

Tools for **WOOD & PLASTIC**



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Wood & Plastics

Miniatures
Shell Inlays and Inlay Pockets

Saws
Fret Slots
Use K-Series Saws

WRU, WRD Series
Roughing

WU1 Series
Pocketing

B Series
Ridge and Bridge Saddle
Bodies and Shaping
Neck and Carving

WD1 Series
Purfling and Binding

WU / WD / WTL **201/203/303**

2 & 3 Flute Solid Carbide Routers



194

WRU / WRD **303**

3 Flute Rougher Solid Carbide Routers



195

C8 / CD8 **201/202/301/303**

2 & 3 Flute C-2 Grade Carbide End Mill
2 Flute Solid Carbide Spiral Routers



196

HB **401/402/404**

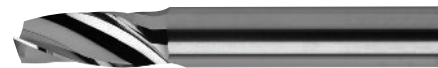
2+2 Flute
Compression Herringbone Routers



198

PM / MPM / PMD **Routers**

1 Flute Polished Flute Carbide Routers



199

ET2 / ET3 / ET4

1 Flute Plunge Tip, Ball Tip
and Standard Engraving Tools



200

ACH / MAH **ACH-M**



Accuhold End Mill
Ultra Precision Extension Holders



201

MINIATURES

(See Miniatures Applications)



X

SAWS

(See Saws Applications)



X

S1 / MS1 **301**

2, 3 and 4 Flute



X

A1 / MA1 **201**

(See Aluminum Applications)



X

C1 **201/301**

2 & 3 Flute on 1/4" Shank
(See Multiple Applications)



X

SB / B 201/203 **MSB / MB 201/203**

2 Flute Ball End
(See Multiple Applications)



X

PCD **203 Routers**

2 Flute PCD Diamond
(See Composites & Plastics)

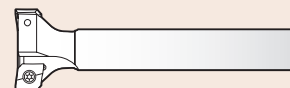


X

AIC / INS **FaceMills**



Insertable Face Mill
and Polished Inserts



72

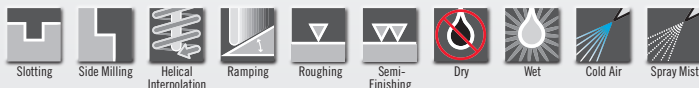
W Precision Spiral Routers for CNC Production



Characteristics



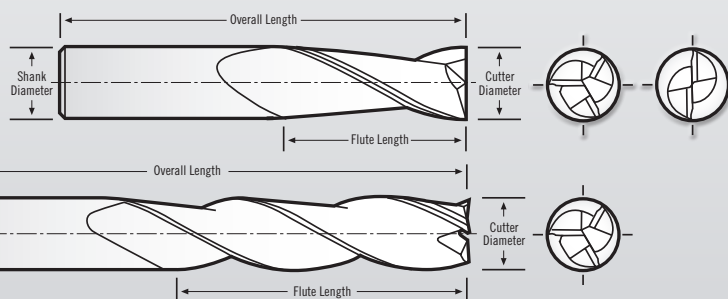
Applications



Materials



Coatings

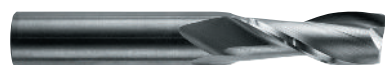


WU/WD Tolerances

Cutting Dia. (1/16" to 1/4") = +.000/- .002
 (9/32" to 3/4") = +.000/- .003
 Shank Dia. = -.0001/- .0002
 Flute Length (1/16" to 5/16") = +.030/- .000
 (3/8" to 3/4") = +.060/- .000
 OAL = ±.060

WTL Tolerances

Cutting Dia. (1/8") = -.0001/- .0002
 (3/16" to 3/4") = -.000/+ .001
 Shank Dia. = -.0001/- .0002
 Flute Length (1/16" to 5/16") = +.030/- .000
 (3/8" to 3/4") = +.060/- .000
 OAL = ±.060



WU1-201 2 Flute Stub Length Solid Carbide Upshear

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
3/16"	3/16"	3/8"	2"	WU1-201-06
1/4"	1/4"	1/2"	2"	WU1-201-08
3/8"	3/8"	5/8"	2"	WU1-201-12
1/2"	1/2"	1-1/4"	3-1/4"	WU1-201-16
5/8"	5/8"	1-1/2"	3-1/2"	WU1-201-20
3/4"	3/4"	1-1/2"	4"	WU1-201-24



