



# Standard and Custom Cutting Tools

Customer Focused, Employee Driven®





## CONTACT US

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## ADDRESS

P.O. Box 549  
125 Main Street N.  
Hutchinson, MN 55350

## OFFICE HOURS

Monday - Friday  
8AM - 4PM Central

## ORDERING INFO

When it comes to buying cutting tools, we trust our customers to know the way that works best for them to purchase. That's why MITGI offers flexibility in purchasing. Customers can buy direct or through distributors they trust to deliver additional service and support. Contact us for more information.

Visit [www.mitgi.us](http://www.mitgi.us) to browse our online catalog, send a quote request, or contact us for purchasing options.

**Prices subject to change.**

## MIDWEST INDUSTRIAL TOOL GRINDING, INC.

Midwest Industrial Tool Grinding, Inc. (MITGI) manufactures and markets standard and custom micro cutting tools. Headquartered in Hutchinson, Minnesota, MITGI combines innovation with quality and repeatability to produce tools needed to power precision manufacturers. MITGI tools are the product of choice for many R&D departments and manufacturers that serve medical device manufacturing, automotive, aerospace, firearms, and other industries. Founded in 1993 as a re-grinding company and custom cutting tool manufacturer, MITGI has grown and expanded, but the focus has remained the same: quality, precision, and personalized customer service.

Many customers first came to MITGI to find a source for tools that other manufacturers could not make or when available lead times were too long. MITGI is good at solving problems like these and we like knowing that the tools we make help to empower innovation and performance in manufacturing facilities across the U.S. and throughout the world.

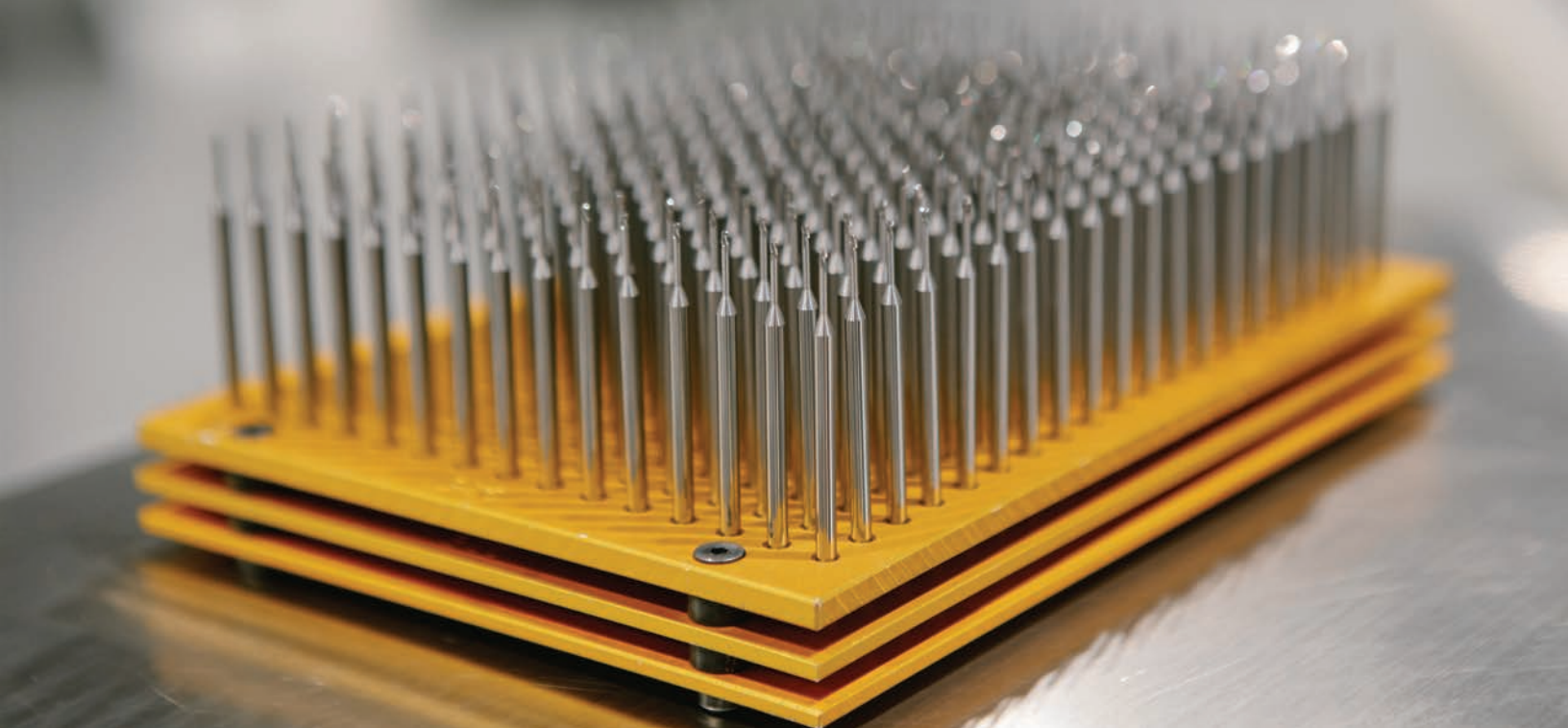
## CUSTOMER FOCUSED, EMPLOYEE DRIVEN®

Building a business is possible only when everyone shares the same goal: meeting the needs of our customers. For more than 30 years, MITGI employees have worked to achieve this goal every day. With an eye for innovation, customer-centric service, and attention to detail, MITGI employees ensure that we meet or exceed the expectations of our customers each day.

We look forward to continuing to work with our customers to manufacture and utilize quality custom and standard tools.

Rev. 04/2026





## MANUFACTURED BY MITGI: QUICK TURN SPECIALS

We strive to provide fast service on every order we manufacture. We start with fast communication and turnaround times on quoting, order placement, tool development and print approval. We continue fast service in production, coating, quality, and packaging. From start to finish, most specials can be manufactured in two weeks or less. Some custom tools can be made even faster, often within a three day turnaround.

In general, tools that are similar to our standard tool lines are more likely to qualify for a condensed timeline. Contact our team to discuss expedited lead time options on any order.

## QUICK TURN TOOL CATEGORIES



Tool categories that may qualify for QUICK TURN timelines are marked throughout the catalog with the QUICK TURN icon. Depending on the tool design, others may qualify

as well (see p. 206-207 for more details about form tools, larger diameter tools, and complex tools).

### MICRO TOOLS (1/8" shank)

- Micro End Mills
- Micro Drills
- Micro Reamers
- Mold Tools
- Step Drills



# QUICK TURN SPECIALS

## GETTING STARTED

1. Send us the specs for your custom tool. Options that provide useful tool information include: existing tool print, a completed Quote Form, sketch, or photo.
2. Ask for a QUICK TURN REVIEW. We will review the tool info, the current schedule, and determine how quickly the tool can be made.
3. If the tool qualifies, your tool will be marked for QUICK TURN. Within a few hours, you will receive a tool print for review and the order acknowledgement. Return the tool print quickly to maintain estimated ship date.

QUICK TURN schedule availability may vary and capacity is limited.

## Ready to get started?

**Contact us:**  
**Phone: (320) 455-0535**  
**Email: [info@mitgi.us](mailto:info@mitgi.us)**  
**Web: [www.mitgi.us](http://www.mitgi.us)**




**MICRO END MILLS (2, 3, 4 Flutes)**

Square	6-12
Extended Reach Square	14-19
Corner Radius	20-29
Extended Reach Corner Radius	30-41
Ball	42-46
Extended Reach Ball	48-53

**MICRO END MILLS (5 Flutes)**

Square	54-58
Extended Reach Square	60-65
Corner Radius	66-73
Extended Reach Corner Radius	74-79

**METRIC MICRO END MILLS**

Square	80-81
Ball	82-83
Square (metric shank)	84-85
Ball (metric shank)	86-87

**VARIABLE HELIX MICRO END MILLS**

Square	88-89
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Ball	94-95


**MICRO DRILLS**

118° and 140° 5x, 8x, 12x, 15x Flute Length	96-103
118° and 140° 5x, 8x, 12x, 15x Flute Length (metric)	104-107

**COOLANT THRU MICRO DRILLS**

140° 8x and 12x Flute Length	108
140° 8x and 12x Flute Length (metric)	109


**REAMERS**

8x Flute Length +0.0002 Tolerance	110
8x Flute Length, 12x Reach +0.0002 Tolerance	111

**METRIC REAMERS**

8x Flute Length +0.005 mm Tolerance	112
8x Flute Length, 12x Reach +0.005 mm Tolerance	113


**DRAFTED MOLD TOOLS**

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Corner Radius, 2°, 3°, 5°	118-123
Ball, 2°, 3°, 5°	124-125

**CLEARANCE CUTTER MOLD TOOLS**

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**TAPERED RIB CUTTER MOLD TOOLS**

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## THREAD MILLS

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## COOLANT THRU THREAD MILLS

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NPT Full Form Helical	170
Metric Full Form Helical	171



## END MILLS

30° Helix Square, 4 Flute	172
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## CUTTERS

Square Keyseat	182
Corner Radius Keyseat	184-185
Full Radius Keyseat	186
45° Chamfer Keyseat	187
60 and 90° Dovetail	188-189
30° and 45° Chamfer	190

## CUTTERS

30°, 60°, 90° Engraving Tools	192-193
7° Deburring Knives, HSS/Carbide	191
10° Deburring Knives, HSS/Carbide	191



## PLASTIC CUTTERS

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Square Upcut, 2 Flute 3x, 5x, 8x Length of Cut	197-199
Square Straight Flute	200

## SAWS

3/8" Brazed Saws	202
1/2" Brazed Saws	203
3/4" Brazed Saws	204
1" Brazed Saws	205



# S10

# Square Micro End Mills

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.003	0.0045	0.125	1.50	S10-003-2-SST	N/A	N/A
0.004	0.006	0.125	1.50	S10-004-2-SST	N/A	N/A
0.005	0.0075	0.125	1.50	S10-005-2-SST	N/A	N/A
0.006	0.009	0.125	1.50	S10-006-2-SST	N/A	N/A
0.007	0.0105	0.125	1.50	S10-007-2-SST	N/A	N/A
0.008	0.012	0.125	1.50	S10-008-2-SST	S10-008-3-SST	S10-008-4-SST
0.009	0.0135	0.125	1.50	S10-009-2-SST	S10-009-3-SST	S10-009-4-SST
0.010	0.015	0.125	1.50	S10-010-2-SST	S10-010-3-SST	S10-010-4-SST
0.011	0.0165	0.125	1.50	S10-011-2-SST	S10-011-3-SST	S10-011-4-SST
0.012	0.018	0.125	1.50	S10-012-2-SST	S10-012-3-SST	S10-012-4-SST
0.013	0.0195	0.125	1.50	S10-013-2-SST	S10-013-3-SST	S10-013-4-SST
0.014	0.021	0.125	1.50	S10-014-2-SST	S10-014-3-SST	S10-014-4-SST
0.015 (1/64)	0.0225	0.125	1.50	S10-015-2-SST	S10-015-3-SST	S10-015-4-SST
0.016	0.024	0.125	1.50	S10-016-2-SST	S10-016-3-SST	S10-016-4-SST
0.017	0.0255	0.125	1.50	S10-017-2-SST	S10-017-3-SST	S10-017-4-SST
0.018	0.027	0.125	1.50	S10-018-2-SST	S10-018-3-SST	S10-018-4-SST
0.019	0.0285	0.125	1.50	S10-019-2-SST	S10-019-3-SST	S10-019-4-SST
0.020	0.030	0.125	1.50	S10-020-2-SST	S10-020-3-SST	S10-020-4-SST
0.021	0.0315	0.125	1.50	S10-021-2-SST	S10-021-3-SST	S10-021-4-SST
0.022	0.033	0.125	1.50	S10-022-2-SST	S10-022-3-SST	S10-022-4-SST
0.023	0.0345	0.125	1.50	S10-023-2-SST	S10-023-3-SST	S10-023-4-SST
0.024	0.036	0.125	1.50	S10-024-2-SST	S10-024-3-SST	S10-024-4-SST
0.025	0.0375	0.125	1.50	S10-025-2-SST	S10-025-3-SST	S10-025-4-SST
0.026	0.039	0.125	1.50	S10-026-2-SST	S10-026-3-SST	S10-026-4-SST
0.027	0.0405	0.125	1.50	S10-027-2-SST	S10-027-3-SST	S10-027-4-SST
0.028	0.042	0.125	1.50	S10-028-2-SST	S10-028-3-SST	S10-028-4-SST
0.029	0.0435	0.125	1.50	S10-029-2-SST	S10-029-3-SST	S10-029-4-SST
0.030	0.045	0.125	1.50	S10-030-2-SST	S10-030-3-SST	S10-030-4-SST
0.031 (1/32)	0.0465	0.125	1.50	S10-031-2-SST	S10-031-3-SST	S10-031-4-SST
0.035	0.0525	0.125	1.50	S10-035-2-SST	S10-035-3-SST	S10-035-4-SST
0.039 (1mm)	0.059	0.125	1.50	S10-039-2-SST	S10-039-3-SST	S10-039-4-SST
0.040	0.060	0.125	1.50	S10-040-2-SST	S10-040-3-SST	S10-040-4-SST
0.045	0.0675	0.125	1.50	S10-045-2-SST	S10-045-3-SST	S10-045-4-SST
0.047 (3/64)	0.0705	0.125	1.50	S10-047-2-SST	S10-047-3-SST	S10-047-4-SST
0.050	0.075	0.125	1.50	S10-050-2-SST	S10-050-3-SST	S10-050-4-SST
0.055	0.0825	0.125	1.50	S10-055-2-SST	S10-055-3-SST	S10-055-4-SST
0.060	0.090	0.125	1.50	S10-060-2-SST	S10-060-3-SST	S10-060-4-SST
0.062 (1/16)	0.093	0.125	1.50	S10-062-2-SST	S10-062-3-SST	S10-062-4-SST
0.065	0.0975	0.125	1.50	S10-065-2-SST	S10-065-3-SST	S10-065-4-SST
0.070	0.105	0.125	1.50	S10-070-2-SST	S10-070-3-SST	S10-070-4-SST
0.075	0.1125	0.125	1.50	S10-075-2-SST	S10-075-3-SST	S10-075-4-SST
0.078 (5/64)	0.117	0.125	1.50	S10-078-2-SST	S10-078-3-SST	S10-078-4-SST
0.080	0.120	0.125	1.50	S10-080-2-SST	S10-080-3-SST	S10-080-4-SST



# Square Micro End Mills

S10

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.085	0.1275	0.125	1.50	S10-085-2-SST	S10-085-3-SST	S10-085-4-SST
0.090	0.135	0.125	1.50	S10-090-2-SST	S10-090-3-SST	S10-090-4-SST
0.093 (3/32)	0.1395	0.125	1.50	S10-093-2-SST	S10-093-3-SST	S10-093-4-SST
0.095	0.1425	0.125	1.50	S10-095-2-SST	S10-095-3-SST	S10-095-4-SST
0.100	0.150	0.125	1.50	S10-100-2-SST	S10-100-3-SST	S10-100-4-SST
0.105	0.1575	0.125	1.50	S10-105-2-SST	S10-105-3-SST	S10-105-4-SST
0.110	0.165	0.125	1.50	S10-110-2-SST	S10-110-3-SST	S10-110-4-SST
0.115	0.1725	0.125	1.50	S10-115-2-SST	S10-115-3-SST	S10-115-4-SST
0.118 (3mm)	0.177	0.125	1.50	S10-118-2-SST	S10-118-3-SST	S10-118-4-SST
0.120	0.180	0.125	1.50	S10-120-2-SST	S10-120-3-SST	S10-120-4-SST
0.125 (1/8)	0.1875	0.125	1.50	S10-125-2-SST	S10-125-3-SST	S10-125-4-SST

FLUTES  
2,3,4

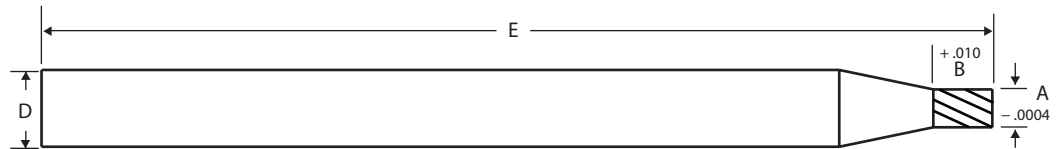
1.5X  
LENGTH  
OF CUT

+

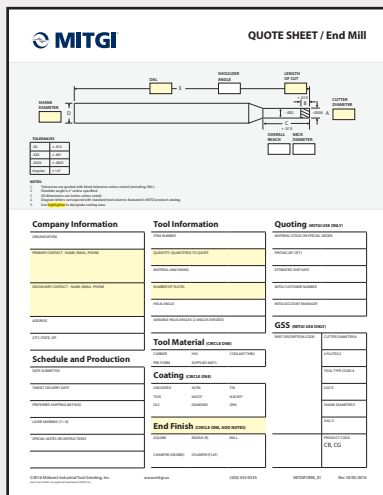
SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



## Custom End Mills



Can't find a tool to meet your exact specifications?  
Specials or modified standards may be the answer.

### MANUFACTURED BY MITGI

- Shank diameter: 3mm – 1.250 in
- Tolerances and number of flutes vary by design
- End finishes: square, ball, corner radius, chamfer
- Extended reach and extended length of cut options available
- Coated or uncoated
- Specials usually available in two weeks or less

Quote forms available on our website and upon request.  
Contact us for an estimate today.



**FLUTES  
2,3,4**
**3X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.003	0.009	0.125	1.50	S08-003-2-SEM	N/A	N/A
0.004	0.012	0.125	1.50	S08-004-2-SEM	N/A	N/A
0.005	0.015	0.125	1.50	S08-005-2-SEM	N/A	N/A
0.006	0.018	0.125	1.50	S08-006-2-SEM	N/A	N/A
0.007	0.021	0.125	1.50	S08-007-2-SEM	N/A	N/A
0.008	0.024	0.125	1.50	S08-008-2-SEM	N/A	N/A
0.009	0.027	0.125	1.50	S08-009-2-SEM	N/A	N/A
0.010	0.030	0.125	1.50	S08-010-2-SEM	S08-010-3-SEM	S08-010-4-SEM
0.011	0.033	0.125	1.50	S08-011-2-SEM	S08-011-3-SEM	S08-011-4-SEM
0.012	0.036	0.125	1.50	S08-012-2-SEM	S08-012-3-SEM	S08-012-4-SEM
0.013	0.039	0.125	1.50	S08-013-2-SEM	S08-013-3-SEM	S08-013-4-SEM
0.014	0.042	0.125	1.50	S08-014-2-SEM	S08-014-3-SEM	S08-014-4-SEM
0.015 (1/64)	0.045	0.125	1.50	S08-015-2-SEM	S08-015-3-SEM	S08-015-4-SEM
0.016	0.048	0.125	1.50	S08-016-2-SEM	S08-016-3-SEM	S08-016-4-SEM
0.017	0.051	0.125	1.50	S08-017-2-SEM	S08-017-3-SEM	S08-017-4-SEM
0.018	0.054	0.125	1.50	S08-018-2-SEM	S08-018-3-SEM	S08-018-4-SEM
0.019	0.057	0.125	1.50	S08-019-2-SEM	S08-019-3-SEM	S08-019-4-SEM
0.020	0.060	0.125	1.50	S08-020-2-SEM	S08-020-3-SEM	S08-020-4-SEM
0.021	0.063	0.125	1.50	S08-021-2-SEM	S08-021-3-SEM	S08-021-4-SEM
0.022	0.066	0.125	1.50	S08-022-2-SEM	S08-022-3-SEM	S08-022-4-SEM
0.023	0.069	0.125	1.50	S08-023-2-SEM	S08-023-3-SEM	S08-023-4-SEM
0.024	0.072	0.125	1.50	S08-024-2-SEM	S08-024-3-SEM	S08-024-4-SEM
0.025	0.075	0.125	1.50	S08-025-2-SEM	S08-025-3-SEM	S08-025-4-SEM
0.026	0.078	0.125	1.50	S08-026-2-SEM	S08-026-3-SEM	S08-026-4-SEM
0.027	0.081	0.125	1.50	S08-027-2-SEM	S08-027-3-SEM	S08-027-4-SEM
0.028	0.084	0.125	1.50	S08-028-2-SEM	S08-028-3-SEM	S08-028-4-SEM
0.029	0.087	0.125	1.50	S08-029-2-SEM	S08-029-3-SEM	S08-029-4-SEM
0.030	0.090	0.125	1.50	S08-030-2-SEM	S08-030-3-SEM	S08-030-4-SEM
0.031 (1/32)	0.093	0.125	1.50	S08-031-2-SEM	S08-031-3-SEM	S08-031-4-SEM
0.035	0.105	0.125	1.50	S08-035-2-SEM	S08-035-3-SEM	S08-035-4-SEM
0.039 (1mm)	0.117	0.125	1.50	S08-039-2-SEM	S08-039-3-SEM	S08-039-4-SEM
0.040	0.120	0.125	1.50	S08-040-2-SEM	S08-040-3-SEM	S08-040-4-SEM
0.042	0.126	0.125	1.50	S08-042-2-SEM	S08-042-3-SEM	S08-042-4-SEM
0.045	0.135	0.125	1.50	S08-045-2-SEM	S08-045-3-SEM	S08-045-4-SEM
0.047 (3/64)	0.141	0.125	1.50	S08-047-2-SEM	S08-047-3-SEM	S08-047-4-SEM
0.050	0.150	0.125	1.50	S08-050-2-SEM	S08-050-3-SEM	S08-050-4-SEM
0.055	0.165	0.125	1.50	S08-055-2-SEM	S08-055-3-SEM	S08-055-4-SEM
0.060	0.180	0.125	1.50	S08-060-2-SEM	S08-060-3-SEM	S08-060-4-SEM
0.062 (1/16)	0.187	0.125	1.50	S08-062-2-SEM	S08-062-3-SEM	S08-062-4-SEM
0.063	0.189	0.125	1.50	S08-063-2-SEM	S08-063-3-SEM	S08-063-4-SEM
0.065	0.195	0.125	1.50	S08-065-2-SEM	S08-065-3-SEM	S08-065-4-SEM
0.070	0.210	0.125	1.50	S08-070-2-SEM	S08-070-3-SEM	S08-070-4-SEM
0.075	0.225	0.125	1.50	S08-075-2-SEM	S08-075-3-SEM	S08-075-4-SEM
0.078 (5/64)	0.234	0.125	1.50	S08-078-2-SEM	S08-078-3-SEM	S08-078-4-SEM
0.080	0.240	0.125	1.50	S08-080-2-SEM	S08-080-3-SEM	S08-080-4-SEM

## Square Micro End Mills

S08

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.085	0.255	0.125	1.50	S08-085-2-SEM	S08-085-3-SEM	S08-085-4-SEM
0.090	0.270	0.125	1.50	S08-090-2-SEM	S08-090-3-SEM	S08-090-4-SEM
0.093 (3/32)	0.279	0.125	1.50	S08-093-2-SEM	S08-093-3-SEM	S08-093-4-SEM
0.095	0.285	0.125	1.50	S08-095-2-SEM	S08-095-3-SEM	S08-095-4-SEM
0.100	0.300	0.125	1.50	S08-100-2-SEM	S08-100-3-SEM	S08-100-4-SEM
0.105	0.315	0.125	1.50	S08-105-2-SEM	S08-105-3-SEM	S08-105-4-SEM
0.110	0.330	0.125	1.50	S08-110-2-SEM	S08-110-3-SEM	S08-110-4-SEM
0.115	0.345	0.125	1.50	S08-115-2-SEM	S08-115-3-SEM	S08-115-4-SEM
0.118 (3mm)	0.354	0.125	1.50	S08-118-2-SEM	S08-118-3-SEM	S08-118-4-SEM
0.120	0.360	0.125	1.50	S08-120-2-SEM	S08-120-3-SEM	S08-120-4-SEM
0.125 (1/8)	0.375	0.125	1.50	S08-125-2-SEM	S08-125-3-SEM	S08-125-4-SEM

FLUTES  
2,3,4

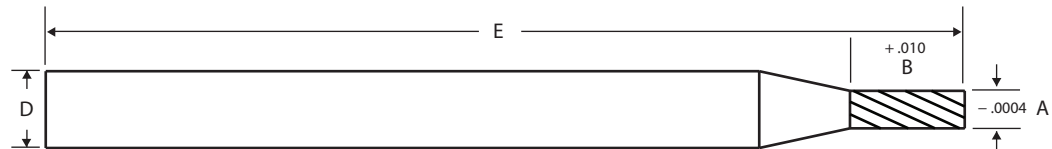
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



### MANUFACTURED BY MITGI: Approval Based Sample Program

**No one makes better tools than MITGI.  
We're so confident that we encourage you to  
give them a try on approval.**

In most cases, the Approval Based Sample Program allows you to order a standard tool and give it a try before placing the full order. This lets you see the catalog tool in action, allows you to compare it to the tools of our competitors, and helps determine whether it matches the specifications required for your project.

Ready to get started? See page 2 for contact information.



FLUTES  
2,3,4

5X  
LENGTH  
OF CUT

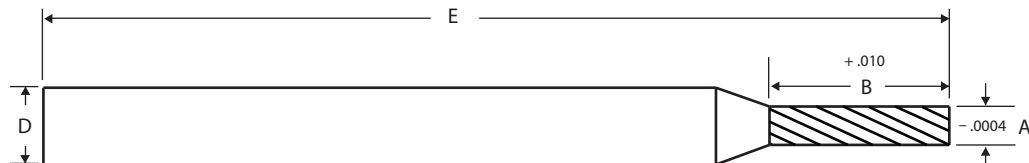
+

SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.010	0.050	0.125	2.50	S62-010-2-SQ5X	N/A	N/A
0.015 (1/64)	0.075	0.125	2.50	S62-015-2-SQ5X	S62-015-3-SQ5X	S62-015-4-SQ5X
0.020	0.100	0.125	2.50	S62-020-2-SQ5X	S62-020-3-SQ5X	S62-020-4-SQ5X
0.025	0.125	0.125	2.50	S62-025-2-SQ5X	S62-025-3-SQ5X	S62-025-4-SQ5X
0.030	0.150	0.125	2.50	S62-030-2-SQ5X	S62-030-3-SQ5X	S62-030-4-SQ5X
0.031 (1/32)	0.155	0.125	2.50	S62-031-2-SQ5X	S62-031-3-SQ5X	S62-031-4-SQ5X
0.035	0.175	0.125	2.50	S62-035-2-SQ5X	S62-035-3-SQ5X	S62-035-4-SQ5X
0.039 (1mm)	0.195	0.125	2.50	S62-039-2-SQ5X	S62-039-3-SQ5X	S62-039-4-SQ5X
0.040	0.200	0.125	2.50	S62-040-2-SQ5X	S62-040-3-SQ5X	S62-040-4-SQ5X
0.045	0.225	0.125	2.50	S62-045-2-SQ5X	S62-045-3-SQ5X	S62-045-4-SQ5X
0.047 (3/64)	0.235	0.125	2.50	S62-047-2-SQ5X	S62-047-3-SQ5X	S62-047-4-SQ5X
0.050	0.250	0.125	2.50	S62-050-2-SQ5X	S62-050-3-SQ5X	S62-050-4-SQ5X
0.055	0.275	0.125	2.50	S62-055-2-SQ5X	S62-055-3-SQ5X	S62-055-4-SQ5X
0.060	0.300	0.125	2.50	S62-060-2-SQ5X	S62-060-3-SQ5X	S62-060-4-SQ5X
0.062 (1/16)	0.310	0.125	2.50	S62-062-2-SQ5X	S62-062-3-SQ5X	S62-062-4-SQ5X
0.065	0.325	0.125	2.50	S62-065-2-SQ5X	S62-065-3-SQ5X	S62-065-4-SQ5X
0.070	0.350	0.125	2.50	S62-070-2-SQ5X	S62-070-3-SQ5X	S62-070-4-SQ5X
0.075	0.375	0.125	2.50	S62-075-2-SQ5X	S62-075-3-SQ5X	S62-075-4-SQ5X
0.078 (5/64)	0.390	0.125	2.50	S62-078-2-SQ5X	S62-078-3-SQ5X	S62-078-4-SQ5X
0.080	0.400	0.125	2.50	S62-080-2-SQ5X	S62-080-3-SQ5X	S62-080-4-SQ5X
0.085	0.425	0.125	2.50	S62-085-2-SQ5X	S62-085-3-SQ5X	S62-085-4-SQ5X
0.090	0.450	0.125	2.50	S62-090-2-SQ5X	S62-090-3-SQ5X	S62-090-4-SQ5X
0.093 (3/32)	0.465	0.125	2.50	S62-093-2-SQ5X	S62-093-3-SQ5X	S62-093-4-SQ5X
0.095	0.475	0.125	2.50	S62-095-2-SQ5X	S62-095-3-SQ5X	S62-095-4-SQ5X
0.100	0.500	0.125	2.50	S62-100-2-SQ5X	S62-100-3-SQ5X	S62-100-4-SQ5X
0.105	0.525	0.125	2.50	S62-105-2-SQ5X	S62-105-3-SQ5X	S62-105-4-SQ5X
0.118 (3mm)	0.590	0.125	2.50	S62-118-2-SQ5X	S62-118-3-SQ5X	S62-118-4-SQ5X
0.125 (1/8)	0.625	0.125	2.50	S62-125-2-SQ5X	S62-125-3-SQ5X	S62-125-4-SQ5X



# Square Micro End Mills

**S63**

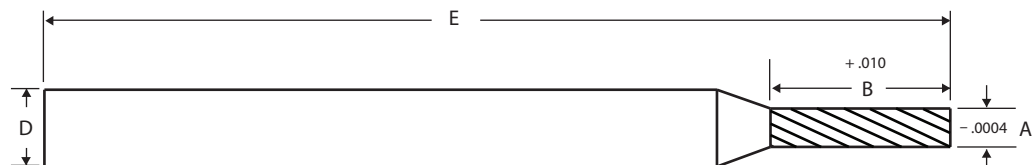
Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.010	0.080	0.125	2.50	S63-010-2-SQ8X	N/A	N/A
0.015 (1/64)	0.120	0.125	2.50	S63-015-2-SQ8X	S63-015-3-SQ8X	S63-015-4-SQ8X
0.020	0.160	0.125	2.50	S63-020-2-SQ8X	S63-020-3-SQ8X	S63-020-4-SQ8X
0.025	0.200	0.125	2.50	S63-025-2-SQ8X	S63-025-3-SQ8X	S63-025-4-SQ8X
0.030	0.240	0.125	2.50	S63-030-2-SQ8X	S63-030-3-SQ8X	S63-030-4-SQ8X
0.031 (1/32)	0.248	0.125	2.50	S63-031-2-SQ8X	S63-031-3-SQ8X	S63-031-4-SQ8X
0.035	0.280	0.125	2.50	S63-035-2-SQ8X	S63-035-3-SQ8X	S63-035-4-SQ8X
0.039 (1mm)	0.312	0.125	2.50	S63-039-2-SQ8X	S63-039-3-SQ8X	S63-039-4-SQ8X
0.040	0.320	0.125	2.50	S63-040-2-SQ8X	S63-040-3-SQ8X	S63-040-4-SQ8X
0.045	0.360	0.125	2.50	S63-045-2-SQ8X	S63-045-3-SQ8X	S63-045-4-SQ8X
0.047 (3/64)	0.376	0.125	2.50	S63-047-2-SQ8X	S63-047-3-SQ8X	S63-047-4-SQ8X
0.050	0.400	0.125	2.50	S63-050-2-SQ8X	S63-050-3-SQ8X	S63-050-4-SQ8X
0.055	0.440	0.125	2.50	S63-055-2-SQ8X	S63-055-3-SQ8X	S63-055-4-SQ8X
0.060	0.480	0.125	2.50	S63-060-2-SQ8X	S63-060-3-SQ8X	S63-060-4-SQ8X
0.062 (1/16)	0.496	0.125	2.50	S63-062-2-SQ8X	S63-062-3-SQ8X	S63-062-4-SQ8X
0.065	0.520	0.125	2.50	S63-065-2-SQ8X	S63-065-3-SQ8X	S63-065-4-SQ8X
0.070	0.560	0.125	2.50	S63-070-2-SQ8X	S63-070-3-SQ8X	S63-070-4-SQ8X
0.075	0.600	0.125	2.50	S63-075-2-SQ8X	S63-075-3-SQ8X	S63-075-4-SQ8X
0.078 (5/64)	0.624	0.125	2.50	S63-078-2-SQ8X	S63-078-3-SQ8X	S63-078-4-SQ8X
0.080	0.640	0.125	2.50	S63-080-2-SQ8X	S63-080-3-SQ8X	S63-080-4-SQ8X
0.085	0.680	0.125	2.50	S63-085-2-SQ8X	S63-085-3-SQ8X	S63-085-4-SQ8X
0.090	0.720	0.125	2.50	S63-090-2-SQ8X	S63-090-3-SQ8X	S63-090-4-SQ8X
0.093 (3/32)	0.744	0.125	2.50	S63-093-2-SQ8X	S63-093-3-SQ8X	S63-093-4-SQ8X
0.095	0.760	0.125	2.50	S63-095-2-SQ8X	S63-095-3-SQ8X	S63-095-4-SQ8X
0.100	0.800	0.125	2.50	S63-100-2-SQ8X	S63-100-3-SQ8X	S63-100-4-SQ8X
0.109 (7/64)	0.872	0.125	2.50	S63-109-2-SQ8X	S63-109-3-SQ8X	S63-109-4-SQ8X
0.118 (3mm)	0.944	0.125	2.50	S63-118-2-SQ8X	S63-118-3-SQ8X	S63-118-4-SQ8X
0.125 (1/8)	1.000	0.125	2.50	S63-125-2-SQ8X	S63-125-3-SQ8X	S63-125-4-SQ8X

**FLUTES  
2,3,4**

**8X  
LENGTH  
OF CUT**

**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS



## CONTACT US

**P. 2**

MITGI is open from 8 AM - 4 PM Central Time. We can be reached any time by email or web. See page 2 for more information about ordering and ways to contact us.



