TOOLS FOR Composites

TOOLS FOR

Composites

Composite Solutions

Scan this code to view:

- Videos on Drilling
- Videos on Trimming
- Tips and Tricks to Machine CFRP and Other Composites Made Easy!
- And More...

Featured Tools:

Solid PCD W-Point

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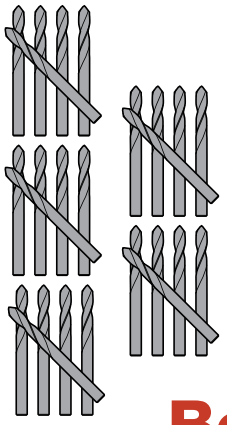


= Wing Spars Complete Ship Set

Before

VS.

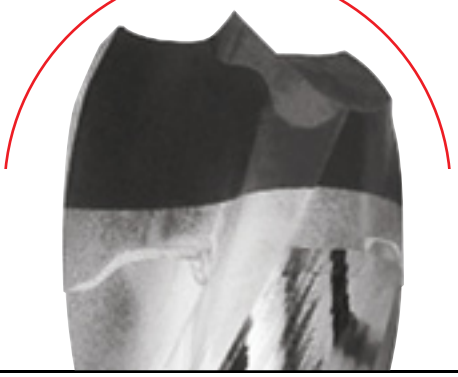
= Wing Spars Complete Ship Set

After

- No Delamination
- No Uncut Fibers
- No Fiber Pull Out
- Can be Resharpened

NEW!

SOLID PCD



CPCD-203 – Best Trimming Tool for Composites

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View the CPD-203 in action on our web site!

Features:

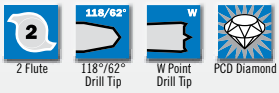
- Drill point for plunging into the part without blowing out the back side of the part
- Over **13,000 linear inches** in Aircraft CFRP material

Composites Tools

Call for Quote! 1-800-527-8883

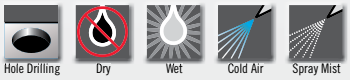
PCD PCD-Tipped Diamond Drills

Characteristics



2 Flute | 118°/62° Drill Tip | W Point Drill Tip | PCD Diamond

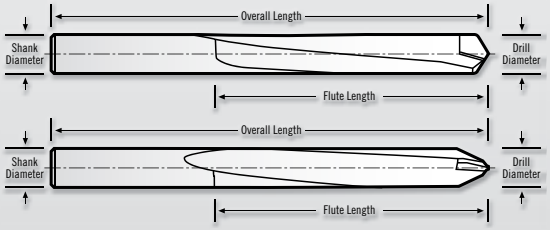
Applications



Hole Drilling | Dry | Wet | Cold Air | Spray Mist

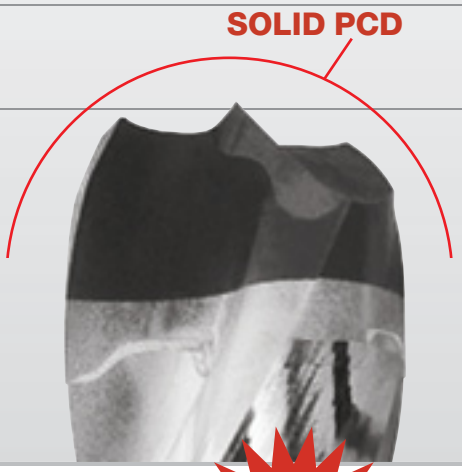
Materials

Aluminum | Copper | Magnesium | Plastics | Composites | Brass



PCD-Tipped Drills Tolerances

Drill Dia. = +0.0000/–0.0005"
+0.0000/–0.0013mm
Shank Dia. = –0.0001/–0.0002"
–0.002/–0.005mm
Flute Length = +0.030"
+0.762mm
OAL = +0.060"
+1.5mm



NEW!

Composite Taper Tip

NEW!

