Merlin Tools Ltd

Solid Carbide Application Router Tooling

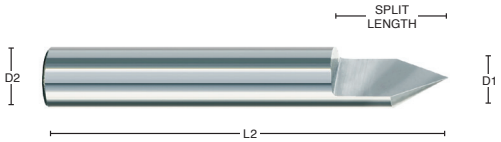
One & Three Dimensional Engraving
Veining • Edge Rounding • Trimming
Grooving • Chamfering

Manufactured in the USA
Distributed in the UK

Solid Carbide Application Tools

001 Solid Carbide General Engraving Tool 30° 60° 90° and 60°

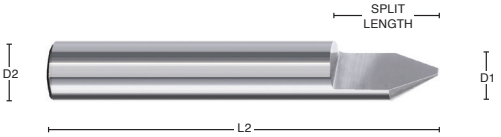
Materials SW HW SS SP HP A



Cutter Dia D1	Shank Dia D2	Included Angle	Split Length	OAL L2	Part Number
3	3	30°	8	38	001-3305
6	6	30°	12	50	001-6308
3	3	60°	8	38	001-3605
6	6	60°	12	50	001-6608
3	3	90°	8	38	001-3905
6	6	90°	12	50	001-6908
1/8	1/8	60°	3/8	1-1/2	001-1860
1/4	1/4	60°	3/8	2-1/2	001-1460

002 Solid Carbide General Engraving Tool 60° with Flats

Materials SW HW SS SP HP A



Cutter Dia D1	Shank Dia D2	Flat	Included Angle	Split Length	OAL L2	Part Number
6	6	0.25	60°	8	50	002-6025
6	6	0.50	60°	8	50	002-6050
6	6	0.75	60°	8	50	002-6075
6	6	1.00	60°	8	50	002-6010
6	6	1.25	60°	8	50	002-6012
6	6	1.50	60°	8	50	002-6015
6	6	2.00	60°	8	50	002-6020

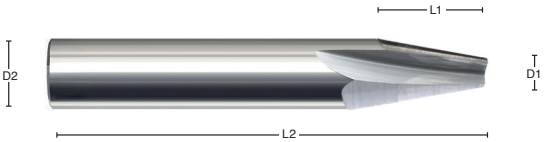
7220 Solid Carbide 1-Flute Straight Flush Laminate Trimmer

Materials LW

Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Style	Part Number
1/4	1/4	3/8	1-1/2	Flush	7220-02
1/4	1/4	1/4	1-1/2	Flush	7220-04
1/4	1/4	1/4	1-1/2	7° Bevel	7220-06

7025 Solid Carbide 1-Flute Veining Bit

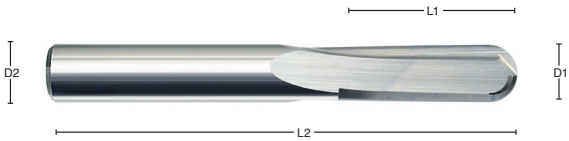
Materials SW HW CW SP HP



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Part Number
1/16	1/4	1/4	1-1/2	7025-02
3/32	1/4	1/4	1-1/2	7025-04
1/8	1/4	1/4	1-1/2	7025-06

7110 Solid Carbide 2-Flute Upcut Slow Spiral Router 3° Helix - Ball Nosed

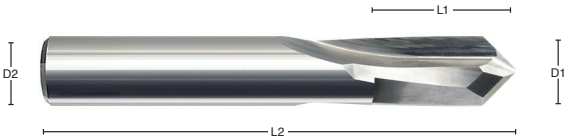
Materials SW HW CW LW SP HP SS



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Part Number
1/8	1/4	3/8	2	7110-02
3/16	1/4	5/8	2	7110-04
1/4	1/4	3/4	2	7110-06
3/8	3/8	3/4	2-1/4	7110-08

7035 Solid Carbide 2-Flute Straight Flute Router 90° V Bottom

Materials SW HW CW LW SP HP SS



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Part Number
3/16	1/4	5/8	2	7035-02
1/4	1/4	3/4	2	7035-04
3/8	3/8	3/4	2-1/2	7035-06

