0.008	IC908	6403205
GEPI 3.00-0.20	0.118	0.008	IC908	6403207
GEPI 3.00-0.20	0.118	0.008	IC528	6403206
GEPI 3.00-0.20	0.118	0.008	IC08	6403400
GEPI 3.00-1.50	0.118	0.059	IC08	6403401
GEPI 3.18-0.20	0.125	0.008	IC528	6403373
GEPI 3.18-0.20	0.125	0.008	IC908	6403374

GEPI (W<M)

· Precision double-ended inserts, used for internal grooving at low feeds in diameters from .49"



Designation	Width	Radius	Grade	Part Number
GEPI 1.00-0.10	0.039	0.004	IC908	6403329
GEPI 1.00-0.50	0.039	0.020	IC908	6403583
GEPI 1.20-0.00	0.047	0.000	IC908	6403335
GEPI 1.47-0.00	0.058	0.000	IC908	6403341
GEPI 1.50-0.10	0.059	0.004	IC908	6403343
GEPI 1.50-0.10	0.059	0.004	IC08	6403383
GEPI 1.57-0.15	0.062	0.006	IC908	6403345
GEPI 1.78-0.15	0.070	0.006	IC528	6403348
GEPI 1.78-0.15	0.070	0.006	IC908	6403349



ISCAR PARTING & GROOVING INSERTS

GEPI (Full Radius)

· Precision double-ended inserts, used for internal and external profiling and grooving at low feeds in diameters from .453".



Designation	Width	Radius	Grade	Part Number
GEPI 2.00-1.00	0.079	0.039	IC528	6403362
GEPI 2.00-1.00	0.079	0.039	IC908	6403363
GEPI 3.00-1.50	0.118	0.059	IC528	6403208
GEPI 3.00-1.50	0.118	0.059	IC908	6403209
GEPI 3.18-1.59	0.125	0.063	IC908	6403376

GFL/R - C

· First choice for the parting of bars, hard materials and tough applications. Positive rake, single cavity with a negative land and shoulders, provides extra cutting-edge strength. Medium-to-high feeds.



Designation	Width	Radius	Grade	Part Number
GFL 1.6 - 8D	0.063	0.006	IC20	6000096
GFL 3-6D	0.118	0.001	IC328	6091866
GFL 3-8D	0.118	0.008	IC20	6000142
GFR 1.6-15D	0.063	0.006	IC354	6002675
GFR 1.6-8D	0.063	0.006	IC354	6098336
GFR 3 - 4D	0.118	0.008	IC20	6000432
GFR 3 - 4D	0.118	0.008	IC328	6002595
GFR 3 - 6D	0.118	0.001	IC328	6090176
GFR 3 - 8D	0.118	0.008	IC20	6000443
GFR 3-15D	0.118	0.008	IC354	6002626
GFR 4-8D	0.161	0.009	IC354	6094405

GFL/R - J

· First choice for soft materials, low carbon steel, alloy and austenitic stainless steel, parting of tubes, small diameters and thin-walled positive rake, used at low-to-medium feeds.



Designation	Width	Radius	Grade	Part Number
GFR 1.2J - 10D	0.047	0.006	IC354	6002566
GFR 1.6JS - 6D	0.063	0.001	IC328	6002741
GFR 1.6JS - 15D	0.063	0.001	IC20	6001859
GFR 1.6JS - 6D	0.063	0.001	IC20	6002256
GFR 3J - 6D	0.118	0.010	IC328	6002594
GFR 3JS - 6D	0.118	0.001	IC328	6002551

GFF

· SELF-GRIP face grooving inserts



Designation	Width	Radius	Grade	Part Number
GFF 2N	0.083	0.008	IC354	6002510
GFF 3N	0.118	0.012	IC354	6002512
GFF 4N	0.157	0.010	IC20	6000026
GFF 4N	0.157	0.010	IC656	6000029
GFF 5N	0.197	0.010	IC354	6002515
GFF 5N	0.197	0.010	IC54	6000031
GFF 5N	0.197	0.010	IC656	6000033
GFF 6N	0.236	0.010	IC354	6002516
GFF 6N	0.236	0.010	IC656	6000037

GFN-C

· First choice for the parting of bars, hard materials and tough applications. Positive rake, single cavity with a negative land and shoulders, provides extra cutting-edge strength. Medium-to-high feeds



Designation	Width	Radius	Grade	Part Number
GFN 1.6	0.063	0.006	IC20	6000241
GFN 1.6	0.063	0.006	IC328	6002611
GFN 1.6	0.063	0.006	IC354	6002657
GFN 2	0.087	0.006	IC328	6002500
GFN 2	0.087	0.006	IC54	6000263
GFN 3	0.119	0.008	IC328	6002573
GFN 3	0.119	0.008	IC354	6011365
GFN 4	0.159	0.009	IC328	6002574
GFN 4	0.159	0.009	IC54	6000324
GFN 4.8	0.189	0.011	IC20	6000332
GFN 4.8	0.189	0.011	IC354	6002659
GFN 5	0.201	0.011	IC328	6002597
GFN 5	0.201	0.011	IC354	6002598
GFN 6	0.252	0.014	IC328	6002599
GFN 8	0.314	0.017	IC328	6002889

GFN-J

· First choice for soft materials, low carbon steel, alloy and austenitic stainless steel, parting of tubes, small diameters and thin-walled parts. Cutting edge with a positive rake, used at low-to-medium feeds.



Designation	Width	Radius	Grade	Part Number
GFN 1.2J	0.047	0.006	IC328	6002539
GFN 1.6J	0.063	0.006	IC1028	6003134
GFN 1.6J	0.063	0.006	IC20	6001357
GFN 1.6J	0.063	0.006	IC328	6094205
GFN 3J	0.118	0.010	IC328	6002541
GFN 4J	0.157	0.010	IC328	6002610



GIF

· CUT-GRIP precision-ground, double-ended inserts for grooving at low to-medium feeds.



Designation	Width	Radius	Grade	Part Number
GIF 3.56-0.20	0.140	0.008	IC808	6404340
GIF 3.74-0.20	0.147	0.008	IC808	6404341
GIF 3.98-0.20	0.157	0.008	IC808	6404342
GIF 4.78-0.55	0.188	0.022	IC8250	6405230
GIF 4.86-0.30	0.191	0.012	IC808	6404347
GIF 5.28-0.20	0.208	0.008	IC808	6404348
GIF 5.39-0.20	0.212	0.008	IC808	6404350
GIF 5.90-0.20	0.232	0.008	IC808	6404351
GIF 6.35-0.50	0.250	0.020	IC808	6404352
GIF 6.35-0.55	0.250	0.022	IC808	6404353

GIF-E

· CUT-GRIP precision-ground, double-ended inserts for grooving at low to-medium feeds.



Designation	Width	Radius	Grade	Part Number
GIF 4.00E-0.40	0.157	0.016	IC830	6405073
GIF 4.00E-0.60	0.157	0.024	IC830	6405026
GIF 5.00E-0.40	0.197	0.016	IC354	6493536
GIF 5.00E-0.80	0.197	0.031	IC830	6405019
GIF 6.00E-0.40	0.236	0.016	IC830	6405145
GIF 8.00E-0.40	0.315	0.016	IC808	6404550
GIF 8.00E-0.80	0.315	0.031	IC908	6402786
GIF 8.00E-1.20	0.315	0.047	IC830	6405125
GIF 10.00E-0.80	0.394	0.031	IC908	6402797

GIFI-E

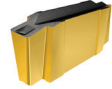
· Precision double-ended inserts for internal turning and grooving at low-to-medium feeds. Min. bore diameter .787".



Designation	Width	Radius	Grade	Part Number
GIFI 4.00E-0.40	0.157	0.016	IC830	6405022
GIFI 5.00E-0.50	0.197	0.020	IC830	6405004
GIFI 6.00E-0.80	0.236	0.031	IC8250	6405268

GIG

· Precision-ground, double-ended inserts for grooving



Designation	Width	Radius	Grade	Part Number
GIG 1.25-0.10	0.049	0.004	IC808	6404356
GIG 1.50-0.10	0.059	0.004	IC808	6404360
GIG 1.85-0.15	0.073	0.006	IC808	6404364
GIG 1.85-0.15	0.073	0.006	IC830	6405030
GIG 2.30-0.20	0.091	0.008	IC808	6404369

GIM - C

· First choice for the parting of bars, hard materials and tough applications. A positive rake, single cavity with negative land and shoulders, provides extra cutting-edge strength. Medium-to-high feeds.



Designation	Width	Radius	Grade	Part Number
GIM 3C	0.118	0.009	IC328	6402138
GIM 3C	0.118	0.009	IC354	6402137
GIM 3C	0.118	0.009	IC908	6403180
GIM 4C	0.157	0.010	IC908	6497832

GIM - J - RA

· First choice for soft materials, parting of tubes, small diameters and thin-walled parts. General applications on low carbon, alloy and austenitic stainless steel. Low-to-medium feeds.



Designation	Width	Radius	Grade	Part Number
GIM 2.2J-8RA	0.087	0.007	IC328	6496475
GIM 2.2J-8RA	0.087	0.007	IC908	6403168
GIM 2.2JS-15RA	0.087	0.001	IC328	6402033
GIM 3J-4RA	0.118	0.010	IC328	6491317
GIM 3JS-RA	0.157	0.010	IC328	6402031

ISCAR PARTING & GROOVING INSERTS

GIM - W

· Parting & grooving single-sided insert. W-type chipformer, with a central ridge that forms double cavities on the rake face. Most efficient on alloy steel.



Designation	Width	Radius	Grade	Part Number
GIM 2.4	0.094	0.007	IC908	6403186
GIM 3	0.118	0.009	IC328	6402096
GIM 3	0.118	0.009	IC908	6403179

GIM - W - RA

· Parting, single-sided insert. W-type chipformer, with a central ridge that forms double cavities on the rake face. Most efficient on alloy steel.



Designation	Width	Radius	Grade	Part Number
GIM 3-8RA	0.118	0.008	IC354	6402259
GIM 4-8RA	0.157	0.010	IC354	6402268

GIMF

· Utility single-ended grooving and turning inserts with F/Y type chipformers. Used for deep machining at low-to medium feeds.



Designation	Width	Radius	Grade	Part Number
GIMF 406	0.157	0.024	IC20	6400445
GIMF 406	0.157	0.024	IC328	6402091
GIMF 406	0.157	0.024	IC808	6404104
GIMF 406	0.157	0.024	IC830	6405068
GIMF 508	0.197	0.031	IC830	6404331
GIMF 608	0.236	0.031	IC20	6400459
GIMF 608	0.236	0.031	IC328	6495745
GIMF 808	0.315	0.031	IC808	6405075

GIMY

· Utility single-ended inserts with F/Y-type chipformers, used for deep grooving and turning at low-to-medium feeds.



Designation	Width	Radius	Grade	Part Number
GIMY 304	0.118	0.016	IC830	6405178
GIMY 808	0.315	0.031	IC20	6401925
GIMY 1008	0.394	0.031	IC830	6405107

GIMY - Full Radius

· Utility single-ended inserts with F/Y-type chipformers, used for deep grooving and turning at low-to-medium feeds. The full-radius inserts can cut arcs to 250.



Designation	Width	Radius	Grade	Part Number
GIMY 315	0.118	0.059	IC20N	6401990
GIMY 315	0.118	0.059	IC908	6402806
GIMY 525	0.197	0.098	IC908	6402809
GIMY 630	0.236	0.118	IC808	6404098
GIMY 630	0.236	0.118	IC908	6402805
GIMY 635-318	0.250	0.125	IC808	6405102
GIMY 635-318	0.250	0.125	IC830	6405147

GIP

· Precision ground inserts for grooving and recessing. Double-ended, P-type chipformer.



Designation	Width	Radius	Grade	Part Number
GIP 2.22-0.15	0.087	0.006	IC830	6405081
GIP 2.39-0.15	0.094	0.006	IC20	6400568
GIP 2.39-0.15	0.094	0.006	IC830	6405085
GIP 2.39-0.15	0.094	0.006	IC908	6402820
GIP 2.47-0.20	0.097	0.008	IC908	6402816
GIP 2.70-0.10	0.106	0.004	IC20	6400592
GIP 2.70-0.10	0.106	0.004	IC908	6402819
GIP 3.00-0.00	0.118	0.000	IC830	6405010
GIP 3.00-0.00	0.118	0.000	IC808	6404396
GIP 3.00-0.20	0.118	0.008	IC20	6401755
GIP 3.00-0.20	0.118	0.008	IC808	6404112
GIP 3.00-0.20	0.118	0.008	IC830	6405002
GIP 3.00-0.20	0.118	0.008	IC908	6402814
GIP 3.15-0.15	0.124	0.006	IC830	6405091
GIP 3.15-0.15	0.124	0.006	IC908	6402821
GIP 3.18-0.20	0.125	0.008	IC20	6400659
GIP 3.18-0.20	0.125	0.008	IC830	6405069
GIP 3.18-0.20	0.125	0.008	IC908	6402812
GIP 3.56-0.20	0.140	0.008	IC20	6400711
GIP 3.98-0.20	0.157	0.008	IC808	6404240
GIP 3.98-0.20	0.157	0.008	IC830	6405092
GIP 3.98-0.20	0.157	0.008	IC908	6402815
GIP 4.23-0.10	0.167	0.004	IC808	6405062

GIP (Full Radius)

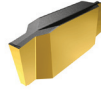
· Precision ground inserts for grooving and recessing. Double-ended, P-type chipformer.



Designation	Width	Radius	Grade	Part Number
GIP 3.18-1.59	0.125	0.063	IC830	6405151
GIP 4.78-2.39	0.188	0.094	IC8250	6405256

GIP (Flat Top)

· Flat top precision ground inserts for grooving



Designation	Width	Radius	Grade	Part Number
GIP 0.80-0.00	0.031	0.000	IC808	6404397
GIP 1.47-0.00	0.058	0.000	IC20	6400494
GIP 1.47-0.00	0.058	0.000	IC908	6402828
GIP 1.57-0.15	0.062	0.006	IC20	6400504
GIP 1.57-0.15	0.062	0.006	IC808	6404243
GIP 1.57-0.15	0.062	0.006	IC830	6405084
GIP 1.57-0.15	0.062	0.006	IC908	6402823
GIP 1.78-0.18	0.070	0.007	IC908	6403125
GIP 1.96-0.15	0.077	0.006	IC20	6400549
GIP 1.96-0.15	0.077	0.006	IC908	6402813

GIP (Flat Top - Full Radius)

· Flat top precision double-ended inserts with full radius for g



Designation	Width	Radius	Grade	Part Number
GIP 1.00-0.50	0.039	0.020	IC807	6404387
GIP 1.00-0.50	0.039	0.020	IC808	6404241
GIP 1.00-0.50	0.039	0.020	IC908	6499942
GIP 1.57-0.79	0.062	0.031	IC830	6405094
GIP 1.57-0.79	0.062	0.031	IC908	6403123
GIP 2.00-1.00	0.079	0.039	IC807	6404375
GIP 2.00-1.00	0.079	0.039	IC808	6404115
GIP 2.39-1.20	0.094	0.047	IC908	6403137

GIP-E

· Precision, double-ended inserts for turning and grooving; P-type chipformer, medium-to-high feeds.



Designation	Width	Radius	Grade	Part Number
GIP 3.00E-0.00	0.118	0.000	IC830	6405015
GIP 3.00E-0.20	0.118	0.008	IC807	6404371
GIP 3.00E-0.20	0.118	0.008	IC808	6404108
GIP 3.00E-0.20	0.118	0.008	IC830	6405063
GIP 3.00E-0.20	0.118	0.008	IC908	6402788
GIP 3.00E-0.40	0.118	0.016	IC830	6405056
GIP 4.00E-0.40	0.157	0.016	IC20	6400797
GIP 4.00E-0.40	0.157	0.016	IC328	6402089
GIP 4.00E-0.40	0.157	0.016	IC808	6404109
GIP 4.00E-0.40	0.157	0.016	IC8250	6404068
GIP 4.00E-0.40	0.157	0.016	IC908	6402787
GIP 4.00E-0.80	0.157	0.031	IC908	6402793
GIP 4.78E-0.55	0.188	0.022	IC20	6400908
GIP 5.00E-0.40	0.197	0.016	IC20	6402006
GIP 5.00E-0.40	0.197	0.016	IC808	6405067
GIP 6.35E-0.80	0.250	0.031	IC808	6405115

GIP-E (Full Radius)

· Precision full radius inserts, for profiling and grooving.



Designation	Width	Radius	Grade	Part Number
GIP 3.00E-1.50	0.118	0.059	IC908	6402794
GIP 4.00E-2.00	0.157	0.079	IC20	6400850
GIP 4.00E-2.00	0.157	0.079	IC354	6402538
GIP 4.00E-2.00	0.157	0.079	IC808	6404110

GIPA

· Precision-ground double-ended inserts, polished to avoid built-up edge, used for external machining of aluminum at medium-to-high feeds.



Designation	Width	Radius	Grade	Part Number
GIPA 3.00-0.20	0.118	0.008	IC20	6402113
GIPA 3.00-1.50	0.118	0.059	IC20	6403197
GIPA 4.00-2.00	0.157	0.079	IC20	6402034
GIPA 6.00-0.40	0.236	0.016	IC20	6402601
GIPA 6.00-3.00	0.236	0.118	IC20	6401782
GIPA 6.00-3.00YZ	0.236	0.118	IC20	6402756

GIPI

· Double-ended precision inserts with P-type chipformer for internal grooving and recessing at medium feeds.



Designation	Width	Radius	Grade	Part Number
GIPI 2.22-0.10	0.087	0.004	IC20	6401246
GIPI 2.22-0.10	0.087	0.004	IC830	6405116
GIPI 2.22-0.10	0.087	0.004	IC908	6403128
GIPI 2.22-0.15	0.087	0.006	IC908	6403228
GIPI 2.30-0.20	0.091	0.008	IC830	6405017
GIPI 2.39-0.15	0.094	0.006	IC830	6405121
GIPI 2.39-0.15	0.094	0.006	IC908	6403132
GIPI 2.50-0.20	0.098	0.008	IC830	6405008
GIPI 2.70-0.10	0.106	0.004	IC808	6404250
GIPI 2.70-0.15	0.106	0.006	IC808	6404552
GIPI 3.00-0.40	0.118	0.016	IC20	6401348
GIPI 3.18-0.20	0.125	0.008	IC20	6401305
GIPI 3.18-0.20	0.125	0.008	IC808	6404247
GIPI 3.18-0.20	0.125	0.008	IC830	6405110
GIPI 3.18-0.20	0.125	0.008	IC908	6402829
GIPI 3.30-0.10	0.130	0.004	IC830	6405148
GIPI 3.96-0.20	0.156	0.008	IC20	6401342
GIPI 4.23-0.10	0.167	0.004	IC20	6401381
GIPI 4.78-0.55	0.188	0.022	IC20	6401389



ISCAR PARTING & GROOVING INSERTS

GIPI (Full Radius)

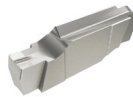
· Precision inserts for internal grooving and recessing. Double-ended, P-type chipformer, medium feeds, min. bore .787".



Designation	Width	Radius	Grade	Part Number
GIPI 3.18-1.59	0.125	0.063	IC20	6401309
GIPI 3.18-1.59	0.125	0.063	IC8250	6405225
GIPI 3.18-1.59	0.125	0.063	IC9054	6403025
GIPI 3.96-1.98	0.156	0.078	IC8250	6405254
GIPI 4.78-2.39	0.188	0.094	IC8250	6405266
GIPI 6.35-3.18	0.250	0.125	IC9054	6403263

GIPI (W<M)

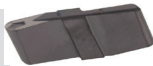
· Precision inserts for internal grooving and recessing. Double-ended, P-type chipformer, medium feeds, min. bore .787".



Designation	Width	Radius	Grade	Part Number
GIPI 1.57-0.15	0.062	0.006	IC830	6405149
GIPI 1.70-0.00	0.067	0.000	IC830	6405156
GIPI 1.78-0.10	0.070	0.004	IC830	6405177
GIPI 1.96-0.10	0.077	0.004	IC908	6403130
GIPI 1.96-0.15	0.077	0.006	IC908	6403153

GIPI (Full Radius W<M)

· Precision inserts for internal grooving and recessing. Double-ended, P-type chipformer, medium feeds, min. bore .787".



Designation	Width	Radius	Grade	Part Number
GIPI 2.39-1.20	0.094	0.047	IC830	6405186
GIPI 2.39-1.20	0.094	0.047	IC908	6403150

GIPI-E

· Precision inserts for internal turning and grooving. Double-ended, P-type chipformer, medium feeds, min. bore .787".



Designation	Width	Radius	Grade	Part Number
GIPI 3.00E-0.40	0.118	0.016	IC808	6404119
GIPI 3.00E-0.40	0.118	0.016	IC830	6405064
GIPI 3.00E-0.40	0.118	0.016	IC908	6402791
GIPI 4.00E-0.40	0.157	0.016	IC20	6401369
GIPI 4.00E-0.40	0.157	0.016	IC328	6402045
GIPI 4.00E-0.40	0.157	0.016	IC908	6402790
GIPI 5.00E-0.50	0.197	0.020	IC20	6401412

GIPI-UR

· Precision inserts for internal undercutting. Double-ended, min. bore .787".



Designation	Width	Radius	Grade	Part Number
GIPI 3.00-1.5UR	0.118	0.059	IC20	6401290
GIPI 3.00-1.5UR	0.118	0.059	IC8250	6405224
GIPI 4.00-2.0UR	0.157	0.079	IC20	6401360
GIPI 4.00-2.0UR	0.157	0.079	IC8250	6405248

GIQR/L 8

· CHAMGROOVE internal grooving and turning inserts



Designation	Width	Radius	Grade	Part Number
GIQR 8-0.75-0.00	0.030	0.000	IC528	6402473
GIQL 8-1.00-0.00	0.039	0.000	IC528	6402605
GIQR 8-1.04-0.05	0.041	0.002	IC528	6402476
GIQL 8-1.20-0.05	0.047	0.002	IC528	6402495
GIQR 8-1.20-0.05	0.047	0.002	IC528	6402477
GIQR 8-1.40-0.05	0.055	0.002	IC528	6402479
GIQR 8-1.50-0.05	0.059	0.002	IC528	6402602
GIQR 8-1.96-0.10	0.077	0.004	IC528	6402483
GIQR 8-2.00-0.10	0.079	0.004	IC528	6402484
GIQL 8-2.00-0.10	0.079	0.004	IC528	6402501
GIQR 8-2.50-0.20	0.098	0.008	IC528	6403734

GIQR/L 11

· CHAMGROOVE internal grooving and turning inserts



Designation	Width	Radius	Grade	Part Number
GIQR 11-0.75-0.00	0.030	0.000	IC528	6402627
GIQR 11-0.95-0.00	0.037	0.000	IC528	6402629
GIQL 11-1.20-0.05	0.047	0.002	IC528	6402653
GIQR 11-1.20-0.05	0.047	0.002	IC528	6402631
GIQR 11-1.50-0.05	0.059	0.002	IC528	6402634
GIQR 11-1.70-0.05	0.067	0.002	IC528	6402635
GIQL 11-2.00-0.10	0.079	0.004	IC528	6411209
GIQR 11-2.00-0.10	0.079	0.004	IC528	6402638
GIQR 11-2.22-0.10	0.087	0.004	IC528	6402640
GIQR 11-2.39-0.15	0.094	0.006	IC528	6402641
GIQR 11-3.00-0.20	0.118	0.008	IC528	6402645



GRIP

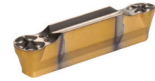
· Double-ended inserts, for turning & grooving in external, internal and face applications.



Designation	Width	Radius	Grade	Part Number
GRIP 3002Y	0.118	0.008	IC08	6200119
GRIP 3002Y	0.118	0.008	IC354	6200116
GRIP 3002Y	0.118	0.008	IC807	6200449
GRIP 3002Y	0.118	0.008	IC808	6200317
GRIP 3002Y	0.118	0.008	IC908	6200117
GRIP 3003Y	0.118	0.012	IC08	6200099
GRIP 3003Y	0.118	0.012	IC354	6200100
GRIP 3003Y	0.118	0.012	IC418	6200108
GRIP 3003Y	0.118	0.012	IC808	6200318
GRIP 3003Y	0.118	0.012	IC830	6200434
GRIP 3003Y	0.118	0.012	IC908	6292379
GRIP 318-040Y	0.125	0.016	IC808	6200320
GRIP 318-040Y	0.125	0.016	IC908	6200175
GRIP 4002Y	0.157	0.008	IC08	6200121
GRIP 4002Y	0.157	0.008	IC354	6200123
GRIP 4002Y	0.157	0.008	IC808	6200322
GRIP 4002Y	0.157	0.008	IC830	6200436
GRIP 4002Y	0.157	0.008	IC908	6200122
GRIP 4004Y	0.157	0.016	IC08	6200091
GRIP 4004Y	0.157	0.016	IC354	6200092
GRIP 4004Y	0.157	0.016	IC418	6200109
GRIP 4004Y	0.157	0.016	IC808	6200323
GRIP 4004Y	0.157	0.016	IC830	6200437
GRIP 4004Y	0.157	0.016	IC908	6291277
GRIP 476-080Y	0.187	0.031	IC808	6200325
GRIP 476-080Y	0.187	0.031	IC908	6200183
GRIP 5005Y	0.197	0.020	IC08	6200087
GRIP 5005Y	0.197	0.020	IC354	6200088
GRIP 5005Y	0.197	0.020	IC808	6200327
GRIP 5005Y	0.197	0.020	IC908	6291287
GRIP 5008Y	0.197	0.031	IC354	6200131
GRIP 5008Y	0.197	0.031	IC5010	6200427
GRIP 5008Y	0.197	0.031	IC830	6200440
GRIP 6005Y	0.236	0.020	IC354	6200096
GRIP 6005Y	0.236	0.020	IC5010	6200425
GRIP 6005Y	0.236	0.020	IC808	6200330
GRIP 6005Y	0.236	0.020	IC830	6200442
GRIP 6005Y	0.236	0.020	IC908	6291307
GRIP 6008Y	0.236	0.031	IC354	6200126
GRIP 6008Y	0.236	0.031	IC808	6200331

GRIP (Full Radius)

· Full radius, double-ended inserts for turning and grooving in external, internal and face applications.



Designation	Width	Radius	Grade	Part Number
GRIP 3015Y	0.118	0.059	IC08	6200142
GRIP 3015Y	0.118	0.059	IC808	6200319
GRIP 3015Y	0.118	0.059	IC830	6200435
GRIP 3015Y	0.118	0.059	IC908	6200143
GRIP 318-159Y	0.125	0.063	IC808	6200321
GRIP 4020Y	0.157	0.079	IC08	6200146
GRIP 4020Y	0.157	0.079	IC808	6200324
GRIP 4020Y	0.157	0.079	IC908	6200147
GRIP 476-238Y	0.187	0.094	IC808	6200326
GRIP 476-238Y	0.187	0.094	IC908	6200172
GRIP 5025Y	0.197	0.098	IC808	6200329
GRIP 5025Y	0.197	0.098	IC908	6200151
GRIP 6030Y	0.236	0.118	IC08	6200154
GRIP 6030Y	0.236	0.118	IC808	6200332
GRIP 6030Y	0.236	0.118	IC830	6200444
GRIP 6030Y	0.236	0.118	IC908	6200155
GRIP 635-318Y	0.250	0.125	IC808	6200334

ISCAR PARTING & GROOVING INSERTS

HFPR

· Utility double-ended face machining inserts.



Designation	Width	Radius	Grade	Part Number
HFPL 3003	0.118	0.012	IC354	6200075
HFPL 3003	0.118	0.012	IC808	6200301
HFPL 3003	0.118	0.012	IC9054	6200204
HFPR 3003	0.118	0.012	IC20	6200038
HFPR 3003	0.118	0.012	IC354	6200067
HFPR 3003	0.118	0.012	IC808	6200300
HFPR 3003	0.118	0.012	IC830	6200356
HFPR 3003	0.118	0.012	IC9015	6200136
HFPR 3003	0.118	0.012	IC9054	6200209
HFPL 4004	0.157	0.016	IC354	6200077
HFPL 4004	0.157	0.016	IC808	6200304
HFPL 4004	0.157	0.016	IC830	6200365
HFPR 4004	0.157	0.016	IC20	6200042
HFPR 4004	0.157	0.016	IC328	6290555
HFPR 4004	0.157	0.016	IC354	6200069
HFPR 4004	0.157	0.016	IC428	6290465
HFPR 4004	0.157	0.016	IC5010	6200388
HFPR 4004	0.157	0.016	IC808	6200306
HFPR 5004	0.197	0.016	IC20	6200044
HFPR 5004	0.197	0.016	IC354	6200071
HFPR 5004	0.197	0.016	IC830	6200359
HFPR 5004	0.197	0.016	IC9015	6200135
HFPL 6004	0.236	0.016	IC9054	6200207
HFPR 6004	0.236	0.016	IC20	6200048
HFPR 6004	0.236	0.016	IC354	6200073
HFPR 6004	0.236	0.016	IC428	6200084
HFPR 6004	0.236	0.016	IC808	6200314

HFPR (Full Radius)

· Utility double-ended face machining inserts.



Designation	Width	Radius	Grade	Part Number
HFPL 3015	0.118	0.059	IC354	6200076
HFPR 3015	0.118	0.059	IC20	6200040
HFPR 3015	0.118	0.059	IC830	6200357
HFPL 4020	0.157	0.079	IC20	6200051
HFPL 6030	0.236	0.118	IC354	6200082
HFPL 6030	0.236	0.118	IC9054	6200200
HFPR 6030	0.236	0.118	IC354	6200074

Inserts - PENTA 24N-C

· Parting and precision grooving insert with 5 cutting edges. First choice for the parting of bars, hard materials and tough applications. A positive rake, single cavity, negative land and shoulders, provides extra cutting-edge strength.



Designation	Cutting Width	Radius	Cutting Depth Max	Grade	Part Number
PENTA 24N150C010	0.059	0.004	0.197	IC908	6004785
PENTA 24N157C015	0.062	0.006	0.118	IC908	6004922
PENTA 24N170C010	0.067	0.004	0.118	IC908	3335539
PENTA 24N178C018	0.070	0.007	0.118	IC908	6004923
PENTA 24N196C015	0.077	0.006	0.118	IC908	3335540
PENTA 24N200C020	0.079	0.008	0.236	IC908	6004780
PENTA 24N230C020	0.091	0.008	0.138	IC908	6004925
PENTA 24N239C015	0.094	0.006	0.197	IC908	6004926
PENTA 24N247C020	0.097	0.008	0.197	IC908	6004786
PENTA 24N270C010	0.106	0.004	0.244	IC908	3335543
PENTA 24N287C020	0.113	0.008	0.244	IC908	3335544
PENTA 24N300C020	0.118	0.008	0.244	IC908	6004781
PENTA 24N300C040	0.118	0.016	0.244	IC908	6004927
PENTA 24N318C020	0.125	0.008	0.244	IC908	6004787
PENTA 24N478C055	0.188	0.022	0.244	IC908	6004935
PENTA 24N486C040	0.191	0.016	0.244	IC908	6004936
PENTA 24N500C040	0.197	0.016	0.244	IC908	6004937

Inserts - PENTA 24N-C (full radius)

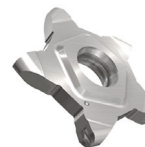
· Full radius grooving inserts with 5 cutting edges. First choice for grooving hard materials and tough applications. A positive rake, single cavity, negative land and shoulders, provides extra cutting-edge strength.



Designation	Cutting Width	Radius	Cutting Depth Max	Grade	Part Number
PENTA 24N157C079	0.062	0.031	0.118	IC908	3335538
PENTA 24N200C100	0.079	0.039	0.118	IC908	6004924
PENTA 24N239C120	0.094	0.047	0.197	IC908	3335542
PENTA 24N300C150	0.118	0.059	0.244	IC908	3335545

Inserts - PENTA 24N-C (full radius)

· Full radius grooving inserts with 5 cutting edges. First choice for grooving hard materials and tough applications. A positive rake, single cavity, negative land and shoulders, provides extra cutting-edge strength.



Designation	Cutting Width	Radius	Cutting Depth Max	Grade	Part Number
PENTA 24N100J050	0.039	0.020	0.138	IC908	6004811
PENTA 24N120J060	0.047	0.024	0.079	IC908	6004810
PENTA 24N140J070	0.055	0.028	0.079	IC908	6004812
PENTA 24N157J079	0.062	0.031	0.118	IC908	6003114
PENTA 24N200J100	0.079	0.039	0.118	IC908	6003120
PENTA 24N239J120	0.094	0.047	0.197	IC908	6003124
PENTA 24N300J150	0.118	0.059	0.256	IC908	6003091
PENTA 24N318J159	0.125	0.063	0.256	IC908	6004813
PENTA 24N400J200	0.157	0.079	0.246	IC908	6004802



Inserts - PENTA 24N-J

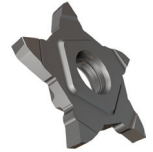
Parting and precision grooving insert on soft parts, minimizes burr size.
Most economical system with 5 cutting edges.



Designation	Cutting Width	Radius	Cutting Depth Max	Grade	Part Number
PENTA 24N050J000	0.020	0.000	0.039	IC908	6003104
PENTA 24N080J000	0.031	0.000	0.063	IC908	6003105
PENTA 24N100J004	0.039	0.002	0.138	IC908	6003106
PENTA 24N104J000	0.041	0.000	0.079	IC908	6003220
PENTA 24N120J000	0.047	0.000	0.079	IC908	6003107
PENTA 24N125J010	0.049	0.004	0.079	IC908	6004794
PENTA 24N140J000	0.055	0.000	0.079	IC908	6003109
PENTA 24N147J000	0.058	0.000	0.098	IC908	6003111
PENTA 24N150J010	0.059	0.004	0.197	IC908	6003226
PENTA 24N157J015	0.062	0.006	0.118	IC908	6003113
PENTA 24N170J010	0.067	0.004	0.118	IC908	6003115
PENTA 24N178J018	0.070	0.007	0.118	IC908	6003116
PENTA 24N185J015	0.073	0.006	0.118	IC908	6004795
PENTA 24N196J015	0.077	0.006	0.118	IC908	6003118
PENTA 24N200J020	0.079	0.008	0.236	IC908	6003218
PENTA 24N222J015	0.087	0.006	0.138	IC908	6003121
PENTA 24N230J020	0.091	0.008	0.138	IC908	6003122
PENTA 24N239J015	0.094	0.006	0.197	IC908	6003123
PENTA 24N247J020	0.097	0.008	0.197	IC908	6003125
PENTA 24N270J010	0.106	0.004	0.197	IC908	6003126
PENTA 24N287J020	0.113	0.008	0.256	IC908	6003127
PENTA 24N300J000	0.118	0.000	0.256	IC908	6003128
PENTA 24N300J020	0.118	0.008	0.256	IC908	6003129
PENTA 24N300J040	0.118	0.016	0.256	IC908	6003130
PENTA 24N315J015	0.124	0.006	0.256	IC908	6003131
PENTA 24N318J020	0.125	0.008	0.256	IC908	6003092
PENTA 24N330J010	0.130	0.004	0.252	IC908	6004796
PENTA 24N348J020	0.137	0.008	0.252	IC908	6004797
PENTA 24N356J020	0.140	0.008	0.252	IC908	6004798
PENTA 24N374J020	0.147	0.008	0.252	IC908	6004799
PENTA 24N398J020	0.157	0.008	0.244	IC908	6004800
PENTA 24N400J040	0.157	0.016	0.244	IC908	6004801
PENTA 24N423J010	0.167	0.004	0.244	IC908	6004803

Inserts - PENTA 24N-RS/LS

Parting and precision grooving pentagonal inserts.
Used for next to high shoulder applications.



Designation	Cutting Width	Radius	Cutting Depth Max	Grade	Part Number
PENTA 24N080NF010LS	0.031	0.004	0.063	IC908	6094304
PENTA 24N080NF010RS	0.031	0.004	0.063	IC908	6094983
PENTA 24N100NF010LS	0.039	0.004	0.071	IC908	6080479
PENTA 24N100NF010RS	0.039	0.004	0.071	IC908	6080478
PENTA 24N119NF010LS	0.047	0.004	0.079	IC908	6099524
PENTA 24N119NF010RS	0.047	0.004	0.079	IC908	6095473
PENTA 24N157NF020LS	0.062	0.008	0.118	IC908	6099534
PENTA 24N157NF020RS	0.062	0.008	0.118	IC908	6094993
PENTA 24N157NF079LS	0.062	0.031	0.118	IC908	6091555
PENTA 24N157NF079RS	0.062	0.031	0.118	IC908	6099484
PENTA 24N200NF020LS	0.079	0.008	0.118	IC908	6099544
PENTA 24N200NF020RS	0.079	0.008	0.118	IC908	6097584
PENTA 24N239NF020LS	0.094	0.008	0.197	IC908	6099554
PENTA 24N239NF020RS	0.094	0.008	0.197	IC908	6095003
PENTA 24N239NF119LS	0.094	0.047	0.197	IC908	6099494
PENTA 24N239NF119RS	0.094	0.047	0.197	IC908	6099444
PENTA 24N300NF020LS	0.118	0.008	0.244	IC908	6080481
PENTA 24N300NF020RS	0.118	0.008	0.244	IC908	6080480
PENTA 24N318NF020LS	0.125	0.008	0.256	IC908	6099564
PENTA 24N318NF020RS	0.125	0.008	0.256	IC908	6095013
PENTA 24N318NF159LS	0.125	0.063	0.256	IC908	6099504
PENTA 24N318NF159RS	0.125	0.063	0.256	IC908	6099514
PENTA 24N400NF020LS	0.157	0.008	0.256	IC908	6080482
PENTA 24N400NF020RS	0.157	0.008	0.256	IC908	6094624
PENTA 24N480NF020LS	0.189	0.008	0.256	IC908	6099474
PENTA 24N480NF020RS	0.189	0.008	0.256	IC908	6095023

ISCAR PARTING & GROOVING INSERTS

Inserts - PENTA 24R-C

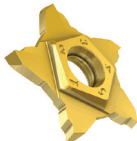
· Parting inserts with 5 cutting edges. First choice for the parting of bars, hard materials and tough applications. A positive rake, single cavity, negative land and shoulders, provides extra cutting-edge strength.



Designation	Cutting Width	Radius	Cutting Depth Max	Grade	Part Number
PENTA 24R150C06D	0.059	0.002	0.197	IC1008	6004928
PENTA 24R200C06D	0.079	0.004	0.236	IC1008	6004929

Inserts - PENTA 24R-P

· Inserts with 5 cutting edges for parting soft materials and thin walls, with minimized burr size. Most economical system due to 5 cutting edges.



Designation	Cutting Width	Radius	Cutting Depth Max	Grade	Part Number
PENTA 24R100P06D	0.039	0.002	0.138	IC1008	6003382
PENTA 24R100P15D	0.039	0.002	0.138	IC1008	6003383
PENTA 24R150P06D	0.059	0.002	0.197	IC1008	6003385
PENTA 24R150P15D	0.059	0.002	0.197	IC1008	6003386
PENTA 24R200P06D	0.079	0.002	0.236	IC1008	6003388
PENTA 24R200P15D	0.079	0.002	0.236	IC1008	6003389

Inserts - PENTA 24R/L-J

· Inserts with 5 cutting edges for parting of tubes, small and thin-walled parts. Most economical system available.



Designation	Cutting Width	Radius	Cutting Depth Max	Grade	Part Number
PENTA 24L100J15D	0.039	0.002	0.138	IC1008	6003096
PENTA 24R100J15D	0.039	0.002	0.138	IC1008	6003095
PENTA 24L150J06D	0.059	0.004	0.197	IC1008	6003098
PENTA 24L150J15D	0.059	0.002	0.197	IC1008	6003099
PENTA 24R150J06D	0.059	0.002	0.197	IC1008	6003097
PENTA 24R150J15D	0.059	0.002	0.197	IC1008	6003090
PENTA 24L200J06D	0.079	0.004	0.236	IC1008	6003101
PENTA 24L200J15D	0.079	0.004	0.236	IC1008	6003103
PENTA 24R200J06D	0.079	0.004	0.236	IC1008	6003100
PENTA 24R200J15D	0.079	0.004	0.236	IC1008	6003102

PICCO

· Inserts for grooving and turning

Designation	Dia.	W±.002	R±.002	OAL	LOC	Depth	Min Bore	Part Number
PICCO R 005.0100-10	0.197	0.039	0	0.984	0.354	0.039	0.197	6402341
PICCO R 005.0150-10	0.197	0.059	0	0.984	0.354	0.039	0.197	6411170
PICCO R 005.0200-15	0.197	0.079	0	1.181	0.551	0.039	0.197	6402352
PICCO R 007.0150-15	0.276	0.059	0	1.181	0.551	0.098	0.268	6402405
PICCO R 007.0150-22	0.276	0.059	0	1.457	0.827	0.098	0.268	6402411
PICCO R 007.0200-15	0.276	0.079	0	1.181	0.551	0.098	0.268	6402407
PICCO R 007.0200-30	0.276	0.079	0	1.772	1.142	0.098	0.268	6402425
PICCO R 007.0.50-30 (FULL RAD)	0.276	0.039	0.02	1.772	1.142	0.098	0.268	6403539



PICCO R/L 050, 053, 055

· Inserts for internal turning and chamfering

Designation	Dia.	Width	OAL	LOC	Radius	Depth	Min Bore	Part Number
PICCO R 050.3-10	0.157	0.102	0.945	0.354	0.004	0.008	0.11	6402305
PICCO R 050.3-20	0.157	0.102	1.339	0.748	0.004	0.008	0.11	6402307
PICCO R 053.4-10	0.157	0.138	0.945	0.354	0.001	0.012	0.157	6403988
PICCO R 050.4-10	0.157	0.138	0.945	0.354	0.004	0.012	0.157	6402309
PICCO R 050.4-16	0.157	0.138	1.181	0.591	0.004	0.012	0.157	6491485
PICCO R 050.4-24	0.157	0.138	1.496	0.906	0.004	0.012	0.157	6403669
PICCO R 050.5-10	0.197	0.173	0.984	0.354	0.006	0.02	0.197	6403822
PICCO R 050.5-15	0.197	0.173	1.181	0.551	0.006	0.02	0.197	6403783
PICCO R 050.5-20	0.197	0.173	1.378	0.748	0.006	0.02	0.197	6402279
PICCO R 050.5-25	0.197	0.173	1.575	0.945	0.006	0.02	0.197	6491475
PICCO R 050.6-15	0.236	0.209	1.181	0.551	0.006	0.02	0.236	6403784
PICCO R 050.6-22	0.236	0.209	1.457	0.827	0.006	0.02	0.236	6402278
PICCO R 050.6-25	0.236	0.209	1.575	0.945	0.006	0.02	0.236	6403832
PICCO R 050.6-30	0.236	0.209	1.772	1.142	0.006	0.02	0.236	6403833
PICCO R 050.6-35	0.236	0.209	1.968	1.339	0.006	0.02	0.236	6403834
PICCO R 050.7-30	0.276	0.248	1.772	1.142	0.006	0.024	0.268	6402335



PICCO-010 (round face groove)

· PICCO Inserts for profile face grooving

Designation	Dia.	W±.002	R±.002	OAL	LOC	Depth	Min Bore	Part Number
PICCO R 005.0100-10	0.197	0.039	0	0.984	0.354	0.039	0.197	6402341
PICCO R 005.0150-10	0.197	0.059	0	0.984	0.354	0.039	0.197	6411170
PICCO R 005.0200-15	0.197	0.079	0	1.181	0.551	0.039	0.197	6402352
PICCO R 007.0150-15	0.276	0.059	0	1.181	0.551	0.098	0.268	6402405
PICCO R 007.0150-22	0.276	0.059	0	1.457	0.827	0.098	0.268	6402411
PICCO R 007.0200-15	0.276	0.079	0	1.181	0.551	0.098	0.268	6402407
PICCO R 007.0200-30	0.276	0.079	0	1.772	1.142	0.098	0.268	6402425
PICCO R 007.0.50-30 (FULL RAD)	0.276	0.039	0.02	1.772	1.142	0.098	0.268	6403539

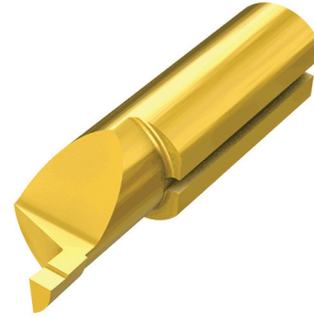


ISCAR PARTING & GROOVING INSERTS

PICCO-010/610 (face grooving)

· Inserts for face grooving

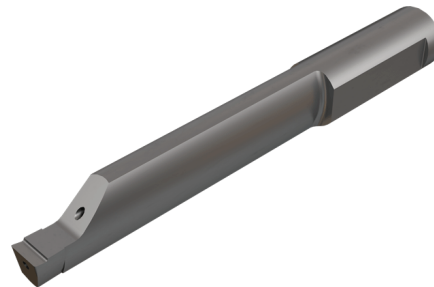
Designation	Dia.	Width	Depth	LOC	OAL	Part Number
PICCO R 010.1008-10	0.31	0.039	0.059	0.433	1.024	6402696
PICCO R 010.1008-30	0.31	0.039	0.059	1.181	1.772	6402835
PICCO R 610.1008-10	0.31	0.039	0.059	0.433	1.024	6402762
PICCO R 610.1008-20	0.31	0.039	0.059	0.787	1.378	6402767
PICCO R 010.1508-10	0.31	0.059	0.098	0.433	1.024	6402694
PICCO R 010.1508-30	0.31	0.059	0.098	1.181	1.772	6402836
PICCO R 610.1508-10	0.31	0.059	0.098	0.433	1.024	6402763
PICCO R 010.2008-10	0.31	0.079	0.118	0.433	1.024	6402693
PICCO R 610.2008-20	0.31	0.079	0.118	0.787	1.378	6402769
PICCO R 010.2508-10	0.31	0.098	0.138	0.433	1.024	6402757
PICCO R 010.2508-20	0.31	0.098	0.138	0.827	1.378	6402692
PICCO R 010.2508-30	0.31	0.098	0.138	1.181	1.772	6402838
PICCO R 010.3008-10	0.31	0.118	0.138	0.433	1.024	6402758
PICCO R 015.2515-20	0.59	0.098	0.787	0.787	1.378	6403070
PICCO R 015.3015-20	0.59	0.118	0.787	0.787	1.378	6403071



PICCO-016/620 (face grooving)

· PICCO mini inserts for deep face grooving

Designation	Dia.	Width	Depth	OAL	Part Number
PICCO R 016.0300-10	0.63	0.118	0.394	1.181	6404147
PICCO R 016.0300-20	0.63	0.118	0.787	1.575	6404148
PICCO R 016.0400-20	0.63	0.157	0.787	1.575	6404154
PICCO R 020.0400-25	0.79	0.157	0.984	1.772	6404155
PICCO R 020.0400-40	0.79	0.157	1.575	2.362	6404158
PICCO R 020.0500-40	0.79	0.197	1.575	2.362	6404163



PICCO-620 (groove along shaft)

· PICCO inserts for grooving along shaft

Designation	Dia.	Width	Depth	LOC	OAL	Part Number
PICCO R 620.1006-20	0.24	0.039	0.079	0.787	1.378	6403913
PICCO R 620.1506-20	0.24	0.059	0.118	0.787	1.378	6403914
PICCO R 620.2006-20	0.24	0.079	0.157	0.787	1.378	6403915
PICCO R 620.2506-20	0.24	0.098	0.197	0.787	1.378	6403916
PICCO R 620.3006-20	0.24	0.118	0.236	0.787	1.378	6403917



SCIR/L-22-N/L/R

· Grooving and parting inserts with parallel and frontal lead angle for reduced burr remaining on the workpiece. Used on Swiss type automatics and small CNC lathes.



Description	Width	Radius	Depth	Clearance	Min Groove	Max Groove	Grade	Part Number
SCIR 22-050N-00	0.020	0.000	0.071	0.217	0.0008	0.0016	IC1008	6405427
SCIR 22-100N-00	0.039	0.000	0.157	0.217	0.0012	0.0020	IC1008	6405403
SCIL 22-100N-00	0.039	0.000	0.157	0.217	0.0012	0.0020	IC1008	6405429
SCIR 22-150N-00	0.059	0.000	0.217	0.315	0.0012	0.0028	IC1008	6404230
SCIL 22-150N-00	0.059	0.000	0.217	0.315	0.0012	0.0028	IC1008	6405430
SCIR 22-200N-10	0.079	0.004	0.276	0.315	0.0012	0.0035	IC1008	6405402
SCIL 22-200N-10	0.079	0.004	0.276	0.315	0.0012	0.0035	IC1008	6405431
SCIR 22-100R16-00	0.039	0.000	0.157	0.217	0.0008	0.0016	IC1008	6405435
SCIL 22-100R16-00	0.039	0.000	0.157	0.217	0.0008	0.0016	IC1008	6410056
SCIL 22-150R16-00	0.059	0.000	0.217	0.315	0.0012	0.0024	IC1008	6405462

SCIR/L-22-NP

· Groove-turn and parting inserts used on Swiss type automatics and small CNC lathes.



Description	Width	Radius	Depth	Clearance	Min Groove	Max Groove	Grade	Part Number
SCIR 22-100NP08	0.039	0.003	0.118	0.315	0.0008	0.0024	IC1008	6410069
SCIR 22-150NP05	0.059	0.002	0.236	0.315	0.0008	0.0028	IC1008	6405417
SCIL 22-150NP05	0.059	0.002	0.236	0.315	0.0008	0.0028	IC1008	6405414

SCIR/L-22-MTR/MTL

· Threading inserts with a 60° partial profile.



Description	Radius	Pitch Min	Pitch Max	TPI Max	TPI Min	Grade	Part Number
SCIL 22-MTL003	0.001	0.300	0.090	83	28	IC1008	6405438
SCIR 22-MTR003	0.001	0.300	0.090	83	28	IC1008	6405443
SCIR 22-MTL007	0.003	0.700	1.100	36	23	IC1008	6405442
SCIR 22-MTR007	0.003	0.700	1.100	36	23	IC1008	6405444
SCIL 22-MTL010	0.004	0.900	1.700	28	15	IC1008	6405440
SCIR 22-MTR010	0.004	0.900	1.700	28	15	IC1008	6405445

ISCAR PARTING & GROOVING INSERTS

TAG N-C

· First choice for the parting of bars, hard materials and tough applications. A positive rake, single cavity (except 7 & 12 mm with double cavity), negative land and shoulders, provides extra cutting-edge strength. Medium-to-high feeds.



Designation	Width	Radius	Grade	Part Number
TAG N1.4C	0.055	0.0063	IC807	6003646
TAG N2C	0.079	0.0079	IC20	6003652
TAG N2C	0.079	0.0079	IC808	6003582
TAG N2C	0.079	0.0079	IC830	6003583
TAG N3C	0.120	0.0079	IC20	6003540
TAG N3C	0.120	0.0079	IC807	6003625
TAG N3C	0.120	0.0079	IC808	6003577
TAG N3C	0.120	0.0079	IC830	6011386
TAG N3C	0.120	0.0079	IC908	6003367
TAG N3C	0.120	0.0079	IC928	6003301
TAG N4C	0.157	0.0094	IC808	6003579
TAG N4C	0.157	0.0094	IC830	6011388
TAG N4C	0.157	0.0094	IC908	6003369
TAG N5C	0.199	0.0098	IC20	6003650
TAG N5C	0.199	0.0098	IC830	6003650

TAG N-UT

· A chipformer for use at low feeds. Recommended for Cr-Ni alloys (especially in the bearing industry), ductile materials and low carbon steel. The narrow chipformer design ensures short deformed chips.



Designation	Width	Radius	Grade	Part Number
TAG N3UT	0.118	0.0118	IC808	6003654
TAG N3UT	0.118	0.0118	IC830	6004427

TAG R-C

· First choice for the parting of bars, hard materials and tough applications. A positive rake, single cavity with a negative land and shoulders, provides extra cutting-edge strength. Medium-to-high feeds.



Designation	Width	Radius	Grade	Part Number
TAG R2C-6D	0.081	0.008	IC808	6003639
TAG R2C-6D	0.081	0.008	IC830	6004457
TAG R3C-6D	0.118	0.008	IC808	6011399
TAG R3C-6D	0.118	0.008	IC830	6011396
TAG R3C-6D	0.118	0.008	IC908	6003452
TAG R3C-15D	0.118	0.008	IC808	6011433
TAG R3C-15D	0.118	0.008	IC830	6011398

TAG N-J/JT

· First choice for soft materials, alloy steel and austenitic stainless steel. Parting of tubes, small diameters and thin-walled parts. Cutting edge with positive rake used at low-to-medium feeds.



Designation	Width	Radius	Grade	Part Number
TAG N1.4J	0.055	0.006	IC808	6004465
TAG N1.4J	0.055	0.006	IC830	6004470
TAG N2J	0.079	0.008	IC808	6003584
TAG N2J	0.079	0.008	IC830	6003585
TAG N2JT	0.079	0.008	IC808	6003676
TAG N3J	0.120	0.008	IC20	6003644
TAG N3J	0.120	0.008	IC807	6003626
TAG N3J	0.120	0.008	IC808	6003578
TAG N3J	0.120	0.008	IC830	6011387
TAG N3J	0.120	0.008	IC908	6003368
TAG N3JT	0.120	0.008	IC830	6003677
TAG N3JT	0.120	0.008	IC908	6004551
TAG N4J	0.157	0.009	IC808	6003580
TAG N4J	0.157	0.009	IC830	6011389
TAG N4JT	0.157	0.009	IC808	6003680
TAG N4JT	0.157	0.009	IC908	6004552
TAG N5J	0.199	0.010	IC808	6011427
TAG N5J	0.199	0.010	IC830	6011428
TAG N5JT	0.199	0.010	IC830	6004538
TAG N7JT	0.27	0.020	IC808	6092970

TAG R-J

· First choice for soft materials, alloy steel and austenitic stainless steel. Parting of tubes, small diameters and thin-walled parts. Cutting edge with positive rake used at low-to-medium feeds. The JS-type has sharp corners.