Solid Tipped PCD

PCD CTT Point 118/62° PCD-Tipped Std. Length – 8 Facet

Tool Diameter	Flute Length	Overall Length	Tool Number
.1655"	1.4"	2.7"	PCD-11862-166
.1915"	1.4"	2.7"	PCD-11862-192
.2210"	1.4"	2.7"	PCD-11862-221
.2510"	1.4"	2.7"	PCD-11862-251
.3125"	1.5"	2.7"	PCD-11862-313
.3765"	1.5"	2.7"	PCD-11862-377

PCD W Point PCD-Tipped Standard Length – Solid Tip

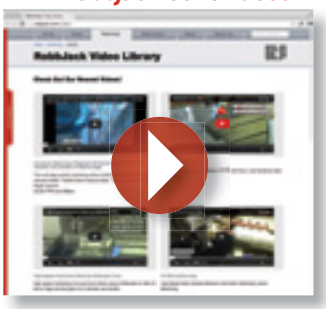
Tool Diameter	Flute Length	Overall Length	Tool Number
.1655"	1.4"	2.7"	PCD-11987-166
.1915"	1.4"	2.7"	PCD-11987-192
.2210"	1.4"	2.7"	PCD-11987-221
.2510"	1.4"	2.7"	PCD-11987-251
.3125"	1.5"	2.7"	PCD-11987-313
.3765"	1.5"	2.7"	PCD-11987-377

10-20X Tool Life Over Carbide!

New Solid Tipped PCD!

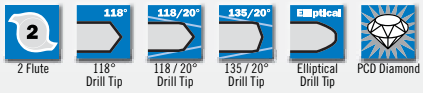
Get the advantage of geometries that used to be only available in carbide. Get the wear resistance of Diamond and the ability to re-sharpen PCD drills.

See RobbJack Videos at
www.robbjack.com/videos



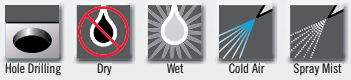
PCD-Tipped Diamond Drills PCD

Characteristics



2 Flute | 118° Drill Tip | 118 / 20° Drill Tip | 135 / 20° Drill Tip | Elliptical Drill Tip | PCD Diamond

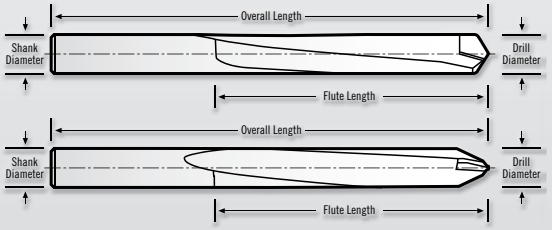
Applications



Hole Drilling | Dry | Wet | Cold Air | Spray Mist

Materials

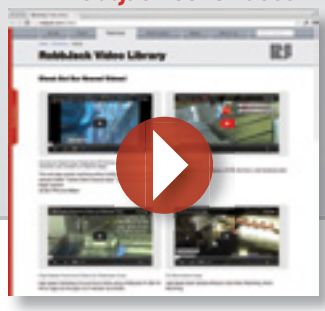
Aluminum | Copper | Magnesium | Plastics | Composites | Brass



PCD-Tipped Drills Tolerances

Drill Dia. = +0.0000/–0.0005"
+0.0000/–0.0013mm
Shank Dia. = –0.0001/–0.0002"
–0.002/–0.005mm
Flute Length = +0.030"
+0.762mm
OAL = +0.060"
+1.5mm

See RobbJack Videos at
www.robbjack.com/videos



PCD 118° PCD-Tipped Standard Length – 4 Facet

Tool Diameter	Flute Length	Overall Length	Tool Number
.1655"	1.4"	2.7"	PCD-118-166
.1915"	1.4"	2.7"	PCD-118-192
.2210"	1.4"	2.7"	PCD-118-221
.2510"	1.4"	2.7"	PCD-118-251
.3125"	1.5"	2.7"	PCD-118-313
.3765"	1.5"	2.7"	PCD-118-377