WD1-201 2 Flute Stub Length Solid Carbide Downshear

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
3/16"	3/16"	3/8"	2"	WD1-201-06
1/4"	1/4"	1/2"	2"	WD1-201-08
3/8"	3/8"	5/8"	2"	WD1-201-12
1/2"	1/2"	1-1/4"	3-1/4"	WD1-201-16
5/8"	5/8"	1-1/2"	3-1/2"	WD1-201-20
3/4"	3/4"	1-1/2"	4"	WD1-201-24



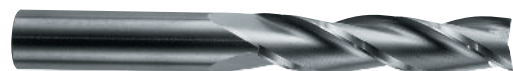
WU1-203 2 Flute Standard Length Solid Carbide Upshear

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/8"	1/8"	1/2"	1-1/2"	WU1-203-04
3/16"	3/16"	5/8"	2"	WU1-203-06
1/4"	1/4"	3/4"	2-1/2"	WU1-203-08
3/8"	3/8"	1"	2-1/2"	WU1-203-12
1/2"	1/2"	1-1/2"	3-1/2"	WU1-203-16
16mm	16mm	55mm	118mm	WU1-203-16mm
5/8"	5/8"	2"	4-5/8"	WU1-203-20
3/4"	3/4"	2-3/16"	5-1/4"	WU1-203-24



WD1-203 2 Flute Standard Length Solid Carbide Downshear

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/8"	1/8"	1/2"	1-1/2"	WD1-203-04
3/16"	3/16"	5/8"	2"	WD1-203-06
1/4"	1/4"	3/4"	2-1/2"	WD1-203-08
3/8"	3/8"	1"	2-1/2"	WD1-203-12
1/2"	1/2"	1-1/2"	3-1/2"	WD1-203-16
16mm	16mm	55mm	118mm	WD1-203-16mm
5/8"	5/8"	2"	4-5/8"	WD1-203-20
3/4"	3/4"	2-3/16"	5-1/4"	WD1-203-24



WTL-303 3 Flute Extra Long Solid Carbide Length Upshear

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/8"	1/8"	1"	3"	WTL-303-04
3/16"	3/16"	1-1/8"	3"	WTL-303-06
1/4"	1/4"	1-1/4"	3-1/8"	WTL-303-08
5/16"	5/16"	1-3/8"	3-1/8"	WTL-303-10
3/8"	3/8"	1-1/2"	3-1/2"	WTL-303-12



Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/2"	1/2"	2"	4"	WTL-303-16
5/8"	5/8"	2-1/2"	4-5/8"	WTL-303-20
3/4"	3/4"	3"	5-1/4"	WTL-303-24

Spiral Routers for Rough Cutting **WR**

Characteristics



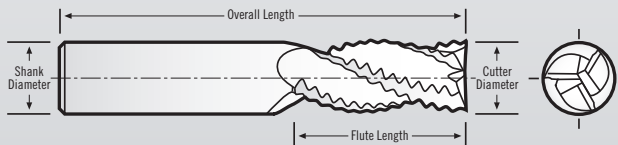
Applications



Materials



Coatings



WRU/WRD Tolerances

Cutting Dia. (1/16" to 1/4") = +.000/- .002
 (9/32" to 3/4") = +.000/- .003
 Shank Dia. = -.0001/- .0002
 Flute Length (1/16" to 5/16") = +.030/- .000
 (3/8" to 3/4") = +.060/- .000
 OAL = ± .060



WRU-301 3 Flute Stub Rougher Solid Carbide Upshear

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/2"	1/2"	1-1/2"	3-1/2"	WRU-301-16
5/8"	5/8"	2-3/16"	4-5/8"	WRU-301-20
3/4"	3/4"	2-3/16"	5"	WRU-301-24



WRD-301 3 Flute Stub Rougher Solid Carbide Downshear

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/2"	1/2"	1-1/2"	3-1/2"	WRD-301-16
5/8"	5/8"	2-3/16"	4-5/8"	WRD-301-20
3/4"	3/4"	2-3/16"	5"	WRD-301-24