FLUTES  
2,3,4

12X  
LENGTH  
OF CUT

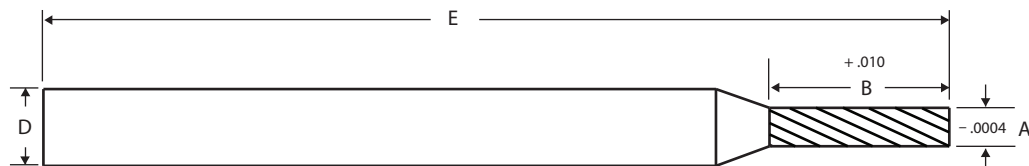
+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.015 (1/64)	0.180	0.125	2.50	S64-015-2-SQ12X	S64-015-3-SQ12X	S64-015-4-SQ12X
0.020	0.240	0.125	2.50	S64-020-2-SQ12X	S64-020-3-SQ12X	S64-020-4-SQ12X
0.025	0.300	0.125	2.50	S64-025-2-SQ12X	S64-025-3-SQ12X	S64-025-4-SQ12X
0.030	0.360	0.125	2.50	S64-030-2-SQ12X	S64-030-3-SQ12X	S64-030-4-SQ12X
0.031 (1/32)	0.372	0.125	2.50	S64-031-2-SQ12X	S64-031-3-SQ12X	S64-031-4-SQ12X
0.035	0.420	0.125	2.50	S64-035-2-SQ12X	S64-035-3-SQ12X	S64-035-4-SQ12X
0.039 (1mm)	0.468	0.125	2.50	S64-039-2-SQ12X	S64-039-3-SQ12X	S64-039-4-SQ12X
0.040	0.480	0.125	2.50	S64-040-2-SQ12X	S64-040-3-SQ12X	S64-040-4-SQ12X
0.045	0.540	0.125	2.50	S64-045-2-SQ12X	S64-045-3-SQ12X	S64-045-4-SQ12X
0.047 (3/64)	0.564	0.125	2.50	S64-047-2-SQ12X	S64-047-3-SQ12X	S64-047-4-SQ12X
0.050	0.600	0.125	2.50	S64-050-2-SQ12X	S64-050-3-SQ12X	S64-050-4-SQ12X
0.055	0.660	0.125	2.50	S64-055-2-SQ12X	S64-055-3-SQ12X	S64-055-4-SQ12X
0.060	0.720	0.125	2.50	S64-060-2-SQ12X	S64-060-3-SQ12X	S64-060-4-SQ12X
0.062 (1/16)	0.744	0.125	2.50	S64-062-2-SQ12X	S64-062-3-SQ12X	S64-062-4-SQ12X
0.065	0.780	0.125	2.50	S64-065-2-SQ12X	S64-065-3-SQ12X	S64-065-4-SQ12X
0.070	0.840	0.125	2.50	S64-070-2-SQ12X	S64-070-3-SQ12X	S64-070-4-SQ12X
0.075	0.900	0.125	2.50	S64-075-2-SQ12X	S64-075-3-SQ12X	S64-075-4-SQ12X
0.078 (5/64)	0.936	0.125	2.50	S64-078-2-SQ12X	S64-078-3-SQ12X	S64-078-4-SQ12X
0.080	0.960	0.125	2.50	S64-080-2-SQ12X	S64-080-3-SQ12X	S64-080-4-SQ12X
0.085	1.020	0.125	2.50	S64-085-2-SQ12X	S64-085-3-SQ12X	S64-085-4-SQ12X
0.090	1.080	0.125	2.50	S64-090-2-SQ12X	S64-090-3-SQ12X	S64-090-4-SQ12X
0.093 (3/32)	1.116	0.125	2.50	S64-093-2-SQ12X	S64-093-3-SQ12X	S64-093-4-SQ12X
0.095	1.140	0.125	2.50	S64-095-2-SQ12X	S64-095-3-SQ12X	S64-095-4-SQ12X
0.100	1.200	0.125	2.50	S64-100-2-SQ12X	S64-100-3-SQ12X	S64-100-4-SQ12X
0.118 (3mm)	1.416	0.125	2.50	S64-118-2-SQ12X	S64-118-3-SQ12X	S64-118-4-SQ12X
0.125 (1/8)	1.500	0.125	2.50	S64-125-2-SQ12X	S64-125-3-SQ12X	S64-125-4-SQ12X





## MANUFACTURED BY MITGI: Overall Lengths for Swiss-type Tooling

On-site manufacturing provides MITGI with many advantages, one of which includes the ability to quickly change the overall length of standard tools. For shops utilizing Swiss-type machines, a shorter overall length than offered as part of our standard tool line may be required.

Many tools found in our standard micro lines are now available in a shorter overall length upon request. Prices remain the same as noted in product tables.

## QUALIFYING CATEGORIES

Tool categories that may qualify for Swiss-type overall length options are marked throughout the catalog with an icon. Qualifying categories are noted below.

### MICRO TOOLS

- Micro End Mills
- High Performance Micro End Mills
- Metric Micro End Mills
- Micro Drills
- Micro Reamers



# TOOLS FOR SWISS MACHINING

## GETTING STARTED

To place an order for standard tools with a Swiss-type OAL, simply contact MITGI. Use the standard tool part number noted in the catalog and designate your preference for a shorter overall length optimized for Swiss machining.



*Top: Standard catalog tool  
Bottom: Standard tool with Swiss-type OAL*

**Ready to place an order?**

**Contact us:**  
**Phone: (320) 455-0535**  
**Email: [info@mitgi.us](mailto:info@mitgi.us)**  
**Web: [www.mitgi.us](http://www.mitgi.us)**



# S71

# Square Micro End Mills

**FLUTES  
2,3,4**

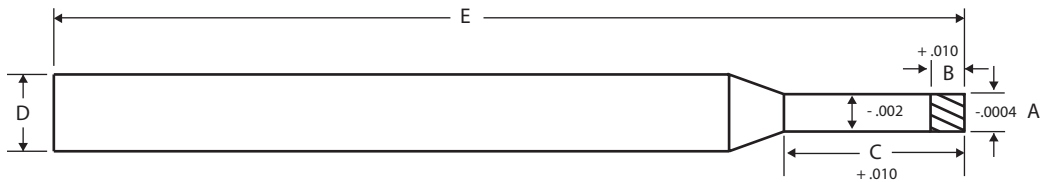
**1.5X  
LENGTH  
OF CUT**

**5X  
REACH**

**+  
SWISS-TYPE  
OAL**

**Q  
QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.015	0.050	0.125	2.50	S71-010-2-SSQ5XR	N/A	N/A
0.015 (1/64)	0.023	0.075	0.125	2.50	S71-015-2-SSQ5XR	S71-015-3-SSQ5XR	S71-015-4-SSQ5XR
0.020	0.030	0.100	0.125	2.50	S71-020-2-SSQ5XR	S71-020-3-SSQ5XR	S71-020-4-SSQ5XR
0.025	0.038	0.125	0.125	2.50	S71-025-2-SSQ5XR	S71-025-3-SSQ5XR	S71-025-4-SSQ5XR
0.030	0.045	0.150	0.125	2.50	S71-030-2-SSQ5XR	S71-030-3-SSQ5XR	S71-030-4-SSQ5XR
0.031 (1/32)	0.047	0.155	0.125	2.50	S71-031-2-SSQ5XR	S71-031-3-SSQ5XR	S71-031-4-SSQ5XR
0.035	0.053	0.175	0.125	2.50	S71-035-2-SSQ5XR	S71-035-3-SSQ5XR	S71-035-4-SSQ5XR
0.039 (1mm)	0.059	0.195	0.125	2.50	S71-039-2-SSQ5XR	S71-039-3-SSQ5XR	S71-039-4-SSQ5XR
0.040	0.060	0.200	0.125	2.50	S71-040-2-SSQ5XR	S71-040-3-SSQ5XR	S71-040-4-SSQ5XR
0.045	0.068	0.225	0.125	2.50	S71-045-2-SSQ5XR	S71-045-3-SSQ5XR	S71-045-4-SSQ5XR
0.047 (3/64)	0.071	0.235	0.125	2.50	S71-047-2-SSQ5XR	S71-047-3-SSQ5XR	S71-047-4-SSQ5XR
0.050	0.075	0.250	0.125	2.50	S71-050-2-SSQ5XR	S71-050-3-SSQ5XR	S71-050-4-SSQ5XR
0.055	0.083	0.275	0.125	2.50	S71-055-2-SSQ5XR	S71-055-3-SSQ5XR	S71-055-4-SSQ5XR
0.060	0.090	0.300	0.125	2.50	S71-060-2-SSQ5XR	S71-060-3-SSQ5XR	S71-060-4-SSQ5XR
0.062 (1/16)	0.093	0.310	0.125	2.50	S71-062-2-SSQ5XR	S71-062-3-SSQ5XR	S71-062-4-SSQ5XR
0.065	0.098	0.325	0.125	2.50	S71-065-2-SSQ5XR	S71-065-3-SSQ5XR	S71-065-4-SSQ5XR
0.070	0.105	0.350	0.125	2.50	S71-070-2-SSQ5XR	S71-070-3-SSQ5XR	S71-070-4-SSQ5XR
0.075	0.113	0.375	0.125	2.50	S71-075-2-SSQ5XR	S71-075-3-SSQ5XR	S71-075-4-SSQ5XR
0.078 (5/64)	0.117	0.390	0.125	2.50	S71-078-2-SSQ5XR	S71-078-3-SSQ5XR	S71-078-4-SSQ5XR
0.080	0.120	0.400	0.125	2.50	S71-080-2-SSQ5XR	S71-080-3-SSQ5XR	S71-080-4-SSQ5XR
0.085	0.128	0.425	0.125	2.50	S71-085-2-SSQ5XR	S71-085-3-SSQ5XR	S71-085-4-SSQ5XR
0.090	0.135	0.450	0.125	2.50	S71-090-2-SSQ5XR	S71-090-3-SSQ5XR	S71-090-4-SSQ5XR
0.093 (3/32)	0.140	0.465	0.125	2.50	S71-093-2-SSQ5XR	S71-093-3-SSQ5XR	S71-093-4-SSQ5XR
0.095	0.143	0.475	0.125	2.50	S71-095-2-SSQ5XR	S71-095-3-SSQ5XR	S71-095-4-SSQ5XR
0.100	0.150	0.500	0.125	2.50	S71-100-2-SSQ5XR	S71-100-3-SSQ5XR	S71-100-4-SSQ5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	S71-118-2-SSQ5XR	S71-118-3-SSQ5XR	S71-118-4-SSQ5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	S71-125-2-SSQ5XR	S71-125-3-SSQ5XR	S71-125-4-SSQ5XR



# Square Micro End Mills

S68

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.030	0.050	0.125	2.50	S68-010-2-SQ5XR	N/A	N/A
0.015 (1/64)	0.045	0.075	0.125	2.50	S68-015-2-SQ5XR	S68-015-3-SQ5XR	S68-015-4-SQ5XR
0.020	0.060	0.100	0.125	2.50	S68-020-2-SQ5XR	S68-020-3-SQ5XR	S68-020-4-SQ5XR
0.025	0.075	0.125	0.125	2.50	S68-025-2-SQ5XR	S68-025-3-SQ5XR	S68-025-4-SQ5XR
0.030	0.090	0.150	0.125	2.50	S68-030-2-SQ5XR	S68-030-3-SQ5XR	S68-030-4-SQ5XR
0.031 (1/32)	0.093	0.155	0.125	2.50	S68-031-2-SQ5XR	S68-031-3-SQ5XR	S68-031-4-SQ5XR
0.035	0.105	0.175	0.125	2.50	S68-035-2-SQ5XR	S68-035-3-SQ5XR	S68-035-4-SQ5XR
0.039 (1mm)	0.117	0.195	0.125	2.50	S68-039-2-SQ5XR	S68-039-3-SQ5XR	S68-039-4-SQ5XR
0.040	0.120	0.200	0.125	2.50	S68-040-2-SQ5XR	S68-040-3-SQ5XR	S68-040-4-SQ5XR
0.045	0.135	0.225	0.125	2.50	S68-045-2-SQ5XR	S68-045-3-SQ5XR	S68-045-4-SQ5XR
0.047 (3/64)	0.141	0.235	0.125	2.50	S68-047-2-SQ5XR	S68-047-3-SQ5XR	S68-047-4-SQ5XR
0.050	0.150	0.250	0.125	2.50	S68-050-2-SQ5XR	S68-050-3-SQ5XR	S68-050-4-SQ5XR
0.055	0.165	0.275	0.125	2.50	S68-055-2-SQ5XR	S68-055-3-SQ5XR	S68-055-4-SQ5XR
0.060	0.180	0.300	0.125	2.50	S68-060-2-SQ5XR	S68-060-3-SQ5XR	S68-060-4-SQ5XR
0.062 (1/16)	0.186	0.310	0.125	2.50	S68-062-2-SQ5XR	S68-062-3-SQ5XR	S68-062-4-SQ5XR
0.065	0.195	0.325	0.125	2.50	S68-065-2-SQ5XR	S68-065-3-SQ5XR	S68-065-4-SQ5XR
0.070	0.210	0.350	0.125	2.50	S68-070-2-SQ5XR	S68-070-3-SQ5XR	S68-070-4-SQ5XR
0.075	0.225	0.375	0.125	2.50	S68-075-2-SQ5XR	S68-075-3-SQ5XR	S68-075-4-SQ5XR
0.078 (5/64)	0.234	0.390	0.125	2.50	S68-078-2-SQ5XR	S68-078-3-SQ5XR	S68-078-4-SQ5XR
0.080	0.240	0.400	0.125	2.50	S68-080-2-SQ5XR	S68-080-3-SQ5XR	S68-080-4-SQ5XR
0.085	0.255	0.425	0.125	2.50	S68-085-2-SQ5XR	S68-085-3-SQ5XR	S68-085-4-SQ5XR
0.090	0.270	0.450	0.125	2.50	S68-090-2-SQ5XR	S68-090-3-SQ5XR	S68-090-4-SQ5XR
0.093 (3/32)	0.279	0.465	0.125	2.50	S68-093-2-SQ5XR	S68-093-3-SQ5XR	S68-093-4-SQ5XR
0.095	0.285	0.475	0.125	2.50	S68-095-2-SQ5XR	S68-095-3-SQ5XR	S68-095-4-SQ5XR
0.100	0.300	0.500	0.125	2.50	S68-100-2-SQ5XR	S68-100-3-SQ5XR	S68-100-4-SQ5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	S68-118-2-SQ5XR	S68-118-3-SQ5XR	S68-118-4-SQ5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	S68-125-2-SQ5XR	S68-125-3-SQ5XR	S68-125-4-SQ5XR

FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

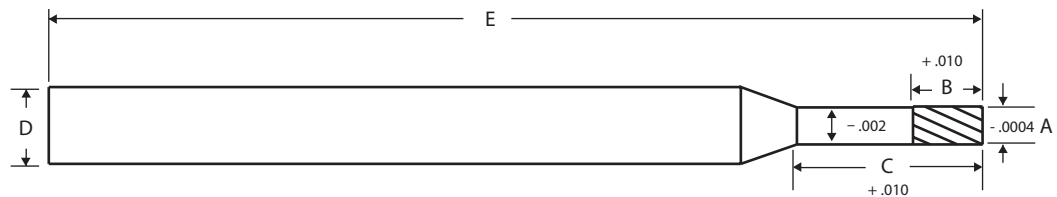
5X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



# S72

# Square Micro End Mills

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

8X  
REACH

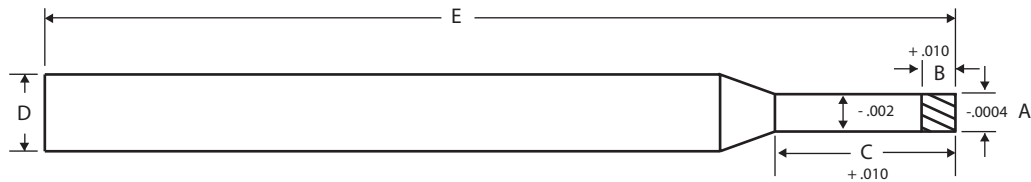
+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.015	0.080	0.125	2.50	S72-010-2-SSQ8XR	N/A	N/A
0.015 (1/64)	0.023	0.120	0.125	2.50	S72-015-2-SSQ8XR	S72-015-3-SSQ8XR	S72-015-4-SSQ8XR
0.020	0.030	0.160	0.125	2.50	S72-020-2-SSQ8XR	S72-020-3-SSQ8XR	S72-020-4-SSQ8XR
0.025	0.038	0.200	0.125	2.50	S72-025-2-SSQ8XR	S72-025-3-SSQ8XR	S72-025-4-SSQ8XR
0.030	0.045	0.240	0.125	2.50	S72-030-2-SSQ8XR	S72-030-3-SSQ8XR	S72-030-4-SSQ8XR
0.031 (1/32)	0.047	0.248	0.125	2.50	S72-031-2-SSQ8XR	S72-031-3-SSQ8XR	S72-031-4-SSQ8XR
0.035	0.053	0.280	0.125	2.50	S72-035-2-SSQ8XR	S72-035-3-SSQ8XR	S72-035-4-SSQ8XR
0.039 (1mm)	0.059	0.312	0.125	2.50	S72-039-2-SSQ8XR	S72-039-3-SSQ8XR	S72-039-4-SSQ8XR
0.040	0.060	0.320	0.125	2.50	S72-040-2-SSQ8XR	S72-040-3-SSQ8XR	S72-040-4-SSQ8XR
0.045	0.068	0.360	0.125	2.50	S72-045-2-SSQ8XR	S72-045-3-SSQ8XR	S72-045-4-SSQ8XR
0.047 (3/64)	0.071	0.376	0.125	2.50	S72-047-2-SSQ8XR	S72-047-3-SSQ8XR	S72-047-4-SSQ8XR
0.050	0.075	0.400	0.125	2.50	S72-050-2-SSQ8XR	S72-050-3-SSQ8XR	S72-050-4-SSQ8XR
0.055	0.083	0.440	0.125	2.50	S72-055-2-SSQ8XR	S72-055-3-SSQ8XR	S72-055-4-SSQ8XR
0.060	0.090	0.480	0.125	2.50	S72-060-2-SSQ8XR	S72-060-3-SSQ8XR	S72-060-4-SSQ8XR
0.062 (1/16)	0.093	0.496	0.125	2.50	S72-062-2-SSQ8XR	S72-062-3-SSQ8XR	S72-062-4-SSQ8XR
0.065	0.098	0.520	0.125	2.50	S72-065-2-SSQ8XR	S72-065-3-SSQ8XR	S72-065-4-SSQ8XR
0.070	0.105	0.560	0.125	2.50	S72-070-2-SSQ8XR	S72-070-3-SSQ8XR	S72-070-4-SSQ8XR
0.075	0.113	0.600	0.125	2.50	S72-075-2-SSQ8XR	S72-075-3-SSQ8XR	S72-075-4-SSQ8XR
0.078 (5/64)	0.117	0.624	0.125	2.50	S72-078-2-SSQ8XR	S72-078-3-SSQ8XR	S72-078-4-SSQ8XR
0.080	0.120	0.640	0.125	2.50	S72-080-2-SSQ8XR	S72-080-3-SSQ8XR	S72-080-4-SSQ8XR
0.085	0.128	0.680	0.125	2.50	S72-085-2-SSQ8XR	S72-085-3-SSQ8XR	S72-085-4-SSQ8XR
0.090	0.135	0.720	0.125	2.50	S72-090-2-SSQ8XR	S72-090-3-SSQ8XR	S72-090-4-SSQ8XR
0.093 (3/32)	0.140	0.744	0.125	2.50	S72-093-2-SSQ8XR	S72-093-3-SSQ8XR	S72-093-4-SSQ8XR
0.095	0.143	0.760	0.125	2.50	S72-095-2-SSQ8XR	S72-095-3-SSQ8XR	S72-095-4-SSQ8XR
0.100	0.150	0.800	0.125	2.50	S72-100-2-SSQ8XR	S72-100-3-SSQ8XR	S72-100-4-SSQ8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	S72-118-2-SSQ8XR	S72-118-3-SSQ8XR	S72-118-4-SSQ8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	S72-125-2-SSQ8XR	S72-125-3-SSQ8XR	S72-125-4-SSQ8XR



Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.030	0.080	0.125	2.50	S69-010-2-SQ8XR	N/A	N/A
0.015 (1/64)	0.045	0.120	0.125	2.50	S69-015-2-SQ8XR	S69-015-3-SQ8XR	S69-015-4-SQ8XR
0.020	0.060	0.160	0.125	2.50	S69-020-2-SQ8XR	S69-020-3-SQ8XR	S69-020-4-SQ8XR
0.025	0.075	0.200	0.125	2.50	S69-025-2-SQ8XR	S69-025-3-SQ8XR	S69-025-4-SQ8XR
0.030	0.090	0.240	0.125	2.50	S69-030-2-SQ8XR	S69-030-3-SQ8XR	S69-030-4-SQ8XR
0.031 (1/32)	0.093	0.248	0.125	2.50	S69-031-2-SQ8XR	S69-031-3-SQ8XR	S69-031-4-SQ8XR
0.035	0.105	0.280	0.125	2.50	S69-035-2-SQ8XR	S69-035-3-SQ8XR	S69-035-4-SQ8XR
0.039 (1mm)	0.117	0.312	0.125	2.50	S69-039-2-SQ8XR	S69-039-3-SQ8XR	S69-039-4-SQ8XR
0.040	0.120	0.320	0.125	2.50	S69-040-2-SQ8XR	S69-040-3-SQ8XR	S69-040-4-SQ8XR
0.045	0.135	0.360	0.125	2.50	S69-045-2-SQ8XR	S69-045-3-SQ8XR	S69-045-4-SQ8XR
0.047 (3/64)	0.141	0.376	0.125	2.50	S69-047-2-SQ8XR	S69-047-3-SQ8XR	S69-047-4-SQ8XR
0.050	0.150	0.400	0.125	2.50	S69-050-2-SQ8XR	S69-050-3-SQ8XR	S69-050-4-SQ8XR
0.055	0.165	0.440	0.125	2.50	S69-055-2-SQ8XR	S69-055-3-SQ8XR	S69-055-4-SQ8XR
0.060	0.180	0.480	0.125	2.50	S69-060-2-SQ8XR	S69-060-3-SQ8XR	S69-060-4-SQ8XR
0.062 (1/16)	0.186	0.496	0.125	2.50	S69-062-2-SQ8XR	S69-062-3-SQ8XR	S69-062-4-SQ8XR
0.065	0.195	0.520	0.125	2.50	S69-065-2-SQ8XR	S69-065-3-SQ8XR	S69-065-4-SQ8XR
0.070	0.210	0.560	0.125	2.50	S69-070-2-SQ8XR	S69-070-3-SQ8XR	S69-070-4-SQ8XR
0.075	0.225	0.600	0.125	2.50	S69-075-2-SQ8XR	S69-075-3-SQ8XR	S69-075-4-SQ8XR
0.078 (5/64)	0.234	0.624	0.125	2.50	S69-078-2-SQ8XR	S69-078-3-SQ8XR	S69-078-4-SQ8XR
0.080	0.240	0.640	0.125	2.50	S69-080-2-SQ8XR	S69-080-3-SQ8XR	S69-080-4-SQ8XR
0.085	0.255	0.680	0.125	2.50	S69-085-2-SQ8XR	S69-085-3-SQ8XR	S69-085-4-SQ8XR
0.090	0.270	0.720	0.125	2.50	S69-090-2-SQ8XR	S69-090-3-SQ8XR	S69-090-4-SQ8XR
0.093 (3/32)	0.279	0.744	0.125	2.50	S69-093-2-SQ8XR	S69-093-3-SQ8XR	S69-093-4-SQ8XR
0.095	0.285	0.760	0.125	2.50	S69-095-2-SQ8XR	S69-095-3-SQ8XR	S69-095-4-SQ8XR
0.100	0.300	0.800	0.125	2.50	S69-100-2-SQ8XR	S69-100-3-SQ8XR	S69-100-4-SQ8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	S69-118-2-SQ8XR	S69-118-3-SQ8XR	S69-118-4-SQ8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	S69-125-2-SQ8XR	S69-125-3-SQ8XR	S69-125-4-SQ8XR

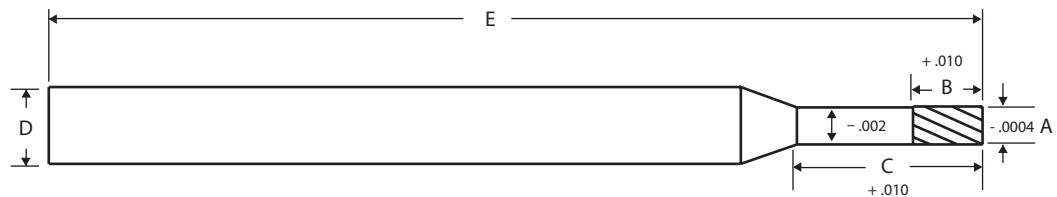
**FLUTES  
2,3,4**

**3X  
LENGTH  
OF CUT**

**8X  
REACH**

**+  
SWISS-TYPE  
OAL**

**QUICK TURN  
SPECIALS**



## Tips on Selecting the Right Tool for the Job

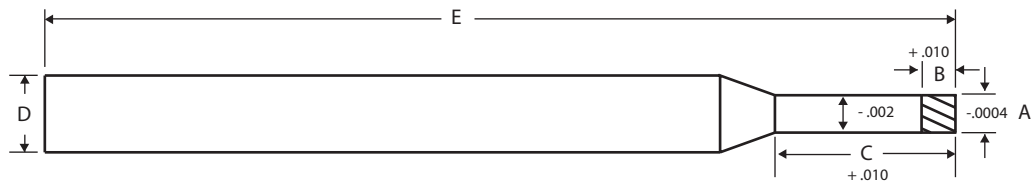
Number of Flutes	Primary Uses	Ideal Cutting Materials
2-3	Tools with fewer flutes allow optimal space for chip removal when milling or slotting softer materials. Also used for roughing.	Soft materials, such as aluminum and plastics.
3-4	Adding flutes provides greater strength. Recommended for use with roughing, milling, and slotting a variety of materials. Can also be used for finishing softer materials.	Hard materials, such as stainless steel, steel, and titanium.
5 +	Ideal for use in finishing work, when using faster feed rates, and with reduced chip load.	Harder materials, such as steel, or for finishing a variety of materials.



**FLUTES  
2,3,4**
**1.5X  
LENGTH  
OF CUT**
**12X  
REACH**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.015	0.120	0.125	2.50	S73-010-2-SSQ12XR	N/A	N/A
0.015 (1/64)	0.023	0.180	0.125	2.50	S73-015-2-SSQ12XR	S73-015-3-SSQ12XR	S73-015-4-SSQ12XR
0.020	0.030	0.240	0.125	2.50	S73-020-2-SSQ12XR	S73-020-3-SSQ12XR	S73-020-4-SSQ12XR
0.025	0.038	0.300	0.125	2.50	S73-025-2-SSQ12XR	S73-025-3-SSQ12XR	S73-025-4-SSQ12XR
0.030	0.045	0.360	0.125	2.50	S73-030-2-SSQ12XR	S73-030-3-SSQ12XR	S73-030-4-SSQ12XR
0.031 (1/32)	0.047	0.372	0.125	2.50	S73-031-2-SSQ12XR	S73-031-3-SSQ12XR	S73-031-4-SSQ12XR
0.035	0.053	0.420	0.125	2.50	S73-035-2-SSQ12XR	S73-035-3-SSQ12XR	S73-035-4-SSQ12XR
0.039 (1mm)	0.059	0.468	0.125	2.50	S73-039-2-SSQ12XR	S73-039-3-SSQ12XR	S73-039-4-SSQ12XR
0.040	0.060	0.480	0.125	2.50	S73-040-2-SSQ12XR	S73-040-3-SSQ12XR	S73-040-4-SSQ12XR
0.045	0.068	0.540	0.125	2.50	S73-045-2-SSQ12XR	S73-045-3-SSQ12XR	S73-045-4-SSQ12XR
0.047 (3/64)	0.071	0.564	0.125	2.50	S73-047-2-SSQ12XR	S73-047-3-SSQ12XR	S73-047-4-SSQ12XR
0.050	0.075	0.600	0.125	2.50	S73-050-2-SSQ12XR	S73-050-3-SSQ12XR	S73-050-4-SSQ12XR
0.055	0.083	0.660	0.125	2.50	S73-055-2-SSQ12XR	S73-055-3-SSQ12XR	S73-055-4-SSQ12XR
0.060	0.090	0.720	0.125	2.50	S73-060-2-SSQ12XR	S73-060-3-SSQ12XR	S73-060-4-SSQ12XR
0.062 (1/16)	0.093	0.744	0.125	2.50	S73-062-2-SSQ12XR	S73-062-3-SSQ12XR	S73-062-4-SSQ12XR
0.065	0.098	0.780	0.125	2.50	S73-065-2-SSQ12XR	S73-065-3-SSQ12XR	S73-065-4-SSQ12XR
0.070	0.105	0.840	0.125	2.50	S73-070-2-SSQ12XR	S73-070-3-SSQ12XR	S73-070-4-SSQ12XR
0.075	0.113	0.900	0.125	2.50	S73-075-2-SSQ12XR	S73-075-3-SSQ12XR	S73-075-4-SSQ12XR
0.078 (5/64)	0.117	0.936	0.125	2.50	S73-078-2-SSQ12XR	S73-078-3-SSQ12XR	S73-078-4-SSQ12XR
0.080	0.120	0.960	0.125	2.50	S73-080-2-SSQ12XR	S73-080-3-SSQ12XR	S73-080-4-SSQ12XR
0.085	0.128	1.020	0.125	2.50	S73-085-2-SSQ12XR	S73-085-3-SSQ12XR	S73-085-4-SSQ12XR
0.090	0.135	1.080	0.125	2.50	S73-090-2-SSQ12XR	S73-090-3-SSQ12XR	S73-090-4-SSQ12XR
0.093 (3/32)	0.140	1.116	0.125	2.50	S73-093-2-SSQ12XR	S73-093-3-SSQ12XR	S73-093-4-SSQ12XR
0.095	0.143	1.140	0.125	2.50	S73-095-2-SSQ12XR	S73-095-3-SSQ12XR	S73-095-4-SSQ12XR
0.100	0.150	1.200	0.125	2.50	S73-100-2-SSQ12XR	S73-100-3-SSQ12XR	S73-100-4-SSQ12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	S73-118-2-SSQ12XR	S73-118-3-SSQ12XR	S73-118-4-SSQ12XR
0.125 (1/8)	0.187	1.500	0.125	2.50	S73-125-2-SSQ12XR	S73-125-3-SSQ12XR	S73-125-4-SSQ12XR



# Square Micro End Mills

S70

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.030	0.120	0.125	2.50	S70-010-2-SQ12XR	N/A	N/A
0.015 (1/64)	0.045	0.180	0.125	2.50	S70-015-2-SQ12XR	S70-015-3-SQ12XR	S70-015-4-SQ12XR
0.020	0.060	0.240	0.125	2.50	S70-020-2-SQ12XR	S70-020-3-SQ12XR	S70-020-4-SQ12XR
0.025	0.075	0.300	0.125	2.50	S70-025-2-SQ12XR	S70-025-3-SQ12XR	S70-025-4-SQ12XR
0.030	0.090	0.360	0.125	2.50	S70-030-2-SQ12XR	S70-030-3-SQ12XR	S70-030-4-SQ12XR
0.031 (1/32)	0.093	0.372	0.125	2.50	S70-031-2-SQ12XR	S70-031-3-SQ12XR	S70-031-4-SQ12XR
0.035	0.105	0.420	0.125	2.50	S70-035-2-SQ12XR	S70-035-3-SQ12XR	S70-035-4-SQ12XR
0.039 (1mm)	0.117	0.468	0.125	2.50	S70-039-2-SQ12XR	S70-039-3-SQ12XR	S70-039-4-SQ12XR
0.040	0.120	0.480	0.125	2.50	S70-040-2-SQ12XR	S70-040-3-SQ12XR	S70-040-4-SQ12XR
0.045	0.135	0.540	0.125	2.50	S70-045-2-SQ12XR	S70-045-3-SQ12XR	S70-045-4-SQ12XR
0.047 (3/64)	0.141	0.564	0.125	2.50	S70-047-2-SQ12XR	S70-047-3-SQ12XR	S70-047-4-SQ12XR
0.050	0.150	0.600	0.125	2.50	S70-050-2-SQ12XR	S70-050-3-SQ12XR	S70-050-4-SQ12XR
0.055	0.165	0.660	0.125	2.50	S70-055-2-SQ12XR	S70-055-3-SQ12XR	S70-055-4-SQ12XR
0.060	0.180	0.720	0.125	2.50	S70-060-2-SQ12XR	S70-060-3-SQ12XR	S70-060-4-SQ12XR
0.062 (1/16)	0.186	0.744	0.125	2.50	S70-062-2-SQ12XR	S70-062-3-SQ12XR	S70-062-4-SQ12XR
0.065	0.195	0.780	0.125	2.50	S70-065-2-SQ12XR	S70-065-3-SQ12XR	S70-065-4-SQ12XR
0.070	0.210	0.840	0.125	2.50	S70-070-2-SQ12XR	S70-070-3-SQ12XR	S70-070-4-SQ12XR
0.075	0.225	0.900	0.125	2.50	S70-075-2-SQ12XR	S70-075-3-SQ12XR	S70-075-4-SQ12XR
0.078 (5/64)	0.234	0.936	0.125	2.50	S70-078-2-SQ12XR	S70-078-3-SQ12XR	S70-078-4-SQ12XR
0.080	0.240	0.960	0.125	2.50	S70-080-2-SQ12XR	S70-080-3-SQ12XR	S70-080-4-SQ12XR
0.085	0.255	1.020	0.125	2.50	S70-085-2-SQ12XR	S70-085-3-SQ12XR	S70-085-4-SQ12XR
0.090	0.270	1.080	0.125	2.50	S70-090-2-SQ12XR	S70-090-3-SQ12XR	S70-090-4-SQ12XR
0.093 (3/32)	0.279	1.116	0.125	2.50	S70-093-2-SQ12XR	S70-093-3-SQ12XR	S70-093-4-SQ12XR
0.095	0.285	1.140	0.125	2.50	S70-095-2-SQ12XR	S70-095-3-SQ12XR	S70-095-4-SQ12XR
0.100	0.300	1.200	0.125	2.50	S70-100-2-SQ12XR	S70-100-3-SQ12XR	S70-100-4-SQ12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	S70-118-2-SQ12XR	S70-118-3-SQ12XR	S70-118-4-SQ12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	S70-125-2-SQ12XR	S70-125-3-SQ12XR	S70-125-4-SQ12XR

FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

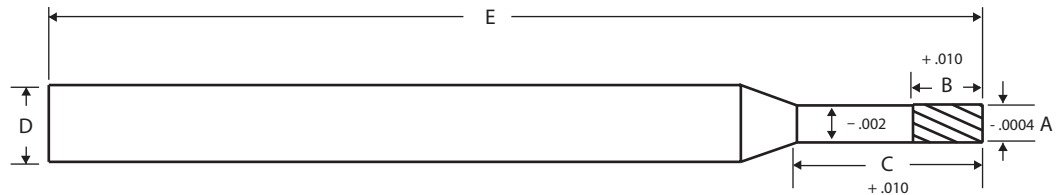
12X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



Need your coated tool quickly? All standard tools are available AITIN coated in 3 days or less. See page 117 for more details.



FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.015 (1/64)	0.023	0.125	1.50	0.003	S83-015-2-.003R	S83-015-3-.003R	S83-015-4-.003R
0.020	0.030	0.125	1.50	0.005	S83-020-2-.005R	S83-020-3-.005R	S83-020-4-.005R
0.025	0.038	0.125	1.50	0.005	S83-025-2-.005R	S83-025-3-.005R	S83-025-4-.005R
0.030	0.045	0.125	1.50	0.005	S83-030-2-.005R	S83-030-3-.005R	S83-030-4-.005R
0.030	0.045	0.125	1.50	0.010	S83-030-2-.010R	S83-030-3-.010R	S83-030-4-.010R
0.031 (1/32)	0.047	0.125	1.50	0.005	S83-031-2-.005R	S83-031-3-.005R	S83-031-4-.005R
0.031 (1/32)	0.047	0.125	1.50	0.010	S83-031-2-.010R	S83-031-3-.010R	S83-031-4-.010R
0.035	0.053	0.125	1.50	0.005	S83-035-2-.005R	S83-035-3-.005R	S83-035-4-.005R
0.035	0.053	0.125	1.50	0.010	S83-035-2-.010R	S83-035-3-.010R	S83-035-4-.010R
0.039 (1mm)	0.059	0.125	1.50	0.005	S83-039-2-.005R	S83-039-3-.005R	S83-039-4-.005R
0.039 (1mm)	0.059	0.125	1.50	0.010	S83-039-2-.010R	S83-039-3-.010R	S83-039-4-.010R
0.040	0.060	0.125	1.50	0.005	S83-040-2-.005R	S83-040-3-.005R	S83-040-4-.005R
0.040	0.060	0.125	1.50	0.010	S83-040-2-.010R	S83-040-3-.010R	S83-040-4-.010R
0.045	0.068	0.125	1.50	0.005	S83-045-2-.005R	S83-045-3-.005R	S83-045-4-.005R
0.045	0.068	0.125	1.50	0.010	S83-045-2-.010R	S83-045-3-.010R	S83-045-4-.010R
0.045	0.068	0.125	1.50	0.015	S83-045-2-.015R	S83-045-3-.015R	S83-045-4-.015R
0.047 (3/64)	0.071	0.125	1.50	0.005	S83-047-2-.005R	S83-047-3-.005R	S83-047-4-.005R
0.047 (3/64)	0.071	0.125	1.50	0.010	S83-047-2-.010R	S83-047-3-.010R	S83-047-4-.010R
0.047 (3/64)	0.071	0.125	1.50	0.015	S83-047-2-.015R	S83-047-3-.015R	S83-047-4-.015R
0.050	0.075	0.125	1.50	0.005	S83-050-2-.005R	S83-050-3-.005R	S83-050-4-.005R
0.050	0.075	0.125	1.50	0.010	S83-050-2-.010R	S83-050-3-.010R	S83-050-4-.010R
0.050	0.075	0.125	1.50	0.015	S83-050-2-.015R	S83-050-3-.015R	S83-050-4-.015R
0.055	0.083	0.125	1.50	0.005	S83-055-2-.005R	S83-055-3-.005R	S83-055-4-.005R
0.055	0.083	0.125	1.50	0.010	S83-055-2-.010R	S83-055-3-.010R	S83-055-4-.010R
0.055	0.083	0.125	1.50	0.015	S83-055-2-.015R	S83-055-3-.015R	S83-055-4-.015R
0.060	0.090	0.125	1.50	0.005	S83-060-2-.005R	S83-060-3-.005R	S83-060-4-.005R
0.060	0.090	0.125	1.50	0.010	S83-060-2-.010R	S83-060-3-.010R	S83-060-4-.010R
0.060	0.090	0.125	1.50	0.015	S83-060-2-.015R	S83-060-3-.015R	S83-060-4-.015R
0.062 (1/16)	0.093	0.125	1.50	0.005	S83-062-2-.005R	S83-062-3-.005R	S83-062-4-.005R
0.062 (1/16)	0.093	0.125	1.50	0.010	S83-062-2-.010R	S83-062-3-.010R	S83-062-4-.010R
0.062 (1/16)	0.093	0.125	1.50	0.015	S83-062-2-.015R	S83-062-3-.015R	S83-062-4-.015R
0.062 (1/16)	0.093	0.125	1.50	0.020	S83-062-2-.020R	S83-062-3-.020R	S83-062-4-.020R
0.065	0.098	0.125	1.50	0.005	S83-065-2-.005R	S83-065-3-.005R	S83-065-4-.005R
0.065	0.098	0.125	1.50	0.010	S83-065-2-.010R	S83-065-3-.010R	S83-065-4-.010R
0.065	0.098	0.125	1.50	0.015	S83-065-2-.015R	S83-065-3-.015R	S83-065-4-.015R
0.070	0.105	0.125	1.50	0.005	S83-070-2-.005R	S83-070-3-.005R	S83-070-4-.005R
0.070	0.105	0.125	1.50	0.010	S83-070-2-.010R	S83-070-3-.010R	S83-070-4-.010R
0.070	0.105	0.125	1.50	0.015	S83-070-2-.015R	S83-070-3-.015R	S83-070-4-.015R
0.075	0.113	0.125	1.50	0.005	S83-075-2-.005R	S83-075-3-.005R	S83-075-4-.005R
0.075	0.113	0.125	1.50	0.010	S83-075-2-.010R	S83-075-3-.010R	S83-075-4-.010R
0.075	0.113	0.125	1.50	0.015	S83-075-2-.015R	S83-075-3-.015R	S83-075-4-.015R



# Corner Radius Micro End Mills

S83

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.078 (5/64)	0.117	0.125	1.50	0.005	S83-078-2-.005R	S83-078-3-.005R	S83-078-4-.005R
0.078 (5/64)	0.117	0.125	1.50	0.010	S83-078-2-.010R	S83-078-3-.010R	S83-078-4-.010R
0.078 (5/64)	0.117	0.125	1.50	0.015	S83-078-2-.015R	S83-078-3-.015R	S83-078-4-.015R
0.078 (5/64)	0.117	0.125	1.50	0.020	S83-078-2-.020R	S83-078-3-.020R	S83-078-4-.020R
0.080	0.120	0.125	1.50	0.005	S83-080-2-.005R	S83-080-3-.005R	S83-080-4-.005R
0.080	0.120	0.125	1.50	0.010	S83-080-2-.010R	S83-080-3-.010R	S83-080-4-.010R
0.080	0.120	0.125	1.50	0.015	S83-080-2-.015R	S83-080-3-.015R	S83-080-4-.015R
0.085	0.128	0.125	1.50	0.005	S83-085-2-.005R	S83-085-3-.005R	S83-085-4-.005R
0.085	0.128	0.125	1.50	0.010	S83-085-2-.010R	S83-085-3-.010R	S83-085-4-.010R
0.085	0.128	0.125	1.50	0.015	S83-085-2-.015R	S83-085-3-.015R	S83-085-4-.015R
0.090	0.135	0.125	1.50	0.005	S83-090-2-.005R	S83-090-3-.005R	S83-090-4-.005R
0.090	0.135	0.125	1.50	0.010	S83-090-2-.010R	S83-090-3-.010R	S83-090-4-.010R
0.090	0.135	0.125	1.50	0.015	S83-090-2-.015R	S83-090-3-.015R	S83-090-4-.015R
0.093 (3/32)	0.140	0.125	1.50	0.005	S83-093-2-.005R	S83-093-3-.005R	S83-093-4-.005R
0.093 (3/32)	0.140	0.125	1.50	0.010	S83-093-2-.010R	S83-093-3-.010R	S83-093-4-.010R
0.093 (3/32)	0.140	0.125	1.50	0.015	S83-093-2-.015R	S83-093-3-.015R	S83-093-4-.015R
0.093 (3/32)	0.140	0.125	1.50	0.020	S83-093-2-.020R	S83-093-3-.020R	S83-093-4-.020R
0.095	0.143	0.125	1.50	0.005	S83-095-2-.005R	S83-095-3-.005R	S83-095-4-.005R
0.095	0.143	0.125	1.50	0.010	S83-095-2-.010R	S83-095-3-.010R	S83-095-4-.010R
0.095	0.143	0.125	1.50	0.015	S83-095-2-.015R	S83-095-3-.015R	S83-095-4-.015R
0.100	0.150	0.125	1.50	0.005	S83-100-2-.005R	S83-100-3-.005R	S83-100-4-.005R
0.100	0.150	0.125	1.50	0.010	S83-100-2-.010R	S83-100-3-.010R	S83-100-4-.010R
0.100	0.150	0.125	1.50	0.015	S83-100-2-.015R	S83-100-3-.015R	S83-100-4-.015R
0.118 (3mm)	0.177	0.125	1.50	0.005	S83-118-2-.005R	S83-118-3-.005R	S83-118-4-.005R
0.118 (3mm)	0.177	0.125	1.50	0.010	S83-118-2-.010R	S83-118-3-.010R	S83-118-4-.010R
0.118 (3mm)	0.177	0.125	1.50	0.015	S83-118-2-.015R	S83-118-3-.015R	S83-118-4-.015R
0.118 (3mm)	0.177	0.125	1.50	0.020	S83-118-2-.020R	S83-118-3-.020R	S83-118-4-.020R
0.125 (1/8)	0.188	0.125	1.50	0.005	S83-125-2-.005R	S83-125-3-.005R	S83-125-4-.005R
0.125 (1/8)	0.188	0.125	1.50	0.010	S83-125-2-.010R	S83-125-3-.010R	S83-125-4-.010R
0.125 (1/8)	0.188	0.125	1.50	0.015	S83-125-2-.015R	S83-125-3-.015R	S83-125-4-.015R
0.125 (1/8)	0.188	0.125	1.50	0.020	S83-125-2-.020R	S83-125-3-.020R	S83-125-4-.020R

FLUTES  
2,3,4

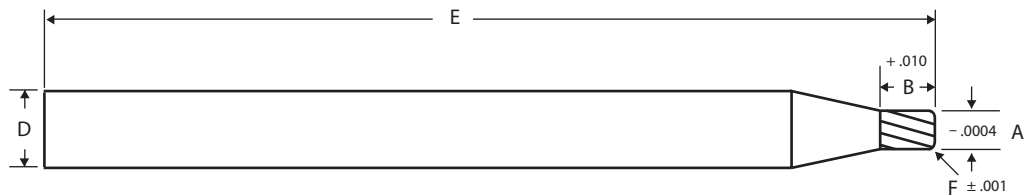
1.5X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



# S58

# Corner Radius Micro End Mills

FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.015 (1/64)	0.045	0.125	1.50	0.003	S58-015-2-.003R	S58-015-3-.003R	S58-015-4-.003R
0.020	0.060	0.125	1.50	0.005	S58-020-2-.005R	S58-020-3-.005R	S58-020-4-.005R
0.025	0.075	0.125	1.50	0.005	S58-025-2-.005R	S58-025-3-.005R	S58-025-4-.005R
0.030	0.090	0.125	1.50	0.005	S58-030-2-.005R	S58-030-3-.005R	S58-030-4-.005R
0.030	0.090	0.125	1.50	0.010	S58-030-2-.010R	S58-030-3-.010R	S58-030-4-.010R
0.031 (1/32)	0.093	0.125	1.50	0.005	S58-031-2-.005R	S58-031-3-.005R	S58-031-4-.005R
0.031 (1/32)	0.093	0.125	1.50	0.010	S58-031-2-.010R	S58-031-3-.010R	S58-031-4-.010R
0.035	0.105	0.125	1.50	0.005	S58-035-2-.005R	S58-035-3-.005R	S58-035-4-.005R
0.035	0.105	0.125	1.50	0.010	S58-035-2-.010R	S58-035-3-.010R	S58-035-4-.010R
0.039 (1mm)	0.117	0.125	1.50	0.005	S58-039-2-.005R	S58-039-3-.005R	S58-039-4-.005R
0.039 (1mm)	0.117	0.125	1.50	0.010	S58-039-2-.010R	S58-039-3-.010R	S58-039-4-.010R
0.040	0.120	0.125	1.50	0.005	S58-040-2-.005R	S58-040-3-.005R	S58-040-4-.005R
0.040	0.120	0.125	1.50	0.010	S58-040-2-.010R	S58-040-3-.010R	S58-040-4-.010R
0.045	0.135	0.125	1.50	0.005	S58-045-2-.005R	S58-045-3-.005R	S58-045-4-.005R
0.045	0.135	0.125	1.50	0.010	S58-045-2-.010R	S58-045-3-.010R	S58-045-4-.010R
0.045	0.135	0.125	1.50	0.015	S58-045-2-.015R	S58-045-3-.015R	S58-045-4-.015R
0.047 (3/64)	0.141	0.125	1.50	0.005	S58-047-2-.005R	S58-047-3-.005R	S58-047-4-.005R
0.047 (3/64)	0.141	0.125	1.50	0.010	S58-047-2-.010R	S58-047-3-.010R	S58-047-4-.010R
0.047 (3/64)	0.141	0.125	1.50	0.015	S58-047-2-.015R	S58-047-3-.015R	S58-047-4-.015R
0.050	0.150	0.125	1.50	0.005	S58-050-2-.005R	S58-050-3-.005R	S58-050-4-.005R
0.050	0.150	0.125	1.50	0.010	S58-050-2-.010R	S58-050-3-.010R	S58-050-4-.010R
0.050	0.150	0.125	1.50	0.015	S58-050-2-.015R	S58-050-3-.015R	S58-050-4-.015R
0.055	0.165	0.125	1.50	0.005	S58-055-2-.005R	S58-055-3-.005R	S58-055-4-.005R
0.055	0.165	0.125	1.50	0.010	S58-055-2-.010R	S58-055-3-.010R	S58-055-4-.010R
0.055	0.165	0.125	1.50	0.015	S58-055-2-.015R	S58-055-3-.015R	S58-055-4-.015R
0.060	0.180	0.125	1.50	0.005	S58-060-2-.005R	S58-060-3-.005R	S58-060-4-.005R
0.060	0.180	0.125	1.50	0.010	S58-060-2-.010R	S58-060-3-.010R	S58-060-4-.010R
0.060	0.180	0.125	1.50	0.015	S58-060-2-.015R	S58-060-3-.015R	S58-060-4-.015R
0.062 (1/16)	0.187	0.125	1.50	0.005	S58-062-2-.005R	S58-062-3-.005R	S58-062-4-.005R
0.062 (1/16)	0.187	0.125	1.50	0.010	S58-062-2-.010R	S58-062-3-.010R	S58-062-4-.010R
0.062 (1/16)	0.187	0.125	1.50	0.015	S58-062-2-.015R	S58-062-3-.015R	S58-062-4-.015R
0.062 (1/16)	0.187	0.125	1.50	0.020	S58-062-2-.020R	S58-062-3-.020R	S58-062-4-.020R
0.065	0.195	0.125	1.50	0.005	S58-065-2-.005R	S58-065-3-.005R	S58-065-4-.005R
0.065	0.195	0.125	1.50	0.010	S58-065-2-.010R	S58-065-3-.010R	S58-065-4-.010R
0.065	0.195	0.125	1.50	0.015	S58-065-2-.015R	S58-065-3-.015R	S58-065-4-.015R
0.070	0.210	0.125	1.50	0.005	S58-070-2-.005R	S58-070-3-.005R	S58-070-4-.005R
0.070	0.210	0.125	1.50	0.010	S58-070-2-.010R	S58-070-3-.010R	S58-070-4-.010R
0.070	0.210	0.125	1.50	0.015	S58-070-2-.015R	S58-070-3-.015R	S58-070-4-.015R
0.075	0.225	0.125	1.50	0.005	S58-075-2-.005R	S58-075-3-.005R	S58-075-4-.005R
0.075	0.225	0.125	1.50	0.010	S58-075-2-.010R	S58-075-3-.010R	S58-075-4-.010R
0.075	0.225	0.125	1.50	0.015	S58-075-2-.015R	S58-075-3-.015R	S58-075-4-.015R



# Corner Radius Micro End Mills

S58

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.078 (5/64)	0.234	0.125	1.50	0.005	S58-078-2-.005R	S58-078-3-.005R	S58-078-4-.005R
0.078 (5/64)	0.234	0.125	1.50	0.010	S58-078-2-.010R	S58-078-3-.010R	S58-078-4-.010R
0.078 (5/64)	0.234	0.125	1.50	0.015	S58-078-2-.015R	S58-078-3-.015R	S58-078-4-.015R
0.078 (5/64)	0.234	0.125	1.50	0.020	S58-078-2-.020R	S58-078-3-.020R	S58-078-4-.020R
0.080	0.240	0.125	1.50	0.005	S58-080-2-.005R	S58-080-3-.005R	S58-080-4-.005R
0.080	0.240	0.125	1.50	0.010	S58-080-2-.010R	S58-080-3-.010R	S58-080-4-.010R
0.080	0.240	0.125	1.50	0.015	S58-080-2-.015R	S58-080-3-.015R	S58-080-4-.015R
0.085	0.255	0.125	1.50	0.005	S58-085-2-.005R	S58-085-3-.005R	S58-085-4-.005R
0.085	0.255	0.125	1.50	0.010	S58-085-2-.010R	S58-085-3-.010R	S58-085-4-.010R
0.085	0.255	0.125	1.50	0.015	S58-085-2-.015R	S58-085-3-.015R	S58-085-4-.015R
0.090	0.270	0.125	1.50	0.005	S58-090-2-.005R	S58-090-3-.005R	S58-090-4-.005R
0.090	0.270	0.125	1.50	0.010	S58-090-2-.010R	S58-090-3-.010R	S58-090-4-.010R
0.090	0.270	0.125	1.50	0.015	S58-090-2-.015R	S58-090-3-.015R	S58-090-4-.015R
0.093 (3/32)	0.279	0.125	1.50	0.005	S58-093-2-.005R	S58-093-3-.005R	S58-093-4-.005R
0.093 (3/32)	0.279	0.125	1.50	0.010	S58-093-2-.010R	S58-093-3-.010R	S58-093-4-.010R
0.093 (3/32)	0.279	0.125	1.50	0.015	S58-093-2-.015R	S58-093-3-.015R	S58-093-4-.015R
0.093 (3/32)	0.279	0.125	1.50	0.020	S58-093-2-.020R	S58-093-3-.020R	S58-093-4-.020R
0.095	0.285	0.125	1.50	0.005	S58-095-2-.005R	S58-095-3-.005R	S58-095-4-.005R
0.095	0.285	0.125	1.50	0.010	S58-095-2-.010R	S58-095-3-.010R	S58-095-4-.010R
0.095	0.285	0.125	1.50	0.015	S58-095-2-.015R	S58-095-3-.015R	S58-095-4-.015R
0.100	0.300	0.125	1.50	0.005	S58-100-2-.005R	S58-100-3-.005R	S58-100-4-.005R
0.100	0.300	0.125	1.50	0.010	S58-100-2-.010R	S58-100-3-.010R	S58-100-4-.010R
0.100	0.300	0.125	1.50	0.015	S58-100-2-.015R	S58-100-3-.015R	S58-100-4-.015R
0.100	0.300	0.125	1.50	0.030	S58-100-2-.030R	S58-100-3-.030R	S58-100-4-.030R
0.118 (3mm)	0.354	0.125	1.50	0.005	S58-118-2-.005R	S58-118-3-.005R	S58-118-4-.005R
0.118 (3mm)	0.354	0.125	1.50	0.010	S58-118-2-.010R	S58-118-3-.010R	S58-118-4-.010R
0.118 (3mm)	0.354	0.125	1.50	0.015	S58-118-2-.015R	S58-118-3-.015R	S58-118-4-.015R
0.118 (3mm)	0.354	0.125	1.50	0.020	S58-118-2-.020R	S58-118-3-.020R	S58-118-4-.020R
0.125 (1/8)	0.375	0.125	1.50	0.005	S58-125-2-.005R	S58-125-3-.005R	S58-125-4-.005R
0.125 (1/8)	0.375	0.125	1.50	0.010	S58-125-2-.010R	S58-125-3-.010R	S58-125-4-.010R
0.125 (1/8)	0.375	0.125	1.50	0.015	S58-125-2-.015R	S58-125-3-.015R	S58-125-4-.015R
0.125 (1/8)	0.375	0.125	1.50	0.020	S58-125-2-.020R	S58-125-3-.020R	S58-125-4-.020R
0.125 (1/8)	0.375	0.125	1.50	0.030	S58-125-2-.030R	S58-125-3-.030R	S58-125-4-.030R

FLUTES  
2,3,4

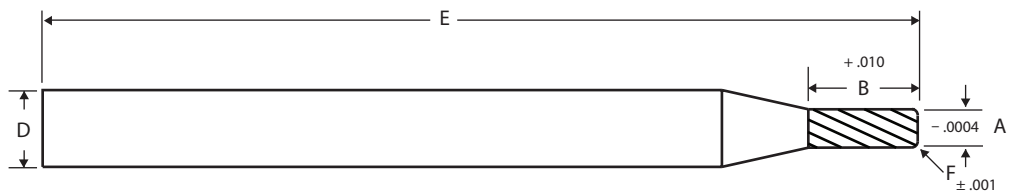
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



Need your coated tool quickly? All standard tools are available AITiN coated in 3 days or less. See page 117 for more details.



# S107

## Corner Radius Micro End Mills

FLUTES  
2,3,4

5X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.015 (1/64)	0.075	0.125	2.50	0.003	S107-015-2-.003R	S107-015-3-.003R	S107-015-4-.003R
0.020	0.100	0.125	2.50	0.005	S107-020-2-.005R	S107-020-3-.005R	S107-020-4-.005R
0.025	0.125	0.125	2.50	0.005	S107-025-2-.005R	S107-025-3-.005R	S107-025-4-.005R
0.030	0.150	0.125	2.50	0.005	S107-030-2-.005R	S107-030-3-.005R	S107-030-4-.005R
0.030	0.150	0.125	2.50	0.010	S107-030-2-.010R	S107-030-3-.010R	S107-030-4-.010R
0.031 (1/32)	0.155	0.125	2.50	0.005	S107-031-2-.005R	S107-031-3-.005R	S107-031-4-.005R
0.031 (1/32)	0.155	0.125	2.50	0.010	S107-031-2-.010R	S107-031-3-.010R	S107-031-4-.010R
0.035	0.175	0.125	2.50	0.005	S107-035-2-.005R	S107-035-3-.005R	S107-035-4-.005R
0.035	0.175	0.125	2.50	0.010	S107-035-2-.010R	S107-035-3-.010R	S107-035-4-.010R
0.039 (1mm)	0.195	0.125	2.50	0.005	S107-039-2-.005R	S107-039-3-.005R	S107-039-4-.005R
0.039 (1mm)	0.195	0.125	2.50	0.010	S107-039-2-.010R	S107-039-3-.010R	S107-039-4-.010R
0.040	0.200	0.125	2.50	0.005	S107-040-2-.005R	S107-040-3-.005R	S107-040-4-.005R
0.040	0.200	0.125	2.50	0.010	S107-040-2-.010R	S107-040-3-.010R	S107-040-4-.010R
0.045	0.225	0.125	2.50	0.005	S107-045-2-.005R	S107-045-3-.005R	S107-045-4-.005R
0.045	0.225	0.125	2.50	0.010	S107-045-2-.010R	S107-045-3-.010R	S107-045-4-.010R
0.045	0.225	0.125	2.50	0.015	S107-045-2-.015R	S107-045-3-.015R	S107-045-4-.015R
0.047 (3/64)	0.235	0.125	2.50	0.005	S107-047-2-.005R	S107-047-3-.005R	S107-047-4-.005R
0.047 (3/64)	0.235	0.125	2.50	0.010	S107-047-2-.010R	S107-047-3-.010R	S107-047-4-.010R
0.047 (3/64)	0.235	0.125	2.50	0.015	S107-047-2-.015R	S107-047-3-.015R	S107-047-4-.015R
0.050	0.250	0.125	2.50	0.005	S107-050-2-.005R	S107-050-3-.005R	S107-050-4-.005R
0.050	0.250	0.125	2.50	0.010	S107-050-2-.010R	S107-050-3-.010R	S107-050-4-.010R
0.050	0.250	0.125	2.50	0.015	S107-050-2-.015R	S107-050-3-.015R	S107-050-4-.015R
0.055	0.275	0.125	2.50	0.005	S107-055-2-.005R	S107-055-3-.005R	S107-055-4-.005R
0.055	0.275	0.125	2.50	0.010	S107-055-2-.010R	S107-055-3-.010R	S107-055-4-.010R
0.055	0.275	0.125	2.50	0.015	S107-055-2-.015R	S107-055-3-.015R	S107-055-4-.015R
0.060	0.300	0.125	2.50	0.005	S107-060-2-.005R	S107-060-3-.005R	S107-060-4-.005R
0.060	0.300	0.125	2.50	0.010	S107-060-2-.010R	S107-060-3-.010R	S107-060-4-.010R
0.060	0.300	0.125	2.50	0.015	S107-060-2-.015R	S107-060-3-.015R	S107-060-4-.015R
0.062 (1/16)	0.310	0.125	2.50	0.005	S107-062-2-.005R	S107-062-3-.005R	S107-062-4-.005R
0.062 (1/16)	0.310	0.125	2.50	0.010	S107-062-2-.010R	S107-062-3-.010R	S107-062-4-.010R
0.062 (1/16)	0.310	0.125	2.50	0.015	S107-062-2-.015R	S107-062-3-.015R	S107-062-4-.015R
0.062 (1/16)	0.310	0.125	2.50	0.020	S107-062-2-.020R	S107-062-3-.020R	S107-062-4-.020R
0.065	0.325	0.125	2.50	0.005	S107-065-2-.005R	S107-065-3-.005R	S107-065-4-.005R
0.065	0.325	0.125	2.50	0.010	S107-065-2-.010R	S107-065-3-.010R	S107-065-4-.010R
0.065	0.325	0.125	2.50	0.015	S107-065-2-.015R	S107-065-3-.015R	S107-065-4-.015R
0.070	0.350	0.125	2.50	0.005	S107-070-2-.005R	S107-070-3-.005R	S107-070-4-.005R
0.070	0.350	0.125	2.50	0.010	S107-070-2-.010R	S107-070-3-.010R	S107-070-4-.010R
0.070	0.350	0.125	2.50	0.015	S107-070-2-.015R	S107-070-3-.015R	S107-070-4-.015R
0.075	0.375	0.125	2.50	0.005	S107-075-2-.005R	S107-075-3-.005R	S107-075-4-.005R
0.075	0.375	0.125	2.50	0.010	S107-075-2-.010R	S107-075-3-.010R	S107-075-4-.010R
0.075	0.375	0.125	2.50	0.015	S107-075-2-.015R	S107-075-3-.015R	S107-075-4-.015R



# Corner Radius Micro End Mills

# S107

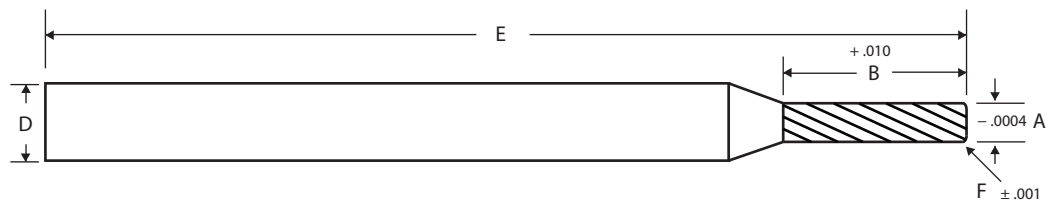
Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.078 (5/64)	0.390	0.125	2.50	0.005	S107-078-2-.005R	S107-078-3-.005R	S107-078-4-.005R
0.078 (5/64)	0.390	0.125	2.50	0.010	S107-078-2-.010R	S107-078-3-.010R	S107-078-4-.010R
0.078 (5/64)	0.390	0.125	2.50	0.015	S107-078-2-.015R	S107-078-3-.015R	S107-078-4-.015R
0.078 (5/64)	0.390	0.125	2.50	0.020	S107-078-2-.020R	S107-078-3-.020R	S107-078-4-.020R
0.080	0.400	0.125	2.50	0.005	S107-080-2-.005R	S107-080-3-.005R	S107-080-4-.005R
0.080	0.400	0.125	2.50	0.010	S107-080-2-.010R	S107-080-3-.010R	S107-080-4-.010R
0.080	0.400	0.125	2.50	0.015	S107-080-2-.015R	S107-080-3-.015R	S107-080-4-.015R
0.085	0.425	0.125	2.50	0.005	S107-085-2-.005R	S107-085-3-.005R	S107-085-4-.005R
0.085	0.425	0.125	2.50	0.010	S107-085-2-.010R	S107-085-3-.010R	S107-085-4-.010R
0.085	0.425	0.125	2.50	0.015	S107-085-2-.015R	S107-085-3-.015R	S107-085-4-.015R
0.090	0.450	0.125	2.50	0.005	S107-090-2-.005R	S107-090-3-.005R	S107-090-4-.005R
0.090	0.450	0.125	2.50	0.010	S107-090-2-.010R	S107-090-3-.010R	S107-090-4-.010R
0.090	0.450	0.125	2.50	0.015	S107-090-2-.015R	S107-090-3-.015R	S107-090-4-.015R
0.093 (3/32)	0.465	0.125	2.50	0.005	S107-093-2-.005R	S107-093-3-.005R	S107-093-4-.005R
0.093 (3/32)	0.465	0.125	2.50	0.010	S107-093-2-.010R	S107-093-3-.010R	S107-093-4-.010R
0.093 (3/32)	0.465	0.125	2.50	0.015	S107-093-2-.015R	S107-093-3-.015R	S107-093-4-.015R
0.093 (3/32)	0.465	0.125	2.50	0.020	S107-093-2-.020R	S107-093-3-.020R	S107-093-4-.020R
0.095	0.475	0.125	2.50	0.005	S107-095-2-.005R	S107-095-3-.005R	S107-095-4-.005R
0.095	0.475	0.125	2.50	0.010	S107-095-2-.010R	S107-095-3-.010R	S107-095-4-.010R
0.095	0.475	0.125	2.50	0.015	S107-095-2-.015R	S107-095-3-.015R	S107-095-4-.015R
0.100	0.500	0.125	2.50	0.005	S107-100-2-.005R	S107-100-3-.005R	S107-100-4-.005R
0.100	0.500	0.125	2.50	0.010	S107-100-2-.010R	S107-100-3-.010R	S107-100-4-.010R
0.100	0.500	0.125	2.50	0.015	S107-100-2-.015R	S107-100-3-.015R	S107-100-4-.015R
0.118 (3mm)	0.590	0.125	2.50	0.005	S107-118-2-.005R	S107-118-3-.005R	S107-118-4-.005R
0.118 (3mm)	0.590	0.125	2.50	0.010	S107-118-2-.010R	S107-118-3-.010R	S107-118-4-.010R
0.118 (3mm)	0.590	0.125	2.50	0.015	S107-118-2-.015R	S107-118-3-.015R	S107-118-4-.015R
0.118 (3mm)	0.590	0.125	2.50	0.020	S107-118-2-.020R	S107-118-3-.020R	S107-118-4-.020R
0.125 (1/8)	0.625	0.125	2.50	0.005	S107-125-2-.005R	S107-125-3-.005R	S107-125-4-.005R
0.125 (1/8)	0.625	0.125	2.50	0.010	S107-125-2-.010R	S107-125-3-.010R	S107-125-4-.010R
0.125 (1/8)	0.625	0.125	2.50	0.015	S107-125-2-.015R	S107-125-3-.015R	S107-125-4-.015R
0.125 (1/8)	0.625	0.125	2.50	0.020	S107-125-2-.020R	S107-125-3-.020R	S107-125-4-.020R

**FLUTES**  
2,3,4

**5X**  
LENGTH  
OF CUT

**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS



## SPECIALS

# P.206

MITGI specializes in custom micro tools that are needed quickly or are difficult to find. See pages 206-207 for more info regarding custom tool capabilities, estimated production times, and information on how to place an order.