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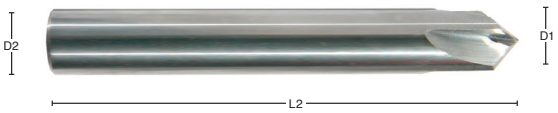
Solid Carbide Application Tools

113 Solid Carbide 4-Flute Chamfer Tool 60° 82° 90°

Materials SP HP A

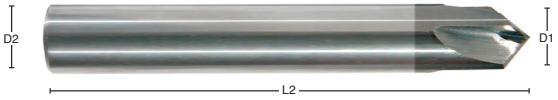


SW	Soft wood	SP	Soft plastic	GF	Glass Fibre
HW	Hard wood	HP	Hard plastic	SS	Solid surface
CW	Composite wood	AC	Acrylic	A	Aluminium
LW	Laminated wood	CP	Composite	F	Foam

Cutter Dia D1	Shank Dia D2	OAL L2	Angle	Part Number
4	4	50	60°	113 - 42260
4	4	50	82°	113 - 42282
4	4	50	90°	113 - 42290
5	5	50	60°	113 - 52260
5	5	50	82°	113 - 52282
5	5	50	90°	113 - 52290
6	6	64	60°	113 - 62260
6	6	64	82°	113 - 62282
6	6	64	90°	113 - 62290
8	8	64	60°	113 - 82260
8	8	64	82°	113 - 82282
8	8	64	90°	113 - 82290
10	10	70	60°	113 - 10260
10	10	70	82°	113 - 10282
10	10	70	90°	113 - 10290
12	12	76	60°	113 - 12260
12	12	76	82°	113 - 12282
12	12	76	90°	113 - 12290

114 Solid Carbide 4-Flute Chamfer Tool 60° 82° 90° *TiALN*

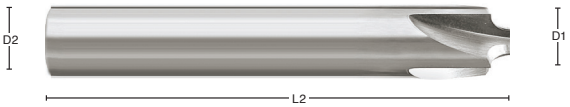
Materials SP HP A



Cutter Dia D1	Shank Dia D2	OAL L2	Angle	Part Number
4	4	50	60°	114 - 42260
4	4	50	82°	114 - 42282
4	4	50	90°	114 - 42290
5	5	50	60°	114 - 52260
5	5	50	82°	114 - 52282
5	5	50	90°	114 - 52290
6	6	64	60°	114 - 62260
6	6	64	82°	114 - 62282
6	6	64	90°	114 - 62290
8	8	64	60°	114 - 82260
8	8	64	82°	114 - 82282
8	8	64	90°	114 - 82290
10	10	70	60°	114 - 10260
10	10	70	82°	114 - 10282
10	10	70	90°	114 - 10290
12	12	76	60°	114 - 12260
12	12	76	82°	114 - 12282
12	12	76	90°	114 - 12290

112 Solid Carbide 4-Flute Corner Rounding 90° Radius plus Run-Out

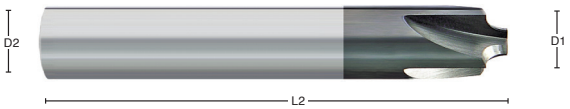
Materials SP HP AC



Radius	Shank Dia D2	OAL L2	Part Number
0.5	8	64	112-41105
1.0	8	64	112-41110
1.5	10	70	112-41115
2.0	10	70	112-41120
2.5	12	76	112-41125
3.0	12	76	112-41130
3.5	16	89	112-41135
4.0	16	89	112-41140
4.5	16	89	112-41145
5.0	16	89	112-41150
5.5	20	100	112-41155
6.0	20	100	112-41160

122 Solid Carbide 4-Flute Corner Rounding 90° Radius plus Run-Out *TiALN*

Materials SP HP AC



Radius	Shank Dia D2	OAL L2	Part Number
0.5	8	64	122-41105
1.0	8	64	122-41110
1.5	10	70	122-41115
2.0	10	70	122-41120
2.5	12	76	122-41125
3.0	12	76	122-41130
3.5	16	89	122-41135
4.0	16	89	122-41140
4.5	16	89	122-41145
5.0	16	89	122-41150
5.5	20	100	122-41155
6.0	20	100	122-41160