WRU-303 3 Flute Standard Rougher Solid Carbide Upshear

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/2"	1/2"	2-3/16"	4"	WRU-303-16
16mm	16mm	55mm	118mm	WRU-303-16mm
5/8"	5/8"	2-1/2"	4-5/8"	WRU-303-20
3/4"	3/4"	2-1/2"	5"	WRU-303-24



WRD-303 3 Flute Standard Rougher Solid Carbide Downshear

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/2"	1/2"	2-3/16"	4"	WRD-303-16
16mm	16mm	55mm	118mm	WRD-303-16mm
5/8"	5/8"	2-1/2"	4-5/8"	WRD-303-20
3/4"	3/4"	2-1/2"	5"	WRD-303-24

Another Popular Wood Tool

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B-333 3 Flute Tuffy Ball End Standard Length



C8 2 Flute Spiral Routers for Signmaking and Engraving

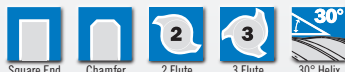
C8 Series



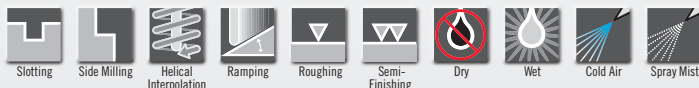
CD8 Series



Characteristics



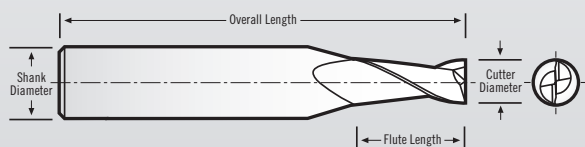
Applications



Materials



Coatings



C8/CD8 Tolerances

Cutting Dia. (1/16" to 1/4") = $+0.000/-0.002$
 (9/32" to 3/4") = $+0.000/-0.003$
 Shank Dia. = $-0.0001/-0.0002$
 Flute Length (1/16" to 5/16") = $+0.030/-0.000$
 (3/8" to 3/4") = $+0.060/-0.000$
 OAL = ± 0.060



C8-201 2 Flute Stub Length C-2 Grade Carbide End Mill

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/8"	1/4"	1/4"	2"	C8-201-04
3/16"	1/4"	3/8"	2"	C8-201-06
1/4"	1/4"	1/2"	2"	C8-201-08



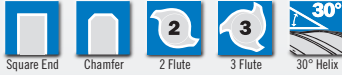
CD8-201 2 Flute Stub Length Solid Carbide Spiral Router

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/8"	1/4"	1/4"	2"	CD8-201-04
3/16"	1/4"	3/8"	2"	CD8-201-06
1/4"	1/4"	1/2"	2"	CD8-201-08

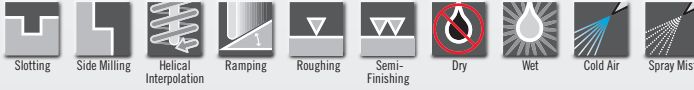
2 & 3 Flute Spiral Routers for CNC Production

C8

Characteristics



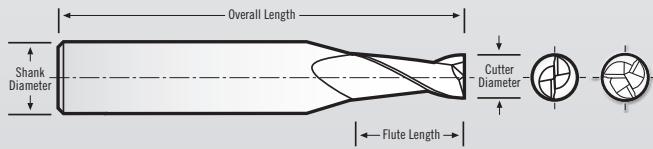
Applications



Materials



Coatings



C8/CD8 Tolerances

Cutting Dia. (1/16" to 1/4") = $+0.00/-0.02$
 (9/32" to 3/4") = $+0.00/-0.03$
 Shank Dia. = $-0.001/-0.002$
 Flute Length (1/16" to 5/16") = $+0.030/-0.000$
 (3/8" to 3/4") = $+0.060/-0.000$
 OAL = ± 0.060

Wood & Plastics



C8-203 2 Flute Standard Length C-2 Grade Carbide End Mill

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/8"	1/4"	1/2"	2-1/2"	C8-203-04
3/16"	1/4"	5/8"	2-1/2"	C8-203-06
1/4"	1/4"	3/4"	2-1/2"	C8-203-08



C8-301 3 Flute Stub Length C-2 Grade Carbide End Mill

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/8"	1/4"	1/4"	2"	C8-301-04
3/16"	1/4"	3/8"	2"	C8-301-06
1/4"	1/4"	1/2"	2"	C8-301-08