Designation	Width	Radius	Grade	Part Number
TAG R2J-6D	0.079	0.008	IC808	6003631
TAG R2J-15D	0.079	0.008	IC830	6004454
TAG R2JS-6D	0.079	0.001	IC808	6003635
TAG R2JS-6D	0.079	0.001	IC830	6004442
TAG R2JS-15D	0.079	0.001	IC830	6004440
TAG R3J-6D	0.118	0.008	IC808	6011400
TAG R3J-6D	0.118	0.008	IC830	6011395
TAG R3J-6D	0.118	0.008	IC908	6003447
TAG R3J-15D	0.118	0.001	IC908	6003450
TAG R3JS-15D	0.118	0.001	IC808	6092748
TAG R4J-4D	0.157	0.009	IC808	6011437



TGMF - Full Radius

- Utility double-ended inserts for external and internal grooving and profiling at low-to-medium feeds. Full radius inserts which can cut arcs to 250°.



Description	Width	Radius	Length	Min DOC	Max DOC	Depth	Grade	Part Number
TGMF 315	.118	.059	.531	.000	.059	.449	IC354	6450066
TGMF 315	.118	.059	.531	.000	.059	.449	IC808	6450112
TGMF 420	.157	.079	.701	.000	.079	.587	IC830	6450133
TGMF 420	.157	.079	.701	.000	.079	.587	IC908	6450095

TGMF

- Utility double-ended inserts for external and internal grooving and turning.



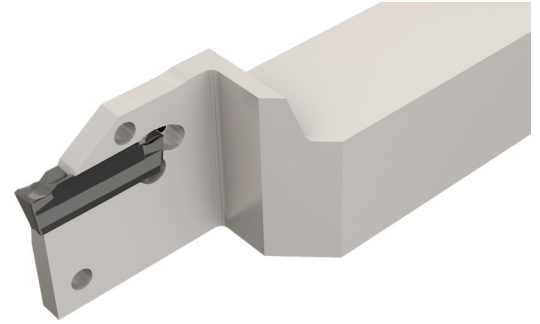
Description	Width	Radius	Length	Min DOC	Max DOC	Depth	Grade	Part Number
TGMF 302	0.118	0.008	0.531	0.01	0.071	0.413	IC20	6450043
TGMF 302	0.118	0.008	0.531	0.01	0.071	0.413	IC808	6450110
TGMF 302	0.118	0.008	0.531	0.01	0.071	0.413	IC908	6450085
TGMF 304	0.118	0.016	0.533	0.02	0.071	0.406	IC20	6450010
TGMF 304	0.118	0.016	0.533	0.02	0.071	0.406	IC830	6450129
TGMF 304	0.118	0.016	0.533	0.02	0.071	0.406	IC908	6450083
TGMF 402	0.157	0.008	0.697	0.008	0.094	0.579	IC20	6450047
TGMF 402	0.157	0.008	0.697	0.008	0.094	0.579	IC808	6450113
TGMF 402	0.157	0.008	0.697	0.008	0.094	0.579	IC908	6450086
TGMF 404	0.157	0.016	0.697	0.02	0.094	0.575	IC808	6450114
TGMF 404	0.157	0.016	0.697	0.02	0.094	0.575	IC908	6450084
TGMF 635-080	0.25	0.031	0.872	0.039	0.15	0.732	IC20	6450016
TGMF 635-080	0.25	0.031	0.872	0.039	0.15	0.732	IC808	6450119
TGMF 635-080	0.25	0.031	0.872	0.039	0.15	0.732	IC830	6450137
TGMF 635-080	0.25	0.031	0.872	0.039	0.15	0.732	IC908	6450088

ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - DGT L/R

• Integral shank parting & grooving

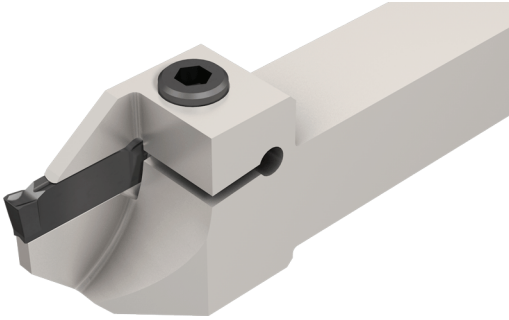
Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Head Length	Parting Dia. Max	Part Number
DGTL 12.7-2	0.075	0.100	0.500	4.500	1.100	1.40	2301291
DGTR 12.7-2	0.075	0.100	0.500	4.500	1.100	1.40	2301281
DGTL 1616-2	0.075	0.098	0.630	5.906	1.142	1.38	2301253
DGTR 1616-2	0.075	0.098	0.630	5.906	1.142	1.38	2301252
DGTL 19-2	0.075	0.100	0.750	4.500	1.100	1.40	2301293
DGTR 19-2	0.075	0.100	0.750	4.500	1.100	1.40	2301283
DGTL 12.7-3	0.118	0.125	0.500	4.500	1.100	1.40	2301294
DGTR 12.7-3	0.118	0.125	0.500	4.500	1.100	1.40	2301284
DGTL 1616-3	0.118	0.125	0.630	5.906	1.142	1.38	2301257
DGTR 1616-3	0.118	0.125	0.630	5.906	1.142	1.38	2301256
DGTL 19-3	0.118	0.125	0.750	4.500	1.100	1.40	2301296
DGTR 19-3	0.118	0.125	0.750	4.500	1.100	1.40	2301286
DGTL 25.4-3	0.118	0.125	1.000	6.000	1.100	1.40	2301297
DGTR 25.4-3	0.118	0.125	1.000	6.000	1.100	1.40	2301287
DGTL 19-4	0.157	0.157	0.750	4.500	1.200	2.00	2301298
DGTR 19-4	0.157	0.157	0.750	4.500	1.200	2.00	2301288
DGTL 25.4-4	0.157	0.157	1.000	6.000	1.200	2.00	2301299
DGTR 25.4-4	0.157	0.157	1.000	6.000	1.200	2.00	2301289
DGTL 25.4-5	0.189	0.200	1.000	6.000	1.300	3.00	2301375
DGTR 25.4-5	0.189	0.200	1.000	6.000	1.300	3.00	2301373
DGTL 25.4-6	0.236	0.236	1.000	6.000	1.300	3.00	2301376
DGTR 25.4-6	0.236	0.236	1.000	6.000	1.300	3.00	2301377



ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - DGTR/L-B/BC-D

- Integral-shank, reinforced parting and grooving tools for double-ended inserts.



Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Head Length	Cutting Depth Max	Part Number
DGTL 9.5B-1.4D20	0.055	0.055	0.375	5.50	0.930	0.394	2301416
DGTR 9.5B-1.4D20	0.055	0.055	0.375	5.50	0.930	0.394	2301415
DGTL 12.7B-1.4D30	0.055	0.055	0.500	5.50	1.200	0.591	2301418
DGTR 12.7B-1.4D30	0.055	0.055	0.500	5.50	1.200	0.591	2301417
DGTL 16B-1.4D30	0.055	0.055	0.630	5.51	1.165	0.591	2301383
DGTR 16B-1.4D30	0.055	0.055	0.630	5.51	1.165	0.591	2301382
DGTL 19B-1.4D30	0.055	0.055	0.750	5.50	1.200	0.591	2301420
DGTR 19B-1.4D30	0.055	0.055	0.750	5.50	1.200	0.591	2301419
DGTL 9.5B-2D30	0.075	0.100	0.375	5.50	1.200	0.591	2301422
DGTR 9.5B-2D30	0.075	0.100	0.375	5.50	1.200	0.591	2301421
DGTL 12.7B-2D30	0.075	0.100	0.500	5.50	1.200	0.591	2301424
DGTR 12.7B-2D30	0.075	0.100	0.500	5.50	1.200	0.591	2301423
DGTL 16B-2D32	0.075	0.098	0.630	5.51	1.205	0.630	2301391
DGTR 16B-2D32	0.075	0.098	0.630	5.51	1.205	0.630	2301390
DGTL 19B-2D35	0.075	0.100	0.750	5.50	1.300	0.689	2301426
DGTR 19B-2D35	0.075	0.100	0.750	5.50	1.300	0.689	2301425
DGTL 25.4B-2D35	0.075	0.100	1.000	5.50	1.300	0.689	2301428
DGTR 25.4B-2D35	0.075	0.100	1.000	5.50	1.300	0.689	2301427
DGTL 12.7B-3D30	0.118	0.125	0.500	5.50	1.200	0.591	2301430
DGTR 12.7B-3D30	0.118	0.125	0.500	5.50	1.200	0.591	2301429
DGTL 16B-3D35	0.118	0.125	0.630	5.51	1.264	0.630	2301399
DGTL 16BC-3D35	0.118	0.125	0.630	5.51	1.224	0.630	2301931
DGTR 16B-3D35	0.118	0.125	0.630	5.51	1.264	0.630	2301398
DGTR 16BC-3D35	0.118	0.125	0.630	5.51	1.224	0.630	2301772
DGTL 19BC-3D40	0.118	0.125	0.750	5.50	1.400	0.787	2301936
DGTR 19BC-3D40	0.118	0.125	0.750	5.50	1.400	0.787	2301935
DGTL 19B-3D40	0.118	0.125	0.750	5.50	1.400	0.787	2301432
DGTR 19B-3D40	0.118	0.125	0.750	5.50	1.400	0.787	2301431
DGTL 25.4B-3D40	0.118	0.125	1.000	5.50	1.400	0.787	2301434
DGTR 25.4B-3D40	0.118	0.125	1.000	5.50	1.400	0.787	2301433
DGTL 25.4BC-3D40	0.118	0.125	1.000	5.50	1.400	0.787	2301965
DGTR 25.4BC-3D40	0.118	0.125	1.000	5.50	1.400	0.780	2301964

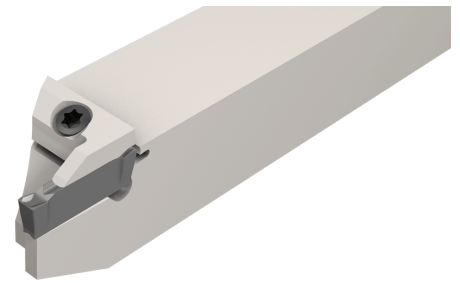


ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - DGTR/L-B-D-SH

- Parting and grooving short head tools for CNC and Swiss automatics.

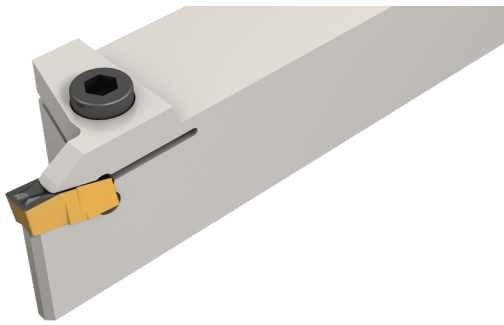
Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Head Length	Cutting Depth Max	Part Number
DGTL 8B-1.4SH	1.40mm	1.40mm	8.00mm	125.00mm	18.00mm	10.00mm	2301435
DGTR 8B-1.4SH	1.40mm	1.40mm	8.00mm	125.00mm	18.00mm	10.00mm	2301436
DGTL 10B-1.4D20SH	1.40mm	1.40mm	10.00mm	120.00mm	18.00mm	20.00mm	2301496
DGTR 10B-1.4D20SH	1.40mm	1.40mm	10.00mm	120.00mm	18.00mm	20.00mm	2301495
DGTL 10B-1.5D20SH	1.00mm	1.50mm	10.00mm	120.00mm	19.00mm	20.00mm	2301577
DGTR 10B-1.5D20SH	1.00mm	1.50mm	10.00mm	120.00mm	19.00mm	20.00mm	2301576
DGTL 10B-2D20SH	1.90mm	2.50mm	10.00mm	120.00mm	19.00mm	20.00mm	2301498
DGTR 10B-2D20SH	1.90mm	2.50mm	10.00mm	120.00mm	19.00mm	20.00mm	2301497
DGTL 12B-1.4D24SH	1.40mm	1.40mm	12.00mm	120.00mm	19.00mm	24.00mm	2393418
DGTR 12B-1.4D24SH	1.40mm	1.40mm	12.00mm	120.00mm	19.00mm	24.00mm	2393388
DGTL 12B-1.5D24SH	1.00mm	1.50mm	12.00mm	120.00mm	19.00mm	24.00mm	2301579
DGTR 12B-1.5D24SH	1.00mm	1.50mm	12.00mm	120.00mm	19.00mm	24.00mm	2301578
DGTL 12B-2D24SH	1.90mm	2.50mm	12.00mm	120.00mm	19.00mm	24.00mm	2393438
DGTR 12B-2D24SH	1.90mm	2.50mm	12.00mm	120.00mm	19.00mm	24.00mm	2393428
DGTL 12B-2D24SH-L85	1.90mm	2.50mm	12.00mm	85.00mm	19.00mm	24.00mm	2391753
DGTL 12B-3D24SH	3.00mm	3.18mm	12.00mm	120.00mm	19.00mm	24.00mm	2393448
DGTR 12B-2D24SH-L85	1.90mm	2.50mm	12.00mm	85.00mm	19.00mm	24.00mm	2391752
DGTR 12B-3D24SH	3.00mm	3.18mm	12.00mm	120.00mm	19.00mm	24.00mm	2393398
DGTL 16B-1.5D25SH	1.00mm	1.50mm	16.00mm	120.00mm	19.50mm	25.40mm	2301581
DGTR 16B-1.5D25SH	1.00mm	1.50mm	16.00mm	120.00mm	19.50mm	25.40mm	2301580
DGTL 16B-2D25SH	1.90mm	2.50mm	16.00mm	120.00mm	19.50mm	25.40mm	2301538
DGTR 16B-2D25SH	1.90mm	2.50mm	16.00mm	120.00mm	19.50mm	25.40mm	2301537
DGTL 16B-3D25SH	3.00mm	3.18mm	16.00mm	120.00mm	19.50mm	25.40mm	2301536
DGTR 16B-3D25SH	3.00mm	3.18mm	16.00mm	120.00mm	19.50mm	25.40mm	2301535
DGTL 20B-1.5D25SH	1.00mm	1.50mm	20.00mm	120.00mm	19.50mm	25.40mm	2301608
DGTR 20B-1.5D25SH	1.00mm	1.50mm	20.00mm	120.00mm	19.50mm	25.40mm	2301607
DGTL 20B-3D25SH	3.00mm	3.18mm	20.00mm	120.00mm	19.50mm	25.40mm	2301610
DGTR 20B-3D25SH	3.00mm	3.18mm	20.00mm	120.00mm	19.50mm	25.40mm	2301609



ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - GHDR/L (short pocket)

• External tools for turning, grooving and parting.



Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Head Length	Cutting Depth Max	Part Number
GHDL 12.7-2	0.016	0.125	0.500	4.500	1.000	0.320	2800077
GHDR 12.7-2	0.016	0.125	0.500	4.500	1.000	0.320	2800141
GHDL 19-2	0.016	0.125	0.750	4.500	1.000	0.330	2800087
GHDR 19-2	0.016	0.125	0.750	4.500	1.000	0.330	2800152
GHDL 12.7-3	0.110	0.157	0.500	4.500	1.000	0.330	2861020
GHDR 12.7-3	0.110	0.157	0.500	4.500	1.000	0.330	2800142
GHDL 16-3	0.110	0.157	0.630	4.331	1.024	0.354	2800081
GHDR 16-3	0.110	0.157	0.630	4.331	1.024	0.354	2800146
GHDL 16-3 ST	0.110	0.157	0.630	3.071	0.945	0.354	2800083
GHDR 16-3 ST	0.110	0.157	0.630	3.071	0.945	0.354	2800148
GHDL 19-3	0.110	0.157	0.750	4.500	1.000	0.360	2800088
GHDR 19-3	0.110	0.157	0.750	4.500	1.000	0.360	2800153
GHDL 25.4-3	0.110	0.157	1.000	6.000	1.000	0.360	2800095
GHDR 25.4-3	0.110	0.157	1.000	6.000	1.000	0.360	2800160
GHDL 31.7-3	0.110	0.157	1.250	7.000	1.000	0.360	2861217
GHDR 31.7-3	0.110	0.157	1.250	7.000	1.000	0.360	2800171
GHDL 16-4	0.157	0.197	0.630	4.331	1.024	0.394	2861021
GHDR 16-4	0.157	0.197	0.630	4.331	1.024	0.394	2800149
GHDR 16-4 ST	0.157	0.213	0.630	3.071	0.969	0.394	2861221
GHDL 19-4	0.157	0.200	0.750	4.500	1.000	0.400	2800089
GHDR 19-4	0.157	0.200	0.750	4.500	1.000	0.400	2800154
GHDL 25.4-4	0.157	0.200	1.000	6.000	1.100	0.400	2800096
GHDR 25.4-4	0.157	0.200	1.000	6.000	1.100	0.400	2800161
GHDL 31.7-4	0.157	0.200	1.250	7.000	1.100	0.400	2800107
GHDR 31.7-4	0.157	0.200	1.250	7.000	1.100	0.400	2800172
GHDL 19-5	0.200	0.252	0.750	4.500	1.200	0.500	2800738
GHDR 19-5	0.200	0.252	0.750	4.500	1.200	0.500	2800737
GHDL 25.4-5	0.200	0.252	1.000	6.000	1.200	0.500	2800740
GHDR 25.4-5	0.200	0.252	1.000	6.000	1.200	0.500	2800739
GHDL 31.7-5	0.200	0.252	1.300	7.000	1.200	0.500	2800746
GHDR 31.7-5	0.200	0.252	1.300	7.000	1.200	0.500	2800745
GHDR 25.4-P8	0.283	0.394	1.000	6.000	1.400	0.650	2801034
GHDL 31.7-P8	0.283	0.394	1.250	7.000	1.400	0.650	2801037

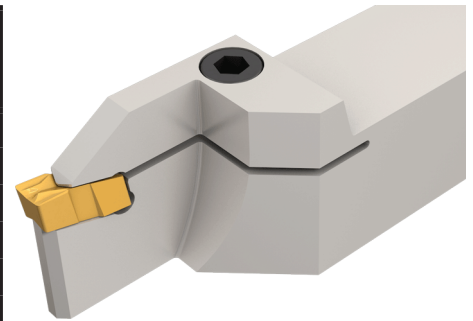


ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - GHGR/L

• External holders for deep grooving and parting

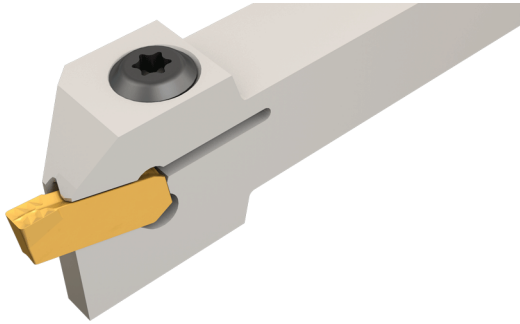
Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Head Length	Parting Depth Max	Part Number
GHGL 19-2	0.016	0.094	0.750	4.500	1.200	1.300	2800611
GHGR 19-2	0.016	0.094	0.750	4.500	1.200	1.300	2800610
GHGL 25.4-2	0.016	0.094	1.000	6.000	1.300	1.300	2800607
GHGR 25.4-2	0.016	0.094	1.000	6.000	1.300	1.300	2800606
GHGL 12.7-3	0.118	0.157	0.500	4.500	1.100	1.000	2800229
GHGR 12.7-3	0.118	0.157	0.500	4.500	1.100	1.000	2800255
GHGL 16-3	0.118	0.157	0.630	4.331	1.417	1.570	2800233
GHGR 16-3	0.118	0.157	0.630	4.331	1.417	1.570	2800259
GHGL 16-3 ST	0.118	0.157	0.630	3.071	1.299	1.340	2861192
GHGR 16-3 ST	0.118	0.157	0.630	3.071	1.299	1.340	2800260
GHGL 19-3	0.118	0.157	0.750	4.500	1.400	1.600	2800236
GHGR 19-3	0.118	0.157	0.750	4.500	1.400	1.600	2800261
GHGL 25.4-3	0.118	0.157	1.000	6.000	1.400	1.600	2800242
GHGR 25.4-3	0.118	0.157	1.000	6.000	1.400	1.600	2800267
GHGL 31.7-3	0.118	0.157	1.300	7.000	1.400	1.600	2800250
GHGR 31.7-3	0.118	0.157	1.300	7.000	1.400	1.600	2861214
GHGR 16-4	0.157	0.197	0.630	4.331	1.417	1.570	2800777
GHGL 19-4	0.150	0.190	0.750	4.500	1.400	1.600	2861193
GHGR 19-4	0.150	0.190	0.750	4.500	1.400	1.600	2800262
GHGL 25.4-4	0.150	0.190	1.000	6.000	1.400	1.600	2800243
GHGR 25.4-4	0.150	0.190	1.000	6.000	1.400	1.600	2800268
GHGL 31.7-4	0.150	0.190	1.300	7.000	1.600	2.000	2800251
GHGR 31.7-4	0.150	0.190	1.300	7.000	1.600	2.000	2800276
GHGL 25.4-425	0.185	0.250	1.000	6.000	1.600	2.000	2800654
GHGR 25.4-425	0.185	0.250	1.000	6.000	1.600	2.000	2800653
GHGL 25.4-5	0.185	0.250	1.000	6.000	1.600	2.000	2800244
GHGR 25.4-5	0.185	0.250	1.000	6.000	1.600	2.000	2800269
GHGL 31.7-5	0.185	0.250	1.300	7.000	1.600	2.000	2800252
GHGR 31.7-5	0.185	0.250	1.300	7.000	1.600	2.000	2800277
GHGL 25.4-630	0.236	0.250	1.000	6.000	1.800	2.400	2800652
GHGR 25.4-630	0.236	0.250	1.000	6.000	1.800	2.400	2800651
GHGL 31.7-632	0.236	0.315	1.300	7.000	2.000	2.500	2800781
GHGR 31.7-632	0.236	0.315	1.300	7.000	2.000	2.500	2800780



ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - GHMR/L

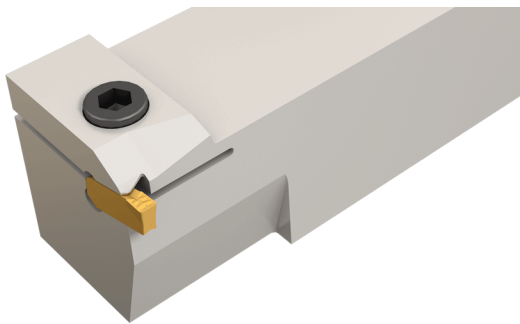
- CUT-GRIP toolholders for shallow radial and axial grooving. Light turning, small depth of cut and small feed



Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Head Length	Part Number
GHML 12.7	0.157	0.189	0.500	4.500	1.000	2800400
GHMR 12.7	0.157	0.189	0.500	4.500	1.000	2800440
GHML 16	0.189	0.189	0.630	4.528	.984	2800402
GHMR 16	0.189	0.189	0.630	4.528	.984	2800442
GHML 19	0.250	0.189	0.750	4.400	1.000	2800405
GHMR 19	0.250	0.189	0.750	4.400	1.000	2800445
GHML 25.4	0.250	0.189	1.000	6.000	1.000	2800410
GHMR 25.4	0.250	0.189	1.000	6.000	1.000	2800450
GHML 31.7	0.252	0.189	1.300	6.000	1.000	2800411
GHMR 31.7	0.252	0.189	1.300	6.000	1.000	2800451

ISCAR TOOL HOLDERS - GHMPR/L

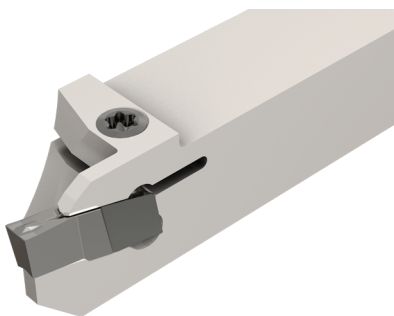
- CUT-GRIP perpendicular toolholders for shallow radial and axial grooving. Light turning, small depth of cut, and small feed



Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Head Length	Part Number
GHMPL 12.7	0.157	0.189	0.500	4.500	0.670	2861179
GHMPR 12.7	0.157	0.189	0.500	4.500	0.670	2800430
GHMPL 16	0.189	0.189	0.630	4.331	0.669	2800421
GHMPR 16	0.189	0.189	0.630	4.331	0.669	2800431
GHMPL 19	0.252	0.189	0.750	4.500	0.670	2800423
GHMPR 19	0.252	0.189	0.750	4.500	0.670	2861196
GHMPL 25.4	0.252	0.189	1.000	6.000	0.670	2861195
GHMPR 25.4	0.252	0.189	1.000	6.000	0.670	2800437
GHMPL 31.7	0.252	0.189	1.300	7.000	0.670	2800429
GHMPR 31.7	0.252	0.189	1.300	7.000	0.670	2800438

ISCAR TOOL HOLDERS - GHSR/L

- Grooving and turning holders, for Swiss type automatics.



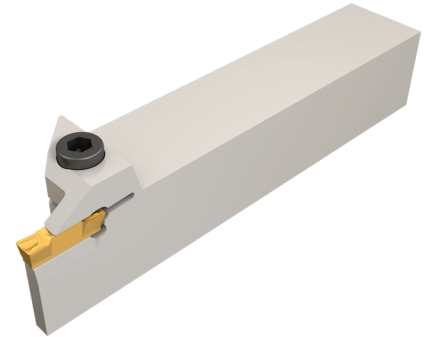
Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Head Length	Parting Depth Max	Part Number
GHSL 9.5-2	0.087	0.124	0.375	4.720	0.680	0.790	2800550
GHSR 9.5-2	0.087	0.124	0.375	4.720	0.680	0.790	2800548
GHSL 10-2	0.087	0.124	0.394	4.724	0.709	0.790	2800490
GHSR 10-2	0.087	0.124	0.394	4.724	0.709	0.790	2800495
GHSL 12.7-2	0.087	0.124	0.500	4.720	0.760	1.000	2800551
GHSR 12.7-2	0.087	0.124	0.500	4.720	0.760	1.000	2800549
GHSL 16-2	0.087	0.124	0.630	4.724	1.024	1.260	2800494
GHSR 16-2	0.087	0.124	0.630	4.724	1.024	1.260	2800499

ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - HELIR/L

• HELI-GRIP external holders for turning, grooving & parting

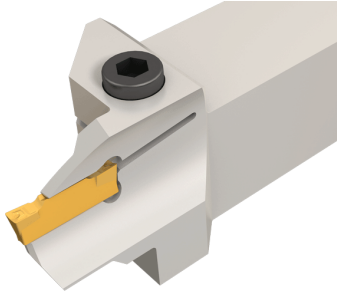
Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Head Length	Part Number
HELIL 12.7-3T12	0.118	0.125	0.500	5.300	1.200	2500631
HELIR 12.7-3T12	0.118	0.125	0.500	5.300	1.200	2500630
HELIL 1616-3T12	0.118	0.125	0.630	5.315	1.181	2500560
HELIR 1616-3T12	0.118	0.125	0.630	5.315	1.181	2500559
HELIL 19-3T12	0.118	0.125	0.750	5.500	1.100	2500523
HELIR 19-3T12	0.118	0.125	0.750	5.500	1.100	2500552
HELIL 25.4-3T12	0.118	0.125	1.000	6.000	1.100	2500555
HELIR 25.4-3T12	0.118	0.125	1.000	6.000	1.100	2500557
HELIL 1616-4T12	0.157	0.187	0.630	5.315	1.142	2500624
HELIR 1616-4T12	0.157	0.187	0.630	5.315	1.142	2500626
HELIL 19-4T12	0.157	0.187	0.750	5.500	1.100	2500524
HELIR 19-4T12	0.157	0.187	0.750	5.500	1.100	2500553
HELIL 25.4-4T12	0.157	0.187	1.000	6.000	1.100	2500447
HELIR 25.4-4T12	0.157	0.187	1.000	6.000	1.100	2500446
HELIL 1616-3T20	0.118	0.125	0.630	5.512	1.433	2500562
HELIR 1616-3T20	0.118	0.125	0.630	5.512	1.433	2500561
HELIL 19-3T20	0.118	0.125	0.750	5.500	1.400	2500549
HELIR 19-3T20	0.118	0.125	0.750	5.500	1.400	2500526
HELIL 25.4-3T20	0.118	0.125	1.000	6.000	1.400	2500556
HELIR 25.4-3T20	0.118	0.125	1.000	6.000	1.400	2500558
HELIL 31.7-3T20	0.118	0.125	1.250	7.000	1.400	2500609
HELIR 31.7-3T20	0.118	0.125	1.250	7.000	1.400	2500608
HELIL 1616-4T20	0.157	0.187	0.630	5.512	1.496	2500625
HELIR 1616-4T20	0.157	0.187	0.630	5.512	1.496	2500627
HELIL 19-4T25	0.157	0.187	0.750	5.500	1.700	2500550
HELIR 19-4T25	0.157	0.187	0.750	5.500	1.700	2500527
HELIL 25.4-4T25	0.157	0.187	1.000	6.000	1.700	2500453
HELIR 25.4-4T25	0.157	0.187	1.000	6.000	1.700	2500452
HELIL 31.7-4T25	0.157	0.187	1.250	7.000	1.700	2500611
HELIR 31.7-4T25	0.157	0.187	1.250	7.000	1.700	2500610
HELIL 19-5T25	0.197	0.197	0.750	5.500	1.700	2500528
HELIR 25.4-5T25	0.197	0.197	1.000	6.000	1.700	2500455
HELIL 25.4-5T25	0.197	0.197	1.000	6.000	1.700	2500454
HELIL 31.7-5T25	0.197	0.197	1.250	7.000	1.700	2500613
HELIR 31.7-5T25	0.197	0.197	1.250	7.000	1.700	2500612
HELIL 25.4-6T30	0.236	0.250	1.000	6.000	2.000	2500457
HELIR 25.4-6T30	0.236	0.250	1.000	6.000	2.000	2500456
HELIL 31.7-6T30	0.236	0.250	1.250	7.000	2.000	2500615
HELIR 31.7-6T30	0.236	0.250	1.250	7.000	2.000	2500614



ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - HFHR/L

• Integral toolholders for external facing. Dmin .98"



Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Groove Diameter Min	Groove Diameter Max	Head Length	Part Number
HFHL 25.4-25-3T12	0.118	0.470	1.000	6.000	0.980	1.180	1.500	2500090
HFHL 25.4-30-3T12	0.118	0.470	1.000	6.000	1.180	1.500	1.500	2500092
HFHL 25.4-48-3T22	0.118	0.870	1.000	6.000	1.890	2.360	1.570	2500096
HFHL 25.4-60-3T22	0.118	0.870	1.000	6.000	2.360	2.960	1.570	2500098
HFHL 25.4-75-3T25	0.118	0.980	1.000	6.000	2.950	3.940	1.690	2500100
HFHR 25.4-25-3T12	0.118	0.470	1.000	6.000	0.980	1.180	1.500	2500089
HFHR 25.4-30-3T12	0.118	0.470	1.000	6.000	1.180	1.500	1.500	2500091
HFHR 25.4-38-3T12	0.118	0.470	1.000	6.000	1.500	1.890	1.500	2500093
HFHR 25.4-48-3T22	0.118	0.870	1.000	6.000	1.890	2.360	1.570	2500095
HFHR 25.4-60-3T22	0.118	0.870	1.000	6.000	2.360	2.960	1.570	2500097
HFHR 25.4-75-3T25	0.118	0.980	1.000	6.000	2.950	3.940	1.690	2500099
HFHR 25.4-25-4T12	0.157	0.470	1.000	6.000	0.980	1.140	1.540	2500195
HFHR 25.4-29-4T12	0.157	0.470	1.000	6.000	1.140	1.340	1.540	2500197
HFHL 25.4-34-4T20	0.157	0.790	1.000	6.000	1.340	1.570	1.540	2500200
HFHR 25.4-34-4T20	0.157	0.790	1.000	6.000	1.340	1.570	1.540	2500199
HFHL 25.4-40-4T25	0.157	0.980	1.000	6.000	1.570	1.890	1.730	2500202
HFHR 25.4-40-4T25	0.157	0.980	1.000	6.000	1.570	1.890	1.730	2500201
HFHL 25.4-48-4T25	0.157	0.980	1.000	6.000	1.890	2.360	1.730	2500204
HFHR 25.4-48-4T25	0.157	0.980	1.000	6.000	1.890	2.360	1.730	2500203
HFHL 25.4-60-4T25	0.157	0.980	1.000	6.000	2.360	2.950	1.730	2500206
HFHR 25.4-60-4T25	0.157	0.980	1.000	6.000	2.360	2.950	1.730	2500205
HFHL 25.4-75-4T25	0.157	0.980	1.000	6.000	2.950	3.940	1.730	2500208
HFHR 25.4-75-4T25	0.157	0.980	1.000	6.000	2.950	3.940	1.730	2500207
HFHL 25.4-100-4T25	0.157	0.980	1.000	6.000	3.940	5.510	1.730	2500210
HFHR 25.4-100-4T25	0.157	0.980	1.000	6.000	3.940	5.510	1.730	2500209
HFHL 25.4-140-4T25	0.157	0.980	1.000	6.000	5.510	9.450	1.730	2500212
HFHR 25.4-140-4T25	0.157	0.980	1.000	6.000	5.510	9.450	1.730	2500211
HFHL 25.4-240-4T25	0.157	0.980	1.000	6.000	9.450	31.500	1.730	2500214
HFHR 25.4-240-4T25	0.157	0.980	1.000	6.000	9.450	31.500	1.730	2500213
HFHR 25.4-25-5T10	0.197	0.390	1.000	6.000	0.980	1.180	1.500	2500117
HFHR 25.4-35-5T20	0.197	0.790	1.000	6.000	1.380	1.570	1.540	2500123
HFHR 25.4-40-5T20	0.197	0.790	1.000	6.000	1.570	1.770	1.540	2500125
HFHR 25.4-45-5T25	0.197	0.980	1.000	6.000	1.770	2.170	1.730	2500127
HFHL 25.4-95-5T32	0.197	1.260	1.000	6.000	3.740	5.120	2.000	2500134
HFHR 25.4-70-5T32	0.197	1.260	1.000	6.000	2.760	3.740	2.000	2500131
HFHR 25.4-95-5T32	0.197	1.260	1.000	6.000	3.740	5.120	2.000	2500133

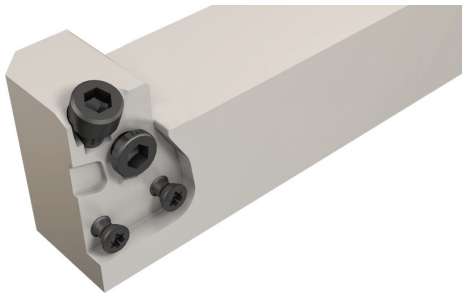


ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - MAHR/L

• MODULAR-GRIP adapter holders for all GRIP systems.

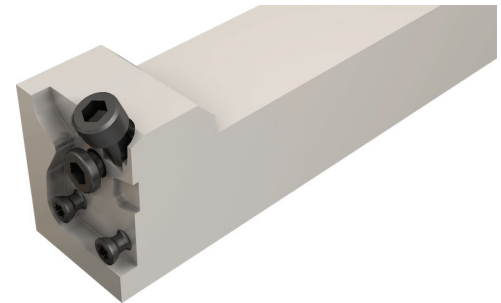
Designation	Shank	OAL	Functional Width	Part Number
MAHL 19	0.750	5.600	0.640	2801373
MAHR 19	0.750	5.600	0.640	2801374
MAHL 25.4	1.000	5.600	0.890	2801259
MAHR 25.4	1.000	5.600	0.890	2801258
MAHL 31.7	1.250	6.600	1.140	2801261
MAHR 31.7	1.250	6.600	1.140	2801260
MAHL 38.1	1.500	6.600	1.390	2801375
MAHR 38.1	1.500	6.600	1.390	2861075



ISCAR TOOL HOLDERS - MAHPR/L

• MODULAR-GRIP holder for perpendicularly mounted adapters of all GRIP systems.

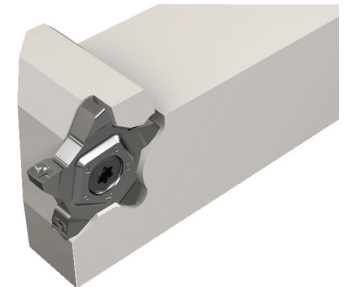
Designation	Shank	OAL	Functional Height	Part Number
MAHPL 19	0.750	6.000	0.750	2801377
MAHPR 19	0.750	6.000	0.750	2801378
MAHPL 25.4	1.000	6.000	1.000	2801263
MAHPR 25.4	1.000	6.000	1.000	2801262
MAHPL 31.7	1.250	7.000	1.250	2801265
MAHPR 31.7	1.250	7.000	1.250	2801264



ISCAR TOOL HOLDERS - PCHR/L-24

• Grooving, parting and recessing holders carrying inserts with 5 cutting edges.

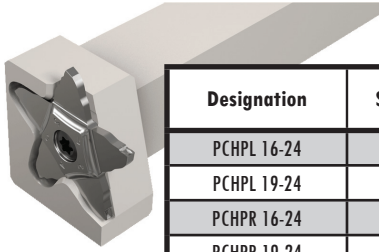
Designation	Shank	Cutting Width Min	Cutting Width Max	Shank to Clamp Surface	Cutting Depth Max	OAL	Part Number
PCHR 9.5-24	0.375	0.020	0.125	0.220	0.256	5.000	2393364
PCHL 12.7-24	0.500	0.020	0.125	0.362	0.256	5.000	2301626
PCHR 12.7-24	0.500	0.020	0.125	0.362	0.256	5.000	2301625
PCHL 16-24	0.630	0.020	0.126	0.492	0.256	4.724	2301612
PCHR 16-24	0.630	0.020	0.126	0.492	0.256	4.724	2301623
PCHL 19-24	0.750	0.020	0.125	0.610	0.256	5.000	2301617
PCHR 19-24	0.750	0.020	0.125	0.610	0.256	5.000	2301627
PCHL 25.4-24	1.000	0.020	0.125	0.860	0.256	5.500	2301620
PCHR 25.4-24	1.000	0.020	0.125	0.860	0.256	5.500	2301628
PCHL 16-24-5	0.630	0.126	0.205	0.453	0.252	4.724	2302952
PCHR 16-24-5	0.630	0.126	0.205	0.453	0.252	4.724	2302951
PCHL 19-24-5	0.750	0.126	0.205	0.570	0.252	5.000	2302958
PCHR 19-24-5	0.750	0.126	0.205	0.570	0.252	5.000	2302957
PCHL 20-24-5	0.787	0.126	0.205	0.610	0.252	4.724	2302954
PCHR 20-24-5	0.787	0.126	0.205	0.610	0.252	4.724	2302953
PCHL 25-24-5	0.984	0.126	0.205	0.807	0.252	5.315	2302956
PCHR 25-24-5	0.984	0.126	0.205	0.807	0.252	5.315	2302955
PCHL 25.4-24-5	1.000	0.126	0.205	0.820	0.252	5.500	2302960
PCHR 25.4-24-5	1.000	0.126	0.205	0.820	0.252	5.500	2302959



ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - PCHPR/L

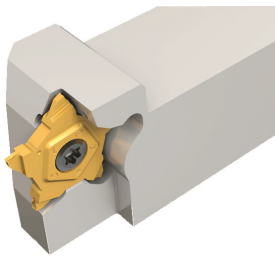
· Perpendicular PENTACUT holders carrying inserts with 5 cutting edges, for facing, grooving, parting and recessing.



Designation	Shank	Cutting Width Min	Cutting Width Max	Cutting Depth Max	Functional Height	Functional Width	Functional Length	OAL	Part Number
PCHPL 16-24	0.630	0.020	.126	0.256	0.630	.059	0.930	4.724	2302430
PCHPL 19-24	0.750	0.020	.126	0.256	0.750	.060	1.100	5.000	2302458
PCHPR 16-24	0.630	0.020	.126	0.256	0.630	.059	0.930	4.724	2302429
PCHPR 19-24	0.750	0.020	.126	0.256	0.750	.060	1.100	5.000	2302457
PCHPL 25.4-24	1.000	0.020	.126	0.256	1.000	.060	1.300	5.500	2302460
PCHPR 25.4-24	1.000	0.020	.126	0.256	1.000	.060	1.300	5.500	2302459

ISCAR TOOL HOLDERS - PCHR/L-24-JHP

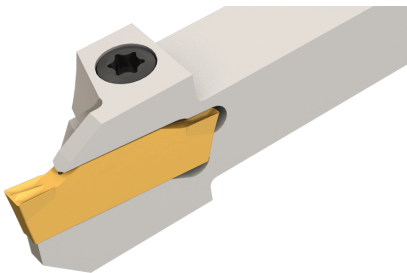
· Grooving, parting and recessing tools carrying PENTA inserts with channels for high pressure coolant.



Designation	Shank	Cutting Width Min	Cutting Width Max	Cutting Depth Max	Functional Width	Head Length	OAL	Part Number
PCHL 12.7-24-JHP	0.500	0.020	0.126	0.256	0.250	1.000	3.400	2302452
PCHR 12.7-24-JHP	0.500	0.020	0.126	0.256	0.250	1.000	3.400	2302451
PCHL 16-24-JHP	0.630	0.020	0.126	0.256	0.374	0.965	4.724	2302380
PCHR 16-24-JHP	0.630	0.020	0.126	0.256	0.374	0.965	4.724	2302379
PCHL 19-24-JHP	0.750	0.020	0.126	0.256	0.500	1.000	5.320	2302454
PCHR 19-24-JHP	0.750	0.020	0.126	0.256	0.500	1.000	5.320	2302453
PCHL 25.4-24-JHP	1.000	0.020	0.126	0.256	0.750	1.000	5.320	2302456
PCHR 25.4-24-JHP	1.000	0.020	0.126	0.256	0.750	1.000	5.320	2302455

ISCAR TOOL HOLDERS - PHSR/L

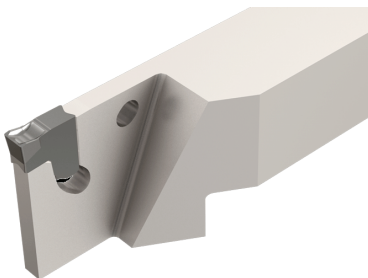
· Holders for Swiss type machines for GDMW/GDMY inserts.



Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Parting Diameter Max	Part Number
PHSL 9.5-2.4	0.094	0.125	0.375	5.910	0.790	2800755
PHSR 9.5-2.4	0.094	0.125	0.375	5.910	0.790	2800753
PHSL 10-2.4	0.094	0.125	0.394	5.906	0.790	2800727
PHSR 10-2.4	0.094	0.125	0.394	5.906	0.790	2800726
PHSL 12.7-2.4	0.094	0.125	0.500	5.900	1.000	2800756
PHSR 12.7-2.4	0.094	0.125	0.500	5.900	1.000	2800754
PHSL 16-2.4	0.094	0.125	0.630	5.906	1.260	2800744
PHSR 16-2.4	0.094	0.125	0.630	5.906	1.260	2800743

ISCAR TOOL HOLDERS - SGTFR/L

· SELF-GRIP integral shank tool for parting & grooving.



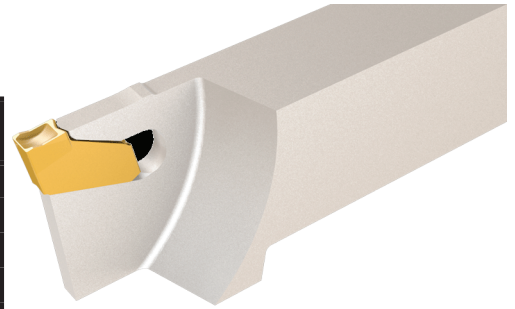
Designation	Cutting Width Min	Cutting Width Max	Parting Diameter Max	Shank	OAL	Part Number
SGTFR 12.7-1.6	0.063	0.063	1.180	0.500	4.300	2300833
SGTFR 12.7-2	0.071	0.106	1.250	0.500	4.300	2300835
SGTFR 12.7-3	0.106	0.139	1.250	0.500	4.300	2300836
SGTFR 16-2	0.071	0.106	1.250	0.625	4.500	2300841
SGTFR 16-3	0.106	0.139	1.380	0.625	4.500	2300842
SGTFR 19-2	0.071	0.106	1.380	0.750	4.500	2300848
SGTFR 19-3	0.106	0.139	1.750	0.750	4.500	2300849
SGTFR 25.4-3	0.106	0.139	2.250	1.000	5.900	2300861
SGTFR 25.4-4	0.139	0.178	2.500	1.000	5.900	2300863

ISCAR PARTING & GROOVING HOLDERS

ISCAR TOOL HOLDERS - TGTR/L-IQ

· Integral shank tools with a very rigid clamping. Enables machining at very high feeds and provides excellent straightness and surface finish. Recommended for parting interrupted cuts. Excellent tool and pocket life.

Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Parting Diameter Max	Part Number
TGTL 9.5-1.4-IQ	0.055	0.060	0.375	5.512	0.79	2302361
TGTR 9.5-1.4-IQ	0.055	0.060	0.375	5.512	0.79	2302358
TGTL 12.7-1.4-IQ	0.055	0.060	0.500	5.512	1.18	2302362
TGTR 12.7-1.4-IQ	0.055	0.060	0.500	5.512	1.18	2302359
TGTL 19-1.4-IQ	0.055	0.060	0.750	5.512	1.18	2302363
TGTR 19-1.4-IQ	0.055	0.060	0.750	5.512	1.18	2302360
TGTR 9.5-1.6-IQ	0.063	0.065	0.375	4.724	1.1	2302863
TGTL 12.7-1.6-IQ	0.063	0.065	0.500	4.724	1.26	2302868
TGTR 12.7-1.6-IQ	0.063	0.065	0.500	4.724	1.26	2302869
TGTL 9.5-2-IQ	0.071	0.098	0.375	5.905	1.1	2301904
TGTR 9.5-2-IQ	0.071	0.098	0.375	5.905	1.1	2301900
TGTL 12.7-2-IQ	0.071	0.098	0.500	5.910	1.26	2301906
TGTR 12.7-2-IQ	0.071	0.098	0.500	5.910	1.26	2301901
TGTL 16-2-IQ	0.071	0.098	0.626	5.910	1.26	2301905
TGTR 16-2-IQ	0.071	0.098	0.626	5.910	1.26	2301902
TGTL 19-2-IQ	0.071	0.098	0.750	5.905	1.38	2301907
TGTR 19-2-IQ	0.071	0.098	0.750	5.905	1.38	2301903
TGTR 25.4-2-IQ	0.071	0.098	1.000	5.910	2.24	2302391
TGTL 12.7-3-IQ	0.110	0.138	0.500	5.905	1.26	2301923
TGTR 12.7-3-IQ	0.110	0.138	0.500	5.905	1.26	2301908
TGTL 16-3-IQ	0.110	0.138	0.625	5.905	1.26	2301909
TGTR 16-3-IQ	0.110	0.138	0.625	5.905	1.26	2301924
TGTL 19-3-IQ	0.110	0.138	0.750	4.500	1.75	2301853
TGTR 19-3-IQ	0.110	0.138	0.750	4.500	1.75	2301824
TGTL 25.4-3-IQ	0.110	0.138	1.000	5.905	2.25	2301855
TGTR 25.4-3-IQ	0.110	0.138	1.000	5.905	2.25	2301826
TGTL 19-4-IQ	0.146	0.177	0.750	4.500	2	2301854
TGTR 19-4-IQ	0.146	0.177	0.750	4.500	2	2301825
TGTL 25.4-4-IQ	0.146	0.177	1.000	5.905	2.5	2301856
TGTR 25.4-4-IQ	0.146	0.177	1.000	5.905	2.5	2301827
TGTL 25.4-5-IQ	0.185	0.217	1.000	5.910	3	2302210
TGTR 25.4-5-IQ	0.185	0.217	1.000	5.910	3	2302209
TGTL 25.4-6-IQ	0.224	0.256	1.000	5.910	3	2302212
TGTR 25.4-6-IQ	0.224	0.256	1.000	5.910	3	2302211



ISCAR GROOVE-TURN BARS

GEHIR/L

· Internal machining bars with a coolant holes using GEMI and GEPI inserts in widths larger than .075".

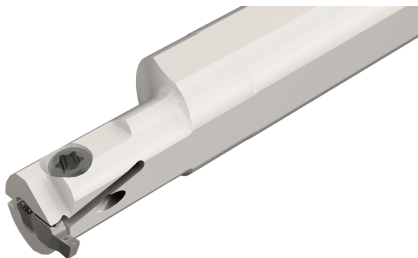


Designation	Cutting Width Min	Cutting Width Max	Shank	Min Bore	Cutting Depth Max	OAL	Part Number
GEHIR 9.5-13-2-T2.4	0.075	0.095	0.375	0.492	0.094	5.000	2801048
GEHIR 12.7-14-2-T2.6	0.075	0.095	0.500	0.551	0.102	6.000	2801050
GEHIR 12.7-14-2-T4	0.075	0.095	0.500	0.551	0.157	6.000	2801775
GEHIR 15.9-11.5-2-T3	0.075	0.095	0.625	0.453	0.118	5.000	2801774
GEHIR 15.9-13-2-T2.4	0.075	0.095	0.625	0.492	0.094	5.000	2801143
GEHIR 15.9-14-2-T2.6	0.075	0.095	0.625	0.551	0.102	5.000	2801147
GEHIR 15.9-14-2-T4	0.075	0.095	0.625	0.551	0.157	5.000	2801777
GEHIR 15.9-16-2-T3	0.075	0.095	0.625	0.630	0.118	6.000	2801151
GEHIR 15.9-20-2-T8	0.075	0.095	0.625	0.787	0.315	6.000	2801779
GEHIR 12.7-14-3-T2.6	0.095	0.126	0.500	0.551	0.102	6.000	2801139
GEHIR 12.7-14-3-T4	0.095	0.126	0.500	0.551	0.157	6.000	2801776
GEHIR 15.9-11.5-3-T3	0.095	0.126	0.625	0.453	0.118	5.000	2801774
GEHIR 15.9-13-3-T2.4	0.095	0.126	0.625	0.492	0.094	5.000	2801052
GEHIR 15.9-14-3-T2.6	0.095	0.126	0.625	0.551	0.102	5.000	2801054
GEHIR 15.9-14-3-T4	0.095	0.126	0.625	0.551	0.157	5.000	2801778
GEHIR 15.9-16-3-T3	0.095	0.126	0.625	0.630	0.118	6.000	2801056
GEHIR 15.9-20-3-T8	0.095	0.126	0.625	0.787	0.315	6.000	2801780

* Left Hand Available

GEHIRM/L

· Internal machining boring bars with coolant holes, using GEMI and GEPI inserts in smaller than .075" widths (the insert is not fully supported).



Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Cutting Depth Max	Min Bore	Part Number
GEHIRM 9.5-13	0.031	0.075	0.375	5.000	.098	0.492	2801191
GEHIRM 12.7-14	0.031	0.075	0.500	6.000	.098	0.551	2801192
GEHIRM 15.9-13	0.031	0.075	0.625	5.000	.098	0.492	2801193
GEHIRM 15.9-14	0.031	0.075	0.625	6.000	.098	0.551	2801194
GEHIRM 15.9-16	0.031	0.075	0.625	6.000	.098	0.630	2801195

* Left Hand Available

GHAIR/L

· Boring bars, for GEAR/L adapters. Used for internal grooving, turning and threading applications.



Designation	Shank	Head Length	OAL	Functional Width	Functional Height	Part Number
GHAIR 15.9-20	0.625	-	6.000	0.450	0.285	2801100
GHAIR 19-20	0.750	0.750	6.000	0.510	0.337	2861064
GHAIR 25.4-20	1.000	1.000	8.000	0.640	0.459	2801114
GHAIR 19-25	0.750	-	6.000	0.550	0.337	2801104
GHAIR 25.4-25	1.000	1.000	8.000	0.680	0.459	2801116
GHAIR 31.7-25	1.250	1.250	8.000	0.800	0.569	2801120

* Left Hand Available



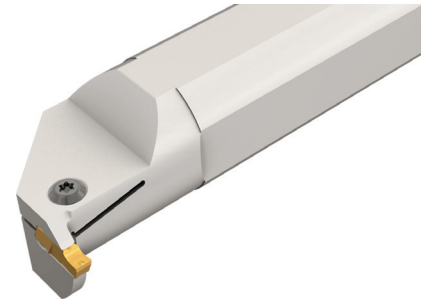
ISCAR GROOVE-TURN BARS

GHIR/L

· Grooving and turning boring bars.

Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Cutting Depth Max	Min Bore	Part Number
GHIR 19-3	0.078	0.137	0.750	8.000	0.177	0.787	2800336
GHIR 19-4	0.118	0.189	0.750	8.000	0.177	0.787	2800337
GHIR 25.4-4	0.098	0.157	1.000	8.000	0.197	0.984	2800345
GHIR 25.4-6	0.157	0.252	1.000	8.000	0.197	0.984	2800346
GHIR 31.7-4	0.098	0.157	1.250	10.000	0.197	1.480	2800353
GHIR 31.7-6	0.157	0.252	1.250	10.000	0.252	1.520	2800354
GHIR 38.1-4	0.098	0.157	1.500	12.000	0.197	1.730	2800359
GHIR 38.1-6	0.157	0.252	1.500	12.000	0.315	1.850	2800360

* Left Hand Available



GHIUR/L

· CUT-GRIP internal undercutting and turning bars.

Designation	Cutting Width Min	Cutting Depth Max	Shank	OAL	Min Bore	Part Number
GHIUR 19	0.189	0.118	0.750	8.000	0.750	2800389
GHIUR 19U	0.189	0.098	0.750	7.000	0.750	2800390
GHIUR 25.4	0.252	0.138	1.000	8.000	1.000	2861207
GHIUR 25.4U	0.252	0.118	1.000	7.000	1.000	2800394
GHIUR 31.7	0.252	0.200	1.250	10.000	1.480	2800397
GHIUR 38.1	0.252	0.250	1.500	12.000	1.800	2800398

* Left Hand Available



HELIIR/L

· Grooving and turning bars with coolant holes for HELI-GRIP utility inserts.

Designation	Cutting Width Min	Cutting Width Max	Shank	Min Bore	Cutting Depth Max	OAL	Part Number
HELIIR 19C-305	0.118	0.125	0.750	0.986	0.197	6.500	2500536
HELIIR 25.4C-305	0.118	0.125	1.000	1.236	0.197	7.000	2500535
HELIIR 25.4C-410	0.157	0.187	1.000	1.690	0.393	7.000	2500476
HELIIR 31.7C-410	0.157	0.187	1.250	1.690	0.393	8.000	2500482
HELIIR 38.1C-412	0.157	0.187	1.500	2.080	0.472	10.000	2500488
HELIIR 25.4C-510	0.197	0.197	1.000	1.690	0.393	7.000	2500478
HELIIR 31.7C-510	0.197	0.197	1.250	1.690	0.393	8.000	2500484
HELIIR 38.1C-512	0.197	0.197	1.500	2.080	0.472	10.000	2500490
HELIIR 31.7C-610	0.236	0.250	1.250	1.690	0.393	8.000	2500486
HELIIR 38.1C-612	0.236	0.250	1.500	2.080	0.472	10.000	2500492

* Left Hand Available



HFIR/L-MC

· Boring bars for internal grooving and turning.