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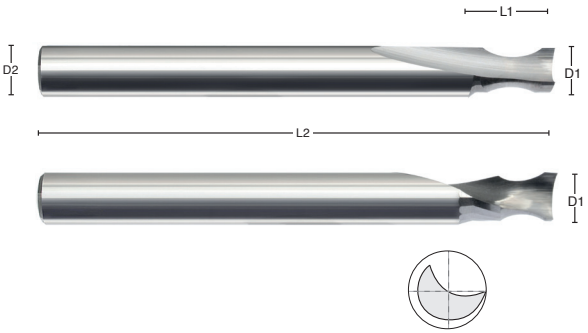
Solid Carbide Edge Rounding

7003 7004 Solid Carbide 1-Flute O-Flute Router - Edge Rounding

Materials SP HP SS



Straight Flute

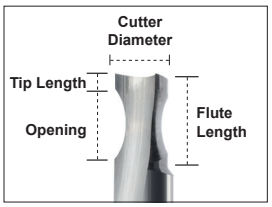
Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Opening	Radius	Small Dia	Tip Length	Part Number
1/4	1/4	3/8	2-1/2	5/32	1/8	.195	1/16	7003-02
1/4	1/4	3/8	2-1/2	7/32	3/16	.180	1/16	7003-04
1/4	1/4	3/8	2-1/2	9/32	1/4	.163	1/16	7003-06

Spiral Flute

Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Opening	Radius	Small Dia	Tip Length	Part Number
1/4	1/4	3/8	2-1/2	5/32	1/8	.195	1/16	7004-02
1/4	1/4	3/8	2-1/2	7/32	3/16	.180	1/16	7004-04
1/4	1/4	3/8	2-1/2	9/32	1/4	.163	1/16	7004-06

6036 7036 Solid Carbide 2-Flute Straight O-Flute Router - Edge Rounding

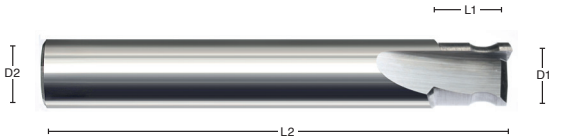
Materials SP HP AC SS

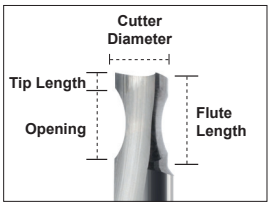


Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Opening	Radius	Small Dia	Tip Length	Part Number
6	6	10	64	4	3	4.47	1.5	6036-02
6	6	10	64	5	4	4.24	1.5	6036-04
6	6	10	64	6	5	3.96	1.5	6036-06
6	6	10	64	7	6	3.73	1.5	6036-08
1/4	1/4	3/8	2-1/2	5/32	1/8	.195	1/16	7036-02
1/4	1/4	3/8	2-1/2	7/32	3/16	.180	1/16	7036-04
1/4	1/4	3/8	2-1/2	9/32	1/4	.163	1/16	7036-06

6034 7034 Solid Carbide 2-Flute Straight V-Flute Router - Edge Rounding

Materials SP HP AC SS

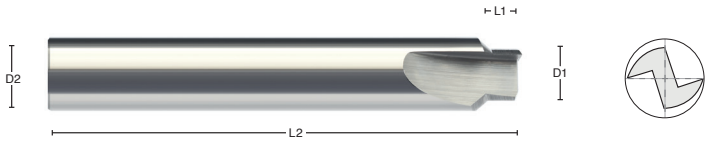




Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Opening	Radius	Small Dia	Tip Length	Part Number
8	8	12	64	9	8	5.21	1.5	6034-02
10	10	14	70	11	10	6.68	1.5	6034-04
12	12	16	76	13	12	8.18	1.5	6034-06
3/8	3/8	3/8	2-1/2	5/32	1/8	.320	1/16	7034-02
3/8	3/8	3/8	2-1/2	7/32	3/16	.305	1/16	7034-04
3/8	3/8	3/8	2-1/2	9/32	1/4	.288	1/16	7034-06
3/8	3/8	1/2	2-1/2	13/32	3/8	.255	1/16	7034-08
1/2	1/2	3/8	3	5/32	1/8	.445	1/16	7034-10
1/2	1/2	3/8	3	7/32	3/16	.430	1/16	7034-12
1/2	1/2	3/8	3	9/32	1/4	.413	1/16	7034-14
1/2	1/2	5/8	3	17/32	1/2	.347	1/16	7034-16