CD8-203 2 Flute Regular Length Solid Carbide Spiral Router

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/8"	1/4"	1/2"	2-1/2"	CD8-203-04
3/16"	1/4"	5/8"	2-1/2"	CD8-203-06
1/4"	1/4"	3/4"	2-1/2"	CD8-203-08



C8-303 3 Flute Standard Length C-2 Grade Carbide End Mill

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
1/8"	1/4"	1/2"	2-1/2"	C8-303-04
3/16"	1/4"	5/8"	2-1/2"	C8-303-06
1/4"	1/4"	3/4"	2-1/2"	C8-303-08

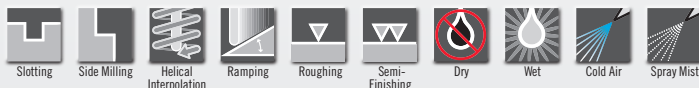
HB 2+2 Herringbone Routers



Characteristics



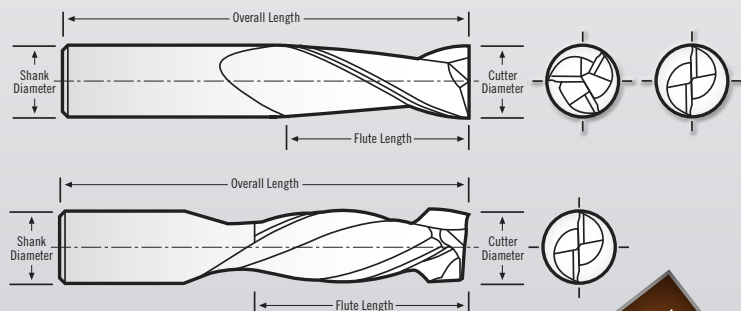
Applications



Materials



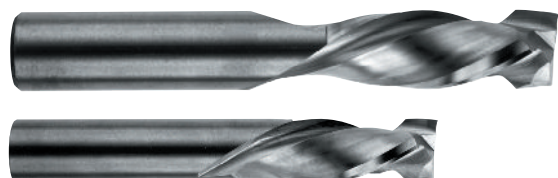
Coatings



HB Tolerances

Cutting Dia. (1/16" to 1/4") = $+0.000/-0.002$
 (9/32" to 3/4") = $+0.000/-0.003$
 Shank Dia. = $-0.0001/-0.0002$
 Flute Length (1/16" to 5/16") = $+0.030/-0.000$
 (3/8" to 3/4") = $+0.060/-0.000$
 OAL = ± 0.060

Short Upshear
Length for
Thin Materials



HB-401 2+2 Flute Short Tip Herringbone Router

Cutting Diameter	Shank Diameter	Flute Length	Upshear Length	Overall Length	Uncoated
1/4"	1/4"	3/4"	3/16"	2-1/2"	HB-401-08
3/8"	3/8"	1"	1/4"	2-1/2"	HB-401-12
1/2"	1/2"	1-1/8"	1/4"	3"	HB-401-16
5/8"	5/8"	1-5/16"	5/16"	4"	HB-401-20
3/4"	3/4"	1-5/16"	3/8"	4"	HB-401-24



HB-402 2+2 Flute Compression Herringbone Router

Cutting Diameter	Shank Diameter	Flute Length	Upshear Length	Overall Length	Uncoated
1/4"	1/4"	3/4"	1/2"	2-1/2"	HB-402-08
3/8"	3/8"	1"	5/8"	2-1/2"	HB-402-12
1/2"	1/2"	1-1/8"	9/16"	3"	HB-402-16
5/8"	5/8"	1-5/16"	3/4"	4"	HB-402-20
3/4"	3/4"	1-5/16"	3/4"	4"	HB-402-24



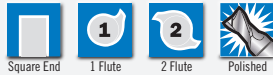
HB-404 2+2 Flute Long Length Compression Herringbone Router

Cutting Diameter	Shank Diameter	Flute Length	Upshear Length	Overall Length	Uncoated
1/2"	1/2"	1-5/16"	3/4"	3-1/2"	HB-404-16