Designation	Cutting Width Min	Cutting Width Max	Shank	OAL	Cutting Depth Max	Functional Width	Functional Height	Part Number
HFIR 15.9MC	0.118	0.236	0.625	5.906	0.197	0.438	0.295	3314670
HFIR 19.05MC	0.118	0.236	0.750	6.693	0.197	0.438	0.354	3314668
HFIR 25.4MC	0.118	0.236	1.000	8.000	0.197	0.450	0.460	2500342
HFIR 31.7MC	0.118	0.236	1.250	10.000	0.197	0.570	0.570	2500343
HFIR 38.1MC	0.118	0.236	1.500	12.000	0.197	0.700	0.670	2500344

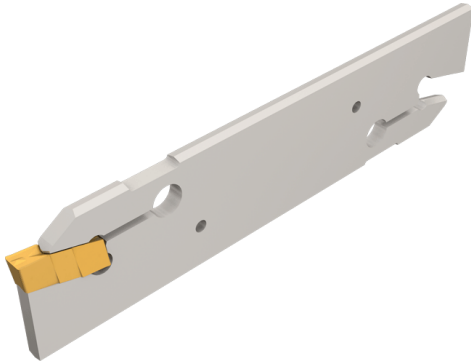
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ISCAR PARTING & GROOVING BLADES

CGHN-D

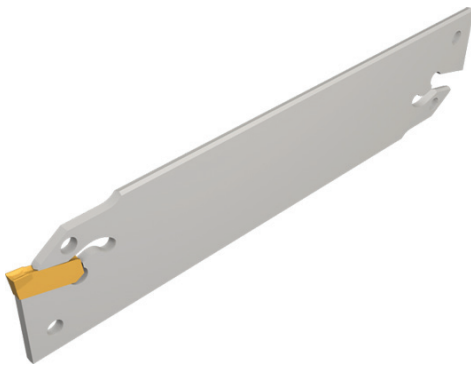
· Double-ended blades for external grooving and turning.



Designation	Shank	Cutting Width Min	Cutting Width Max	Functional Height	OAL	Part Number
CGHN 26-3D	1.024	0.110	0.157	0.843	4.331	2800002
CGHN 26-4D	1.024	0.138	0.177	0.843	4.331	2800003
CGHN 26-5D	1.024	0.173	0.252	0.843	4.331	2800004
CGHN 32-3D	1.260	0.110	0.157	0.976	5.906	2800005
CGHN 32-4D	1.260	0.138	0.197	0.976	5.906	2800006
CGHN 32-5D	1.260	0.173	0.252	0.976	5.906	2800007
CGHN 32-6D	1.260	0.217	0.252	0.976	5.906	2800008

CGHN-DG

· CUT-GRIP double-ended blades for external grooving and turning self-clamped inserts.



Designation	Shank	Cutting Width Min	Cutting Width Max	Functional Height	OAL	Part Number
CGHN 32-3DG	1.260	0.110	0.157	0.976	5.906	2800790
CGHN 32-4DG	1.260	0.138	0.197	0.976	5.906	2800791
CGHN 32-5DG	1.260	0.173	0.252	0.976	5.906	2800792
CGHN 32-6DG	1.260	0.217	0.252	0.976	5.906	2800793

CGHN-DGM

· Internal single-ended grooving and turning blades using self-clamped inserts.



Designation	Shank	Cutting Width Min	Cutting Width Max	Functional Width Min	Functional Width Max	Functional Height	OAL	Min Bore	Part Number
CGHN 32-3DGM	1.26	0.11	0.157	2.09	2.32	0.976	3.543	3.661	2800812
CGHN 32-4DGM	1.26	0.138	0.197	2.09	2.32	0.976	3.543	3.661	2800813
CGHN 32-5DGM	1.26	0.173	0.252	2.09	2.32	0.976	3.543	3.661	2800814
CGHN 32-6DGM	1.26	0.22	0.252	2.09	2.32	0.976	3.543	3.661	2800815

CGHN-M

· Internal grooving and turning blades.



Designation	Shank	Cutting Width Min	Cutting Width Max	Functional Width Min	Functional Width Max	Functional Height	OAL	Min Bore	Part Number
CGHN 32-3M	1.26	0.11	0.157	1.73	1.89	0.976	3.228	3.346	2800806
CGHN 32-4M	1.26	0.142	0.197	1.73	1.97	0.976	3.228	3.346	2800807
CGHN 32-5M	1.26	0.173	0.252	1.73	2.17	0.976	3.228	3.346	2800808
CGHN 32-6M	1.26	0.22	0.252	1.73	2.17	0.976	3.228	3.346	2800809

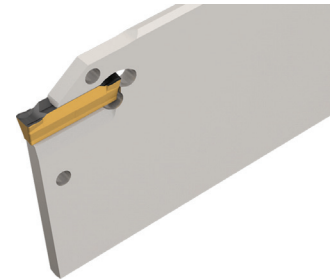


ISCAR PARTING & GROOVING BLADES

DGFH

· Double-ended parting and grooving blades carrying DO-GRIP and HELI-GRIP double-ended inserts.

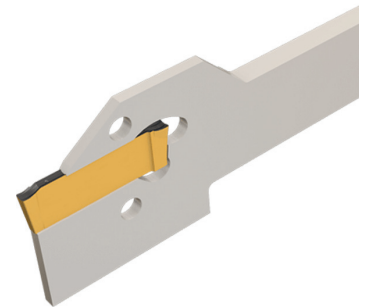
Designation	Shank	Cutting Width Min	Cutting Width Max	OAL	Functional Height	Parting Diameter Max	Part Number
DGFH 26-1.4	1.024	0.055	0.055	4.331	0.843	1.020	2395946
DGFH 26-2	1.024	0.075	0.098	4.331	0.843	1.540	2301241
DGFH 26-3	1.024	0.118	0.125	4.331	0.843	1.540	2301242
DGFH 26-4	1.024	0.157	0.157	4.331	0.843	3.150	2301243
DGFH 32-1.4	1.260	0.055	0.055	5.906	0.976	1.020	2301449
DGFH 32-2	1.260	0.078	0.098	5.906	0.976	1.540	2301244
DGFH 32-3	1.260	0.118	0.125	5.906	0.976	1.540	2301245
DGFH 32-4	1.260	0.157	0.157	5.906	0.976	3.940	2301246
DGFH 32-5	1.260	0.197	0.197	5.906	0.976	4.720	2301247
DGFH 32-6	1.260	0.236	0.250	5.906	0.976	4.720	2301268



DGFS

· Blades for multi-spindle machines - replacement for HSS and brazed tools, using double-ended inserts.

Designation	Shank	Cutting Width Min	Cutting Width Max	Parting Diameter Max	OAL	Part Number
DGFS 0-12-2	0.500	0.075	0.098	1.260	4.331	2301406
DGFS 0-17-2	0.685	0.075	0.098	1.380	4.331	2394326
DGFS 0-17-3	0.685	0.118	0.125	2.360	4.331	2394336
DGFS 5-17-2	0.685	0.075	0.098	1.380	4.331	2398467
DGFS 5-17-3	0.685	0.118	0.125	2.360	4.331	2398457
DGFS 5-22-2	0.874	0.075	0.098	1.970	5.906	2301410
DGFS 5-22-3	0.874	0.118	0.125	2.950	5.906	2398437
DGFS 5-22-4	0.874	0.157	0.157	3.150	5.906	2398637
DGFS 5-24-3	0.937	0.118	0.125	3.150	5.906	2398647
DGFS 5-28-2	1.122	0.075	0.098	2.560	5.906	2301412
DGFS 5-28-4	1.122	0.157	0.157	3.940	5.906	2301414



HFFR/L-T

· Blades for face machining Dmin 1.89".

Designation	Cutting Width	Groove Diameter Min	Groove Diameter Max	Cutting Depth Max	OAL	Functional Height	Shank	Part Number
HFFR 48-4T25	0.157	1.890	2.360	0.984	5.906	0.976	1.260	2500348
HFFR 60-4T25	0.157	2.360	2.950	0.984	5.906	0.976	1.260	2500360
HFFR 75-4T30	0.157	2.950	5.510	1.181	5.906	0.976	1.260	2500362
HFFR 140-4T30	0.157	5.510	59.060	1.181	5.906	0.976	1.260	2500350
HFFR 70-5T32	0.197	2.760	3.740	1.260	5.906	0.976	1.260	2500352
HFFR 95-5T35	0.197	3.740	5.120	1.378	5.906	0.976	1.260	2500364
HFFR 130-5T38	0.197	5.120	7.090	1.496	5.906	0.976	1.260	2500366
HFFR 180-5T38	0.197	7.090	59.060	1.496	5.906	0.976	1.260	2500354
HFFR 90-6T32	0.236	3.540	7.090	1.260	5.906	0.976	1.260	2500356
HFFR 180-6T38	0.236	7.090	15.750	1.496	5.906	0.976	1.260	2500358



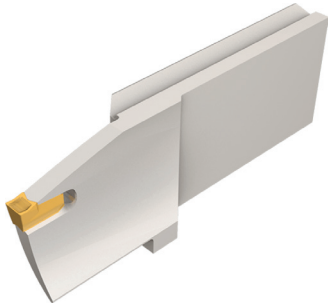
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ISCAR PARTING & GROOVING BLADES

SGFFA

· SELF-GRIP reinforced face grooving blades, used on standard tool blocks.



Designation	Cutting Width	Cutting Depth Max	Groove Diameter Min	Groove Diameter Max	Shank	OAL	Part Number
SGFFA 25-R-2	0.083	0.512	0.980	1.180	1.260	3.150	2300250
SGFFA 30-R-2	0.083	0.551	1.140	1.420	1.260	3.150	2300252
SGFFA 80-R-2	0.083	0.787	3.110	4.020	1.260	3.150	2300260
SGFFA 30-R-3	0.118	0.748	1.180	1.380	1.260	3.543	2300262
SGFFA 35-R-3	0.118	0.787	1.350	1.600	1.260	3.543	2300264
SGFFA 40-R-3	0.118	0.866	1.570	1.850	1.260	3.543	2300266
SGFFA 46-R-3	0.118	0.945	1.810	2.170	1.260	3.543	2300268
SGFFA 55-R-3	0.118	0.984	2.130	2.560	1.260	3.543	2300270
SGFFA 65-R-3	0.118	1.024	2.520	3.150	1.260	3.543	2300272
SGFFA 35-R-4	0.157	0.984	1.380	1.770	1.260	3.543	2300276
SGFFA 45-R-4	0.157	0.984	1.730	2.280	1.260	3.543	2300278
SGFFA 80-R-4	0.157	1.181	3.110	5.120	1.260	3.740	2300282
SGFFA 40-R-5	0.197	0.984	1.570	2.050	1.260	3.543	2300284
SGFFA 50-R-5	0.197	1.102	1.970	2.800	1.260	3.740	2300286
SGFFA 100-R-5	0.197	1.378	3.940	7.090	1.260	3.937	2300290
SGFFA 45-R-6	0.236	0.984	1.730	2.280	1.260	3.543	2300292
SGFFA 60-R-6	0.236	1.181	2.240	3.030	1.260	3.740	2300294
SGFFA 75-R-6	0.236	1.378	2.950	4.020	1.260	3.937	2300296
SGFFA 100-R-6	0.236	1.575	3.940	5.910	1.260	4.134	2300298
SGFFA 150-R-6	0.236	1.575	5.870	9.840	1.260	4.134	2300300

* Left Hand Available

SGFFH

· SELF-GRIP face grooving blades.



Designation	Cutting Width	Cutting Depth Max	Groove Diameter Min	Groove Diameter Max	Shank	OAL	Part Number
SGFFH 35-R-2	0.083	0.787	1.38	1.81	1.26	5.906	2300302
SGFFH 45-R-2	0.083	0.787	1.77	2.4	1.26	5.906	2300304
SGFFH 60-R-2	0.083	0.787	2.36	3.15	1.26	5.906	2300306
SGFFH 80-R-2	0.083	0.787	3.11	4.02	1.26	5.906	2300308
SGFFH 100-R-2	0.083	0.787	3.98	5.2	1.26	5.906	2300310
SGFFH 75-R-3	0.118	0.787	2.56	3.62	1.26	5.906	2300312
SGFFH 90-R-3	0.118	0.787	3.54	4.8	1.26	5.906	2300314
SGFFH 120-R-3	0.118	0.984	4.72	6.3	1.26	5.906	2300316
SGFFH 80-R-4	0.157	1.181	3.15	6.1	1.26	5.906	2300318
SGFFH 150-R-4	0.157	1.181	5.91	19.69	1.26	5.906	2300320
SGFFH 80-R-5	0.197	1.26	3.15	6.38	1.26	5.906	2300322
SGFFH 150-R-5	0.197	1.378	5.91	23.62	1.26	5.906	2300324
SGFFH 90-R-6	0.236	1.26	3.54	5.91	1.26	5.906	2300326
SGFFH 150-R-6	0.236	1.378	5.83	27.56	1.26	5.906	2300328

* Left Hand Available

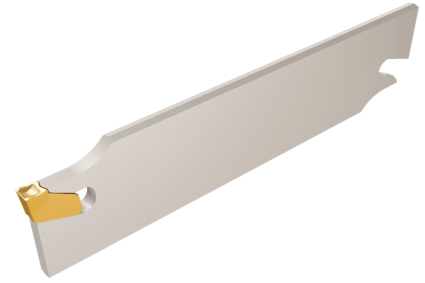


ISCAR PARTING & GROOVING BLADES

SGFH

· SELF-GRIP blades for parting and grooving with single-ended inserts.

Designation	Shank	Cutting Width Min	Cutting Width Max	Parting Diameter Max	OAL	Part Number
SGFH 19-1	0.748	0.063	0.063	1.260	3.386	2300507
SGFH 19-1.2	0.748	0.047	0.047	0.710	3.386	2301237
SGFH 19-2	0.748	0.071	0.106	1.500	3.386	2300509
SGFH 26-1	1.024	0.063	0.063	1.380	4.331	2300510
SGFH 26-1.2	1.024	0.047	0.047	0.790	4.331	2301238
SGFH 26-2	1.024	0.071	0.106	1.970	4.331	2300512
SGFH 26-3	1.024	0.106	0.139	2.950	4.331	2300514
SGFH 26-4	1.024	0.139	0.178	3.150	4.331	2300517
SGFH 26-5	1.024	0.179	0.217	3.150	4.331	2300519
SGFH 32-1	1.260	0.063	0.063	1.500	5.906	2300521
SGFH 32-2	1.260	0.071	0.106	1.970	5.906	2300522
SGFH 32-3	1.260	0.106	0.139	3.940	5.906	2300524
SGFH 32-4	1.260	0.139	0.178	3.940	5.906	2300526
SGFH 32-5	1.260	0.179	0.217	4.720	5.906	2300528
SGFH 32-6	1.260	0.217	0.256	4.720	5.906	2300530



TGFH

· Very rigid clamping. Enables machining at very high feed rates and provides excellent straightness and surface finish. Recommended for parting large diameter parts and for interrupted cuts. Excellent tool and pocket life.

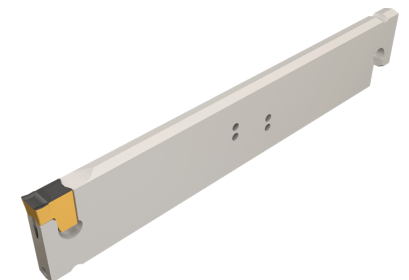
Designation	Shank	Cutting Width Min	Cutting Width Max	Parting Diameter Max	OAL	Part Number
TGFH 26-1.4	1.024	0.055	0.055	1.140	4.331	2302276
TGFH 26-1.6	1.024	0.063	0.063	1.380	4.331	2302860
TGFH 26-2	1.024	0.071	0.094	1.970	4.331	2301860
TGFH 26-3	1.024	0.110	0.138	2.950	4.331	2301764
TGFH 26-4	1.024	0.146	0.177	3.150	4.331	2301765
TGFH 26-5	1.024	0.185	0.217	3.150	5.906	2302239
TGFH 32-1.4	1.260	0.055	0.055	1.140	5.906	2302277
TGFH 32-1.6	1.260	0.063	0.063	1.500	5.906	2302861
TGFH 32-2	1.260	0.071	0.094	1.970	5.906	2301861
TGFH 32-3	1.260	0.110	0.138	3.940	5.906	2301743
TGFH 32-4	1.260	0.146	0.177	3.940	5.906	2301763
TGFH 32-5	1.260	0.185	0.217	4.720	5.906	2302143



TGSU

· Very rigid clamping. Enables machining at very high feed rates and provides excellent straightness and surface finish. The blade features no upper jaw and a flat top, which allows for ZERO chip interference.

Designation	Shank	Cutting Width Min	Cutting Width Max	Parting Diameter Max	OAL	Part Number
TGSU 35-2-1Q	1.378	0.071	0.094	2.340	6.299	2302190
TGSU 35-3-1Q-4Z	1.378	0.110	0.138	4.720	7.087	2302826
TGSU 35-4-1Q-4Z	1.378	0.146	0.177	4.720	7.087	2302833
TGSU 35-5-1Q	1.378	0.185	0.217	5.670	7.087	2302192



ISCAR PARTING & GROOVING ADAPTERS

CGPAD

· MODULAR-GRIP adapters for GIP/GIF groove-turn inserts.



Designation	Cutting Width Min	Cutting Width Max	Parting Diameter Max	Head Length	Functional Width	Functional Height	OAL	OAH	Part Number
CGPAD 3R-T16	0.110	0.157	0.630	0.681	0.157	0.945	1.654	1.181	2801213
CGPAD 3R-T22	0.110	0.157	0.866	0.906	0.157	0.945	1.878	1.181	2898263
CGPAD 4R-T16	0.157	0.197	0.630	0.681	0.142	0.945	1.654	1.181	2801214
CGPAD 4R-T22	0.157	0.197	0.866	0.906	0.138	0.945	1.878	1.181	2801216
CGPAD 5R-T16	0.197	0.252	0.630	0.681	0.122	0.945	1.654	1.181	2801217
CGPAD 5R-T22	0.197	0.252	0.866	0.906	0.118	0.945	1.878	1.181	2801219

* Left Hand Available

DGAD/HGAD

· Parting and grooving adapters for DO-GRIP double-ended inserts.



Designation	Cutting Width Min	Cutting Width Max	Parting Diameter Max	Functional Height	OAL	OAH	Part Number
DGAD 1.4N	0.055	0.055	1.100	0.945	1.634	1.181	2301448
DGAD 2N	0.075	0.098	1.260	0.945	1.634	1.181	2394966
DGAD 3N	0.118	0.125	1.260	0.945	1.634	1.181	2394956
HGAD 3N	0.118	0.118	1.970	0.945	1.988	1.181	2301458
DGAD 4N	0.157	0.157	1.970	0.945	1.988	1.181	2395846
DGAD 5N	0.189	0.197	1.970	0.945	1.988	1.181	2395856

GAIR/L

· Parting and grooving adapters for DO-GRIP double-ended inserts.

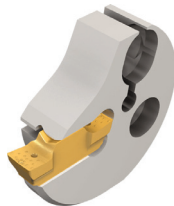


Designation	Cutting Width Min	Cutting Width Max	Parting Diameter Max	Functional Height	OAL	Part Number
GAIR 32-2	1.26	0.059	0.083	0.118	0.15	2801069
GAIR 32-3	1.26	0.083	0.118	0.118	0.161	2801071
GAIR 32-4	1.26	0.118	0.177	0.197	0.177	2801096
GAIR 32-5	1.26	0.177	0.252	0.197	0.205	2801072
GAIR 40-2	1.575	0.059	0.083	0.118	0.15	2801074
GAIR 40-3	1.575	0.083	0.118	0.157	0.161	2801076
GAIR 40-4	1.575	0.118	0.177	0.276	0.177	2801098
GAIR 40-5	1.575	0.177	0.252	0.276	0.205	2801078

* Left Hand Available

GEAIR/L

· Internal grooving and turning adapters for GEMI and GEPI inserts.



Designation	Cutting Width Min	Cutting Width Max	Parting Diameter Max	Functional Height	OAL	Part Number
GEAIR 20-2	0.787	0.075	0.094	0.118	0.134	2801088
GEAIR 20-3	0.787	0.094	0.118	0.118	0.142	2801086
GEAIR 20-4	0.787	0.118	0.157	0.118	0.154	2801090
GEAIR 25-2	0.984	0.075	0.094	0.157	0.134	2801092
GEAIR 25-3	0.984	0.094	0.118	0.157	0.142	2801087
GEAIR 25-4	0.984	0.118	0.157	0.157	0.154	2801094

* Left Hand Available



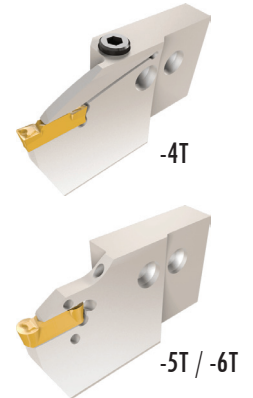
ISCAR PARTING & GROOVING ADAPTERS

HFAER/L

· Adapters for external facing along shaft.
-4 : Dmin. 1.57", -5/6 : Dmin 2.76".

Designation	Cutting Depth Max	Cutting Width	Groove Dia Min	Groove Dia Max	OAL	Functional Width	Part Number
HFAER 40-4T20	0.787	0.157	1.570	1.890	2.697	0.457	2550074
HFAER 48-4T20	0.787	0.157	1.890	2.360	2.697	0.457	2550075
HFAER 60-4T25	0.984	0.157	2.360	2.950	2.697	0.457	2550076
HFAER 75-4T25	0.984	0.157	2.950	3.940	2.697	0.457	2550077
HFAER 70C-5T25	0.984	0.197	2.760	3.740	2.598	0.480	2550047
HFAER 95C-5T25	0.984	0.197	3.740	5.120	2.598	0.480	2550048
HFAER 70C-6T28	1.102	0.236	2.760	3.940	2.717	0.484	2550051
HFAER 100C-6T32	1.260	0.236	3.940	7.090	2.874	0.484	2550052
HFAER 180C-6T32	1.260	0.236	7.090	15.750	2.874	0.484	2550053

* Left Hand Available



HFAIR/L

· Adapters for internal face grooving and turning.
-4 : Dmin. 1.34", -DG : Dmin 2.16".

Designation	Cutting Depth Max	Cutting Width	Groove Dia Min	Groove Dia Max	OAL	Functional Width	Part Number
HFAIR 34-4T18	0.709	0.157	1.340	1.570	2.638	0.602	2550070
HFAIR 40-4T20	0.787	0.157	1.570	1.890	2.638	0.602	2550071
HFAIR 48-4T20	0.787	0.157	1.890	2.360	2.638	0.602	2550072
HFAIR 60-4T25	0.984	0.157	2.360	2.950	2.638	0.602	2550073
HFAIR 140C-4T30DG	1.181	0.157	5.510	-	2.697	0.429	2500727
HFAIR 75C-4T30DG	1.181	0.157	2.950	5.510	2.697	0.429	2500725
HFAIR 130C-5T38DG	1.496	0.197	5.120	7.090	3.012	0.469	2500731
HFAIR 180C-5T38DG	1.496	0.197	7.090	-	3.012	0.469	2500733
HFAIR 55C-5T25DG	0.984	0.197	2.170	2.760	2.598	0.469	2550021
HFAIR 70C-5T25DG	0.984	0.197	2.760	3.740	2.598	0.469	2550022
HFAIR 95C-5T35DG	1.378	0.197	3.740	5.120	2.894	0.469	2500729
HFAIR 100C-6T32DG	1.260	0.236	3.940	7.090	2.874	0.472	2550026
HFAIR 180C-6T38DG	1.496	0.236	7.090	-	3.012	0.488	2500735
HFAIR 70C-6T28DG	1.102	0.236	2.760	3.940	2.717	0.472	2550025

* Left Hand Available



ISCAR PARTING & GROOVING ADAPTERS

HFPAD R/L

· Adapters for face grooving and turning. Part of the MODULAR-GRIP system.
-3 : .984-15" Dia.; -4 : .984-31" Dia.; -5 : 1.57-31" Dia.; -6 : 2.36-118" Dia.

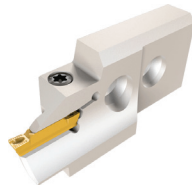


Designation	Groove Dia Min	Groove Dia Max	Cutting Depth Max	Cutting Width	Functional Width	OAL	Functional Height	Part Number
HFPAD 3R-25-T10	0.980	1.180	0.118	0.394	0.189	1.555	0.945	2550111
HFPAD 3R-30-T10	1.180	1.570	0.118	0.394	0.189	1.555	0.945	2550112
HFPAD 3R-40-T10	1.570	2.560	0.118	0.394	0.189	1.555	0.945	2550113
HFPAD 3R-65-T18	2.560	4.530	0.118	0.709	0.189	1.713	0.945	2550126
HFPAD 3R-115-T18	4.530	15.750	0.118	0.709	0.189	1.713	0.945	2550128
HFPAD 4R-25-T10	0.980	1.220	0.157	0.394	0.177	1.594	0.945	2550114
HFPAD 4R-31-T10	1.220	1.730	0.157	0.394	0.177	1.594	0.945	2550131
HFPAD 4R-44-T14	1.730	2.280	0.157	0.551	0.177	1.594	0.945	2550115
HFPAD 4R-58-T14	2.280	3.460	0.157	0.551	0.177	1.594	0.945	2550134
HFPAD 4R-88-T14	3.460	6.890	0.157	0.551	0.177	1.594	0.945	2550136
HFPAD 4R-175-T20	6.890	31.500	0.157	0.787	0.177	1.791	0.945	2550138
HFPAD 5R-40-T14	1.570	1.970	0.197	0.551	0.177	1.594	0.945	2550109
HFPAD 5R-50-T14	1.970	2.950	0.197	0.551	0.177	1.594	0.945	2550141
HFPAD 5R-75-T14	2.950	4.330	0.197	0.551	0.177	1.594	0.945	2550143
HFPAD 5R-110-T14	4.330	7.870	0.197	0.551	0.177	1.594	0.945	2550145
HFPAD 5R-200-T20	7.870	31.500	0.197	0.787	0.177	1.791	0.945	2550110
HFPAD 6R-60-T14	2.360	3.940	0.236	0.551	0.177	1.594	0.945	2550116
HFPAD 6R-100-T20	3.940	7.870	0.236	0.787	0.177	1.791	0.945	2550118
HFPAD 6R-200-T20	7.870	118.110	0.236	0.787	0.177	1.791	0.945	2550120

* Left Hand Available

HGAER/L-3

· Adapters for external facing, along shafts. Dmin. .472".



Designation	Axial Groove Depth	Axial Groove Min Dia	Axial Groove Max Dia	Holder Length	Part Number
HGAER 12-3M	0.079	0.470	19.690	2.165	2550082
HGAER 12-3T6	0.236	0.470	0.590	2.165	2550078
HGAER 14-3T7	0.276	0.550	0.670	2.165	2550079
HGAER 17-3T8	0.315	0.670	0.830	2.165	2550080
HGAER 21-3T9	0.354	0.830	0.980	2.165	2550081

* Left Hand Available



ISCAR PARTING & GROOVING ADAPTERS

HGAIR/L-3

· Adapters for internal face grooving and turning.
Dmin .472".

Designation	Cutting Depth Max	Cutting Width	Groove Dia Min	Groove Dia Max	OAL	Functional Width	Part Number
HGAIR 12-3M	0.079	0.118	0.470	19.690	2.165	0.402	2550089
HGAIR 12-3T6	0.236	0.118	0.470	0.590	2.165	0.402	2550083
HGAIR 14-3T7	0.276	0.118	0.550	0.670	2.165	0.402	2550084
HGAIR 17-3T8	0.315	0.118	0.670	0.830	2.165	0.402	2550085
HGAIR 21-3T9	0.354	0.118	0.830	0.980	2.165	0.402	2550086
HGAIR 25-3T9	0.354	0.118	0.980	1.340	2.165	0.402	2550088
HGAIR 35-3T10	0.394	0.118	1.380	1.770	2.205	0.406	2500717
HGAIR 45-3T10	0.394	0.118	1.770	2.560	2.205	0.406	2500719
HGAIR 115-3T18	0.709	0.118	4.530	15.750	2.520	0.445	2500723
HGAIR 65-3T18	0.709	0.118	2.560	4.530	2.520	0.445	2500721



* Left Hand Available

HGAIR/L-3

· Adapters for internal face grooving and turning.
Dmin .472".

Designation	Cutting Width Min	Cutting Width Max	Cutting Depth Max	Functional Width	Functional Height	OAL	OAH	Part Number
HGPAD 3R-T12	0.118	0.126	0.472	0.189	0.945	1.563	1.260	2550146
HGPAD 3R-T20	0.118	0.126	0.787	0.189	0.945	1.799	1.260	2550153
HGPAD 4R-T12	0.157	0.187	0.472	0.173	0.945	1.701	1.260	2550148
HGPAD 4R-T20	0.157	0.187	0.787	0.173	0.945	1.799	1.260	2550154
HGPAD 5R-T12	0.197	0.197	0.472	0.154	0.945	1.701	1.260	2550150
HGPAD 5R-T20	0.197	0.197	0.787	0.154	0.945	1.799	1.260	2550157
HGPAD 6R-T12	0.236	0.250	0.472	0.134	0.945	1.701	1.260	2550152
HGPAD 6R-T22	0.236	0.250	0.866	0.134	0.945	1.878	1.260	2550158



* Left Hand Available

PADR/L

· Adapters for GDMW/GDMY groove-turn inserts.

Designation	Cutting Width Min	Cutting Width Max	Cutting Depth Max	Functional Width	Functional Height	OAL	OAH	Part Number
PADL 2.4	0.094	0.125	0.642	0.165	0.945	1.614	1.181	2800715
PADR 2.4	0.094	0.125	0.642	0.165	0.945	1.614	1.181	2800714



TGAD

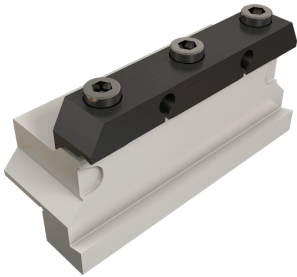
· Parting and grooving adapters for TANG-GRIP tangentially clamped inserts.

Designation	Cutting Width Min	Cutting Width Max	Cutting Depth Max	Functional Height	OAL	OAH	Part Number
TGAD 1.4N	0.055	0.055	1.260	0.945	1.634	1.142	2302365
TGAD 2N	0.071	0.094	1.260	0.945	1.634	1.181	2302228
TGAD 3N	0.110	0.138	1.380	0.945	1.634	1.181	2301884
TGAD 4N	0.146	0.177	1.970	0.945	1.988	1.181	2301885
TGAD 5N	0.185	0.217	1.970	0.945	1.988	1.181	2302213



SGTBU

· Blocks for different parting and grooving blades.



Designation	Shank Height	Shank Width	Prism Height	Prism Width	OAW	OAH	OAL	Part Number
SGTBU 16-5G	0.630	0.669	1.024	0.157	1.339	1.690	3.386	2301025
SGTBU 19-5G	0.750	0.790	1.024	0.160	1.450	1.700	3.400	2300753
SGTBU 19-6G	0.750	0.790	1.260	0.210	1.500	1.940	3.950	2300946
SGTBU 25.4-5G	1.000	1.030	1.024	0.160	1.700	1.750	4.330	2300762
SGTBU 25.4-6G	1.000	1.028	1.260	0.210	1.750	1.950	4.330	2300765
SGTBU 25.4C-6	1.000	1.028	1.260	0.210	1.744	1.940	4.330	2301044
SGTBU 31.8-6G	1.250	1.140	1.260	0.210	1.900	2.100	4.330	2300770
SGTBU 38.1-6G	1.500	1.650	1.260	0.210	2.283	2.150	4.500	2390840
SGTBU 38.1-9	1.500	1.540	2.071	0.310	2.520	3.200	5.120	2300774



TGTBU

· Blocks for different parting and grooving blades.

Designation	Shank Height	Shank Width	Prism Height	Prism Width	OAW	OAH	OAL	Part Number
TGTBU 19-35	0.750	0.750	1.378	0.236	1.535	2.200	4.331	2302196
TGTBU 25.4-35	1.000	1.024	1.378	0.236	1.772	2.200	4.331	2302197
TGTBU 31.8-35	1.250	1.142	1.378	0.236	1.890	2.200	4.331	2302241
TGTBU 38.1-35	1.500	1.535	1.378	0.236	2.283	2.200	4.331	2302242

ISCAR DR-TWIST DRILLS

ISCAR DR Indexable Insert Drills - 2D

These indexable insert drills are designed to bring solutions to typical problems which occur when using turning machines. The new drills are made from steel that features body hardness up to 55 HRC and a **HARD TOUCH** nickel coating for better wear resistance and smooth chip flow. They feature a shallow helix angle and reinforced body structure, which provides excellent tool performance and easy chip evacuation on lathe applications.



Description	Diameter	Max Diameter	Drill Depth	OAL	Shank	Part Number
DR0469-0938-063-04-2D-N	0.469	0.507	0.940	4.690	0.625	3202554
DR0500-1000-063-04-2D-N	0.500	0.509	1.000	4.750	0.625	3202555
DR0531-1062-063-04-2D-N	0.531	0.568	1.060	4.810	0.625	3202557
DR0562-1125-075-05-2D-N	0.562	0.665	1.130	4.950	0.750	3201308
DR0578-1156-075-05-2D-N	0.578	0.673	1.160	4.980	0.750	3201309
DR0594-1188-075-05-2D-N	0.594	0.681	1.190	5.010	0.750	3201310
DR0625-1250-075-05-2D-N	0.625	0.697	1.250	5.100	0.750	3201311
DR0656-1312-075-05-2D-N	0.656	0.713	1.310	5.140	0.750	3201312
DR0688-1375-075-05-2D-N	0.688	0.728	1.380	5.200	0.750	3201356
DR0703-1406-075-05-2D-N	0.703	0.736	1.410	5.230	0.750	3201357
DR0709-1418-100-06-2D-N	0.709	0.799	1.420	5.280	1.000	3201595
DR0734-1469-100-06-2D-N	0.734	0.811	1.470	5.330	1.000	3201358
DR0750-1500-100-06-2D-N	0.750	0.819	1.500	5.360	1.000	3201359
DR0781-1562-100-06-2D-N	0.781	0.835	1.560	5.430	1.000	3201360
DR0812-1625-100-06-2D-N	0.812	0.850	1.630	5.490	1.000	3201392
DR0844-1688-100-07-2D-N	0.844	0.972	1.690	5.550	1.000	3201393
DR0875-1750-100-07-2D-N	0.875	0.988	1.750	5.610	1.000	3201394
DR0906-1813-100-07-2D-N	0.906	1.004	1.810	5.680	1.000	3201395
DR0937-1875-100-07-2D-N	0.937	1.020	1.880	5.740	1.000	3201396
DR0984-1969-125-09-2D-N	0.984	1.142	1.970	6.270	1.250	3201794
DR1000-2000-125-09-2D-N	1.000	1.161	2.000	6.300	1.250	3201795
DR1031-2062-125-09-2D-N	1.031	1.181	2.060	6.360	1.250	3201796
DR1062-2125-125-09-2D-N	1.062	1.201	2.130	6.430	1.250	3201797
DR1125-2250-125-09-2D-N	1.125	1.220	2.250	6.550	1.250	3201798



ISCAR DR Indexable Insert Drills - 2D



These indexable insert drills are designed to bring solutions to typical problems which occur when using turning machines. The new drills are made from steel that features body hardness up to 55 HRC and a HARD TOUCH nickel coating for better wear resistance and smooth chip flow. They feature a shallow helix angle and reinforced body structure, which provides excellent tool performance and easy chip evacuation on lathe applications.

Description	Diameter	Max Diameter	Drill Depth	OAL	Shank	Part Number
DR1187-2375-125-09-2D-N	1.187	1.240	2.380	6.670	1.250	3201799
DR1219-2438-125-09-2D-N	1.219	1.260	2.440	6.740	1.250	3201800
DR1250-2500-125-09-2D-N	1.250	1.280	2.500	6.800	1.250	3201801
DR1281-2562-125-09-2D-N	1.281	1.319	2.560	6.860	1.250	3201802
DR1312-2625-125-09-2D-N	1.312	1.339	2.630	6.930	1.250	3201803
DR1375-2750-150-12-2D-N	1.375	1.590	2.750	7.210	1.500	3201804
DR1437-2875-150-12-2D-N	1.437	1.630	2.870	7.330	1.500	3201805
DR1500-3000-150-12-2D-N	1.500	1.650	3.000	7.460	1.500	3201806
DR1562-3125-150-12-2D-N	1.562	1.690	3.120	7.500	1.500	3201807
DR1625-3250-150-12-2D-N	1.625	1.710	3.250	7.710	1.500	3201808
DR1687-3375-150-12-2D-N	1.687	1.750	3.370	7.830	1.500	3201809
DR1750-3500-150-12-2D-N	1.750	1.770	3.500	7.950	1.500	3201810
DR1812-3624-150-16-2D-N	1.812	2.028	3.620	8.130	1.500	3201810
DR1875-3750-150-16-2D-N	1.875	2.047	3.750	8.250	1.500	3201810
DR1937-3874-150-16-2D-N	1.937	2.087	3.870	8.370	1.500	3201810
DR2000-4000-150-16-2D-N	2.000	2.126	4.000	8.500	1.500	3201810
DR2125-4250-150-16-2D-N	2.125	2.205	4.250	8.750	1.500	3201810
DR2187-4374-150-16-2D-N	2.187	2.224	4.370	8.870	1.500	3201810
DR2219-4438-150-16-2D-N	2.219	2.244	4.440	8.930	1.500	3201810
DR2250-4500-150-16-2D-N	2.250	2.264	4.500	9.000	1.500	3201810
DR2281-4562-150-16-2D-N	2.281	2.264	4.560	9.060	1.500	3201810
DR2344-4687-150-16-2D-N	2.344	2.344	4.690	9.190	1.500	3201810



ISCAR DR-TWIST DRILLS

ISCAR DR Indexable Insert Drills - 3D

These indexable insert drills are designed to bring solutions to typical problems which occur when using turning machines. The new drills are made from steel that features body hardness up to 55 HRC and a **HARD TOUCH** nickel coating for better wear resistance and smooth chip flow. They feature a shallow helix angle and reinforced body structure, which provides excellent tool performance and easy chip evacuation on lathe applications.



Description	Diameter	Max Diameter	Drill Depth	OAL	Shank	Part Number
DR0469-1407-063-04-3D-N	0.469	0.507	1.410	5.150	0.625	3202558
DR0500-1500-063-04-3D-N	0.500	0.509	1.500	5.250	0.625	3202559
DR0531-1593-063-04-3D-N	0.531	0.568	1.590	5.340	0.625	3202561
DR0562-1687-075-05-3D-N	0.562	0.665	1.690	5.510	0.750	3201320
DR0578-1734-075-05-3D-N	0.578	0.673	1.730	5.560	0.750	3201321
DR0594-1781-075-05-3D-N	0.594	0.681	1.780	5.600	0.750	3201322
DR0625-1875-075-05-3D-N	0.625	0.697	1.880	5.700	0.750	3201323
DR0656-1969-075-05-3D-N	0.656	0.713	1.970	5.790	0.750	3201324
DR0688-2062-075-05-3D-N	0.688	0.728	2.060	5.890	0.750	3201361
DR0703-2109-075-05-3D-N	0.703	0.736	2.110	5.940	0.750	3201362
DR0709-2127-100-06-3D-N	0.709	0.799	2.130	5.990	1.000	3201596
DR0734-2203-100-06-3D-N	0.734	0.811	2.200	6.070	1.000	3201363
DR0750-2250-100-06-3D-N	0.750	0.819	2.250	6.120	1.000	3201364
DR0781-2344-100-06-3D-N	0.781	0.835	2.340	6.210	1.000	3201365
DR0812-2438-100-06-3D-N	0.812	0.850	2.440	6.300	1.000	3201397
DR0844-2531-100-07-3D-N	0.844	0.972	2.530	6.400	1.000	3201398
DR0875-2625-100-07-3D-N	0.875	0.988	2.630	6.490	1.000	3201399
DR0906-2719-100-07-3D-N	0.906	1.004	2.720	6.580	1.000	3201400
DR0937-2813-100-07-3D-N	0.937	1.020	2.810	6.680	1.000	3201401
DR0984-2952-125-09-3D-N	0.984	1.142	2.950	7.250	1.250	3201839
DR1000-3000-125-09-3D-N	1.000	1.161	3.000	7.300	1.250	3201840
DR1031-3093-125-09-3D-N	1.031	1.181	3.090	7.390	1.250	3201841
DR1062-3186-125-09-3D-N	1.062	1.201	3.190	7.490	1.250	3201842
DR1125-3375-125-09-3D-N	1.125	1.220	3.380	7.670	1.250	3201843
DR1187-3561-125-09-3D-N	1.187	1.240	3.560	7.860	1.250	3201844
DR1219-3657-125-09-3D-N	1.219	1.260	3.660	7.960	1.250	3201845
DR1250-3750-125-09-3D-N	1.250	1.280	3.750	8.050	1.250	3201846
DR1281-3843-125-09-3D-N	1.281	1.320	3.840	8.140	1.250	3201847
DR1312-3936-125-09-3D-N	1.312	1.340	3.940	8.240	1.250	3201848
DR1375-4125-150-12-3D-N	1.375	1.572	4.130	8.420	1.500	3201849
DR1437-4311-150-12-3D-N	1.437	1.630	4.310	8.770	1.500	3201850
DR1500-4500-150-12-3D-N	1.500	1.650	4.500	8.960	1.500	3201851



ISCAR DR Indexable Insert Drills - 4D



These indexable insert drills are designed to bring solutions to typical problems which occur when using turning machines. The new drills are made from steel that features body hardness up to 55 HRC and a HARD TOUCH nickel coating for better wear resistance and smooth chip flow. They feature a shallow helix angle and reinforced body structure, which provides excellent tool performance and easy chip evacuation on lathe applications.

Description	Diameter	Max Diameter	Drill Depth	OAL	Shank	Part Number
DR0469-1876-063-04-4D-N	0.469	0.507	1.880	5.620	0.625	3202562
DR0500-2000-063-04-4D-N	0.500	0.509	2.000	5.750	0.625	3202563
DR0531-2124-063-04-4D-N	0.531	0.568	2.120	5.870	0.625	3202565
DR0562-2250-075-05-4D-N	0.562	0.665	2.250	6.080	0.750	3201332
DR0578-2312-075-05-4D-N	0.578	0.673	2.310	6.140	0.750	3201333
DR0594-2375-075-05-4D-N	0.594	0.681	2.380	6.200	0.750	3201334
DR0625-2500-075-05-4D-N	0.625	0.697	2.500	6.330	0.750	3201335
DR0656-2625-075-05-4D-N	0.656	0.713	2.630	6.450	0.750	3201336
DR0688-2750-075-05-4D-N	0.688	0.728	2.750	6.570	0.750	3201366
DR0703-2812-075-05-4D-N	0.703	0.736	2.810	6.640	0.750	3201367
DR0709-2836-100-06-4D-N	0.709	0.799	2.840	6.700	1.000	3201597
DR0734-2937-100-06-4D-N	0.734	0.811	2.940	6.800	1.000	3201368
DR0750-3000-100-06-4D-N	0.750	0.819	3.000	6.860	1.000	3201369
DR0781-3125-100-06-4D-N	0.781	0.835	3.130	6.990	1.000	3201370
DR0812-3250-100-06-4D-N	0.812	0.850	3.250	7.120	1.000	3201402
DR0844-3375-100-07-4D-N	0.844	0.972	3.380	7.240	1.000	3201403
DR0875-3500-100-07-4D-N	0.875	0.988	3.500	7.360	1.000	3201404
DR0906-3625-100-07-4D-N	0.906	1.004	3.630	7.490	1.000	3201405
DR0937-3750-100-07-4D-N	0.937	1.020	3.750	7.610	1.000	3201406
DR0984-3936-125-09-4D-N	0.984	1.142	3.940	8.240	1.250	3201493
DR1000-4000-125-09-4D-N	1.000	1.161	4.000	8.300	1.250	3201494
DR1031-4124-125-09-4D-N	1.031	1.181	4.120	8.470	1.250	3201977
DR1062-4248-125-09-4D-N	1.062	1.201	4.250	8.550	1.250	3201495
DR1125-4500-125-09-4D-N	1.125	1.220	4.500	8.800	1.250	3201496
DR1187-4748-125-09-4D-N	1.187	1.240	4.750	9.050	1.250	3201497
DR1219-4876-125-09-4D-N	1.219	1.260	4.880	9.170	1.250	3201498
DR1250-5000-125-09-4D-N	1.250	1.280	5.000	9.300	1.250	3201499
DR1281-5124-125-09-4D-N	1.281	1.319	5.120	9.430	1.250	3201978
DR1312-5248-125-09-4D-N	1.312	1.340	5.250	9.550	1.250	3201500
DR1375-5500-150-12-4D-N	1.375	1.590	5.500	9.960	1.500	3201501



ISCAR DR-TWIST DRILLS

ISCAR DR Indexable Insert Drills - 4D (cont.)

These indexable insert drills are designed to bring solutions to typical problems which occur when using turning machines. The new drills are made from steel that features body hardness up to 55 HRc and a **HARD TOUCH** nickel coating for better wear resistance and smooth chip flow. They feature a shallow helix angle and reinforced body structure, which provides excellent tool performance and easy chip evacuation on lathe applications.



Description	Diameter	Max Diameter	Drill Depth	OAL	Shank	Part Number
DR1437-5748-150-12-4D-N	1.437	1.630	5.750	10.210	1.500	3201502
DR1500-6000-150-12-4D-N	1.500	1.650	6.000	10.460	1.500	3201503
DR1562-6248-150-12-4D-N	1.562	1.690	6.250	10.710	1.500	3201504
DR1625-6500-150-12-4D-N	1.625	1.710	6.500	10.960	1.500	3201505
DR1687-6748-150-12-4D-N	1.687	1.750	6.750	11.210	1.500	3201506
DR1750-7000-150-12-4D-N	1.750	1.770	7.000	11.460	1.500	3201507
DR1812-7248-150-16-4D-N	1.812	2.028	7.250	11.670	1.500	3201507
DR1875-7500-150-16-4D-N	1.875	2.047	7.500	11.920	1.500	3201507
DR1937-7748-150-16-4D-N	1.937	2.087	7.750	12.170	1.500	3201507
DR2000-8000-150-16-4D-N	2.000	2.145	8.000	12.420	1.500	3201507
DR2125-8500-150-16-4D-N	2.125	2.205	8.500	12.920	1.500	3201507
DR2187-8748-150-16-4D-N	2.187	2.224	8.750	13.170	1.500	3201507
DR2250-9000-150-16-4D-N	2.250	2.264	9.000	13.420	1.500	3201507
DR2312-9248-150-16-4D-N	2.312	2.312	9.250	13.670	1.500	3201507
DR2344-9376-150-16-4D-N	2.344	2.344	9.380	13.790	1.500	3201507



ISCAR DR Indexable Insert Drills - 5D



These indexable insert drills are designed to bring solutions to typical problems which occur when using turning machines. The new drills are made from steel that features body hardness up to 55 HRC and a HARD TOUCH nickel coating for better wear resistance and smooth chip flow. They feature a shallow helix angle and reinforced body structure, which provides excellent tool performance and easy chip evacuation on lathe applications.

Description	Diameter	Max Diameter	Drill Depth	OAL	Shank	Part Number
DR0562-2815-075-05-5D-N	0.562	0.639	2.820	6.660	0.750	3202574
DR0578-2894-075-05-5D-N	0.578	0.649	2.890	6.740	0.750	3202575
DR0594-2972-075-05-5D-N	0.594	0.659	2.970	6.820	0.750	3202576
DR0625-3130-075-05-5D-N	0.625	0.679	3.130	6.970	0.750	3202577
DR0656-3287-075-05-5D-N	0.656	0.698	3.290	7.120	0.750	3202578
DR0688-3445-075-05-5D-N	0.688	0.718	3.450	7.280	0.750	3202579
DR0703-3524-075-05-5D-N	0.703	0.727	3.520	7.330	0.750	3202580
DR0709-3543-100-06-5D-N	0.709	0.776	3.540	7.390	1.000	3202581
DR0734-3661-100-06-5D-N	0.734	0.791	3.660	7.520	1.000	3202582
DR0750-3760-100-06-5D-N	0.750	0.801	3.760	7.590	1.000	3202583
DR0781-3898-100-06-5D-N	0.781	0.821	3.900	7.750	1.000	3202584
DR0812-4055-100-06-5D-N	0.812	0.840	4.060	7.910	1.000	3202585
DR0844-4212-100-07-5D-N	0.844	0.940	4.210	8.070	1.000	3202586
DR0875-4370-100-07-5D-N	0.875	0.959	4.370	8.220	1.000	3202587
DR0906-4527-100-07-5D-N	0.906	0.979	4.530	8.380	1.000	3202588
DR0937-4685-100-07-5D-N	0.937	0.999	4.690	8.510	1.000	3202589



ISCAR DRILLING INSERTS

ISCAR DR Indexable Drill Inserts

SOMT-DT

· Inserts with a DT chipformer for DR drills, for general applications at medium-to-high feed rates.



Designation	Diameter	Thickness	Radius	Grade	Part Number
SOMT 060204-DT	0.236	0.077	0.016	IC328	5504598
SOMT 060204-DT	0.236	0.077	0.016	IC908	5504858
SOMT 09T306-DT	0.354	0.150	0.024	IC808	5507875
SOMT 09T306-DT	0.354	0.150	0.024	IC908	5505240
SOMT 09T306-DT	0.354	0.150	0.024	IC9080	5506614
SOMT 110408-DT	0.453	0.189	0.031	IC808	5507876
SOMT 120408-DT	0.500	0.187	0.031	IC808	5507877
SOMT 120408-DT	0.500	0.187	0.031	IC908	5505289
SOMT 160512-DT	0.630	0.219	0.047	IC808	5507878
SOMT 160512-DT	0.630	0.219	0.047	IC908	5505439
SOMT 160512-DT	0.630	0.219	0.047	IC9080	5506616

SOMX-DT

· Inserts with a DT chipformer for DR drills, for general applications at medium-to-high feed rates.



Designation	Diameter	Thickness	Radius	Grade	Part Number
SOMX 050204-DT	0.213	0.094	0.016	IC1008	5507426
SOMX 050204-DT	0.213	0.094	0.016	IC808	5507879
SOMX 050204-DT	0.213	0.094	0.016	IC908	5506337
SOMX 050204-DT	0.213	0.094	0.016	IC9080	5506611
SOMX 060304-DT	0.244	0.126	0.016	IC808	5507880
SOMX 060304-DT	0.244	0.126	0.016	IC908	5506496
SOMX 060304-DT	0.244	0.126	0.016	IC9080	5506612
SOMX 070305-DT	0.303	0.142	0.020	IC808	5507881
SOMX 070305-DT	0.303	0.142	0.020	IC908	5506341
SOMX 070305-DT	0.303	0.142	0.020	IC9080	5506613

SOMT-GF

· Inserts for DR drills with a GF chipformer, for soft materials at low-to-medium feed rates.



Designation	Diameter	Thickness	Radius	Grade	Part Number
SOMT 09T306-GF	0.354	0.150	0.024	IC328	5598816
SOMT 09T306-GF	0.354	0.150	0.024	IC908	5504859
SOMT 120408-GF	0.500	0.187	0.031	IC908	5505233
SOMT 160512-GF	0.630	0.219	0.047	IC908	5505528

SOMX-GF

· Inserts for DR drills with a GF chipformer, for soft materials at low-to-medium feed rates.



Designation	Diameter	Thickness	Radius	Grade	Part Number
SOMX 050204-GF	0.213	0.094	0.016	IC908	5506338
SOMX 060304-GF	0.244	0.126	0.016	IC908	5506340

SOMT-HD

· Inserts for DR drills, for carbon steel and soft materials.



Designation	Diameter	Thickness	Radius	Grade	Part Number
SOMT 120408-HD	0.500	0.187	0.031	IC808	5567124
SOMT 160512-HD	0.630	0.219	0.047	IC808	5567135

SOMT-HQ

· HELIQUAD square milling inserts for general use.



Designation	Diameter	Thickness	Radius	Grade	Part Number
SOMT 060204-HQ	0.243	0.101	0.016	IC28	5600926
SOMT 060204-HQ	0.243	0.101	0.016	IC328	5601249





Mitsubishi Indexable Drills

- Economical insert with 4 cutting edges.
- Unique insert design includes a wavy design chip breaker which provides excellent chip control.
- Insert design also includes a wiper type geometry; this will help achieve excellent wall accuracy.
- Drill body has increased surface hardness providing high rigidity, resistance of deformation and abrasion.
- Extra body thickness behind inner edge helps resist principal forces preventing twisting and deformation.
- Inclined through coolant holes improve chip evacuation and maintain coolant pressure.