PCD 135/20° PCD-Tipped Standard Length – 8 Facet

Tool Diameter	Flute Length	Overall Length	Tool Number
.1655"	1.4"	2.7"	PCD-13520-166
.1915"	1.4"	2.7"	PCD-13520-192
.2210"	1.4"	2.7"	PCD-13520-221
.2510"	1.4"	2.7"	PCD-13520-251
.3125"	1.5"	2.7"	PCD-13520-313
.3765"	1.5"	2.7"	PCD-13520-377

PCD 118/20° PCD-Tipped Standard Length – 8 Facet

Tool Diameter	Flute Length	Overall Length	Tool Number
.1655"	1.4"	2.7"	PCD-11820-166
.1915"	1.4"	2.7"	PCD-11820-192
.2210"	1.4"	2.7"	PCD-11820-221
.2510"	1.4"	2.7"	PCD-11820-251
.3125"	1.5"	2.7"	PCD-11820-313
.3765"	1.5"	2.7"	PCD-11820-377

PCD Elliptical PCD-Tipped Standard Length

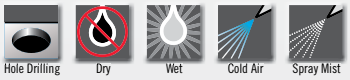
Tool Diameter	Flute Length	Overall Length	Tool Number
.1655"	1.4"	2.7"	PCD-360-166
.1915"	1.4"	2.7"	PCD-360-192
.2210"	1.4"	2.7"	PCD-360-221
.2510"	1.4"	2.7"	PCD-360-251
.3125"	1.5"	2.7"	PCD-360-313
.3765"	1.5"	2.7"	PCD-360-377

P810/F104 Diamond Coated Aircraft Drills

Characteristics

2 Flute | 118° Drill Tip | Elliptical Drill Tip

Applications



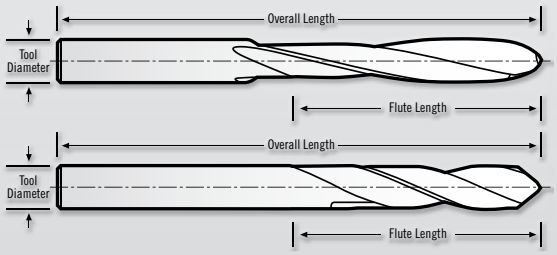
Hole Drilling | Dry | Wet | Cold Air | Spray Mist

Materials

Aluminum | Copper | Magnesium | Plastics | Composites | Brass

Coatings

Diamond Coated (DCC)



P810/F104 Drills Tolerances

Drill Dia. = +0.0000/–0.0005"
+0.000mm/–0.0127mm
Shank Dia. = –0.0001/–0.0030"
+0.000mm/–0.076mm
Flute Length = +0.030"
+0.762mm
OAL = +/–0.060"
+/–1.5mm

P810 118° Diamond Coated Standard Length Drills – 4 Facet

Tool Diameter	Flute Length	Overall Length	Tool Number Diamond Coated
0.0980"	1.4"	2.7"	P810-100345-1
0.1285"	1.4"	2.7"	P810-100344-1
0.1655"	1.4"	2.7"	P810-100335-1
0.1915"	1.4"	2.7"	P810-100336-1
0.2515"	1.4"	2.7"	P810-100337-1
0.2812"	1.4"	2.7"	P810-100410-1
0.3135"	1.5"	2.7"	P810-100338-1
0.3765"	1.5"	2.7"	P810-100341-1

F104 Elliptical Diamond Coated Standard Length Drills

Tool Diameter	Flute Length	Overall Length	Tool Number Diamond Coated
0.0980"	1.4"	2.7"	F104-100001-1
0.1285"	1.4"	2.7"	F104-100003-1
0.1655"	1.4"	2.7"	F104-100007-1
0.1915"	1.4"	2.7"	F104-100010-1
0.2515"	1.4"	2.7"	F104-100002-1
0.2812"	1.4"	2.7"	F104-100017-1
0.3135"	1.5"	2.7"	F104-100018-1
0.3765"	1.5"	2.7"	F104-100019-1

Get the advantage of geometries that used to be only available in carbide. Get the wear resistance of Diamond and the ability to re-sharpen PCD drills.