Tuffy Grade Carbide Router Bits

PM/MPM/GTS

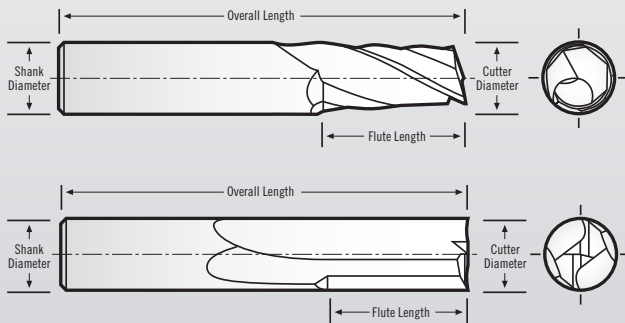
Characteristics



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. = $+0.000/-0.075$ mm
Shank Dia. = $-0.002/-0.005$ mm
Flute Length = $+1/2"/+1.500$ mm
OAL = ± 10 mm

GTS Series Tolerances

Cutting Dia. = $+0.000/-0.002$
Shank Dia. = $-0.0001/-0.0002$
Flute Length = $+0.060/-0.000$
OAL = ± 0.060



Wood & Plastics



PM 1 Flute Upshear Polished Flute Carbide Router

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
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



PMD 1 Flute Downsheat Polished Flute Carbide Router

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
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 Router

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
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



MPM 1 Flute Upshear Tuffy Grade Carbide Router Polished Flute

Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Uncoated
4mm	4mm	12mm	50mm	MPM-104-04
4mm	6mm	12mm	50mm	MPM-106-04
5mm	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



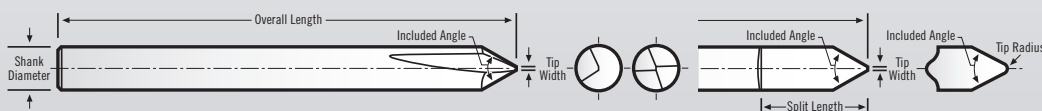
Characteristics



Applications



Materials



ET2 Plunge Tip for Drill and Engrave Engraving Tool

Tip Width	Shank Diameter	Included Angle	Split Length	Overall Length	Uncoated
.010"	1/4"	60°	—	2	ET2-01060
.020"	1/4"	60°	—	2	ET2-02060
.010"	1/4"	90°	—	2	ET2-01090
.020"	1/4"	90°	—	2	ET2-02090

NOTE: Two flute tool serves as a multipurpose tool, which can be used for engraving, chamfering, spot-drilling and countersinking.



ET3 Ball Tip Engraving Tool

Tip Radius	Shank Diameter	Included Angle	Split Length	Overall Length	Uncoated
.005"	1/4"	30°	.650"	2"	ET3-00530
.010"	1/4"	30°	.650"	2"	ET3-01030
.020"	1/4"	30°	.650"	2"	ET3-02030
.030"	1/4"	30°	.650"	2"	ET3-03030
.005"	1/4"	60°	.650"	2"	ET3-00560
.010"	1/4"	60°	.650"	2"	ET3-01060
.020"	1/4"	60°	.650"	2"	ET3-02060
.030"	1/4"	60°	.650"	2"	ET3-03060

NOTE: Ball shaped radius on the tip, excellent results for high speed engraving and 3D engraving applications



ET4 Standard Engraving Tool for Most Applications

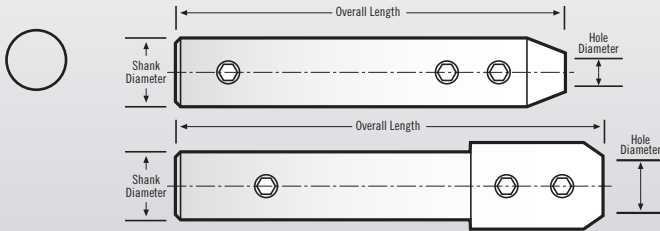
Tip Width	Shank Diameter	Included Angle	Split Length	Overall Length	Uncoated
.010"	1/4"	60°	.650"	2"	ET4-01060
.020"	1/4"	60°	.650"	2"	ET4-02060
.030"	1/4"	60°	.650"	2"	ET4-03060
.050"	1/4"	60°	.650"	2"	ET4-05060
.060"	1/4"	60°	.650"	2"	ET4-06060
.010"	1/4"	90°	.650"	2"	ET4-01090
.020"	1/4"	90°	.650"	2"	ET4-02090
.030"	1/4"	90°	.650"	2"	ET4-03090
.050"	1/4"	90°	.650"	2"	ET4-05090
.060"	1/4"	90°	.650"	2"	ET4-06090

NOTE: Utilized in a wide variety of machines, including top loading engraving machines, CNC milling machines and industrial engraving marking systems.