6111 7111 Solid Carbide 2-Flute Rout and Chamfer Tool

Materials SP HP AC



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Material Thickness	Part Number
6	10	5	70	3	6111-02
6	10	6	70	4	6111-04
6	10	8	70	6	6111-06
8	12	5	76	3	6111-08
8	12	6	76	4	6111-10
8	12	8	76	6	6111-12
1/4	3/8	3/16	2-1/4	1/8	7111-02
1/4	3/8	1/4	2-1/4	3/16	7111-04
1/4	3/8	5/16	2-1/4	1/4	7111-06
3/8	1/2	3/16	3	1/8	7111-08
3/8	1/2	1/4	3	3/16	7111-10
3/8	1/2	5/16	3	1/4	7111-12

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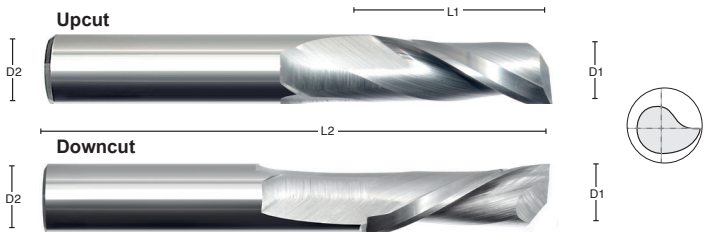
Solid Carbide Composite Router Tooling

6020 6021 7020 7021 — Solid Carbide 1-Flute Spiral Router 30° Helix

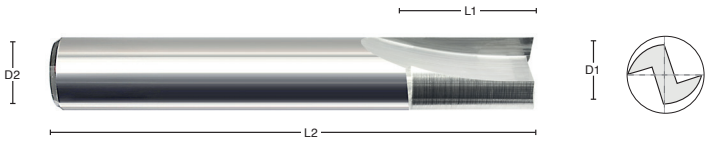
Materials HP CP A



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Upcut Part No	Downcut Part No
4	6	16	64	6020-02	6021-02
5	6	20	64	6020-04	6021-04
6	6	25	64	6020-06	6021-06
8	8	25	64	6020-08	6021-08
1/8	1/4	1/2	2	7020-02	7021-02
5/32	1/4	9/16	2	7020-04	7021-04
3/16	1/4	5/8	2	7020-06	7021-06
7/32	1/4	5/8	2-1/2	7020-08	7021-08
1/4	1/4	3/4	2-1/2	7020-10	7021-10
9/32	3/8	3/4	2-1/2	7020-12	7021-12
5/16	3/8	13/16	2-1/2	7020-14	7021-14
3/8	3/8	7/8	2-1/2	7020-16	7021-16
7/16	1/2	1	3	7020-18	7021-18
1/2	1/2	1	3	7020-20	7021-20

6030 7030 — Solid Carbide 2-Flute Straight Flute Router - Mill End

Materials HP AC CP SS F



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Part Number
4	6	16	64	6030-02
5	6	20	64	6030-04
6	6	25	64	6030-06
8	8	25	76	6030-08
10	10	35	88	6030-10
12	12	35	88	6030-12
1/8	1/4	1/4	2	7030-02
3/16	1/4	3/8	2	7030-04
3/16	1/4	5/8	2	7030-06
3/16	1/4	5/8	2	7030-08 LH
3/16	1/4	5/8	4	7030-10
1/4	1/4	3/8	2-1/2	7030-12
1/4	1/4	3/4	2-1/2	7030-16 LH
1/4	1/4	1-1/4	4	7030-18
3/8	3/8	5/8	2-1/2	7030-20
3/8	3/8	7/8	2-1/2	7030-22
3/8	3/8	7/8	2-1/2	7030-24 LH
3/8	3/8	1-5/8	6	7030-26
1/2	1/2	1	3	7030-28
1/2	1/2	1	3	7030-30 LH
1/2	1/2	2-1/8	6	7030-32