# S108

# Corner Radius Micro End Mills

FLUTES  
2,3,4

8X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.015 (1/64)	0.120	0.125	2.50	0.003	S108-015-2-.003R	S108-015-3-.003R	S108-015-4-.003R
0.020	0.160	0.125	2.50	0.005	S108-020-2-.005R	S108-020-3-.005R	S108-020-4-.005R
0.025	0.200	0.125	2.50	0.005	S108-025-2-.005R	S108-025-3-.005R	S108-025-4-.005R
0.030	0.240	0.125	2.50	0.005	S108-030-2-.005R	S108-030-3-.005R	S108-030-4-.005R
0.030	0.240	0.125	2.50	0.010	S108-030-2-.010R	S108-030-3-.010R	S108-030-4-.010R
0.031 (1/32)	0.248	0.125	2.50	0.005	S108-031-2-.005R	S108-031-3-.005R	S108-031-4-.005R
0.031 (1/32)	0.248	0.125	2.50	0.010	S108-031-2-.010R	S108-031-3-.010R	S108-031-4-.010R
0.035	0.280	0.125	2.50	0.005	S108-035-2-.005R	S108-035-3-.005R	S108-035-4-.005R
0.035	0.280	0.125	2.50	0.010	S108-035-2-.010R	S108-035-3-.010R	S108-035-4-.010R
0.039 (1mm)	0.312	0.125	2.50	0.005	S108-039-2-.005R	S108-039-3-.005R	S108-039-4-.005R
0.039 (1mm)	0.312	0.125	2.50	0.010	S108-039-2-.010R	S108-039-3-.010R	S108-039-4-.010R
0.040	0.320	0.125	2.50	0.005	S108-040-2-.005R	S108-040-3-.005R	S108-040-4-.005R
0.040	0.320	0.125	2.50	0.010	S108-040-2-.010R	S108-040-3-.010R	S108-040-4-.010R
0.045	0.360	0.125	2.50	0.005	S108-045-2-.005R	S108-045-3-.005R	S108-045-4-.005R
0.045	0.360	0.125	2.50	0.010	S108-045-2-.010R	S108-045-3-.010R	S108-045-4-.010R
0.045	0.360	0.125	2.50	0.015	S108-045-2-.015R	S108-045-3-.015R	S108-045-4-.015R
0.047 (3/64)	0.376	0.125	2.50	0.005	S108-047-2-.005R	S108-047-3-.005R	S108-047-4-.005R
0.047 (3/64)	0.376	0.125	2.50	0.010	S108-047-2-.010R	S108-047-3-.010R	S108-047-4-.010R
0.047 (3/64)	0.376	0.125	2.50	0.015	S108-047-2-.015R	S108-047-3-.015R	S108-047-4-.015R
0.050	0.400	0.125	2.50	0.005	S108-050-2-.005R	S108-050-3-.005R	S108-050-4-.005R
0.050	0.400	0.125	2.50	0.010	S108-050-2-.010R	S108-050-3-.010R	S108-050-4-.010R
0.050	0.400	0.125	2.50	0.015	S108-050-2-.015R	S108-050-3-.015R	S108-050-4-.015R
0.055	0.440	0.125	2.50	0.005	S108-055-2-.005R	S108-055-3-.005R	S108-055-4-.005R
0.055	0.440	0.125	2.50	0.010	S108-055-2-.010R	S108-055-3-.010R	S108-055-4-.010R
0.055	0.440	0.125	2.50	0.015	S108-055-2-.015R	S108-055-3-.015R	S108-055-4-.015R
0.060	0.480	0.125	2.50	0.005	S108-060-2-.005R	S108-060-3-.005R	S108-060-4-.005R
0.060	0.480	0.125	2.50	0.010	S108-060-2-.010R	S108-060-3-.010R	S108-060-4-.010R
0.060	0.480	0.125	2.50	0.015	S108-060-2-.015R	S108-060-3-.015R	S108-060-4-.015R
0.062 (1/16)	0.496	0.125	2.50	0.005	S108-062-2-.005R	S108-062-3-.005R	S108-062-4-.005R
0.062 (1/16)	0.496	0.125	2.50	0.010	S108-062-2-.010R	S108-062-3-.010R	S108-062-4-.010R
0.062 (1/16)	0.496	0.125	2.50	0.015	S108-062-2-.015R	S108-062-3-.015R	S108-062-4-.015R
0.062 (1/16)	0.496	0.125	2.50	0.020	S108-062-2-.020R	S108-062-3-.020R	S108-062-4-.020R
0.065	0.520	0.125	2.50	0.005	S108-065-2-.005R	S108-065-3-.005R	S108-065-4-.005R
0.065	0.520	0.125	2.50	0.010	S108-065-2-.010R	S108-065-3-.010R	S108-065-4-.010R
0.065	0.520	0.125	2.50	0.015	S108-065-2-.015R	S108-065-3-.015R	S108-065-4-.015R
0.070	0.560	0.125	2.50	0.005	S108-070-2-.005R	S108-070-3-.005R	S108-070-4-.005R
0.070	0.560	0.125	2.50	0.010	S108-070-2-.010R	S108-070-3-.010R	S108-070-4-.010R
0.070	0.560	0.125	2.50	0.015	S108-070-2-.015R	S108-070-3-.015R	S108-070-4-.015R
0.075	0.600	0.125	2.50	0.005	S108-075-2-.005R	S108-075-3-.005R	S108-075-4-.005R
0.075	0.600	0.125	2.50	0.010	S108-075-2-.010R	S108-075-3-.010R	S108-075-4-.010R
0.075	0.600	0.125	2.50	0.015	S108-075-2-.015R	S108-075-3-.015R	S108-075-4-.015R



# Corner Radius Micro End Mills

# S108

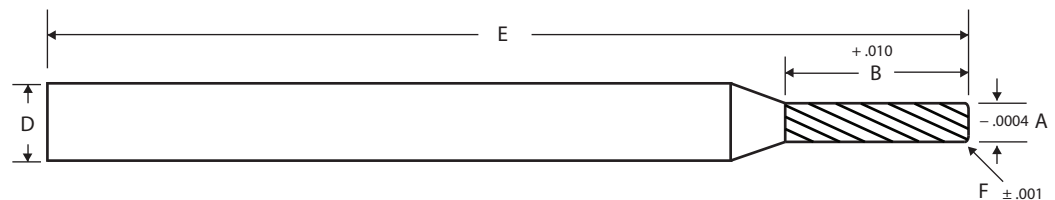
Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.078 (5/64)	0.624	0.125	2.50	0.005	S108-078-2-.005R	S108-078-3-.005R	S108-078-4-.005R
0.078 (5/64)	0.624	0.125	2.50	0.010	S108-078-2-.010R	S108-078-3-.010R	S108-078-4-.010R
0.078 (5/64)	0.624	0.125	2.50	0.015	S108-078-2-.015R	S108-078-3-.015R	S108-078-4-.015R
0.078 (5/64)	0.624	0.125	2.50	0.020	S108-078-2-.020R	S108-078-3-.020R	S108-078-4-.020R
0.080	0.640	0.125	2.50	0.005	S108-080-2-.005R	S108-080-3-.005R	S108-080-4-.005R
0.080	0.640	0.125	2.50	0.010	S108-080-2-.010R	S108-080-3-.010R	S108-080-4-.010R
0.080	0.640	0.125	2.50	0.015	S108-080-2-.015R	S108-080-3-.015R	S108-080-4-.015R
0.085	0.680	0.125	2.50	0.005	S108-085-2-.005R	S108-085-3-.005R	S108-085-4-.005R
0.085	0.680	0.125	2.50	0.010	S108-085-2-.010R	S108-085-3-.010R	S108-085-4-.010R
0.085	0.680	0.125	2.50	0.015	S108-085-2-.015R	S108-085-3-.015R	S108-085-4-.015R
0.090	0.720	0.125	2.50	0.005	S108-090-2-.005R	S108-090-3-.005R	S108-090-4-.005R
0.090	0.720	0.125	2.50	0.010	S108-090-2-.010R	S108-090-3-.010R	S108-090-4-.010R
0.090	0.720	0.125	2.50	0.015	S108-090-2-.015R	S108-090-3-.015R	S108-090-4-.015R
0.093 (3/32)	0.744	0.125	2.50	0.005	S108-093-2-.005R	S108-093-3-.005R	S108-093-4-.005R
0.093 (3/32)	0.744	0.125	2.50	0.010	S108-093-2-.010R	S108-093-3-.010R	S108-093-4-.010R
0.093 (3/32)	0.744	0.125	2.50	0.015	S108-093-2-.015R	S108-093-3-.015R	S108-093-4-.015R
0.093 (3/32)	0.744	0.125	2.50	0.020	S108-093-2-.020R	S108-093-3-.020R	S108-093-4-.020R
0.095	0.760	0.125	2.50	0.005	S108-095-2-.005R	S108-095-3-.005R	S108-095-4-.005R
0.095	0.760	0.125	2.50	0.010	S108-095-2-.010R	S108-095-3-.010R	S108-095-4-.010R
0.095	0.760	0.125	2.50	0.015	S108-095-2-.015R	S108-095-3-.015R	S108-095-4-.015R
0.100	0.800	0.125	2.50	0.005	S108-100-2-.005R	S108-100-3-.005R	S108-100-4-.005R
0.100	0.800	0.125	2.50	0.010	S108-100-2-.010R	S108-100-3-.010R	S108-100-4-.010R
0.100	0.800	0.125	2.50	0.015	S108-100-2-.015R	S108-100-3-.015R	S108-100-4-.015R
0.118 (3mm)	0.944	0.125	2.50	0.005	S108-118-2-.005R	S108-118-3-.005R	S108-118-4-.005R
0.118 (3mm)	0.944	0.125	2.50	0.010	S108-118-2-.010R	S108-118-3-.010R	S108-118-4-.010R
0.118 (3mm)	0.944	0.125	2.50	0.015	S108-118-2-.015R	S108-118-3-.015R	S108-118-4-.015R
0.118 (3mm)	0.944	0.125	2.50	0.020	S108-118-2-.020R	S108-118-3-.020R	S108-118-4-.020R
0.125 (1/8)	1.000	0.125	2.50	0.005	S108-125-2-.005R	S108-125-3-.005R	S108-125-4-.005R
0.125 (1/8)	1.000	0.125	2.50	0.010	S108-125-2-.010R	S108-125-3-.010R	S108-125-4-.010R
0.125 (1/8)	1.000	0.125	2.50	0.015	S108-125-2-.015R	S108-125-3-.015R	S108-125-4-.015R
0.125 (1/8)	1.000	0.125	2.50	0.020	S108-125-2-.020R	S108-125-3-.020R	S108-125-4-.020R

**FLUTES**  
2,3,4

**8X**  
LENGTH  
OF CUT

**+**  
SWISS-TYPE  
OAL

**Q**  
QUICK TURN  
SPECIALS



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



# S109

## Corner Radius Micro End Mills

FLUTES  
2,3,4

12X  
LENGTH  
OF CUT

+  
SWISS-TYPE  
OAL

QT  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.015 (1/64)	0.180	0.125	2.50	0.003	S109-015-2-.003R	S109-015-3-.003R	S109-015-4-.003R
0.020	0.240	0.125	2.50	0.005	S109-020-2-.005R	S109-020-3-.005R	S109-020-4-.005R
0.025	0.300	0.125	2.50	0.005	S109-025-2-.005R	S109-025-3-.005R	S109-025-4-.005R
0.030	0.360	0.125	2.50	0.005	S109-030-2-.005R	S109-030-3-.005R	S109-030-4-.005R
0.030	0.360	0.125	2.50	0.010	S109-030-2-.010R	S109-030-3-.010R	S109-030-4-.010R
0.031 (1/32)	0.372	0.125	2.50	0.005	S109-031-2-.005R	S109-031-3-.005R	S109-031-4-.005R
0.031 (1/32)	0.372	0.125	2.50	0.010	S109-031-2-.010R	S109-031-3-.010R	S109-031-4-.010R
0.035	0.420	0.125	2.50	0.005	S109-035-2-.005R	S109-035-3-.005R	S109-035-4-.005R
0.035	0.420	0.125	2.50	0.010	S109-035-2-.010R	S109-035-3-.010R	S109-035-4-.010R
0.039 (1mm)	0.468	0.125	2.50	0.005	S109-039-2-.005R	S109-039-3-.005R	S109-039-4-.005R
0.039 (1mm)	0.468	0.125	2.50	0.010	S109-039-2-.010R	S109-039-3-.010R	S109-039-4-.010R
0.040	0.480	0.125	2.50	0.005	S109-040-2-.005R	S109-040-3-.005R	S109-040-4-.005R
0.040	0.480	0.125	2.50	0.010	S109-040-2-.010R	S109-040-3-.010R	S109-040-4-.010R
0.045	0.540	0.125	2.50	0.005	S109-045-2-.005R	S109-045-3-.005R	S109-045-4-.005R
0.045	0.540	0.125	2.50	0.010	S109-045-2-.010R	S109-045-3-.010R	S109-045-4-.010R
0.045	0.540	0.125	2.50	0.015	S109-045-2-.015R	S109-045-3-.015R	S109-045-4-.015R
0.047 (3/64)	0.564	0.125	2.50	0.005	S109-047-2-.005R	S109-047-3-.005R	S109-047-4-.005R
0.047 (3/64)	0.564	0.125	2.50	0.010	S109-047-2-.010R	S109-047-3-.010R	S109-047-4-.010R
0.047 (3/64)	0.564	0.125	2.50	0.015	S109-047-2-.015R	S109-047-3-.015R	S109-047-4-.015R
0.050	0.600	0.125	2.50	0.005	S109-050-2-.005R	S109-050-3-.005R	S109-050-4-.005R
0.050	0.600	0.125	2.50	0.010	S109-050-2-.010R	S109-050-3-.010R	S109-050-4-.010R
0.050	0.600	0.125	2.50	0.015	S109-050-2-.015R	S109-050-3-.015R	S109-050-4-.015R
0.055	0.660	0.125	2.50	0.005	S109-055-2-.005R	S109-055-3-.005R	S109-055-4-.005R
0.055	0.660	0.125	2.50	0.010	S109-055-2-.010R	S109-055-3-.010R	S109-055-4-.010R
0.055	0.660	0.125	2.50	0.015	S109-055-2-.015R	S109-055-3-.015R	S109-055-4-.015R
0.060	0.720	0.125	2.50	0.005	S109-060-2-.005R	S109-060-3-.005R	S109-060-4-.005R
0.060	0.720	0.125	2.50	0.010	S109-060-2-.010R	S109-060-3-.010R	S109-060-4-.010R
0.060	0.720	0.125	2.50	0.015	S109-060-2-.015R	S109-060-3-.015R	S109-060-4-.015R
0.062 (1/16)	0.744	0.125	2.50	0.005	S109-062-2-.005R	S109-062-3-.005R	S109-062-4-.005R
0.062 (1/16)	0.744	0.125	2.50	0.010	S109-062-2-.010R	S109-062-3-.010R	S109-062-4-.010R
0.062 (1/16)	0.744	0.125	2.50	0.015	S109-062-2-.015R	S109-062-3-.015R	S109-062-4-.015R
0.062 (1/16)	0.744	0.125	2.50	0.020	S109-062-2-.020R	S109-062-3-.020R	S109-062-4-.020R
0.065	0.780	0.125	2.50	0.005	S109-065-2-.005R	S109-065-3-.005R	S109-065-4-.005R
0.065	0.780	0.125	2.50	0.010	S109-065-2-.010R	S109-065-3-.010R	S109-065-4-.010R
0.065	0.780	0.125	2.50	0.015	S109-065-2-.015R	S109-065-3-.015R	S109-065-4-.015R
0.070	0.840	0.125	2.50	0.005	S109-070-2-.005R	S109-070-3-.005R	S109-070-4-.005R
0.070	0.840	0.125	2.50	0.010	S109-070-2-.010R	S109-070-3-.010R	S109-070-4-.010R
0.070	0.840	0.125	2.50	0.015	S109-070-2-.015R	S109-070-3-.015R	S109-070-4-.015R
0.075	0.900	0.125	2.50	0.005	S109-075-2-.005R	S109-075-3-.005R	S109-075-4-.005R
0.075	0.900	0.125	2.50	0.010	S109-075-2-.010R	S109-075-3-.010R	S109-075-4-.010R
0.075	0.900	0.125	2.50	0.015	S109-075-2-.015R	S109-075-3-.015R	S109-075-4-.015R



# Corner Radius Micro End Mills

# S109

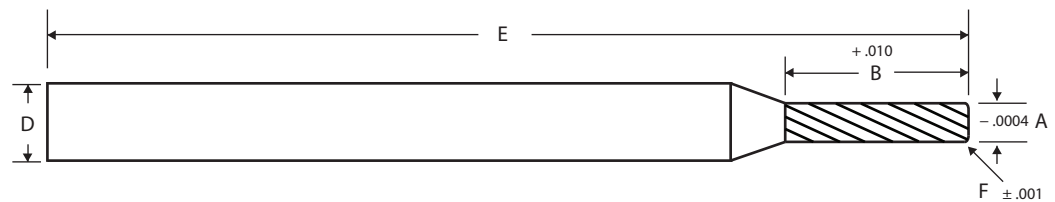
Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F			
0.078 (5/64)	0.936	0.125	2.50	0.005	S109-078-2-.005R	S109-078-3-.005R	S109-078-4-.005R
0.078 (5/64)	0.936	0.125	2.50	0.010	S109-078-2-.010R	S109-078-3-.010R	S109-078-4-.010R
0.078 (5/64)	0.936	0.125	2.50	0.015	S109-078-2-.015R	S109-078-3-.015R	S109-078-4-.015R
0.078 (5/64)	0.936	0.125	2.50	0.020	S109-078-2-.020R	S109-078-3-.020R	S109-078-4-.020R
0.080	0.960	0.125	2.50	0.005	S109-080-2-.005R	S109-080-3-.005R	S109-080-4-.005R
0.080	0.960	0.125	2.50	0.010	S109-080-2-.010R	S109-080-3-.010R	S109-080-4-.010R
0.080	0.960	0.125	2.50	0.015	S109-080-2-.015R	S109-080-3-.015R	S109-080-4-.015R
0.085	1.020	0.125	2.50	0.005	S109-085-2-.005R	S109-085-3-.005R	S109-085-4-.005R
0.085	1.020	0.125	2.50	0.010	S109-085-2-.010R	S109-085-3-.010R	S109-085-4-.010R
0.085	1.020	0.125	2.50	0.015	S109-085-2-.015R	S109-085-3-.015R	S109-085-4-.015R
0.090	1.080	0.125	2.50	0.005	S109-090-2-.005R	S109-090-3-.005R	S109-090-4-.005R
0.090	1.080	0.125	2.50	0.010	S109-090-2-.010R	S109-090-3-.010R	S109-090-4-.010R
0.090	1.080	0.125	2.50	0.015	S109-090-2-.015R	S109-090-3-.015R	S109-090-4-.015R
0.093 (3/32)	1.116	0.125	2.50	0.005	S109-093-2-.005R	S109-093-3-.005R	S109-093-4-.005R
0.093 (3/32)	1.116	0.125	2.50	0.010	S109-093-2-.010R	S109-093-3-.010R	S109-093-4-.010R
0.093 (3/32)	1.116	0.125	2.50	0.015	S109-093-2-.015R	S109-093-3-.015R	S109-093-4-.015R
0.093 (3/32)	1.116	0.125	2.50	0.020	S109-093-2-.020R	S109-093-3-.020R	S109-093-4-.020R
0.095	1.140	0.125	2.50	0.005	S109-095-2-.005R	S109-095-3-.005R	S109-095-4-.005R
0.095	1.140	0.125	2.50	0.010	S109-095-2-.010R	S109-095-3-.010R	S109-095-4-.010R
0.095	1.140	0.125	2.50	0.015	S109-095-2-.015R	S109-095-3-.015R	S109-095-4-.015R
0.100	1.200	0.125	2.50	0.005	S109-100-2-.005R	S109-100-3-.005R	S109-100-4-.005R
0.100	1.200	0.125	2.50	0.010	S109-100-2-.010R	S109-100-3-.010R	S109-100-4-.010R
0.100	1.200	0.125	2.50	0.015	S109-100-2-.015R	S109-100-3-.015R	S109-100-4-.015R
0.118 (3mm)	1.416	0.125	2.50	0.005	S109-118-2-.005R	S109-118-3-.005R	S109-118-4-.005R
0.118 (3mm)	1.416	0.125	2.50	0.010	S109-118-2-.010R	S109-118-3-.010R	S109-118-4-.010R
0.118 (3mm)	1.416	0.125	2.50	0.015	S109-118-2-.015R	S109-118-3-.015R	S109-118-4-.015R
0.118 (3mm)	1.416	0.125	2.50	0.020	S109-118-2-.020R	S109-118-3-.020R	S109-118-4-.020R
0.125 (1/8)	1.500	0.125	2.50	0.005	S109-125-2-.005R	S109-125-3-.005R	S109-125-4-.005R
0.125 (1/8)	1.500	0.125	2.50	0.010	S109-125-2-.010R	S109-125-3-.010R	S109-125-4-.010R
0.125 (1/8)	1.500	0.125	2.50	0.015	S109-125-2-.015R	S109-125-3-.015R	S109-125-4-.015R
0.125 (1/8)	1.500	0.125	2.50	0.020	S109-125-2-.020R	S109-125-3-.020R	S109-125-4-.020R

**FLUTES**  
2,3,4

**12X**  
LENGTH  
OF CUT

**+**  
SWISS-TYPE  
OAL

**Q**  
QUICK TURN  
SPECIALS



Need your coated tool quickly? All standard tools are available AITiN coated in 3 days or less. See page 117 for more details.



FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

5X  
REACH

+  
SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.015 (1/64)	0.023	0.075	0.125	2.50	0.003	S87-015-2-.003R5XR	S87-015-3-.003R5XR	S87-015-4-.003R5XR
0.020	0.030	0.100	0.125	2.50	0.005	S87-020-2-.005R5XR	S87-020-3-.005R5XR	S87-020-4-.005R5XR
0.025	0.038	0.125	0.125	2.50	0.005	S87-025-2-.005R5XR	S87-025-3-.005R5XR	S87-025-4-.005R5XR
0.030	0.045	0.150	0.125	2.50	0.005	S87-030-2-.005R5XR	S87-030-3-.005R5XR	S87-030-4-.005R5XR
0.030	0.045	0.150	0.125	2.50	0.010	S87-030-2-.010R5XR	S87-030-3-.010R5XR	S87-030-4-.010R5XR
0.031 (1/32)	0.047	0.155	0.125	2.50	0.005	S87-031-2-.005R5XR	S87-031-3-.005R5XR	S87-031-4-.005R5XR
0.031 (1/32)	0.047	0.155	0.125	2.50	0.010	S87-031-2-.010R5XR	S87-031-3-.010R5XR	S87-031-4-.010R5XR
0.035	0.053	0.175	0.125	2.50	0.005	S87-035-2-.005R5XR	S87-035-3-.005R5XR	S87-035-4-.005R5XR
0.035	0.053	0.175	0.125	2.50	0.010	S87-035-2-.010R5XR	S87-035-3-.010R5XR	S87-035-4-.010R5XR
0.039 (1mm)	0.059	0.195	0.125	2.50	0.005	S87-039-2-.005R5XR	S87-039-3-.005R5XR	S87-039-4-.005R5XR
0.039 (1mm)	0.059	0.195	0.125	2.50	0.010	S87-039-2-.010R5XR	S87-039-3-.010R5XR	S87-039-4-.010R5XR
0.040	0.060	0.200	0.125	2.50	0.005	S87-040-2-.005R5XR	S87-040-3-.005R5XR	S87-040-4-.005R5XR
0.040	0.060	0.200	0.125	2.50	0.010	S87-040-2-.010R5XR	S87-040-3-.010R5XR	S87-040-4-.010R5XR
0.045	0.068	0.225	0.125	2.50	0.005	S87-045-2-.005R5XR	S87-045-3-.005R5XR	S87-045-4-.005R5XR
0.045	0.068	0.225	0.125	2.50	0.010	S87-045-2-.010R5XR	S87-045-3-.010R5XR	S87-045-4-.010R5XR
0.045	0.068	0.225	0.125	2.50	0.015	S87-045-2-.015R5XR	S87-045-3-.015R5XR	S87-045-4-.015R5XR
0.047 (3/64)	0.071	0.235	0.125	2.50	0.005	S87-047-2-.005R5XR	S87-047-3-.005R5XR	S87-047-4-.005R5XR
0.047 (3/64)	0.071	0.235	0.125	2.50	0.010	S87-047-2-.010R5XR	S87-047-3-.010R5XR	S87-047-4-.010R5XR
0.047 (3/64)	0.071	0.235	0.125	2.50	0.015	S87-047-2-.015R5XR	S87-047-3-.015R5XR	S87-047-4-.015R5XR
0.050	0.075	0.250	0.125	2.50	0.005	S87-050-2-.005R5XR	S87-050-3-.005R5XR	S87-050-4-.005R5XR
0.050	0.075	0.250	0.125	2.50	0.010	S87-050-2-.010R5XR	S87-050-3-.010R5XR	S87-050-4-.010R5XR
0.050	0.075	0.250	0.125	2.50	0.015	S87-050-2-.015R5XR	S87-050-3-.015R5XR	S87-050-4-.015R5XR
0.055	0.083	0.275	0.125	2.50	0.005	S87-055-2-.005R5XR	S87-055-3-.005R5XR	S87-055-4-.005R5XR
0.055	0.083	0.275	0.125	2.50	0.010	S87-055-2-.010R5XR	S87-055-3-.010R5XR	S87-055-4-.010R5XR
0.055	0.083	0.275	0.125	2.50	0.015	S87-055-2-.015R5XR	S87-055-3-.015R5XR	S87-055-4-.015R5XR
0.060	0.090	0.300	0.125	2.50	0.005	S87-060-2-.005R5XR	S87-060-3-.005R5XR	S87-060-4-.005R5XR
0.060	0.090	0.300	0.125	2.50	0.010	S87-060-2-.010R5XR	S87-060-3-.010R5XR	S87-060-4-.010R5XR
0.060	0.090	0.300	0.125	2.50	0.015	S87-060-2-.015R5XR	S87-060-3-.015R5XR	S87-060-4-.015R5XR
0.062 (1/16)	0.093	0.310	0.125	2.50	0.005	S87-062-2-.005R5XR	S87-062-3-.005R5XR	S87-062-4-.005R5XR
0.062 (1/16)	0.093	0.310	0.125	2.50	0.010	S87-062-2-.010R5XR	S87-062-3-.010R5XR	S87-062-4-.010R5XR
0.062 (1/16)	0.093	0.310	0.125	2.50	0.015	S87-062-2-.015R5XR	S87-062-3-.015R5XR	S87-062-4-.015R5XR
0.062 (1/16)	0.093	0.310	0.125	2.50	0.020	S87-062-2-.020R5XR	S87-062-3-.020R5XR	S87-062-4-.020R5XR
0.065	0.098	0.325	0.125	2.50	0.005	S87-065-2-.005R5XR	S87-065-3-.005R5XR	S87-065-4-.005R5XR
0.065	0.098	0.325	0.125	2.50	0.010	S87-065-2-.010R5XR	S87-065-3-.010R5XR	S87-065-4-.010R5XR
0.065	0.098	0.325	0.125	2.50	0.015	S87-065-2-.015R5XR	S87-065-3-.015R5XR	S87-065-4-.015R5XR
0.070	0.105	0.350	0.125	2.50	0.005	S87-070-2-.005R5XR	S87-070-3-.005R5XR	S87-070-4-.005R5XR
0.070	0.105	0.350	0.125	2.50	0.010	S87-070-2-.010R5XR	S87-070-3-.010R5XR	S87-070-4-.010R5XR
0.070	0.105	0.350	0.125	2.50	0.015	S87-070-2-.015R5XR	S87-070-3-.015R5XR	S87-070-4-.015R5XR
0.075	0.113	0.375	0.125	2.50	0.005	S87-075-2-.005R5XR	S87-075-3-.005R5XR	S87-075-4-.005R5XR
0.075	0.113	0.375	0.125	2.50	0.010	S87-075-2-.010R5XR	S87-075-3-.010R5XR	S87-075-4-.010R5XR
0.075	0.113	0.375	0.125	2.50	0.015	S87-075-2-.015R5XR	S87-075-3-.015R5XR	S87-075-4-.015R5XR



# Corner Radius Micro End Mills

S87

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.078 (5/64)	0.117	0.390	0.125	2.50	0.005	S87-078-2-.005R5XR	S87-078-3-.005R5XR	S87-078-4-.005R5XR
0.078 (5/64)	0.117	0.390	0.125	2.50	0.010	S87-078-2-.010R5XR	S87-078-3-.010R5XR	S87-078-4-.010R5XR
0.078 (5/64)	0.117	0.390	0.125	2.50	0.015	S87-078-2-.015R5XR	S87-078-3-.015R5XR	S87-078-4-.015R5XR
0.078 (5/64)	0.117	0.390	0.125	2.50	0.020	S87-078-2-.020R5XR	S87-078-3-.020R5XR	S87-078-4-.020R5XR
0.080	0.120	0.400	0.125	2.50	0.005	S87-080-2-.005R5XR	S87-080-3-.005R5XR	S87-080-4-.005R5XR
0.080	0.120	0.400	0.125	2.50	0.010	S87-080-2-.010R5XR	S87-080-3-.010R5XR	S87-080-4-.010R5XR
0.080	0.120	0.400	0.125	2.50	0.015	S87-080-2-.015R5XR	S87-080-3-.015R5XR	S87-080-4-.015R5XR
0.085	0.128	0.425	0.125	2.50	0.005	S87-085-2-.005R5XR	S87-085-3-.005R5XR	S87-085-4-.005R5XR
0.085	0.128	0.425	0.125	2.50	0.010	S87-085-2-.010R5XR	S87-085-3-.010R5XR	S87-085-4-.010R5XR
0.085	0.128	0.425	0.125	2.50	0.015	S87-085-2-.015R5XR	S87-085-3-.015R5XR	S87-085-4-.015R5XR
0.090	0.135	0.450	0.125	2.50	0.005	S87-090-2-.005R5XR	S87-090-3-.005R5XR	S87-090-4-.005R5XR
0.090	0.135	0.450	0.125	2.50	0.010	S87-090-2-.010R5XR	S87-090-3-.010R5XR	S87-090-4-.010R5XR
0.090	0.135	0.450	0.125	2.50	0.015	S87-090-2-.015R5XR	S87-090-3-.015R5XR	S87-090-4-.015R5XR
0.093 (3/32)	0.140	0.465	0.125	2.50	0.005	S87-093-2-.005R5XR	S87-093-3-.005R5XR	S87-093-4-.005R5XR
0.093 (3/32)	0.140	0.465	0.125	2.50	0.010	S87-093-2-.010R5XR	S87-093-3-.010R5XR	S87-093-4-.010R5XR
0.093 (3/32)	0.140	0.465	0.125	2.50	0.015	S87-093-2-.015R5XR	S87-093-3-.015R5XR	S87-093-4-.015R5XR
0.093 (3/32)	0.140	0.465	0.125	2.50	0.020	S87-093-2-.020R5XR	S87-093-3-.020R5XR	S87-093-4-.020R5XR
0.095	0.143	0.475	0.125	2.50	0.005	S87-095-2-.005R5XR	S87-095-3-.005R5XR	S87-095-4-.005R5XR
0.095	0.143	0.475	0.125	2.50	0.010	S87-095-2-.010R5XR	S87-095-3-.010R5XR	S87-095-4-.010R5XR
0.095	0.143	0.475	0.125	2.50	0.015	S87-095-2-.015R5XR	S87-095-3-.015R5XR	S87-095-4-.015R5XR
0.100	0.150	0.500	0.125	2.50	0.005	S87-100-2-.005R5XR	S87-100-3-.005R5XR	S87-100-4-.005R5XR
0.100	0.150	0.500	0.125	2.50	0.010	S87-100-2-.010R5XR	S87-100-3-.010R5XR	S87-100-4-.010R5XR
0.100	0.150	0.500	0.125	2.50	0.015	S87-100-2-.015R5XR	S87-100-3-.015R5XR	S87-100-4-.015R5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	0.005	S87-118-2-.005R5XR	S87-118-3-.005R5XR	S87-118-4-.005R5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	0.010	S87-118-2-.010R5XR	S87-118-3-.010R5XR	S87-118-4-.010R5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	0.015	S87-118-2-.015R5XR	S87-118-3-.015R5XR	S87-118-4-.015R5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	0.020	S87-118-2-.020R5XR	S87-118-3-.020R5XR	S87-118-4-.020R5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	0.005	S87-125-2-.005R5XR	S87-125-3-.005R5XR	S87-125-4-.005R5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	0.010	S87-125-2-.010R5XR	S87-125-3-.010R5XR	S87-125-4-.010R5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	0.015	S87-125-2-.015R5XR	S87-125-3-.015R5XR	S87-125-4-.015R5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	0.020	S87-125-2-.020R5XR	S87-125-3-.020R5XR	S87-125-4-.020R5XR

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

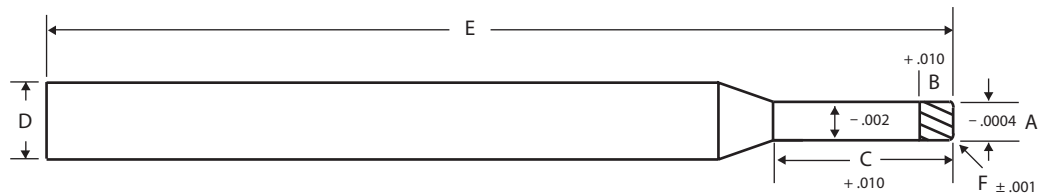
5X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



IN STOCK, ON DEMAND

P.117

All standard tools can be manufactured and shipped within 3 days of receiving the purchase order. See page 117 for more information regarding turnaround times, stocking programs, and delivery options for both standard and custom tools.



# S84

# Corner Radius Micro End Mills

**FLUTES  
2,3,4**

**3X  
LENGTH  
OF CUT**

**5X  
REACH**

**+  
SWISS-TYPE  
OAL**

**Q  
QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.015 (1/64)	0.045	0.075	0.125	2.50	0.003	S84-015-2-.003R5XR	S84-015-3-.003R5XR	S84-015-4-.003R5XR
0.020	0.060	0.100	0.125	2.50	0.005	S84-020-2-.005R5XR	S84-020-3-.005R5XR	S84-020-4-.005R5XR
0.025	0.075	0.125	0.125	2.50	0.005	S84-025-2-.005R5XR	S84-025-3-.005R5XR	S84-025-4-.005R5XR
0.030	0.090	0.150	0.125	2.50	0.005	S84-030-2-.005R5XR	S84-030-3-.005R5XR	S84-030-4-.005R5XR
0.030	0.090	0.150	0.125	2.50	0.010	S84-030-2-.010R5XR	S84-030-3-.010R5XR	S84-030-4-.010R5XR
0.031 (1/32)	0.093	0.155	0.125	2.50	0.005	S84-031-2-.005R5XR	S84-031-3-.005R5XR	S84-031-4-.005R5XR
0.031 (1/32)	0.093	0.155	0.125	2.50	0.010	S84-031-2-.010R5XR	S84-031-3-.010R5XR	S84-031-4-.010R5XR
0.035	0.105	0.175	0.125	2.50	0.005	S84-035-2-.005R5XR	S84-035-3-.005R5XR	S84-035-4-.005R5XR
0.035	0.105	0.175	0.125	2.50	0.010	S84-035-2-.010R5XR	S84-035-3-.010R5XR	S84-035-4-.010R5XR
0.039 (1mm)	0.117	0.195	0.125	2.50	0.005	S84-039-2-.005R5XR	S84-039-3-.005R5XR	S84-039-4-.005R5XR
0.039 (1mm)	0.117	0.195	0.125	2.50	0.010	S84-039-2-.010R5XR	S84-039-3-.010R5XR	S84-039-4-.010R5XR
0.040	0.120	0.200	0.125	2.50	0.005	S84-040-2-.005R5XR	S84-040-3-.005R5XR	S84-040-4-.005R5XR
0.040	0.120	0.200	0.125	2.50	0.010	S84-040-2-.010R5XR	S84-040-3-.010R5XR	S84-040-4-.010R5XR
0.045	0.135	0.225	0.125	2.50	0.005	S84-045-2-.005R5XR	S84-045-3-.005R5XR	S84-045-4-.005R5XR
0.045	0.135	0.225	0.125	2.50	0.010	S84-045-2-.010R5XR	S84-045-3-.010R5XR	S84-045-4-.010R5XR
0.045	0.135	0.225	0.125	2.50	0.015	S84-045-2-.015R5XR	S84-045-3-.015R5XR	S84-045-4-.015R5XR
0.047 (3/64)	0.141	0.235	0.125	2.50	0.005	S84-047-2-.005R5XR	S84-047-3-.005R5XR	S84-047-4-.005R5XR
0.047 (3/64)	0.141	0.235	0.125	2.50	0.010	S84-047-2-.010R5XR	S84-047-3-.010R5XR	S84-047-4-.010R5XR
0.047 (3/64)	0.141	0.235	0.125	2.50	0.015	S84-047-2-.015R5XR	S84-047-3-.015R5XR	S84-047-4-.015R5XR
0.050	0.150	0.250	0.125	2.50	0.005	S84-050-2-.005R5XR	S84-050-3-.005R5XR	S84-050-4-.005R5XR
0.050	0.150	0.250	0.125	2.50	0.010	S84-050-2-.010R5XR	S84-050-3-.010R5XR	S84-050-4-.010R5XR
0.050	0.150	0.250	0.125	2.50	0.015	S84-050-2-.015R5XR	S84-050-3-.015R5XR	S84-050-4-.015R5XR
0.055	0.165	0.275	0.125	2.50	0.005	S84-055-2-.005R5XR	S84-055-3-.005R5XR	S84-055-4-.005R5XR
0.055	0.165	0.275	0.125	2.50	0.010	S84-055-2-.010R5XR	S84-055-3-.010R5XR	S84-055-4-.010R5XR
0.055	0.165	0.275	0.125	2.50	0.015	S84-055-2-.015R5XR	S84-055-3-.015R5XR	S84-055-4-.015R5XR
0.060	0.180	0.300	0.125	2.50	0.005	S84-060-2-.005R5XR	S84-060-3-.005R5XR	S84-060-4-.005R5XR
0.060	0.180	0.300	0.125	2.50	0.010	S84-060-2-.010R5XR	S84-060-3-.010R5XR	S84-060-4-.010R5XR
0.060	0.180	0.300	0.125	2.50	0.015	S84-060-2-.015R5XR	S84-060-3-.015R5XR	S84-060-4-.015R5XR
0.062 (1/16)	0.186	0.310	0.125	2.50	0.005	S84-062-2-.005R5XR	S84-062-3-.005R5XR	S84-062-4-.005R5XR
0.062 (1/16)	0.186	0.310	0.125	2.50	0.010	S84-062-2-.010R5XR	S84-062-3-.010R5XR	S84-062-4-.010R5XR
0.062 (1/16)	0.186	0.310	0.125	2.50	0.015	S84-062-2-.015R5XR	S84-062-3-.015R5XR	S84-062-4-.015R5XR
0.062 (1/16)	0.186	0.310	0.125	2.50	0.020	S84-062-2-.020R5XR	S84-062-3-.020R5XR	S84-062-4-.020R5XR
0.065	0.195	0.325	0.125	2.50	0.005	S84-065-2-.005R5XR	S84-065-3-.005R5XR	S84-065-4-.005R5XR
0.065	0.195	0.325	0.125	2.50	0.010	S84-065-2-.010R5XR	S84-065-3-.010R5XR	S84-065-4-.010R5XR
0.065	0.195	0.325	0.125	2.50	0.015	S84-065-2-.015R5XR	S84-065-3-.015R5XR	S84-065-4-.015R5XR
0.070	0.210	0.350	0.125	2.50	0.005	S84-070-2-.005R5XR	S84-070-3-.005R5XR	S84-070-4-.005R5XR
0.070	0.210	0.350	0.125	2.50	0.010	S84-070-2-.010R5XR	S84-070-3-.010R5XR	S84-070-4-.010R5XR
0.070	0.210	0.350	0.125	2.50	0.015	S84-070-2-.015R5XR	S84-070-3-.015R5XR	S84-070-4-.015R5XR
0.075	0.225	0.375	0.125	2.50	0.005	S84-075-2-.005R5XR	S84-075-3-.005R5XR	S84-075-4-.005R5XR
0.075	0.225	0.375	0.125	2.50	0.010	S84-075-2-.010R5XR	S84-075-3-.010R5XR	S84-075-4-.010R5XR
0.075	0.225	0.375	0.125	2.50	0.015	S84-075-2-.015R5XR	S84-075-3-.015R5XR	S84-075-4-.015R5XR