Diameter	Description	Flute Length	OAL	Shank
0.687	MVX0687X2C100	1.65	4.97	1.00
0.687	MVX0687X3C100	2.34	5.66	1.00
0.687	MVX0687X4C100	3.03	6.34	1.00
0.687	MVX0687X5C100	3.71	7.03	1.00
0.687	MVX0687X6C100	4.40	7.72	1.00
0.750	MVX0750X2C100	1.78	5.16	1.00
0.750	MVX0750X3C100	2.53	5.91	1.00
0.750	MVX0750X4C100	3.28	6.66	1.00
0.750	MVX0750X5C100	4.03	7.41	1.00
0.750	MVX0750X6C100	4.78	8.16	1.00
0.812	MVX0812X2C100	1.90	5.26	1.00
0.812	MVX0812X3C100	2.71	6.07	1.00
0.812	MVX0812X4C100	3.53	6.88	1.00
0.812	MVX0812X5C100	4.34	7.69	1.00
0.812	MVX0812X6C100	5.15	8.51	1.00
0.875	MVX0875X2C100	2.03	5.37	1.00
0.875	MVX0875X3C100	2.90	6.25	1.00
0.875	MVX0875X4C100	3.78	7.12	1.00
0.875	MVX0875X5C100	4.65	8.00	1.00
0.875	MVX0875X6C100	5.53	8.87	1.00
0.937	MVX0937X2C100	2.15	5.49	1.00
0.937	MVX0937X3C100	3.09	6.42	1.00
0.937	MVX0937X4C100	4.03	7.36	1.00
0.937	MVX0937X5C100	4.96	8.30	1.00
0.937	MVX0937X6C100	5.90	9.24	1.00
1.000	MVX1000X2C125	2.28	5.73	1.25
1.000	MVX1000X3C125	3.28	6.73	1.25
1.000	MVX1000X4C125	4.28	7.73	1.25
1.000	MVX1000X5C125	5.28	8.73	1.25
1.000	MVX1000X6C125	6.28	9.73	1.25
1.062	MVX1062X2C125	2.40	5.84	1.25
1.062	MVX1062X3C125	3.46	6.90	1.25
1.062	MVX1062X4C125	4.53	7.96	1.25
1.062	MVX1062X5C125	5.59	9.03	1.25
1.062	MVX1062X6C125	6.65	10.09	1.25
1.125	MVX1125X2C125	2.53	6.01	1.25
1.125	MVX1125X3C125	3.65	7.14	1.25
1.125	MVX1125X4C125	4.78	8.26	1.25
1.125	MVX1125X5C125	5.90	9.39	1.25
1.125	MVX1125X6C125	7.03	10.51	1.25

Diameter	Description	Flute Length	OAL	Shank
1.187	MVX1187X2C125	2.65	6.13	1.25
1.187	MVX1187X3C125	3.84	7.32	1.25
1.187	MVX1187X4C125	5.03	8.51	1.25
1.187	MVX1187X5C125	6.21	9.69	1.25
1.187	MVX1187X6C125	7.40	10.88	1.25
1.250	MVX1250X2C150	2.78	6.62	1.50
1.250	MVX1250X3C150	4.03	7.87	1.50
1.250	MVX1250X4C150	5.28	9.12	1.50
1.250	MVX1250X5C150	6.53	10.37	1.50
1.250	MVX1250X6C150	7.78	11.62	1.50
1.312	MVX1312X2C150	2.90	7.15	1.50
1.312	MVX1312X3C150	4.21	8.46	1.50
1.312	MVX1312X4C150	5.53	9.77	1.50
1.312	MVX1312X5C150	6.84	11.08	1.50
1.312	MVX1312X6C150	8.15	12.40	1.50
1.375	MVX1375X2C150	3.03	7.27	1.50
1.375	MVX1375X3C150	4.40	8.65	1.50
1.375	MVX1375X4C150	5.78	10.02	1.50
1.375	MVX1375X5C150	7.15	11.40	1.50
1.375	MVX1375X6C150	8.53	12.77	1.50
1.437	MVX1437X2C150	3.15	7.40	1.50
1.437	MVX1437X3C150	4.59	8.83	1.50
1.437	MVX1437X4C150	6.03	10.27	1.50
1.437	MVX1437X5C150	7.46	11.71	1.50
1.437	MVX1437X6C150	8.90	13.15	1.50
1.500	MVX1500X2C150	3.28	7.52	1.50
1.500	MVX1500X3C150	4.78	9.02	1.50
1.500	MVX1500X4C150	6.28	10.52	1.50
1.500	MVX1500X5C150	7.78	12.02	1.50
1.500	MVX1500X6C150	9.28	13.52	1.50
1.562	MVX1562X2C150	3.40	7.65	1.50
1.562	MVX1562X3C150	4.96	9.21	1.50
1.562	MVX1562X4C150	6.53	10.77	1.50
1.562	MVX1562X5C150	8.09	12.33	1.50
1.562	MVX1562X6C150	9.65	13.90	1.50
1.625	MVX1625X2C150	3.53	7.77	1.50
1.625	MVX1625X3C150	5.15	9.40	1.50
1.625	MVX1625X4C150	6.78	11.02	1.50
1.625	MVX1625X5C150	8.40	12.65	1.50
1.625	MVX1625X6C150	10.03	14.27	1.50

MITSUBISHI MVX DRILLS

Mitsubishi Indexable Drills (cont.)

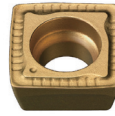
- Economical insert with 4 cutting edges.
- Unique insert design includes a wavy design chip breaker which provides excellent chip control.
- Insert design also includes a wiper type geometry; this will help achieve excellent wall accuracy.
- Drill body has increased surface hardness providing high rigidity, resistance of deformation and abrasion.
- Extra body thickness behind inner edge helps resist principal forces preventing twisting and deformation.
- Inclined through coolant holes improve chip evacuation and maintain coolant pressure.



Diameter	Description	Flute Length	OAL	Shank
1.687	MVX1687X2C150	3.65	7.90	1.50
1.687	MVX1687X3C150	5.34	9.58	1.50
1.687	MVX1687X4C150	7.03	11.27	1.50
1.687	MVX1687X5C150	8.71	12.96	1.50
1.687	MVX1687X6C150	10.40	14.65	1.50
1.750	MVX1750X2C150	3.78	8.02	1.50
1.750	MVX1750X3C150	5.53	9.77	1.50
1.750	MVX1750X4C150	7.28	11.52	1.50
1.750	MVX1750X5C150	9.03	13.27	1.50
1.812	MVX1812X2C150	3.90	8.15	1.50
1.812	MVX1812X3C150	5.71	9.96	1.50
1.812	MVX1812X4C150	7.53	11.77	1.50
1.812	MVX1812X5C150	9.34	13.58	1.50
1.875	MVX1875X2C150	4.03	8.35	1.50
1.875	MVX1875X3C150	5.90	10.23	1.50
1.875	MVX1875X4C150	7.78	12.10	1.50
1.875	MVX1875X5C150	9.65	13.98	1.50
1.937	MVX1937X2C150	4.15	8.48	1.50
1.937	MVX1937X3C150	6.09	10.41	1.50
1.937	MVX1937X4C150	8.03	12.35	1.50
1.937	MVX1937X5C150	9.96	14.29	1.50
2.000	MVX2000X2C150	4.28	8.60	1.50
2.000	MVX2000X3C150	6.28	10.60	1.50
2.000	MVX2000X4C150	8.28	12.60	1.50
2.000	MVX2000X5C150	10.28	14.60	1.50
2.125	MVX2125X2C150	4.53	8.85	1.50
2.125	MVX2125X3C150	6.65	10.98	1.50
2.125	MVX2125X4C150	8.78	13.10	1.50
2.125	MVX2125X5C150	10.90	15.23	1.50
2.250	MVX2250X2C150	4.78	9.10	1.50
2.250	MVX2250X3C150	7.03	11.35	1.50
2.250	MVX2250X4C150	9.28	13.60	1.50
2.250	MVX2250X5C150	11.53	15.85	1.50
2.375	MVX2375X2C150	5.03	9.35	1.50
2.375	MVX2375X3C150	7.40	11.73	1.50
2.375	MVX2375X4C150	9.78	14.10	1.50
2.375	MVX2375X5C150	12.15	16.48	1.50
2.500	MVX2500X2C150	5.28	9.60	1.50
2.500	MVX2500X3C150	7.78	12.10	1.50
2.500	MVX2500X4C150	10.28	14.60	1.50
2.500	MVX2500X5C150	12.78	17.10	1.50

Mitsubishi Indexable Drill Inserts

SOMX-UM



The cutting edge has both sharp and strong type geometry along its length for improved fracture resistance. The radius design also achieves excellent fracture and welding resistance.

Drill Diameter	Designation	Diameter	Thickness	Radius	Grade MC1020 Part Number	Grade MC5020 Part Number	Grade VP15TF Part Number
0.687" - 0.750"	SOMX063005-UM	0.236	0.118	0.020	MIT-654661	MIT-654670	MIT-653431
0.812" - 0.875"	SOMX073505-UM	0.276	0.138	0.020	MIT-654696	MIT-654709	MIT-654688
0.937" - 1.062"	SOMX084005-UM	0.327	0.157	0.020	MIT-654725	MIT-654733	MIT-654717
1.125" - 1.250"	SOMX094506-UM	0.382	0.177	0.024	MIT-654750	MIT-654768	MIT-654741
1.312" - 1.562"	SOMX115506-UM	0.457	0.217	0.024	MIT-832392	MIT-832430	MIT-832350
1.625" - 1.812"	SOMX136008-UM	0.543	0.236	0.031	MIT-832405	MIT-832448	MIT-832368
1.875" - 2.125"	SOMX166508-UM	0.650	0.256	0.031	MIT-832413	MIT-832456	MIT-832376
2.250" - 2.500"	SOMX187008-UM	0.717	0.276	0.031	MIT-832421	MIT-832464	MIT-832384

SOMX-US



The unique wave design allows smooth chip discharge. An universal breaker for steel, stainless steel, cast iron and hardened steel.

Drill Diameter	Designation	Diameter	Thickness	Radius	Grade VP15TF Part Number
0.687" - 0.750"	SOMX063005-US	0.236	0.118	0.020	MIT-824552
0.812" - 0.875"	SOMX073505-US	0.276	0.138	0.020	MIT-824608
0.937" - 1.062"	SOMX084005-US	0.327	0.157	0.020	MIT-824616
1.125" - 1.250"	SOMX094506-US	0.382	0.177	0.024	MIT-824624
1.312" - 1.562"	SOMX115506-US	0.457	0.217	0.024	MIT-10524831
1.625" - 1.812"	SOMX136008-US	0.543	0.236	0.031	MIT-10524848
1.875" - 2.125"	SOMX166508-US	0.650	0.256	0.031	MIT-10524855
2.250" - 2.500"	SOMX187008-US	0.717	0.276	0.031	MIT-10524862

ISCAR SUMOCHAM DRILLS

ISCAR DCN Indexable Head Drills - 3D

SUMOCHAM 3xD drills with indexable heads, one flat shanks and internal coolant holes.
Feature 4 standard drilling head types for drilling on 4 different material groups.



Designation	Drill Min - Max	Depth	Shank	OAL	Pocket Size	Part Number
DCN 0236-071-050A-3D	0.236 - 0.250	0.71	0.5	2.61	6	3203271
DCN 0256-079-050A-3D	0.256 - 0.271	0.79	0.5	2.68	6.5	3203278
DCN 0275-082-050A-3D	0.275 - 0.291	0.82	0.5	3.17	7	3202933
DCN 0295-089-050A-3D	0.295 - 0.311	0.89	0.5	3.23	7	3202945
DCN 0315-094-050A-3D	0.315 - 0.331	0.94	0.5	3.32	8	3202290
DCN 0335-100-050A-3D	0.335 - 0.350	1	0.5	3.38	8	3202292
DCN 0354-106-050A-3D	0.354 - 0.370	1.06	0.5	3.46	9	3202440
DCN 0374-112-050A-3D	0.374 - 0.390	1.12	0.5	3.51	9	3202442
DCN 0394-118-063A-3D	0.394 - 0.409	1.18	0.625	3.71	10	3260095
DCN 0413-124-063A-3D	0.413 - 0.429	1.24	0.625	3.77	10	3202453
DCN 0433-130-063A-3D	0.433 - 0.449	1.3	0.625	3.84	11	3202444
DCN 0453-135-063A-3D	0.453 - 0.469	1.35	0.625	3.9	11	3202455
DCN 0472-141-063A-3D	0.472 - 0.488	1.41	0.625	3.98	12	3260096
DCN 0492-147-063A-3D	0.492 - 0.508	1.47	0.625	4.04	12	3202285
DCN 0512-153-063A-3D	0.512 - 0.528	1.53	0.625	4.12	13	3202446
DCN 0531-159-063A-3D	0.531 - 0.547	1.59	0.625	4.18	13	3202457
DCN 0551-165-063A-3D	0.551 - 0.567	1.65	0.625	4.34	14	3202448
DCN 0571-171-063A-3D	0.571 - 0.587	1.71	0.625	4.4	14	3202459
DCN 0591-177-075A-3D	0.591 - 0.626	1.77	0.75	4.68	15	3202450
DCN 0630-189-075A-3D	0.630 - 0.665	1.89	0.75	4.86	16	3202299
DCN 0669-201-075A-3D	0.669 - 0.705	2.01	0.75	5.04	17	3202488

ISCAR DCN Indexable Head Drills - 3D

SUMOCHAM 3xD drills with indexable heads, one flat shanks and internal coolant holes. Feature 4 standard drilling head types for drilling on 4 different material groups.



Designation	Drill Min - Max	Depth	Shank	OAL	Pocket Size	Part Number
DCN 0709-213-100A-3D	0.709 - 0.744	2.13	1	5.45	18	3260097
DCN 0748-224-100A-3D	0.748 - 0.783	2.24	1	5.63	19	3260098
DCN 0787-236-100A-3D	0.787 - 0.823	2.36	1	5.81	20	3260099
DCN 0827-248-100A-3D	0.827 - 0.862	2.48	1	5.99	21	3260100
DCN 0866-260-100A-3D	0.866 - 0.902	2.6	1	6.17	22	3260101
DCN 0906-272-125A-3D	0.906 - 0.941	2.72	1.25	6.51	23	3260102
DCN 0945-283-125A-3D	0.945 - 0.980	2.83	1.25	6.69	24	3260103
DCN 0984-295-125A-3D	0.984 - 1.020	2.95	1.25	6.87	25	3202590
DCN 1024-307-125A-3D	1.024 - 1.059	3.07	1.25	7.04	26	3260104
DCN 1063-319-125A-3D	1.063 - 1.098	3.19	1.25	7.23	27	3260242
DCN 1063-319-150A-3D	1.063 - 1.098	3.19	1.5	7.55	27	3260105
DCN 1102-331-125A-3D	1.102 - 1.138	3.31	1.25	7.41	28	3203524
DCN 1102-331-150A-3D	1.102 - 1.138	3.31	1.5	7.73	28	3260106
DCN 1142-342-125A-3D	1.142 - 1.177	3.42	1.25	7.58	29	3203528
DCN 1142-342-150A-3D	1.142 - 1.177	3.42	1.5	7.9	29	3260107
DCN 1181-354-125A-3D	1.181 - 1.216	3.54	1.25	7.77	30	3203532
DCN 1181-354-150A-3D	1.181 - 1.216	3.54	1.5	8.09	30	3260108
DCN 1220-366-125A-3D	1.220 - 1.256	3.66	1.25	7.95	31	3203536
DCN 1220-366-150A-3D	1.220 - 1.256	3.66	1.5	8.27	31	3260109
DCN 1260-378-125A-3D	1.260 - 1.296	3.78	1.25	8.12	32	3203540
DCN 1260-378-150A-3D	1.260 - 1.296	3.78	1.5	8.44	32	3260110

ISCAR SUMOCHAM DRILLS

ISCAR DCN Indexable Head Drills - 5D

SUMOCHAM 5xD drills with indexable heads, one flat shanks and internal coolant holes. Feature 4 standard drilling head types for drilling on 4 different material groups.



Designation	Drill Min - Max	Depth	Shank	OAL	Pocket Size	Part Number
DCN 0236-118-050A-5D	0.236 - 0.250	1.180	0.500	3.500	6	3260186
DCN 0256-130-050A-5D	0.256 - 0.271	1.300	0.500	3.610	7	3203280
DCN 0275-138-050A-5D	0.275 - 0.291	1.380	0.500	3.720	7	3202934
DCN 0295-148-050A-5D	0.295 - 0.311	1.480	0.500	3.820	7	3202947
DCN 0315-157-050A-5D	0.315 - 0.331	1.570	0.500	3.950	8	3202291
DCN 0335-167-050A-5D	0.335 - 0.350	1.670	0.500	4.050	8	3202293
DCN 0354-177-050A-5D	0.354 - 0.370	1.770	0.500	4.160	9	3202441
DCN 0374-187-050A-5D	0.374 - 0.390	1.870	0.500	4.260	9	3202443
DCN 0394-196-063A-5D	0.394 - 0.409	1.960	0.625	4.500	10	3260111
DCN 0413-206-063A-5D	0.413 - 0.429	2.060	0.625	4.590	10	3202454
DCN 0433-216-063A-5D	0.433 - 0.449	2.160	0.625	4.710	11	3202445
DCN 0453-226-063A-5D	0.453 - 0.469	2.260	0.625	4.810	11	3202456
DCN 0472-236-063A-5D	0.472 - 0.488	2.360	0.625	4.920	12	3201736
DCN 0492-246-063A-5D	0.492 - 0.508	2.460	0.625	5.020	12	3202286
DCN 0512-256-063A-5D	0.512 - 0.528	2.560	0.625	5.140	13	3202447
DCN 0531-266-063A-5D	0.531 - 0.547	2.650	0.625	5.240	13	3202458
DCN 0551-275-063A-5D	0.551 - 0.567	2.750	0.625	5.440	14	3202449
DCN 0571-285-063A-5D	0.571 - 0.587	2.850	0.625	5.540	14	3202460
DCN 0591-295-075A-5D	0.591 - 0.626	2.950	0.750	5.860	15	3202451
DCN 0630-315-075A-5D	0.630 - 0.665	3.150	0.750	6.120	16	3202301
DCN 0669-335-075A-5D	0.669 - 0.705	3.350	0.750	6.380	17	3202489



ISCAR DCN Indexable Head Drills - 5D

SUMOCHAM 5xD drills with indexable heads, one flat shanks and internal coolant holes. Feature 4 standard drilling head types for drilling on 4 different material groups.



Designation	Drill Min - Max	Depth	Shank	OAL	Pocket Size	Part Number
DCN 0709-354-100A-5D	0.709 - 0.744	3.540	1.000	6.870	18	3201737
DCN 0748-374-100A-5D	0.748 - 0.783	3.740	1.000	7.120	19	3201738
DCN 0787-394-100A-5D	0.787 - 0.823	3.940	1.000	7.380	20	3201739
DCN 0827-413-100A-5D	0.827 - 0.862	4.130	1.000	7.640	21	3201740
DCN 0866-433-100A-5D	0.866 - 0.902	4.330	1.000	7.900	22	3201741
DCN 0906-453-125A-5D	0.906 - 0.941	4.530	1.250	8.320	23	3201742
DCN 0945-472-125A-5D	0.945 - 0.980	4.720	1.250	8.580	24	3201743
DCN 0984-492-125A-5D	0.984 - 1.020	4.920	1.250	8.840	25	3202591
DCN 1024-512-125A-5D	1.024 - 1.059	5.120	1.250	9.090	26	3260112
DCN 1063-531-125A-5D	1.063 - 1.098	5.310	1.250	9.350	27	3203521
DCN 1063-531-150A-5D	1.063 - 1.098	5.310	1.500	9.670	27	3260113
DCN 1102-551-125A-5D	1.102 - 1.138	5.510	1.250	9.610	28	3203525
DCN 1102-551-150A-5D	1.102 - 1.138	5.510	1.500	9.930	28	3201747
DCN 1142-571-125A-5D	1.142 - 1.177	5.710	1.250	9.870	29	3203529
DCN 1142-571-150A-5D	1.142 - 1.177	5.710	1.500	10.190	29	3201748
DCN 1181-590-125A-5D	1.181 - 1.216	5.900	1.250	10.130	30	3203533
DCN 1181-590-150A-5D	1.181 - 1.216	5.900	1.500	10.450	30	3201749
DCN 1220-610-125A-5D	1.220 - 1.256	6.100	1.250	10.390	31	3260243
DCN 1220-610-150A-5D	1.220 - 1.256	6.100	1.500	10.710	31	3201750
DCN 1260-630-125A-5D	1.260 - 1.295	6.300	1.250	10.640	32	3203541
DCN 1260-630-150A-5D	1.260 - 1.295	6.300	1.500	10.960	32	3201751

ISCAR SUMOCHAM DRILL HEADS

ISCAR Drilling Heads for DCN Drills

- SUMOCHAM features four different standard drill head geometries, designed for optimal performance and high reliability when used on various materials.
- All geometries are made from grade IC908 with a TiAlN PVD coating. IC908 features excellent performance on a large variety of drilling applications.
- SUMOCHAM drilling heads are available in the diameter range of .315" to 1.020".

IC (P/K/M)

Designation	D	S	Pocket Size
ICP ___ ICK ___ ICM ___	.315-.350	.213	8
	.355-.390	.228	9
	.394-.429	.244	10
	.433-.469	.260	11
	.472-.508	.276	12
	.512-.547	.299	13
	.551-.587	.321	14
	.591-.626	.344	15
	.630-.665	.366	16
	.669-.705	.390	17
	.709-.744	.413	18
	.748-.783	.433	19
	.787-.823	.457	20
	.827-.862	.480	21
	.866-.902	.504	22
	.906-.941	.528	23
.945-.980	.551	24	
.984-1.020	.571	25	



**ICP - For use on carbon and alloy steel (ISO P).
The drill head has a honed cutting edge.**

**ICK - For use on cast iron (ISO K).
The drill head is designed with a honed cutting edge.**

ICM - For use on stainless and high temperature alloys (ISO M). The drill head features a T-land on the cutting edge.



ISCAR SUMOCHAM DRILL HEADS

ISCAR Drilling Heads for DCN Drills

ICP

Designation	Grade	Part Number
ICP 0248	IC908	5566705
ICP 0256	IC908	5509300
ICP 0263	IC908	5566707
ICP 0279	IC908	5509493
ICP 0283	IC908	5509458
ICP 0291	IC908	5509303
ICP 0311	IC908	5509305
ICP 0315	IC908	5507898
ICP 0319	IC908	5508308
ICP 0323	IC908	5508309
ICP 0327	IC908	5508310
ICP 0331	IC908	5508311
ICP 0335	IC908	5507899
ICP 0339	IC908	5508312
ICP 0343	IC908	5508267
ICP 0346	IC908	5508313
ICP 0350	IC908	5507900
ICP 0354	IC908	5508272
ICP 0358	IC908	5508333
ICP 0362	IC908	5508334
ICP 0366	IC908	5508335
ICP 0370	IC908	5508336
ICP 0374	IC908	5508263
ICP 0378	IC908	5508337
ICP 0382	IC908	5508338
ICP 0386	IC908	5508339
ICP 0390	IC908	5508340
ICP 0394	IC908	5506634
ICP 0398	IC908	5508368
ICP 0402	IC908	5508369
ICP 0406	IC908	5508370
ICP 0409	IC908	5508371
ICP 0413	IC908	5506635
ICP 0417	IC908	5508372
ICP 0421	IC908	5508265
ICP 0425	IC908	5508266
ICP 0429	IC908	5506636
ICP 0433	IC908	5508286
ICP 0437	IC908	5508287
ICP 0441	IC908	5508288
ICP 0445	IC908	5508289

ICP (cont.)

Designation	Grade	Part Number
ICP 0449	IC908	5508290
ICP 0453	IC908	5508291
ICP 0457	IC908	5508292
ICP 0461	IC908	5508293
ICP 0465	IC908	5508294
ICP 0469	IC908	5508295
ICP 0472	IC908	5506637
ICP 0476	IC908	5508382
ICP 0480	IC908	5508383
ICP 0484	IC908	5508384
ICP 0488	IC908	5508385
ICP 0492	IC908	5506638
ICP 0496	IC908	5508278
ICP 0500	IC908	5507956
ICP 0504	IC908	5508386
ICP 0508	IC908	5506639
ICP 0512	IC908	5508394
ICP 0516	IC908	5508395
ICP 0520	IC908	5508396
ICP 0524	IC908	5508397
ICP 0528	IC908	5508398
ICP 0531	IC908	5508399
ICP 0535	IC908	5508400
ICP 0539	IC908	5508401
ICP 0543	IC908	5508402
ICP 0547	IC908	5508403
ICP 0551	IC908	5508420
ICP 0555	IC908	5508421
ICP 0559	IC908	5508422
ICP 0563	IC908	5508423
ICP 0567	IC908	5508424
ICP 0571	IC908	5508425
ICP 0575	IC908	5508426
ICP 0579	IC908	5508427
ICP 0583	IC908	5508428
ICP 0587	IC908	5508429
ICP 0591	IC908	5508445
ICP 0594	IC908	5508446
ICP 0598	IC908	5508447
ICP 0602	IC908	5508448
ICP 0606	IC908	5508449

ICP (cont.)

Designation	Grade	Part Number
ICP 0610	IC908	5508450
ICP 0614	IC908	5508451
ICP 0618	IC908	5508452
ICP 0622	IC908	5508453
ICP 0625	IC908	5508454
ICP 0630	IC908	5507972
ICP 0634	IC908	5508472
ICP 0638	IC908	5508473
ICP 0642	IC908	5508474
ICP 0646	IC908	5508475
ICP 0650	IC908	5507973
ICP 0654	IC908	5508476
ICP 0657	IC908	5508477
ICP 0661	IC908	5508478
ICP 0665	IC908	5507974
ICP 0669	IC908	5508571
ICP 0673	IC908	5508572
ICP 0677	IC908	5508573
ICP 0681	IC908	5508574
ICP 0685	IC908	5508575
ICP 0689	IC908	5508576
ICP 0693	IC908	5508577
ICP 0697	IC908	5508578
ICP 0701	IC908	5508579
ICP 0705	IC908	5508580
ICP 0709	IC908	5506640
ICP 0713	IC908	5509265
ICP 0717	IC908	5508597
ICP 0720	IC908	5508598
ICP 0724	IC908	5509413
ICP 0728	IC908	5506641
ICP 0732	IC908	5508599
ICP 0736	IC908	5508600
ICP 0740	IC908	5508601
ICP 0744	IC908	5506642
ICP 0748	IC908	5506643
ICP 0750	IC908	5509280
ICP 0752	IC908	5509283
ICP 0756	IC908	5508606
ICP 0760	IC908	5508259
ICP 0764	IC908	5509266



ISCAR SUMOCHAM DRILL HEADS

ISCAR Drilling Heads for DCN Drills

ICP (cont.)

Designation	Grade	Part Number
ICP 0768	IC908	5506644
ICP 0772	IC908	5508607
ICP 0776	IC908	5508608
ICP 0780	IC908	5508609
ICP 0783	IC908	5506645
ICP 0787	IC908	5506646
ICP 0791	IC908	5509087
ICP 0795	IC908	5509088
ICP 0799	IC908	5509089
ICP 0803	IC908	5509090
ICP 0807	IC908	5506647
ICP 0811	IC908	5509073
ICP 0815	IC908	5509091
ICP 0819	IC908	5509092
ICP 0823	IC908	5506648
ICP 0827	IC908	5506649
ICP 0831	IC908	5509107
ICP 0835	IC908	5509108
ICP 0839	IC908	5509109
ICP 0843	IC908	5509110
ICP 0846	IC908	5506650
ICP 0850	IC908	5509111
ICP 0854	IC908	5509112
ICP 0858	IC908	5509113
ICP 0862	IC908	5506651
ICP 0866	IC908	5506652
ICP 0870	IC908	5509127
ICP 0874	IC908	5509128
ICP 0878	IC908	5509129
ICP 0882	IC908	5509130
ICP 0886	IC908	5506653
ICP 0890	IC908	5509131
ICP 0894	IC908	5509132
ICP 0898	IC908	5509133
ICP 0902	IC908	5506654

ICP (cont.)

Designation	Grade	Part Number
ICP 0906	IC908	5506655
ICP 0909	IC908	5509148
ICP 0913	IC908	5509149
ICP 0917	IC908	5509150
ICP 0921	IC908	5509151
ICP 0925	IC908	5506656
ICP 0929	IC908	5509152
ICP 0933	IC908	5509153
ICP 0937	IC908	5509154
ICP 0941	IC908	5506657
ICP 0945	IC908	5506658
ICP 0949	IC908	5509169
ICP 0953	IC908	5509170
ICP 0957	IC908	5509171
ICP 0961	IC908	5509172
ICP 0965	IC908	5506659
ICP 0969	IC908	5509173
ICP 0972	IC908	5509174
ICP 0976	IC908	5509175
ICP 0980	IC908	5506660
ICP 0984	IC908	5508510
ICP 0988	IC908	5509030
ICP 0992	IC908	5509031
ICP 0996	IC908	5509032
ICP 1000	IC908	5509033
ICP 1004	IC908	5506662
ICP 1008	IC908	5509034
ICP 1012	IC908	5508614
ICP 1016	IC908	5509035
ICP 1020	IC908	5506663
ICP 1031	IC908	5597385
ICP 1181	IC908	5506676
ICP 1248	IC908	5568364
ICP 1250	IC908	5567119
ICP 1252	IC908	5568365

ICM

Designation	Grade	Part Number
ICM 0244	IC908	5566711
ICM 0256	IC908	5566714
ICM 0267	IC908	5566717
ICM 0291	IC908	5509467
ICM 0311	IC908	5509472
ICM 0315	IC908	5507901
ICM 0319	IC908	5508319
ICM 0323	IC908	5508320
ICM 0327	IC908	5508321
ICM 0331	IC908	5508322
ICM 0335	IC908	5507902
ICM 0339	IC908	5508323
ICM 0343	IC908	5508324
ICM 0346	IC908	5508325
ICM 0350	IC908	5507903
ICM 0354	IC908	5508348
ICM 0358	IC908	5508349
ICM 0362	IC908	5508350
ICM 0366	IC908	5508351
ICM 0370	IC908	5508352
ICM 0374	IC908	5508353
ICM 0378	IC908	5508354
ICM 0382	IC908	5508355
ICM 0386	IC908	5508356
ICM 0390	IC908	5508357
ICM 0394	IC908	5506691
ICM 0398	IC908	5508373
ICM 0402	IC908	5508374
ICM 0406	IC908	5508375
ICM 0409	IC908	5508376
ICM 0413	IC908	5506692
ICM 0417	IC908	5509075
ICM 0421	IC908	5508377
ICM 0425	IC908	5508378
ICM 0429	IC908	5506693
ICM 0433	IC908	5508296
ICM 0437	IC908	5508297
ICM 0441	IC908	5508298
ICM 0445	IC908	5508299



ISCAR Drilling Heads for DCN Drills

ICM (cont.)

Designation	Grade	Part Number
ICM 0449	IC908	5508300
ICM 0453	IC908	5508301
ICM 0457	IC908	5508302
ICM 0461	IC908	5508303
ICM 0465	IC908	5508304
ICM 0469	IC908	5508305
ICM 0472	IC908	5506694
ICM 0476	IC908	5508387
ICM 0480	IC908	5508388
ICM 0484	IC908	5508389
ICM 0488	IC908	5508390
ICM 0492	IC908	5506695
ICM 0496	IC908	5508391
ICM 0500	IC908	5507957
ICM 0504	IC908	5508392
ICM 0508	IC908	5506696
ICM 0512	IC908	5508404
ICM 0516	IC908	5508405
ICM 0520	IC908	5508406
ICM 0524	IC908	5508407
ICM 0528	IC908	5508408
ICM 0531	IC908	5508409
ICM 0535	IC908	5508410
ICM 0539	IC908	5508411
ICM 0543	IC908	5508412
ICM 0547	IC908	5508413
ICM 0551	IC908	5508430
ICM 0555	IC908	5508431
ICM 0559	IC908	5508432
ICM 0563	IC908	5508433
ICM 0567	IC908	5509289
ICM 0571	IC908	5508434
ICM 0575	IC908	5508435
ICM 0579	IC908	5508436
ICM 0583	IC908	5508437
ICM 0587	IC908	5508438
ICM 0591	IC908	5508455
ICM 0594	IC908	5508456
ICM 0598	IC908	5508457

ICM (cont.)

Designation	Grade	Part Number
ICM 0602	IC908	5508458
ICM 0606	IC908	5508459
ICM 0610	IC907	5567168
ICM 0610	IC908	5508460
ICM 0614	IC908	5508461
ICM 0618	IC908	5508462
ICM 0622	IC908	5508463
ICM 0625	IC908	5508464
ICM 0630	IC908	5507976
ICM 0634	IC908	5508479
ICM 0638	IC908	5508480
ICM 0642	IC908	5508481
ICM 0646	IC908	5508482
ICM 0650	IC908	5507977
ICM 0654	IC908	5508483
ICM 0657	IC908	5508484
ICM 0661	IC908	5508485
ICM 0665	IC908	5507978
ICM 0669	IC908	5508585
ICM 0673	IC908	5508586
ICM 0677	IC908	5508587
ICM 0681	IC908	5508588
ICM 0685	IC908	5508589
ICM 0689	IC908	5508590
ICM 0693	IC908	5508591
ICM 0697	IC908	5508592
ICM 0701	IC908	5508593
ICM 0705	IC908	5508594
ICM 0709	IC908	5506697
ICM 0717	IC908	5508602
ICM 0720	IC908	5509880
ICM 0724	IC908	5508603
ICM 0728	IC908	5506698
ICM 0732	IC908	5508604
ICM 0738	IC908	5509494
ICM 0740	IC908	5508605
ICM 0744	IC908	5506699
ICM 0748	IC908	5506700
ICM 0750	IC908	5510147

ICM (cont.)

Designation	Grade	Part Number
ICM 0752	IC908	5509076
ICM 0756	IC908	5508610
ICM 0760	IC908	5508260
ICM 0764	IC908	5509267
ICM 0768	IC908	5506701
ICM 0772	IC908	5508611
ICM 0776	IC908	5508612
ICM 0780	IC908	5508613
ICM 0783	IC908	5506702
ICM 0787	IC908	5506703
ICM 0791	IC908	5509093
ICM 0795	IC908	5509094
ICM 0799	IC908	5509095
ICM 0803	IC908	5509096
ICM 0807	IC908	5506704
ICM 0811	IC908	5509097
ICM 0815	IC908	5509098
ICM 0819	IC908	5509099
ICM 0823	IC908	5506705
ICM 0827	IC908	5506706
ICM 0831	IC908	5509114
ICM 0835	IC908	5509115
ICM 0839	IC908	5509116
ICM 0843	IC908	5509117
ICM 0846	IC908	5506707
ICM 0850	IC908	5509118
ICM 0854	IC908	5509119
ICM 0858	IC908	5509120
ICM 0862	IC908	5506708
ICM 0866	IC908	5506709
ICM 0870	IC908	5509134
ICM 0874	IC908	5509135
ICM 0878	IC908	5509136
ICM 0882	IC908	5509137
ICM 0886	IC908	5506710
ICM 0890	IC908	5509138
ICM 0894	IC908	5509139
ICM 0898	IC908	5509140
ICM 0902	IC908	5506711



ISCAR SUMOCHAM DRILL HEADS

ISCAR Drilling Heads for DCN Drills

ICM (cont.)

Designation	Grade	Part Number
ICM 0906	IC908	5506712
ICM 0909	IC908	5509155
ICM 0913	IC908	5509156
ICM 0917	IC908	5509157
ICM 0921	IC908	5509158
ICM 0925	IC908	5506713
ICM 0929	IC908	5509159
ICM 0933	IC908	5509160
ICM 0937	IC908	5509161
ICM 0941	IC908	5506714
ICM 0945	IC908	5506715
ICM 0949	IC908	5509176
ICM 0953	IC908	5509177
ICM 0957	IC908	5509178
ICM 0961	IC908	5509179
ICM 0965	IC908	5506716
ICM 0969	IC908	5509180
ICM 0972	IC908	5509181
ICM 0976	IC908	5509182
ICM 0980	IC908	5506717
ICM 0984	IC908	5506718
ICM 0988	IC908	5509036
ICM 0992	IC908	5509037
ICM 0996	IC908	5509038
ICM 1000	IC908	5509039
ICM 1004	IC908	5506719
ICM 1008	IC908	5509040
ICM 1012	IC908	5508615
ICM 1016	IC908	5509041
ICM 1020	IC908	5506720
ICM 1181	IC908	5506733
ICM 1189	IC908	5568400
ICM 1217	IC908	5506735
ICM 1250	IC908	5567120
ICM 1252	IC908	5568412
ICM 1295	IC908	5506741

ICK

Designation	Grade	Part Number
ICK 0315	IC908	5507961
ICK 0319	IC908	5509258
ICK 0323	IC908	5508314
ICK 0327	IC908	5508315
ICK 0331	IC908	5509259
ICK 0335	IC908	5507962
ICK 0339	IC908	5508316
ICK 0343	IC908	5508317
ICK 0346	IC908	5508318
ICK 0350	IC908	5507963
ICK 0354	IC908	5508341
ICK 0358	IC908	5508342
ICK 0362	IC908	5509260
ICK 0366	IC908	5508343
ICK 0370	IC908	5508344
ICK 0374	IC908	5508345
ICK 0382	IC908	5509261
ICK 0386	IC908	5509262
ICK 0390	IC908	5508347
ICK 0394	IC908	5506748
ICK 0398	IC908	5509207
ICK 0402	IC908	5508379
ICK 0406	IC908	5509208
ICK 0409	IC908	5508380
ICK 0413	IC908	5506749
ICK 0417	IC908	5509209
ICK 0421	IC908	5509210
ICK 0425	IC908	5508381
ICK 0429	IC908	5506750
ICK 0433	IC908	5508306
ICK 0437	IC908	5509211
ICK 0441	IC908	5508889
ICK 0445	IC908	5508890
ICK 0449	IC908	5509212
ICK 0453	IC908	5509068
ICK 0457	IC908	5509213
ICK 0461	IC908	5509214

ICK (cont.)

Designation	Grade	Part Number
ICK 0465	IC908	5509215
ICK 0469	IC908	5509216
ICK 0472	IC908	5506751
ICK 0476	IC908	5509217
ICK 0480	IC908	5509218
ICK 0484	IC908	5508393
ICK 0488	IC908	5509219
ICK 0492	IC908	5506752
ICK 0496	IC908	5509220
ICK 0500	IC908	5507958
ICK 0504	IC908	5509221
ICK 0508	IC908	5506753
ICK 0512	IC908	5508414
ICK 0516	IC908	5509067
ICK 0520	IC908	5509222
ICK 0524	IC908	5509223
ICK 0528	IC908	5509224
ICK 0531	IC908	5508415
ICK 0535	IC908	5509083
ICK 0539	IC908	5508967
ICK 0543	IC908	5509225
ICK 0547	IC908	5508416
ICK 0551	IC908	5508439
ICK 0555	IC908	5508440
ICK 0559	IC908	5508441
ICK 0563	IC908	5509226
ICK 0567	IC908	5508978
ICK 0571	IC908	5508442
ICK 0575	IC908	5509227
ICK 0579	IC908	5508443
ICK 0583	IC908	5509228
ICK 0587	IC908	5509229
ICK 0591	IC908	5508465
ICK 0594	IC908	5508466
ICK 0598	IC908	5509230
ICK 0602	IC908	5509231
ICK 0606	IC908	5509232



ISCAR Drilling Heads for DCN Drills

ICK (cont.)

Designation	Grade	Part Number
ICK 0610	IC908	5508467
ICK 0614	IC908	5509233
ICK 0618	IC908	5508468
ICK 0622	IC908	5509234
ICK 0625	IC908	5509235
ICK 0630	IC908	5507979
ICK 0634	IC908	5508486
ICK 0638	IC908	5509236
ICK 0642	IC908	5509237
ICK 0646	IC908	5509238
ICK 0650	IC908	5507980
ICK 0654	IC908	5508626
ICK 0657	IC908	5508487
ICK 0661	IC908	5508488
ICK 0665	IC908	5507981
ICK 0669	IC908	5508581
ICK 0673	IC908	5508582
ICK 0677	IC908	5508583
ICK 0681	IC908	5509239
ICK 0685	IC908	5509240
ICK 0689	IC908	5508584
ICK 0693	IC908	5509241
ICK 0697	IC908	5509242
ICK 0701	IC908	5509243
ICK 0705	IC908	5509244
ICK 0709	IC908	5506754
ICK 0717	IC908	5509246
ICK 0720	IC908	5509247
ICK 0724	IC908	5509248
ICK 0728	IC908	5506755
ICK 0732	IC908	5509249
ICK 0736	IC908	5509250
ICK 0740	IC908	5509251
ICK 0744	IC908	5506756
ICK 0748	IC908	5506757
ICK 0750	IC908	5510146
ICK 0752	IC908	5509252

ICK (cont.)

Designation	Grade	Part Number
ICK 0756	IC908	5509253
ICK 0760	IC908	5509254
ICK 0764	IC908	5509255
ICK 0768	IC908	5506758
ICK 0772	IC908	5509256
ICK 0776	IC908	5509204
ICK 0780	IC908	5509257
ICK 0783	IC908	5506759
ICK 0787	IC908	5506760
ICK 0791	IC908	5509100
ICK 0795	IC908	5509101
ICK 0799	IC908	5509102
ICK 0803	IC908	5509103
ICK 0807	IC908	5506761
ICK 0811	IC908	5509104
ICK 0815	IC908	5509105
ICK 0819	IC908	5509106
ICK 0823	IC908	5506762
ICK 0827	IC908	5506763
ICK 0831	IC908	5509121
ICK 0835	IC908	5509122
ICK 0839	IC908	5509123
ICK 0843	IC908	5509190
ICK 0846	IC908	5509124
ICK 0850	IC908	5506764
ICK 0854	IC908	5509125
ICK 0858	IC908	5509126
ICK 0862	IC908	5506765
ICK 0866	IC908	5506766
ICK 0870	IC908	5509141
ICK 0874	IC908	5509142
ICK 0878	IC908	5509143
ICK 0882	IC908	5509144
ICK 0886	IC908	5506767
ICK 0890	IC908	5509145
ICK 0894	IC908	5509146
ICK 0898	IC908	5509147

ICK (cont.)

Designation	Grade	Part Number
ICK 0902	IC908	5506768
ICK 0906	IC908	5506769
ICK 0909	IC908	5509162
ICK 0913	IC908	5509163
ICK 0917	IC908	5509164
ICK 0921	IC908	5509165
ICK 0925	IC908	5506770
ICK 0929	IC908	5509166
ICK 0933	IC908	5509167
ICK 0937	IC908	5509168
ICK 0941	IC908	5506771
ICK 0945	IC908	5506772
ICK 0949	IC908	5509183
ICK 0953	IC908	5509184
ICK 0957	IC908	5509185
ICK 0961	IC908	5509186
ICK 0965	IC908	5506773
ICK 0969	IC908	5509187
ICK 0972	IC908	5509188
ICK 0976	IC908	5509189
ICK 0984	IC908	5506775
ICK 0988	IC908	5509042
ICK 0992	IC908	5509043
ICK 0996	IC908	5509044
ICK 1000	IC908	5509045
ICK 1004	IC908	5506776
ICK 1008	IC908	5509046
ICK 1012	IC908	5509047
ICK 1016	IC908	5509048
ICK 1020	IC908	5506777

TOOL-FLO INSERTS

Tool-Flo Flo-Lock Grooving Inserts

- Maximum Chip Control
- Industry Standard Widths

Description	Width	Radius	Cutting Depth Max	Grade GP3 Part Number	Grade GP50 Part Number	Grade AC3 Part Number	Grade AC50 Part Number
FLG 2031L	0.031	.002/.005	0.050	2415457	2415458	2412200	2412867
FLG 2031R	0.031	.002/.005	0.050	2415459	2415460	2412201	2412726
FLG 2041L	0.041	.002/.005	0.050	2415461	2415462	#N/A	#N/A
FLG 2041R	0.041	.002/.005	0.050	2415463	2415464	#N/A	#N/A
FLG 2047L	0.047	.002/.005	0.050	2415466	2415467	2412202	2412868
FLG 2047R	0.047	.002/.005	0.050	2415472	2415473	2413988	2412871
FLG 2058L	0.058	.005/.010	0.050	2415548	2415549	#N/A	#N/A
FLG 2058R	0.058	.005/.010	0.050	2415550	2415551	#N/A	#N/A
FLG 2062L	0.062	.005/.010	0.110	2415552	2415553	2412203	2412873
FLG 2062R	0.062	.005/.010	0.110	2415558	2415559	2412204	2412727
FLG 2094L	0.094	.005/.010	0.110	2415563	2415564	2412205	2412878
FLG 2094R	0.094	.005/.010	0.110	2415569	2415570	2413994	2412881
FLG 2125L	0.125	.005/.010	0.110	2415583	2415584	2413805	2412882
FLG 2125R	0.125	.005/.010	0.110	2415589	2415590	2413997	2413205
FLG 3031L	0.031	.002/.005	0.050	2415643	2415644	2412206	2413219
FLG 3031R	0.031	.002/.005	0.050	2415649	2415650	2412207	2413222
FLG 3047L	0.047	.005/.010	0.075	2415652	2415653	2412208	2413223
FLG 3047R	0.047	.005/.010	0.075	2415658	2415660	2412209	2413226
FLG 3062L	0.062	.005/.010	0.120	2415665	2415666	2412210	2413227
FLG 3062R	0.062	.005/.010	0.120	2415671	2415672	2412211	2413229
FLG 3072L	0.072	.005/.010	0.120	2415674	2415675	2412212	2487044
FLG 3072R	0.072	.005/.010	0.120	2415680	2415681	2412213	2413234
FLG 3078L	0.078	.005/.010	0.120	2415684	2415685	2412214	2413235
FLG 3078R	0.078	.005/.010	0.120	2415690	2415691	2412215	2413239
FLG 3088L	0.088	.005/.010	0.180	2415693	2415694	2413240	2413241
FLG 3088R	0.088	.005/.010	0.180	2415698	2415699	2413118	2413244
FLG 3094L	0.094	.005/.010	0.180	2415702	2415703	2411905	2411907
FLG 3094R	0.094	.005/.010	0.180	2415714	2415715	2411902	2411904
FLG 3097L	0.097	.005/.010	0.180	2415716	2415717	2413452	2413247
FLG 3097R	0.097	.005/.010	0.180	2415722	2415723	2413465	#N/A



Tool-Flo Flo-Lock Grooving Inserts

- Maximum Chip Control
- Industry Standard Widths



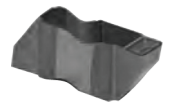
Description	Width	Radius	Cutting Depth Max	Grade GP3 Part Number	Grade GP50 Part Number	Grade AC3 Part Number	Grade AC50 Part Number
FLG 3105L	0.105	.005/.010	0.180	2415725	2415726	2413467	2413249
FLG 3105R	0.105	.005/.010	0.180	2415727	2415728	2413468	2413250
FLG 3110L	0.110	.005/.010	0.180	2415729	2415730	2413047	2413251
FLG 3110R	0.110	.005/.010	0.180	2415746	2415748	2412216	2413252
FLG 3122L	0.122	.005/.010	0.180	2415750	2415751	2413469	2413253
FLG 3122R	0.122	.005/.010	0.180	2415752	2415753	2413019	2413254
FLG 3125L	0.125	.005/.010	0.180	2415756	2415757	2411899	2411901
FLG 3125R	0.125	.005/.010	0.180	2415762	2415763	2411896	2411898
FLG 3142L	0.142	.005/.010	0.180	2415766	2415767	2413481	2413255
FLG 3142R	0.142	.005/.010	0.180	2415768	2415921	2413482	2413257
FLG 3156L	0.156	.005/.010	0.180	2416170	2416171	2413487	2413258
FLG 3156R	0.156	.005/.010	0.180	2416172	2416173	2413488	2413259
FLG 3178L	0.178	.005/.010	0.180	2416174	2416175	2413491	2414637
FLG 3178R	0.178	.005/.010	0.180	2416177	2416178	2413493	2413260
FLG 3185L	0.185	.020/.025	0.180	2416179	2416180	2413495	#N/A
FLG 3185R	0.185	.020/.025	0.180	2416181	2416182	2413499	2413262
FLG 3189L	0.189	.020/.025	0.180	2416183	2416184	2412217	2413263
FLG 3189R	0.189	.020/.025	0.180	2416189	2416190	2412218	2413264
FLG 3250L	0.250	.020/.025	0.180	#N/A	2416281	#N/A	#N/A
FLG 3250R	0.250	.020/.025	0.180	#N/A	2416280	#N/A	#N/A
FLG 4125L	0.125	.005/.010	0.250	2416249	2416250	2412219	2413280
FLG 4125R	0.125	.005/.010	0.250	2416256	2416257	2412220	2413282
FLG 4189L	0.189	.020/.025	0.250	2416259	2416260	2413505	2413283
FLG 4189R	0.189	.020/.025	0.250	2416264	2416265	2413508	2413286
FLG 4213L	0.213	.005/.010	0.250	2419178	2416329	#N/A	#N/A
FLG 4213R	0.213	.005/.010	0.250	2416330	2416331	#N/A	#N/A
FLG 4219L	0.219	.020/.025	0.250	2416332	2416333	#N/A	#N/A
FLG 4219R	0.219	.020/.025	0.250	2418991	2416334	#N/A	#N/A
FLG 4250L	0.250	.020/.025	0.250	2416336	2416337	2413169	2414020
FLG 4250R	0.250	.020/.025	0.250	2416345	2416346	2413149	2414025

TOOL-FLO INSERTS

Tool-Flo Flo-Lock Grooving Inserts w/ Chipbreaker

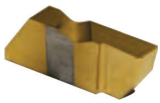
- Maximum Chip Control
- Industry Standard Widths

Description	Width	Radius	Cutting Depth Max	Grade GP3 Part Number	Grade GP50 Part Number	Grade AC3 Part Number	Grade AC50 Part Number
FLG 2047R CB	0.047	.002/.005	0.050	2415470	2415471	2413987	2412870
FLG 2047L CB	0.047	.002/.005	0.050	2415468	2415469	2413986	2412869
FLG 2062R CB	0.062	.005/.010	0.110	2415556	2415557	2413990	2412875
FLG 2062L CB	0.062	.005/.010	0.110	2415554	2415555	2413989	2412874
FLG 2078R CB	0.078	.005/.010	0.110	2415561	2415562	2413992	2412877
FLG 2078L CB	0.078	.005/.010	0.110	2419131	2415560	2413991	2412876
FLG 2094R CB	0.094	.005/.010	0.110	2415567	2415568	2412297	2412880
FLG 2094L CB	0.094	.005/.010	0.110	2415565	2415566	2413993	2412879
FLG 2125R CB	0.125	.005/.010	0.110	2415587	2415588	2413996	2412883
FLG 2125L CB	0.125	.005/.010	0.110	2415585	2415586	2413995	2412519
FLG 3031R CB	0.031	.002/.005	0.050	2415647	2415648	2412299	2413168
FLG 3031L CB	0.031	.002/.005	0.050	2415645	2415646	2413220	2413221
FLG 3047R CB	0.047	.005/.010	0.075	2415656	2415657	2412300	2413225
FLG 3047L CB	0.047	.005/.010	0.075	2415654	2415655	2414017	2413224
FLG 3062R CB	0.062	.005/.010	0.120	2415669	2415670	2412301	2412334
FLG 3062L CB	0.062	.005/.010	0.120	2415667	2415668	2412302	2413228
FLG 3072R CB	0.072	.005/.010	0.120	2415678	2415679	2413232	2413233
FLG 3072L CB	0.072	.005/.010	0.120	2415676	2415677	2413230	2413231
FLG 3078R CB	0.078	.005/.010	0.120	2415688	2415689	2414018	2413238
FLG 3078L CB	0.078	.005/.010	0.120	2415686	2415687	2413236	2413237
FLG 3088R CB	0.088	.005/.010	0.180	2415696	2415697	2412525	2412864
FLG 3088L CB	0.088	.005/.010	0.180	2419150	2415695	2413242	2413243
FLG 3094R CB	0.094	.005/.010	0.180	2415706	2415713	2412303	2413246
FLG 3094L CB	0.094	.005/.010	0.180	2415704	2415705	2412304	2413245
FLG 3097R CB	0.097	.005/.010	0.180	2415720	2415721	2413459	2413248
FLG 3097L CB	0.097	.005/.010	0.180	2415718	2415719	#N/A	#N/A
FLG 3125R CB	0.125	.005/.010	0.180	2415760	2415761	2412306	2412333
FLG 3125L CB	0.125	.005/.010	0.180	2415758	2415759	2412305	2412808
FLG 3189R CB	0.189	.020/.025	0.180	2416187	2416188	2413502	2412636
FLG 3189L CB	0.189	.020/.025	0.180	2416185	2416186	2413501	2413182
FLG 4125R CB	0.125	.005/.010	0.250	2416253	2416255	2413503	2413281
FLG 4125L CB	0.125	.005/.010	0.250	2416251	2416252	2412307	2413172
FLG 4189R CB	0.189	.020/.025	0.250	2416262	2416263	2413507	2413285
FLG 4189L CB	0.189	.020/.025	0.250	2419177	2416261	2413506	2413284
FLG 4250R CB	0.250	.020/.025	0.250	2416343	2416344	2414023	2414024
FLG 4250L CB	0.250	.020/.025	0.250	2416338	2416339	2414021	2414022



Tool-Flo Flo-Lock Deep Grooving Inserts

- Maximum Chip Control
- Industry Standard Widths

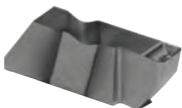
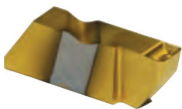


Description	Width	Radius	Cutting Depth Max	Grade GP3 Part Number	Grade GP50 Part Number	Grade AC3 Part Number	Grade AC50 Part Number
FLGD 3062R *	0.062	.005/.010	0.120	2418022	2417993	#N/A	#N/A
FLGD 3062L *	0.062	.005/.010	0.120	2417339	2418021	#N/A	#N/A
FLGD 3094R	0.094	.005/.010	0.250	2416946	2416647	#N/A	#N/A
FLGD 3094L	0.094	.005/.010	0.250	2418023	2417918	#N/A	#N/A
FLGD 3125R	0.125	.005/.010	0.250	2416681	2417329	2411916	#N/A
FLGD 3125L	0.125	.005/.010	0.250	2418026	2416740	#N/A	2411921
FLGD 3189R	0.189	.020/.025	0.250	2418029	2417214	#N/A	#N/A
FLGD 3189L	0.189	.020/.025	0.250	2418027	2418028	#N/A	#N/A
FLGD 4189R	0.189	.020/.025	0.375	2418087	2417189	2412225	#N/A
FLGD 4189L	0.189	.020/.025	0.375	2418085	2418086	2419192	#N/A
FLGD 4250R	0.250	.020/.025	0.500	2418090	2418091	#N/A	#N/A
FLGD 4250L	0.250	.020/.025	0.500	2419193	2418089	#N/A	#N/A