ET SPEEDS & FEEDS

Material	5000 RPM	7500 RPM	10,000 RPM
	in/min	in/min	in/min
NON-FERROUS METALS			
Aluminum/Aluminum Alloys	10 ipm	15 ipm	20 ipm
Brass/Bronze	10 ipm	15 ipm	20 ipm
Copper/Copper Alloys	10 ipm	15 ipm	20 ipm
Magnesium	10 ipm	15 ipm	20 ipm
COMPOSITES			
G10 Fiberglass	15 ipm	22.5 ipm	30 ipm
Graphite	15 ipm	22.5 ipm	30 ipm
Carbon Fiber	15 ipm	22.5 ipm	30 ipm
Plastics	15 ipm	22.5 ipm	30 ipm
FERROUS METALS			
Cast Iron	5 ipm	7.5 ipm	10 ipm
Steel, Low Carbon	5 ipm	7.5 ipm	10 ipm
Steel, Medium Carbon	7.5 ipm	11.25 ipm	15 ipm
Steel, Hardened	2.5 ipm	3.75 ipm	5 ipm
Stainless Steel, Soft	5 ipm	7.5 ipm	10 ipm
Stainless Steel, Hard	2.5 ipm	3.75 ipm	5 ipm
Inconel	4 ipm	6 ipm	8 ipm
Titanium, Soft	5 ipm	7.5 ipm	10 ipm
Titanium, Hard	2.5 ipm	3.75 ipm	5 ipm

Accuhold End Mill Extension Holder **ACH/MAH**



ACH Tolerances

Hole Dia. = $+0.0015/-0.0000$
 Shank Dia. = $-0.0001/-0.0003$
 OAL = ± 0.060

MAH Tolerances

Hole Dia. = $+0.004/-0.000$ mm
 Shank Dia. = $+0.000/-0.007$ mm
 OAL = ± 1.5 mm

NEW!



ACH Accuhold End Mill Ultra Precision Extension Holder

Hole Diameter	Shank Diameter	Overall Length	Screw	Uncoated
3/32"	3/8"	2-1/8"	5-40	ACH-03
1/8"	3/8"	3-1/4"	8-32	ACH-04
1/8"	3/8"	6"	8-32	ACH-04-L
5/32"	1/2"	3-1/2"	8-32	ACH-05
3/16"	1/2"	3-1/2"	8-32	ACH-06
3/16"	1/2"	5"	8-32	ACH-06-L
1/4"	5/8"	4-1/4"	10-32	ACH-08
1/4"	5/8"	6"	10-32	ACH-08-L
5/16"	3/4"	4-1/2"	1/4-28	ACH-10
3/8"	3/4"	4-1/2"	5/16-24	ACH-12
3/8"	3/4"	6"	5/16-24	ACH-12-L
7/16"	3/4"	4-1/2"	5/16-24	ACH-14
1/2"	3/4"	4-3/4"	3/8-24	ACH-16*
1/2"	1"	4-3/4"	3/8-24	ACH-16L
1/2"	1"	6"	3/8-24	ACH-16-32-L
9/16"	1"	5-1/4"	3/8-24	ACH-18
5/8"	1"	5-1/2"	3/8-24	ACH-20
3/4"	1"	5-1/4"	7/16-20	ACH-24**
3/4"	1-1/4"	6"	7/16-20	ACH-24-1.25
1"	1"	5-1/2"	7/16-20	ACH-32**

* 1" Diameter x 1.5" Long Head

**ACH-24 & ACH-32 have a 1-1/4" diameter x 2-1/4" long head and hole depth of only 2" deep

Metric End Mill Extension Holder with Inch Shank.