# Corner Radius Micro End Mills

S84

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.078 (5/64)	0.234	0.390	0.125	2.50	0.005	S84-078-2-.005R5XR	S84-078-3-.005R5XR	S84-078-4-.005R5XR
0.078 (5/64)	0.234	0.390	0.125	2.50	0.010	S84-078-2-.010R5XR	S84-078-3-.010R5XR	S84-078-4-.010R5XR
0.078 (5/64)	0.234	0.390	0.125	2.50	0.015	S84-078-2-.015R5XR	S84-078-3-.015R5XR	S84-078-4-.015R5XR
0.078 (5/64)	0.234	0.390	0.125	2.50	0.020	S84-078-2-.020R5XR	S84-078-3-.020R5XR	S84-078-4-.020R5XR
0.080	0.240	0.400	0.125	2.50	0.005	S84-080-2-.005R5XR	S84-080-3-.005R5XR	S84-080-4-.005R5XR
0.080	0.240	0.400	0.125	2.50	0.010	S84-080-2-.010R5XR	S84-080-3-.010R5XR	S84-080-4-.010R5XR
0.080	0.240	0.400	0.125	2.50	0.015	S84-080-2-.015R5XR	S84-080-3-.015R5XR	S84-080-4-.015R5XR
0.085	0.255	0.425	0.125	2.50	0.005	S84-085-2-.005R5XR	S84-085-3-.005R5XR	S84-085-4-.005R5XR
0.085	0.255	0.425	0.125	2.50	0.010	S84-085-2-.010R5XR	S84-085-3-.010R5XR	S84-085-4-.010R5XR
0.085	0.255	0.425	0.125	2.50	0.015	S84-085-2-.015R5XR	S84-085-3-.015R5XR	S84-085-4-.015R5XR
0.090	0.270	0.450	0.125	2.50	0.005	S84-090-2-.005R5XR	S84-090-3-.005R5XR	S84-090-4-.005R5XR
0.090	0.270	0.450	0.125	2.50	0.010	S84-090-2-.010R5XR	S84-090-3-.010R5XR	S84-090-4-.010R5XR
0.090	0.270	0.450	0.125	2.50	0.015	S84-090-2-.015R5XR	S84-090-3-.015R5XR	S84-090-4-.015R5XR
0.093 (3/32)	0.279	0.465	0.125	2.50	0.005	S84-093-2-.005R5XR	S84-093-3-.005R5XR	S84-093-4-.005R5XR
0.093 (3/32)	0.279	0.465	0.125	2.50	0.010	S84-093-2-.010R5XR	S84-093-3-.010R5XR	S84-093-4-.010R5XR
0.093 (3/32)	0.279	0.465	0.125	2.50	0.015	S84-093-2-.015R5XR	S84-093-3-.015R5XR	S84-093-4-.015R5XR
0.093 (3/32)	0.279	0.465	0.125	2.50	0.020	S84-093-2-.020R5XR	S84-093-3-.020R5XR	S84-093-4-.020R5XR
0.095	0.285	0.475	0.125	2.50	0.005	S84-095-2-.005R5XR	S84-095-3-.005R5XR	S84-095-4-.005R5XR
0.095	0.285	0.475	0.125	2.50	0.010	S84-095-2-.010R5XR	S84-095-3-.010R5XR	S84-095-4-.010R5XR
0.095	0.285	0.475	0.125	2.50	0.015	S84-095-2-.015R5XR	S84-095-3-.015R5XR	S84-095-4-.015R5XR
0.100	0.300	0.500	0.125	2.50	0.005	S84-100-2-.005R5XR	S84-100-3-.005R5XR	S84-100-4-.005R5XR
0.100	0.300	0.500	0.125	2.50	0.010	S84-100-2-.010R5XR	S84-100-3-.010R5XR	S84-100-4-.010R5XR
0.100	0.300	0.500	0.125	2.50	0.015	S84-100-2-.015R5XR	S84-100-3-.015R5XR	S84-100-4-.015R5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	0.005	S84-118-2-.005R5XR	S84-118-3-.005R5XR	S84-118-4-.005R5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	0.010	S84-118-2-.010R5XR	S84-118-3-.010R5XR	S84-118-4-.010R5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	0.015	S84-118-2-.015R5XR	S84-118-3-.015R5XR	S84-118-4-.015R5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	0.020	S84-118-2-.020R5XR	S84-118-3-.020R5XR	S84-118-4-.020R5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	0.005	S84-125-2-.005R5XR	S84-125-3-.005R5XR	S84-125-4-.005R5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	0.010	S84-125-2-.010R5XR	S84-125-3-.010R5XR	S84-125-4-.010R5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	0.015	S84-125-2-.015R5XR	S84-125-3-.015R5XR	S84-125-4-.015R5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	0.020	S84-125-2-.020R5XR	S84-125-3-.020R5XR	S84-125-4-.020R5XR

FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

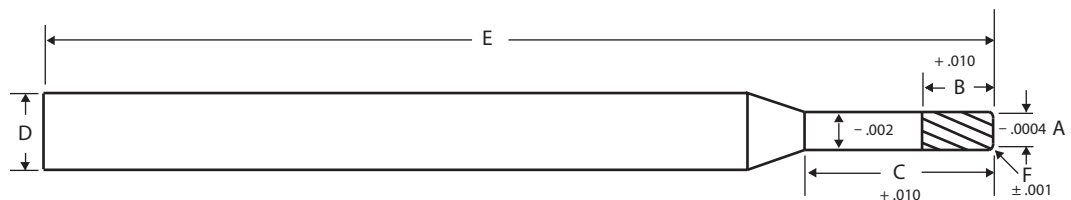
5X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



# S88

# Corner Radius Micro End Mills

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

8X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.015 (1/64)	0.023	0.120	0.125	2.50	0.003	S88-015-2-.003R8XR	S88-015-3-.003R8XR	S88-015-4-.003R8XR
0.020	0.030	0.160	0.125	2.50	0.005	S88-020-2-.005R8XR	S88-020-3-.005R8XR	S88-020-4-.005R8XR
0.025	0.038	0.200	0.125	2.50	0.005	S88-025-2-.005R8XR	S88-025-3-.005R8XR	S88-025-4-.005R8XR
0.030	0.045	0.240	0.125	2.50	0.005	S88-030-2-.005R8XR	S88-030-3-.005R8XR	S88-030-4-.005R8XR
0.030	0.045	0.240	0.125	2.50	0.010	S88-030-2-.010R8XR	S88-030-3-.010R8XR	S88-030-4-.010R8XR
0.031 (1/32)	0.047	0.248	0.125	2.50	0.005	S88-031-2-.005R8XR	S88-031-3-.005R8XR	S88-031-4-.005R8XR
0.031 (1/32)	0.047	0.248	0.125	2.50	0.010	S88-031-2-.010R8XR	S88-031-3-.010R8XR	S88-031-4-.010R8XR
0.035	0.053	0.280	0.125	2.50	0.005	S88-035-2-.005R8XR	S88-035-3-.005R8XR	S88-035-4-.005R8XR
0.035	0.053	0.280	0.125	2.50	0.010	S88-035-2-.010R8XR	S88-035-3-.010R8XR	S88-035-4-.010R8XR
0.039 (1mm)	0.059	0.312	0.125	2.50	0.005	S88-039-2-.005R8XR	S88-039-3-.005R8XR	S88-039-4-.005R8XR
0.039 (1mm)	0.059	0.312	0.125	2.50	0.010	S88-039-2-.010R8XR	S88-039-3-.010R8XR	S88-039-4-.010R8XR
0.040	0.060	0.320	0.125	2.50	0.005	S88-040-2-.005R8XR	S88-040-3-.005R8XR	S88-040-4-.005R8XR
0.040	0.060	0.320	0.125	2.50	0.010	S88-040-2-.010R8XR	S88-040-3-.010R8XR	S88-040-4-.010R8XR
0.045	0.068	0.360	0.125	2.50	0.005	S88-045-2-.005R8XR	S88-045-3-.005R8XR	S88-045-4-.005R8XR
0.045	0.068	0.360	0.125	2.50	0.010	S88-045-2-.010R8XR	S88-045-3-.010R8XR	S88-045-4-.010R8XR
0.045	0.068	0.360	0.125	2.50	0.015	S88-045-2-.015R8XR	S88-045-3-.015R8XR	S88-045-4-.015R8XR
0.047 (3/64)	0.071	0.376	0.125	2.50	0.005	S88-047-2-.005R8XR	S88-047-3-.005R8XR	S88-047-4-.005R8XR
0.047 (3/64)	0.071	0.376	0.125	2.50	0.010	S88-047-2-.010R8XR	S88-047-3-.010R8XR	S88-047-4-.010R8XR
0.047 (3/64)	0.071	0.376	0.125	2.50	0.015	S88-047-2-.015R8XR	S88-047-3-.015R8XR	S88-047-4-.015R8XR
0.050	0.075	0.400	0.125	2.50	0.005	S88-050-2-.005R8XR	S88-050-3-.005R8XR	S88-050-4-.005R8XR
0.050	0.075	0.400	0.125	2.50	0.010	S88-050-2-.010R8XR	S88-050-3-.010R8XR	S88-050-4-.010R8XR
0.050	0.075	0.400	0.125	2.50	0.015	S88-050-2-.015R8XR	S88-050-3-.015R8XR	S88-050-4-.015R8XR
0.055	0.083	0.440	0.125	2.50	0.005	S88-055-2-.005R8XR	S88-055-3-.005R8XR	S88-055-4-.005R8XR
0.055	0.083	0.440	0.125	2.50	0.010	S88-055-2-.010R8XR	S88-055-3-.010R8XR	S88-055-4-.010R8XR
0.055	0.083	0.440	0.125	2.50	0.015	S88-055-2-.015R8XR	S88-055-3-.015R8XR	S88-055-4-.015R8XR
0.060	0.090	0.480	0.125	2.50	0.005	S88-060-2-.005R8XR	S88-060-3-.005R8XR	S88-060-4-.005R8XR
0.060	0.090	0.480	0.125	2.50	0.010	S88-060-2-.010R8XR	S88-060-3-.010R8XR	S88-060-4-.010R8XR
0.060	0.090	0.480	0.125	2.50	0.015	S88-060-2-.015R8XR	S88-060-3-.015R8XR	S88-060-4-.015R8XR
0.062 (1/16)	0.093	0.496	0.125	2.50	0.005	S88-062-2-.005R8XR	S88-062-3-.005R8XR	S88-062-4-.005R8XR
0.062 (1/16)	0.093	0.496	0.125	2.50	0.010	S88-062-2-.010R8XR	S88-062-3-.010R8XR	S88-062-4-.010R8XR
0.062 (1/16)	0.093	0.496	0.125	2.50	0.015	S88-062-2-.015R8XR	S88-062-3-.015R8XR	S88-062-4-.015R8XR
0.062 (1/16)	0.093	0.496	0.125	2.50	0.020	S88-062-2-.020R8XR	S88-062-3-.020R8XR	S88-062-4-.020R8XR
0.065	0.098	0.520	0.125	2.50	0.005	S88-065-2-.005R8XR	S88-065-3-.005R8XR	S88-065-4-.005R8XR
0.065	0.098	0.520	0.125	2.50	0.010	S88-065-2-.010R8XR	S88-065-3-.010R8XR	S88-065-4-.010R8XR
0.065	0.098	0.520	0.125	2.50	0.015	S88-065-2-.015R8XR	S88-065-3-.015R8XR	S88-065-4-.015R8XR
0.070	0.105	0.560	0.125	2.50	0.005	S88-070-2-.005R8XR	S88-070-3-.005R8XR	S88-070-4-.005R8XR
0.070	0.105	0.560	0.125	2.50	0.010	S88-070-2-.010R8XR	S88-070-3-.010R8XR	S88-070-4-.010R8XR
0.070	0.105	0.560	0.125	2.50	0.015	S88-070-2-.015R8XR	S88-070-3-.015R8XR	S88-070-4-.015R8XR
0.075	0.113	0.600	0.125	2.50	0.005	S88-075-2-.005R8XR	S88-075-3-.005R8XR	S88-075-4-.005R8XR
0.075	0.113	0.600	0.125	2.50	0.010	S88-075-2-.010R8XR	S88-075-3-.010R8XR	S88-075-4-.010R8XR
0.075	0.113	0.600	0.125	2.50	0.015	S88-075-2-.015R8XR	S88-075-3-.015R8XR	S88-075-4-.015R8XR



# Corner Radius Micro End Mills

S88

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.078 (5/64)	0.117	0.624	0.125	2.50	0.005	S88-078-2-.005R8XR	S88-078-3-.005R8XR	S88-078-4-.005R8XR
0.078 (5/64)	0.117	0.624	0.125	2.50	0.010	S88-078-2-.010R8XR	S88-078-3-.010R8XR	S88-078-4-.010R8XR
0.078 (5/64)	0.117	0.624	0.125	2.50	0.015	S88-078-2-.015R8XR	S88-078-3-.015R8XR	S88-078-4-.015R8XR
0.078 (5/64)	0.117	0.624	0.125	2.50	0.020	S88-078-2-.020R8XR	S88-078-3-.020R8XR	S88-078-4-.020R8XR
0.080	0.120	0.640	0.125	2.50	0.005	S88-080-2-.005R8XR	S88-080-3-.005R8XR	S88-080-4-.005R8XR
0.080	0.120	0.640	0.125	2.50	0.010	S88-080-2-.010R8XR	S88-080-3-.010R8XR	S88-080-4-.010R8XR
0.080	0.120	0.640	0.125	2.50	0.015	S88-080-2-.015R8XR	S88-080-3-.015R8XR	S88-080-4-.015R8XR
0.085	0.128	0.680	0.125	2.50	0.005	S88-085-2-.005R8XR	S88-085-3-.005R8XR	S88-085-4-.005R8XR
0.085	0.128	0.680	0.125	2.50	0.010	S88-085-2-.010R8XR	S88-085-3-.010R8XR	S88-085-4-.010R8XR
0.085	0.128	0.680	0.125	2.50	0.015	S88-085-2-.015R8XR	S88-085-3-.015R8XR	S88-085-4-.015R8XR
0.090	0.135	0.720	0.125	2.50	0.005	S88-090-2-.005R8XR	S88-090-3-.005R8XR	S88-090-4-.005R8XR
0.090	0.135	0.720	0.125	2.50	0.010	S88-090-2-.010R8XR	S88-090-3-.010R8XR	S88-090-4-.010R8XR
0.090	0.135	0.720	0.125	2.50	0.015	S88-090-2-.015R8XR	S88-090-3-.015R8XR	S88-090-4-.015R8XR
0.093 (3/32)	0.140	0.744	0.125	2.50	0.005	S88-093-2-.005R8XR	S88-093-3-.005R8XR	S88-093-4-.005R8XR
0.093 (3/32)	0.140	0.744	0.125	2.50	0.010	S88-093-2-.010R8XR	S88-093-3-.010R8XR	S88-093-4-.010R8XR
0.093 (3/32)	0.140	0.744	0.125	2.50	0.015	S88-093-2-.015R8XR	S88-093-3-.015R8XR	S88-093-4-.015R8XR
0.093 (3/32)	0.140	0.744	0.125	2.50	0.020	S88-093-2-.020R8XR	S88-093-3-.020R8XR	S88-093-4-.020R8XR
0.095	0.143	0.760	0.125	2.50	0.005	S88-095-2-.005R8XR	S88-095-3-.005R8XR	S88-095-4-.005R8XR
0.095	0.143	0.760	0.125	2.50	0.010	S88-095-2-.010R8XR	S88-095-3-.010R8XR	S88-095-4-.010R8XR
0.095	0.143	0.760	0.125	2.50	0.015	S88-095-2-.015R8XR	S88-095-3-.015R8XR	S88-095-4-.015R8XR
0.100	0.150	0.800	0.125	2.50	0.005	S88-100-2-.005R8XR	S88-100-3-.005R8XR	S88-100-4-.005R8XR
0.100	0.150	0.800	0.125	2.50	0.010	S88-100-2-.010R8XR	S88-100-3-.010R8XR	S88-100-4-.010R8XR
0.100	0.150	0.800	0.125	2.50	0.015	S88-100-2-.015R8XR	S88-100-3-.015R8XR	S88-100-4-.015R8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	0.005	S88-118-2-.005R8XR	S88-118-3-.005R8XR	S88-118-4-.005R8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	0.010	S88-118-2-.010R8XR	S88-118-3-.010R8XR	S88-118-4-.010R8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	0.015	S88-118-2-.015R8XR	S88-118-3-.015R8XR	S88-118-4-.015R8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	0.020	S88-118-2-.020R8XR	S88-118-3-.020R8XR	S88-118-4-.020R8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	0.005	S88-125-2-.005R8XR	S88-125-3-.005R8XR	S88-125-4-.005R8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	0.010	S88-125-2-.010R8XR	S88-125-3-.010R8XR	S88-125-4-.010R8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	0.015	S88-125-2-.015R8XR	S88-125-3-.015R8XR	S88-125-4-.015R8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	0.020	S88-125-2-.020R8XR	S88-125-3-.020R8XR	S88-125-4-.020R8XR

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

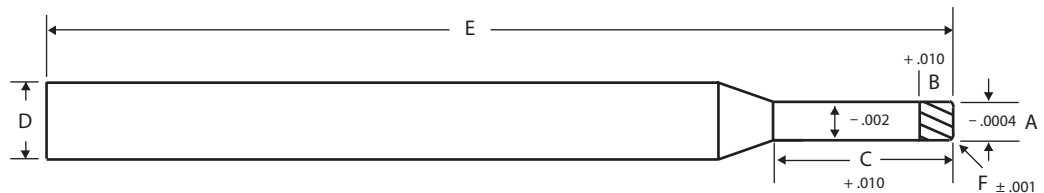
8X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



Need your coated tool quickly? All standard tools are available AITiN coated in 3 days or less. See page 117 for more details.



# S85

# Corner Radius Micro End Mills

**FLUTES  
2,3,4**

**3X  
LENGTH  
OF CUT**

**8X  
REACH**

**+  
SWISS-TYPE  
OAL**

**Q  
QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.015 (1/64)	0.045	0.120	0.125	2.50	0.003	S85-015-2-.003R8XR	S85-015-3-.003R8XR	S85-015-4-.003R8XR
0.020	0.060	0.160	0.125	2.50	0.005	S85-020-2-.005R8XR	S85-020-3-.005R8XR	S85-020-4-.005R8XR
0.025	0.075	0.200	0.125	2.50	0.005	S85-025-2-.005R8XR	S85-025-3-.005R8XR	S85-025-4-.005R8XR
0.030	0.090	0.240	0.125	2.50	0.005	S85-030-2-.005R8XR	S85-030-3-.005R8XR	S85-030-4-.005R8XR
0.030	0.090	0.240	0.125	2.50	0.010	S85-030-2-.010R8XR	S85-030-3-.010R8XR	S85-030-4-.010R8XR
0.031 (1/32)	0.093	0.248	0.125	2.50	0.005	S85-031-2-.005R8XR	S85-031-3-.005R8XR	S85-031-4-.005R8XR
0.031 (1/32)	0.093	0.248	0.125	2.50	0.010	S85-031-2-.010R8XR	S85-031-3-.010R8XR	S85-031-4-.010R8XR
0.035	0.105	0.280	0.125	2.50	0.005	S85-035-2-.005R8XR	S85-035-3-.005R8XR	S85-035-4-.005R8XR
0.035	0.105	0.280	0.125	2.50	0.010	S85-035-2-.010R8XR	S85-035-3-.010R8XR	S85-035-4-.010R8XR
0.039 (1mm)	0.117	0.312	0.125	2.50	0.005	S85-039-2-.005R8XR	S85-039-3-.005R8XR	S85-039-4-.005R8XR
0.039 (1mm)	0.117	0.312	0.125	2.50	0.010	S85-039-2-.010R8XR	S85-039-3-.010R8XR	S85-039-4-.010R8XR
0.040	0.120	0.320	0.125	2.50	0.005	S85-040-2-.005R8XR	S85-040-3-.005R8XR	S85-040-4-.005R8XR
0.040	0.120	0.320	0.125	2.50	0.010	S85-040-2-.010R8XR	S85-040-3-.010R8XR	S85-040-4-.010R8XR
0.045	0.135	0.360	0.125	2.50	0.005	S85-045-2-.005R8XR	S85-045-3-.005R8XR	S85-045-4-.005R8XR
0.045	0.135	0.360	0.125	2.50	0.010	S85-045-2-.010R8XR	S85-045-3-.010R8XR	S85-045-4-.010R8XR
0.045	0.135	0.360	0.125	2.50	0.015	S85-045-2-.015R8XR	S85-045-3-.015R8XR	S85-045-4-.015R8XR
0.047 (3/64)	0.141	0.376	0.125	2.50	0.005	S85-047-2-.005R8XR	S85-047-3-.005R8XR	S85-047-4-.005R8XR
0.047 (3/64)	0.141	0.376	0.125	2.50	0.010	S85-047-2-.010R8XR	S85-047-3-.010R8XR	S85-047-4-.010R8XR
0.047 (3/64)	0.141	0.376	0.125	2.50	0.015	S85-047-2-.015R8XR	S85-047-3-.015R8XR	S85-047-4-.015R8XR
0.050	0.150	0.400	0.125	2.50	0.005	S85-050-2-.005R8XR	S85-050-3-.005R8XR	S85-050-4-.005R8XR
0.050	0.150	0.400	0.125	2.50	0.010	S85-050-2-.010R8XR	S85-050-3-.010R8XR	S85-050-4-.010R8XR
0.050	0.150	0.400	0.125	2.50	0.015	S85-050-2-.015R8XR	S85-050-3-.015R8XR	S85-050-4-.015R8XR
0.055	0.165	0.440	0.125	2.50	0.005	S85-055-2-.005R8XR	S85-055-3-.005R8XR	S85-055-4-.005R8XR
0.055	0.165	0.440	0.125	2.50	0.010	S85-055-2-.010R8XR	S85-055-3-.010R8XR	S85-055-4-.010R8XR
0.055	0.165	0.440	0.125	2.50	0.015	S85-055-2-.015R8XR	S85-055-3-.015R8XR	S85-055-4-.015R8XR
0.060	0.180	0.480	0.125	2.50	0.005	S85-060-2-.005R8XR	S85-060-3-.005R8XR	S85-060-4-.005R8XR
0.060	0.180	0.480	0.125	2.50	0.010	S85-060-2-.010R8XR	S85-060-3-.010R8XR	S85-060-4-.010R8XR
0.060	0.180	0.480	0.125	2.50	0.015	S85-060-2-.015R8XR	S85-060-3-.015R8XR	S85-060-4-.015R8XR
0.062 (1/16)	0.186	0.496	0.125	2.50	0.005	S85-062-2-.005R8XR	S85-062-3-.005R8XR	S85-062-4-.005R8XR
0.062 (1/16)	0.186	0.496	0.125	2.50	0.010	S85-062-2-.010R8XR	S85-062-3-.010R8XR	S85-062-4-.010R8XR
0.062 (1/16)	0.186	0.496	0.125	2.50	0.015	S85-062-2-.015R8XR	S85-062-3-.015R8XR	S85-062-4-.015R8XR
0.062 (1/16)	0.186	0.496	0.125	2.50	0.020	S85-062-2-.020R8XR	S85-062-3-.020R8XR	S85-062-4-.020R8XR
0.065	0.195	0.520	0.125	2.50	0.005	S85-065-2-.005R8XR	S85-065-3-.005R8XR	S85-065-4-.005R8XR
0.065	0.195	0.520	0.125	2.50	0.010	S85-065-2-.010R8XR	S85-065-3-.010R8XR	S85-065-4-.010R8XR
0.065	0.195	0.520	0.125	2.50	0.015	S85-065-2-.015R8XR	S85-065-3-.015R8XR	S85-065-4-.015R8XR
0.070	0.210	0.560	0.125	2.50	0.005	S85-070-2-.005R8XR	S85-070-3-.005R8XR	S85-070-4-.005R8XR
0.070	0.210	0.560	0.125	2.50	0.010	S85-070-2-.010R8XR	S85-070-3-.010R8XR	S85-070-4-.010R8XR
0.070	0.210	0.560	0.125	2.50	0.015	S85-070-2-.015R8XR	S85-070-3-.015R8XR	S85-070-4-.015R8XR
0.075	0.225	0.600	0.125	2.50	0.005	S85-075-2-.005R8XR	S85-075-3-.005R8XR	S85-075-4-.005R8XR
0.075	0.225	0.600	0.125	2.50	0.010	S85-075-2-.010R8XR	S85-075-3-.010R8XR	S85-075-4-.010R8XR
0.075	0.225	0.600	0.125	2.50	0.015	S85-075-2-.015R8XR	S85-075-3-.015R8XR	S85-075-4-.015R8XR



# Corner Radius Micro End Mills

S85

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.078 (5/64)	0.234	0.624	0.125	2.50	0.005	S85-078-2-.005R8XR	S85-078-3-.005R8XR	S85-078-4-.005R8XR
0.078 (5/64)	0.234	0.624	0.125	2.50	0.010	S85-078-2-.010R8XR	S85-078-3-.010R8XR	S85-078-4-.010R8XR
0.078 (5/64)	0.234	0.624	0.125	2.50	0.015	S85-078-2-.015R8XR	S85-078-3-.015R8XR	S85-078-4-.015R8XR
0.078 (5/64)	0.234	0.624	0.125	2.50	0.020	S85-078-2-.020R8XR	S85-078-3-.020R8XR	S85-078-4-.020R8XR
0.080	0.240	0.640	0.125	2.50	0.005	S85-080-2-.005R8XR	S85-080-3-.005R8XR	S85-080-4-.005R8XR
0.080	0.240	0.640	0.125	2.50	0.010	S85-080-2-.010R8XR	S85-080-3-.010R8XR	S85-080-4-.010R8XR
0.080	0.240	0.640	0.125	2.50	0.015	S85-080-2-.015R8XR	S85-080-3-.015R8XR	S85-080-4-.015R8XR
0.085	0.255	0.680	0.125	2.50	0.005	S85-085-2-.005R8XR	S85-085-3-.005R8XR	S85-085-4-.005R8XR
0.085	0.255	0.680	0.125	2.50	0.010	S85-085-2-.010R8XR	S85-085-3-.010R8XR	S85-085-4-.010R8XR
0.085	0.255	0.680	0.125	2.50	0.015	S85-085-2-.015R8XR	S85-085-3-.015R8XR	S85-085-4-.015R8XR
0.090	0.270	0.720	0.125	2.50	0.005	S85-090-2-.005R8XR	S85-090-3-.005R8XR	S85-090-4-.005R8XR
0.090	0.270	0.720	0.125	2.50	0.010	S85-090-2-.010R8XR	S85-090-3-.010R8XR	S85-090-4-.010R8XR
0.090	0.270	0.720	0.125	2.50	0.015	S85-090-2-.015R8XR	S85-090-3-.015R8XR	S85-090-4-.015R8XR
0.093 (3/32)	0.279	0.744	0.125	2.50	0.005	S85-093-2-.005R8XR	S85-093-3-.005R8XR	S85-093-4-.005R8XR
0.093 (3/32)	0.279	0.744	0.125	2.50	0.010	S85-093-2-.010R8XR	S85-093-3-.010R8XR	S85-093-4-.010R8XR
0.093 (3/32)	0.279	0.744	0.125	2.50	0.015	S85-093-2-.015R8XR	S85-093-3-.015R8XR	S85-093-4-.015R8XR
0.093 (3/32)	0.279	0.744	0.125	2.50	0.020	S85-093-2-.020R8XR	S85-093-3-.020R8XR	S85-093-4-.020R8XR
0.095	0.285	0.760	0.125	2.50	0.005	S85-095-2-.005R8XR	S85-095-3-.005R8XR	S85-095-4-.005R8XR
0.095	0.285	0.760	0.125	2.50	0.010	S85-095-2-.010R8XR	S85-095-3-.010R8XR	S85-095-4-.010R8XR
0.095	0.285	0.760	0.125	2.50	0.015	S85-095-2-.015R8XR	S85-095-3-.015R8XR	S85-095-4-.015R8XR
0.100	0.300	0.800	0.125	2.50	0.005	S85-100-2-.005R8XR	S85-100-3-.005R8XR	S85-100-4-.005R8XR
0.100	0.300	0.800	0.125	2.50	0.010	S85-100-2-.010R8XR	S85-100-3-.010R8XR	S85-100-4-.010R8XR
0.100	0.300	0.800	0.125	2.50	0.015	S85-100-2-.015R8XR	S85-100-3-.015R8XR	S85-100-4-.015R8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	0.005	S85-118-2-.005R8XR	S85-118-3-.005R8XR	S85-118-4-.005R8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	0.010	S85-118-2-.010R8XR	S85-118-3-.010R8XR	S85-118-4-.010R8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	0.015	S85-118-2-.015R8XR	S85-118-3-.015R8XR	S85-118-4-.015R8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	0.020	S85-118-2-.020R8XR	S85-118-3-.020R8XR	S85-118-4-.020R8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	0.005	S85-125-2-.005R8XR	S85-125-3-.005R8XR	S85-125-4-.005R8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	0.010	S85-125-2-.010R8XR	S85-125-3-.010R8XR	S85-125-4-.010R8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	0.015	S85-125-2-.015R8XR	S85-125-3-.015R8XR	S85-125-4-.015R8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	0.020	S85-125-2-.020R8XR	S85-125-3-.020R8XR	S85-125-4-.020R8XR

FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

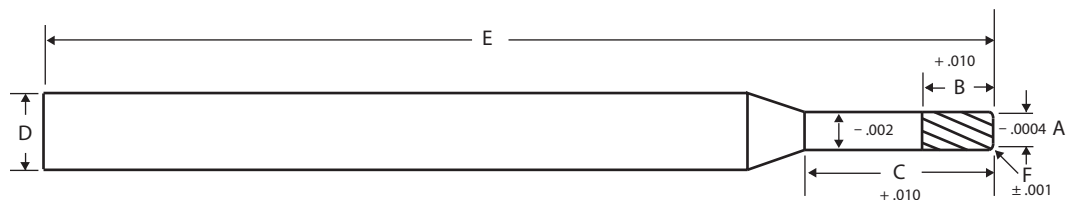
8X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



## COATING

# P.208

In-house coating allows MITGI to deliver high-quality coating applied consistently from tool-to-tool and batch-to-batch, with short turnaround times. See page 208-209 for more information regarding coating options, pricing, and timelines.