See Page 68

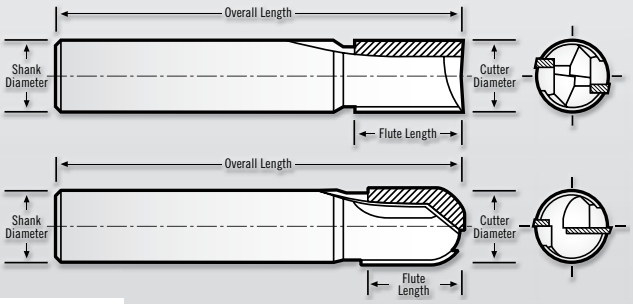
PCD-Tipped Router Bits CPCD/MCPCD

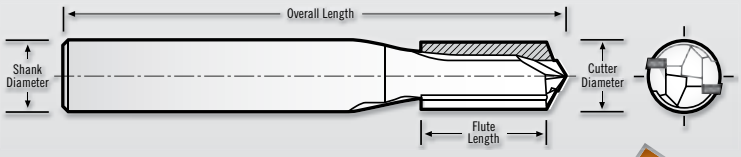
Characteristics: Square End, Ball End, 118° Drill Tip, 2 Flute, PCD Diamond

Applications: Slotting, Side Milling, Helical Interpolation, Ramping, Roughing, Semi-Finishing, Finishing, Dry, Wet, Cold Air, Spray Mist

Materials: Aluminum, Copper, Magnesium, Plastics, Composites, Brass

10-20X Tool Life Over Carbide!





CPCD Tolerances
Cutting Dia. = ±.003"
Shank Dia. = –.0001/–.0002"
Flute Length = ±.030"
OAL = ±.060"

MCPCD Tolerances
Cutting Dia. = ±0,076mm
Shank Dia. = –0,003/–0,005mm
Flute Length = ±0,76mm
OAL = ±1,5mm

New PCD Grade & Geometries specifically designed for CFRP Materials

118° Drill Tip, PCD Diamond

CPCD-203 Drill Point Composite 2 Flute Standard Length

Cutting Diameter	Shank Diameter	Flute Length	Drill Point	Overall Length	Tool Number
1/8"	1/8"	5/16"	118°	1-1/2"	CPCD-203-04-118
3/16"	3/16"	7/16"	118°	2"	CPCD-203-06-118
1/4"	1/4"	9/16"	118°	2"	CPCD-203-08-118
3/8"	3/8"	5/8"	118°	2-1/2"	CPCD-203-12-118
1/2"	1/2"	7/8"	118°	3"	CPCD-203-16-118
5/8"	5/8"	7/8"	118°	3-1/2"	CPCD-203-20-118
3/4"	3/4"	7/8"	118°	4"	CPCD-203-24-118

Square End, PCD Diamond

PCD-203 Square End 2 Flute Standard Length

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number
1/8"	1/8"	3/8"	1-1/2"	PCD-203-04-**CF**
3/16"	3/16"	1/2"	2"	PCD-203-06-**CF**
1/4"	1/4"	5/8"	2"	PCD-203-08-**CF**
3/8"	3/8"	3/4"	2-1/2"	PCD-203-12-**CF**
1/2"	1/2"	1"	3"	PCD-203-16-**CF**
5/8"	5/8"	1"	3-1/2"	PCD-203-20-**CF**
3/4"	3/4"	1"	4"	PCD-203-24-**CF**

MCPCD-203 METRIC Drill Point Composite 2 Flute Std. Lgth.

118° Drill Tip, PCD Diamond

Cutting Diameter	Shank Diameter	Flute Length	Drill Point	Overall Length	Tool Number
3mm	3mm	8mm	118°	38mm	MCPCD-203-03-118
6mm	6mm	14mm	118°	50mm	MCPCD-203-06-118
10mm	10mm	16mm	118°	63mm	MCPCD-203-10-118
12mm	12mm	22mm	118°	76mm	MCPCD-203-12-118

MPCD-203 METRIC Square End Composite 2 Flute Std. Lgth.