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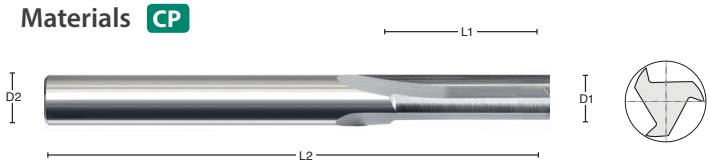
- ***Ex Stock Delivery on All Tools***

7120 — Solid Carbide 3-Flute Straight Flute Router

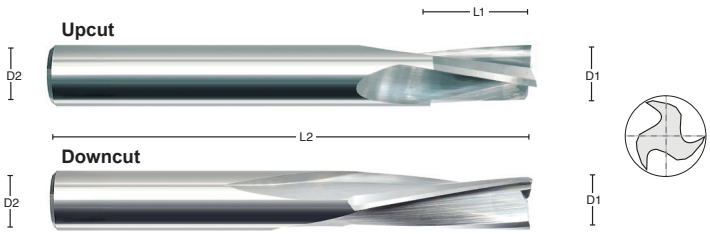
Materials CP



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Part Number
1/8	1/4	1/2	2	7120-02
1/4	1/4	3/4	2-1/2	7120-04

6140 6141 7140 7141 — Solid Carbide 3-Flute Slow Spiral Router 10° Helix - Mill End

Materials SW HW CW HP SS CP



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Upcut Part No	Downcut Part No
6	6	25	76	6140-02	6141-02
8	8	25	76	6140-04	6141-04
10	10	35	76	6140-06	6141-06
12	12	35	88	6140-08	6141-08
14	14	45	110	6140-10	6141-10
16	16	55	120	6140-12	6141-12
18	18	60	120	6140-14	6141-14
1/4	1/4	3/8	3	7140-02	7141-02
1/4	1/4	7/8	3	7140-04	7141-04
3/8	3/8	5/8	3	7140-06	7141-06
3/8	3/8	1-1/8	3	7140-08	7141-08
1/2	1/2	1-1/8	3-1/2	7140-10	7141-10
1/2	1/2	1-5/8	4	7140-12	7141-12
1/2	1/2	2-1/8	4-1/2	7140-14	7141-14
3/4	3/4	1-5/8	4	7140-16	7141-16
3/4	3/4	2-1/8	5	7140-18	7141-18

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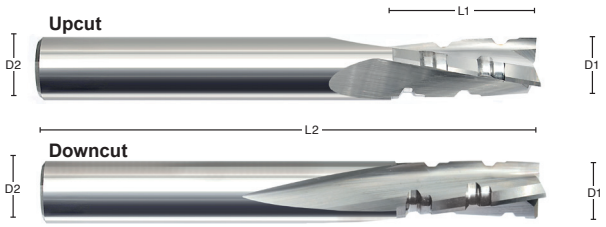
Solid Carbide Composite Router Tooling

7170 7171 Solid Carbide 3-Flute Spiral Phenolic Router 10° Helix - Mill End

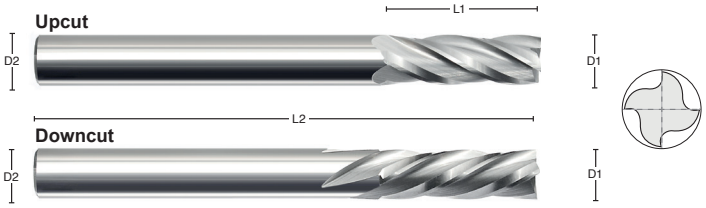
Materials CP



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Upcut Part No	Downcut Part No
3/8	3/8	7/8	3	7170-02	7171-02
1/2	1/2	1-1/8	3-1/2		7171-04
1/2	1/2	1-1/4	3-1/2	7170-04	
1/2	1/2	2-1/8	4	7170-06	7171-06

7190 7191 Solid Carbide 4-Flute Spiral Router 30° Helix

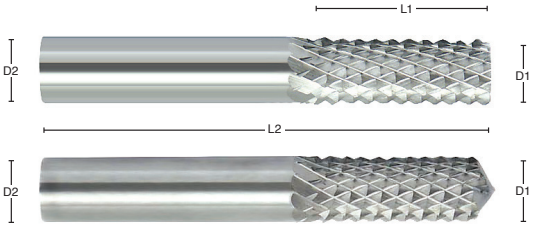
Materials HP CP GF



Cutter Dia D1	Shank Dia D2	FL L1	OAL L2	Upcut Part No	Downcut Part No
1/8	1/4	1/2	2	7190-02	7191-02
5/32	1/4	9/16	2	7190-04	7191-04
3/16	1/4	5/8	2	7190-06	7191-06
1/4	1/4	3/4	2-1/2	7190-08	7191-08