# S89

# Corner Radius Micro End Mills

**FLUTES  
2,3,4**

**1.5X  
LENGTH  
OF CUT**

**12X  
REACH**

**+  
SWISS-TYPE  
OAL**

**Q  
QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.015 (1/64)	0.023	0.180	0.125	2.50	0.003	S89-015-2-.003R12XR	S89-015-3-.003R12XR	S89-015-4-.003R12XR
0.020	0.030	0.240	0.125	2.50	0.005	S89-020-2-.005R12XR	S89-020-3-.005R12XR	S89-020-4-.005R12XR
0.025	0.038	0.300	0.125	2.50	0.005	S89-025-2-.005R12XR	S89-025-3-.005R12XR	S89-025-4-.005R12XR
0.030	0.045	0.360	0.125	2.50	0.005	S89-030-2-.005R12XR	S89-030-3-.005R12XR	S89-030-4-.005R12XR
0.030	0.045	0.360	0.125	2.50	0.010	S89-030-2-.010R12XR	S89-030-3-.010R12XR	S89-030-4-.010R12XR
0.031 (1/32)	0.047	0.372	0.125	2.50	0.005	S89-031-2-.005R12XR	S89-031-3-.005R12XR	S89-031-4-.005R12XR
0.031 (1/32)	0.047	0.372	0.125	2.50	0.010	S89-031-2-.010R12XR	S89-031-3-.010R12XR	S89-031-4-.010R12XR
0.035	0.053	0.420	0.125	2.50	0.005	S89-035-2-.005R12XR	S89-035-3-.005R12XR	S89-035-4-.005R12XR
0.035	0.053	0.420	0.125	2.50	0.010	S89-035-2-.010R12XR	S89-035-3-.010R12XR	S89-035-4-.010R12XR
0.039 (1mm)	0.059	0.468	0.125	2.50	0.005	S89-039-2-.005R12XR	S89-039-3-.005R12XR	S89-039-4-.005R12XR
0.039 (1mm)	0.059	0.468	0.125	2.50	0.010	S89-039-2-.010R12XR	S89-039-3-.010R12XR	S89-039-4-.010R12XR
0.040	0.060	0.480	0.125	2.50	0.005	S89-040-2-.005R12XR	S89-040-3-.005R12XR	S89-040-4-.005R12XR
0.040	0.060	0.480	0.125	2.50	0.010	S89-040-2-.010R12XR	S89-040-3-.010R12XR	S89-040-4-.010R12XR
0.045	0.068	0.540	0.125	2.50	0.005	S89-045-2-.005R12XR	S89-045-3-.005R12XR	S89-045-4-.005R12XR
0.045	0.068	0.540	0.125	2.50	0.010	S89-045-2-.010R12XR	S89-045-3-.010R12XR	S89-045-4-.010R12XR
0.045	0.068	0.540	0.125	2.50	0.015	S89-045-2-.015R12XR	S89-045-3-.015R12XR	S89-045-4-.015R12XR
0.047 (3/64)	0.071	0.564	0.125	2.50	0.005	S89-047-2-.005R12XR	S89-047-3-.005R12XR	S89-047-4-.005R12XR
0.047 (3/64)	0.071	0.564	0.125	2.50	0.010	S89-047-2-.010R12XR	S89-047-3-.010R12XR	S89-047-4-.010R12XR
0.047 (3/64)	0.071	0.564	0.125	2.50	0.015	S89-047-2-.015R12XR	S89-047-3-.015R12XR	S89-047-4-.015R12XR
0.050	0.075	0.600	0.125	2.50	0.005	S89-050-2-.005R12XR	S89-050-3-.005R12XR	S89-050-4-.005R12XR
0.050	0.075	0.600	0.125	2.50	0.010	S89-050-2-.010R12XR	S89-050-3-.010R12XR	S89-050-4-.010R12XR
0.050	0.075	0.600	0.125	2.50	0.015	S89-050-2-.015R12XR	S89-050-3-.015R12XR	S89-050-4-.015R12XR
0.055	0.083	0.660	0.125	2.50	0.005	S89-055-2-.005R12XR	S89-055-3-.005R12XR	S89-055-4-.005R12XR
0.055	0.083	0.660	0.125	2.50	0.010	S89-055-2-.010R12XR	S89-055-3-.010R12XR	S89-055-4-.010R12XR
0.055	0.083	0.660	0.125	2.50	0.015	S89-055-2-.015R12XR	S89-055-3-.015R12XR	S89-055-4-.015R12XR
0.060	0.090	0.720	0.125	2.50	0.005	S89-060-2-.005R12XR	S89-060-3-.005R12XR	S89-060-4-.005R12XR
0.060	0.090	0.720	0.125	2.50	0.010	S89-060-2-.010R12XR	S89-060-3-.010R12XR	S89-060-4-.010R12XR
0.060	0.090	0.720	0.125	2.50	0.015	S89-060-2-.015R12XR	S89-060-3-.015R12XR	S89-060-4-.015R12XR
0.062 (1/16)	0.093	0.744	0.125	2.50	0.005	S89-062-2-.005R12XR	S89-062-3-.005R12XR	S89-062-4-.005R12XR
0.062 (1/16)	0.093	0.744	0.125	2.50	0.010	S89-062-2-.010R12XR	S89-062-3-.010R12XR	S89-062-4-.010R12XR
0.062 (1/16)	0.093	0.744	0.125	2.50	0.015	S89-062-2-.015R12XR	S89-062-3-.015R12XR	S89-062-4-.015R12XR
0.062 (1/16)	0.093	0.744	0.125	2.50	0.020	S89-062-2-.020R12XR	S89-062-3-.020R12XR	S89-062-4-.020R12XR
0.065	0.098	0.780	0.125	2.50	0.005	S89-065-2-.005R12XR	S89-065-3-.005R12XR	S89-065-4-.005R12XR
0.065	0.098	0.780	0.125	2.50	0.010	S89-065-2-.010R12XR	S89-065-3-.010R12XR	S89-065-4-.010R12XR
0.065	0.098	0.780	0.125	2.50	0.015	S89-065-2-.015R12XR	S89-065-3-.015R12XR	S89-065-4-.015R12XR
0.070	0.105	0.840	0.125	2.50	0.005	S89-070-2-.005R12XR	S89-070-3-.005R12XR	S89-070-4-.005R12XR
0.070	0.105	0.840	0.125	2.50	0.010	S89-070-2-.010R12XR	S89-070-3-.010R12XR	S89-070-4-.010R12XR
0.070	0.105	0.840	0.125	2.50	0.015	S89-070-2-.015R12XR	S89-070-3-.015R12XR	S89-070-4-.015R12XR
0.075	0.113	0.900	0.125	2.50	0.005	S89-075-2-.005R12XR	S89-075-3-.005R12XR	S89-075-4-.005R12XR
0.075	0.113	0.900	0.125	2.50	0.010	S89-075-2-.010R12XR	S89-075-3-.010R12XR	S89-075-4-.010R12XR
0.075	0.113	0.900	0.125	2.50	0.015	S89-075-2-.015R12XR	S89-075-3-.015R12XR	S89-075-4-.015R12XR



# Corner Radius Micro End Mills

S89

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.078 (5/64)	0.117	0.936	0.125	2.50	0.005	S89-078-2-.005R12XR	S89-078-3-.005R12XR	S89-078-4-.005R12XR
0.078 (5/64)	0.117	0.936	0.125	2.50	0.010	S89-078-2-.010R12XR	S89-078-3-.010R12XR	S89-078-4-.010R12XR
0.078 (5/64)	0.117	0.936	0.125	2.50	0.015	S89-078-2-.015R12XR	S89-078-3-.015R12XR	S89-078-4-.015R12XR
0.078 (5/64)	0.117	0.936	0.125	2.50	0.020	S89-078-2-.020R12XR	S89-078-3-.020R12XR	S89-078-4-.020R12XR
0.080	0.120	0.960	0.125	2.50	0.005	S89-080-2-.005R12XR	S89-080-3-.005R12XR	S89-080-4-.005R12XR
0.080	0.120	0.960	0.125	2.50	0.010	S89-080-2-.010R12XR	S89-080-3-.010R12XR	S89-080-4-.010R12XR
0.080	0.120	0.960	0.125	2.50	0.015	S89-080-2-.015R12XR	S89-080-3-.015R12XR	S89-080-4-.015R12XR
0.085	0.128	1.020	0.125	2.50	0.005	S89-085-2-.005R12XR	S89-085-3-.005R12XR	S89-085-4-.005R12XR
0.085	0.128	1.020	0.125	2.50	0.010	S89-085-2-.010R12XR	S89-085-3-.010R12XR	S89-085-4-.010R12XR
0.085	0.128	1.020	0.125	2.50	0.015	S89-085-2-.015R12XR	S89-085-3-.015R12XR	S89-085-4-.015R12XR
0.090	0.135	1.080	0.125	2.50	0.005	S89-090-2-.005R12XR	S89-090-3-.005R12XR	S89-090-4-.005R12XR
0.090	0.135	1.080	0.125	2.50	0.010	S89-090-2-.010R12XR	S89-090-3-.010R12XR	S89-090-4-.010R12XR
0.090	0.135	1.080	0.125	2.50	0.015	S89-090-2-.015R12XR	S89-090-3-.015R12XR	S89-090-4-.015R12XR
0.093 (3/32)	0.140	1.116	0.125	2.50	0.005	S89-093-2-.005R12XR	S89-093-3-.005R12XR	S89-093-4-.005R12XR
0.093 (3/32)	0.140	1.116	0.125	2.50	0.010	S89-093-2-.010R12XR	S89-093-3-.010R12XR	S89-093-4-.010R12XR
0.093 (3/32)	0.140	1.116	0.125	2.50	0.015	S89-093-2-.015R12XR	S89-093-3-.015R12XR	S89-093-4-.015R12XR
0.093 (3/32)	0.140	1.116	0.125	2.50	0.020	S89-093-2-.020R12XR	S89-093-3-.020R12XR	S89-093-4-.020R12XR
0.095	0.143	1.140	0.125	2.50	0.005	S89-095-2-.005R12XR	S89-095-3-.005R12XR	S89-095-4-.005R12XR
0.095	0.143	1.140	0.125	2.50	0.010	S89-095-2-.010R12XR	S89-095-3-.010R12XR	S89-095-4-.010R12XR
0.095	0.143	1.140	0.125	2.50	0.015	S89-095-2-.015R12XR	S89-095-3-.015R12XR	S89-095-4-.015R12XR
0.100	0.150	1.200	0.125	2.50	0.005	S89-100-2-.005R12XR	S89-100-3-.005R12XR	S89-100-4-.005R12XR
0.100	0.150	1.200	0.125	2.50	0.010	S89-100-2-.010R12XR	S89-100-3-.010R12XR	S89-100-4-.010R12XR
0.100	0.150	1.200	0.125	2.50	0.015	S89-100-2-.015R12XR	S89-100-3-.015R12XR	S89-100-4-.015R12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	0.005	S89-118-2-.005R12XR	S89-118-3-.005R12XR	S89-118-4-.005R12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	0.010	S89-118-2-.010R12XR	S89-118-3-.010R12XR	S89-118-4-.010R12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	0.015	S89-118-2-.015R12XR	S89-118-3-.015R12XR	S89-118-4-.015R12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	0.020	S89-118-2-.020R12XR	S89-118-3-.020R12XR	S89-118-4-.020R12XR
0.125 (1/8)	0.188	1.500	0.125	2.50	0.005	S89-125-2-.005R12XR	S89-125-3-.005R12XR	S89-125-4-.005R12XR
0.125 (1/8)	0.188	1.500	0.125	2.50	0.010	S89-125-2-.010R12XR	S89-125-3-.010R12XR	S89-125-4-.010R12XR
0.125 (1/8)	0.188	1.500	0.125	2.50	0.015	S89-125-2-.015R12XR	S89-125-3-.015R12XR	S89-125-4-.015R12XR
0.125 (1/8)	0.188	1.500	0.125	2.50	0.020	S89-125-2-.020R12XR	S89-125-3-.020R12XR	S89-125-4-.020R12XR

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

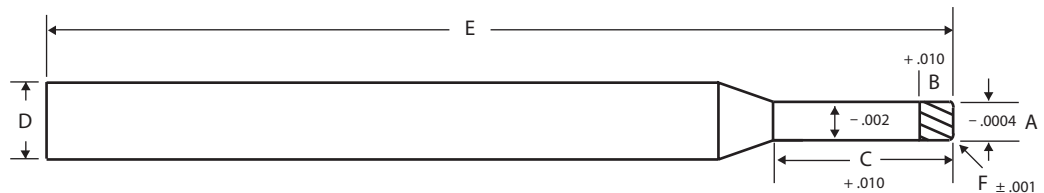
12X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



# S86

# Corner Radius Micro End Mills

FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

12X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.015 (1/64)	0.045	0.180	0.125	2.50	0.003	S86-015-2-.003R12XR	S86-015-3-.003R12XR	S86-015-4-.003R12XR
0.020	0.060	0.240	0.125	2.50	0.005	S86-020-2-.005R12XR	S86-020-3-.005R12XR	S86-020-4-.005R12XR
0.025	0.075	0.300	0.125	2.50	0.005	S86-025-2-.005R12XR	S86-025-3-.005R12XR	S86-025-4-.005R12XR
0.030	0.090	0.360	0.125	2.50	0.005	S86-030-2-.005R12XR	S86-030-3-.005R12XR	S86-030-4-.005R12XR
0.030	0.090	0.360	0.125	2.50	0.010	S86-030-2-.010R12XR	S86-030-3-.010R12XR	S86-030-4-.010R12XR
0.031 (1/32)	0.093	0.372	0.125	2.50	0.005	S86-031-2-.005R12XR	S86-031-3-.005R12XR	S86-031-4-.005R12XR
0.031 (1/32)	0.093	0.372	0.125	2.50	0.010	S86-031-2-.010R12XR	S86-031-3-.010R12XR	S86-031-4-.010R12XR
0.035	0.105	0.420	0.125	2.50	0.005	S86-035-2-.005R12XR	S86-035-3-.005R12XR	S86-035-4-.005R12XR
0.035	0.105	0.420	0.125	2.50	0.010	S86-035-2-.010R12XR	S86-035-3-.010R12XR	S86-035-4-.010R12XR
0.039 (1mm)	0.117	0.468	0.125	2.50	0.005	S86-039-2-.005R12XR	S86-039-3-.005R12XR	S86-039-4-.005R12XR
0.039 (1mm)	0.117	0.468	0.125	2.50	0.010	S86-039-2-.010R12XR	S86-039-3-.010R12XR	S86-039-4-.010R12XR
0.040	0.120	0.480	0.125	2.50	0.005	S86-040-2-.005R12XR	S86-040-3-.005R12XR	S86-040-4-.005R12XR
0.040	0.120	0.480	0.125	2.50	0.010	S86-040-2-.010R12XR	S86-040-3-.010R12XR	S86-040-4-.010R12XR
0.045	0.135	0.540	0.125	2.50	0.005	S86-045-2-.005R12XR	S86-045-3-.005R12XR	S86-045-4-.005R12XR
0.045	0.135	0.540	0.125	2.50	0.010	S86-045-2-.010R12XR	S86-045-3-.010R12XR	S86-045-4-.010R12XR
0.045	0.135	0.540	0.125	2.50	0.015	S86-045-2-.015R12XR	S86-045-3-.015R12XR	S86-045-4-.015R12XR
0.047 (3/64)	0.141	0.564	0.125	2.50	0.005	S86-047-2-.005R12XR	S86-047-3-.005R12XR	S86-047-4-.005R12XR
0.047 (3/64)	0.141	0.564	0.125	2.50	0.010	S86-047-2-.010R12XR	S86-047-3-.010R12XR	S86-047-4-.010R12XR
0.047 (3/64)	0.141	0.564	0.125	2.50	0.015	S86-047-2-.015R12XR	S86-047-3-.015R12XR	S86-047-4-.015R12XR
0.050	0.150	0.600	0.125	2.50	0.005	S86-050-2-.005R12XR	S86-050-3-.005R12XR	S86-050-4-.005R12XR
0.050	0.150	0.600	0.125	2.50	0.010	S86-050-2-.010R12XR	S86-050-3-.010R12XR	S86-050-4-.010R12XR
0.050	0.150	0.600	0.125	2.50	0.015	S86-050-2-.015R12XR	S86-050-3-.015R12XR	S86-050-4-.015R12XR
0.055	0.165	0.660	0.125	2.50	0.005	S86-055-2-.005R12XR	S86-055-3-.005R12XR	S86-055-4-.005R12XR
0.055	0.165	0.660	0.125	2.50	0.010	S86-055-2-.010R12XR	S86-055-3-.010R12XR	S86-055-4-.010R12XR
0.055	0.165	0.660	0.125	2.50	0.015	S86-055-2-.015R12XR	S86-055-3-.015R12XR	S86-055-4-.015R12XR
0.060	0.180	0.720	0.125	2.50	0.005	S86-060-2-.005R12XR	S86-060-3-.005R12XR	S86-060-4-.005R12XR
0.060	0.180	0.720	0.125	2.50	0.010	S86-060-2-.010R12XR	S86-060-3-.010R12XR	S86-060-4-.010R12XR
0.060	0.180	0.720	0.125	2.50	0.015	S86-060-2-.015R12XR	S86-060-3-.015R12XR	S86-060-4-.015R12XR
0.062 (1/16)	0.186	0.744	0.125	2.50	0.005	S86-062-2-.005R12XR	S86-062-3-.005R12XR	S86-062-4-.005R12XR
0.062 (1/16)	0.186	0.744	0.125	2.50	0.010	S86-062-2-.010R12XR	S86-062-3-.010R12XR	S86-062-4-.010R12XR
0.062 (1/16)	0.186	0.744	0.125	2.50	0.015	S86-062-2-.015R12XR	S86-062-3-.015R12XR	S86-062-4-.015R12XR
0.062 (1/16)	0.186	0.744	0.125	2.50	0.020	S86-062-2-.020R12XR	S86-062-3-.020R12XR	S86-062-4-.020R12XR
0.065	0.195	0.780	0.125	2.50	0.005	S86-065-2-.005R12XR	S86-065-3-.005R12XR	S86-065-4-.005R12XR
0.065	0.195	0.780	0.125	2.50	0.010	S86-065-2-.010R12XR	S86-065-3-.010R12XR	S86-065-4-.010R12XR
0.065	0.195	0.780	0.125	2.50	0.015	S86-065-2-.015R12XR	S86-065-3-.015R12XR	S86-065-4-.015R12XR
0.070	0.210	0.840	0.125	2.50	0.005	S86-070-2-.005R12XR	S86-070-3-.005R12XR	S86-070-4-.005R12XR
0.070	0.210	0.840	0.125	2.50	0.010	S86-070-2-.010R12XR	S86-070-3-.010R12XR	S86-070-4-.010R12XR
0.070	0.210	0.840	0.125	2.50	0.015	S86-070-2-.015R12XR	S86-070-3-.015R12XR	S86-070-4-.015R12XR
0.075	0.225	0.900	0.125	2.50	0.005	S86-075-2-.005R12XR	S86-075-3-.005R12XR	S86-075-4-.005R12XR
0.075	0.225	0.900	0.125	2.50	0.010	S86-075-2-.010R12XR	S86-075-3-.010R12XR	S86-075-4-.010R12XR
0.075	0.225	0.900	0.125	2.50	0.015	S86-075-2-.015R12XR	S86-075-3-.015R12XR	S86-075-4-.015R12XR



# Corner Radius Micro End Mills

S86

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F			
0.078 (5/64)	0.234	0.936	0.125	2.50	0.005	S86-078-2-.005R12XR	S86-078-3-.005R12XR	S86-078-4-.005R12XR
0.078 (5/64)	0.234	0.936	0.125	2.50	0.010	S86-078-2-.010R12XR	S86-078-3-.010R12XR	S86-078-4-.010R12XR
0.078 (5/64)	0.234	0.936	0.125	2.50	0.015	S86-078-2-.015R12XR	S86-078-3-.015R12XR	S86-078-4-.015R12XR
0.078 (5/64)	0.234	0.936	0.125	2.50	0.020	S86-078-2-.020R12XR	S86-078-3-.020R12XR	S86-078-4-.020R12XR
0.080	0.240	0.960	0.125	2.50	0.005	S86-080-2-.005R12XR	S86-080-3-.005R12XR	S86-080-4-.005R12XR
0.080	0.240	0.960	0.125	2.50	0.010	S86-080-2-.010R12XR	S86-080-3-.010R12XR	S86-080-4-.010R12XR
0.080	0.240	0.960	0.125	2.50	0.015	S86-080-2-.015R12XR	S86-080-3-.015R12XR	S86-080-4-.015R12XR
0.085	0.255	1.020	0.125	2.50	0.005	S86-085-2-.005R12XR	S86-085-3-.005R12XR	S86-085-4-.005R12XR
0.085	0.255	1.020	0.125	2.50	0.010	S86-085-2-.010R12XR	S86-085-3-.010R12XR	S86-085-4-.010R12XR
0.085	0.255	1.020	0.125	2.50	0.015	S86-085-2-.015R12XR	S86-085-3-.015R12XR	S86-085-4-.015R12XR
0.090	0.270	1.080	0.125	2.50	0.005	S86-090-2-.005R12XR	S86-090-3-.005R12XR	S86-090-4-.005R12XR
0.090	0.270	1.080	0.125	2.50	0.010	S86-090-2-.010R12XR	S86-090-3-.010R12XR	S86-090-4-.010R12XR
0.090	0.270	1.080	0.125	2.50	0.015	S86-090-2-.015R12XR	S86-090-3-.015R12XR	S86-090-4-.015R12XR
0.093 (3/32)	0.279	1.116	0.125	2.50	0.005	S86-093-2-.005R12XR	S86-093-3-.005R12XR	S86-093-4-.005R12XR
0.093 (3/32)	0.279	1.116	0.125	2.50	0.010	S86-093-2-.010R12XR	S86-093-3-.010R12XR	S86-093-4-.010R12XR
0.093 (3/32)	0.279	1.116	0.125	2.50	0.015	S86-093-2-.015R12XR	S86-093-3-.015R12XR	S86-093-4-.015R12XR
0.093 (3/32)	0.279	1.116	0.125	2.50	0.020	S86-093-2-.020R12XR	S86-093-3-.020R12XR	S86-093-4-.020R12XR
0.095	0.285	1.140	0.125	2.50	0.005	S86-095-2-.005R12XR	S86-095-3-.005R12XR	S86-095-4-.005R12XR
0.095	0.285	1.140	0.125	2.50	0.010	S86-095-2-.010R12XR	S86-095-3-.010R12XR	S86-095-4-.010R12XR
0.095	0.285	1.140	0.125	2.50	0.015	S86-095-2-.015R12XR	S86-095-3-.015R12XR	S86-095-4-.015R12XR
0.100	0.300	1.200	0.125	2.50	0.005	S86-100-2-.005R12XR	S86-100-3-.005R12XR	S86-100-4-.005R12XR
0.100	0.300	1.200	0.125	2.50	0.010	S86-100-2-.010R12XR	S86-100-3-.010R12XR	S86-100-4-.010R12XR
0.100	0.300	1.200	0.125	2.50	0.015	S86-100-2-.015R12XR	S86-100-3-.015R12XR	S86-100-4-.015R12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	0.005	S86-118-2-.005R12XR	S86-118-3-.005R12XR	S86-118-4-.005R12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	0.010	S86-118-2-.010R12XR	S86-118-3-.010R12XR	S86-118-4-.010R12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	0.015	S86-118-2-.015R12XR	S86-118-3-.015R12XR	S86-118-4-.015R12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	0.020	S86-118-2-.020R12XR	S86-118-3-.020R12XR	S86-118-4-.020R12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	0.005	S86-125-2-.005R12XR	S86-125-3-.005R12XR	S86-125-4-.005R12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	0.010	S86-125-2-.010R12XR	S86-125-3-.010R12XR	S86-125-4-.010R12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	0.015	S86-125-2-.015R12XR	S86-125-3-.015R12XR	S86-125-4-.015R12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	0.020	S86-125-2-.020R12XR	S86-125-3-.020R12XR	S86-125-4-.020R12XR

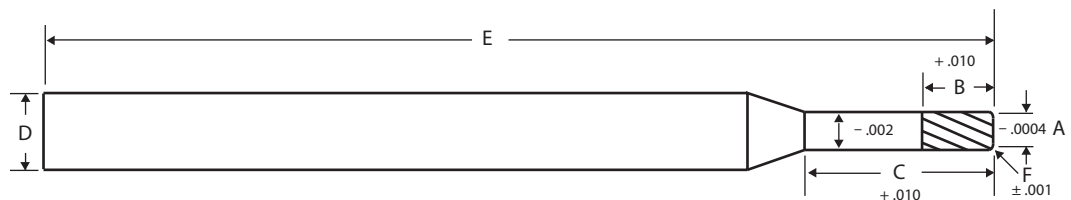
FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

12X  
REACH

+  
SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS



Need your coated tool quickly? All standard tools are available AITIN coated in 3 days or less. See page 117 for more details.



# S11

# Ball Micro End Mills

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

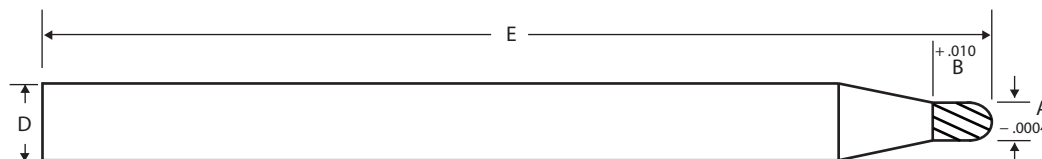
+

SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.004	0.006	0.125	1.50	S11-004-2-BST	N/A	N/A
0.005	0.008	0.125	1.50	S11-005-2-BST	N/A	N/A
0.006	0.009	0.125	1.50	S11-006-2-BST	N/A	N/A
0.008	0.012	0.125	1.50	S11-008-2-BST	N/A	N/A
0.010	0.015	0.125	1.50	S11-010-2-BST	S11-010-3-BST	S11-010-4-BST
0.015 (1/64)	0.023	0.125	1.50	S11-015-2-BST	S11-015-3-BST	S11-015-4-BST
0.020	0.030	0.125	1.50	S11-020-2-BST	S11-020-3-BST	S11-020-4-BST
0.025	0.038	0.125	1.50	S11-025-2-BST	S11-025-3-BST	S11-025-4-BST
0.030	0.045	0.125	1.50	S11-030-2-BST	S11-030-3-BST	S11-030-4-BST
0.031 (1/32)	0.047	0.125	1.50	S11-031-2-BST	S11-031-3-BST	S11-031-4-BST
0.032	0.048	0.125	1.50	S11-032-2-BST	S11-032-3-BST	S11-032-4-BST
0.035	0.053	0.125	1.50	S11-035-2-BST	S11-035-3-BST	S11-035-4-BST
0.039 (1mm)	0.059	0.125	1.50	S11-039-2-BST	S11-039-3-BST	S11-039-4-BST
0.040	0.060	0.125	1.50	S11-040-2-BST	S11-040-3-BST	S11-040-4-BST
0.045	0.068	0.125	1.50	S11-045-2-BST	S11-045-3-BST	S11-045-4-BST
0.047 (3/64)	0.071	0.125	1.50	S11-047-2-BST	S11-047-3-BST	S11-047-4-BST
0.050	0.075	0.125	1.50	S11-050-2-BST	S11-050-3-BST	S11-050-4-BST
0.055	0.083	0.125	1.50	S11-055-2-BST	S11-055-3-BST	S11-055-4-BST
0.060	0.090	0.125	1.50	S11-060-2-BST	S11-060-3-BST	S11-060-4-BST
0.062 (1/16)	0.093	0.125	1.50	S11-062-2-BST	S11-062-3-BST	S11-062-4-BST
0.065	0.098	0.125	1.50	S11-065-2-BST	S11-065-3-BST	S11-065-4-BST
0.070	0.105	0.125	1.50	S11-070-2-BST	S11-070-3-BST	S11-070-4-BST
0.075	0.113	0.125	1.50	S11-075-2-BST	S11-075-3-BST	S11-075-4-BST
0.078 (5/64)	0.117	0.125	1.50	S11-078-2-BST	S11-078-3-BST	S11-078-4-BST
0.080	0.120	0.125	1.50	S11-080-2-BST	S11-080-3-BST	S11-080-4-BST
0.085	0.128	0.125	1.50	S11-085-2-BST	S11-085-3-BST	S11-085-4-BST
0.090	0.135	0.125	1.50	S11-090-2-BST	S11-090-3-BST	S11-090-4-BST
0.093 (3/32)	0.140	0.125	1.50	S11-093-2-BST	S11-093-3-BST	S11-093-4-BST
0.095	0.143	0.125	1.50	S11-095-2-BST	S11-095-3-BST	S11-095-4-BST
0.100	0.150	0.125	1.50	S11-100-2-BST	S11-100-3-BST	S11-100-4-BST
0.118 (3mm)	0.177	0.125	1.50	S11-118-2-BST	S11-118-3-BST	S11-118-4-BST
0.125 (1/8)	0.188	0.125	1.50	S11-125-2-BST	S11-125-3-BST	S11-125-4-BST



## CONTACT US

# P. 2

MITGI is open from 8 AM - 4 PM Central Time, and can be reached any time by email or web. See page 2 for more information about ordering and ways to reach us.



# Ball Micro End Mills

S07

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.004	0.012	0.125	1.50	S07-004-2-BEM	N/A	N/A
0.005	0.015	0.125	1.50	S07-005-2-BEM	N/A	N/A
0.006	0.018	0.125	1.50	S07-006-2-BEM	N/A	N/A
0.008	0.024	0.125	1.50	S07-008-2-BEM	N/A	N/A
0.010	0.030	0.125	1.50	S07-010-2-BEM	S07-010-3-BEM	S07-010-4-BEM
0.015 (1/64)	0.045	0.125	1.50	S07-015-2-BEM	S07-015-3-BEM	S07-015-4-BEM
0.020	0.060	0.125	1.50	S07-020-2-BEM	S07-020-3-BEM	S07-020-4-BEM
0.025	0.075	0.125	1.50	S07-025-2-BEM	S07-025-3-BEM	S07-025-4-BEM
0.030	0.090	0.125	1.50	S07-030-2-BEM	S07-030-3-BEM	S07-030-4-BEM
0.031 (1/32)	0.093	0.125	1.50	S07-031-2-BEM	S07-031-3-BEM	S07-031-4-BEM
0.032	0.096	0.125	1.50	S07-032-2-BEM	S07-032-3-BEM	S07-032-4-BEM
0.035	0.105	0.125	1.50	S07-035-2-BEM	S07-035-3-BEM	S07-035-4-BEM
0.039 (1mm)	0.117	0.125	1.50	S07-039-2-BEM	S07-039-3-BEM	S07-039-4-BEM
0.040	0.120	0.125	1.50	S07-040-2-BEM	S07-040-3-BEM	S07-040-4-BEM
0.045	0.135	0.125	1.50	S07-045-2-BEM	S07-045-3-BEM	S07-045-4-BEM
0.047 (3/64)	0.141	0.125	1.50	S07-047-2-BEM	S07-047-3-BEM	S07-047-4-BEM
0.050	0.150	0.125	1.50	S07-050-2-BEM	S07-050-3-BEM	S07-050-4-BEM
0.055	0.165	0.125	1.50	S07-055-2-BEM	S07-055-3-BEM	S07-055-4-BEM
0.060	0.180	0.125	1.50	S07-060-2-BEM	S07-060-3-BEM	S07-060-4-BEM
0.062 (1/16)	0.187	0.125	1.50	S07-062-2-BEM	S07-062-3-BEM	S07-062-4-BEM
0.065	0.195	0.125	1.50	S07-065-2-BEM	S07-065-3-BEM	S07-065-4-BEM
0.070	0.210	0.125	1.50	S07-070-2-BEM	S07-070-3-BEM	S07-070-4-BEM
0.075	0.225	0.125	1.50	S07-075-2-BEM	S07-075-3-BEM	S07-075-4-BEM
0.078 (5/64)	0.234	0.125	1.50	S07-078-2-BEM	S07-078-3-BEM	S07-078-4-BEM
0.080	0.240	0.125	1.50	S07-080-2-BEM	S07-080-3-BEM	S07-080-4-BEM
0.085	0.255	0.125	1.50	S07-085-2-BEM	S07-085-3-BEM	S07-085-4-BEM
0.090	0.270	0.125	1.50	S07-090-2-BEM	S07-090-3-BEM	S07-090-4-BEM
0.093 (3/32)	0.279	0.125	1.50	S07-093-2-BEM	S07-093-3-BEM	S07-093-4-BEM
0.095	0.285	0.125	1.50	S07-095-2-BEM	S07-095-3-BEM	S07-095-4-BEM
0.100	0.300	0.125	1.50	S07-100-2-BEM	S07-100-3-BEM	S07-100-4-BEM
0.115	0.345	0.125	1.50	S07-115-2-BEM	S07-115-3-BEM	S07-115-4-BEM
0.118 (3mm)	0.354	0.125	1.50	S07-118-2-BEM	S07-118-3-BEM	S07-118-4-BEM
0.122	0.366	0.125	1.50	S07-122-2-BEM	S07-122-3-BEM	S07-122-4-BEM
0.125 (1/8)	0.375	0.125	1.50	S07-125-2-BEM	S07-125-3-BEM	S07-125-4-BEM

FLUTES  
2,3,4

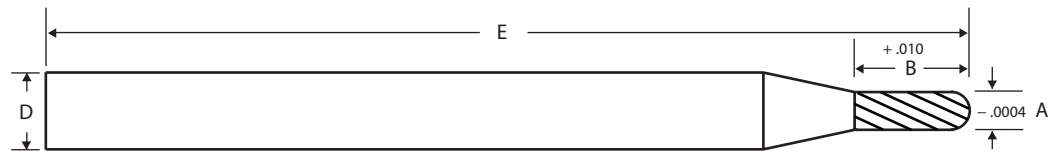
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



FLUTES  
2,3,4

5X  
LENGTH  
OF CUT

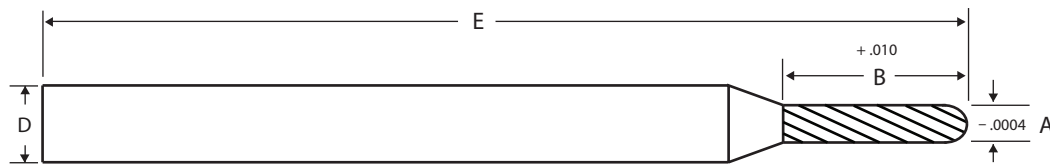
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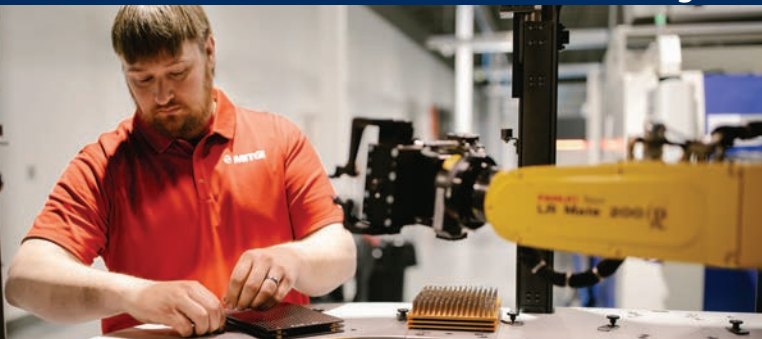
Q

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.010	0.050	0.125	2.50	S74-010-2-BN5X	N/A	N/A
0.015 (1/64)	0.075	0.125	2.50	S74-015-2-BN5X	S74-015-3-BN5X	S74-015-4-BN5X
0.020	0.100	0.125	2.50	S74-020-2-BN5X	S74-020-3-BN5X	S74-020-4-BN5X
0.025	0.125	0.125	2.50	S74-025-2-BN5X	S74-025-3-BN5X	S74-025-4-BN5X
0.030	0.150	0.125	2.50	S74-030-2-BN5X	S74-030-3-BN5X	S74-030-4-BN5X
0.031 (1/32)	0.155	0.125	2.50	S74-031-2-BN5X	S74-031-3-BN5X	S74-031-4-BN5X
0.035	0.175	0.125	2.50	S74-035-2-BN5X	S74-035-3-BN5X	S74-035-4-BN5X
0.039 (1mm)	0.195	0.125	2.50	S74-039-2-BN5X	S74-039-3-BN5X	S74-039-4-BN5X
0.040	0.200	0.125	2.50	S74-040-2-BN5X	S74-040-3-BN5X	S74-040-4-BN5X
0.045	0.225	0.125	2.50	S74-045-2-BN5X	S74-045-3-BN5X	S74-045-4-BN5X
0.047 (3/64)	0.235	0.125	2.50	S74-047-2-BN5X	S74-047-3-BN5X	S74-047-4-BN5X
0.050	0.250	0.125	2.50	S74-050-2-BN5X	S74-050-3-BN5X	S74-050-4-BN5X
0.055	0.275	0.125	2.50	S74-055-2-BN5X	S74-055-3-BN5X	S74-055-4-BN5X
0.060	0.300	0.125	2.50	S74-060-2-BN5X	S74-060-3-BN5X	S74-060-4-BN5X
0.062 (1/16)	0.310	0.125	2.50	S74-062-2-BN5X	S74-062-3-BN5X	S74-062-4-BN5X
0.065	0.325	0.125	2.50	S74-065-2-BN5X	S74-065-3-BN5X	S74-065-4-BN5X
0.070	0.350	0.125	2.50	S74-070-2-BN5X	S74-070-3-BN5X	S74-070-4-BN5X
0.075	0.375	0.125	2.50	S74-075-2-BN5X	S74-075-3-BN5X	S74-075-4-BN5X
0.078 (5/64)	0.390	0.125	2.50	S74-078-2-BN5X	S74-078-3-BN5X	S74-078-4-BN5X
0.080	0.400	0.125	2.50	S74-080-2-BN5X	S74-080-3-BN5X	S74-080-4-BN5X
0.085	0.425	0.125	2.50	S74-085-2-BN5X	S74-085-3-BN5X	S74-085-4-BN5X
0.090	0.450	0.125	2.50	S74-090-2-BN5X	S74-090-3-BN5X	S74-090-4-BN5X
0.093 (3/32)	0.465	0.125	2.50	S74-093-2-BN5X	S74-093-3-BN5X	S74-093-4-BN5X
0.095	0.475	0.125	2.50	S74-095-2-BN5X	S74-095-3-BN5X	S74-095-4-BN5X
0.100	0.500	0.125	2.50	S74-100-2-BN5X	S74-100-3-BN5X	S74-100-4-BN5X
0.118 (3mm)	0.590	0.125	2.50	S74-118-2-BN5X	S74-118-3-BN5X	S74-118-4-BN5X
0.125 (1/8)	0.625	0.125	2.50	S74-125-2-BN5X	S74-125-3-BN5X	S74-125-4-BN5X



MANUFACTURED BY MITGI: Selecting the Right Tool



Unsure how many flutes to select to deliver optimum results?