* Insert is same as the FLG

Tool-Flo Flo-Lock Deep Grooving Inserts w/ Chipbreaker

- Maximum Chip Control
- Industry Standard Widths



Description	Width	Radius	Cutting Depth Max	Grade GP3 Part Number	Grade GP50 Part Number	Grade AC3 Part Number	Grade AC50 Part Number
FLGD 3094R CB	0.094	.005/.010	0.250	2418033	2416952	2413620	2413337
FLGD 3094L CB	0.094	.005/.010	0.250	2418032	2416951	2413618	2413336
FLGD 3125R CB	0.125	.005/.010	0.250	2417533	2417595	2413623	2413339
FLGD 3125L CB	0.125	.005/.010	0.250	2418036	2418037	2412308	2413338
FLGD 3189R CB	0.189	.020/.025	0.250	2418043	2418044	2413626	2413341
FLGD 3189L CB	0.189	.020/.025	0.250	2418041	2418042	2413625	2413340
FLGD 4189R CB	0.189	.020/.025	0.375	2418098	2418099	2413643	2412656
FLGD 4189L CB	0.189	.020/.025	0.375	2416961	2418097	2413642	2413349
FLGD 4250R CB	0.250	.020/.025	0.500	2418105	2418106	2413646	2419196
FLGD 4250L CB	0.250	.020/.025	0.500	2418104	2416954	2413092	2416296

TOOL FLO INSERTS

Tool-Flo Flo-Lock Full Nose Radius Inserts

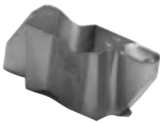
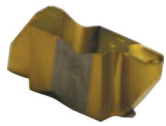
- Maximum Chip Control
- Industry Standard Widths

Description	Width	Radius	Cutting Depth Max	Grade GP3 Part Number	Grade GP50 Part Number	Grade AC3 Part Number	Grade AC50 Part Number
FLR 2031R	0.062	0.031	0.110	2416449	2416450	2412246	2412734
FLR 2031L	0.062	0.031	0.110	2416447	2416448	2412245	2412733
FLR 2047R	0.094	0.047	0.110	2416453	2416454	2412248	2412736
FLR 2047L	0.094	0.047	0.110	2416451	2416452	2412247	2412735
FLR 2062R	0.125	0.062	0.110	2416457	2416458	2412250	2412740
FLR 2062L	0.125	0.062	0.110	2416455	2416456	2412249	2412738
FLR 3031R	0.062	0.031	0.125	2416467	2416468	2412255	2412742
FLR 3031L	0.062	0.031	0.125	2416465	2416466	2412254	2412689
FLR 3047R	0.094	0.047	0.180	2416474	2416475	2412257	2412749
FLR 3047L	0.094	0.047	0.180	2416469	2416470	2412256	2412743
FLR 3062R	0.125	0.062	0.180	2416482	2416483	2411908	2411910
FLR 3062L	0.125	0.062	0.180	2416476	2416477	2411911	2411913
FLR 3078R	0.156	0.078	0.180	2416488	2416489	2414034	2412760
FLR 3078L	0.156	0.078	0.180	2416484	2416485	2414033	2412756
FLR 3094R	0.189	0.094	0.180	2416498	2416499	2412259	2412764
FLR 3094L	0.189	0.094	0.180	2416496	2416497	2412258	2412762
FLR 4062R	0.125	0.062	0.250	2416535	2416536	2412782	2412786
FLR 4062L	0.125	0.062	0.250	2416533	2416534	2412780	2412781
FLR 4094R	0.189	0.094	0.250	2416541	2416542	2412788	2412789
FLR 4094L	0.189	0.094	0.250	2416537	2416538	2472929	2412787
FLR 4125R	0.250	0.125	0.250	2416545	2416546	2414039	2414041
FLR 4125L	0.250	0.125	0.250	2416543	2416544	2414035	2414036

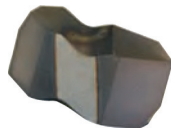
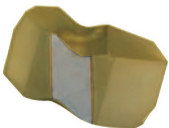


Tool-Flo Flo-Lock Full Nose Radius Inserts w/ Chipbreaker

- Maximum Chip Control
- Industry Standard Widths



Description	Width	Radius	Cutting Depth Max	Grade GP3 Part Number	Grade GP50 Part Number	Grade AC3 Part Number	Grade AC50 Part Number
FLR 3031R CB	0.062	0.031	0.125	2415291	2417165	2415499	2417914
FLR 3031L CB	0.062	0.031	0.125	2415290	2420141	2415519	2419201
FLR 3047R CB	0.094	0.047	0.180	2416473	2416507	2412747	2412748
FLR 3047L CB	0.094	0.047	0.180	2416471	2416472	2412744	2412745
FLR 3062R CB	0.125	0.062	0.180	2416480	2416481	2412658	2412755
FLR 3062L CB	0.125	0.062	0.180	2416478	2416479	2412752	2412753



Tool-Flo 60° V-Threading

- Maximum Chip Control
- Fewer scarred threads

Description	TPI Internal	TPI External	Radius	Cutting Depth Max	Grade GP3 Part Number	Grade GP50 Part Number	Grade AC3 Part Number	Grade AC50 Part Number
FLT 2R	7-20	8-36	.003/.005	0.075	2416555	2416556	2413542	2413290
FLT 2L	7-20	8-36	.003/.005	0.075	2416551	2416553	2413177	2413289
FLT 3R	5-12	6-20	.005/.008	0.098	2416583	2416585	2411890	2411892
FLT 3L	5-12	6-20	.005/.008	0.098	2416578	2416580	2411893	2411895
FLT 4R	4-12	4-20	.005/.008	0.128	2419283	2419285	2413556	2416877
FLT 4L	4-12	4-20	.005/.008	0.128	2419284	2419282	2413555	2414058

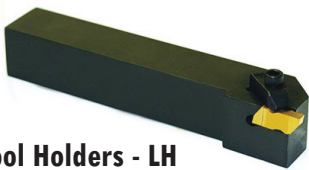
TOP NOTCH HOLDERS & BARS

TOOL HOLDERS



External Tool Holders - RH

Designation	Part Number
TOOLHOLDER 3/4" SH. - RH	NSR 12-2
TOOLHOLDER 3/4" SH. - RH	NSR 12-3
TOOLHOLDER 1" SH. - RH	NSR 16-2
TOOLHOLDER 1" SH. - RH	NSR 16-3
TOOLHOLDER 1" SH. - RH	NSR 16-4



External Tool Holders - LH

Designation	Part Number
TOOLHOLDER 3/4" SH. - LH	NSL 12-2
TOOLHOLDER 3/4" SH. - LH	NSL 12-3
TOOLHOLDER 1" SH. - LH	NSL 16-3
TOOLHOLDER 1" SH. - LH	NSL 16-4



Perpendicular Tool Holders

Designation	Part Number
TOOLHOLDER 1" SH. - LH	NEL 16-3
TOOLHOLDER 1" SH. - RH	NER 16-3

GROOVING BARS



House Brand Steel Grooving Bars

Designation	Part Number
1-1/4" THREADING & GROOVING BAR	A20 NER3
1-1/2" THREADING & GROOVING BAR	A24 NER3
1-1/2" THREADING & GROOVING BAR	A24 NER4

Ultra-Dex Steel Grooving Bars

Designation	Part Number
1/2" #2 GROOVING BAR-RH	S08M NER2
5/8" #2 GROOVING BAR-RH	S10Q NER2
3/4" #2 GROOVING BAR-RH	S12Q NER2
1" #3 GROOVING BAR-RH	S16R NER3

Ultra-Dex Carbide Grooving Bars

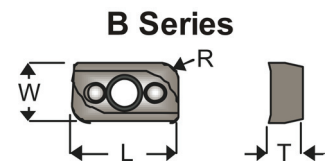
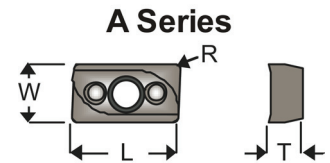
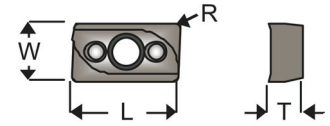
Designation	Part Number
1/2" #2 CARB GROOVING BAR-RH	E08 NER2
3/4" #2 CARB GROOVING BAR-RH	E12S NER2

K-TOOL INSERTS

MGH

Designation	R	L	W	T	Grade	Part Number
MGH-151	0.002	0.250	0.170	0.080	x33	K-MGH-151 x33
MGH-1510	0.008	0.250	0.170	0.080	x33	K-MGH-1510 x33
MGH-1511	0.015	0.250	0.170	0.080	x33	K-MGH-1511 x33
MGH-2321	0.015	0.400	0.250	0.140	x33	K-MGH-2321 x33
MGH-2322	0.031	0.400	0.250	0.140	x33	K-MGH-2322 x33
MGH-2323	0.047	0.400	0.250	0.140	x33	K-MGH-2323 x33
MGH-2324	0.062	0.400	0.250	0.140	x33	K-MGH-2324 x33
A Series						
MGH-531A	0.015	0.562	0.313	0.190	x33	K-MGH-531A x33
MGH-532A	0.031	0.562	0.313	0.190	x33	K-MGH-532A x33
MGH-534A	0.062	0.562	0.313	0.190	x33	K-MGH-534A x33
MGH-536A	0.093	0.562	0.313	0.190	x33	K-MGH-536A x33
MGH-538A	0.125	0.562	0.313	0.190	x33	K-MGH-538A x33
B Series						
MGH-531B	0.156	0.562	0.313	0.190	x33	K-MGH-531B x33
MGH-5312B	0.187	0.562	0.313	0.190	x33	K-MGH-5312B x33
MGH-5314B	0.218	0.562	0.313	0.190	x33	K-MGH-5314B x33
MGH-5316B	0.250	0.562	0.313	0.190	x33	K-MGH-5316B x33

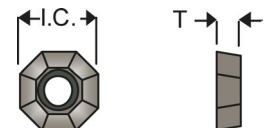
- Positive Top Inserts
- x20 Grade - Super Nitride Coating
- Carbon Steels, Alloy Steels, Tool Steels, Stainless Steels, Iron, Titanium Alloys & Non-Ferrous Metals



ODEB

Designation	I.C.	T	Grade	Part Number
ODEB-2711	.343	.110	x33	K-ODEB-2711 x33
ODEB-2721	.343	.130	x33	K-ODEB-2721 x33

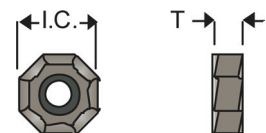
- Positive Top Inserts
- x20 Grade - Super Nitride Coating
- Carbon Steels, Alloy Steels, Tool Steels, Stainless Steels, Iron, Titanium Alloys & Non-Ferrous Metals



Designation	I.C.	T	Grade	Part Number
ONPG-4532	.593	.220	x33	K-ONPG-4532 x33

ONPG - Double Sided

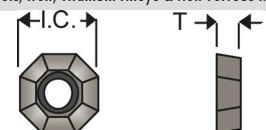
- Positive Top Inserts
- x20 Grade - Super Nitride Coating
- Carbon Steels, Alloy Steels, Tool Steels, Stainless Steels, Iron, Titanium Alloys & Non-Ferrous Metals



Designation	I.C.	T	Grade	Part Number
OPEB-535	.625	.220	x33	K-OPEB-535 x33
OPEB-535XP	.625	.220	x40	K-OPEB-535XP x40

OPEB

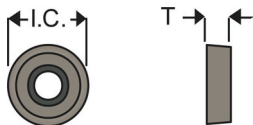
- Positive Top Inserts
- x20 Grade - Super Nitride Coating
- Carbon Steels, Alloy Steels, Tool Steels, Stainless Steels, Iron, Titanium Alloys & Non-Ferrous Metals



K-TOOL INSERTS

RCEB

- Positive Top Inserts
- x20 Grade - Super Nitride Coating
- Carbon Steels, Alloy Steels, Tool Steels, Stainless Steels, Iron, Titanium Alloys & Non-Ferrous Metals

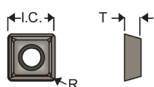


Designation	I.C.	T	Grade	Part Number
RCEB-22	.250	.125	x33	K-RCEB-22 x33
RCEB-325	.375	.156	x33	K-RCEB-325 x33
RCEB-435	.500	.220	x33	K-RCEB-435 x33
RCEB-64	.750	.250	x33	K-RCEB-64 x33

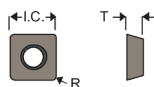
SDEB

- x20 Grade - Super Nitride Coating
- Carbon Steels, Alloy Steels, Tool Steels, Stainless Steels, Iron, Titanium Alloys & Non-Ferrous Metals

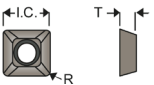
SDEB / Chipbreaker



SDEB / Flat Top



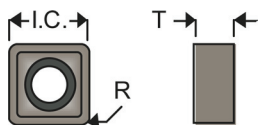
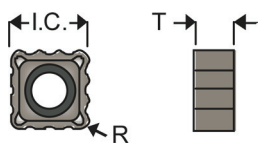
SDEB / Positive Top



Designation	I.C.	T	R	Grade	Part Number
Chipbreaker					
SDEB-1511CB	.187	.082	.015	x33	K-SDEB-1511CB x33
SDEB-2151CB	.250	.093	.015	x33	K-SDEB-2151CB x33
SDEB-2522CB	.312	.125	.031	x33	K-SDEB-2522CB x33
Flat Top					
SDEB-2151F	0.250	0.093	0.015	x33	K-SDEB-2151F x33
Positive Top					
SDEB-2151P	.250	.093	.015	x33	K-SDEB-2151P x33
SDEB-2521P	.312	.125	.015	x33	K-SDEB-2521P x33
SDEB-2522P	.312	.125	.031	x33	K-SDEB-2522P x33

SNMC

- x20 Grade - Super Nitride Coating
- Carbon Steels, Alloy Steels, Tool Steels, Stainless Steels, Iron, Titanium Alloys & Non-Ferrous Metals



Designation	I.C.	T	R	Grade	Part Number
B Series					
SNMC-222B	.250	.125	.031	x33	K-SNMC-222B X33
SNMC-333B	.375	.187	.047	x33	K-SNMC-333B X33
SNMC-444B	.500	.250	.062	x33	K-SNMC-444B X33
P Series					
SNMC-221P	.250	.125	.015	x33	K-SNMC-221P x33
SNMC-332P	.375	.187	.031	x33	K-SNMC-332P x33
SNMC-443P	.500	.250	.047	x33	K-SNMC-443P x33

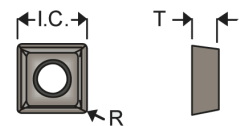


SPEB

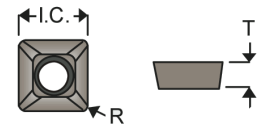
- x20 Grade - Super Nitride Coating
- Carbon Steels, Alloy Steels, Tool Steels, Stainless Steels, Iron, Titanium Alloys & Non-Ferrous Metals

Designation	I.C.	T	R	Grade	Part Number
Chipbreaker					
SPEB-1511CB	.187	.082	.015	x33	K-SPEB-1511CB X33
SPEB-221CB	.250	.125	.015	x33	K-SPEB-221CB X33
SPEB-222CB	.250	.125	.031	x33	K-SPEB-222CB X33
SPEB-2521CB	.312	.125	.015	x33	K-SPEB-2521CB X33
SPEB-2522CB	.312	.125	.031	x33	K-SPEB-2522CB X33
SPEB-322CB	.375	.125	.031	x33	K-SPEB-322CB X33
SPEB-332CB	.375	.187	.031	x33	K-SPEB-332CB X33
SPEB-422CB	.500	.125	.031	x33	K-SPEB-422CB X33
SPEB-432CB	.500	.187	.031	x33	K-SPEB-432CB X33
SPEB-532CB	.625	.187	.031	x33	K-SPEB-532CB X33
SPEB-6352CB	.750	.220	.031	x33	K-SPEB-6352CB X33
SPEB-842CB	1.000	.250	.031	x33	K-SPEB-842CB X33
Positive Top					
SPEB-220P	.250	.125	.003	x33	K-SPEB-220P X33
SPEB-221P	.250	.125	.015	x33	K-SPEB-221P X33
SPEB-222P	.250	.125	.031	x33	K-SPEB-222P X33
SPEB-2521P	.312	.125	.015	x33	K-SPEB-2521P X33
SPEB-2522P	.312	.125	.031	x33	K-SPEB-2522P X33
SPEB-321P	.375	.125	.015	x33	K-SPEB-321P X33
SPEB-322P	.375	.125	.031	x33	K-SPEB-322P X33
SPEB-331P	.375	.187	.015	x33	K-SPEB-331P X33
SPEB-332P	.375	.187	.031	x33	K-SPEB-332P X33
SPEB-333P	.375	.187	.047	x33	K-SPEB-333P X33
SPEB-334P	.375	.187	.062	x33	K-SPEB-334P X33
SPEB-3522PA	.437	.125	.031	x33	K-SPEB-3522PA X33
SPEB-422PA	.500	.125	.031	x33	K-SPEB-422PA X33
SPEB-431PA	.500	.187	.015	x33	K-SPEB-431PA X33
SPEB-432PA	.500	.187	.031	x33	K-SPEB-432PA X33
SPEB-433PA	.500	.187	.047	x33	K-SPEB-433PA X33
SPEB-434PA	.500	.187	.062	x33	K-SPEB-434PA X33
SPEB-532PA	.625	.187	.031	x33	K-SPEB-532PA X33
SPEB-6352PA	.750	.220	.031	x33	K-SPEB-6352PA X33
SPEB-842PA	1.000	.250	.031	x33	K-SPEB-842PA X33

SPEB / Chipbreaker



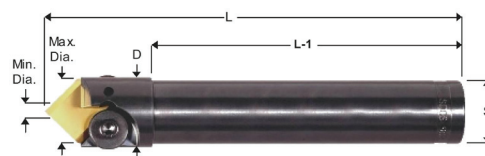
SPEB / Positive Top





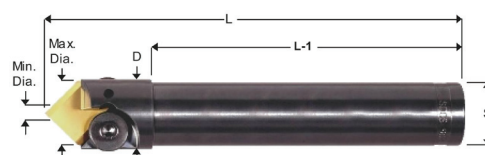
82° Indexable Spot Drills

Tool#	Min Dia.	Max Dia.	L	L-1	S	D	Part Number
SDCS-820	.093	.400	3.250	2.375	.500	.625	K-SDCS-82
SDCS-821L	.156	.580	5.360	4.250	.750	1.000	K-SDCS-821L
SDCS-822L	.250	.880	6.535	4.875	1.000	1.120	K-SDCS-822L
SDCS-823	.250	1.500	4.937	2.500	1.000	1.500	K-SDCS-823



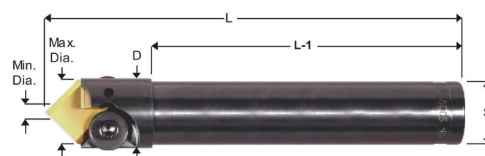
90° Indexable Spot Drills

Tool#	Min Dia.	Max Dia.	L	L-1	S	D	Part Number
SDCS-90	.070	.390	3.250	2.500	.375	.430	K-SDCS-90
SDCS-90-500	.093	.500	4.000	-	.500	-	K-SDCS-90-500
SDCS-90-750	.125	.750	6.000	-	.750	-	K-SDCS-90-750
SDCS-900	.093	.470	3.250	2.375	.500	.625	K-SDCS-900
SDCS-901	.156	.600	3.060	2.000	.500	1.000	K-SDCS-901
SDCS-901L	.156	.600	5.330	4.250	.750	1.000	K-SDCS-901L
SDCS-902	.250	.900	4.130	2.500	.750	1.125	K-SDCS-902
SDCS-902L	.250	.900	6.530	4.875	1.000	1.125	K-SDCS-902L
SDCS-9025	.250	1.270	4.690	2.625	1.000	1.250	K-SDCS-9025
SDCS-903	.375	1.560	4.880	2.625	1.000	1.700	K-SDCS-903



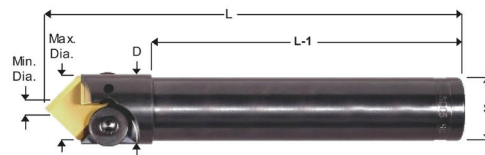
100° Indexable Spot Drills

Tool#	Min Dia.	Max Dia.	L	L-1	S	D	Part Number
SDCS-100	.093	.470	3.210	2.375	.500	.625	K-SDCS-100
SDCS-1001L	.156	.630	5.310	4.250	.750	1.000	K-SDCS-1001L
SDCS-1002L	.250	1.030	6.500	4.875	1.000	1.125	K-SDCS-1002L



120° Indexable Spot Drills

Tool#	Min Dia.	Max Dia.	L	L-1	S	D	Part Number
SDCS-1201L	.156	.875	5.300	4.250	.750	1.000	K-SDCS-1201L
SDCS-1202L	.250	1.300	6.437	4.875	1.000	1.125	K-SDCS-1202L

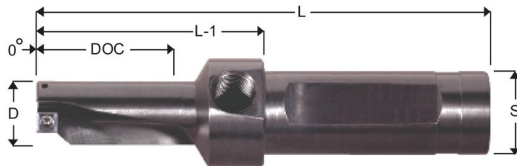


135° Indexable Spot Drills

Tool#	Min Dia.	Max Dia.	L	L-1	S	D	Part Number
SDCS-1351L	.156	1.062	5.290	4.250	.750	1.000	K-SDCS-1351L
SDCS-1352L	.250	1.625	6.400	4.875	1.000	1.125	K-SDCS-1352L



Flat Bottom Drills



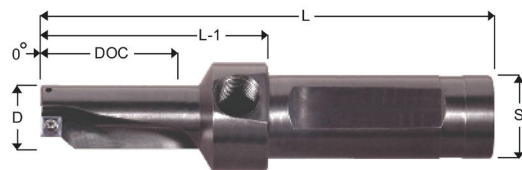
Tool#	D	Flutes	L	L-1	DOC	S	Part Number
FB-500	.500	2 - 1 Eff.	4.000	2.000	1.125	.750	K-FB-500
FB-500-3	.500	2 - 1 Eff.	4.500	2.500	1.500	.750	K-FB-500-3
FB-531	.531	2 - 1 Eff.	4.000	2.000	1.125	.750	K-FB-531
FB-531-3	.531	2 - 1 Eff.	4.500	2.500	1.593	.750	K-FB-531-3
FB-562	.562	2 - 1 Eff.	4.000	2.000	1.125	.750	K-FB-562
FB-562-3	.562	2 - 1 Eff.	4.625	2.625	1.687	.750	K-FB-562-3
FB-593	.593	2 - 1 Eff.	4.000	2.000	1.187	.750	K-FB-593
FB-593-3	.593	2 - 1 Eff.	4.687	2.687	1.812	.750	K-FB-593-3
FB-625	.625	2 - 1 Eff.	4.250	2.250	1.375	.750	K-FB-625
FB-625-3	.625	2 - 1 Eff.	4.750	2.750	1.875	.750	K-FB-625-3
FB-656	.656	2 - 1 Eff.	4.250	2.250	1.375	.750	K-FB-656
FB-656-3	.656	2 - 1 Eff.	4.875	2.875	2.000	.750	K-FB-656-3
FB-687	.687	2 - 1 Eff.	4.250	2.250	1.375	.750	K-FB-687
FB-687-3	.687	2 - 1 Eff.	4.937	2.937	2.062	.750	K-FB-687-3
FB-718	.718	2 - 1 Eff.	4.250	2.250	1.437	.750	K-FB-718
FB-718-3	.718	2 - 1 Eff.	5.062	3.062	2.187	.750	K-FB-718-3
FB-750	.750	2 - 1 Eff.	4.750	2.500	1.500	1.000	K-FB-750
FB-750-3	.750	2 - 1 Eff.	5.500	3.250	2.250	1.000	K-FB-750-3
FB-781	.781	2 - 1 Eff.	4.750	2.500	1.562	1.000	K-FB-781
FB-781-3	.781	2 - 1 Eff.	5.500	3.250	2.343	1.000	K-FB-781-3
FB-812	.812	2 - 1 Eff.	4.750	2.500	1.625	1.000	K-FB-812
FB-812-3	.812	2 - 1 Eff.	5.625	3.375	2.437	1.000	K-FB-812-3
FB-875	.875	2 - 1 Eff.	5.000	2.750	1.750	1.000	K-FB-875
FB-875-3	.875	2 - 1 Eff.	5.750	3.500	2.625	1.000	K-FB-875-3
FB-937	.937	2 - 1 Eff.	5.000	2.750	1.875	1.000	K-FB-937
FB-937-3	.937	2 - 1 Eff.	6.000	3.750	2.812	1.000	K-FB-937-3
FB-984	.984	2 - 1 Eff.	5.250	3.000	2.000	1.000	K-FB-984
FB-984-3	.984	2 - 1 Eff.	6.125	3.875	2.950	1.000	K-FB-984-3
FB-1000	1.000	2 - 1 Eff.	5.250	3.000	2.000	1.000	K-FB-1000
FB-1000-3	1.000	2 - 1 Eff.	6.250	4.000	3.000	1.000	K-FB-1000-3
FB-1062	1.062	2 - 1 Eff.	5.250	3.000	2.125	1.000	K-FB-1062
FB-1062-3	1.062	2 - 1 Eff.	6.250	4.000	3.187	1.000	K-FB-1062-3
FB-1125	1.125	2 - 1 Eff.	5.250	3.000	2.250	1.000	K-FB-1125
FB-1125-3	1.125	2 - 1 Eff.	6.375	4.125	3.375	1.000	K-FB-1125-3



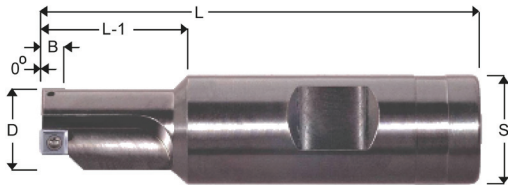
K-TOOL CUTTERS

Flat Bottom Drills (cont.)

Tool#	D	Flutes	L	L-1	DOC	S	Part Number
FB-1187	1.187	2 - 1 Eff.	6.000	3.750	2.375	1.250	K-FB-1187
FB-1187-3	1.187	2 - 1 Eff.	7.125	4.875	3.562	1.250	K-FB-1187-3
FB-1250	1.250	2 - 1 Eff.	6.000	3.750	2.500	1.250	K-FB-1250
FB-1250-3	1.250	2 - 1 Eff.	7.500	5.250	3.750	1.250	K-FB-1250-3
FB-1312	1.312	2 - 1 Eff.	6.000	3.750	2.625	1.250	K-FB-1312
FB-1312-3	1.312	2 - 1 Eff.	7.562	5.312	3.937	1.250	K-FB-1312-3
FB-1375	1.375	2 - 1 Eff.	6.000	3.750	2.750	1.250	K-FB-1375
FB-1375-3	1.375	2 - 1 Eff.	7.625	5.375	4.125	1.250	K-FB-1375-3
FB-1437	1.437	2 - 1 Eff.	6.250	4.000	2.875	1.250	K-FB-1437
FB-1500	1.500	2 - 1 Eff.	6.250	4.000	3.000	1.250	K-FB-1500
FB-1500-3	1.500	2 - 1 Eff.	7.750	5.500	4.500	1.250	K-FB-1500-3
FB-1562	1.562	2 - 1 Eff.	7.500	4.500	3.125	1.500	K-FB-1562
FB-1625	1.625	2 - 1 Eff.	7.500	4.500	3.250	1.500	K-FB-1625
FB-1625-3	1.625	2 - 1 Eff.	9.125	6.125	4.875	1.500	K-FB-1625-3
FB-1687	1.687	2 - 1 Eff.	7.500	4.500	3.375	1.500	K-FB-1687
FB-1750	1.750	2 - 1 Eff.	7.750	4.750	3.500	1.500	K-FB-1750
FB-1750-3	1.750	2 - 1 Eff.	9.625	6.625	5.250	1.500	K-FB-1750-3
FB-2000	2.000	2 - 1 Eff.	8.125	5.125	4.000	1.500	K-FB-2000
FB-2000-3	2.000	2 - 1 Eff.	10.125	7.125	6.000	1.500	K-FB-2000-3
FB-2125	2.125	2 - 1 Eff.	9.125	5.625	4.500	2.000	K-FB-2125
FB-2250	2.250	2 - 1 Eff.	9.125	5.625	4.500	2.000	K-FB-2250
FB-2375	2.375	2 - 1 Eff.	9.625	6.125	5.000	2.000	K-FB-2375
FB-2500	2.500	2 - 1 Eff.	9.625	6.125	5.000	2.000	K-FB-2500
FB-2750	2.750	2 - 1 Eff.	10.125	6.625	5.500	2.000	K-FB-2750
FB-3000	3.000	2 - 1 Eff.	10.625	7.125	6.000	2.000	K-FB-3000
FB-3500	3.500	2 - 1 Eff.	11.625	8.125	7.000	2.000	K-FB-3500



Drill Mills

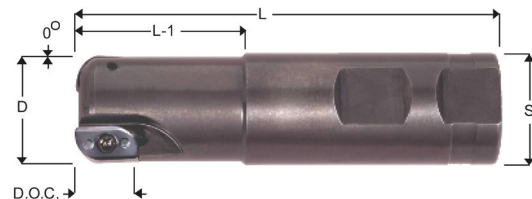


Tool#	D	Inserts	L	L-1	B	S	Part Number
DM-375	.375	1	2.500	.625	.170	.500	K-DM-375
DM-500	.500	1	2.625	.625	.235	.500	K-DM-500
DM-531	.531	2	2.625	.875	.170	.500	K-DM-531
DM-562	.562	2	3.000	.875	.170	.750	K-DM-562
DM-593	.593	2	3.000	.875	.170	.750	K-DM-593
DM-625	.625	1	3.000	1.000	.280	.750	K-DM-625
DM-656	.656	2	3.000	.940	.170	.750	K-DM-656
DM-687	.687	2	3.000	.970	.235	.750	K-DM-687
DM-718	.718	2	3.000	1.000	.235	.750	K-DM-718
DM-750	.750	1	3.000	1.000	.340	.750	K-DM-750
XDM-750	.750	1	4.250	1.500	.340	.750	K-XDM750
DM-781	.781	2	3.000	1.000	.235	.750	K-DM-781
DM-812	.812	2	3.000	1.000	.280	.750	K-DM-812
DM-875	.875	2	3.000	1.000	.280	.750	K-DM-875
DM-937	.937	2	3.250	1.250	.280	.750	K-DM-937
DM-1000	1.000	2	3.250	1.250	.340	.750	K-DM-1000
XDM-1000	1.000	2	5.250	2.000	.340	1.000	K-XDM1000
DM-1125	1.125	2	3.500	1.250	.340	1.000	K-DM-1125
DM-1250	1.250	2	3.625	1.375	.340	1.000	K-DM-1250
XDM-1250	1.250	2	5.250	1.375	.340	1.000	K-XDM1250
DM-1375	1.375	2	3.625	1.375	.465	1.000	K-DM-1375
DM-1500	1.500	2	3.625	1.375	.465	1.000	K-DM-1500
XDM-1500	1.500	2	5.250	1.375	.465	1.000	K-XDM1500
DM-1625	1.625	2	3.750	1.500	.465	1.000	K-DM-1625
DM-1750	1.750	2	3.750	1.500	.465	1.000	K-DM-1750
DM-2001	2.000	2	4.000	1.750	.710	1.000	K-DM-2001
XDM-2000	2.000	2	5.500	1.500	.710	1.250	K-XDM-2000
DM-2250	2.250	2	4.000	1.750	.710	1.000	K-DM-2250
DM-2500	2.500	2	4.000	1.750	.710	1.000	K-DM-2500
DM-3000	3.000	2	4.250	2.000	.960	1.250	K-DM-3000
DM-3500	3.500	2	4.250	2.000	.960	1.250	K-DM-3500

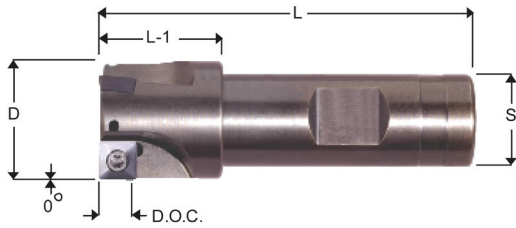
K-TOOL CUTTERS

Radius Mills

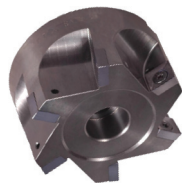
Tool#	D	Flutes	L	L-1	DOC	S	Part Number
RMS Series							
RMS-375	.375	1	2.625	.340	.310	.500	K-RMS375
RMS-500	.500	1	2.750	.750	.380	.500	K-RMS500
XRM-500	.500	1	3.625	1.500	.380	.750	K-XRM500
RMS-625	.625	2	3.000	1.000	.380	.625	K-RMS625
XRM-625	.625	1	3.875	1.875	.380	.750	K-XRM625
RMS-750	.750	3	3.000	1.000	.380	.750	K-RMS750
XRM-750	.750	2	4.250	2.250	.380	.750	K-XRM750
RMS-875	.875	3	3.250	1.250	.380	.750	K-RMS875
RMS-1000	1.000	4	3.250	1.250	.380	.750	K-RMS1000
RM-A Series							
RM-750A	.750	2	3.250	1.250	.540	.750	K-RM750A
RM-980A	.980	2	3.750	1.500	.540	1.000	K-RM980A
RM-1000A-2	1.000	2	3.750	1.500	.540	1.000	K-RM1000A-2
RM-1000A-3	1.000	3	3.750	1.500	.540	1.000	K-RM1000A-3
XRM-1000A	1.000	2	5.250	3.000	.540	1.000	K-XRM1000A
RM-1250A-3	1.250	3	4.000	.875	.540	1.000	K-RM1250A-3
RM-1250A-4	1.250	4	4.000	.875	.540	1.000	K-RM1250A-4
RM-1500A-4	1.500	4	4.000	.875	.540	1.000	K-RM1500A-4
RM-1500A-5	1.500	5	4.000	.875	.540	1.000	K-RM1500A-5
RM-B Series							
RM-750B	.750	2	3.250	1.250	.540	.750	K-RM750B
RM-980B	.980	2	3.750	1.500	.540	1.000	K-RM980B
RM-1000B-2	1.000	2	3.750	1.500	.540	1.000	K-RM1000B-2
RM-1000B-3	1.000	3	3.750	1.500	.540	1.000	K-RM1000B-3
XRM-1000B	1.000	2	5.250	3.000	.540	1.000	K-XRM1000B
RM-1250B-3	1.250	3	4.000	.875	.540	1.000	K-RM1250B-3
RM-1250B-4	1.250	4	4.000	.875	.540	1.000	K-RM1250B-4
RM-1500B-4	1.500	4	4.000	.875	.540	1.000	K-RM1500B-4
RM-1500B-5	1.500	5	4.000	.875	.540	1.000	K-RM1500B-5



Super Alloy Mills



Tool#	D	Flutes	L	L-1	DOC	S	Part Number
SA-100	1.000	3.000	3.000	1.000	0.280	0.750	K-SA-100
SA-125	1.250	3.000	3.250	1.250	0.340	0.750	K-SA-125
SA-125HS	1.250	2.000	3.500	1.250	0.465	1.000	K-SA-125HS
SA-150	1.500	3.000	3.250	1.250	0.340	0.750	K-SA-150
SA-150HS	1.500	3.000	3.500	1.250	0.465	1.000	K-SA-150HS
SA-200	2.000	4.000	3.250	1.250	0.340	0.750	K-SA-200
SA-250	0.250	1.000	2.125	0.440	0.170	0.375	K-SA-250
SA-312	0.312	1.000	2.125	0.440	0.170	0.375	K-SA-312
SA-375	0.375	1.000	2.250	0.625	0.235	0.375	K-SA-375
SA-500	0.500	1.000	2.625	0.625	0.215	0.500	K-SA-500
SA-625	0.625	2.000	3.000	0.875	0.215	0.625	K-SA-625
SA-750	0.750	2.000	3.000	1.000	0.280	0.750	K-SA-750



Super Alloy Mills

Tool#	D	Flutes	L	DOC	Bore	Key	Part Number
SA-2000	2.000	4	1.500	.465	.750	.312	K-SA2000
SA-2500	2.500	5	1.625	.465	1.000	.375	K-SA2500
SA-3000	3.000	6	1.625	.465	1.000	.375	K-SA3000

Torx Screws



Part Number
K-164T
K-300T
K-314T
K-414T
K-438T
K-538T
K-560T
K-614T
K-638T
K-838T
K-1012T
K-25618

INTERNAL TOOL - BORING TOOLS

INT Carbide Boring Tools

Min. Bore	Max Depth	Tool ID	Shank & OAL	Part Number
0.050	0.150	B-050-150	1/8 x 2"	INT-101000
0.050	0.200	B-050-200	1/8 x 2"	INT-101005
0.050	0.300	B-050-300	1/8 x 2"	INT-101010
0.050	0.400	B-050-400	1/8 x 2"	INT-101015
0.060	0.150	B-060-150	1/8 x 2"	INT-101020
0.060	0.200	B-060-200	1/8 x 2"	INT-101025
0.060	0.300	B-060-300	1/8 x 2"	INT-101030
0.060	0.400	B-060-400	1/8 x 2"	INT-101035
0.060	0.500	B-060-500	1/8 x 2"	INT-101040
0.080	0.150	B-080-150	1/8 x 2"	INT-101045
0.080	0.200	B-080-200	1/8 x 2"	INT-101050
0.080	0.300	B-080-300	1/8 x 2"	INT-101055
0.080	0.400	B-080-400	1/8 x 2"	INT-101060
0.080	0.500	B-080-500	1/8 x 2"	INT-101065
0.080	0.600	B-080-600	1/8 x 2"	INT-101070
0.100	0.150	B-100-150	1/8 x 2"	INT-101075
0.100	0.200	B-100-200	1/8 x 2"	INT-101080
0.100	0.300	B-100-300	1/8 x 2"	INT-101085
0.100	0.400	B-100-400	1/8 x 2"	INT-101090
0.100	0.500	B-100-500	1/8 x 2"	INT-101095
0.100	0.600	B-100-600	1/8 x 2"	INT-101100
0.100	0.700	B-100-700	1/8 x 2"	INT-101105
0.110	0.150	B-110-150	1/8 x 2"	INT-101110
0.110	0.200	B-110-200	1/8 x 2"	INT-101115
0.110	0.300	B-110-300	1/8 x 2"	INT-101120
0.110	0.400	B-110-400	1/8 x 2"	INT-101125
0.110	0.500	B-110-500	1/8 x 2"	INT-101130
0.110	0.600	B-110-600	1/8 x 2"	INT-101135
0.110	0.700	B-110-700	1/8 x 2"	INT-101140
0.120	0.250	B-120-250	3/16 x 2-1/2"	INT-101145
0.120	0.350	B-120-350	3/16 x 2-1/2"	INT-101150
0.120	0.500	B-120-500	3/16 x 2-1/2"	INT-101155
0.120	0.600	B-120-600	3/16 x 2-1/2"	INT-101160
0.120	0.700	B-120-700	3/16 x 2-1/2"	INT-101165
0.120	0.800	B-120-800	3/16 x 2-1/2"	INT-101170
0.140	0.250	B-140-250	3/16 x 2-1/2"	INT-101175
0.140	0.400	B-140-400	3/16 x 2-1/2"	INT-101180
0.140	0.500	B-140-500	3/16 x 2-1/2"	INT-101185
0.140	0.600	B-140-600	3/16 x 2-1/2"	INT-101190
0.140	0.700	B-140-700	3/16 x 2-1/2"	INT-101195
0.140	0.750	B-140-750	3/16 x 2-1/2"	INT-101200
0.140	0.800	B-140-800	3/16 x 2-1/2"	INT-101205



INT Carbide Boring Tools (cont.)

Min. Bore	Max Depth	Tool ID	Shank & OAL	Part Number
0.160	0.250	B-160-250	3/16 x 2-1/2"	INT-101210
0.160	0.400	B-160-400	3/16 x 2-1/2"	INT-10-1215
0.160	0.500	B-160-500	3/16 x 2-1/2"	INT-10-1220
0.160	0.600	B-160-600	3/16 x 2-1/2"	INT-101225
0.160	0.750	B-160-750	3/16 x 2-1/2"	INT-101230
0.160	0.900	B-160-900	3/16 x 2-1/2"	INT-101235
0.160	1.000	B-160-1000	3/16 x 2-1/2"	INT-101240
0.180	0.350	B-180-350	1/4 x 2-1/2"	INT-101245
0.180	0.500	B-180-500	1/4 x 2-1/2"	INT-101250
0.180	0.600	B-180-600	1/4 x 2-1/2"	INT-101255
0.180	0.750	B-180-750	1/4 x 2-1/2"	INT-101260
0.180	0.900	B-180-900	1/4 x 2-1/2"	INT-101265
0.180	1.000	B-180-1000	1/4 x 2-1/2"	INT-101270
0.180	1.100	B-180-1100	1/4 x 2-1/2"	INT-101275
0.200	0.400	B-200-400	1/4 x 2-1/2"	INT-101280
0.200	0.500	B-200-500	1/4 x 2-1/2"	INT-101285
0.200	0.600	B-200-600	1/4 x 2-1/2"	INT-101290
0.200	0.700	B-200-700	1/4 x 2-1/2"	INT-101295
0.200	0.800	B-200-800	1/4 x 2-1/2"	INT-101300
0.200	0.900	B-200-900	1/4 x 2-1/2"	INT-101305
0.200	1.000	B-200-1000	1/4 x 2-1/2"	INT-101310
0.200	1.100	B-200-1100	1/4 x 2-1/2"	INT-101315
0.200	1.200	B-200-1200	1/4 x 2-1/2"	INT-101320
0.200	1.300	B-200-1300	1/4 x 2-1/2"	INT-101325
0.230	0.400	B-230-400	5/16 x 2-1/2"	INT-101330
0.230	0.500	B-230-500	5/16 x 2-1/2"	INT-101335
0.230	0.600	B-230-600	5/16 x 2-1/2"	INT-101340
0.230	0.700	B-230-700	5/16 x 2-1/2"	INT-101345
0.230	0.800	B-230-800	5/16 x 2-1/2"	INT-101350
0.230	0.900	B-230-900	5/16 x 2-1/2"	INT-101355
0.230	1.000	B-230-1000	5/16 x 2-1/2"	INT-101360
0.230	1.150	B-230-1150	5/16 x 2-1/2"	INT-101365
0.230	1.200	B-230-1200	5/16 x 2-1/2"	INT-101370
0.230	1.250	B-230-1250	5/16 x 2-1/2"	INT-101375
0.230	1.400	B-230-1400	5/16 x 2-1/2"	INT-101380
0.230	1.500	B-230-1500	5/16 x 2-1/2"	INT-101385
0.230	1.600	B-230-1600	5/16 x 2-1/2"	INT-101390
0.290	0.500	B-290-500	5/16 x 2-1/2"	INT-101395
0.290	0.600	B-290-600	5/16 x 2-1/2"	INT-101400
0.290	0.750	B-290-750	5/16 x 2-1/2"	INT-101405
0.290	0.900	B-290-900	5/16 x 2-1/2"	INT-101410
0.290	1.000	B-290-1000	5/16 x 2-1/2"	INT-101415
0.290	1.100	B-290-1100	5/16 x 2-1/2"	INT-101420

INTERNAL TOOL - BORING TOOLS

INT Carbide Boring Tools (cont.)



Min. Bore	Max Depth	Tool ID	Shank & OAL	Part Number
0.290	1.250	B-290-1250	5/16 x 2-1/2"	INT-101425
0.290	1.350	B-290-1350	5/16 x 2-1/2"	INT-101430
0.290	1.500	B-290-1500	5/16 x 2-1/2"	INT-101435
0.290	1.600	B-290-1600	5/16 x 2-1/2"	INT-101440
0.290	1.750	B-290-1750	5/16 x 2-1/2"	INT-101445
0.320	0.500	B-320-500	3/8 x 2-1/2"	INT-101450
0.320	0.600	B-320-600	3/8 x 2-1/2"	INT-101455
0.320	0.750	B-320-750	3/8 x 2-1/2"	INT-101460
0.320	0.900	B-320-900	3/8 x 2-1/2"	INT-101465
0.320	1.000	B-320-1000	3/8 x 2-1/2"	INT-101470
0.320	1.100	B-320-1100	3/8 x 2-1/2"	INT-101475
0.320	1.250	B-320-1250	3/8 x 2-1/2"	INT-101480
0.320	1.500	B-320-1500	3/8 x 2-1/2"	INT-101485
0.320	1.600	B-320-1600	3/8 x 2-1/2"	INT-101490
0.320	1.800	B-320-1800	3/8 x 2-1/2"	INT-101495
0.320	2.000	B-320-2000	3/8 x 4"	INT-101500
0.320	2.500	B-320-2500	3/8 x 4"	INT-101505
0.320	3.000	B-320-3000	3/8 x 4"	INT-101510
0.360	0.500	B-360-500	3/8 x 2-1/2"	INT-101515
0.360	0.600	B-360-600	3/8 x 2-1/2"	INT-101520
0.360	0.750	B-360-750	3/8 x 2-1/2"	INT-101525
0.360	0.900	B-360-900	3/8 x 2-1/2"	INT-101530
0.360	1.000	B-360-1000	3/8 x 2-1/2"	INT-101535
0.360	1.150	B-360-1150	3/8 x 2-1/2"	INT-101540
0.360	1.250	B-360-1250	3/8 x 2-1/2"	INT-101545
0.360	1.500	B-360-1500	3/8 x 2-1/2"	INT-101550
0.360	1.600	B-360-1600	3/8 x 2-1/2"	INT-101555
0.360	1.800	B-360-1800	3/8 x 2-1/2"	INT-101560
0.360	2.000	B-360-2000	3/8 x 4"	INT-101565
0.360	2.500	B-360-2500	3/8 x 4"	INT-101570
0.360	3.000	B-360-3000	3/8 x 4"	INT-101575
0.490	0.750	B-490-750	1/2 x 3"	INT-101580
0.490	1.000	B-490-1000	1/2 x 3"	INT-101585
0.490	1.250	B-490-1250	1/2 x 3"	INT-101590
0.490	1.500	B-490-1500	1/2 x 3"	INT-101595
0.490	2.000	B-490-2000	1/2 x 4"	INT-101600
0.490	2.500	B-490-2500	1/2 x 4"	INT-101605
0.490	2.600	B-490-2600	1/2 x 4"	INT-101610
0.490	3.000	B-490-3000	1/2 x 6"	INT-101615
0.490	3.500	B-490-3500	1/2 x 6"	INT-101620
0.490	4.000	B-490-4000	1/2 x 6"	INT-101625
0.490	4.500	B-490-4500	1/2 x 6"	INT-101630

INTERNAL TOOL - BORING TOOLS

INT Carbide MAX-BORE Boring Tools

Min. Bore	Tool ID	Max. Depth	Radius	Shank & OAL	Part Number
0.050	MB-050-200	0.200	0.007	1/8" x 2"	INT-181000
0.050	MB-050-300	0.300	0.007	1/8" x 2"	INT-181005
0.050	MB-050-400	0.400	0.007	1/8" x 2"	INT-181010
0.060	MB-060-200	0.200	0.007	1/8" x 2"	INT-181015
0.060	MB-060-300	0.300	0.007	1/8" x 2"	INT-181020
0.060	MB-060-400	0.400	0.007	1/8" x 2"	INT-181025
0.060	MB-060-500	0.500	0.007	1/8" x 2"	INT-181030
0.080	MB-080-200	0.200	0.007	1/8" x 2"	INT-181035
0.080	MB-080-300	0.300	0.007	1/8" x 2"	INT-181040
0.080	MB-080-400	0.400	0.007	1/8" x 2"	INT-181045
0.080	MB-080-500	0.500	0.007	1/8" x 2"	INT-181050
0.080	MB-080-600	0.600	0.007	1/8" x 2"	INT-181055
0.090	MB-090-400	0.400	0.007	1/8" x 2"	INT-181060
0.090	MB-090-500	0.500	0.007	1/8" x 2"	INT-181065
0.090	MB-090-600	0.600	0.007	1/8" x 2"	INT-181070
0.100	MB-100-300	0.300	0.007	1/8" x 2"	INT-181075
0.100	MB-100-400	0.400	0.007	1/8" x 2"	INT-181080
0.100	MB-100-500	0.500	0.007	1/8" x 2"	INT-181085
0.100	MB-100-600	0.600	0.007	1/8" x 2"	INT-181090
0.100	MB-100-700	0.700	0.007	1/8" x 2"	INT-181095
0.110	MB-110-300	0.300	0.007	1/8" x 2"	INT-181100
0.110	MB-110-400	0.400	0.007	1/8" x 2"	INT-181105
0.110	MB-110-500	0.500	0.007	1/8" x 2"	INT-181110
0.110	MB-110-600	0.600	0.007	1/8" x 2"	INT-181115
0.110	MB-110-700	0.700	0.007	1/8" x 2"	INT-181120
0.120	MB-120-400	0.400	0.007	1/8" x 2"	INT-181125
0.120	MB-120-500	0.500	0.007	1/8" x 2"	INT-181130
0.120	MB-120-600	0.600	0.007	1/8" x 2"	INT-181135
0.120	MB-120-700	0.700	0.007	1/8" x 2"	INT-181140
0.120	MB-120-800	0.800	0.007	1/8" x 2"	INT-181145
0.140	MB-140-400	0.400	0.007	3/16" x 2-1/2"	INT-181150
0.140	MB-140-500	0.500	0.007	3/16" x 2-1/2"	INT-181155
0.140	MB-140-600	0.600	0.007	3/16" x 2-1/2"	INT-181160
0.140	MB-140-700	0.700	0.007	3/16" x 2-1/2"	INT-181165
0.140	MB-140-800	0.800	0.007	3/16" x 2-1/2"	INT-181170
0.140	MB-140-900	0.900	0.007	3/16" x 2-1/2"	INT-181175
0.140	MB-140-1000	1.000	0.007	3/16" x 2-1/2"	INT-181180
0.140	MB-140-1250	1.250	0.007	3/16" x 2-1/2"	INT-181185
0.160	MB-160-500	0.500	0.007	3/16" x 2-1/2"	INT-181190
0.160	MB-160-600	0.600	0.007	3/16" x 2-1/2"	INT-181195
0.160	MB-160-800	0.800	0.007	3/16" x 2-1/2"	INT-181200
0.160	MB-160-1000	1.000	0.007	3/16" x 2-1/2"	INT-181205
0.160	MB-160-1250	1.250	0.007	3/16" x 2-1/2"	INT-181210



INT Carbide MAX-BORE Boring Tools (cont.)



Min. Bore	Tool ID	Max. Depth	Radius	Shank & OAL	Part Number
0.180	MB-180-400	0.400	0.007	3/16" x 2-1/2"	INT-181212
0.180	MB-180-500	0.500	0.007	3/16" x 2-1/2"	INT-181215
0.180	MB-180-600	0.600	0.007	3/16" x 2-1/2"	INT-181220
0.180	MB-180-800	0.800	0.007	3/16" x 2-1/2"	INT-181225
0.180	MB-180-1000	1.000	0.007	3/16" x 2-1/2"	INT-181230
0.180	MB-180-1250	1.250	0.007	3/16" x 2-1/2"	INT-181235
0.180	MB-180-1500	1.500	0.007	3/16" x 2-1/2"	INT-181240
0.200	MB-200-400	0.400	0.007	1/4" x 2-1/2"	INT-181242
0.200	MB-200-500	0.500	0.007	1/4" x 2-1/2"	INT-181245
0.200	MB-200-800	0.800	0.007	1/4" x 2-1/2"	INT-181250
0.200	MB-200-1000	1.000	0.007	1/4" x 2-1/2"	INT-181255
0.200	MB-200-1250	1.250	0.007	1/4" x 2-1/2"	INT-181260
0.200	MB-200-1500	1.500	0.007	1/4" x 2-1/2"	INT-181265
0.200	MB-200-1750	1.750	0.007	1/4" x 2-1/2"	INT-181270
0.240	MB-240-500	0.500	0.007	1/4" x 2-1/2"	INT-181275
0.240	MB-240-800	0.800	0.007	1/4" x 2-1/2"	INT-181280
0.240	MB-240-1000	1.000	0.007	1/4" x 2-1/2"	INT-181285
0.240	MB-240-1250	1.250	0.007	1/4" x 2-1/2"	INT-181290
0.240	MB-240-1500	1.500	0.007	1/4" x 2-1/2"	INT-181295
0.290	MB-290-750	0.750	0.007	5/16" x 2-1/2"	INT-181300
0.290	MB-290-1000	1.000	0.007	5/16" x 2-1/2"	INT-181305
0.290	MB-290-1250	1.250	0.007	5/16" x 2-1/2"	INT-181310
0.290	MB-290-1500	1.500	0.007	5/16" x 2-1/2"	INT-181315
0.290	MB-290-1750	1.750	0.007	5/16" x 2-1/2"	INT-181320
0.310	MB-310-500	0.500	0.007	5/16" x 2-1/2"	INT-181322
0.310	MB-310-750	0.750	0.007	5/16" x 2-1/2"	INT-181325
0.310	MB-310-1000	1.000	0.007	5/16" x 2-1/2"	INT-181330
0.310	MB-310-1250	1.250	0.007	5/16" x 2-1/2"	INT-181335
0.310	MB-310-1500	1.500	0.007	5/16" x 2-1/2"	INT-181340
0.310	MB-310-1750	1.750	0.007	5/16" x 2-1/2"	INT-181345
0.360	MB-360-500	0.500	0.015	3/8" x 2-1/2"	INT-181350
0.360	MB-360-750	0.750	0.015	3/8" x 2-1/2"	INT-181355
0.360	MB-360-1000	1.000	0.015	3/8" x 2-1/2"	INT-181360
0.360	MB-360-1250	1.250	0.015	3/8" x 2-1/2"	INT-181365
0.360	MB-360-1500	1.500	0.015	3/8" x 2-1/2"	INT-181370
0.490	MB-490-750	0.750	0.015	1/2" x 3"	INT-181375
0.490	MB-490-1000	1.000	0.015	1/2" x 3"	INT-181380
0.490	MB-490-1250	1.250	0.015	1/2" x 3"	INT-181385
0.490	MB-490-1500	1.500	0.015	1/2" x 3"	INT-181390

INTERNAL TOOL - GROOVING TOOLS

INT Carbide Grooving Tools

Min. Bore	Groove Width	Max Depth	Tool ID	Offset	Shank & OAL	Part Number
1/16	.031/.032	3/16	G-032-3	0.020	1/8 x 2"	INT-201170
1/16	.031/.032	1/4	G-032-4	0.020	1/8 x 2"	INT-201175
1/16	.031/.032	3/8	G-032-6	0.020	1/8 x 2"	INT-201180
3/32	.046/.047	1/4	G-047-4	0.030	1/8 x 2"	INT-201185
3/32	.046/.047	3/8	G-047-6	0.030	1/8 x 2"	INT-201190
3/32	.046/.047	1/2	G-047-8	0.030	1/8 x 2"	INT-201195
1/8	.062/.063	1/4	G-064-4	0.040	1/8 x 2"	INT-201200
1/8	.062/.063	3/8	G-064-6	0.040	1/8 x 2"	INT-201205
1/8	.062/.063	1/2	G-064-8	0.040	1/8 x 2"	INT-201210
1/8	.062/.063	5/8	G-064-10	0.040	1/8 x 2"	INT-201215
3/16	.017/.018	1/4	G-018-4	0.050	3/16 x 2-1/2"	INT-201220
3/16	.017/.018	3/8	G-018-6	0.050	3/16 x 2-1/2"	INT-201225
3/16	.017/.018	1/2	G-018-8	0.050	3/16 x 2-1/2"	INT-201230
3/16	.017/.018	5/8	G-018-10	0.050	3/16 x 2-1/2"	INT-201235
3/16	.025/.026	1/4	G-026-4	0.050	3/16 x 2-1/2"	INT-201240
3/16	.025/.026	3/8	G-026-6	0.050	3/16 x 2-1/2"	INT-201245
3/16	.025/.026	1/2	G-026-8	0.050	3/16 x 2-1/2"	INT-201250
3/16	.025/.026	5/8	G-026-10	0.050	3/16 x 2-1/2"	INT-201255
3/16	.030/.031	1/4	G-031-4	0.050	3/16 x 2-1/2"	INT-201260
3/16	.030/.031	3/8	G-031-6	0.050	3/16 x 2-1/2"	INT-201265
3/16	.030/.031	1/2	G-031-8	0.050	3/16 x 2-1/2"	INT-201270
3/16	.030/.031	5/8	G-031-10	0.050	3/16 x 2-1/2"	INT-201275
3/16	.062/.063	1/4	G-061-4	0.050	3/16 x 2-1/2"	INT-201280
3/16	.062/.063	3/8	G-061-6	0.050	3/16 x 2-1/2"	INT-201285
3/16	.062/.063	1/2	G-061-8	0.050	3/16 x 2-1/2"	INT-201290
3/16	.062/.063	5/8	G-061-10	0.050	3/16 x 2-1/2"	INT-201295
1/4	.017/.018	1/4	G-017-4	0.050	1/4 x 2-1/2"	INT-201300
1/4	.017/.018	3/8	G-017-6	0.050	1/4 x 2-1/2"	INT-201305
1/4	.017/.018	1/2	G-017-8	0.050	1/4 x 2-1/2"	INT-201310
1/4	.017/.018	5/8	G-017-10	0.050	1/4 x 2-1/2"	INT-201315
1/4	.025/.026	1/4	G-025-4	0.050	1/4 x 2-1/2"	INT-201320
1/4	.025/.026	3/8	G-025-6	0.050	1/4 x 2-1/2"	INT-201325
1/4	.025/.026	1/2	G-025-8	0.050	1/4 x 2-1/2"	INT-201330
1/4	.025/.026	5/8	G-025-10	0.050	1/4 x 2-1/2"	INT-201335
1/4	.030/.031	1/4	G-030-4	0.050	1/4 x 2-1/2"	INT-201340
1/4	.030/.031	3/8	G-030-6	0.050	1/4 x 2-1/2"	INT-201345
1/4	.030/.031	1/2	G-030-8	0.050	1/4 x 2-1/2"	INT-201350
1/4	.030/.031	5/8	G-030-10	0.050	1/4 x 2-1/2"	INT-201355
1/4	.062/.064	3/8	G-060-6	0.050	1/4 x 2-1/2"	INT-201356
1/4	.062/.064	1/2	G-060-8	0.050	1/4 x 2-1/2"	INT-201357
1/4	.062/.064	5/8	G-060-10	0.050	1/4 x 2-1/2"	INT-201358

INT Carbide Grooving Tools (cont.)