Square End, PCD Diamond

Cutting Diameter	Shank Diameter	Number of Flutes	Flute Length	End Style	Overall Length	Tool Number
3mm	3mm	2	8mm	SE	38mm	MCPCD-203-03
6mm	6mm	2	14mm	SE	50mm	MCPCD-203-06
10mm	10mm	2	16mm	SE	63mm	MCPCD-203-10
12mm	12mm	2	22mm	SE	76mm	MCPCD-203-12

Ball End, PCD Diamond

PCD-201BN 2 Flute Ball End Stub Length

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number
1/8"	1/8"	1/4"	1-1/2"	PCD-201-04BN
3/16"	3/16"	5/16"	2"	PCD-201-06BN
1/4"	1/4"	3/8"	2"	PCD-201-08BN
3/8"	3/8"	1/2"	2-1/2"	PCD-201-12BN
1/2"	1/2"	5/8"	3"	PCD-201-16BN
5/8"	5/8"	7/8"	3-1/2"	PCD-201-20BN
3/4"	3/4"	1"	4"	PCD-201-24BN

Square End, PCD Diamond

PCD-203 Square End 2 Flute Standard Length

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number
1/8"	1/8"	3/8"	1-1/2"	PCD-203-04
3/16"	3/16"	1/2"	2"	PCD-203-06
1/4"	1/4"	5/8"	2"	PCD-203-08
3/8"	3/8"	3/4"	2-1/2"	PCD-203-12
1/2"	1/2"	1"	3"	PCD-203-16
5/8"	5/8"	1"	3-1/2"	PCD-203-20
3/4"	3/4"	1"	4"	PCD-203-24

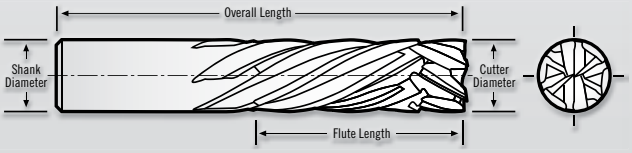
CR/MCR Compression Router

Characteristics: Square End · 4 Flute · 6 Flute

Applications: Slotting · Side Milling · Helical Interpolation · Ramping · Roughing · Semi-Finishing · Finishing · Dry · Wet · Cold Air · Spray Mist

Materials: Composites

Coatings: Diamond Coated (DCC) · Diamond-Like Carbon (DLC)



CR Tolerances
Cutting Dia. = –.001/–.003"
Shank Dia. = –.0001/–.0002"
Flute Length (<5/16") = +.020/+.030"
(>5/16") = +.030/+.060"
OAL = ±.060"

MCR Tolerances
Cutting Dia. = –0.025/–0.075mm
Shank Dia. = –0.002/–0.005mm
Flute Length = +0.500/+1.500mm
OAL = ±1.000mm

UNCOATED

CR Compression Router – 4/6 Flute Uncoated

Cutting Diameter	Shank Diameter	Number of Flutes	Upshear Length	Flute Length	Overall Length	Tool Number Uncoated
1/4"	1/4"	4	3/16"	3/4"	2-1/2"	CR-402-08
3/8"	3/8"	6	1/4"	1"	2-1/2"	CR-602-12
1/2"	1/2"	6	1/4"	1-1/8"	3"	CR-602-16

MCR Compression Router – 4/6 Flute Uncoated METRIC

Cutting Diameter	Shank Diameter	Number of Flutes	Upshear Length	Flute Length	Overall Length	Tool Number Uncoated
6mm	6mm	4	5mm	20mm	63mm	MCR-402-06
10mm	10mm	6	6mm	25mm	63mm	MCR-602-10
12mm	12mm	6	6mm	28mm	76mm	MCR-602-12

DLC COATED

Diamond-Like Carbon (DLC)