The ideal number of flutes for each tool is based on the application, operation, and the material being cut.

See page 17: Selecting the right tool for the job



# Ball Micro End Mills

# S75

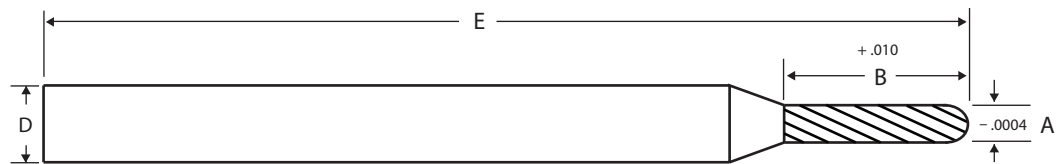
Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.010	0.080	0.125	2.50	S75-010-2-BN8X	N/A	N/A
0.015 (1/64)	0.120	0.125	2.50	S75-015-2-BN8X	S75-015-3-BN8X	S75-015-4-BN8X
0.020	0.160	0.125	2.50	S75-020-2-BN8X	S75-020-3-BN8X	S75-020-4-BN8X
0.025	0.200	0.125	2.50	S75-025-2-BN8X	S75-025-3-BN8X	S75-025-4-BN8X
0.030	0.240	0.125	2.50	S75-030-2-BN8X	S75-030-3-BN8X	S75-030-4-BN8X
0.031 (1/32)	0.248	0.125	2.50	S75-031-2-BN8X	S75-031-3-BN8X	S75-031-4-BN8X
0.035	0.280	0.125	2.50	S75-035-2-BN8X	S75-035-3-BN8X	S75-035-4-BN8X
0.039 (1mm)	0.312	0.125	2.50	S75-039-2-BN8X	S75-039-3-BN8X	S75-039-4-BN8X
0.040	0.320	0.125	2.50	S75-040-2-BN8X	S75-040-3-BN8X	S75-040-4-BN8X
0.045	0.360	0.125	2.50	S75-045-2-BN8X	S75-045-3-BN8X	S75-045-4-BN8X
0.047 (3/64)	0.376	0.125	2.50	S75-047-2-BN8X	S75-047-3-BN8X	S75-047-4-BN8X
0.050	0.400	0.125	2.50	S75-050-2-BN8X	S75-050-3-BN8X	S75-050-4-BN8X
0.055	0.440	0.125	2.50	S75-055-2-BN8X	S75-055-3-BN8X	S75-055-4-BN8X
0.060	0.480	0.125	2.50	S75-060-2-BN8X	S75-060-3-BN8X	S75-060-4-BN8X
0.062 (1/16)	0.496	0.125	2.50	S75-062-2-BN8X	S75-062-3-BN8X	S75-062-4-BN8X
0.065	0.520	0.125	2.50	S75-065-2-BN8X	S75-065-3-BN8X	S75-065-4-BN8X
0.070	0.560	0.125	2.50	S75-070-2-BN8X	S75-070-3-BN8X	S75-070-4-BN8X
0.075	0.600	0.125	2.50	S75-075-2-BN8X	S75-075-3-BN8X	S75-075-4-BN8X
0.078 (5/64)	0.624	0.125	2.50	S75-078-2-BN8X	S75-078-3-BN8X	S75-078-4-BN8X
0.080	0.640	0.125	2.50	S75-080-2-BN8X	S75-080-3-BN8X	S75-080-4-BN8X
0.085	0.680	0.125	2.50	S75-085-2-BN8X	S75-085-3-BN8X	S75-085-4-BN8X
0.090	0.720	0.125	2.50	S75-090-2-BN8X	S75-090-3-BN8X	S75-090-4-BN8X
0.093 (3/32)	0.744	0.125	2.50	S75-093-2-BN8X	S75-093-3-BN8X	S75-093-4-BN8X
0.095	0.760	0.125	2.50	S75-095-2-BN8X	S75-095-3-BN8X	S75-095-4-BN8X
0.100	0.800	0.125	2.50	S75-100-2-BN8X	S75-100-3-BN8X	S75-100-4-BN8X
0.118 (3mm)	0.944	0.125	2.50	S75-118-2-BN8X	S75-118-3-BN8X	S75-118-4-BN8X
0.125 (1/8)	1.000	0.125	2.50	S75-125-2-BN8X	S75-125-3-BN8X	S75-125-4-BN8X

**FLUTES**  
2,3,4

**8X**  
LENGTH  
OF CUT

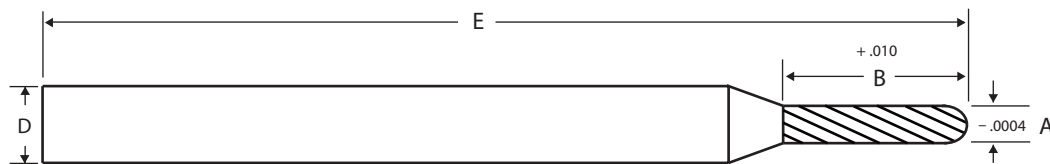
**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS



**S76**
**Ball Micro End Mills**
**FLUTES  
2,3,4**
**12X  
LENGTH  
OF CUT**
**+  
SWISS-TYPE  
OAL**
**QT  
QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.015 (1/64)	0.180	0.125	2.50	S76-015-2-BN12X	S76-015-3-BN12X	S76-015-4-BN12X
0.020	0.240	0.125	2.50	S76-020-2-BN12X	S76-020-3-BN12X	S76-020-4-BN12X
0.025	0.300	0.125	2.50	S76-025-2-BN12X	S76-025-3-BN12X	S76-025-4-BN12X
0.030	0.360	0.125	2.50	S76-030-2-BN12X	S76-030-3-BN12X	S76-030-4-BN12X
0.031 (1/32)	0.372	0.125	2.50	S76-031-2-BN12X	S76-031-3-BN12X	S76-031-4-BN12X
0.035	0.420	0.125	2.50	S76-035-2-BN12X	S76-035-3-BN12X	S76-035-4-BN12X
0.039 (1mm)	0.468	0.125	2.50	S76-039-2-BN12X	S76-039-3-BN12X	S76-039-4-BN12X
0.040	0.480	0.125	2.50	S76-040-2-BN12X	S76-040-3-BN12X	S76-040-4-BN12X
0.045	0.540	0.125	2.50	S76-045-2-BN12X	S76-045-3-BN12X	S76-045-4-BN12X
0.047 (3/64)	0.564	0.125	2.50	S76-047-2-BN12X	S76-047-3-BN12X	S76-047-4-BN12X
0.050	0.600	0.125	2.50	S76-050-2-BN12X	S76-050-3-BN12X	S76-050-4-BN12X
0.055	0.660	0.125	2.50	S76-055-2-BN12X	S76-055-3-BN12X	S76-055-4-BN12X
0.060	0.720	0.125	2.50	S76-060-2-BN12X	S76-060-3-BN12X	S76-060-4-BN12X
0.062 (1/16)	0.744	0.125	2.50	S76-062-2-BN12X	S76-062-3-BN12X	S76-062-4-BN12X
0.065	0.780	0.125	2.50	S76-065-2-BN12X	S76-065-3-BN12X	S76-065-4-BN12X
0.070	0.840	0.125	2.50	S76-070-2-BN12X	S76-070-3-BN12X	S76-070-4-BN12X
0.075	0.900	0.125	2.50	S76-075-2-BN12X	S76-075-3-BN12X	S76-075-4-BN12X
0.078 (5/64)	0.936	0.125	2.50	S76-078-2-BN12X	S76-078-3-BN12X	S76-078-4-BN12X
0.080	0.960	0.125	2.50	S76-080-2-BN12X	S76-080-3-BN12X	S76-080-4-BN12X
0.085	1.020	0.125	2.50	S76-085-2-BN12X	S76-085-3-BN12X	S76-085-4-BN12X
0.090	1.080	0.125	2.50	S76-090-2-BN12X	S76-090-3-BN12X	S76-090-4-BN12X
0.093 (3/32)	1.116	0.125	2.50	S76-093-2-BN12X	S76-093-3-BN12X	S76-093-4-BN12X
0.095	1.140	0.125	2.50	S76-095-2-BN12X	S76-095-3-BN12X	S76-095-4-BN12X
0.100	1.200	0.125	2.50	S76-100-2-BN12X	S76-100-3-BN12X	S76-100-4-BN12X
0.118 (3mm)	1.416	0.125	2.50	S76-118-2-BN12X	S76-118-3-BN12X	S76-118-4-BN12X
0.125 (1/8)	1.500	0.125	2.50	S76-125-2-BN12X	S76-125-3-BN12X	S76-125-4-BN12X


**MANUFACTURED BY MITGI: Turnaround and Stocking Options**

**Facing a tight production schedule, or suddenly out of a tool you need?**

MITGI standards can ship in 3 days or less, and usually within 2 weeks for specials. After standard tools have been ordered, they are stocked and available for same day shipment.

**See page 117: Scheduling and stocking options**



## SPECIALS

All standard tool types are available with a variety of options as specials or modified standards. Each section of the catalog includes more information about specials in that category.

In addition to standard tool categories, MITGI also manufactures the following custom tool types:

- **Drills, Drill Mills, Spot Drills, G-Style Drills, Double Margin Drills, Spade Drills, Gun Drills**
- **Multi-Diameter Step Tooling, Step Drills, Step Reamers**
- **Countersinks, Counterbores**
- Form Tools
- Intersecting Form Tools
- Specialty Mold Tooling
- Chamfer Cutters, Corner Rounders
- Keyseat Cutters, Woodruff Cutters
- Dovetails
- Combination Tools
- Slitting Saws (mounted and arbor)
- Broaches, Pins, Go/No-Go Gauges
- **Corner Rounding End Mills**
- Boring Bars
- **Rebar Tools, Thread Bars**
- Specialty Tool Manufacturing to Customer Print or Design

More information on specials and quote forms can be found on pages 206-207.

Renewing services available on tools larger than 1/8" in designated tool categories (marked in **BOLD**).

# TOOL TYPES AND REGRINDS

## STANDARDS

All standard tool lines are available in 3 days or less (except saws, see pages 202-205 for more details). All stocked tools are available for same or next day shipment.

- Micro End Mills (stub, standard, extended reach, extended length of cut)
- Micro Drills
- **Reamers**
- Drafted Mold Tools
- Clearance Cutter Mold Tools
- Tapered Rib Cutter Mold Tools
- **Single Point and Full Form Thread Mills**
- **End Mills**
- Undercutting End Mills/Cherry Ball Tools
- **Spot Drills, Drill Mills**
- Deburring Knives
- Keyseat Cutters
- Chamfer Cutters
- Engraving Cutters
- Coolant Thru Thread Mills
- Coolant Thru Micro Drills
- Brazed Saws



# S80

# Ball Micro End Mills

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

5X  
REACH

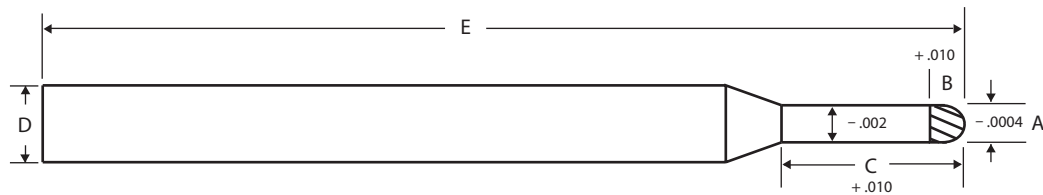
+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.015	0.050	0.125	2.50	S80-010-2-SBN5XR	N/A	N/A
0.015 (1/64)	0.023	0.075	0.125	2.50	S80-015-2-SBN5XR	S80-015-3-SBN5XR	S80-015-4-SBN5XR
0.020	0.030	0.100	0.125	2.50	S80-020-2-SBN5XR	S80-020-3-SBN5XR	S80-020-4-SBN5XR
0.025	0.038	0.125	0.125	2.50	S80-025-2-SBN5XR	S80-025-3-SBN5XR	S80-025-4-SBN5XR
0.030	0.045	0.150	0.125	2.50	S80-030-2-SBN5XR	S80-030-3-SBN5XR	S80-030-4-SBN5XR
0.031 (1/32)	0.047	0.155	0.125	2.50	S80-031-2-SBN5XR	S80-031-3-SBN5XR	S80-031-4-SBN5XR
0.035	0.053	0.175	0.125	2.50	S80-035-2-SBN5XR	S80-035-3-SBN5XR	S80-035-4-SBN5XR
0.039 (1mm)	0.059	0.195	0.125	2.50	S80-039-2-SBN5XR	S80-039-3-SBN5XR	S80-039-4-SBN5XR
0.040	0.060	0.200	0.125	2.50	S80-040-2-SBN5XR	S80-040-3-SBN5XR	S80-040-4-SBN5XR
0.045	0.068	0.225	0.125	2.50	S80-045-2-SBN5XR	S80-045-3-SBN5XR	S80-045-4-SBN5XR
0.047 (3/64)	0.071	0.235	0.125	2.50	S80-047-2-SBN5XR	S80-047-3-SBN5XR	S80-047-4-SBN5XR
0.050	0.075	0.250	0.125	2.50	S80-050-2-SBN5XR	S80-050-3-SBN5XR	S80-050-4-SBN5XR
0.055	0.083	0.275	0.125	2.50	S80-055-2-SBN5XR	S80-055-3-SBN5XR	S80-055-4-SBN5XR
0.060	0.090	0.300	0.125	2.50	S80-060-2-SBN5XR	S80-060-3-SBN5XR	S80-060-4-SBN5XR
0.062 (1/16)	0.093	0.310	0.125	2.50	S80-062-2-SBN5XR	S80-062-3-SBN5XR	S80-062-4-SBN5XR
0.065	0.098	0.325	0.125	2.50	S80-065-2-SBN5XR	S80-065-3-SBN5XR	S80-065-4-SBN5XR
0.070	0.105	0.350	0.125	2.50	S80-070-2-SBN5XR	S80-070-3-SBN5XR	S80-070-4-SBN5XR
0.075	0.113	0.375	0.125	2.50	S80-075-2-SBN5XR	S80-075-3-SBN5XR	S80-075-4-SBN5XR
0.078 (5/64)	0.117	0.390	0.125	2.50	S80-078-2-SBN5XR	S80-078-3-SBN5XR	S80-078-4-SBN5XR
0.080	0.120	0.400	0.125	2.50	S80-080-2-SBN5XR	S80-080-3-SBN5XR	S80-080-4-SBN5XR
0.085	0.128	0.425	0.125	2.50	S80-085-2-SBN5XR	S80-085-3-SBN5XR	S80-085-4-SBN5XR
0.090	0.135	0.450	0.125	2.50	S80-090-2-SBN5XR	S80-090-3-SBN5XR	S80-090-4-SBN5XR
0.093 (3/32)	0.140	0.465	0.125	2.50	S80-093-2-SBN5XR	S80-093-3-SBN5XR	S80-093-4-SBN5XR
0.095	0.143	0.475	0.125	2.50	S80-095-2-SBN5XR	S80-095-3-SBN5XR	S80-095-4-SBN5XR
0.100	0.150	0.500	0.125	2.50	S80-100-2-SBN5XR	S80-100-3-SBN5XR	S80-100-4-SBN5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	S80-118-2-SBN5XR	S80-118-3-SBN5XR	S80-118-4-SBN5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	S80-125-2-SBN5XR	S80-125-3-SBN5XR	S80-125-4-SBN5XR



# Ball Micro End Mills

S77

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.030	0.050	0.125	2.50	S77-010-2-BN5XR	N/A	N/A
0.015 (1/64)	0.045	0.075	0.125	2.50	S77-015-2-BN5XR	S77-015-3-BN5XR	S77-015-4-BN5XR
0.020	0.060	0.100	0.125	2.50	S77-020-2-BN5XR	S77-020-3-BN5XR	S77-020-4-BN5XR
0.025	0.075	0.125	0.125	2.50	S77-025-2-BN5XR	S77-025-3-BN5XR	S77-025-4-BN5XR
0.030	0.090	0.150	0.125	2.50	S77-030-2-BN5XR	S77-030-3-BN5XR	S77-030-4-BN5XR
0.031 (1/32)	0.093	0.155	0.125	2.50	S77-031-2-BN5XR	S77-031-3-BN5XR	S77-031-4-BN5XR
0.035	0.105	0.175	0.125	2.50	S77-035-2-BN5XR	S77-035-3-BN5XR	S77-035-4-BN5XR
0.039 (1mm)	0.117	0.195	0.125	2.50	S77-039-2-BN5XR	S77-039-3-BN5XR	S77-039-4-BN5XR
0.040	0.120	0.200	0.125	2.50	S77-040-2-BN5XR	S77-040-3-BN5XR	S77-040-4-BN5XR
0.045	0.135	0.225	0.125	2.50	S77-045-2-BN5XR	S77-045-3-BN5XR	S77-045-4-BN5XR
0.047 (3/64)	0.141	0.235	0.125	2.50	S77-047-2-BN5XR	S77-047-3-BN5XR	S77-047-4-BN5XR
0.050	0.150	0.250	0.125	2.50	S77-050-2-BN5XR	S77-050-3-BN5XR	S77-050-4-BN5XR
0.055	0.165	0.275	0.125	2.50	S77-055-2-BN5XR	S77-055-3-BN5XR	S77-055-4-BN5XR
0.060	0.180	0.300	0.125	2.50	S77-060-2-BN5XR	S77-060-3-BN5XR	S77-060-4-BN5XR
0.062 (1/16)	0.186	0.310	0.125	2.50	S77-062-2-BN5XR	S77-062-3-BN5XR	S77-062-4-BN5XR
0.065	0.195	0.325	0.125	2.50	S77-065-2-BN5XR	S77-065-3-BN5XR	S77-065-4-BN5XR
0.070	0.210	0.350	0.125	2.50	S77-070-2-BN5XR	S77-070-3-BN5XR	S77-070-4-BN5XR
0.075	0.225	0.375	0.125	2.50	S77-075-2-BN5XR	S77-075-3-BN5XR	S77-075-4-BN5XR
0.078 (5/64)	0.234	0.390	0.125	2.50	S77-078-2-BN5XR	S77-078-3-BN5XR	S77-078-4-BN5XR
0.080	0.240	0.400	0.125	2.50	S77-080-2-BN5XR	S77-080-3-BN5XR	S77-080-4-BN5XR
0.085	0.255	0.425	0.125	2.50	S77-085-2-BN5XR	S77-085-3-BN5XR	S77-085-4-BN5XR
0.090	0.270	0.450	0.125	2.50	S77-090-2-BN5XR	S77-090-3-BN5XR	S77-090-4-BN5XR
0.093 (3/32)	0.279	0.465	0.125	2.50	S77-093-2-BN5XR	S77-093-3-BN5XR	S77-093-4-BN5XR
0.095	0.285	0.475	0.125	2.50	S77-095-2-BN5XR	S77-095-3-BN5XR	S77-095-4-BN5XR
0.100	0.300	0.500	0.125	2.50	S77-100-2-BN5XR	S77-100-3-BN5XR	S77-100-4-BN5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	S77-118-2-BN5XR	S77-118-3-BN5XR	S77-118-4-BN5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	S77-125-2-BN5XR	S77-125-3-BN5XR	S77-125-4-BN5XR

FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

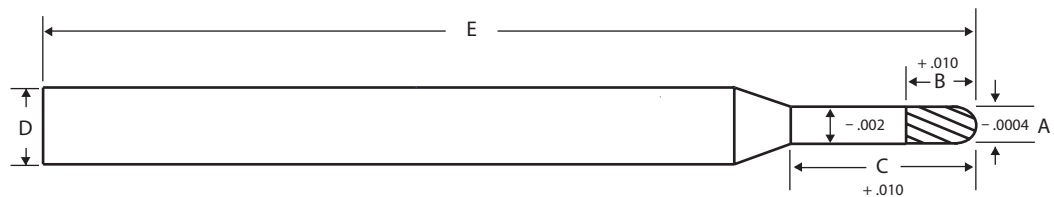
5X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



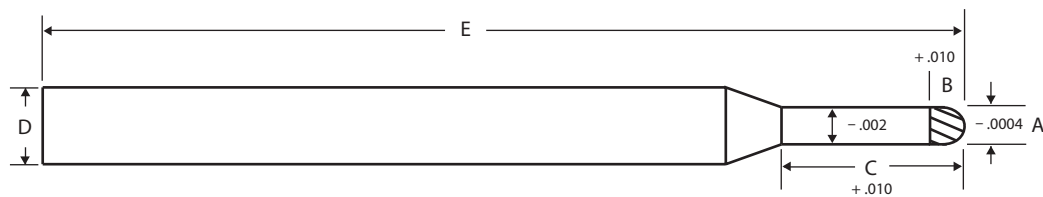
Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



**S81**
**Ball Micro End Mills**
**FLUTES  
2,3,4**
**1.5X  
LENGTH  
OF CUT**
**8X  
REACH**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.015	0.080	0.125	2.50	S81-010-2-SBN8XR	N/A	N/A
0.015 (1/64)	0.023	0.120	0.125	2.50	S81-015-2-SBN8XR	S81-015-3-SBN8XR	S81-015-4-SBN8XR
0.020	0.030	0.160	0.125	2.50	S81-020-2-SBN8XR	S81-020-3-SBN8XR	S81-020-4-SBN8XR
0.025	0.038	0.200	0.125	2.50	S81-025-2-SBN8XR	S81-025-3-SBN8XR	S81-025-4-SBN8XR
0.030	0.045	0.240	0.125	2.50	S81-030-2-SBN8XR	S81-030-3-SBN8XR	S81-030-4-SBN8XR
0.031 (1/32)	0.047	0.248	0.125	2.50	S81-031-2-SBN8XR	S81-031-3-SBN8XR	S81-031-4-SBN8XR
0.035	0.053	0.280	0.125	2.50	S81-035-2-SBN8XR	S81-035-3-SBN8XR	S81-035-4-SBN8XR
0.039 (1mm)	0.059	0.312	0.125	2.50	S81-039-2-SBN8XR	S81-039-3-SBN8XR	S81-039-4-SBN8XR
0.040	0.060	0.320	0.125	2.50	S81-040-2-SBN8XR	S81-040-3-SBN8XR	S81-040-4-SBN8XR
0.045	0.068	0.360	0.125	2.50	S81-045-2-SBN8XR	S81-045-3-SBN8XR	S81-045-4-SBN8XR
0.047 (3/64)	0.071	0.376	0.125	2.50	S81-047-2-SBN8XR	S81-047-3-SBN8XR	S81-047-4-SBN8XR
0.050	0.075	0.400	0.125	2.50	S81-050-2-SBN8XR	S81-050-3-SBN8XR	S81-050-4-SBN8XR
0.055	0.083	0.440	0.125	2.50	S81-055-2-SBN8XR	S81-055-3-SBN8XR	S81-055-4-SBN8XR
0.060	0.090	0.480	0.125	2.50	S81-060-2-SBN8XR	S81-060-3-SBN8XR	S81-060-4-SBN8XR
0.062 (1/16)	0.093	0.496	0.125	2.50	S81-062-2-SBN8XR	S81-062-3-SBN8XR	S81-062-4-SBN8XR
0.065	0.098	0.520	0.125	2.50	S81-065-2-SBN8XR	S81-065-3-SBN8XR	S81-065-4-SBN8XR
0.070	0.105	0.560	0.125	2.50	S81-070-2-SBN8XR	S81-070-3-SBN8XR	S81-070-4-SBN8XR
0.075	0.113	0.600	0.125	2.50	S81-075-2-SBN8XR	S81-075-3-SBN8XR	S81-075-4-SBN8XR
0.078 (5/64)	0.117	0.624	0.125	2.50	S81-078-2-SBN8XR	S81-078-3-SBN8XR	S81-078-4-SBN8XR
0.080	0.120	0.640	0.125	2.50	S81-080-2-SBN8XR	S81-080-3-SBN8XR	S81-080-4-SBN8XR
0.085	0.128	0.680	0.125	2.50	S81-085-2-SBN8XR	S81-085-3-SBN8XR	S81-085-4-SBN8XR
0.090	0.135	0.720	0.125	2.50	S81-090-2-SBN8XR	S81-090-3-SBN8XR	S81-090-4-SBN8XR
0.093 (3/32)	0.140	0.744	0.125	2.50	S81-093-2-SBN8XR	S81-093-3-SBN8XR	S81-093-4-SBN8XR
0.095	0.143	0.760	0.125	2.50	S81-095-2-SBN8XR	S81-095-3-SBN8XR	S81-095-4-SBN8XR
0.100	0.150	0.800	0.125	2.50	S81-100-2-SBN8XR	S81-100-3-SBN8XR	S81-100-4-SBN8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	S81-118-2-SBN8XR	S81-118-3-SBN8XR	S81-118-4-SBN8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	S81-125-2-SBN8XR	S81-125-3-SBN8XR	S81-125-4-SBN8XR



# Ball Micro End Mills

S78

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.030	0.080	0.125	2.50	S78-010-2-BN8XR	N/A	N/A
0.015 (1/64)	0.045	0.120	0.125	2.50	S78-015-2-BN8XR	S78-015-3-BN8XR	S78-015-4-BN8XR
0.020	0.060	0.160	0.125	2.50	S78-020-2-BN8XR	S78-020-3-BN8XR	S78-020-4-BN8XR
0.025	0.075	0.200	0.125	2.50	S78-025-2-BN8XR	S78-025-3-BN8XR	S78-025-4-BN8XR
0.030	0.090	0.240	0.125	2.50	S78-030-2-BN8XR	S78-030-3-BN8XR	S78-030-4-BN8XR
0.031 (1/32)	0.093	0.248	0.125	2.50	S78-031-2-BN8XR	S78-031-3-BN8XR	S78-031-4-BN8XR
0.035	0.105	0.280	0.125	2.50	S78-035-2-BN8XR	S78-035-3-BN8XR	S78-035-4-BN8XR
0.039 (1mm)	0.117	0.312	0.125	2.50	S78-039-2-BN8XR	S78-039-3-BN8XR	S78-039-4-BN8XR
0.040	0.120	0.320	0.125	2.50	S78-040-2-BN8XR	S78-040-3-BN8XR	S78-040-4-BN8XR
0.045	0.135	0.360	0.125	2.50	S78-045-2-BN8XR	S78-045-3-BN8XR	S78-045-4-BN8XR
0.047 (3/64)	0.141	0.376	0.125	2.50	S78-047-2-BN8XR	S78-047-3-BN8XR	S78-047-4-BN8XR
0.050	0.150	0.400	0.125	2.50	S78-050-2-BN8XR	S78-050-3-BN8XR	S78-050-4-BN8XR
0.055	0.165	0.440	0.125	2.50	S78-055-2-BN8XR	S78-055-3-BN8XR	S78-055-4-BN8XR
0.060	0.180	0.480	0.125	2.50	S78-060-2-BN8XR	S78-060-3-BN8XR	S78-060-4-BN8XR
0.062 (1/16)	0.186	0.496	0.125	2.50	S78-062-2-BN8XR	S78-062-3-BN8XR	S78-062-4-BN8XR
0.065	0.195	0.520	0.125	2.50	S78-065-2-BN8XR	S78-065-3-BN8XR	S78-065-4-BN8XR
0.070	0.210	0.560	0.125	2.50	S78-070-2-BN8XR	S78-070-3-BN8XR	S78-070-4-BN8XR
0.075	0.225	0.600	0.125	2.50	S78-075-2-BN8XR	S78-075-3-BN8XR	S78-075-4-BN8XR
0.078 (5/64)	0.234	0.624	0.125	2.50	S78-078-2-BN8XR	S78-078-3-BN8XR	S78-078-4-BN8XR
0.080	0.240	0.640	0.125	2.50	S78-080-2-BN8XR	S78-080-3-BN8XR	S78-080-4-BN8XR
0.085	0.255	0.680	0.125	2.50	S78-085-2-BN8XR	S78-085-3-BN8XR	S78-085-4-BN8XR
0.090	0.270	0.720	0.125	2.50	S78-090-2-BN8XR	S78-090-3-BN8XR	S78-090-4-BN8XR
0.093 (3/32)	0.279	0.744	0.125	2.50	S78-093-2-BN8XR	S78-093-3-BN8XR	S78-093-4-BN8XR
0.095	0.285	0.760	0.125	2.50	S78-095-2-BN8XR	S78-095-3-BN8XR	S78-095-4-BN8XR
0.100	0.300	0.800	0.125	2.50	S78-100-2-BN8XR	S78-100-3-BN8XR	S78-100-4-BN8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	S78-118-2-BN8XR	S78-118-3-BN8XR	S78-118-4-BN8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	S78-125-2-BN8XR	S78-125-3-BN8XR	S78-125-4-BN8XR

FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

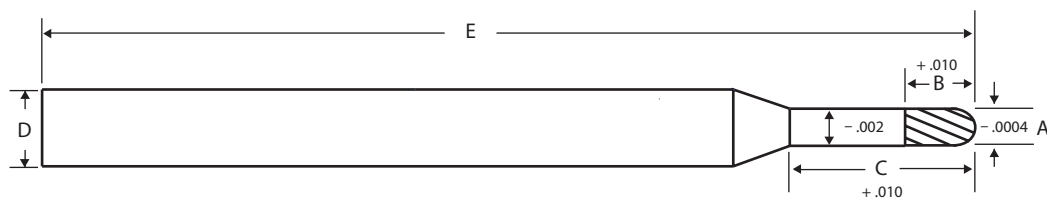
8X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



## COATING

# P.208

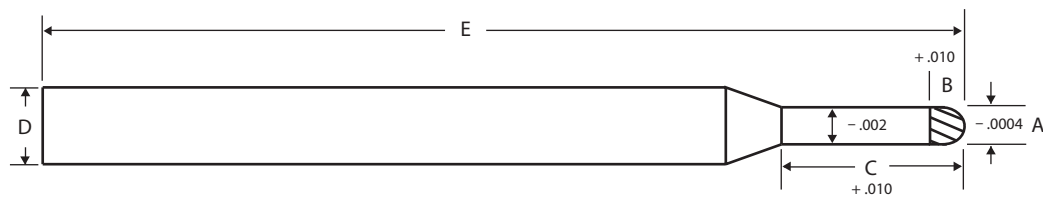
In-house coating allows MITGI to deliver high-quality coating applied consistently from tool-to-tool and batch-to-batch, with short turnaround times. See pages 208-209 for more information regarding coating options, pricing, and timelines.



**FLUTES  
2,3,4**
**1.5X  
LENGTH  
OF CUT**
**12X  
REACH**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.015	0.120	0.125	2.50	S82-010-2-SBN12XR	N/A	N/A
0.015 (1/64)	0.023	0.180	0.125	2.50	S82-015-2-SBN12XR	S82-015-3-SBN12XR	S82-015-4-SBN12XR
0.020	0.030	0.240	0.125	2.50	S82-020-2-SBN12XR	S82-020-3-SBN12XR	S82-020-4-SBN12XR
0.025	0.038	0.300	0.125	2.50	S82-025-2-SBN12XR	S82-025-3-SBN12XR	S82-025-4-SBN12XR
0.030	0.045	0.360	0.125	2.50	S82-030-2-SBN12XR	S82-030-3-SBN12XR	S82-030-4-SBN12XR
0.031 (1/32)	0.047	0.372	0.125	2.50	S82-031-2-SBN12XR	S82-031-3-SBN12XR	S82-031-4-SBN12XR
0.035	0.053	0.420	0.125	2.50	S82-035-2-SBN12XR	S82-035-3-SBN12XR	S82-035-4-SBN12XR
0.039 (1mm)	0.059	0.468	0.125	2.50	S82-039-2-SBN12XR	S82-039-3-SBN12XR	S82-039-4-SBN12XR
0.040	0.060	0.480	0.125	2.50	S82-040-2-SBN12XR	S82-040-3-SBN12XR	S82-040-4-SBN12XR
0.045	0.068	0.540	0.125	2.50	S82-045-2-SBN12XR	S82-045-3-SBN12XR	S82-045-4-SBN12XR
0.047 (3/64)	0.071	0.564	0.125	2.50	S82-047-2-SBN12XR	S82-047-3-SBN12XR	S82-047-4-SBN12XR
0.050	0.075	0.600	0.125	2.50	S82-050-2-SBN12XR	S82-050-3-SBN12XR	S82-050-4-SBN12XR
0.055	0.083	0.660	0.125	2.50	S82-055-2-SBN12XR	S82-055-3-SBN12XR	S82-055-4-SBN12XR
0.060	0.090	0.720	0.125	2.50	S82-060-2-SBN12XR	S82-060-3-SBN12XR	S82-060-4-SBN12XR
0.062 (1/16)	0.093	0.744	0.125	2.50	S82-062-2-SBN12XR	S82-062-3-SBN12XR	S82-062-4-SBN12XR
0.065	0.098	0.780	0.125	2.50	S82-065-2-SBN12XR	S82-065-3-SBN12XR	S82-065-4-SBN12XR
0.070	0.105	0.840	0.125	2.50	S82-070-2-SBN12XR	S82-070-3-SBN12XR	S82-070-4-SBN12XR
0.075	0.113	0.900	0.125	2.50	S82-075-2-SBN12XR	S82-075-3-SBN12XR	S82-075-4-SBN12XR
0.078 (5/64)	0.117	0.936	0.125	2.50	S82-078-2-SBN12XR	S82-078-3-SBN12XR	S82-078-4-SBN12XR
0.080	0.120	0.960	0.125	2.50	S82-080-2-SBN12XR	S82-080-3-SBN12XR	S82-080-4-SBN12XR
0.085	0.128	1.020	0.125	2.50	S82-085-2-SBN12XR	S82-085-3-SBN12XR	S82-085-4-SBN12XR
0.090	0.135	1.080	0.125	2.50	S82-090-2-SBN12XR	S82-090-3-SBN12XR	S82-090-4-SBN12XR
0.093 (3/32)	0.140	1.116	0.125	2.50	S82-093-2-SBN12XR	S82-093-3-SBN12XR	S82-093-4-SBN12XR
0.095	0.143	1.140	0.125	2.50	S82-095-2-SBN12XR	S82-095-3-SBN12XR	S82-095-4-SBN12XR
0.100	0.150	1.200	0.125	2.50	S82-100-2-SBN12XR	S82-100-3-SBN12XR	S82-100-4-SBN12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	S82-118-2-SBN12XR	S82-118-3-SBN12XR	S82-118-4-SBN12XR
0.125 (1/8)	0.187	1.500	0.125	2.50	S82-125-2-SBN12XR	S82-125-3-SBN12XR	S82-125-4-SBN12XR



# Ball Micro End Mills

S79

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.010	0.030	0.120	0.125	2.50	S79-010-2-BN12XR	N/A	N/A
0.015 (1/64)	0.045	0.180	0.125	2.50	S79-015-2-BN12XR	S79-015-3-BN12XR	S79-015-4-BN12XR
0.020	0.060	0.240	0.125	2.50	S79-020-2-BN12XR	S79-020-3-BN12XR	S79-020-4-BN12XR
0.025	0.075	0.300	0.125	2.50	S79-025-2-BN12XR	S79-025-3-BN12XR	S79-025-4-BN12XR
0.030	0.090	0.360	0.125	2.50	S79-030-2-BN12XR	S79-030-3-BN12XR	S79-030-4-BN12XR
0.031 (1/32)	0.093	0.372	0.125	2.50	S79-031-2-BN12XR	S79-031-3-BN12XR	S79-031-4-BN12XR
0.035	0.105	0.420	0.125	2.50	S79-035-2-BN12XR	S79-035-3-BN12XR	S79-035-4-BN12XR
0.039 (1mm)	0.117	0.468	0.125	2.50	S79-039-2-BN12XR	S79-039-3-BN12XR	S79-039-4-BN12XR
0.040	0.120	0.480	0.125	2.50	S79-040-2-BN12XR	S79-040-3-BN12XR	S79-040-4-BN12XR
0.045	0.135	0.540	0.125	2.50	S79-045-2-BN12XR	S79-045-3-BN12XR	S79-045-4-BN12XR
0.047 (3/64)	0.141	0.564	0.125	2.50	S79-047-2-BN12XR	S79-047-3-BN12XR	S79-047-4-BN12XR
0.050	0.150	0.600	0.125	2.50	S79-050-2-BN12XR	S79-050-3-BN12XR	S79-050-4-BN12XR
0.055	0.165	0.660	0.125	2.50	S79-055-2-BN12XR	S79-055-3-BN12XR	S79-055-4-BN12XR
0.060	0.180	0.720	0.125	2.50	S79-060-2-BN12XR	S79-060-3-BN12XR	S79-060-4-BN12XR
0.062 (1/16)	0.186	0.744	0.125	2.50	S79-062-2-BN12XR	S79-062-3-BN12XR	S79-062-4-BN12XR
0.065	0.195	0.780	0.125	2.50	S79-065-2-BN12XR	S79-065-3-BN12XR	S79-065-4-BN12XR
0.070	0.210	0.840	0.125	2.50	S79-070-2-BN12XR	S79-070-3-BN12XR	S79-070-4-BN12XR
0.075	0.225	0.900	0.125	2.50	S79-075-2-BN12XR	S79-075-3-BN12XR	S79-075-4-BN12XR
0.078 (5/64)	0.234	0.936	0.125	2.50	S79-078-2-BN12XR	S79-078-3-BN12XR	S79-078-4-BN12XR
0.080	0.240	0.960	0.125	2.50	S79-080-2-BN12XR	S79-080-3-BN12XR	S79-080-4-BN12XR
0.085	0.255	1.020	0.125	2.50	S79-085-2-BN12XR	S79-085-3-BN12XR	S79-085-4-BN12XR
0.090	0.270	1.080	0.125	2.50	S79-090-2-BN12XR	S79-090-3-BN12XR	S79-090-4-BN12XR
0.093 (3/32)	0.279	1.116	0.125	2.50	S79-093-2-BN12XR	S79-093-3-BN12XR	S79-093-4-BN12XR
0.095	0.285	1.140	0.125	2.50	S79-095-2-BN12XR	S79-095-3-BN12XR	S79-095-4-BN12XR
0.100	0.300	1.200	0.125	2.50	S79-100-2-BN12XR	S79-100-3-BN12XR	S79-100-4-BN12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	S79-118-2-BN12XR	S79-118-3-BN12XR	S79-118-4-BN12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	S79-125-2-BN12XR	S79-125-3-BN12XR	S79-125-4-BN12XR

FLUTES  
2,3,4

3X  
LENGTH  
OF CUT

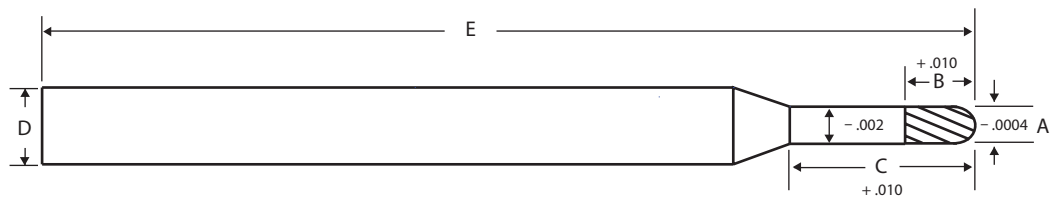
12X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



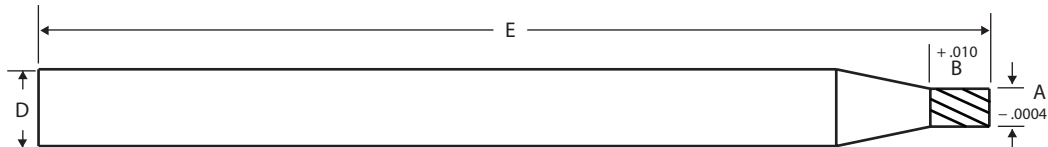
Need your coated tool quickly? All standard tools are available AITiN coated in 3 days or less. See page 117 for more details.