Min. Bore	Groove Width	Max Depth	Tool ID	Offset	Shank & OAL	Part Number
5/16	.033/.034	1/4	G-033-4	0.100	5/16 x 2-1/2"	INT-201360
5/16	.033/.034	3/8	G-033-6	0.100	5/16 x 2-1/2"	INT-201365
5/16	.033/.034	1/2	G-033-8	0.100	5/16 x 2-1/2"	INT-201370
5/16	.033/.034	3/4	G-033-12	0.100	5/16 x 2-1/2"	INT-201375
5/16	.038/.039	1/4	G-038-4	0.100	5/16 x 2-1/2"	INT-201380
5/16	.038/.039	3/8	G-038-6	0.100	5/16 x 2-1/2"	INT-201385
5/16	.038/.039	1/2	G-038-8	0.100	5/16 x 2-1/2"	INT-201390
5/16	.038/.039	3/4	G-038-12	0.100	5/16 x 2-1/2"	INT-201395
5/16	.062/.064	1/2	G-063-8	0.100	5/16 x 2-1/2"	INT-201400
5/16	.062/.064	3/4	G-063-12	0.100	5/16 x 2-1/2"	INT-201405
5/16	.062/.064	1	G-063-16	0.100	5/16 x 2-1/2"	INT-201410
5/16	.093/.095	1/2	G-094-8	0.100	5/16 x 2-1/2"	INT-201415
5/16	.093/.095	3/4	G-094-12	0.100	5/16 x 2-1/2"	INT-201420
5/16	.093/.095	1	G-094-16	0.100	5/16 x 2-1/2"	INT-201425
3/8	.039/.041	1/4	G-039-4	0.100	3/8 x 2-1/2"	INT-201430
3/8	.039/.041	3/8	G-039-6	0.100	3/8 x 2-1/2"	INT-201435
3/8	.039/.041	1/2	G-039-8	0.100	3/8 x 2-1/2"	INT-201440
3/8	.039/.041	3/4	G-039-12	0.100	3/8 x 2-1/2"	INT-201445
3/8	.039/.041	1	G-039-16	0.100	3/8 x 2-1/2"	INT-201450
3/8	.039/.041	1-1/4	G-039-20	0.100	3/8 x 2-1/2"	INT-201455
3/8	.046/.048	1/4	G-046-4	0.100	3/8 x 2-1/2"	INT-201460
3/8	.046/.048	3/8	G-046-6	0.100	3/8 x 2-1/2"	INT-201465
3/8	.046/.048	1/2	G-046-8	0.100	3/8 x 2-1/2"	INT-201470
3/8	.046/.048	3/4	G-046-12	0.100	3/8 x 2-1/2"	INT-201475
3/8	.046/.048	1	G-046-16	0.100	3/8 x 2-1/2"	INT-201480
3/8	.046/.048	1-1/4	G-046-20	0.100	3/8 x 2-1/2"	INT-201485
3/8	.055/.057	1/4	G-055-4	0.100	3/8 x 2-1/2"	INT-201490
3/8	.055/.057	3/8	G-055-6	0.100	3/8 x 2-1/2"	INT-201495
3/8	.055/.057	1/2	G-055-8	0.100	3/8 x 2-1/2"	INT-201500
3/8	.055/.057	3/4	G-055-12	0.100	3/8 x 2-1/2"	INT-201505
3/8	.055/.057	1	G-055-16	0.100	3/8 x 2-1/2"	INT-201510
3/8	.055/.057	1-1/4	G-055-20	0.100	3/8 x 2-1/2"	INT-201515
3/8	.062/.064	1/4	G-062-4	0.100	3/8 x 2-1/2"	INT-201520
3/8	.062/.064	3/8	G-062-6	0.100	3/8 x 2-1/2"	INT-201525
3/8	.062/.064	1/2	G-062-8	0.100	3/8 x 2-1/2"	INT-201530
3/8	.062/.064	3/4	G-062-12	0.100	3/8 x 2-1/2"	INT-201535
3/8	.062/.064	1	G-062-16	0.100	3/8 x 2-1/2"	INT-201540
3/8	.062/.064	1-1/4	G-062-20	0.100	3/8 x 2-1/2"	INT-201545
3/8	.069/.071	1/4	G-069-4	0.100	3/8 x 2-1/2"	INT-201550
3/8	.069/.071	3/8	G-069-6	0.100	3/8 x 2-1/2"	INT-201555
3/8	.069/.071	1/2	G-069-8	0.100	3/8 x 2-1/2"	INT-201560



INT Carbide Grooving Tools (cont.)

Min. Bore	Groove Width	Max Depth	Tool ID	Offset	Shank & OAL	Part Number
3/8	.069/.071	3/4	G-069-12	0.100	3/8 x 2-1/2"	INT-201565
3/8	.069/.071	1	G-069-16	0.100	3/8 x 2-1/2"	INT-201570
3/8	.069/.071	1-1/4	G-069-20	0.100	3/8 x 2-1/2"	INT-201575
3/8	.087/.089	1/4	G-087-4	0.100	3/8 x 2-1/2"	INT-201580
3/8	.087/.089	3/8	G-087-6	0.100	3/8 x 2-1/2"	INT-201585
3/8	.087/.089	1/2	G-087-8	0.100	3/8 x 2-1/2"	INT-201590
3/8	.087/.089	3/4	G-087-12	0.100	3/8 x 2-1/2"	INT-201595
3/8	.087/.089	1	G-087-16	0.100	3/8 x 2-1/2"	INT-201600
3/8	.087/.089	1-1/4	G-087-20	0.100	3/8 x 2-1/2"	INT-201605
3/8	.093/.095	1/2	G-095-8	0.100	3/8 x 2-1/2"	INT-201610
3/8	.093/.095	3/4	G-095-12	0.100	3/8 x 2-1/2"	INT-201615
3/8	.093/.095	1	G-095-16	0.100	3/8 x 2-1/2"	INT-201620
3/8	.125/.127	1/2	G-126-8	0.100	3/8 x 2-1/2"	INT-201625
3/8	.125/.127	3/4	G-126-12	0.100	3/8 x 2-1/2"	INT-201630
3/8	.125/.127	1	G-126-16	0.100	3/8 x 2-1/2"	INT-201635
1/2	.093/.095	1/2	G-093-8	0.150	1/2 x 3"	INT-201640
1/2	.093/.095	3/4	G-093-12	0.150	1/2 x 3"	INT-201645
1/2	.093/.095	1	G-093-16	0.150	1/2 x 3"	INT-201650
1/2	.093/.095	1-1/4	G-093-20	0.150	1/2 x 3"	INT-201655
1/2	.093/.095	1-1/2	G-093-24	0.150	1/2 x 3"	INT-201660
1/2	.125/.127	1/2	G-125-8	0.150	1/2 x 3"	INT-201665
1/2	.125/.127	3/4	G-125-12	0.150	1/2 x 3"	INT-201670
1/2	.125/.127	1	G-125-16	0.150	1/2 x 3"	INT-201675
1/2	.125/.127	1-1/4	G-125-20	0.150	1/2 x 3"	INT-201680
1/2	.125/.127	1-1/2	G-125-24	0.150	1/2 x 3"	INT-201685
1/2	.156/.158	1/2	G-156-8	0.150	1/2 x 3"	INT-201690
1/2	.156/.158	3/4	G-156-12	0.150	1/2 x 3"	INT-201695
1/2	.156/.158	1	G-156-16	0.150	1/2 x 3"	INT-201700
1/2	.156/.158	1-1/4	G-156-20	0.150	1/2 x 3"	INT-201705
1/2	.156/.158	1-1/2	G-156-24	0.150	1/2 x 3"	INT-201710
1/2	.187/.189	1/2	G-187-8	0.150	1/2 x 3"	INT-201715
1/2	.187/.189	3/4	G-187-12	0.150	1/2 x 3"	INT-201720
1/2	.187/.189	1	G-187-16	0.150	1/2 x 3"	INT-201725
1/2	.187/.189	1-1/4	G-187-20	0.150	1/2 x 3"	INT-201730
1/2	.187/.189	1-1/2	G-187-24	0.150	1/2 x 3"	INT-201735
1/2	.250/.252	1/2	G-250-8	0.150	1/2 x 3"	INT-201740
1/2	.250/.252	3/4	G-250-12	0.150	1/2 x 3"	INT-201745
1/2	.250/.252	1	G-250-16	0.150	1/2 x 3"	INT-201750
1/2	.250/.252	1-1/4	G-250-20	0.150	1/2 x 3"	INT-201755
1/2	.250/.252	1-1/2	G-250-24	0.150	1/2 x 3"	INT-201760

INT Carbide Full Radius Grooving Tools

Min. Bore	Groove Width	Max Depth	Tool ID	Offset	Shank & OAL	Part Number
1/4	.017/.018	1/4	R-017-4	0.050	1/4 x 2-1/2"	INT-241300
1/4	.017/.018	3/8	R-017-6	0.050	1/4 x 2-1/2"	INT-241305
1/4	.017/.018	1/2	R-017-8	0.050	1/4 x 2-1/2"	INT-241310
1/4	.017/.018	5/8	R-017-10	0.050	1/4 x 2-1/2"	INT-241315
1/4	.025/.026	1/4	R-025-4	0.050	1/4 x 2-1/2"	INT-241320
1/4	.025/.026	3/8	R-025-6	0.050	1/4 x 2-1/2"	INT-241325
1/4	.025/.026	1/2	R-025-8	0.050	1/4 x 2-1/2"	INT-241330
1/4	.025/.026	5/8	R-025-10	0.050	1/4 x 2-1/2"	INT-241335
1/4	.030/.031	1/4	R-030-4	0.050	1/4 x 2-1/2"	INT-241340
1/4	.030/.031	3/8	R-030-6	0.050	1/4 x 2-1/2"	INT-241345
1/4	.030/.031	1/2	R-030-8	0.050	1/4 x 2-1/2"	INT-241350
1/4	.030/.031	5/8	R-030-10	0.050	1/4 x 2-1/2"	INT-241355
1/4	.062/.064	3/8	R-060-6	0.050	1/4 x 2-1/2"	INT-241356
1/4	.062/.064	1/2	R-060-8	0.050	1/4 x 2-1/2"	INT-241357
1/4	.062/.064	5/8	R-060-10	0.050	1/4 x 2-1/2"	INT-241358
5/16	.033/.034	1/4	R-033-4	0.100	5/16 x 2-1/2"	INT-241360
5/16	.033/.034	3/8	R-033-6	0.100	5/16 x 2-1/2"	INT-241365
5/16	.033/.034	1/2	R-033-8	0.100	5/16 x 2-1/2"	INT-241370
5/16	.033/.034	5/8	R-033-10	0.100	5/16 x 2-1/2"	INT-241372
5/16	.033/.034	3/4	R-033-12	0.100	5/16 x 2-1/2"	INT-241375
5/16	.038/.039	1/4	R-038-4	0.100	5/16 x 2-1/2"	INT-241380
5/16	.038/.039	3/8	R-038-6	0.100	5/16 x 2-1/2"	INT-241385
5/16	.038/.039	1/2	R-038-8	0.100	5/16 x 2-1/2"	INT-241390
5/16	.038/.039	3/4	R-038-12	0.100	5/16 x 2-1/2"	INT-241395
5/16	.062/.064	1/2	R-063-8	0.100	5/16 x 2-1/2"	INT-241400
5/16	.062/.064	3/4	R-063-12	0.100	5/16 x 2-1/2"	INT-241405
5/16	.062/.064	1"	R-063-16	0.100	5/16 x 2-1/2"	INT-241410
5/16	.093/.095	1/2	R-094-8	0.100	5/16 x 2-1/2"	INT-241415
5/16	.093/.095	3/4	R-094-12	0.100	5/16 x 2-1/2"	INT-241420
5/16	.093/.095	1"	R-094-16	0.100	5/16 x 2-1/2"	INT-241425
3/8	.039/.041	1/4	R-039-4	0.100	3/8 x 2-1/2"	INT-241430
3/8	.039/.041	3/8	R-039-6	0.100	3/8 x 2-1/2"	INT-241435
3/8	.039/.041	1/2	R-039-8	0.100	3/8 x 2-1/2"	INT-241440
3/8	.039/.041	5/8	R-039-10	0.100	3/8 x 2-1/2"	INT-241442
3/8	.039/.041	3/4	R-039-12	0.100	3/8 x 2-1/2"	INT-241445
3/8	.039/.041	1"	R-039-16	0.100	3/8 x 2-1/2"	INT-241450
3/8	.039/.041	1-1/4	R-039-2	0.100	3/8 x 2-1/2"	INT-241455
3/8	.046/.048	1/4	R-046-4	0.100	3/8 x 2-1/2"	INT-241460
3/8	.046/.048	3/8	R-046-6	0.100	3/8 x 2-1/2"	INT-241465



INTERNAL TOOL - GROOVING TOOLS

INT Carbide Full Radius Grooving Tools (cont.)

Min. Bore	Groove Width	Max Depth	Tool ID	Offset	Shank & OAL	Part Number
3/8	.046/.048	1/2	R-046-8	0.100	3/8 x 2-1/2"	INT-241470
3/8	.046/.048	3/4	R-046-12	0.100	3/8 x 2-1/2"	INT-241475
3/8	.046/.048	1"	R-046-16	0.100	3/8 x 2-1/2"	INT-241480
3/8	.046/.048	1-1/4	R-046-20	0.100	3/8 x 2-1/2"	INT-241485
3/8	.055/.057	1/4	R-055-4	0.100	3/8 x 2-1/2"	INT-241490
3/8	.055/.057	3/8	R-055-6	0.100	3/8 x 2-1/2"	INT-241495
3/8	.055/.057	1/2	R-055-8	0.100	3/8 x 2-1/2"	INT-241500
3/8	.055/.057	3/4	R-055-12	0.100	3/8 x 2-1/2"	INT-241505
3/8	.055/.057	1"	R-055-16	0.100	3/8 x 2-1/2"	INT-241510
3/8	.055/.057	1-1/4	R-055-20	0.100	3/8 x 2-1/2"	INT-241515
3/8	.062/.064	1/4	R-062-4	0.100	3/8 x 2-1/2"	INT-241520
3/8	.062/.064	3/8	R-062-6	0.100	3/8 x 2-1/2"	INT-241525
3/8	.062/.064	1/2	R-062-8	0.100	3/8 x 2-1/2"	INT-241530
3/8	.062/.064	3/4	R-062-12	0.100	3/8 x 2-1/2"	INT-241535
3/8	.062/.064	1"	R-062-16	0.100	3/8 x 2-1/2"	INT-241540
3/8	.062/.064	1-1/4	R-062-20	0.100	3/8 x 2-1/2"	INT-241545
3/8	.069/.071	1/4	R-069-4	0.100	3/8 x 2-1/2"	INT-241550
3/8	.069/.071	3/8	R-069-6	0.100	3/8 x 2-1/2"	INT-241555
3/8	.069/.071	1/2	R-069-8	0.100	3/8 x 2-1/2"	INT-241560
3/8	.069/.071	3/4	R-069-12	0.100	3/8 x 2-1/2"	INT-241565
3/8	.069/.071	1"	R-069-16	0.100	3/8 x 2-1/2"	INT-241570
3/8	.069/.071	1-1/4	R-069-20	0.100	3/8 x 2-1/2"	INT-241575
3/8	.087/.089	1/4	R-087-4	0.100	3/8 x 2-1/2"	INT-241580
3/8	.087/.089	3/8	R-087-6	0.100	3/8 x 2-1/2"	INT-241585
3/8	.087/.089	1/2	R-087-8	0.100	3/8 x 2-1/2"	INT-241590
3/8	.087/.089	3/4	R-087-12	0.100	3/8 x 2-1/2"	INT-241595
3/8	.087/.089	1"	R-087-16	0.100	3/8 x 2-1/2"	INT-241600
3/8	.087/.089	1-1/4	R-087-20	0.100	3/8 x 2-1/2"	INT-241605
3/8	.093/.095	1/2	R-095-8	0.100	3/8 x 2-1/2"	INT-241610
3/8	.093/.095	3/4	R-095-12	0.100	3/8 x 2-1/2"	INT-241615

INT Carbide Full Radius Grooving Tools (cont.)

Min. Bore	Groove Width	Max Depth	Tool ID	Offset	Shank & OAL	Part Number
3/8	.093/.095	1"	R-095-16	0.100	3/8 x 2-1/2"	INT-241620
3/8	.125/.127	1/2	R-126-8	0.100	3/8 x 2-1/2"	INT-241625
3/8	.125/.127	3/4	R-126-12	0.100	3/8 x 2-1/2"	INT-241630
3/8	.125/.127	1"	R-126-16	0.100	3/8 x 2-1/2"	INT-241635
1/2	.093/.095	1/2	R-093-8	0.150	1/2 x 3"	INT-241640
1/2	.093/.095	3/4	R-093-12	0.150	1/2 x 3"	INT-241645
1/2	.093/.095	1"	R-093-16	0.150	1/2 x 3"	INT-241650
1/2	.093/.095	1-1/4	R-093-20	0.150	1/2 x 3"	INT-241655
1/2	.093/.095	1-1/2	R-093-24	0.150	1/2 x 3"	INT-241660
1/2	.125/.127	1/2	R-125-8	0.150	1/2 x 3"	INT-241665
1/2	.125/.127	3/4	R-125-12	0.150	1/2 x 3"	INT-241670
1/2	.125/.127	1"	R-125-16	0.150	1/2 x 3"	INT-241675
1/2	.125/.127	1-1/4	R-125-20	0.150	1/2 x 3"	INT-241680
1/2	.125/.127	1-1/2	R-125-24	0.150	1/2 x 3"	INT-241685
1/2	.156/.158	1/2	R-156-8	0.150	1/2 x 3"	INT-241690
1/2	.156/.158	3/4	R-156-12	0.150	1/2 x 3"	INT-241695
1/2	.156/.158	1"	R-156-16	0.150	1/2 x 3"	INT-241700
1/2	.156/.158	1-1/4	R-156-20	0.150	1/2 x 3"	INT-241705
1/2	.156/.158	1-1/2	R-156-24	0.150	1/2 x 3"	INT-241710
1/2	.187/.189	1/2	R-187-8	0.150	1/2 x 3"	INT-241715
1/2	.187/.189	3/4	R-187-12	0.150	1/2 x 3"	INT-241720
1/2	.187/.189	1"	R-187-16	0.150	1/2 x 3"	INT-241725
1/2	.187/.189	1-1/4	R-187-20	0.150	1/2 x 3"	INT-241730
1/2	.187/.189	1-1/2	R-187-24	0.150	1/2 x 3"	INT-241735
1/2	.250/.252	1/2	R-250-8	0.150	1/2 x 3"	INT-241740
1/2	.250/.252	3/4	R-250-12	0.150	1/2 x 3"	INT-241745
1/2	.250/.252	1"	R-250-16	0.150	1/2 x 3"	INT-241750
1/2	.250/.252	1-1/4	R-250-20	0.150	1/2 x 3"	INT-241755
1/2	.250/.252	1-1/2	R-250-24	0.150	1/2 x 3"	INT-241760



INT Carbide Right Hand Threading Tools

Min. Bore	Max Depth	Tool ID	Offset	Shank & OAL	Part Number
0.060	0.150	T-060-150	0.020	1/8 x 2"	INT-301340
0.060	0.200	T-060-200	0.020	1/8 x 2"	INT-301345
0.060	0.300	T-060-300	0.020	1/8 x 2"	INT-301350
0.090	0.200	T-090-200	0.025	1/8 x 2"	INT-301355
0.090	0.300	T-090-300	0.025	1/8 x 2"	INT-301360
0.090	0.400	T-090-400	0.025	1/8 x 2"	INT-301365
0.120	0.300	T-120-300	0.030	3/16 x 2-1/2"	INT-301370
0.120	0.400	T-120-400	0.030	3/16 x 2-1/2"	INT-301375
0.120	0.500	T-120-500	0.030	3/16 x 2-1/2"	INT-301380
0.140	0.300	T-140-300	0.035	3/16 x 2-1/2"	INT-301385
0.140	0.400	T-140-400	0.035	3/16 x 2-1/2"	INT-301390
0.140	0.500	T-140-500	0.035	3/16 x 2-1/2"	INT-301395
0.160	0.400	T-160-400	0.040	3/16 x 2-1/2"	INT-301396
0.160	0.500	T-160-500	0.040	3/16 x 2-1/2"	INT-301397
0.160	0.750	T-160-750	0.040	3/16 x 2-1/2"	INT-301398
0.160	1.000	T-160-1000	0.040	3/16 x 2-1/2"	INT-301399
0.180	0.350	T-180-350	0.040	1/4 x 2-1/2"	INT-301400
0.180	0.500	T-180-500	0.040	1/4 x 2-1/2"	INT-301405
0.180	0.750	T-180-750	0.040	1/4 x 2-1/2"	INT-301410
0.180	1.000	T-180-1000	0.040	1/4 x 2-1/2"	INT-301415
0.200	0.400	T-200-400	0.045	1/4 x 2-1/2"	INT-301420
0.200	0.600	T-200-600	0.045	1/4 x 2-1/2"	INT-301425
0.200	0.750	T-200-750	0.045	1/4 x 2-1/2"	INT-301430
0.200	0.100	T-200-1000	0.045	1/4 x 2-1/2"	INT-301435
0.230	0.400	T-230-400	0.055	5/16 x 2-1/2"	INT-301440
0.230	0.600	T-230-600	0.055	5/16 x 2-1/2"	INT-301445

INT Carbide Right Hand Threading Tools (cont.)

Min. Bore	Max Depth	Tool ID	Offset	Shank & OAL	Part Number
0.230	0.750	T-230-750	0.055	5/16 x 2-1/2"	INT-301450
0.230	1.000	T-230-1000	0.055	5/16 x 2-1/2"	INT-301455
0.230	1.500	T-230-1500	0.055	5/16 x 2-1/2"	INT-301460
0.290	0.500	T-290-500	0.070	5/16 x 2-1/2"	INT-301465
0.290	0.750	T-290-750	0.070	5/16 x 2-1/2"	INT-301470
0.290	1.000	T-290-1000	0.070	5/16 x 2-1/2"	INT-301475
0.290	1.250	T-290-1250	0.070	5/16 x 2-1/2"	INT-301480
0.290	1.500	T-290-1500	0.070	5/16 x 2-1/2"	INT-301482
0.290	1.750	T-290-1750	0.070	5/16 x 2-1/2"	INT-301485
0.320	0.500	T-320-500	0.075	3/8 x 2-1/2"	INT-301490
0.320	0.750	T-320-750	0.075	3/8 x 2-1/2"	INT-301495
0.320	0.100	T-320-1000	0.075	3/8 x 2-1/2"	INT-301500
0.320	1.250	T-320-1250	0.075	3/8 x 2-1/2"	INT-301505
0.320	1.500	T-320-1500	0.075	3/8 x 2-1/2"	INT-301507
0.320	1.800	T-320-1800	0.075	3/8 x 2-1/2"	INT-301510
0.360	0.500	T-360-500	0.085	3/8 x 2-1/2"	INT-301515
0.360	0.750	T-360-750	0.085	3/8 x 2-1/2"	INT-301520
0.360	1.000	T-360-1000	0.085	3/8 x 2-1/2"	INT-301525
0.360	1.250	T-360-1250	0.085	3/8 x 2-1/2"	INT-301530
0.360	1.500	T-360-1500	0.085	3/8 x 2-1/2"	INT-301532
0.360	1.800	T-360-1800	0.085	3/8 x 2-1/2"	INT-301535
0.490	0.750	T-490-750	0.120	1/2 x 3"	INT-301540
0.490	1.000	T-490-1000	0.120	1/2 x 3"	INT-301542
0.490	1.500	T-490-1500	0.120	1/2 x 3"	INT-301545
0.490	2.000	T-490-2000	0.120	1/2 x 3"	INT-301550



ISCAR GRADES

Grade	Designation
IC02	Ultrafine grain carbide with 9% cobalt.
IC07	An uncoated, fine grain, carbide grade. Used for high temperature alloys at low to medium cutting speed.
IC08	An uncoated fine grain, carbide grade. Used mainly for aluminum and for high temperature alloys at low to medium cutting speed.
IC10	Recommended for aluminum alloys and nonferrous materials.
IC1007	A tough submicron substrate, TiAlN PVD coated grade. Suitable for threading heat resistant alloys, austenitic stainless steel and hard steel at low to medium cutting speeds.
IC1008	Used for High temp. alloys, stainless steel and hardened steel. Low to medium speed, interrupted cut.
IC1028	Roughing applications at low speed, high feed and interrupted cut. High resistance to mechanical and thermal shock.
IC1030	A high toughness and wear resistance PVD coated grade. Recommended for interrupted cut and heavy operations on stainless steel, high temperature and alloyed steel.
IC107	Diamond coated grade for drilling CFRP (Carbon Fiber Reinforced Plastic) and titanium CFRP laminates.
IC20	Used for semifinishing, finishing and semiroughing of aluminum, cast iron and stainless steel. An uncoated carbide grade.
IC20N	A cermet grade, used for grooving and turning applications. Recommended for semi-finishing and finishing operations when excellent surface finish is required. Wear resistant, prevents built-up edge.
IC228	A TiN PVD coated tough grade. Used for grooving and threading wide range of workpiece materials at low cutting speed.
IC250	For high loads and medium to high cutting speed.
IC28	Used mainly for machining aluminum at medium cutting speeds and medium or large chip sections. The inserts usually feature very sharp cutting angles.
IC300	A tough sub-micron PVD coated grade. Suitable for low to medium cutting speed. Designed for machining of heat resistant alloys, austenitic stainless steel, hard materials and carbon steel at interrupted cut and unfavorable conditions.
IC308	A tough sub-micron PVD coated grade. Suitable for low to medium cutting speed. Designed for machining of heat resistant alloys, austenitic stainless steel, hard materials and carbon steel at interrupted cut and unfavorable conditions.

Grade	Designation
IC30N	Provides excellent resistance to wear and plastic deformation even at high cutting speeds and medium feeds. Useful for semifinishing and finishing.
IC328	A thin PVD coated TiCN layer on a P45-K40 substrate. Very high toughness. For milling, parting and grooving of steel, stainless and alloy steels at low to medium cutting speeds and for unstable machining conditions.
IC330	A tough grade TiCN+TiN PVD coated with a "SUMO TEC" surface treatment. Used for milling a wide range of workpiece materials, at low to medium cutting speeds and for unstable machining conditions.
IC350	For central and peripheral insert, on most applications, with sufficient coolant.
IC354	A thin PVD coated TiCN layer on a P40 substrate. High toughness. For general Applications in parting and grooving steel, alloy and stainless steel at medium to high cutting speeds.
IC380	A tough, "SUMO TEC" PVD coated grade. Used for machining heat resistant alloys, austenitic stainless steel, at medium to high cutting speeds and unfavorable conditions. Excellent built-up edge, mechanical and thermal shock resistance.
IC4	An uncoated carbide grade used for aluminum, silicon aluminum, copper alloys, and other non-ferrous materials.
IC4028	Used for turning cast iron, at medium to high speed and for interrupted cutting conditions.
IC4100	A tough substrate with a new MTCVD and alpha Al2O3 coating. Recommended for milling grey cast iron at high cutting speeds, providing extended tool life.
IC418	CVD multilayer TiCN / TiC / Al2O3 coated grade. Used for grooving and milling of grey and nodular cast iron at medium and high cutting speed. Can be used for interrupted cuts and heavy machining.
IC428	For wide range of applications, machining conditions and materials. For turning cast iron.
IC5005	A very hard substrate, improved MTCVD TiCN and a thick alpha Al2O3 CVD coating. Recommended mainly for nodular cast iron at stable or slightly unstable conditions. Can also be used successfully on grey cast iron.
IC5010	A hard substrate, improved MTCVD TiCN and a thick alpha Al2O3 CVD coating. Recommended mainly for grey cast iron at stable or slightly unstable conditions. Can be used successfully also on nodular cast iron.
IC507	A tough sub-micron substrate, TiCN & TiN PVD coated. Suitable for low-to-medium cutting speeds. Used for machining heat resistant alloys, austenitic stainless steel and hard steel.

Grade	Designation
IC508	A tough submicron substrate, TiCN+TiN PVD coated grade. Designed for machining wide range of materials at low to medium cutting speeds, interrupted cut and unfavorable conditions. Excellent notch wear and built-up edge resistance.
IC50M	Recommended for milling of steel, for semifinishing, semiroughing and roughing with medium or large chip sections and machining in unfavorable conditions.
IC5100	A tough substrate with MTCVD and alpha TiCN+Al2O3 coating with "SUMO TEC" post coating surface treatment. Recommended for milling grey cast iron at high cutting speeds, providing extended tool life.
IC520	A hard substrate TiCN PVD coated grade. Suitable for turning austenitic stainless titanium and Inconel.
IC520M	A CVD TiCN coated grade. Used for milling steel, malleable cast iron and stainless steel at medium to high cutting speed and medium feed.
IC520N	A cermet grade, TiCN & TiN PVD coated. Used for high speed semi-finishing and finishing applications with excellent surface finish. Wear resistant, prevents built-up edge.
IC528	A thin PVD coated TiCN layer on a P45-K40 substrate. Very high toughness. For milling, parting and grooving of steel, stainless and alloy steels at low to medium cutting speeds and for unstable machining conditions.
IC530N	A cermet grade, TiCN & TiN PVD coated. Used for high speed semi-finishing and finishing applications with excellent surface finish. Wear resistant, prevents built-up edge.
IC5400	A tough substrate with MTCVD and alpha Al2O3 coating. Recommended for milling steel at high cutting speed and for parting stainless steel.
IC5500	A tough substrate with a MTCVD and alpha Al2O3 coating. Recommended for milling martensitic stainless steel at high cutting speed providing excellent tool life.
IC570	A PVD coated grade, used for semifinishing and finishing at medium cutting speed of alloy and stainless steel.
IC5820	A tough submicron substrate, with a MTCVD and alpha Al2O3 coating and a special surface treatment. Designed for machining austenitic stainless steel, titanium and high temperature alloys.
IC6015	A very hard substrate with a cobalt enriched outer layer and alpha Al2O3 coating. Used for finishing and medium turning of stainless steel at high cutting speed. Features long tool life and excellent repeatability.
IC602	A hard submicron substrate PVD coated. Long tool life and high deformation, oxidation, chipping and wear resistance on hardened steel (up to 62 HRC), titanium and high temperature alloys. Brown color.


Grade	Designation
IC6025	A tough substrate with MTCVD Al2O3 and TiCN coating. Recommended for machining stainless steel at high feeds and unfavorable conditions at medium cutting speed.
IC608	A hard submicron substrate PVD coated. Long tool life and high deformation, oxidation, chipping and wear resistance on a wide range of materials. Brown color.
IC635	For low speed, high feed and unfavorable conditions.
IC702	A hard submicron substrate PVD coated. Long tool life and high deformation, oxidation, chipping and wear resistance on hardened steel (up to 65 HRC). Blue color - easy wear detection.
IC708	A hard submicron substrate PVD coated. Long tool life and high deformation, oxidation, chipping and wear resistance on a wide range of materials. Blue color - easy wear detection.
IC804	A hard submicron substrate, TiAlN PVD coated grade followed by a special "SUMO TEC" surface treatment. Suitable for turning hard nickel base alloys /inconel (40-50 HRC) at low to medium cutting speeds.
IC806	A tough submicron substrate, TiAlN PVD coated grade followed by a special "SUMO TEC" surface treatment. Suitable for turning inconel at low to medium cutting speeds.
IC807	A tough sub-micron substrate, "SUMO TEC" TiAlN PVD coated. Suitable for low-to-medium cutting speeds. Developed for machining of heat resistant alloys, austenitic stainless steel and hard steel.
IC807G	A hard submicron substrate, TiAlN PVD coated grade. Suitable for parting and turning heat resistant alloys, austenitic stainless steel and hard steel at low to medium cutting speeds.
IC808	A hard, fine grain substrate with excellent chipping resistance, combined with a new "SUMO TEC" TiAlN PVD coating. Provides high wear resistance. Recommended for a very wide range of materials.
IC8080	A hard fine grain substrate with "SUMO TEC" MTCVD alpha Al2O3 coating. Features excellent chipping and wear resistance. Recommended for high speed drilling of cast iron and steel, to be used for the peripheral insert on DR drills.
IC808G	A hard, fine grain substrate with excellent chipping resistance, TiAlN PVD coating. Provides high wear resistance. Recommended for a very wide range of materials.
IC810	PVD AlTiN+TiN "SUMO TEC" coated grade. First choice for milling nodular cast iron at medium to high cutting speeds.
IC8150	A hard substrate with a cobalt enriched layer, MTCVD TiCN and alpha Al2O3 CVD coating. Excellent thermal stability and resistance to chipping and plastic deformation. Recommended for high speed machining of steel at stable conditions.

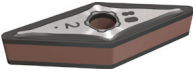
ISCAR GRADES

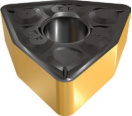
Grade	Designation
IC8250	A tough substrate with a cobalt enriched layer combined with MTCVD TiCN and a thick alpha Al2O3 CVD coating. Recommended for general use machining of steel in a wide range of conditions, featuring high toughness and wear resistance.
IC830	A "SUMO TEC" AlTiN+TiN PVD coated grade. Recommended for interrupted cut and heavy operations on stainless steel, high temperature and alloyed steel. High toughness and wear resistance.
IC8350	A very tough substrate with a cobalt enriched layer combined with a MTCVD TiCN and alpha Al2O3 CVD coating. Provides excellent toughness and good wear resistance on steel for interrupted and unstable cutting conditions.
IC840	A PVD TiSiN coated tough grade followed by a special surface treatment. Suitable for milling austenitic stainless steel and high temperature alloys. Recommended for interrupted cuts and heavy operations.
IC845	A PVD AlTiN coated tough grade followed by a special "SUMO TEC" surface treatment. Suitable for milling alloyed steel. Recommended for interrupted cut and heavy operations.
IC882	A tough submicron substrate, TiAlN PVD coated and a special surface treatment. Designed for machining austenitic stainless steel, titanium and high temperature alloys.
IC900	A tough sub-micron PVD TiAlN coated grade. Suitable for medium to high cutting speed. Designed for machining of heat resistant alloys, austenitic stainless steel, hard alloys and carbon steel at interrupted cuts.
IC9007	Used for cast iron and steel. For finishing at high cutting speed.
IC9015	A hard substrate with a cobalt enriched layer, MTCVD TiCN and alpha Al2O3 CVD coating. Excellent thermal stability and resistance to chipping and plastic deformation. Recommended for high speed machining of steel at stable conditions.
IC902	Ultra-fine carbide grain with 9% cobalt, TiAlN PVD coated. Used for machining hardened steel.
IC9025	A tough substrate with a cobalt enriched layer combined with MTCVD TiCN and a thick alpha Al2O3 CVD coating. Recommended for general use machining of steel in a wide range of conditions, featuring high toughness and wear resistance.
IC903	Ultra-fine carbide grain with 12% cobalt, TiAlN PVD coated. High wear resistance and toughness. High speed, medium feed. Used for up to 62Rc hardened steel, titanium, nickel-based alloys and stainless steel.

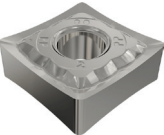
Grade	Designation
IC9054	A CVD multilayer TiCN / Al2O3 / TiN coated grade. A tough grade, used for and grooving and turning carbon, alloyed and stainless steel, at medium to high cutting speed.
IC907	A tough sub-micron substrate, TiAlN PVD coated. Suitable for low-to-medium cutting speeds. Developed for machining of heat resistant alloys, austenitic stainless steel and hard steel.
IC908	A hard, fine grain substrate with excellent chipping resistance, combined with a new TiAlN PVD coating. Provides high wear and oxidation resistance. Recommended for a very wide range of materials applications and machining conditions.
IC9080	A hard fine grain substrate with MTCVD alpha Al2O3 coating. Features excellent chipping and wear resistance. Recommended for high speed drilling of cast iron and steel, to be used for the peripheral insert on DR drills.
IC909	A hard, fine grain substrate TiCrVN PVD coated. Recommended for machining medical parts made from titanium, medical standard stainless steel and other difficult to machine materials.
IC910	PVD AlTiN (AL-TEC) coated grade. First choice for milling of grey and nodular cast iron at medium to high cutting speed.
IC9150	A hard substrate with a cobalt enriched layer, MTCVD TiCN and alpha Al2O3 CVD coating. Excellent thermal stability and resistance to chipping and plastic deformation. Recommended for high speed machining of steel at stable conditions.
IC920	Features good fracture toughness and excellent wear resistance. Used for grooving and turning of nodular cast iron at medium cutting speed.
IC9250	A tough substrate with a cobalt enriched layer combined with MTCVD TiCN and a thick alpha Al2O3 CVD coating. Recommended for general use machining of steel in a wide range of conditions, featuring high toughness and wear resistance.
IC928	A PVD TiAlN coated tough grade. Suitable for milling stainless steel, high temperature alloys and other alloy steels. Recommended for interrupted cut and heavy operations.
IC9350	A very tough substrate with a cobalt enriched layer combined with a MTCVD TiCN and alpha Al2O3 CVD coating. Provides excellent toughness and good wear resistance on steel for interrupted and unstable cutting conditions.
IC950	A PVD TiAlN coated grade. Used for heavy milling alloy steel and cast iron. Features excellent wear resistance.

Chipformers for Medium Machining

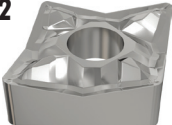
M3P  Double-sided insert for medium machining on steel with a reinforced edge to increase tool life.

M3M  Double-sided insert for medium machining on stainless steel with a reinforced cutting edge that prevents notch wear at tight radii to increase tool life.

TF  Double-sided positive rake angles to prevent strain hardening. The rake angle varies along the edge to a negative angle which prevents chipping. Special design reduces cratering. Used for carbon and alloy steel, stainless steel, and high-temp alloys.

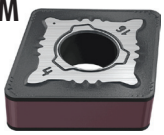
PP  Double-sided, very positive rake, sharp and positive radial edge for heat-resistant alloys, stainless steel, aluminum alloys and soft, low carbon steel.

GN  Double-sided for general applications. Secure cutting edge for medium-and-semi-roughing on steel and cast iron.

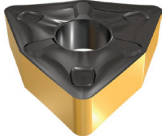
12  Single-sided for medium to rough machining on aluminum and soft materials.


Chipformers for Roughing

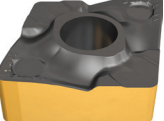
R3P  Chip-breaker for rough machining on steel with a positive rake angle and reinforced cutting edge for better performance and longer tool life.

R3M  Double-sided insert for rough machining on stainless steel with a unique deflector geometry to improve chip control. Includes a wavy surface to prevent chip hammering.

T3P  Double-sided 6° negative flank trigone insert for high feed turning on steel.

TNM  Double-sided trigon for roughing applications.
Feed Range: .010 to .026 in/rev
Depth of Cut from .08 to .28"

NR  Double-sided sharp cutting edge with a 13° positive rake angle for machining high temperature alloys at $\alpha < .24^\circ$.

M4PW  Double-sided for roughing applications.
Feed Range: .010 to .032 in/rev
Depth of Cut from .08 to .40"


M4MW  Chipformer for heavy machining applications on stainless steel. The inserts feature a very positive radial helical cutting edge and a positive rake angle.

HT/WG  Double-sided for roughing applications.
Feed Range: .010 to .032 in/rev
Depth of Cut from .08 to .40"


HM  Feed Range: .003 to .030 in/rev
Depth of Cut from .06 to .32"

Chipformers for Finishing

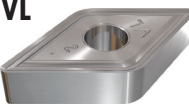
F3P  Double-sided insert with a positive rake angle to reduce cutting forces for finish machining on steel

F3M  Double-sided insert with a positive rake angle to finish machining on stainless steel. Its unique deflector geometry with a wavy surface prevents chip hammering.

SF  A unique super-finishing chipformer that controls chip flow at very low feeds and cutting depths. Designed to reduce crater wear.

NF  Double-sided for semi-finishing and finishing applications. Low cutting forces are due to very sharp edge and positive rake.

WF  Wiper geometry for high feed finishing on soft and gummy materials. Small depths of cut.

VL  High positive rake and a special edge preparation used for rough and finish turning on high temperature alloys. Excellent performance on parts such as automotive valves.

Chipformers for Positive Clearance

PF  Super finishing and finishing applications, mainly on positive inserts.
Feed Range: .001 to .008 in/rev
Depth of Cut from .01 to .12"

SM  Finishing and boring applications.
Feed Range: .002 to .010 in/rev
Depth of Cut from .02 to .10"

AS  For general use machining on aluminum and soft materials.

14  Semi-finishing and finishing. Medium feeds.

MITSUBISHI GRADES

Grade	Designation
AP25N	A multi-coated, true micrograin cermet for turning applications. This all new cermet exhibits extreme toughness while maintaining the relative hardness consistent with conventional cermets. The unique coating is Mitsubishi Carbide's own TiAlN based system.
BC8020	High efficiency TiAlN coated cBN grade with increased cutting edge strength and high crater wear resistance. Results are longer tool life in heavy duty or interrupted cutting.
DP1020	Newly-developed coating for drills provides excellent wear resistance with low friction property, resulting in excellent versatility and extended tool life.
DP5010	A new PVD coated grade. Cemented carbide substrate coated using a proprietary method of crystal control technology. Cast iron grade.
DP7020	New grade with a unique margin, developed specifically for stainless steel, complement high flow coolant holes.
F620	Coated cemented carbide recommended for the milling of a wide variety of steels and stainless steels. Tough substrate and added wear resistance characterize this ideal milling grade.
F7030	A combination of a tough, special cemented carbide substrate and CVD coated grade for milling of steel.
HTi10	Uncoated carbide grade for general purpose turning or milling of aluminum, cast iron, and all non-ferrous materials. Balanced strength and wear resistance characteristics make HTi10 an outstanding grade.
MBC020	A general purpose coated CBN grade suitable for continuous turning to light interrupted machining of hardened steel. The combination of high cutting edge rigidity and a coating for higher wear resistance allows MBC020 to cover a wider range of machining applications than conventional CBN grades.
MC1020	MC1020 is a CVD coated grade for higher cutting speeds. The main properties are high wear and high plastic deformation resistance for reliability. Suitable for placing on the outer cutting edge. It displays high wear and plastic deformation resistance, allowing it to be effective when used for machining steels and stainless steels
MC5005	MC5005 for more wear resistant applications. The optimized crystal growth, Nano-Texture coating technology gives outstanding wear and chipping resistance. Reduction of costs when machining cast iron parts by using high efficiency methods is now possible because of improved tool life and cutting edge reliability.

Grade	Designation
MC5015	MC5015 for severe and interrupted applications. The optimized crystal growth, Nano-Texture coating technology gives outstanding wear and chipping resistance. Reduction of costs when machining cast iron parts by using high efficiency methods is now possible because of improved tool life and cutting edge reliability.
MC5020	A general purpose milling grade for cast iron milling. It covers a wide range of machining, combining high wear resistance and outstanding fracture resistance. MC5020 is a CVD coated grade suitable for drilling cast iron. It has excellent abrasion resistance and gives long tool life by controlling chipping and thermal cracking that can occur when drilling nodular cast iron.
MC6015	Delivers outstanding heat and wear the resistance during high speed cutting. Machining time can be shortened and number of work pieces per cutting edge can be increased in stable machining. MC6015 grade for steel turning fulfils that need by delivering substantially better wear resistance through the adoption of an optimized crystal growth, Nano-Texture Coating Technology. This coating technology permits high speed, efficient machining even at high temperatures.
MC6025	MC6025 is a standard grade for steels, and utilizes an optimum CVD coating which is suitable for crater and flank wear, thereby achieving general versatility for increased stability. MC6025 provides stable cutting edge strength and wear resistance with a combination of specially engineered substrate, with significantly improved edge toughness, and a highly wear resistant CVD coating. Black super smooth coating surface prevents abnormal damage and weld chipping. Flat Al ₂ O ₃ for excellent heat resistance. Microscopic TiCN for high wear resistance. Special carbide substrate prevents crack development and provides stable tool life.
MC7015	Smooth cutting edge prevents chip welding. Thin layer, Nano-texture Al ₂ O ₃ controls abnormal damage. Tough, Nano-texture TiCN provides high wear resistance. Special carbide substrate resists chipping and plastic deformation.
MC7025	Smooth cutting edge prevents chip welding. Thin layer, Nano-texture Al ₂ O ₃ controls abnormal damage. Tough, Nano-texture TiCN provides high wear resistance. Special carbide substrate resists chipping and plastic deformation.

Grade	Designation
MP3025	PVD coated cermet grade for steel. Excellent tool life when machining small diameter workpieces. Due to the improved adhesion strength of the smooth substrate surface, MP3025 gives better tool life than conventional cermet. High quality finishes at low speeds. MP3025 produces better surface finishes at low cutting speeds than competitors PVD cermet grades. Ti-compound PVD coating provides excellent wear and welding resistance. Substrate surface provides excellent adhesion strength for coating layer. Substrate with superior fracture resistance and thermal shock resistance.
MP6120	PVD coated carbide milling grade optimised for machining steel. The MP6120 inserts have an Al-Cr top coating that offers the best solution for wear and welding resistance to steels.
MP7035	PVD coated carbide grade for tough applications in stainless steel. Thin PVD coating preserves edge sharpness and reduces tensile stresses. Special carbide substrate improved fracture and thermal shock resistance. (Al,Ti)N coating prevents welding.
MP9015	PVD coated carbide grade for machining of difficult to cut materials such as heat resistant alloys, titanium alloys and Inconel. This new Al rich, (AlTi)N coating surpasses conventional performance with a single layer that provides stabilisation of the high hardness phase to dramatically improve wear, crater and welding resistance.
MT9015	Uncoated cemented carbide inserts that have a sharp cutting edge but also have high fracture and wear resistance properties. This uncoated range is offered specifically for general turning of titanium alloys.
NX2525	This new innovation in cermet technology provides the best in toughness and high wear resistance. This cermet is outstanding in milling, showing both reliability and increased tool life run at higher surface speeds in steels and cast irons
NX55	Titanium carbonitride (Cermet) composition for turning and milling steel. Good balance of wear resistance and toughness. NX55 can be selected for steel cutting operations
RT9005	Cemented carbide grade unmatched resistance to heat and plastic deformation. Ideal for wear resistant high-speed machining.
RT9010	Cemented carbide grade with a good balance of wear and fracture resistance. First choice for turning of titanium alloys.
TF15	Cemented carbide grade with a high-strength micro-grain cemented carbide grade. Ideal for interrupted cutting that requires high fracture resistance

Grade	Designation
UC5005	Combination of special micro-grain cemented carbide substrate, which excels in wear and thermal shock resistance, and tough, thick TiCN, which actualizes long tool life and high efficiency in all cast iron turning such as gray cast iron and ductile cast iron.
UC5105	The new, smoother-than-normal surface coating prevents welding and edge chipping to allow reliable and stable cutting. A very hard carbide substrate and All-Black Super-Even Coat. Effective for high-speed turning of cast iron and ductile cast iron.
UC5115	The new, smoother-than-normal surface coating prevents welding and edge chipping to allow reliable and stable cutting. A very tough carbide substrate and All-Black Super-Even Coat. The first recommended grade for general turning of cast iron and ductile cast iron.
UC6010	Latest technology in coated cemented carbide. Recommended for the high speed cutting of both steels and cast irons. Extraordinary resistance to plastic deformation, cratering and flank wear. Excellent toughness in relation to wear resistance.
UE6020	An all-new fracture resistant cemented carbide grade exhibiting high wear resistance for steel turning at a wide range of cutting speeds. UE6020 features smooth layers of fibrous TiCN, micrograin aluminum oxide and TiN for improved surface finishes and consistent performance.
UE6105	UE6105 is the first recommendation for high speed steel turning. Suitable for turning mild, carbon and alloy steels. Superior machining performance achieved using 2 in 1 technology.
UE6110	UE6110 is the first recommendation for steel turning. Suitable for mild, carbon, alloy, bearing and lead free steel. UE6110 displays exceptional fracture and chipping resistance, providing a highly reliable cutting edge.
US7020	US7020 structure that enables new higher speed cutting of stainless steel. A combination of the latest coating and micrograin substrate technology to give superior reliability and wear resistance when cutting stainless steels at high speed.
US735	CDV coated grade for stainless steel turning. Specially designed for both interrupted and uninterrupted machining of materials that are subject to workhardening, such as stainless steels, where a sharper cutting edge produces more desired results. Suitable for turning carbon steels also.

MITSUBISHI GRADES

Grade	Designation
VP10RT	A PVD coated cemented carbide grade that exhibits excellent wear resistance especially at high surface speeds when machining difficult-to-cut materials. First recommendation for turning heat-resistant alloys. Also suitable for stainless steels.
VP15TF	Comparing to conventional coating technology, the VP (MIRACLE) coating features (Al,Ti)N coating which highly increases heat resistance and adhesion strength. Due to the oxidizing of aluminum during cutting, a protective film of aluminum oxide is formed on the surface which improves heat resistance. The VP (MIRACLE) coating is formed by arc ion-plating method that excels in adhesion strength.
VP20RT	Ideal for heavy interrupted cutting of stainless and general steels because of the excellent fracture resistance properties.
VP25N	A coated cermet grade which can provide exceptional finish and long tool life. Ideal for finish machining of mild steel and alloy steels
VP30RT	A combination of a tough, special cemented carbide substrate and MIRACLE coating. Ideal for heavy interrupted cutting of stainless and general steels.

Standard

First recommendation for medium cutting of cast iron
Alternative breaker for medium cutting of carbon steel and alloy steel

Double sided chipbreaker.
 Flat land offers high edge strength.



FP

First recommendation for finishing carbon steel and alloy steel

Chip breaker peninsula controls chips even at small depth of cut. Maintains the edge strength at the corner and prevents sudden fractures.



Flat Top

First recommendation for rough cutting of cast iron

Double sided flat insert.
 Most effective in unstable machining i.e. interrupted cuts due to high edge strength and stable fitting on the shim.



FS

Alternative breaker for finishing mild steel

Double sided chipbreaker.
 Stable chip control even at small depth of cut.
 Sharp edge gives best performance.



AZ

First recommendation for aluminium alloy

The high rake angle and 3D curved cutting edge provides sharpness at the cutting point.
 Additionally the 3D shape of the rake face enables excellent chip control.
 The polished insert face prevents built up edge.



FV

First recommendation for finishing carbon steel, alloy steel, mild steel and stainless steel

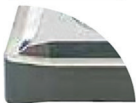
Suitable for low depth of cut and feed rate applications.
 Sharp cutting edge and low resistance design provide excellent cutting performance.



C

Alternative breaker for light cutting of carbon steel and alloy steel

Double sided chipbreaker.
 Can be used at small depth of cuts.
 The curved edge allows smooth chip discharge.



FY

First recommendation for finishing mild steel

Double sided chipbreaker.
 Effectively controls chips.
 Suitable for mild steel finishing.