CR Compression Router – 4/6 Flute Black Widow DLC Coated

Cutting Diameter	Shank Diameter	Number of Flutes	Upshear Length	Flute Length	Overall Length	Tool Number DLC Coated
1/4"	1/4"	4	3/16"	3/4"	2-1/2"	CR-402-08-**DLC**
3/8"	3/8"	6	1/4"	1"	2-1/2"	CR-602-12-**DLC**
1/2"	1/2"	6	1/4"	1-1/8"	3"	CR-602-16-**DLC**

MCR Compression Router – 4/6 Flute Black Widow DLC Coated METRIC

Cutting Diameter	Shank Diameter	Number of Flutes	Upshear Length	Flute Length	Overall Length	Tool Number DLC Coated
6mm	6mm	4	5mm	20mm	63mm	MCR-402-06-**DLC**
10mm	10mm	6	6mm	25mm	63mm	MCR-602-10-**DLC**
12mm	12mm	6	6mm	28mm	76mm	MCR-602-12-**DLC**

DIAMOND COATED

Diamond Coated (DCC)

CR Compression Router – 4/6 Flute Diamond Coated

Cutting Diameter	Shank Diameter	Number of Flutes	Upshear Length	Flute Length	Overall Length	Tool Number Diamond Coated
1/4"	1/4"	4	3/16"	3/4"	2-1/2"	CR-402-08-**D**
3/8"	3/8"	6	1/4"	1"	2-1/2"	CR-602-12-**D**
1/2"	1/2"	6	1/4"	1-1/8"	3"	CR-602-16-**D**

MCR Compression Router – 4/6 Flute Diamond Coated METRIC

Cutting Diameter	Shank Diameter	Number of Flutes	Upshear Length	Flute Length	Overall Length	Tool Number Diamond Coated
6mm	6mm	4	5mm	20mm	63mm	MCR-402-06-**D**
10mm	10mm	6	6mm	25mm	63mm	MCR-602-10-**D**
12mm	12mm	6	6mm	28mm	76mm	MCR-602-12-**D**

Carbide Composite Router CE/MCE

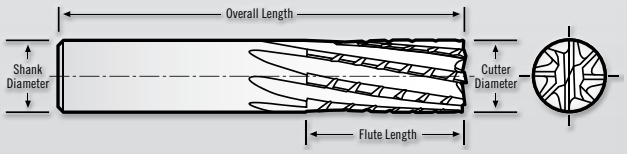
Characteristics

Applications

Materials

Coatings

NEW!



CE Tolerances

Cutting Dia. = –.001/–.003"
Shank Dia. = –.0001/–.0002"
Flute Length (<5/16") = +.020/+.030"
(>5/16") = +.030/+.060"
OAL = ±.060"

MCE Tolerances

Cutting Dia. = –0.025/–0.075mm
Shank Dia. = –0.002/–0.005mm
Flute Length = +0.500/+1.500mm
OAL = ±1.000mm

UNCOATED

CE Carbide Composite Router – 6/8 Flute Uncoated

Cutting Diameter	Shank Diameter	Number of Flutes	Flute Length	Overall Length	Tool Number Uncoated
1/4"	1/4"	6	3/4"	2-1/2"	CE-602-08
3/8"	3/8"	8	1"	2-1/2"	CE-802-12
1/2"	1/2"	8	1-1/8"	3"	CE-802-16

MCE Carbide Composite Router – 6/8 Flute Uncoated METRIC

Cutting Diameter	Shank Diameter	Number of Flutes	Flute Length	Overall Length	Tool Number Uncoated
6mm	6mm	6	20mm	63mm	MCE-602-06
10mm	10mm	8	25mm	63mm	MCE-802-10
12mm	12mm	8	28mm	76mm	MCE-802-12

DLC COATED

CE Carbide Composite Router – 6/8 Flute Black Widow DLC Coated

Cutting Diameter	Shank Diameter	Number of Flutes	Flute Length	Overall Length	Tool Number DLC Coated
1/4"	1/4"	6	3/4"	2-1/2"	CE-602-08-**DLC**
3/8"	3/8"	8	1"	2-1/2"	CE-802-12-**DLC**
1/2"	1/2"	8	1-1/8"	3"	CE-802-16-**DLC**