Use this precision end mill extension holder to convert your inch tool holder to be able to hold onto metric shanks. This is the tightest tolerance end mill extension used to reach into parts that need longer length. Precision end mills need precision holders to eliminate runout (TIR) and reduce tool breakage. Convert your inch tool holder to metric sizes.



METRIC



MAH Precision Extension Holder for Metric Size End Mill

Hole Diameter	Shank Diameter	Overall Length	Screw	Uncoated
3mm	10mm	82.5mm		MAH-03
4mm	12mm	110mm		MAH-04
5mm	12mm	110mm		MAH-05
6mm	16mm	125mm		MAH-06
8mm	20mm	135mm		MAH-08
10mm	20mm	135mm		MAH-10
12mm	25mm	150mm		MAH-12*

* 1" Diameter x 1.5" Long Head



ACH-M Metric to Inch End Mill Ultra Precision Extension Holder

Hole Diameter	Shank Diameter	Overall Length	Screw	Uncoated
3mm	3/8"	3.25	6-32	ACH-M3
4mm	1/2"	3-1/2"	8-32	ACH-M4
5mm	1/2"	3-1/2"	10-32	ACH-M5
6mm	5/8"	4-1/4"	10-32	ACH-M6
7mm	5/8"	4-1/4"	10-32	ACH-M7
8mm	3/4"	4-1/2"	1/4-28	ACH-M8
9mm	3/4"	4-1/2"	5/16-24	ACH-M9
10mm	3/4"	4-1/2"	5/16-24	ACH-M10
11mm	3/4"	4-1/2"	5/16-24	ACH-M11
12mm	3/4"	4-3/4"	3/8-24	ACH-M12*
12mm	1"	4-3/4"	3/8-24	ACH-M12-1
13mm	1"	4-3/4"	3/8-24	ACH-M13
14mm	1"	5-1/2"	3/8-24	ACH-M14
15mm	1"	5-1/2"	3/8-24	ACH-M15
16mm	1"	5-1/2"	3/8-24	ACH-M16
18mm	1"	5-1/4"	7/16-20	ACH-M18**
20mm	1"	6"	7/16-20	ACH-M20-1
20mm	1-1/4"	6"	7/16-20	ACH-M20
25mm	1"	6-1/2"	7/16-20	ACH-M25**

*ACH-M12 has a 1" diameter x 1.5" long head

**ACH-M18 & ACH-M25 have a 1-1/4" diameter x 2-1/4" long head and hole depth of only 2" deep

SPEEDS & FEEDS

WOOD SERIES SPEEDS & FEEDS

Material	RPM (1/4")	Feed Inches/Minute
Wood		
Hardwoods	18,000	180–250
Softwoods	18,000	180–250
MDF	18,000	150–250
Laminated Materials	18,000	150–250

General Guidelines

- Select the shortest flute length possible for the application. Shorter flute length router tools offer better stability and increased feed rates.
- Select the largest diameter tool for the job. Increasing diameter by 10% provides 25% more strength.

- Adjust RPM and feed rate to reduce vibration. Vibration will cause poor finish and chip tools. Too slow a feed rate can also cause vibration and poor tool life.
- Regular cleaning of tool holders and collets help ensure the tool's performance and life.
- Securing the part as rigidly as possible will improve finishes and tool life.

Material	RPM (1/4")	Feed Inches/Minute
Plastics, Others		
Solid Surface	15,300	70–130
Fiberglass	15,300	80–150
Phenolic	15,300	80–150
Aluminum (Soft)	18,000	90–120
Aluminum (Aircraft Grade)	18,000	180–230
Copper	9,200	45–60
Foam	18,000	150–300
Plastics (Soft)	18,000	180–250
Plastics (Hard)	18,000	150–200

Wood Tools in Other Sections

MINIATURES

(See Miniatures Applications)



89

SAWS

(See Saws Applications)



121

S1 / MS1 301

2, 3 and 4 Flute



36

A1 / MA1 201

(See Aluminum Applications)



18

C1 201/301

2 & 3 Flute on 1/4" Shank
(See Multiple Applications)



38

SB / B 201/203 MSB / MB 201/203

2 Flute Ball End
(See Multiple Applications)



110

PCD 203 Routers

2 Flute PCD Diamond
(See Composites)



71

PM / MPM / PMD Routers

Single Flute



145