FH

First recommendation for finishing carbon steel, alloy steel and stainless steel

Double sided chipbreaker.
 Stable chip control even at small depth of cut.



GH

First recommendation for rough cutting of carbon steel, alloy steel and stainless steel

Double sided chipbreaker.
 For interrupted cut and removing scale.
 A combination of wide land and large chip pocket allows high feeds.



FJ

First recommendation for finishing difficult-to-cut materials

Double sided chipbreaker.
 Ideal for heat-resistant alloy.
 The sharp edge produces good cutting surface.
 The curved edge allows smooth chip discharge.



GJ

First recommendation for rough cutting of difficult-to-cut materials

Double sided chipbreaker.
 Excellent balance of edge sharpness and strength.
 Edge geometry with high face wear resistance.



FJ-P

First recommendation for finishing titanium alloy

Double sided chipbreaker.
 Ideal for aluminum and copper.
 The sharp edge produces excellent surface finishes.
 The curved edge allows smooth chip discharge.
 The polished insert face prevents built up edge.



NEW

GK

First recommendation for rough cutting of cast iron

Positive land increases welding resistance and suppresses chip welding and abrasion at low speed cutting.



FM

First recommendation for finishing stainless steel

Chip breaker peninsula controls chips even at small depth of cut. Maintains the edge strength at the corner and prevents sudden fractures.



GM

Alternative chip breaker for light to medium cutting of stainless steel

Double sided chipbreaker.
 Alternate chip breaker to main chip breakers LM and MM.
 Excellent notch wear resistance for light to medium cutting.



HV

Alternative chipbreaker for heavy cutting of carbon steel and alloy steel



Single sided chipbreaker. Appropriate for the upper end of the heavy cutting region. Wide land and large chamfer offer high edge strength. A wide chipbreaker prevents chip jamming.

HX

First recommendation for heavy cutting of carbon steel and alloy steel



Single sided chipbreaker. Appropriate for the lower end of the heavy cutting region. The flat edge and chamfer provide a balance of sharpness and strength. Variable land and a wavy chipbreaker for good chip control.

HZ

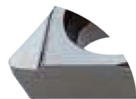
First recommendation for heavy cutting of mild steel and stainless steel



Single sided chipbreaker. Appropriate for the lower end of the heavy cutting region. Low cutting resistance due to positive land and curved edge. Teardrop dots improve chip control without increasing cutting resistance.

L

Finishing



Angled chipbreaker controls chip flow. Good chip control for low to medium feed rates.

NEW

LK

First recommendation for light cutting of cast iron



Narrow positive land provides low cutting resistance and excellent finish.

LM

First recommendation for light cutting of stainless steel



Double sided chipbreaker. Stable chip control in light cutting range. Breaker with high rake angle provides excellent burr control.

LP

First recommendation for light cutting of carbon steel and alloy steel



Double sided chipbreaker. Stable chip control in light cutting range. The curved edge allows smooth chip discharge.

NEW

LS

First recommendation for light cutting of difficult-to-cut materials



Enhanced chip disposal for depth of cut smaller than the corner R.

MA

First recommendation for medium cutting of carbon steel and alloy steel
First recommendation for finish to light cutting of cast iron



Double sided chipbreaker. Positive land provides sharp cutting action.

MH

First recommendation for medium-heavy cutting of mild steel
Alternative breaker for medium cutting of carbon steel and alloy steel



Double sided chipbreaker. Flat land offers high edge strength. A wide chip pocket prevents chip jamming at large depth of cut.

MJ

First recommendation for light cutting of difficult-to-cut materials



Double sided chipbreaker. Ideal for heat-resistant alloy and titanium alloy. The sharp edge produces excellent surface finishes. The curved edge allows smooth chip discharge.

MJ-P

Light cutting for titanium alloy



Ideal for aluminum and copper. The sharp edge produces excellent surface finishes. The curved edge allows smooth chip discharge. The polished insert face prevents built up edge.

NEW

MK

First recommendation for medium cutting of cast iron



Optimum balance between sharpness and high edge strength for general use.

MM

Breaker with high rake angle reduces burr formation



Double sided chipbreaker. Simulation analysis technology assisted in the development of an optimized cutting edge land geometry, preventing plastic deformation and extending tool life.

MP

Alternative breaker for medium cutting of carbon steel and alloy steel



Double sided chipbreaker. Suitable for medium to light cutting. Breaker geometry appropriate for copying and back turning. Good balance of sharpness and strength.

MQ

Medium cutting of carbon steel, alloy steel and stainless steel

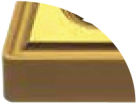


Can be used under a wide range of cutting conditions.

MS

First recommendation for medium cutting of stainless steel, mild steel and difficult-to-cut materials

Double sided chipbreaker.
The sharp edge gives best performance.



MV

Medium cutting of carbon steel, alloy steel, mild steel and stainless steel

A positive land and the high rake angle provides sharp cutting edge performance.
The double breakers and round-shaped dots in the rake face provide a wide range of chip control.



MW

Wiper insert for medium cutting carbon steel and alloy steel

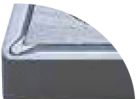
Double sided chipbreaker.
The wiper allows up to two times higher feed.
A wide chip pocket prevents chip jamming.



PK

Alternative breaker for finishing carbon steel and alloy steel

Double sided chipbreaker.
G class insert tolerance is suitable for workpieces requiring close dimensional tolerances.
Stable chip control even at small depth of cut.



RK

First recommendation for rough cutting of cast iron

Seating surface and wide land 3 or more times that of conventional products provides high cutting stability for interrupted machining and scale removal.



RM

First recommendation for rough cutting of stainless steel

Double sided chipbreaker.
Excellent fracture resistance during interrupted cutting due to the optimum cutting edge land angle and honing geometry.



RP

First recommendation for rough cutting of carbon and alloy steel

Double sided chipbreaker.
For interrupted cutting and cutting through scale.
Good balance of cutting edge strength and low cutting resistance.



RR

Heavy cutting of carbon steel and alloy steel

A wide groove chipbreaker prevents chips from jamming at large depths of cut.
Small dimples improve chip control at small depths of cut.

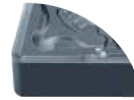


NEW

RS

First recommendation for rough cutting of difficult-to-cut materials

Seating surface and land width 3 or more times that of conventional products and provides high cutting stability for interrupted machining and scale removal.



SA

Alternative breaker for light cutting of carbon steel and alloy steel

Double sided chipbreaker.
Superior chip control at small depth of cuts.
Covers copying and back turning with wavy edge.
Recommended for workpieces in the 200–300HB range.



SH

First recommendation for light cutting of carbon steel, alloy steel and stainless steel

Double sided chipbreaker.
Can be used at low depth of cuts and high feed rates.
The curved edge allows smooth chip discharge.
Recommended for workpieces in the 160–250HB range.



SQ

Finishing carbon steel, alloy steel and stainless steel

For small depth of cut and low feed.



SV

Light cutting of carbon steel, alloy steel, mild steel and stainless steel

The double breaker design promotes chip discharge for mild steel low depth of cut a applications.



SVX

Light cutting of carbon steel and alloy steel

Breaker geometry appropriate for copying.
Excellent chip control.



SW

Wiper insert for light cutting of carbon steel and alloy steel

Double sided chipbreaker.
The wiper allows up to two times higher feed.
Wiper design for increased productivity and improved surface finish.



SY

First recommendation for light cutting of mild steel

Double sided chipbreaker.
Effectively controls chips.
Recommended for workpieces in the 200–300HB range.



NC3010

- High speed cutting for steel
- Combining excellent wear resistance substrate with chipping and heat resistance increased stability

NC3220

- For medium machining of steel
- Universal grade combining substrate with wear resistance and toughness and coating with oxidation resistance and fracture resistance
- Special treatment on the outermost layer

NC3120

- Medium to roughing for steel
- Combining excellent fracture resistance substrate with chipping resistance and heat resistance increased stability

NC3030

- For general cutting, interrupted cutting and roughing operations in steel and stainless steel
- Combining excellent fracture resistance substrate with chipping resistance and heat resistance increased stability in wide ranges of cutting conditions

NC5330

- Stainless Steel/General Cutting for Mild Steel & Forging Steel

NC9025

- Stainless Steel/General Cutting for Mild Steel & Forging Steel

NC6205

- General cutting for gray cast iron and ductile cast iron
- High hardness substrate and improved adhesion of thick show superior wear resistance

NC6210

- General cutting for gray cast iron and ductile cast iron
- Tough substrate and improved adhesion of thick show superior wear resistance

PC9030

- Medium, roughing and heavy interrupted cutting for stainless steel
- TiAlN coating and ultra fine grain substrate adopted
- High chipping and welding resistance for stable machining

PC8110

- High speed and continuous machining for stainless & HRSA
- High chipping and welding resistance longer tool life
- New TiAlN coating and ultra fine grain substrate adopted

PC5300

- Universal grade for stainless, HRSA, steel and interrupted cast iron machining
- High chipping and welding resistance for longer tool life
- New TiAlN coating and ultra fine grain substrate adopted

PC5400

- For medium cutting for hard-to-cut materials, stainless steel, steel, and cast iron at medium or low speed
- Stable machinability with chipping resistance, fracture resistance and welding resistance
- Ultra fine substrate with high toughness and new AlCrN layer

CN1000

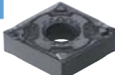


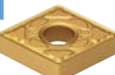







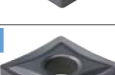



- Cermet for finishing for steel, cast iron and sintered metals
- Functionally gradient material cermet as a next generation cermet





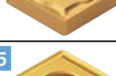







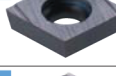



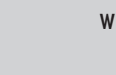
CN2000

- Wide ranges from finishing to roughing in steel machining
- Functionally gradient material cermet as a next generation cermet

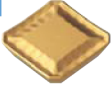
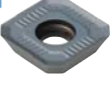







H01

- H01 is exclusive uncoated carbide for aluminum turning and milling operation.
- H01 guarantees excellent performance thanks to its mirroring surface and AK, TA chip breaker.

VG		For finishing <ul style="list-style-type: none"> Ensures stable chip flow even at very small depth of cut Suitable for copying
VQ		For Medium to Finish Cutting <ul style="list-style-type: none"> Strong cutting edge makes excellent cutting performance at interrupted cutting
VL		For Finishing <ul style="list-style-type: none"> Stable chip control in high toughness material; low carbon steel, pipe steel & steel plates Improved chip control for facing, copy machining and better surface finish
VF		For Finishing <ul style="list-style-type: none"> Good chip control quality on varied depth of cut Excellent cutting edge strength has been acquired due to the special chip-breaker
VB		For Finishing <ul style="list-style-type: none"> Improved chip control for smaller depth of cuts Excellent chip control in copying, corner R machining
VC		For Medium to Finish Cutting <ul style="list-style-type: none"> Stable chip control in copying and internal machining with various depths of cut
VM		For Medium cutting <ul style="list-style-type: none"> Wide available chip control range from medium-finishing to medium-roughing Suitable chip breaker for CNC machining
VK		For Medium to Roughing of Milling <ul style="list-style-type: none"> Optimal for high speed machining and interrupted machining
VH		For Heavy duty cutting <ul style="list-style-type: none"> Designed specifically for heavy machining Specialized chip breaker for the heavy industries like Ship building, Power plant industry
VT		For Heavy duty cutting <ul style="list-style-type: none"> Designed specifically for heavy machining Specialized chip breaker for the heavy industries like Ship building, Power plant industry
VP1		For Finishing <ul style="list-style-type: none"> High positive cutting edge Reduced chip contract minimizes temperature to improve tool life
VP2		For Medium to Finish Cutting <ul style="list-style-type: none"> Stable chip control and high machinability in copying with various depths of cut
VP3		For Medium cutting <ul style="list-style-type: none"> High positive cutting edge with wide land Stable cutting performance in interrupted machining with high toughness Stable machinability and chip control in machining with high depth of cut
HR		For Roughing <ul style="list-style-type: none"> Excellent chip control at deep depth of cut and fast feed rate Strong cutting edge makes excellent cutting performance at intermittent cutting
HA		For Light-alloy, Stainless-steel machining <ul style="list-style-type: none"> Sharp cutting edge generates low cutting force Specially designed tough main cutting edge Suitable for cutting of low carbon steel, stainless steel, aluminum

HS		For Medium cutting of Stainless steel <ul style="list-style-type: none"> Exclusive design for stainless steel cutting provide longer tool life Wear resistance have been reinforced through high rake angle of chip breaker land
GM		For Medium to Light cutting <ul style="list-style-type: none"> Excellent chip control at general cutting conditions Strong cutting edge strength provides good performance at intermittent and fast feed cutting
GR		For Medium to Roughing <ul style="list-style-type: none"> Suitable for deep depth of cut and high feed cutting of steel and cast iron Suitable for intermittent cutting
GH		For Heavy duty cutting <ul style="list-style-type: none"> Suitable for heavy duty cutting due to strong cutting edge Wide chip control range with low cutting force
GS		For Medium to Roughing of Stainless-steel <ul style="list-style-type: none"> Exclusive chip breaker for stainless steel
B25		For General cutting <ul style="list-style-type: none"> Suitable for general cutting condition cutting
VF		For Finishing <ul style="list-style-type: none"> Improved surface finish and size accuracy due to stable inner boring
VL		For Finishing <ul style="list-style-type: none"> Superior chip control in low carbon steel, pipes, and steel plates
VP1		For Finishing <ul style="list-style-type: none"> Excellent chip control in application with micro depth of cut and low feed Low cutting load and superb surface finish Optimal for both internal and external machining
HMP		For Medium cutting <ul style="list-style-type: none"> Excellent chip control at wide range of cutting conditions Suitable for stainless steel cutting
C25		For Medium cutting <ul style="list-style-type: none"> Suitable for interrupted cutting and cast iron machining Good surface finish due to low cutting force Suitable for both boring and outer diameter turning
AK		For Aluminum cutting <ul style="list-style-type: none"> High rake angle and low resistance cutting edge secure long tool life in continuous cutting of aluminum turning High speed of finishing operation
AR		For Aluminum cutting <ul style="list-style-type: none"> High stability of cutting edge secures great performance in high speed and interrupted machining High speed of medium and interrupted operation
KF		For Finishing <ul style="list-style-type: none"> Shallow depth of cut with sharp edge. Longer tool life at high speed cutting due to low cutting force Good surface finish
KM		For Medium to Finish Cutting <ul style="list-style-type: none"> Improved chip control makes tool life long and better machining
LW		For Medium cutting(Wiper) <ul style="list-style-type: none"> Guarantees excellent surface roughness and good chip controls at high feed machining
VW		For Finishing(Wiper) <ul style="list-style-type: none"> Improved surface roughness at shallow depth of cut and high feed due to strong cutting edge

KORLOY BREAKERS

MX		For General Milling <ul style="list-style-type: none"> • Possible to increase productivity through increase feed and depth • Excellent heat resistance due to the special chip breaker design of top face of insert
MF		For Finishing of Milling <ul style="list-style-type: none"> • Special design for light cutting of gummy materials like stainless steel and hard to machine material provide fine surface finish and longer tool life
MM		For Medium cutting of Milling <ul style="list-style-type: none"> • Chip breaker design to cover general cutting condition provides wide available application range • Ground type and as sintered type is available
MR		For Roughing of Milling <ul style="list-style-type: none"> • Strongest cutting edge strength provide stable tool life even in case of severe cutting with heavy intermittent and heavy roughing
MA		For Aluminum <ul style="list-style-type: none"> • Suitable design for aluminum machining like sharp cutting edge, mirror face of insert top which prevent built-up-edge, provide excellent cutting performance
MA		For Aluminum <ul style="list-style-type: none"> • Sharp cutting edge and buffed top face show excellent chip flow and welding resistance in aluminum machining
MF		For Finishing of Milling <ul style="list-style-type: none"> • Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
MM		For Medium to Roughing of Milling <ul style="list-style-type: none"> • Suitable geometry design for general milling has wider ranges of machining
MF		For Finishing of Milling <ul style="list-style-type: none"> • Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining

MM		For Medium to Roughing of Milling <ul style="list-style-type: none"> • Suitable geometry design for general milling has wider ranges of machining
MA		For Aluminum cutting <ul style="list-style-type: none"> • Sharp cutting edge design ensures low cutting resistance and excellent machining in difficult-to-cut materials, aluminum and light machining
MF		For Finishing of Milling <ul style="list-style-type: none"> • Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
MM		For Medium to Roughing of Milling <ul style="list-style-type: none"> • Suitable geometry design for general milling has wider ranges of machining
W		For Finishing of Milling (Wiper) <ul style="list-style-type: none"> • Wiper insert provides improved surface roughness due to special cutting edge
MA		For Aluminum <ul style="list-style-type: none"> • Sharp cutting edge and buffed top face show excellent chip flow and welding resistance in aluminum machining
MF		For Finishing of Milling <ul style="list-style-type: none"> • Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
MM		For Medium to Roughing of Milling <ul style="list-style-type: none"> • Suitable geometry design for general milling has wider ranges of machining
ML		For hard-to-cut material machining <ul style="list-style-type: none"> • The chip breaker with low cutting resistance ensures superior machinability in hard-to-cut materials

AC3

- PVD TiAlN grade
- First choice for grooving and threading in stainless steel, high-temperature alloys, aerospace materials, and non-ferrous materials
- Excellent in standard steels at medium SFM
- Dry machining capable

AC22

- PVD TiAlN grade with a tough, micro-grain substrate
- First choice in laydown threading in all materials
- Dry machining capable

AC50

- PVD TiAlN grade
- First choice for grooving and threading in all standard steels and 400 series stainless
- Application range is medium to high SFM.
- Dry machining capable

C3

- Uncoated micro-grain C3 grade.
- Good for all non-ferrous, stainless steel, and nickel-based alloys

GP3

- PVD TiN grade with a wear resistant micro-grain substrate
- Excellent choice in stainless steels, high-temperature alloys, aerospace materials, and non-ferrous materials
- Good in standard steels at low to medium SFM

GP22

- PVD TiN grade with a tough, micro-grain substrate
- Good for threading at low to medium speeds, while capable of handling interruptions
- Works well in stainless steel, high-temperature alloys, and standard steels at low to medium SFM.

GP50

- PVD TiN grade with a medium tough substrate and excellent wear properties
- Great general purpose grade for steel applications.

C25

- Uncoated general purpose C2 grade
- Good for all non-ferrous materials

K-TOOL GRADES

B1M

- Uncoated Carbide - No Hone

A1M

- TiN Coated

A9M

- Advanced Multi-Layer PVD Coated Carbide

A10M

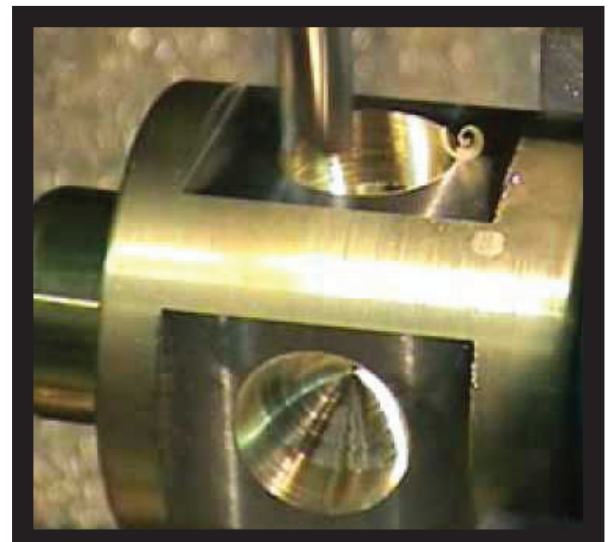
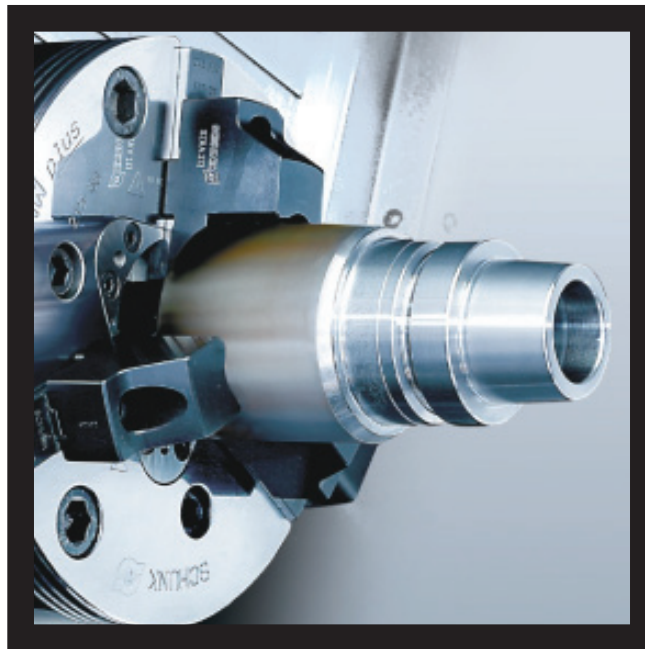
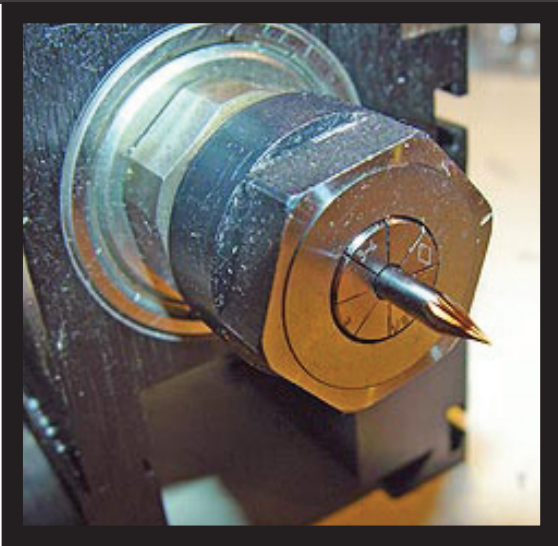
- TiAlN \ TiN Coated Carbide / Wear Resistant Grade

X33

- High Performance Nitride

X40

- Extremely Smooth Boride Coating





DA Holders & Collets

- 318 GS DA CAT40 Chucks
- 318 GS DA CAT50 Chucks
- 318 GS DA BT30 Chucks
- 318 GS DA BT40 Chucks
- 318 GS DA Collets

ER Holders & Collets

- 320 GS ER CAT40 Chucks
- 320 GS ER BT 30 Chucks
- 320 GS ER BT40 Chucks
- 321 GS ER Metric Collets
- 322 GS ER Inch Collets
- 323 GS ER Tap Collets
- 324 ER Steel Sealed Collets
- 326 ER Rubber Sealed Collets
- 327 ER Collet Sets
- 327 GS ER Extensions
- 327 GS ER Replacements

TG Holders & Collets

- 328 GS CAT40 TG Chucks
- 328 GS CAT50 TG Chucks
- 328 GS TG Collets
- 328 GS TG Replacements

Milling Holders & Collets

- 329 GS CAT40 Milling Chucks
- 329 GS Milling Collets
- 329 GS Milling Wrenches

End Mill Holders

- 330 GS CAT40 End Mill Holders
- 330 GS CAT50 End Mill Holders
- 331 GS BT30 End Mill Holders
- 331 GS BT40 End Mill Holders
- 331 GS End Mill Replacements

Shell Mill Holders

- 332 GS CAT 40 Shell Mill Holders
- 332 GS CAT 50 Shell Mill Holders
- 332 GS BT 30 Shell Mill Holders
- 332 GS BT 40 Shell Mill Holders

Tap Holders & Collets

- 333 GS Tap Holders
- 333 GS Tap Collets

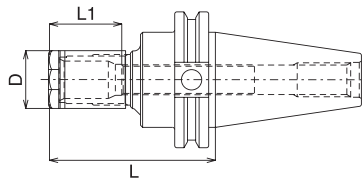
Misc.

- 334 Retention Studs
- 335 Soft Jaws

GS DA CHUCKS & COLLETS

CAT Taper DA Collet Chucks

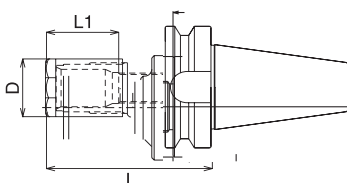
- DIN Coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications



Taper	Collet Series	Collet Range	L	L1	D	Part Number
CT40	100DA	3/64-9/16"	3.50"	1.15"	1.06"	GS-531270
CT40	180DA	3/64-3/4"	4.00"	1.50"	1.44"	GS-531273
CT40	200DA	3/64-3/8"	3.00"	1.03"	0.86"	GS-531275
CT50	180DA	3/64-3/4"	4.00"	1.50"	1.44"	GS-531278

BT Taper DA Collet Chucks

- BT 40 DIN Coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications



Taper	Collet Series	Collet Range	L	L1	D	Part Number
BT30	100DA	3/64-9/16"	3.00"	1.15"	1.06"	GS-532108
BT30	180DA	3/64-3/4"	3.00"	1.51"	1.44"	GS-532110
BT30	200DA	3/64-3/8"	3.00"	1.03"	0.86"	GS-532112
BT40	100DA	3/64-9/16"	3.50"	1.15"	1.06"	GS-532116
BT40	180DA	3/64-3/4"	4.00"	1.51"	1.44"	GS-532120
BT40	200DA	3/64-3/8"	3.00"	1.03"	0.86"	GS-532124

DA100 Collets

Fractional Inch	Decimal Inch	Part Number
3/64	0.047	DA100-3/64
1/16	0.062	DA100-1/16
5/64	0.078	DA100-5/64
3/32	0.094	DA100-3/32
7/64	0.109	DA100-7/64
1/8	0.125	DA100-1/8
9/64	0.141	DA100-9/64
5/32	0.156	DA100-5/32
11/64	0.172	DA100-11/64
3/16	0.188	DA100-3/16
13/64	0.203	DA100-13/64
7/32	0.219	DA100-7/32
15/64	0.234	DA100-15/64
1/4	0.250	DA100-1/4
17/64	0.266	DA100-17/64
9/32	0.281	DA100-9/32
19/64	0.297	DA100-19/64

DA100 Collets (cont.)

Fractional Inch	Decimal Inch	Part Number
5/16	0.312	DA100-5/16
21/64	0.328	DA100-21/64
11/32	0.344	DA100-11/32
23/64	0.359	DA100-23/64
3/8	0.375	DA100-3/8
25/64	0.391	DA100-25/64
13/32	0.406	DA100-13/32
27/64	0.422	DA100-27/64
7/16	0.438	DA100-7/16
29/64	0.453	DA100-29/64
15/32	0.469	DA100-15/32
31/64	0.484	DA100-31/64
1/2	0.500	DA100-1/2
33/64	0.516	DA100-33/64
17/32	0.531	DA100-17/32
35/64	0.547	DA100-35/64
9/16	0.562	DA100-9/16

DA180 Collets

Fractional Inch	Decimal Inch	Part Number
3/64	0.046	DA180-3/64
1/16	0.062	DA180-1/16
5/64	0.078	DA180-5/64
3/32	0.094	DA180-3/32
7/64	0.109	DA180-7/64
1/8	0.125	DA180-1/8
9/64	0.141	DA180-9/64
5/32	0.156	DA180-5/32
11/64	0.172	DA180-11/64
3/16	0.188	DA180-3/16
13/64	0.203	DA180-13/64
7/32	0.219	DA180-7/32
15/64	0.234	DA180-15/64
1/4	0.250	DA180-1/4
17/64	0.266	DA180-17/64
9/32	0.281	DA180-9/32
19/64	0.297	DA180-19/64
5/16	0.312	DA180-5/16
21/64	0.328	DA180-21/64
11/32	0.344	DA180-11/32
23/64	0.359	DA180-23/64
3/8	0.375	DA180-3/8
25/64	0.391	DA180-25/64
13/32	0.406	DA180-13/32
27/64	0.422	DA180-27/64
7/16	0.438	DA180-7/16
29/64	0.453	DA180-29/64
15/32	0.469	DA180-15/32
31/64	0.484	DA180-31/64
1/2	0.500	DA180-1/2
33/64	0.516	DA180-33/64
17/32	0.531	DA180-17/32
35/64	0.547	DA180-35/64
9/16	0.562	DA180-9/16
37/64	0.578	DA180-37/64
19/32	0.594	DA180-19/32
39/64	0.609	DA180-39/64
5/8	0.625	DA180-5/8
41/64	0.641	DA180-41/64
21/32	0.656	DA180-21/32
43/64	0.672	DA180-43/64
11/16	0.688	DA180-11/16
45/64	0.703	DA180-45/64
23/32	0.719	DA180-23/32
47/64	0.734	DA180-47/64
3/4	0.750	DA180-3/4

DA200 Collets

Fractional Inch	Decimal Inch	Part Number
3/64	0.047	DA200-3/64
1/16	0.062	DA200-1/16
5/64	0.078	DA200-5/64
3/32	0.094	DA200-3/32
7/64	0.109	DA200-7/64
1/8	0.125	DA200-1/8
9/64	0.141	DA200-9/64
5/32	0.156	DA200-5/32
11/64	0.172	DA200-11/64
3/16	0.188	DA200-3/16
13/64	0.203	DA200-13/64
7/32	0.219	DA200-7/32
15/64	0.234	DA200-15/64
1/4	0.250	DA200-1/4
17/64	0.266	DA200-17/64
9/32	0.281	DA200-9/32
19/64	0.297	DA200-19/64
5/16	0.312	DA200-5/16
21/64	0.328	DA200-21/64
11/32	0.344	DA200-11/32
23/64	0.359	DA200-23/64
3/8	0.375	DA200-3/8
25/64	0.391	DA200-25/64



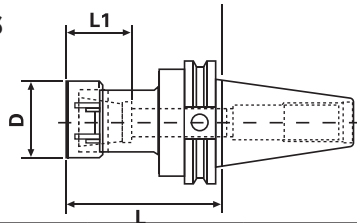
DA300 Collets

Fractional Inch	Decimal Inch	Part Number
1/32	0.031	DA300-1/32
3/64	0.047	DA300-3/64
1/16	0.062	DA300-1/16
5/64	0.078	DA300-5/64
3/32	0.094	DA300-3/32
7/64	0.109	DA300-7/64
1/8	0.125	DA300-1/8
9/64	0.141	DA300-9/64
5/32	0.156	DA300-5/32
11/64	0.172	DA300-11/64
3/16	0.188	DA300-3/16
13/64	0.203	DA300-13/64
7/32	0.219	DA300-7/32
15/64	0.234	DA300-15/64
1/4	0.250	DA300-1/4

GS ER CHUCKS

CAT 40 Taper ER Collet Chucks

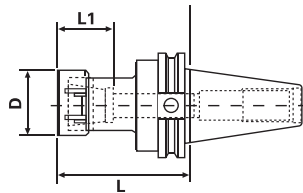
- DIN Coolant thru the flange
- Factory balanced to save spindle life, tool life and increased productivity.
- Threaded through holes for a back-up screw or coolant through when removed.



Taper	Collet Series	Collet Range	L	L1	D	Part Number
CT40	ER11	.019-.275"	2.50"	0.65"	0.75"	GS-531400
CT40	ER11	.019-.275"	4.00"	0.65"	0.75"	GS-531402
CT40	ER16	.019-.406"	2.50"	0.87"	1.26"	GS-531406
CT40	ER20	.039-.511"	2.50"	1.06"	1.38"	GS-531412
CT40	ER20	.039-.511"	4.00"	1.06"	1.38"	GS-531414
CT40	ER20	.039-.511"	6.00"	1.06"	1.38"	GS-531416
CT40	ER25	.039-.629"	2.50"	1.18"	1.65"	GS-531418
CT40	ER32	.078-.787"	.750"	-	-	GS-531401
CT40	ER32	.078-.787"	2.50"	1.34"	1.97"	GS-531421
CT40	ER32	.078-.787"	3.13"	1.34"	1.97"	GS-531424
CT40	ER32	.078-.787"	4.00"	1.34"	1.97"	GS-531423
CT40	ER32	.078-.787"	5.00"	1.34"	1.97"	GS-531426
CT40	ER40	.118-1.023"	3.13"	1.50"	2.48"	GS-531428

BT Taper ER Collet Chucks

- DIN Coolant thru the flange
- Factory balanced to save spindle life, tool life and increased productivity.
- Threaded through holes for a back-up screw or coolant through when removed.



BT 30 Taper

Taper	Collet Series	Collet Range	L	L1	D	Part Number
BT30	ER11	.019-.275"	2.00"	0.65"	0.75"	GS-532150
BT30	ER11	.019-.275"	4.00"	0.65"	0.75"	GS-532152
BT30	ER16	.019-.406"	2.36"	0.87"	1.26"	GS-532154
BT30	ER16	.019-.406"	4.00"	0.87"	1.26"	GS-532156
BT30	ER20	.039-.511"	2.50"	1.06"	1.38"	GS-532162
BT30	ER20	.039-.511"	4.00"	1.06"	1.38"	GS-532164
BT30	ER25	.039-.629"	2.00"	1.18"	1.65"	GS-532166
BT30	ER25	.039-.629"	4.00"	1.18"	1.65"	GS-532168
BT30	ER32	.078-.787"	3.00"	1.34"	1.97"	GS-532170

BT 40 Taper

Taper	Collet Series	Collet Range	L	L1	D	Part Number
BT40	ER11	.019-.275"	2.50"	0.65"	0.75"	GS-532174
BT40	ER16	.019-.406"	3.50"	0.87"	1.26"	GS-532180
BT40	ER20	.039-.511"	2.50"	1.06"	1.38"	GS-532184
BT40	ER20	.039-.511"	4.00"	1.06"	1.38"	GS-532186
BT40	ER25	.039-.629"	2.25"	1.18"	1.65"	GS-532190
BT40	ER25	.039-.629"	4.00"	1.18"	1.65"	GS-532192
BT40	ER32	.078-.787"	3.13"	1.34"	1.97"	GS-532196

ER 11 Metric Collets

Size (in)	Size (mm)	Part Number
.019-.039"	1	ER11-337650
.039-.059"	1.5	ER11-337652
.059-.078"	2	ER11-337654
.078-.098"	2.5	ER11-337656
.098-.118"	3	ER11-337658
.118-.137"	3.5	ER11-337660
.137-.157"	4	ER11-337662
.157-.177"	4.5	ER11-337664
.177-.196"	5	ER11-337666
.196-.216"	5.5	ER11-337668
.216-.236"	6	ER11-337670
.236-.255"	6.5	ER11-337672
.255-.275"	7	ER11-337674

ER 16 Metric Collets

Size (in)	Size (mm)	Part Number
.019-.039"	1	ER16-337302
.039-.078"	2	ER16-337304
.078-.118"	3	ER16-337306
.118-.157"	4	ER16-337308
.157-.196"	5	ER16-337310
.196-.236"	6	ER16-337312
.236-.275"	7	ER16-337314
.275-.314"	8	ER16-337316
.314-.354"	9	ER16-337318
.354-.393"	10	ER16-337320



ER 20 Metric Collets

Size (in)	Size (mm)	Part Number
.039-.078"	2	ER20-337473
.078-.118"	3	ER20-337474
.098-.137"	3.5	ER20-337471
.118-.157"	4	ER20-337475
.157-.196"	5	ER20-337476
.196-.236"	6	ER20-337477
.236-.275"	7	ER20-337478
.275-.314"	8	ER20-337479
.314-.354"	9	ER20-337480
.354-.393"	10	ER20-337481
.393-.433"	11	ER20-337482
.433-.452"	11.5	ER20-337469
.433-.472"	12	ER20-337483
.472-.511"	13	ER20-337484

ER 25 Metric Collets

Size (in)	Size (mm)	Part Number
.039-.078"	2	ER25-337330
.078-.118"	3	ER25-337332
.098-.137"	3.5	ER25-337333
.118-.157"	4	ER25-337334
.157-.196"	5	ER25-337336
.196-.236"	6	ER25-337338
.236-.275"	7	ER25-337340
.275-.314"	8	ER25-337342
.314-.354"	9	ER25-337344
.354-.393"	10	ER25-337346
.393-.433"	11	ER25-337348
.433-.452"	11.5	ER25-337349
.433-.472"	12	ER25-337350
.472-.511"	13	ER25-337352
.511-.551"	14	ER25-337354
.551-.590"	15	ER25-337356
.590-.629"	16	ER25-337358

ER 32 Metric Collets

Size (in)	Size (mm)	Part Number
.078-.118"	3	ER32-337361
.098-.137"	3.5	ER32-337359
.118-.157"	4	ER32-337362
.157-.196"	5	ER32-337363
.196-.236"	6	ER32-337364
.236-.275"	7	ER32-337365
.275-.314"	8	ER32-337366
.314-.354"	9	ER32-337367
.354-.393"	10	ER32-337368
.393-.433"	11	ER32-337369
.413-.452"	11.5	ER32-337357
.433-.472"	12	ER32-337370
.472-.511"	13	ER32-337371
.511-.551"	14	ER32-337372
.551-.590"	15	ER32-337373
.590-.629"	16	ER32-337374
.629-.669"	17	ER32-337375
.669-.708"	18	ER32-337376
.708-.748"	19	ER32-337377
.728-.767"	19.5	ER32-337355
.748-.787"	20	ER32-337378

ER 40 Metric Collets

Size (in)	Size (mm)	Part Number
.118-.157"	4	ER40-337501
.157-.196"	5	ER40-337502
.196-.236"	6	ER40-337503
.236-.275"	7	ER40-337505
.275-.314"	8	ER40-337506
.314-.354"	9	ER40-337507
.354-.393"	10	ER40-337509
.393-.433"	11	ER40-337510
.433-.472"	12	ER40-337511
.472-.511"	13	ER40-337513
.511-.551"	14	ER40-337514
.551-.590"	15	ER40-337515
.590-.629"	16	ER40-337517
.629-.669"	17	ER40-337518
.669-.708"	18	ER40-337519
.708-.748"	19	ER40-337521
.728-.767"	19.5	ER40-337496
.748-.787"	20	ER40-337522
.787-.826"	21	ER40-337523
.826-.866"	22	ER40-337524
.866-.905"	23	ER40-337525
.905-.944"	24	ER40-337526
.944-.984"	25	ER40-337527
.984-1.023"	26	ER40-337528



GS ER INCH COLLETS

ER 11 Inch Collets

Size (in)	Size (in)	Part Number
.031-.047"	3/64	ER11-337609
.047-.063"	1/16	ER11-337610
.063-.078"	5/64	ER11-337611
.078-.094"	3/32	ER11-337613
.094-.109"	7/64	ER11-337614
.109-.125"	1/8	ER11-337615
.125-.141"	9/64	ER11-337617
.141-.156"	5/32	ER11-337618
.156-.172"	11/64	ER11-337619
.172-.187"	3/16	ER11-337651
.187-.203"	13/64	ER11-337653
.203-.219"	7/32	ER11-337655
.219-.234"	15/64	ER11-337657
.234-.250"	1/4	ER11-337659
.250-.266"	17/64	ER11-337661

ER 20 Inch Collets

Size (in)	Size (in)	Part Number
.047-.063"	1/16	ER20-337621
.078-.094"	3/32	ER20-337623
.109-.125"	1/8	ER20-337663
.125-.156"	5/32	ER20-337665
.156-.187"	3/16	ER20-337667
.187-.219"	7/32	ER20-337669
.219-.250"	1/4	ER20-337671
.250-.281"	9/32	ER20-337673
.281-.312"	5/16	ER20-337675
.312-.344"	11/32	ER20-337676
.344-.375"	3/8	ER20-337677
.375-.406"	13/32	ER20-337678
.406-.437"	7/16	ER20-337679
.437-.469"	15/32	ER20-337681
.469-.500"	1/2	ER20-337682

ER 32 Inch Collets

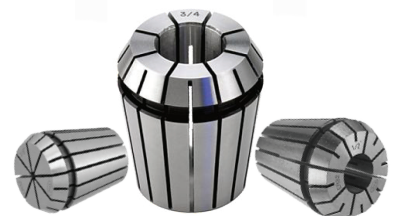
Size (in)	Size (in)	Part Number
.109-.125"	1/8	ER32-337703
.125-.156"	5/32	ER32-337704
.156-.187"	3/16	ER32-337706
.187-.219"	7/32	ER32-337707
.219-.250"	1/4	ER32-337708
.250-.281"	9/32	ER32-337709
.281-.312"	5/16	ER32-337711
.312-.344"	11/32	ER32-337712
.344-.375"	3/8	ER32-337713
.375-.406"	13/32	ER32-337714
.406-.437"	7/16	ER32-337716
.437-.469"	15/32	ER32-337717
.469-.500"	1/2	ER32-337718
.500-.531"	17/32	ER32-337719
.563-.594"	9/16	ER32-337721
.562-.594"	19/32	ER32-337722
.594-.625"	5/8	ER32-337723
.656-.688"	21/32	ER32-337724
.688-.719"	11/16	ER32-337725
.687-.719"	23/32	ER32-337726
.719-.750"	3/4	ER32-337727

ER 16 Inch Collets

Size (in)	Size (in)	Part Number
.047-.063"	1/16	ER16-337531
.078-.094"	3/32	ER16-337532
.109-.125"	1/8	ER16-337533
.125-.156"	5/32	ER16-337534
.156-.187"	3/16	ER16-337535
.187-.219"	7/32	ER16-337536
.219-.250"	1/4	ER16-337537
.250-.281"	9/32	ER16-337538
.281-.312"	5/16	ER16-337540
.312-.344"	11/32	ER16-337541
.344-.375"	3/8	ER16-337542
.375-.406"	13/32	ER16-337543

ER 25 Inch Collets

Size (in)	Size (in)	Part Number
.109-.125"	1/8	ER25-337683
.125-.156"	5/32	ER25-337684
.156-.187"	3/16	ER25-337685
.187-.218"	7/32	ER25-337686
.219-.250"	1/4	ER25-337687
.250-.281"	9/32	ER25-337688
.281-.312"	5/16	ER25-337689
.312-.344"	11/32	ER25-337691
.344-.375"	3/8	ER25-337692
.375-.406"	13/32	ER25-337693
.406-.437"	7/16	ER25-337694
.437-.469"	15/32	ER25-337696
.469-.500"	1/2	ER25-337697
.500-.531"	17/32	ER25-337698
.531-.563"	9/16	ER25-337699
.563-.594"	19/32	ER25-337701
.594-.625"	5/8	ER25-337702



ER 20 Tap Collets

ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Part Number
0-6	M1.6-M3.5	.141"	.110"	GS-337869
8	M4	.168"	.131"	GS-337870
10	M4.5, M5	.194"	.152"	GS-337871
12	-	.220"	.165"	GS-337872
1/4	M6, M6.3	.255"	.191"	GS-337873
5/16	M7, M8	.318"	.238"	GS-337874
3/8	M10	.381"	.286"	GS-337875
7/16	-	.323"	.242"	GS-337876
1/2	M12, M12.5	.367"	.275"	GS-337877

ER 25 Tap Collets

ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Part Number
0-6	M1.6-M3.5	.141"	.110"	GS-337895
8	M4	.168"	.131"	GS-337896
10	M4.5, M5	.194"	.152"	GS-337897
12	-	.220"	.165"	GS-337898
1/4	M6, M6.3	.255"	.191"	GS-337899
5/16	M7, M8	.318"	.238"	GS-337900
3/8	M10	.381"	.286"	GS-337901
7/16	-	.323"	.242"	GS-337902
1/2	M12, M12.5	.367"	.275"	GS-337903
9/16	M14	.429"	.322"	GS-337904
5/8	M16	.480"	.360"	GS-337905
NPT 1/16, 1/8-SS	-	.3125"	.234"	GS-337909
NPT 1/8-LS	-	.4375"	.328"	GS-337910

ER 32 Tap Collets

ANSI Tap Inch	ANSI Tap Metric	Shank Dia.	Size of Square	Part Number
0-6	M1.6-M3.5	.141"	.110"	GS-338221
8	M4	.168"	.131"	GS-338222
10	M4.5, M5	.194"	.152"	GS-338223
1/4	M6, M6.3	.255"	.191"	GS-338225
5/16	M7, M8	.318"	.238"	GS-338226
3/8	M10	.381"	.286"	GS-338227
7/16	-	.323"	.242"	GS-338228
1/2	M12, M12.5	.367"	.275"	GS-338229
9/16	M14	.429"	.322"	GS-338230
5/8	M16	.480"	.360"	GS-338231
3/4	-	.590"	.442"	GS-338233
NPT 1/16, 1/8-SS	-	.3125"	.234"	GS-338235
NPT 1/8-LS	-	.4375"	.328"	GS-338236
NPT 1/4	-	.5625"	.421"	GS-338237



ER SEALED COLLETS

ER Steel SEALED Collet

ER 16 Metric Sealed Collets

Designation	Part Number
ER16-3mm-SS	ER16 3mm Steel Sealed Collet
ER16-4mm-SS	ER16 4mm Steel Sealed Collet
ER16-5mm-SS	ER16 5mm Steel Sealed Collet
ER16-6mm-SS	ER16 6mm Steel Sealed Collet
ER16-7mm-SS	ER16 7mm Steel Sealed Collet
ER16-8mm-SS	ER16 8mm Steel Sealed Collet
ER16-9mm-SS	ER16 9mm Steel Sealed Collet
ER16-10mm-SS	ER16 10mm Steel Sealed Collet

ER 16 Inch Sealed Collets

Designation	Part Number
ER16-3/32-SS	ER16 3/32 Steel Sealed Collet
ER16-1/8-SS	ER16 1/8 Steel Sealed Collet
ER16-5/32-SS	ER16 5/32 Steel Sealed Collet
ER16-3/16-SS	ER16 3/16 Steel Sealed Collet
ER16-7/32-SS	ER16 7/32 Steel Sealed Collet
ER16-1/4-SS	ER16 1/4 Steel Sealed Collet
ER16-9/32-SS	ER16 9/32 Steel Sealed Collet
ER16-5/16-SS	ER16 5/16 Steel Sealed Collet
ER16-11/32-SS	ER16 11/32 Steel Sealed Collet
ER16-3/8-SS	ER16 3/8 Steel Sealed Collet
ER16-13/32-SS	ER16 13/32 Steel Sealed Collet

ER 20 Metric Sealed Collets

Designation	Part Number
ER20-3mm-SS	ER20 3mm Steel Sealed Collet
ER20-4mm-SS	ER20 4mm Steel Sealed Collet
ER20-5mm-SS	ER20 5mm Steel Sealed Collet
ER20-6mm-SS	ER20 6mm Steel Sealed Collet
ER20-7mm-SS	ER20 7mm Steel Sealed Collet
ER20-8mm-SS	ER20 8mm Steel Sealed Collet
ER20-9mm-SS	ER20 9mm Steel Sealed Collet
ER20-10mm-SS	ER20 10mm Steel Sealed Collet
ER20-11mm-SS	ER20 11mm Steel Sealed Collet
ER20-12mm-SS	ER20 12mm Steel Sealed Collet
ER20-13mm-SS	ER20 13mm Steel Sealed Collet
ER20-14mm-SS	ER20 14mm Steel Sealed Collet

ER 20 Inch Sealed Collets

Designation	Part Number
ER20-1/8-SS	ER20 1/8 Steel Sealed Collet
ER20-5/32-SS	ER20 5/32 Steel Sealed Collet
ER20-3/16-SS	ER20 3/16 Steel Sealed Collet
ER20-7/32-SS	ER20 7/32 Steel Sealed Collet
ER20-1/4-SS	ER20 1/4 Steel Sealed Collet
ER20-9/32-SS	ER20 9/32 Steel Sealed Collet
ER20-5/16-SS	ER20 5/16 Steel Sealed Collet
ER20-11/32-SS	ER20 11/32 Steel Sealed Collet
ER20-3/8-SS	ER20 3/8 Steel Sealed Collet
ER20-13/32-SS	ER20 13/32 Steel Sealed Collet
ER20-7/16-SS	ER20 7/16 Steel Sealed Collet
ER20-15/32-SS	ER20 15/32 Steel Sealed Collet
ER20-1/2-SS	ER20 1/2 Steel Sealed Collet



ER Steel SEALED Collet

ER 25 Metric Sealed Collets

Designation	Part Number
ER25-03mm-SS	ER25 3mm Steel Sealed Collet
ER25-04mm-SS	ER25 4mm Steel Sealed Collet
ER25-05mm-SS	ER25 5mm Steel Sealed Collet
ER25-06mm-SS	ER25 6mm Steel Sealed Collet
ER25-07mm-SS	ER25 7mm Steel Sealed Collet
ER25-08mm-SS	ER25 8mm Steel Sealed Collet
ER25-09mm-SS	ER25 9mm Steel Sealed Collet
ER25-10mm-SS	ER25 10mm Steel Sealed Collet
ER25-11mm-SS	ER25 11mm Steel Sealed Collet
ER25-12mm-SS	ER25 12mm Steel Sealed Collet
ER25-13mm-SS	ER25 13mm Steel Sealed Collet
ER25-14mm-SS	ER25 14mm Steel Sealed Collet
ER25-15mm-SS	ER25 15mm Steel Sealed Collet
ER25-16mm-SS	ER25 16mm Steel Sealed Collet

ER 25 Inch Sealed Collets

Designation	Part Number
ER25-3/16-SS	ER25 3/16 Steel Sealed Collet
ER25-7/32-SS	ER25 7/32 Steel Sealed Collet
ER25-1/4-SS	ER25 1/4 Steel Sealed Collet
ER25-9/32-SS	ER25 9/32 Steel Sealed Collet
ER25-5/16-SS	ER25 5/16 Steel Sealed Collet
ER25-11/32-SS	ER25 11/32 Steel Sealed Collet
ER25-3/8-SS	ER25 3/8 Steel Sealed Collet
ER25-13/32-SS	ER25 13/32 Steel Sealed Collet
ER25-7/16-SS	ER25 7/16 Steel Sealed Collet
ER25-15/32-SS	ER25 15/32 Steel Sealed Collet
ER25-1/2-SS	ER25 1/2 Steel Sealed Collet
ER25-17/32-SS	ER25 17/32 Steel Sealed Collet
ER25-9/16-SS	ER25 9/16 Steel Sealed Collet
ER25-19/32-SS	ER25 19/32 Steel Sealed Collet
ER25-5/8-SS	ER25 5/8 Steel Sealed Collet

ER 32 Metric Sealed Collets

Designation	Part Number
ER32-03mm-SS	ER32 3mm Steel Sealed Collet
ER32-04mm-SS	ER32 4mm Steel Sealed Collet
ER32-05mm-SS	ER32 5mm Steel Sealed Collet
ER32-06mm-SS	ER32 6mm Steel Sealed Collet
ER32-07mm-SS	ER32 7mm Steel Sealed Collet
ER32-08mm-SS	ER32 8mm Steel Sealed Collet
ER32-09mm-SS	ER32 9mm Steel Sealed Collet
ER32-10mm-SS	ER32 10mm Steel Sealed Collet
ER32-11mm-SS	ER32 11mm Steel Sealed Collet
ER32-12mm-SS	ER32 12mm Steel Sealed Collet
ER32-13mm-SS	ER32 13mm Steel Sealed Collet
ER32-14mm-SS	ER32 14mm Steel Sealed Collet
ER32-15mm-SS	ER32 15mm Steel Sealed Collet
ER32-16mm-SS	ER32 16mm Steel Sealed Collet
ER32-17mm-SS	ER32 17mm Steel Sealed Collet
ER32-18mm-SS	ER32 18mm Steel Sealed Collet
ER32-19mm-SS	ER32 19mm Steel Sealed Collet
ER32-20mm-SS	ER32 20mm Steel Sealed Collet

ER 32 Inch Sealed Collets

Designation	Part Number
ER32-3/16-SS	ER32 3/16 Steel Sealed Collet
ER32-7/32-SS	ER32 7/32 Steel Sealed Collet
ER32-15/64-SS	ER32 15/64 Steel Sealed Collet
ER32-1/4-SS	ER32 1/4 Steel Sealed Collet
ER32-17/64-SS	ER32 17/64 Steel Sealed Collet
ER32-9/32-SS	ER32 9/32 Steel Sealed Collet
ER32-5/16-SS	ER32 5/16 Steel Sealed Collet
ER32-11/32-SS	ER32 11/32 Steel Sealed Collet
ER32-3/8-SS	ER32 3/8 Steel Sealed Collet
ER32-13/32-SS	ER32 13/32 Steel Sealed Collet
ER32-27/64-SS	ER32 27/64 Steel Sealed Collet
ER32-7/16-SS	ER32 7/16 Steel Sealed Collet
ER32-15/32-SS	ER32 15/32 Steel Sealed Collet
ER32-1/2-SS	ER32 1/2 Steel Sealed Collet
ER32-17/32-SS	ER32 17/32 Steel Sealed Collet
ER32-35/64-SS	ER32 35/64 Steel Sealed Collet
ER32-9/16-SS	ER32 9/16 Steel Sealed Collet
ER32-19/32-SS	ER32 19/32 Steel Sealed Collet
ER32-5/8-SS	ER32 5/8 Steel Sealed Collet
ER32-21/32-SS	ER32 21/32 Steel Sealed Collet
ER32-11/16-SS	ER32 11/16 Steel Sealed Collet
ER32-23/32-SS	ER32 23/32 Steel Sealed Collet
ER32-3/4-SS	ER32 3/4 Steel Sealed Collet
ER32-25/32-SS	ER32 25/32 Steel Sealed Collet



ER SEALED COLLETS

ISCAR ER Rubber SEALED Collet

- ER COOLIT, sealed collets with cooling jets for up to 1450 PSI.
- The Hard Touch coating increases wear resistance, improves corrosion protection, prolongs the surface finish quality and maintains longer run out accuracy.