MCE Carbide Composite Router – 6/8 Flute Black Widow DLC Coated METRIC

Cutting Diameter	Shank Diameter	Number of Flutes	Flute Length	Overall Length	Tool Number DLC Coated
6mm	6mm	6	20mm	63mm	MCE-602-06-**DLC**
10mm	10mm	8	25mm	63mm	MCE-802-10-**DLC**
12mm	12mm	8	28mm	76mm	MCE-802-12-**DLC**

DIAMOND COATED

CE Carbide Composite Router – 6/8 Flute Diamond Coated

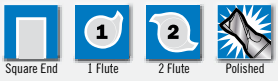
Cutting Diameter	Shank Diameter	Number of Flutes	Flute Length	Overall Length	Tool Number Diamond Coated
1/4"	1/4"	6	3/4"	2-1/2"	CE-602-08-**D**
3/8"	3/8"	8	1"	2-1/2"	CE-802-12-**D**
1/2"	1/2"	8	1-1/8"	3"	CE-802-16-**D**

MCE Carbide Composite Router – 6/8 Flute Diamond Coated METRIC

Cutting Diameter	Shank Diameter	Number of Flutes	Flute Length	Overall Length	Tool Number Diamond Coated
6mm	6mm	6	20mm	63mm	MCE-602-06-**D**
10mm	10mm	8	25mm	63mm	MCE-802-10-**D**
12mm	12mm	8	28mm	76mm	MCE-802-12-**D**

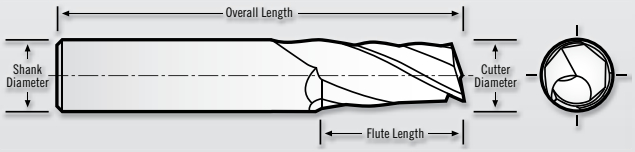
PM/MPM/MPD/GTS Tuffy Grade Carbide Router Bits

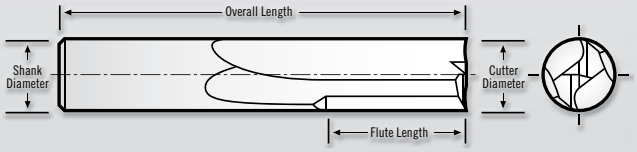
Characteristics



Applications

Materials





PM/PMD Series Tolerances
Cutting Dia. = +0.000/–0.002"
Shank Dia. = –0.0001/–0.0002"
Flute Length = +0.060/ –0.000"
OAL = ±0.060"

MPM Tolerances
Cutting Dia. = +.000/–.075mm
Shank Dia. = –.002/–.005mm
Flute Length = +0.500/+1.500mm
OAL = ±1.000mm

GTS Series Tolerances
Cutting Dia. = +.000/–.002"
Shank Dia. = –.0001/–.0002"
Flute Length = +.060/–.000"
OAL = ±.060"

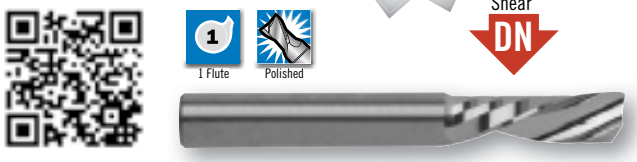
Polished
Best Tool for Plastics
Eliminates Material Sticking to Tool and Melting in the Cut

PM Up Shear 1 Flute Tuffy Grade

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number
1/8"	1/8"	1/2"	2"	PM-104-04
1/8"	1/4"	1/2"	2"	PM-108-04
3/16"	3/16"	5/8"	2"	PM-106-06
3/16"	1/4"	5/8"	2"	PM-108-06
3/16"	1/4"	1-1/4"	3"	PM-108-06L
1/4"	1/4"	3/4"	2"	PM-108-08
1/4"	1/4"	1-1/2"	3"	PM-108-08L
3/8"	3/8"	1-1/4"	3"	PM-112-12
1/2"	1/2"	1-1/2"	4"	PM-116-16