FG Solid Carbide Diamond Cut - Fibreglass Router Good Surface Finish on Both Hand & CNC Applications

Materials CP GF



Cutter Dia-D1	Shank Dia-D2	FL L1	OAL L2	No End Cut Part Number	Drill Point Part Number	End Mill Cut Part Number	Burr End Cut Part Number
1.5	3	5	38	FG1 - 80100	FG1 - 80101	FG1 - 80102	FG1 - 80103
2	3	10	38	FG2 - 80200	FG2 - 80201	FG2 - 80202	FG2 - 80203
3	3	12	38	FG3 - 80300	FG3 - 80301	FG3 - 80302	FG3 - 80303
5	5	16	50	FG4 - 80400	FG4 - 80401	FG4 - 80402	FG4 - 80403
5	6	16	50	FG5 - 80500	FG5 - 80501	FG5 - 80502	FG5 - 80503
6	6	18	50	FG6 - 80600	FG6 - 80601	FG6 - 80602	FG6 - 80603
6	6	18	63	FG7 - 80700	FG7 - 80701	FG7 - 80702	FG7 - 80703
6	6	25	63	FG8 - 80800	FG8 - 80801	FG8 - 80802	FG8 - 80803
6	6	18	75	FG9 - 80900	FG9 - 80901	FG9 - 80902	FG9 - 80903
6	6	25	75	FG10 - 81000	FG10 - 81001	FG10 - 81002	FG10 - 81003
6	6	38	75	FG11 - 81100	FG11 - 81101	FG11 - 81102	FG11 - 82203
8	8	25	63	FG12 - 81200	FG12 - 81201	FG12 - 81202	FG12 - 81203
10	10	25	63	FG13 - 81300	FG13 - 81301	FG13 - 81302	FG13 - 81303
12	12	25	75	FG14 - 81400	FG14 - 81401	FG14 - 81402	FG14 - 81403

Cutter Dia-D1	Shank Dia-D2	FL L1	OAL L2	No End Cut Part Number	Drill Point Part Number	End Mill Cut Part Number	Burr End Cut Part Number
1/16	1/8	3/16	1-1/2	FG1 - 70100	FG1 - 70101	FG1 -70102	FG1 - 70103
3/32	1/8	3/8	1-1/2	FG2 - 70200	FG2 - 70201	FG2 - 70202	FG2 - 70203
1/8	1/8	1/2	1-1/2	FG3 - 70300	FG3 - 70301	FG3 - 70302	FG3 - 70303
3/16	3/16	5/8	2	FG4 - 70400	FG4 - 70401	FG4 - 70402	FG4 - 70403
3/16	1/4	5/8	2	FG5 - 70500	FG5 - 70501	FG5 - 70502	FG5 - 70503
1/4	1/4	3/4	2	FG6 - 70600	FG6 - 70601	FG6 - 70602	FG6 - 70603
1/4	1/4	3/4	2-1/2	FG7 - 70700	FG7 - 70701	FG7 - 70702	FG7 - 70703
1/4	1/4	1	2-1/2	FG8 - 70800	FG8 - 70801	FG8 - 70802	FG8 - 70803
1/4	1/4	3/4	3	FG9 - 70900	FG9 - 70901	FG9 - 70902	FG9 - 70903
1/4	1/4	1	3	FG10 - 71000	FG10 - 71001	FG10 - 71002	FG10 - 71003
1/4	1/4	1-1/2	3	FG11 - 71100	FG11 - 71101	FG11 - 71102	FG11 - 72203
5/16	5/16	1	2-1/2	FG12 - 71200	FG12 - 71201	FG12 - 71202	FG12 - 71203
3/8	3/8	1	2-1/2	FG13 - 71300	FG13 - 71301	FG13 - 71302	FG13 - 71303
1/2	1/2	1	3	FG14 - 71400	FG14 - 71401	FG14 - 71402	FG14 - 71403

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