ER 16 Sealed Collets

Designation	d min	d max	Part Number
ER16 SEAL .120-.159	0.118	0.157	4501047
ER16 SEAL .159-.199	0.157	0.197	4501048
ER16 SEAL .199-.238	0.197	0.236	4501049
ER16 SEAL .238-.278	0.236	0.276	4501050
ER16 SEAL .278-.317	0.276	0.315	4501051
ER16 SEAL .317-.356	0.315	0.354	4501052
ER16 SEAL .356-.396	0.354	0.394	4501053

ER 20 Sealed Collets

Designation	d min	d max	Part Number
ER20 SEAL .120-.159	0.118	0.157	4501054
ER20 SEAL .159-.199	0.157	0.197	4501055
ER20 SEAL .199-.238	0.197	0.236	4501056
ER20 SEAL .238-.278	0.236	0.276	4501057
ER20 SEAL .278-.317	0.276	0.315	4501058
ER20 SEAL .317-.356	0.315	0.354	4501059
ER20 SEAL .356-.396	0.354	0.394	4501060
ER20 SEAL .396-.435	0.394	0.433	4501061
ER20 SEAL .435-.474	0.433	0.472	4501062
ER20 SEAL .474-.514	0.472	0.512	4501063

ER 25 Sealed Collets

Designation	d min	d max	Part Number
ER25 SEAL .120-.159	0.118	0.157	4501018
ER25 SEAL .159-.199	0.157	0.197	4501019
ER25 SEAL .199-.238	0.197	0.236	4501020
ER25 SEAL .238-.278	0.236	0.276	4501067
ER25 SEAL .278-.317	0.276	0.315	4500280
ER25 SEAL .317-.356	0.315	0.354	4500281
ER25 SEAL .356-.396	0.354	0.394	4501070
ER25 SEAL .396-.435	0.394	0.433	4501071
ER25 SEAL .435-.474	0.433	0.472	4501072
ER25 SEAL .474-.514	0.472	0.512	4501073
ER25 SEAL .514-.553	0.512	0.551	4501074
ER25 SEAL .553-.593	0.551	0.591	4501029
ER25 SEAL .593-.632	0.591	0.630	4501076

ER 32 Sealed Collets

Designation	d min	d max	Part Number
ER32 SEAL .120-.159	0.118	0.157	4501031
ER32 SEAL .159-.199	0.157	0.197	4501032
ER32 SEAL .199-.238	0.197	0.236	4501033
ER32 SEAL .238-.278	0.236	0.276	4501034
ER32 SEAL .278-.317	0.276	0.315	4501035
ER32 SEAL .317-.356	0.315	0.354	4501036
ER32 SEAL .356-.396	0.354	0.394	4501037
ER32 SEAL .396-.435	0.394	0.433	4501038
ER32 SEAL .435-.474	0.433	0.472	4501039
ER32 SEAL .474-.514	0.472	0.512	4501040
ER32 SEAL .514-.553	0.512	0.551	4501041
ER32 SEAL .553-.593	0.551	0.591	4501042
ER32 SEAL .593-.632	0.591	0.630	4501043
ER32 SEAL .632-.671	0.630	0.669	4501044
ER32 SEAL .671-.711	0.669	0.709	4501045
ER32 SEAL .711-.750	0.709	0.748	4500282
ER32 SEAL .750-.789	0.748	0.787	4501046

ER 40 Sealed Collets

Designation	d min	d max	Part Number
ER40 SEAL .120-.159	0.118	0.157	4500366
ER40 SEAL .159-.199	0.157	0.197	4500367
ER40 SEAL .199-.238	0.197	0.236	4500368
ER40 SEAL .238-.278	0.236	0.276	4500369
ER40 SEAL .278-.317	0.276	0.315	4500370
ER40 SEAL .317-.356	0.315	0.354	4500371
ER40 SEAL .356-.396	0.354	0.394	4500372
ER40 SEAL .396-.435	0.394	0.433	4500373
ER40 SEAL .435-.474	0.433	0.472	4500374
ER40 SEAL .474-.514	0.472	0.512	4500375
ER40 SEAL .514-.553	0.512	0.551	4500376
ER40 SEAL .553-.593	0.551	0.591	4500377
ER40 SEAL .593-.632	0.591	0.630	4500378
ER40 SEAL .632-.671	0.630	0.669	4500379
ER40 SEAL .671-.711	0.669	0.709	4500380
ER40 SEAL .711-.750	0.709	0.748	4500381
ER40 SEAL .750-.789	0.748	0.787	4501068
ER40 SEAL .789-.829	0.787	0.827	4500383
ER40 SEAL .829-.868	0.827	0.866	4500384
ER40 SEAL .868-.907	0.866	0.906	4500385
ER40 SEAL .907-.947	0.906	0.945	4500386
ER40 SEAL .947-.986	0.945	0.984	4500387



GS ER COLLET SETS & REPLACEMENTS

ER Collet Sets

ER11 / 13pcs ER11-337379		ER16 / 10pcs ER16-337380		ER20 / 12pcs ER20-337382		ER25 / 15pcs ER25-337383		ER32 / 18pcs ER32-337384		ER40 / 23pcs ER40-337386	
Code #	Size	Code #	Size	Code #	Size	Code #	Size	Code #	Size	Code #	Size
337-650	.019-.039	337-302	.019-.039	337-473	.039-.078	337-330	.039-.078	337-361	.078-.118	337-501	.118-.157
337-652	.039-.058	337-304	.039-.078	337-474	.078-.118	337-332	.078-.118	337-362	.118-.157	337-502	.157-.196
337-654	.059-.078	337-306	.078-.118	337-475	.118-.157	337-334	.118-.157	337-363	.157-.196	337-503	.196-.236
337-656	.078-.098	337-308	.118-.157	337-476	.157-.196	337-336	.157-.196	337-364	.196-.236	337-505	.236-.275
337-658	.098-.118	337-310	.157-.196	337-477	.196-.236	337-338	.196-.236	337-365	.236-.275	337-506	.275-.314
337-660	.118-.137	337-312	.196-.236	337-478	.236-.275	337-340	.236-.275	337-366	.275-.314	337-507	.314-.354
337-662	.137-.157	337-314	.236-.275	337-479	.275-.314	337-342	.275-.314	337-367	.314-.354	337-509	.354-.393
337-664	.157-.177	337-316	.275-.314	337-480	.314-.354	337-344	.314-.354	337-368	.354-.393	337-510	.393-.433
337-666	.177-.196	337-314	.236-.275	337-481	.354-.393	337-346	.354-.393	337-369	.393-.433	337-511	.433-.472
337-668	.196-.216	337-316	.275-.314	337-482	.393-.433	337-348	.393-.433	337-370	.433-.472	337-513	.472-.511
337-670	.216-.236			337-483	.433-.472	337-350	.433-.472	337-371	.472-.511	337-514	.511-.551
337-672	.236-.255			337-484	.472-.511	337-352	.472-.511	337-372	.511-.551	337-515	.551-.590
337-674	.255-.275					337-354	.511-.551	337-373	.551-.590	337-517	.590-.629
						337-356	.551-.590	337-374	.590-.629	337-518	.629-.669
						337-358	.590-.629	337-375	.629-.669	337-519	.669-.708
								337-376	.669-.708	337-521	.708-.748
								337-377	.708-.748	337-522	.748-.787
								337-378	.748-.787	337-523	.787-.826
										337-524	.826-.866
										337-525	.866-.905
										337-526	.905-.944
										337-527	.944-.984
										337-528	.984-1.023



Replacement ER Chuck Nut

Description	Part Number
ER11 Nut (Hex)	GS-534790
ER16 Nut (Hex)	GS-534792
ER20 Nut (Hex)	GS-534794
ER25 Nut (Notched)	GS-534796
ER32 Nut (Notched)	GS-534798
ER40 Nut (Notched)	GS-534800

ER Collet Chuck Extensions

Collet Series	Collet Range	Shank Dia. (D)	OAL (L)	L1	L2	D1	Part Number
ER11	.019-.275"	1/2	.075"	6.11"	.091"	5.00"	GS-534368
ER11	.019-.275"	3/4	.075"	5.65"	.091"	5.00"	GS-534372
ER16	.019-.406"	3/4	1.26"	6.48"	1.28"	5.00"	GS-534376
ER16	.019-.406"	1	1.26"	5.89"	1.28"	5.00"	GS-534378
ER20	.039-.511"	3/4	1.38"	6.67"	1.48"	5.00"	GS-534380
ER20	.039-.511"	1	1.38"	6.40"	1.48"	5.00"	GS-534382
ER20	.039-.511"	1-1/4	1.38"	6.40"	1.48"	5.00"	GS-534384
ER25	.039-.629"	3/4	1.65"	6.85"	1.65"	5.00"	GS-534386
ER25	.039-.629"	1	1.65"	6.85"	1.65"	5.00"	GS-534388
ER25	.039-.629"	1-1/4	1.65"	6.00"	1.65"	5.00"	GS-534390
ER32	.078-.787"	1	1.97"	7.09"	1.85"	5.00"	GS-534392
ER32	.078-.787"	1-1/4	1.97"	7.09"	1.85"	5.00"	GS-534394

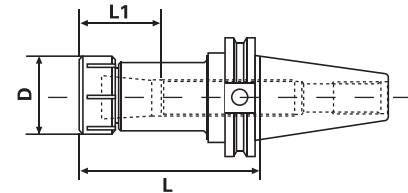
ER Chuck Nut Wrenches

Description	Part Number
Fits ER11 Chucks (Hex)	GS-337388
Fits ER16 Chucks (Hex)	GS-337395
Fits ER20 Chucks (Hex)	GS-337397
Fits ER25 Chucks (Notched)	GS-337396
Fits ER32 Chucks (Notched)	GS-337398
Fits ER40 Chucks (Notched)	GS-337399

GS TG CHUCKS, COLLETS & REPLACEMENTS

CAT / BT Taper TG Collet Chucks

- DIN Coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications
- Factory balanced to save spindle life, tool life and increased productivity.
- Threaded through holes for a back-up screw or coolant through when removed.



CAT 40 Taper

Taper	Collet Series	Collet Range	L	L1	D	Part Number
CT40	100TG	3/64-1"	3.00"	2.13"	2.50"	GS-531288

CAT 50 Taper

Taper	Collet Series	Collet Range	L	L1	D	Part Number
CT50	100TG	3/64-1"	3.50"	2.13"	2.50"	GS-531300

TG 100 Standard Collets

Size (in)	Part Number
3/64	TG100-3/64
1/16	TG100-1/16
5/64	TG100-5/64
3/32	TG100-3/32
7/64	TG100-7/64
1/8	TG100-1/8
9/64	TG100-9/64
5/32	TG100-5/32
11/64	TG100-11/64
3/16	TG100-3/16
13/64	TG100-13/64
7/32	TG100-7/32
15/64	TG100-15/64
1/4	TG100-1/4
17/64	TG100-17/64
9/32	TG100-9/32

Size (in)	Part Number
19/64	TG100-19/64
5/16	TG100-5/16
21/64	TG100-21/64
11/32	TG100-11/32
23/64	TG100-23/64
3/8	TG100-3/8
25/64	TG100-25/64
13/32	TG100-13/32
27/64	TG100-27/64
7/16	TG100-7/16
29/64	TG100-29/64
15/32	TG100-15/32
31/64	TG100-31/64
1/2	TG100-1/2
33/64	TG100-33/64
17/32	TG100-17/32

Size (in)	Part Number
35/64	TG100-35/64
9/16	TG100-9/16
37/64	TG100-37/64
19/32	TG100-19/32
39/64	TG100-39/64
5/8	TG100-5/8
41/64	TG100-41/64
21/32	TG100-21/32
43/64	TG100-43/64
11/16	TG100-11/16
45/64	TG100-45/64
23/32	TG100-23/32
47/64	TG100-47/64
3/4	TG100-3/4
49/64	TG100-49/64
25/32	TG100-25/32

Size (in)	Part Number
51/64	TG100-51/64
13/16	TG100-13/16
53/64	TG100-53/64
27/32	TG100-27/32
55/64	TG100-55/64
7/8	TG100-7/8
57/64	TG100-57/64
29/32	TG100-29/32
59/64	TG100-59/64
15/16	TG100-15/16
61/64	TG100-61/64
31/32	TG100-31/32
63/64	TG100-63/64
1	TG100-1

TG Chuck Wrenches

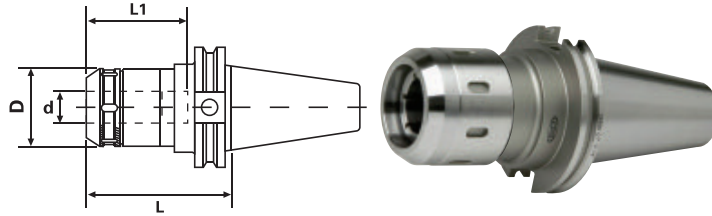
Description	Part Number
Fits 100TG Chuck	GS-334402N



Replacement TG Chuck Nut

Description	Part Number
100TG Nut, Solid	GS-534832

GS MILLING CHUCKS, COLLETS & WRENCHES



CAT Taper Milling Chucks

- DIN Coolant thru the flange
- Rough milling or 'hogging' operations
- Improved tool life over regular end mill holders
- 360° gripping contact

Taper	Collet Series	Collet Range	d	L	L1	D	Part Number
CT40	GS 3/4"	.125-.750"	.750"	4.14"	3.15"	2.05"	GS-531250
CT40	GS 1"	.125-1.00"	1.00"	3.54"	3.15"	2.41"	GS-531255
CT40	GS 1"	.125-1.00"	1.00"	4.14"	3.15"	2.41"	GS-531254
CT40	GS 1-1/4"	.187-1.25"	1.25"	4.14"	3.34"	2.88"	GS-531256

GS 3/4" Collets

Size (inch)	Part Number
1/8"	GS-534650
3/16"	GS-331469N
1/4"	GS-331470N
5/16"	GS-331472N
3/8"	GS-331474N
7/16"	GS-534660
1/2"	GS-331476N
9/16"	GS-331477N
5/8"	GS-331478N

GS 1" Collets

Size (inch)	Part Number
1/8"	GS-534682
3/16"	GS-534684
1/4"	GS-534686
5/16"	GS-534688
3/8"	GS-534690
7/16"	GS-534692
1/2"	GS-534694
5/8"	GS-534696
3/4"	GS-534698
7/8"	GS-534700

GS 1-1/4" Collets

Size (inch)	Part Number
3/16"	GS-331481N
1/4"	GS-331482N
5/16"	GS-331484N
3/8"	GS-331486N
7/16"	GS-534726
1/2"	GS-331488N
9/16"	GS-331489N
5/8"	GS-331490N
3/4"	GS-331492N
7/8"	GS-331494N
1"	GS-331496N

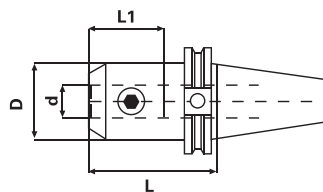
Milling Chuck Wrenches

Chuck Cap	Part Number
3/4"	GS-534208
1"	GS-534210
1-1/4"	GS-534212

GS END MILL HOLDERS

CAT 40 End Mill Holders

- DIN Coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications

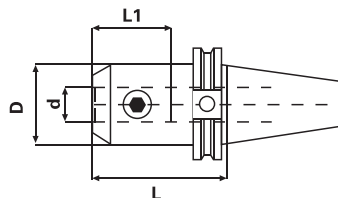


Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Part Number
CT40	1/8"	2.50"	0.63"	0.75"	8-32	GS-531070
CT40	3/16"	1.38"	0.63"	0.75"	10-32	GS-531072
CT40	3/16"	2.50"	0.86"	0.75"	10-32	GS-531073
CT40	1/4"	2.50"	1.10"	0.79"	1/4-28	GS-531002
CT40	5/16"	2.50"	1.26"	0.87"	5/16-24	GS-531008
CT40	5/16"	4.00"	1.26"	0.87"	5/16-24	GS-531010
CT40	3/8"	1.38"	1.34"	1.00"	3/8-24	GS-531012
CT40	3/8"	2.50"	1.26"	1.00"	3/8-24	GS-531014
CT40	3/8"	4.00"	1.26"	1.00"	3/8-24	GS-531016
CT40	3/8"	5.00"	1.26"	1.00"	3/8-24	GS-531018
CT40	7/16"	2.50"	1.50"	1.38"	7/16-20	GS-531020
CT40	1/2"	1.75"	1.50"	1.38"	7/16-20	GS-531024
CT40	1/2"	2.50"	1.50"	1.38"	7/16-20	GS-531026

Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Part Number
CT40	1/2"	4.00"	1.50"	1.38"	7/16-20	GS-531028
CT40	5/8"	1.75"	1.61"	1.65"	9/16-18	GS-531032
CT40	5/8"	3.00"	1.61"	1.65"	9/16-18	GS-531034
CT40	3/4"	1.75"	1.77"	1.89"	5/8-18	GS-531040
CT40	3/4"	3.00"	1.77"	1.75"	5/8-18	GS-531042
CT40	3/4"	4.00"	1.77"	1.75"	5/8-18	GS-531044
CT40	7/8"	3.50"	2.08"	2.00"	5/8-18	GS-531050
CT40	1"	2.00"	2.36"	2.25"	3/4-16	GS-531054
CT40	1"	4.00"	2.36"	2.36"	3/4-16	GS-531056
CT40	1"	6.00"	2.36"	2.36"	3/4-16	GS-531058
CT40	1-1/4"	2.00"	2.28"	2.25"	3/4-16	GS-531060
CT40	1-1/4"	4.00"	2.55"	2.48"	3/4-16	GS-531062
CT40	1-1/2"	4.50"	2.55"	2.99"	3/4-16	GS-531066

CAT 50 End Mill Holders

- DIN Coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Part Number
CT50	1/4"	2.50"	1.10"	0.79"	1/4-28	GS-531084
CT50	5/16"	2.50"	1.26"	0.87"	5/16-24	GS-531092
CT50	3/8"	2.50"	1.26"	1.00"	3/8-24	GS-531100
CT50	7/16"	2.50"	1.50"	1.38"	7/16-20	GS-531108
CT50	1/2"	2.63"	1.50"	1.38"	7/16-20	GS-531118
CT50	5/8"	3.00"	1.61"	1.65"	9/16-18	GS-531128
CT50	5/8"	6.00"	1.61"	1.65"	9/16-18	GS-531132
CT50	3/4"	3.00"	1.77"	1.89"	5/8-18	GS-531138
CT50	3/4"	6.00"	1.77"	1.89"	5/8-18	GS-531142
CT50	7/8"	3.75"	2.08"	2.00"	5/8-18	GS-531148
CT50	1"	2.00"	2.36"	2.36"	3/4-16	GS-531152
CT50	1"	4.00"	2.36"	2.36"	3/4-16	GS-531154
CT50	1-1/4"	2.00"	2.55"	2.75"	3/4-16	GS-531160
CT50	1-1/4"	4.00"	2.55"	2.48"	3/4-16	GS-531162
CT50	1-1/2"	2.25"	2.83"	2.75"	3/4-16	GS-531168
CT50	1-1/2"	4.50"	2.83"	2.99"	3/4-16	GS-531170

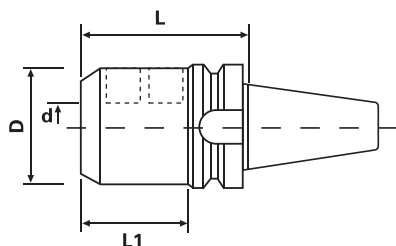
GS END MILL HOLDERS & REPLACEMENTS



BT 30 End Mill Holders



- DIN Coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications

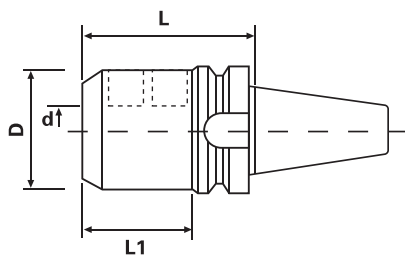


Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Part Number
BT30	1/4"	2.36"	1.10"	0.79"	1/4-28	GS-532000
BT30	5/16"	2.36"	1.26"	0.87"	5/16-24	GS-532002
BT30	3/8"	2.36"	1.26"	1.00"	3/8-24	GS-532004
BT30	7/16"	2.36"	1.50"	1.38"	7/16-20	GS-532006
BT30	1/2"	2.36"	1.50"	1.38"	7/16-20	GS-532008
BT30	5/8"	2.50"	1.61"	1.65"	9/16-18	GS-532010
BT30	3/4"	3.00"	1.77"	1.88"	5/8-18	GS-532012
BT30	7/8"	3.54"	2.09"	2.00"	5/8-18	GS-532014
BT30	1"	3.54"	2.36"	2.36"	3/4-16	GS-532016

BT 40 End Mill Holders



- DIN Coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications



Taper	Hole Dia. (d)	Gauge Length (L)	L1	D	Set Screw	Part Number
BT40	3/16"	1.38"	0.63"	0.75"	10-32	GS-531025
BT40	1/4"	2.50"	1.10"	0.79"	1/4-28	GS-532020
BT40	1/4"	4.00"	1.10"	0.79"	1/4-28	GS-532022
BT40	5/16"	2.50"	1.26"	0.87"	5/16-24	GS-532026
BT40	3/8"	1.38"	1.38"	1.00"	3/8-24	GS-532030
BT40	3/8"	2.50"	1.26"	1.00"	3/8-24	GS-532032
BT40	7/16"	2.50"	1.53"	1.38"	7/16-20	GS-532036
BT40	1/2"	1.75"	1.57"	1.38"	7/16-20	GS-532038
BT40	1/2"	2.50"	1.50"	1.38"	7/16-20	GS-532040
BT40	5/8"	1.75"	1.61"	1.65"	9/16-18	GS-532044
BT40	5/8"	2.50"	1.61"	1.65"	9/16-18	GS-532046
BT40	3/4"	1.75"	1.77"	1.89"	5/8-18	GS-532050
BT40	3/4"	2.50"	1.77"	1.89"	5/8-18	GS-532052
BT40	7/8"	3.38"	2.08"	2.00"	5/8-18	GS-532056
BT40	1"	2.00"	2.28"	2.25"	3/4-16	GS-532060
BT40	1"	3.56"	2.36"	2.36"	3/4-16	GS-532062
BT40	1-1/4"	2.00"	2.16"	2.25"	3/4-16	GS-532066
BT40	1-1/4"	3.56"	2.56"	2.48"	3/4-16	GS-532068
BT40	1-1/2"	4.50"	2.83"	2.99"	3/4-16	GS-532072

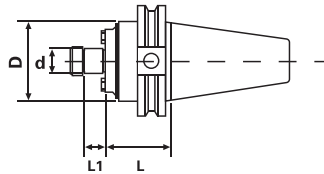
Replacement Screw Set

Size	Size of Holder	Part Number
3/8-24 x 5/16	3/8", 7/16"	GS-534114
7/16-20 x 3/8	1/2"	GS-534116
9/16-18 x 1/2	5/8"	GS-534118
5/8-18 x 1/2	3/4", 7/8"	GS-534120
3/4-16 x 11/16	1", 1-1/4", 1-1/2"	GS-534122

GS SHELL MILL HOLDERS

CAT Shell Mill Holders

- DIN Coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications



CAT 40 Shell Mill Holders

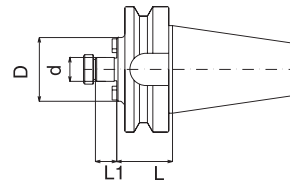
Taper	d	L	D	L1	Key Size	Arbor Thread	Part Number
CT40	1/2"	1.75"	1.38"	0.57"	1/4"	1/4"-28	GS-531190
CT40	3/4"	1.75"	1.75"	0.67"	5/16"	3/8"-24	GS-531192
CT40	3/4"	4.00"	1.75"	0.67"	5/16"	3/8"-24	GS-531194
CT40	1"	1.75"	2.38"	0.67"	3/8"	1/2"-20	GS-531196
CT40	1"	4.00"	2.38"	0.67"	3/8"	1/2"-20	GS-531198
CT40	1-1/4"	2.00"	2.88"	0.67"	1/2"	5/8"-18	GS-531200
CT40	1-1/2"	2.00"	3.80"	0.93"	5/8"	3/4"-16	GS-531204

CAT 50 Shell Mill Holders

Taper	d	L	D	L1	Key Size	Arbor Thread	Part Number
CT50	3/4"	1.75"	2.00"	0.67"	5/16"	3/8"-24	GS-531208
CT50	1"	1.75"	2.75"	0.69"	3/8"	1/2"-20	GS-531216
CT50	1"	4.00"	2.75"	0.69"	3/8"	1/2"-20	GS-531218
CT50	1-1/4"	1.75"	2.88"	0.69"	1/2"	5/8"-18	GS-531224
CT50	1-1/2"	2.00"	3.80"	0.93"	5/8"	3/4"-16	GS-531232

BT Taper Shell Mill Holders

- DIN Coolant thru the flange
- Shank traverse ground to obtain optimum accuracy
- Meets or exceeds ANSI specifications



BT 30 Shell Mill Holders

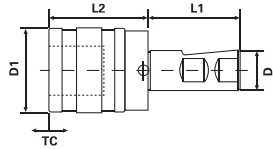
Taper	d	L	D	L1	Key Size	Arbor Thread	Part Number
BT30	3/4"	1.19"	2.00"	0.67"	5/16"	3/8"-24	GS-532082
BT30	1"	1.19"	2.38"	0.67"	3/8"	1/2"-20	GS-532084

BT 40 Shell Mill Holders

Taper	d	L	D	L1	Key Size	Arbor Thread	Part Number
BT40	3/4"	1.75"	1.75"	0.67"	5/16"	3/8"-24	GS-532088
BT40	1"	1.75"	2.38"	0.67"	3/8"	1/2"-20	GS-532090
BT40	1-1/4"	2.00"	2.88"	0.67"	1/2"	5/8"-18	GS-532092
BT40	1-1/2"	2.00"	3.80"	0.92"	5/8"	3/4"-16	GS-532094



Weldon Shank Tension / Compression Tap Holders



- Precision ground surfaces
- Compact Length
- Adjustable entry float
- Provide additional mating flexibility and axial float

Tap Range Hand	Tap Range Pipe	System	Shank Dia. (D)	D1	L1	L2	T	C	Part Number
#0-9/16"	1/8"	#1	1"	1.43"	2.28"	1.53"	0.29"	0.29"	GS-534522
#0-9/16"	1/8"	#1	1-1/4"	1.25"	2.28"	4.13"	0.79"	0.39"	GS-534528

Positive Drive Tap Collets

Tap Size	Tap System	D	Tap Shank	Square	Part Number
#0-#6	1	.748	0.141	0.110	GS-337052
#8	1	.748	0.168	0.131	GS-337054
#10	1	.748	0.194	0.152	GS-337056
#12	1	.748	0.220	0.165	GS-337058
1/4	1	.748	0.255	0.191	GS-337060
5/16	1	.748	0.318	0.238	GS-337062
3/8	1	.748	0.381	0.286	GS-337064
7/16	1	.748	0.323	0.242	GS-337066
1/2	1	.748	0.367	0.275	GS-337068
9/16	1	.748	0.429	0.322	GS-337070
NPT 1/8P	1	.748	0.313	0.234	GS-337072
5/16	2	1.220	0.318	0.238	GS-337074
3/8	2	1.220	0.381	0.286	GS-337076
7/16	2	1.220	0.323	0.242	GS-337078
1/2	2	1.220	0.367	0.275	GS-337080
9/16	2	1.220	0.429	0.322	GS-337082
5/8	2	1.220	0.480	0.360	GS-337084
3/4	2	1.220	0.590	0.442	GS-337088
13/16	2	1.220	0.652	0.489	GS-337090
7/8	2	1.220	0.697	0.523	GS-337092
NPT					
1/4P	2	1.220	0.562	0.421	GS-337094
3/8P	2	1.220	0.700	0.531	GS-337096
1/2P	2	1.220	0.687	0.515	GS-337098
1	3	1.891	0.800	0.600	GS-337106
1-1/4	3	1.891	1.021	0.766	GS-337110
Sets					
Type #1 - 11pc	#0-9/16, 1/8 NPT				GS-337073



RETENTION STUDS

Retention Studs

Part Number	Description
PS-270 x 15	CT50 RETENTION STUD
PS-273	CT50 RETENTION STUD
PS-275	CT50 RETENTION STUD
PS-444 x 45	BT40 RETENTION STUD
PS-470 x 15	CT40 RETENTION STUD
PS-472	CT40 RETENTION STUD
PS-474	CT40 RETENTION STUD
PS-475	CT40 RETENTION STUD
PS-532 x 15	CT40 RETENTION STUD
PS-532 x 45	CT40 RETENTION STUD
PS-532 x 60	CT40 RETENTION STUD
PS-532 x 90	CT40 RETENTION STUD
PS-536 x 45	CT50 RETENTION STUD
PS-536 x 60	CT50 RETENTION STUD
PS-536 x 90	CT50 RETENTION STUD
PS-538 x 60	CT50 RETENTION STUD
PS-552	CT40 RETENTION STUD
PS-572 x 45	CT40 RETENTION STUD
PS-572 x 90	CT40 RETENTION STUD
PS-585 x 45	BT30 RETENTION STUD
PS-585 x 60	BT30 RETENTION STUD



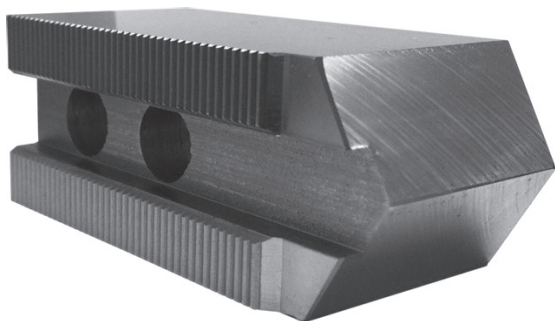
Retention Studs with Coolant Holes

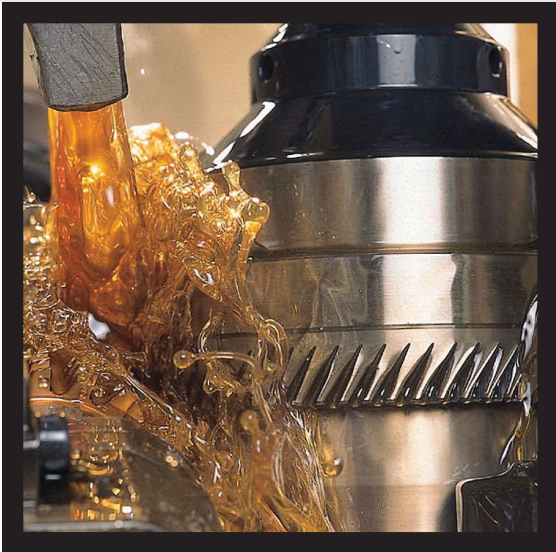
Part Number	Description
PSC-273	CT50 RETENTION STUD-W/C
PSC-275	CT50 RETENTION STUD-W/C
PSC-444 x 15	BT40 RETENTION STUD-W/C
PSC-444 x 45	BT40 RETENTION STUD-W/C
PSC-470 x 15	CT40 RETENTION STUD-W/C
PSC-471	CT40 RETENTION STUD-W/C
PSC-472	CT40 RETENTION STUD-W/C
PSC-475	CT40 RETENTION STUD-W/C
PSC-532 x 15	CT40 RETENTION STUD-W/C
PSC-532 x 45	CT40 RETENTION STUD-W/C
PSC-532 x 60	CT40 RETENTION STUD-W/C
PSC-535 x 60	CT50 RETENTION STUD-W/C
PSC-536 x 45	CT50 RETENTION STUD-W/C
PSC-539 x 45	CT50 RETENTION STUD-W/C
PSC-552	CT40 RETENTION STUD-W/C
PSC-572 x 45	CT40 RETENTION STUD-W/C
PSC-572 x 60	CT40 RETENTION STUD-W/C
PSC-585 x 45	CT40 RETENTION STUD-W/C
PSC-585 x 60	CT40 RETENTION STUD-W/C



Soft Jaws

Description	Groove Width	Screw Size	Hole Space	Part Number
4" POINTED SOFT JAW (3/SET)	0.394 (10.0mm)	8.0mm	0.551 (14.0mm)	KT-4205P
5" POINTED SOFT JAWS (3/SET)	0.433 (11.0mm)	8.0mm	0.669 (17.0mm)	KT-5150P
5" POINTED SOFT JAWS (3/SET)	0.394 (10.0mm)	8.0mm	0.713 (18.0mm)	KT-5153P
6" FLAT SOFT JAWS (3/SET)	0.472 (12.0mm)	10.0mm	0.787 (20.0mm)	KT-6150F
6" POINTED SOFT JAWS (3/SET)	0.472 (12.0mm)	10.0mm	0.787 (20.0mm)	KT-6150P
6" ALUM POINTED SOFT JAWS (3/SET)	0.472 (12.0mm)	10.0mm	0.787 (20.0mm)	KT-6200AP
6" POINTED SOFT JAWS (3/SET)	0.472 (12.0mm)	10.0mm	0.787 (20.0mm)	KT-6200P
6" POINTED SOFT JAWS (3/SET)	0.472 (12.0mm)	10.0mm	0.787 (20.0mm)	KT-6300P
8" ALUM POINTED SOFT JAW (3/SET)	0.551 (14.0mm)	12.0mm	0.984 (25.0mm)	KT-8200AP
8" FLAT SOFT JAWS (3/SET)	0.551 (14.0mm)	12.0mm	0.984 (25.0mm)	KT-8200F
8" POINTED SOFT JAWS (3/SET)	0.551 (14.0mm)	12.0mm	0.984 (25.0mm)	KT-8200P
8" POINTED SOFT JAWS (3/SET)	0.551 (14.0mm)	12.0mm	0.984 (25.0mm)	KT-8300P
8" POINTED SOFT JAWS (3/SET)	0.551 (14.0mm)	12.0mm	0.984 (25.0mm)	KT-8400P
10" POINTED ALUM SOFT JAW (3/SET)	0.630 (16.0mm)	12.0mm	1.181 (30.0mm)	KT-10200AP
10" FLAT SOFT JAWS (3/SET)	0.630 (16.0mm)	12.0mm	1.181 (30.0mm)	KT-10200F
10" POINTED SOFT JAWS (3/SET)	0.630 (16.0mm)	12.0mm	1.181 (30.0mm)	KT-10200P
10" POINTED SOFT JAWS (3/SET)	0.630 (16.0mm)	12.0mm	1.181 (30.0mm)	KT-10201P
10" POINTED SOFT JAWS (3/SET)	0.630 (16.0mm)	12.0mm	1.181 (30.0mm)	KT-10300P
10" FLAT SOFT JAWS (3/SET)	0.630 (16.0mm)	12.0mm	1.181 (30.0mm)	KT-10400F
10" POINTED SOFT JAWS (3/SET)	0.630 (16.0mm)	12.0mm	1.181 (30.0mm)	KT-10400P
10" FLAT SOFT JAWS (3/SET)	0.630 (16.0mm)	12.0mm	1.181 (30.0mm)	KT-10500F
12" FLAT SOFT JAWS (3/SET)	0.709 (18.0mm)	14.0mm	1.181 (30.0mm)	KT-12200F
12" POINTED SOFT JAWS (3/SET)	0.709 (18.0mm)	14.0mm	1.181 (30.0mm)	KT-12200P
12" FLAT SOFT JAWS (3/SET)	0.827 (21.0mm)	16.0mm	1.181 (30.0mm)	KT-12208F
12" POINTED SOFT JAW (3/SET)	0.827 (21.0mm)	16.0mm	1.181 (30.0mm)	KT-12208P
12" ALUM FLAT JAW (3/SET)	0.709 (18.0mm)	14.0mm	1.181 (30.0mm)	KT-12250AF
12" ALUM POINTED JAW (3/SET)	0.709 (18.0mm)	14.0mm	1.181 (30.0mm)	KT-12250AP
12" FLAT SOFT JAWS (3/SET)	0.709 (18.0mm)	14.0mm	1.181 (30.0mm)	KT-12250F
12" FLAT SOFT JAWS (3/SET)	0.827 (21.0mm)	16.0mm	1.181 (30.0mm)	KT-12308F
12" POINTED SOFT JAW (3/SET)	0.827 (21.0mm)	16.0mm	1.181 (30.0mm)	KT-12308P
12" POINTED SOFT JAW (3/SET)	0.709 (18.0mm)	14.0mm	1.181 (30.0mm)	KT-12400P
12" FLAT SOFT JAWS (3/SET)	0.709 (18.0mm)	14.0mm	1.181 (30.0mm)	KT-12408F
15" POINTED SOFT JAW (3/SET)	0.866 (22.0mm)	20.0mm	1.690 (43.0mm)	KT-15250P







Metalworking Fluids

Synthetic Fluids

- 338 Q-Cool 330
- 338 Q-Cool 350
- 338 Xtreme Cool 343c
- 338 Xtreme Cool 353c

Semi-Synthetic - General Purpose

- 339 Q-Cut 225c
- 339 Q-Cut 236c

Semi-Synthetic - Premium

- 340 Q-Cut 245c
- 340 Xtreme Cut 210
- 340 Xtreme Cut 231
- 341 Xtreme Cut 250c
- 341 Xtreme Cut 251c
- 341 Xtreme Cut 290

Oils

- 342 Xtreme Cut 735 - Straight Oil
- 342 Xtreme Cut 746LV - Straight Oil
- 342 Xtreme Grind 291 - Grinding Oil
- 342 Xtreme Grind 321 - Grinding Oil
- 343 Quick Slide 68 - Way Oil
- 343 Quick Slide 32 - Way Oil
- 343 AW-32 - Hydraulic Oil

Cleaners

- 344 Citrus Cleaner
- 344 Met-Kleen 155

Preventatives

- 345 Rust Preventative
- 345 Defoam

Tools

Skimmers

- 345 Zebra Disk Skimmer
- 345 Zebra Belt Skimmer

Refractometer

- 345 Zebra 0-32% Refractometer

Mixer

- 345 Zebra Machinist Mixer

METALWORKING FLUIDS

Synthetic Fluids

- Synthetic cutting and grinding fluid designed for ferrous and non-ferrous metals.
- This is an oil-rejecting fluid that provides excellent in-process corrosion protection for parts and machine tools, runs clean, has excellent bioresistance and is non-foaming.



Q-Cool 330



Q-COOL 330 is a light to moderate duty solution synthetic cutting and grinding fluid designed for ferrous and non-ferrous metals. This oil-rejecting fluid provides excellent in-process corrosion protection for parts and machine tools. Q-COOL 330 runs clean, has excellent bioresistance and is low foaming. This product is recommended for machining and grinding applications and is well suited for job shop operations.

Part Number	Size
Q-COOL 330 (D)	55 gl. Drum

Q-Cool 350



Q-COOL 350C is a heavy-duty solution synthetic cutting & grinding fluid designed for difficult ferrous machining operations. This oil-rejecting fluid provides excellent in-process corrosion protection for parts and machine tools. Q-COOL 350C runs clean, has excellent bioresistance and is low foaming. This product has state of the art additive technology to improve tool life and part quality in severe machining operations such as broaching, deep hole drilling, gear hobbing, gundrilling, honing, and threading.

Part Number	Size
Q-COOL 350c (D)	55 gl. Drum

Xtreme Cool 343c



XTREME COOL 343C is an oil-dispersing synthetic cutting and grinding fluid specifically designed for use on cast iron. The product is engineered to address the problems associated with cast iron machining such as rust, smut buildup, and clinkering. The oil dispersing technology and additive chemistry of XTREME COOL 343C provides greater rust protection than other metalworking fluids and additionally, helps carry smut and fines back to the filter system. Only a small amount of oil is dispersed to aid in cleanliness and rust protection while the remaining oil is rejected for easy removal from the system, extending system life. XTREME COOL 343C works well in individual sumps and central systems to include transfer lines. This is a new generation of synthetic technology that is designed to provide optimum operator acceptance. XTREME COOL 343C overcomes objections to synthetics fluids by being extremely mild to the skin and giving off very low odor.

Part Number	Size
X-COOL 343c (P)	5 gl. Pail
X-COOL 343c (D)	55 gl. Drum

Xtreme Cool 353c



XTREME COOL 353C is a moderate-duty solution synthetic cutting and grinding fluid designed for machining of ferrous and nonferrous metals. This product has a neutral pH to prevent staining on sensitive aluminum and aerospace alloys. XTREME COOL 353C is a new generation of metalworking technology designed to provide optimum operator acceptance and is extremely mild to the skin and very low odor. XTREME COOL 353C is an oil-rejecting fluid providing excellent in-process corrosion protection for parts and machine tools. The product runs clean, has excellent bioresistance and is low foaming. This product has state of the art additive technology to improve tool life and part quality in severe machining operations such as: broaching, deep hole drilling, gear hobbing, gundrilling, honing, and threading.

Part Number	Size
X-COOL 353c (P)	5 gl. Pail
X-COOL 353c (D)	55 gl. Drum

Semi-Synthetic Fluids - General Purpose



- Semi-Synthetic cutting and grinding fluid designed for ferrous and non-ferrous metals.
- The product is designed for use in central systems and individual sumps.

Q-Cut 225c



Q-CUT 225C is a general purpose semi-synthetic cutting and grinding fluid for ferrous metals and most non-ferrous metals. The product is designed for use in central systems and individual sumps. Q-CUT 225C is a chlorine free product designed for light to moderate duty applications. Typical operations include centerless grinding, cylindrical grinding, internal grinding, surface grinding, drilling, milling, sawing, and turning. The fluid forms a stable emulsion in hard and soft water and exhibits excellent hard water stability up to 35 grains of hardness. The product has exceptional bioresistance to ensure long fluid life.

Part Number	Size
Q-Cut225c (P)	5 gal. Pail

Q-Cut 236c



Q-CUT 236 is a general purpose semi-synthetic cutting and grinding fluid for ferrous metals and most non-ferrous metals. The product is designed for use in central systems and individual sumps. Typical operations include centerless grinding, cylindrical grinding, internal grinding, surface grinding, drilling, milling, sawing, and turning. Q-CUT 236 contains a chlorinated extreme pressure additive and is designed for moderate duty operations. The fluid forms a stable emulsion in hard and soft water and has good bioresistance to ensure long fluid life.

Part Number	Size
Q-Cut 236 (P)	5 gal. Pail
Q-Cut 236 (D)	55 gal. Drum

METALWORKING FLUIDS

Semi-Synthetic Fluids - Premium

- Premium Semi-Synthetic cutting and grinding fluid designed for ferrous and non-ferrous metals.
- This product is designed to provide optimum tool life and surface finish



Q-Cut 245c



Q-CUT 245C is a chlorine free, high performance semi-synthetic fluid for machining and grinding ferrous and non-ferrous metals. This product utilizes state of the art raw materials to eliminate the rancidity and cleanliness issues associated with most soluble oils and semi-synthetics. The product is designed for use on a wide range of metals, making it well suited for job shop operations. Q-CUT 245C is non-staining to sensitive aerospace alloys, aluminum (including 319, 356, 6061T-6, 7075), and yellow metals. The product also has excellent corrosion control for ferrous metals. The fluid has a tight emulsion to promote tramp oil rejection and exhibits excellent hard water stability. Q-CUT 245C runs clean, has excellent bioresistance, and is non-foaming.

Part Number	Size
Q-Cut 245C (P)	5 gl. Pail
Q-Cut 245C (D)	55 gl. Drum

Xtreme Cut 210



XTREME CUT 210 is a light duty, semi-synthetic cutting and grinding fluid for multi-metal applications including carbide. The product is designed for use in central systems as well as individual sumps. XTREME CUT 210 is particularly well suited for grinding and in applications where oil absorbing synthetics have been used. Typical operations include boring, cylindrical grinding, internal grinding, tapping, centerless grinding, drilling, and reaming. XTREME CUT 210 is specifically formulated to provide cost savings by extending fluid life and reducing concentrate and additive requirements. The fluid has a tight emulsion to promote tramp oil rejection and exhibits excellent hard water stability. The fluid runs clean and has excellent bio-resistance without the use of conventional biocides.

Part Number	Size
X-Cut 210 (D)	55 gl. Drum

Xtreme Cut 231



XTREME CUT 231 is a premium semi-synthetic fluid for machining and grinding ferrous and non-ferrous alloys. This universal fluid delivers the lubricity and versatility of a premium soluble oil, yet has the cleanliness and heat control of a synthetic. XTREME CUT 231 is designed for use on a wide range of metals, making it well suited for job shop operations. The product contains an extreme pressure additive as well as other high performance additives to improve tool life and part quality. XTREME CUT 231 also has excellent corrosion control for ferrous metals. The fluid has a tight emulsion to promote tramp oil rejection and exhibits excellent hard water stability up to 35 grains of hardness. XTREME CUT 231 utilizes state of the art raw materials to prevent the rotten egg odors associated with most soluble oils and semi-synthetic fluids. The fluid runs clean, has excellent bioresistance, and is low foaming.

Part Number	Size
X-Cut 231 (P)	5 gl. Pail
X-Cut 231 (D)	55 gl. Drum



Semi-Synthetic Fluids - Premium

- Premium Semi-Synthetic cutting and grinding fluid designed for ferrous and non-ferrous metals.
- This product is designed to provide optimum tool life and surface finish

Xtreme Cut 250c



XTREME CUT 250C is a premium, heavy-duty semi-synthetic fluid designed to provide optimum tool life and surface finish. This product is formulated for use on a wide range of ferrous and non-ferrous metals, which makes it well suited for job shop operations. XTREME CUT 250C also has excellent corrosion control for ferrous metals. The fluid has a tight emulsion to promote tramp oil rejection and exhibits excellent hard water stability up to 35 grains of hardness. XTREME CUT 250C utilizes state of the art raw materials to prevent the rotten egg odors associated with most soluble oils and semi-synthetic fluids, runs clean, has excellent bioreistance, and is low foaming.

Part Number	Size
X-Cut 250c (P)	5 gl. Pail
X-Cut 250c (D)	55 gl. Drum

Xtreme Cut 251c



XTREME CUT 251C is a premium, high performance semi-synthetic fluid designed to provide optimum tool life and surface finish. The product is designed for cutting and grinding a wide range of ferrous and non-ferrous alloys, which makes it well suited for job shop operations. XTREME CUT 251C contains an extreme pressure additive and high performance additives to further improve tool life and part quality. The product provides excellent corrosion control for ferrous metals, has a tight emulsion to promote tramp oil rejection, exhibits excellent hard water stability up to 35 grains of hardness, runs clean, has excellent bioreistance, and is non-foaming. Additionally, XTREME CUT 251C utilizes state of the art raw materials to prevent the rotten egg odors associated with most soluble oils and semi-synthetic fluids.

Part Number	Size
X-Cut 251c (P)	5 gl. Pail
X-Cut 251c (D)	55 gl. Drum

Xtreme Cut 290



XTREME CUT 290 is a high performance semi-synthetic fluid designed for the most difficult machining applications. The product is formulated to improve tool life on difficult aerospace alloys such as Inconel, Titanium, and Stainless Steel. XTREME CUT 290 provides the performance level of heavy-duty soluble oils without the unpleasant odors or high usage rates associated with soluble oils. This unique product does not contain chlorine, phosphorous, or sulfur; yet its performance exceeds soluble oils, which contain these extreme pressure additives. XTREME CUT 290 has excellent bioreistance resulting in long fluid life in both central systems and individual sumps. It has a tight, stable emulsion that imparts excellent tramp oil rejection and product stability.

Part Number	Size
X-Cut 290 (P)	5 gl. Pail
X-Cut 290 (D)	55 gl. Drum

METALWORKING FLUIDS

Oils



Xtreme Cut 735 Straight Oil



XTREME CUT 735 is a medium to heavy-duty straight oil designed for Swiss style screw machines and other applications that require dual or tri-purpose oils. This straight oil is formulated with very good polar lubrication and does contain extreme pressure additives to provide superior tool life. XTREME CUT 735 is designed to prevent chip welding and metal pick-up on the tool and grinding wheel. This fluid is used where fine finishes and critical part tolerance is required. XTREME CUT 735 is formulated with anti-mist, anti-foam and anti-oxidation additives for clean, trouble free performance.

Part Number	Size
X-Cut 735 (P)	5 gl. Pail
X-Cut 735 (D)	55 gl. Drum

Xtreme Cut 746LV Straight Oil



XTREME CUT 746LV is a low viscosity, chlorine-free cutting and grinding oil primarily designed for ferrous applications. Its low viscosity and polar and EP lubricants provide excellent cooling and superb boundary lubrication for high-speed operations such as deep hole drilling, boring, trepanning, and belt grinding. XTREME CUT 746LV is also suitable for high-speed hobbing and gear shaving applications and is exceptionally well suited for use on difficult to machine steels and high nickel alloy applications. Not for use on aluminum or yellow metals.

Part Number	Size
X-Cut 746LV (P)	5 gl. Pail
X-Cut 746LV (D)	55 gl. Drum

Xtreme Grind 291 Grinding Fluid



XTREME GRIND 291 is a highly fortified, heavy duty, emulsifiable grinding fluid specifically designed for performance grinding. This fluid delivers extreme grinding performance with either conventional or CBN wheels. XTREME GRIND 291 is low foaming in either naturally soft or treated waters. XTREME GRIND 291 utilizes a combination of extreme pressure and polar additives to give excellent surface finishes. XTREME GRIND 291 can be used in a wide variety of water qualities. XTREME GRIND 291 is recommended for grinding of ferrous and non-ferrous metals to include steel, cast iron, stainless steel, aluminum, titanium and copper alloys.

Part Number	Size
X-Grind 291 (D)	55 gl. Drum

Xtreme Grind 321 Grinding Fluid



XTREME GRIND 321 is a full synthetic grinding fluid designed for use on ferrous metals. XTREME GRIND 321 does not contain any petroleum oil, making it environmentally friendly. This oil-rejecting fluid provides excellent in-process corrosion protection for parts and machine tools. XTREME GRIND 321 runs exceptionally clean, has excellent bioresistance and is virtually non-foaming. The product has been formulated with aquatic friendly surfactants specifically selected to promote rapid chip settling, good flushing properties, reduced cycle times, and improved G ratios. XTREME GRIND 321 can also be used for light duty machining operations.

Part Number	Size
X-Grind 321 (P)	5 gl. Pail
X-Grind 321 (D)	55 gl. Drum



Quick Slide 68 Way Oil



QUICK SLIDE 68 is a premium-quality slide way lubricant specifically designed to meet the strict requirements for accuracy and part finish of today's high production machine tools. It is formulated with high-quality base stocks and a highly engineered additive package designed to reduce stick-slip and chatter under thin film, boundary lubrication conditions allowing smooth uniform motion at travel speeds of today's advanced machinery. QUICK SLIDE 68 ensures protection of slides and ways while still providing good filterability thereby minimizing reduced flow or plugged applicator filters. QUICK SLIDE 68 is approved under Cincinnati Machine P-47 specification.

Part Number	Size
Way Oil (P)	5 gl. Pail
Way Oil (D)	55 gl. Drum

Quick Slide 32 Way Oil



QUICK SLIDE 32 is a light viscosity premium-quality slide way lubricant specifically designed for machine tools fitted with combined hydraulic and slideway lubrication systems. It is formulated with high-quality base stocks and a highly engineered additive package designed to reduce stick-slip and chatter under thin film, boundary lubrication conditions allowing smooth uniform motion at travel speeds of today's advanced machinery. QUICK SLIDE 32 ensures protection of slides and ways while still providing good filterability thereby minimizing reduced flow or plugged applicator filters.

Part Number	Size
Way Oil 1 (P)	5 gl. Pail
Way Oil 1 (D)	55 gl. Drum

AW-32 Hydraulic Oil



AW-32 Hydraulic Oil is a zinc-containing anti-wear hydraulic oils formulated with high quality paraffinic base oils and a carefully selected additive system to provide superior wear protection performance even under the most severe operating conditions. Brad Penn AW-32 Hydraulic Oil are suitable for use in a wide variety of both high and low pressure industrial and mobile hydraulic systems utilizing either vane or piston pumps. Brad Penn AW-32 Hydraulic Oil have excellent thermal and oxidation stability to minimize varnish and deposit formation and extend service life.

Part Number	Size
AW-32 (P)	5 gl. Pail
AW-32 (D)	55 gl. Drum

Met Kleen 155



MET-KLEEN 155 is a heavy-duty alkaline cleaner designed for use in cleaning large central systems and individual machine tools. This heavy duty cleaner/degreaser is designed to optimize the cleaning of baked on grease and carbon, hardened deposits of chips and swarf, oily and gummy surfaces. It can be used in pressure washing, dip tanks, agirlifts, spray washers and floor scrubbers as well as other cleaning applications requiring a heavy-duty, low foam degreaser. MET-KLEEN 155 can be used on both ferrous and non-ferrous metals.

Part Number	Size
MET-KLEEN 155 (P)	5 gl. Pail
MET-KLEEN 155 (D)	55 gl. Drum

Citrus Cutter



CITRUS CUTTER is a powerful natural citrus floor cleaner and degreaser. The superior performance of this water based cleaner is derived from a synergistic blend of natural orange solvent and a unique surfactant system. This versatile product can be used for most industrial and commercial cleaning jobs. The product will remove heavy grease and oil deposits and deodorizes as it cleans. CITRUS CUTTER is designed for use in automatic floor scrubbers, mop buckets, spray bottles, and hand cleaning applications.

Part Number	Size
CITRUS CUTTER (P)	5 gl. Pail
CITRUS CUTTER (D)	55 gl. Drum

Rust Preventative



RP 150 Rust Proofing Oil is a soft film type rust preventative formulated with unique additives to impart excellent water displacement and fingerprint neutralizing properties. It is ideally suited to provide protection against metal corrosion and rusting under mildly corrosive conditions in covered storage, packaged shipment, or interprocess handling.

Part Number	Size
RP-150 (P)	5 gl. Pail
RP-150 (D)	55 gl. Drum

Antifoam



Highly effective, non-silicone anti-foam agent compatible with all Coolant Control semi-synthetic and synthetic water-based machine and grinding coolants.

Part Number	Size
ANTIFOAM (G)	1 Gallon
ANTIFOAM (P)	5 gl Pail

Zebra Disk Skimmer



- Lifetime warranty on disk and wipers, One year warranty on all other parts
- Handles heavy oil loads
- Heavy-duty steel construction
- Intermittent-duty motor standard
- Continuous-duty motor available
- Does not retrofit for use with Diverter

Part Number	Size
ZEB-LH300	1 unit

Zebra Belt Oil Skimmer



- Dual wiper set with lifetime warranty, One year all other parts (steel belts 30 days)
- Heavy-duty, steel construction
- Removable collection tray
- Continuous-duty, fan-cooled motor
- Fixed lower pulley (on reaches to 24")
- Hanging lower pulley (on reaches 36" and up)

Part Number	Size
ZEB-BPF1-12	1 unit

Zebra 0-32% Refractometer



- Range of 0-10 or 0-32 Brix
- Prism aperture lets in a lot of light
- Diamond-knurled sleeve for good gripping
- Comfortable eyepiece with adjustable focus for easy reading
- Auto temperature compensation for shop areas with varying temperatures
- Average use accuracy range ($\pm .10\%$)

Part Number	Size
ZEB-OPT32	1 unit

Zebra Machinist Mixer



- Lifetime Warranty
- Separate water shut-off valve
- Machined from solid bronze casting with galvanized steel stand pipe
- Maximum viscosity of 500 SUS
- 40" discharge tube included
- Fits drums, pails, or totes

Part Number	Size
ZEB-MIX0327	1 unit