MPM Up Shear 1 Flute Tuffy Grade METRIC

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number
4mm	3mm	12mm	50mm	MPM-104-04
6mm	4mm	12mm	50mm	MPM-106-04
6mm	6mm	14mm	50mm	MPM-106-05
6mm	6mm	14mm	57mm	MPM-106-06
8mm	8mm	22mm	63mm	MPM-108-08
10mm	10mm	25mm	72mm	MPM-110-10
12mm	12mm	25mm	83mm	MPM-112-12



PMD Down Shear 1 Flute Tuffy Grade

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number
1/8"	1/4"	1/2"	2"	PMD-108-04
3/16"	1/4"	5/8"	2"	PMD-108-06
1/4"	1/4"	3/4"	2"	PMD-108-08

GTS 2 Flute Tuffy Grade Straight Flute

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Tool Number
1/8"	1/4"	1/2"	2"	GTS-201-04
1/4"	1/4"	3/4"	2-1/2"	GTS-201-08
3/8"	3/8"	7/8"	2-1/2"	GTS-201-12
1/2"	1/2"	1"	3"	GTS-201-16

FROM ROBBJACK:

2 Great Problem Solving Tools Made to Order

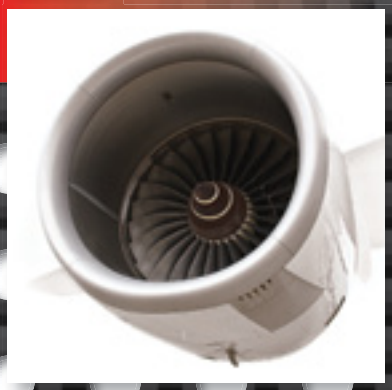
Sound Reduction Perforation Tools

Designed for Airplane Engine Nacelles

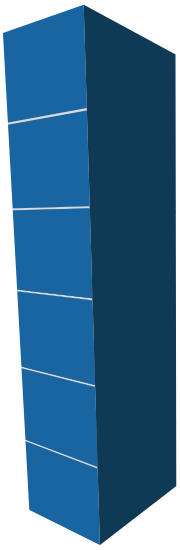
Up to 80,000 Holes in Fiberglass
Up to 40,000 Holes in Carbon Fiber

- No Uncut Fiber
- No Delamination
- No Fiber Pullout
- Best Finishes

Produces the Cleanest Holes

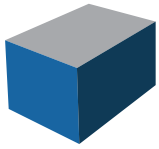


Dove Tail Cutters – Cut 40 Hours Off Operation!

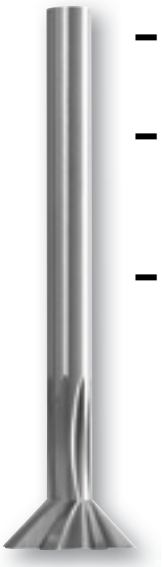


6 Days VS. 1 Day

Other Tools



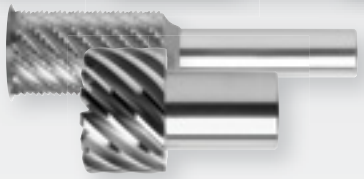
RJ Dove Tail Cutter



- Reduce Cycle Time by 1 Week
- Cut the Dove Tail and Trim the Part at the Same Time
- Available with Diamond Coating

Special dove tail cutters for carbon fiber that eliminate the operation of trimming the part to match the CAD file. Used in composite aircraft ribs and spars or where any dovetail cuts are needed.

Composites Tools in Other Sections



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Made to Order

Threaded Shank Tools *in a* **Solid Piece of Carbide** *by RobbJack*

Eliminate the problem of TIR and tool length associated with brazed threads. Can be diamond coated.

Nut Plate Drills *Made from a Solid Piece of Carbide*