**S10**
**Square Micro End Mills**
**FLUTES  
5**
**1.5X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.0465	0.125	1.50	S10-031-5-SST
0.035	0.0525	0.125	1.50	S10-035-5-SST
0.039 (1mm)	0.059	0.125	1.50	S10-039-5-SST
0.040	0.060	0.125	1.50	S10-040-5-SST
0.045	0.0675	0.125	1.50	S10-045-5-SST
0.047 (3/64)	0.0705	0.125	1.50	S10-047-5-SST
0.050	0.075	0.125	1.50	S10-050-5-SST
0.055	0.0825	0.125	1.50	S10-055-5-SST
0.060	0.090	0.125	1.50	S10-060-5-SST
0.062 (1/16)	0.093	0.125	1.50	S10-062-5-SST
0.065	0.0975	0.125	1.50	S10-065-5-SST
0.070	0.105	0.125	1.50	S10-070-5-SST
0.075	0.1125	0.125	1.50	S10-075-5-SST
0.078 (5/64)	0.117	0.125	1.50	S10-078-5-SST
0.080	0.120	0.125	1.50	S10-080-5-SST
0.085	0.1275	0.125	1.50	S10-085-5-SST
0.090	0.135	0.125	1.50	S10-090-5-SST
0.093 (3/32)	0.1395	0.125	1.50	S10-093-5-SST
0.095	0.1425	0.125	1.50	S10-095-5-SST
0.100	0.150	0.125	1.50	S10-100-5-SST
0.118 (3mm)	0.177	0.125	1.50	S10-118-5-SST
0.125 (1/8)	0.1875	0.125	1.50	S10-125-5-SST



## Square Micro End Mills

S08

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.093	0.125	1.50	S08-031-5-SEM
0.035	0.105	0.125	1.50	S08-035-5-SEM
0.039 (1mm)	0.117	0.125	1.50	S08-039-5-SEM
0.040	0.120	0.125	1.50	S08-040-5-SEM
0.045	0.135	0.125	1.50	S08-045-5-SEM
0.047 (3/64)	0.141	0.125	1.50	S08-047-5-SEM
0.050	0.150	0.125	1.50	S08-050-5-SEM
0.055	0.165	0.125	1.50	S08-055-5-SEM
0.060	0.180	0.125	1.50	S08-060-5-SEM
0.062 (1/16)	0.187	0.125	1.50	S08-062-5-SEM
0.065	0.195	0.125	1.50	S08-065-5-SEM
0.070	0.210	0.125	1.50	S08-070-5-SEM
0.075	0.225	0.125	1.50	S08-075-5-SEM
0.078 (5/64)	0.234	0.125	1.50	S08-078-5-SEM
0.080	0.240	0.125	1.50	S08-080-5-SEM
0.085	0.255	0.125	1.50	S08-085-5-SEM
0.090	0.270	0.125	1.50	S08-090-5-SEM
0.093 (3/32)	0.279	0.125	1.50	S08-093-5-SEM
0.095	0.285	0.125	1.50	S08-095-5-SEM
0.100	0.300	0.125	1.50	S08-100-5-SEM
0.118 (3mm)	0.354	0.125	1.50	S08-118-5-SEM
0.125 (1/8)	0.375	0.125	1.50	S08-125-5-SEM

FLUTES  
5

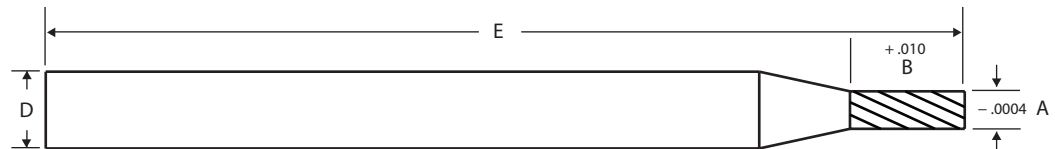
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



### Tips on Selecting the Right Tool for the Job

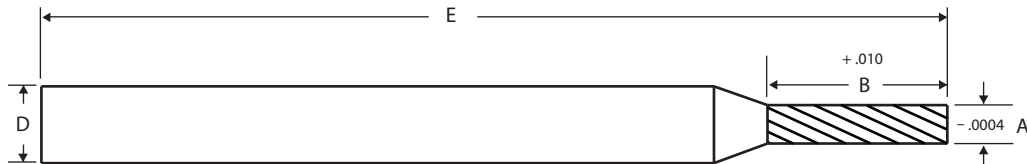
Number of Flutes	Primary Uses	Ideal Cutting Materials
2-3	Tools with fewer flutes allow optimal space for chip removal when milling or slotting softer materials. Also used for roughing.	Soft materials, such as aluminum and plastics
3-4	Adding flutes provides greater strength. Recommended for use with roughing, milling, and slotting a variety of materials. Can also be used for finishing softer materials.	Hard materials, such as stainless steel, steel, and titanium.
5 +	Ideal for use in finishing work, when using faster feed rates, and with reduced chip load.	Harder materials, such as steel, or for finishing a variety of materials.



**FLUTES  
5**
**5X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.155	0.125	2.50	S62-031-5-SQ5X
0.035	0.175	0.125	2.50	S62-035-5-SQ5X
0.039 (1mm)	0.195	0.125	2.50	S62-039-5-SQ5X
0.040	0.200	0.125	2.50	S62-040-5-SQ5X
0.045	0.225	0.125	2.50	S62-045-5-SQ5X
0.047 (3/64)	0.235	0.125	2.50	S62-047-5-SQ5X
0.050	0.250	0.125	2.50	S62-050-5-SQ5X
0.055	0.275	0.125	2.50	S62-055-5-SQ5X
0.060	0.300	0.125	2.50	S62-060-5-SQ5X
0.062 (1/16)	0.310	0.125	2.50	S62-062-5-SQ5X
0.065	0.325	0.125	2.50	S62-065-5-SQ5X
0.070	0.350	0.125	2.50	S62-070-5-SQ5X
0.075	0.375	0.125	2.50	S62-075-5-SQ5X
0.078 (5/64)	0.390	0.125	2.50	S62-078-5-SQ5X
0.080	0.400	0.125	2.50	S62-080-5-SQ5X
0.085	0.425	0.125	2.50	S62-085-5-SQ5X
0.090	0.450	0.125	2.50	S62-090-5-SQ5X
0.093 (3/32)	0.465	0.125	2.50	S62-093-5-SQ5X
0.095	0.475	0.125	2.50	S62-095-5-SQ5X
0.100	0.500	0.125	2.50	S62-100-5-SQ5X
0.118 (3mm)	0.590	0.125	2.50	S62-118-5-SQ5X
0.125 (1/8)	0.625	0.125	2.50	S62-125-5-SQ5X


**MANUFACTURED BY MITGI: Stocking Program Advantages**

**Price or time: which is more important? They both are; you don't need to prioritize one over the other. MITGI stocking options can help complete the job on time and in budget.**

When the tool is right but price is an objection, consider ordering a higher quantity to take advantage of price breaks. MITGI offers stocking programs that can be delivered in regular intervals or on-demand. After the initial order, tools are stocked and available to ship the day the PO is received.

Once a tool is put into your production environment, there are more options to consider. Using your forecast and production data, minimum and maximum inventory numbers can be set; this allows MITGI to gain production efficiencies by producing your tool in larger quantities. The benefits are twofold: lower pricing for higher quantities, and tools that are in-stock and available for same day shipping.

# Square Micro End Mills

S63

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.248	0.125	2.50	S63-031-5-SQ8X
0.035	0.280	0.125	2.50	S63-035-5-SQ8X
0.039 (1mm)	0.312	0.125	2.50	S63-039-5-SQ8X
0.040	0.320	0.125	2.50	S63-040-5-SQ8X
0.045	0.360	0.125	2.50	S63-045-5-SQ8X
0.047 (3/64)	0.376	0.125	2.50	S63-047-5-SQ8X
0.050	0.400	0.125	2.50	S63-050-5-SQ8X
0.055	0.440	0.125	2.50	S63-055-5-SQ8X
0.060	0.480	0.125	2.50	S63-060-5-SQ8X
0.062 (1/16)	0.496	0.125	2.50	S63-062-5-SQ8X
0.065	0.520	0.125	2.50	S63-065-5-SQ8X
0.070	0.560	0.125	2.50	S63-070-5-SQ8X
0.075	0.600	0.125	2.50	S63-075-5-SQ8X
0.078 (5/64)	0.624	0.125	2.50	S63-078-5-SQ8X
0.080	0.640	0.125	2.50	S63-080-5-SQ8X
0.085	0.680	0.125	2.50	S63-085-5-SQ8X
0.090	0.720	0.125	2.50	S63-090-5-SQ8X
0.093 (3/32)	0.744	0.125	2.50	S63-093-5-SQ8X
0.095	0.760	0.125	2.50	S63-095-5-SQ8X
0.100	0.800	0.125	2.50	S63-100-5-SQ8X
0.118 (3mm)	0.944	0.125	2.50	S63-118-5-SQ8X
0.125 (1/8)	1.000	0.125	2.50	S63-125-5-SQ8X

FLUTES  
5

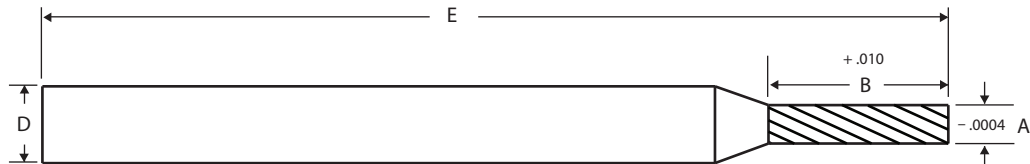
8X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



## MITGI RESULTS: Tool Life Is Doubled

"My customer loves the end mills we had them test - they were able to increase the tool life from 85 to 165 pieces, and the finish was a lot better with minimal burrs. They are setting up on four machines tomorrow, and they would like more tools."

Once I have the forecast, we would like to setup a blanket order to make sure we have enough to keep them stocked."

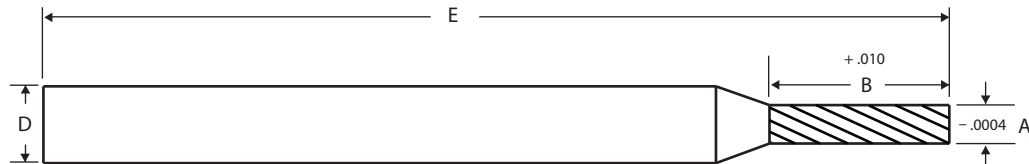
- Brennan



**FLUTES  
5**
**12X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.372	0.125	2.50	S64-031-5-SQ12X
0.035	0.420	0.125	2.50	S64-035-5-SQ12X
0.039 (1mm)	0.468	0.125	2.50	S64-039-5-SQ12X
0.040	0.480	0.125	2.50	S64-040-5-SQ12X
0.045	0.540	0.125	2.50	S64-045-5-SQ12X
0.047 (3/64)	0.564	0.125	2.50	S64-047-5-SQ12X
0.050	0.600	0.125	2.50	S64-050-5-SQ12X
0.055	0.660	0.125	2.50	S64-055-5-SQ12X
0.060	0.720	0.125	2.50	S64-060-5-SQ12X
0.062 (1/16)	0.744	0.125	2.50	S64-062-5-SQ12X
0.065	0.780	0.125	2.50	S64-065-5-SQ12X
0.070	0.840	0.125	2.50	S64-070-5-SQ12X
0.075	0.900	0.125	2.50	S64-075-5-SQ12X
0.078 (5/64)	0.936	0.125	2.50	S64-078-5-SQ12X
0.080	0.960	0.125	2.50	S64-080-5-SQ12X
0.085	1.020	0.125	2.50	S64-085-5-SQ12X
0.090	1.080	0.125	2.50	S64-090-5-SQ12X
0.093 (3/32)	1.116	0.125	2.50	S64-093-5-SQ12X
0.095	1.140	0.125	2.50	S64-095-5-SQ12X
0.100	1.200	0.125	2.50	S64-100-5-SQ12X
0.118 (3mm)	1.416	0.125	2.50	S64-118-5-SQ12X
0.125 (1/8)	1.500	0.125	2.50	S64-125-5-SQ12X


**MANUFACTURED BY MITGI: Tool Selection**

**Unsure how many flutes to select to deliver optimum results?**

The ideal number of flutes for each tool is based on the application, operation, and the material being cut.

See page 71: Selecting the right tool for the job



## MANUFACTURED BY MITGI: QUALITY

At MITGI, quality isn't just the end goal, it's embedded throughout the entire manufacturing process. From securing tool print accuracy, mid-job inspections, and pre-shipping approvals, we ensure that each tool meets our quality standards before it leaves our door. It is our goal that every customer receives tools that meet specs and exceed expectations with every order.

In order for this to happen, the design needs to be right the first time you use it and well-executed every time it is ordered.

The MITGI quality process begins using tool prints provided by customers or those designed in-house. Each tool print is reviewed for accuracy, tool performance optimization, and to establish the tightest tolerances that can be held in manufacturing. Every tool manufactured is inspected by the machine operator as it moves through production, reviewed by a quality technician, and checked by the department supervisor. This multi-step inspection process ensures that every tool produced will match customer expectations.



# QUALITY & REPEATABILITY

## REPEATABILITY

After the initial order, specifications are kept in our tool record system to ensure that we're ready to manufacture the same tool each time it is reordered. Detailed program notes, in-house tool prints, routers, and inspection sheets give us the ability to track each job completely and to the source. Closely tracking each customer order means we're ready to manufacture the tool to the exact same specifications when you're ready to reorder.

**Ready to get started?**

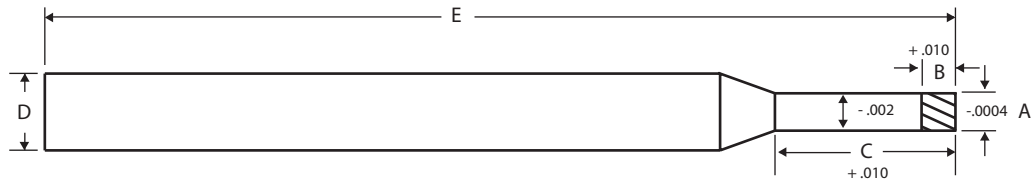
**Contact us:**  
**Phone: (320) 455-0535**  
**Email: [info@mitgi.us](mailto:info@mitgi.us)**  
**Web: [www.mitgi.us](http://www.mitgi.us)**



**FLUTES  
5**
**1.5X  
LENGTH  
OF CUT**
**5X  
REACH**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	5 Flute Tool #
A	B	C	D	E	
0.031 (1/32)	0.047	0.155	0.125	2.50	S71-031-5-SSQ5XR
0.035	0.053	0.175	0.125	2.50	S71-035-5-SSQ5XR
0.039 (1mm)	0.059	0.195	0.125	2.50	S71-039-5-SSQ5XR
0.040	0.060	0.200	0.125	2.50	S71-040-5-SSQ5XR
0.045	0.068	0.225	0.125	2.50	S71-045-5-SSQ5XR
0.047 (3/64)	0.071	0.235	0.125	2.50	S71-047-5-SSQ5XR
0.050	0.075	0.250	0.125	2.50	S71-050-5-SSQ5XR
0.055	0.083	0.275	0.125	2.50	S71-055-5-SSQ5XR
0.060	0.090	0.300	0.125	2.50	S71-060-5-SSQ5XR
0.062 (1/16)	0.093	0.310	0.125	2.50	S71-062-5-SSQ5XR
0.065	0.098	0.325	0.125	2.50	S71-065-5-SSQ5XR
0.070	0.105	0.350	0.125	2.50	S71-070-5-SSQ5XR
0.075	0.113	0.375	0.125	2.50	S71-075-5-SSQ5XR
0.078 (5/64)	0.117	0.390	0.125	2.50	S71-078-5-SSQ5XR
0.080	0.120	0.400	0.125	2.50	S71-080-5-SSQ5XR
0.085	0.128	0.425	0.125	2.50	S71-085-5-SSQ5XR
0.090	0.135	0.450	0.125	2.50	S71-090-5-SSQ5XR
0.093 (3/32)	0.140	0.465	0.125	2.50	S71-093-5-SSQ5XR
0.095	0.143	0.475	0.125	2.50	S71-095-5-SSQ5XR
0.100	0.150	0.500	0.125	2.50	S71-100-5-SSQ5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	S71-118-5-SSQ5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	S71-125-5-SSQ5XR


**MANUFACTURED BY MITGI: Renewing Services**

**Have your carbide tools become less effective over time? Extend tooling investment by utilizing MITGI renewing services.**

In production, tools can become dull through normal wear and tear. In some cases, tools may become chipped through production or mishandling. In many cases, tools can be resharpened to bring new life to old tools. Many carbide tools made by MITGI or manufactured by other vendors may qualify for resharpening.

A complete list of qualifying tool types can be found on page 47. Contact MITGI for more renewing service information and pricing estimates.

# Square Micro End Mills

S68

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	5 Flute Tool #
A	B	C	D	E	
0.031 (1/32)	0.093	0.155	0.125	2.50	S68-031-5-SQ5XR
0.035	0.105	0.175	0.125	2.50	S68-035-5-SQ5XR
0.039 (1mm)	0.117	0.195	0.125	2.50	S68-039-5-SQ5XR
0.040	0.120	0.200	0.125	2.50	S68-040-5-SQ5XR
0.045	0.135	0.225	0.125	2.50	S68-045-5-SQ5XR
0.047 (3/64)	0.141	0.235	0.125	2.50	S68-047-5-SQ5XR
0.050	0.150	0.250	0.125	2.50	S68-050-5-SQ5XR
0.055	0.165	0.275	0.125	2.50	S68-055-5-SQ5XR
0.060	0.180	0.300	0.125	2.50	S68-060-5-SQ5XR
0.062 (1/16)	0.186	0.310	0.125	2.50	S68-062-5-SQ5XR
0.065	0.195	0.325	0.125	2.50	S68-065-5-SQ5XR
0.070	0.210	0.350	0.125	2.50	S68-070-5-SQ5XR
0.075	0.225	0.375	0.125	2.50	S68-075-5-SQ5XR
0.078 (5/64)	0.234	0.390	0.125	2.50	S68-078-5-SQ5XR
0.080	0.240	0.400	0.125	2.50	S68-080-5-SQ5XR
0.085	0.255	0.425	0.125	2.50	S68-085-5-SQ5XR
0.090	0.270	0.450	0.125	2.50	S68-090-5-SQ5XR
0.093 (3/32)	0.279	0.465	0.125	2.50	S68-093-5-SQ5XR
0.095	0.285	0.475	0.125	2.50	S68-095-5-SQ5XR
0.100	0.300	0.500	0.125	2.50	S68-100-5-SQ5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	S68-118-5-SQ5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	S68-125-5-SQ5XR

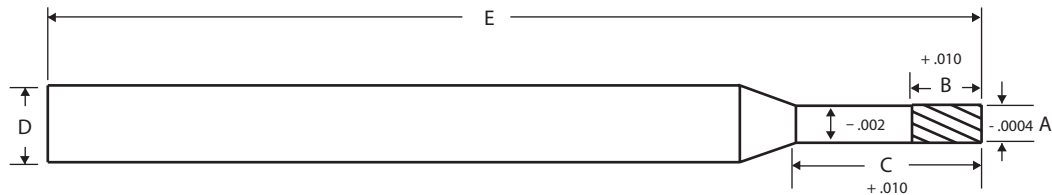
FLUTES  
5

3X  
LENGTH  
OF CUT

5X  
REACH

+  
SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS



## MITGI RESULTS: Service is a Team Sport

"Thank you for becoming one of our most trusted partners. Your team solved an issue that has been plaguing us for months. Your quick response brings value to our business.

Thanks for adding our part number to your system and label. This is huge for us as all of our tools are dispensed using our internal part number.

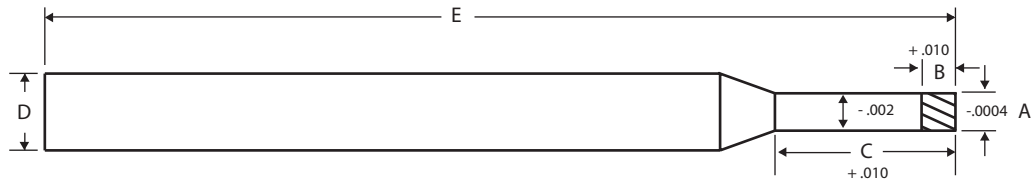
Your quality and consistency are spot on!" - Sam



**FLUTES  
5**
**1.5X  
LENGTH  
OF CUT**
**8X  
REACH**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	5 Flute Tool #
A	B	C	D	E	
0.031 (1/32)	0.047	0.248	0.125	2.50	S72-031-5-SSQ8XR
0.035	0.053	0.280	0.125	2.50	S72-035-5-SSQ8XR
0.039 (1mm)	0.059	0.312	0.125	2.50	S72-039-5-SSQ8XR
0.040	0.060	0.320	0.125	2.50	S72-040-5-SSQ8XR
0.045	0.068	0.360	0.125	2.50	S72-045-5-SSQ8XR
0.047 (3/64)	0.071	0.376	0.125	2.50	S72-047-5-SSQ8XR
0.050	0.075	0.400	0.125	2.50	S72-050-5-SSQ8XR
0.055	0.083	0.440	0.125	2.50	S72-055-5-SSQ8XR
0.060	0.090	0.480	0.125	2.50	S72-060-5-SSQ8XR
0.062 (1/16)	0.093	0.496	0.125	2.50	S72-062-5-SSQ8XR
0.065	0.098	0.520	0.125	2.50	S72-065-5-SSQ8XR
0.070	0.105	0.560	0.125	2.50	S72-070-5-SSQ8XR
0.075	0.113	0.600	0.125	2.50	S72-075-5-SSQ8XR
0.078 (5/64)	0.117	0.624	0.125	2.50	S72-078-5-SSQ8XR
0.080	0.120	0.640	0.125	2.50	S72-080-5-SSQ8XR
0.085	0.128	0.680	0.125	2.50	S72-085-5-SSQ8XR
0.090	0.135	0.720	0.125	2.50	S72-090-5-SSQ8XR
0.093 (3/32)	0.140	0.744	0.125	2.50	S72-093-5-SSQ8XR
0.095	0.143	0.760	0.125	2.50	S72-095-5-SSQ8XR
0.100	0.150	0.800	0.125	2.50	S72-100-5-SSQ8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	S72-118-5-SSQ8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	S72-125-5-SSQ8XR


**MANUFACTURED BY MITGI: Innovation and Design**

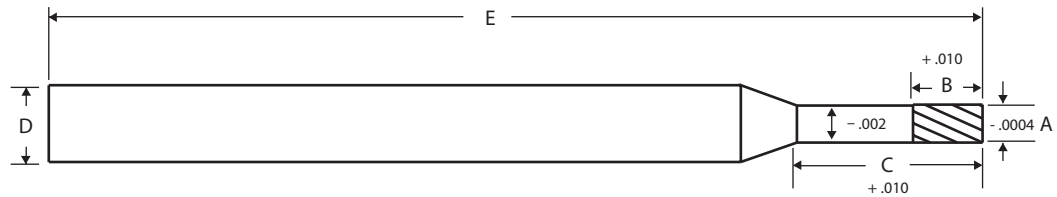
**Complex manufacturing jobs require tooling that is up to the task. Our in-house design and manufacturing teams are up to the challenge.**

When customers can't find exactly what they are looking for or when they are facing a particularly difficult job, we rely on our design and technical teams to find innovative solutions to meet their needs.

Our in-house design teams are able to review tools, identify enhancements that may provide superior production capabilities, or create a new tool to match customer specifications. Using a wide range of experiences in machining, cutting tools, and production, our teams collaborate to design and manufacture tools that can accomplish even the most complex manufacturing tasks.

Contact us to start working with our design and technical teams today.

Cutter Diameter A	Length of Cut B	Overall Reach C	Shank Diameter D	Overall Length E	5 Flute Tool #
0.031 (1/32)	0.093	0.248	0.125	2.50	S69-031-5-SQ8XR
0.035	0.105	0.280	0.125	2.50	S69-035-5-SQ8XR
0.039 (1mm)	0.117	0.312	0.125	2.50	S69-039-5-SQ8XR
0.040	0.120	0.320	0.125	2.50	S69-040-5-SQ8XR
0.045	0.135	0.360	0.125	2.50	S69-045-5-SQ8XR
0.047 (3/64)	0.141	0.376	0.125	2.50	S69-047-5-SQ8XR
0.050	0.150	0.400	0.125	2.50	S69-050-5-SQ8XR
0.055	0.165	0.440	0.125	2.50	S69-055-5-SQ8XR
0.060	0.180	0.480	0.125	2.50	S69-060-5-SQ8XR
0.062 (1/16)	0.186	0.496	0.125	2.50	S69-062-5-SQ8XR
0.065	0.195	0.520	0.125	2.50	S69-065-5-SQ8XR
0.070	0.210	0.560	0.125	2.50	S69-070-5-SQ8XR
0.075	0.225	0.600	0.125	2.50	S69-075-5-SQ8XR
0.078 (5/64)	0.234	0.624	0.125	2.50	S69-078-5-SQ8XR
0.080	0.240	0.640	0.125	2.50	S69-080-5-SQ8XR
0.085	0.255	0.680	0.125	2.50	S69-085-5-SQ8XR
0.090	0.270	0.720	0.125	2.50	S69-090-5-SQ8XR
0.093 (3/32)	0.279	0.744	0.125	2.50	S69-093-5-SQ8XR
0.095	0.285	0.760	0.125	2.50	S69-095-5-SQ8XR
0.100	0.300	0.800	0.125	2.50	S69-100-5-SQ8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	S69-118-5-SQ8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	S69-125-5-SQ8XR



## MITGI RESULTS: Great Expectations

"The tools we used without the honed edges worked perfectly. We've been very happy with all of the cutting tools we have received from you. They have all performed as expected

Your customer service and lead times have been great.

I look forward to future projects with you and your company."

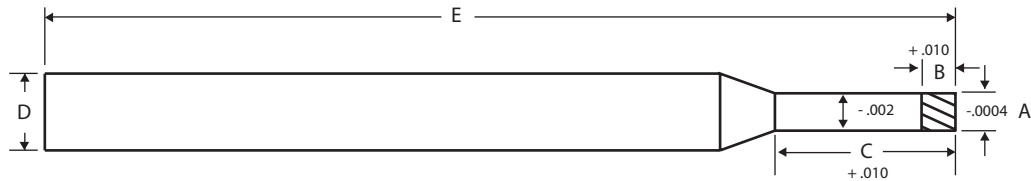
- Guy



**FLUTES  
5**
**1.5X  
LENGTH  
OF CUT**
**12X  
REACH**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	5 Flute Tool #
A	B	C	D	E	
0.031 (1/32)	0.047	0.372	0.125	2.50	S73-031-5-SSQ12XR
0.035	0.053	0.420	0.125	2.50	S73-035-5-SSQ12XR
0.039 (1mm)	0.059	0.468	0.125	2.50	S73-039-5-SSQ12XR
0.040	0.060	0.480	0.125	2.50	S73-040-5-SSQ12XR
0.045	0.068	0.540	0.125	2.50	S73-045-5-SSQ12XR
0.047 (3/64)	0.071	0.564	0.125	2.50	S73-047-5-SSQ12XR
0.050	0.075	0.600	0.125	2.50	S73-050-5-SSQ12XR
0.055	0.083	0.660	0.125	2.50	S73-055-5-SSQ12XR
0.060	0.090	0.720	0.125	2.50	S73-060-5-SSQ12XR
0.062 (1/16)	0.093	0.744	0.125	2.50	S73-062-5-SSQ12XR
0.065	0.098	0.780	0.125	2.50	S73-065-5-SSQ12XR
0.070	0.105	0.840	0.125	2.50	S73-070-5-SSQ12XR
0.075	0.113	0.900	0.125	2.50	S73-075-5-SSQ12XR
0.078 (5/64)	0.117	0.936	0.125	2.50	S73-078-5-SSQ12XR
0.080	0.120	0.960	0.125	2.50	S73-080-5-SSQ12XR
0.085	0.128	1.020	0.125	2.50	S73-085-5-SSQ12XR
0.090	0.135	1.080	0.125	2.50	S73-090-5-SSQ12XR
0.093 (3/32)	0.140	1.116	0.125	2.50	S73-093-5-SSQ12XR
0.095	0.143	1.140	0.125	2.50	S73-095-5-SSQ12XR
0.100	0.150	1.200	0.125	2.50	S73-100-5-SSQ12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	S73-118-5-SSQ12XR
0.125 (1/8)	0.187	1.500	0.125	2.50	S73-125-5-SSQ12XR


**MANUFACTURED BY MITGI: Fast Turnaround Time**

**Finding the right tool for the job is important. Don't let an out-of-inventory situation keep you from completing the job on time.**

Long lead times or out-of-stock situations can be disruptive to your manufacturing schedule. Through flexible scheduling and in-house capabilities, we are able to manufacture standard tools in three days or less, custom within two weeks. By utilizing on-site design and manufacturing, we're able to quickly deliver the tools you need.

Contact us to start working with our design and manufacturing teams today.

# Square Micro End Mills

S70

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	5 Flute Tool #
A	B	C	D	E	
0.031 (1/32)	0.093	0.372	0.125	2.50	S70-031-5-SQ12XR
0.035	0.105	0.420	0.125	2.50	S70-035-5-SQ12XR
0.039 (1mm)	0.117	0.468	0.125	2.50	S70-039-5-SQ12XR
0.040	0.120	0.480	0.125	2.50	S70-040-5-SQ12XR
0.045	0.135	0.540	0.125	2.50	S70-045-5-SQ12XR
0.047 (3/64)	0.141	0.564	0.125	2.50	S70-047-5-SQ12XR
0.050	0.150	0.600	0.125	2.50	S70-050-5-SQ12XR
0.055	0.165	0.660	0.125	2.50	S70-055-5-SQ12XR
0.060	0.180	0.720	0.125	2.50	S70-060-5-SQ12XR
0.062 (1/16)	0.186	0.744	0.125	2.50	S70-062-5-SQ12XR
0.065	0.195	0.780	0.125	2.50	S70-065-5-SQ12XR
0.070	0.210	0.840	0.125	2.50	S70-070-5-SQ12XR
0.075	0.225	0.900	0.125	2.50	S70-075-5-SQ12XR
0.078 (5/64)	0.234	0.936	0.125	2.50	S70-078-5-SQ12XR
0.080	0.240	0.960	0.125	2.50	S70-080-5-SQ12XR
0.085	0.255	1.020	0.125	2.50	S70-085-5-SQ12XR
0.090	0.270	1.080	0.125	2.50	S70-090-5-SQ12XR
0.093 (3/32)	0.279	1.116	0.125	2.50	S70-093-5-SQ12XR
0.095	0.285	1.140	0.125	2.50	S70-095-5-SQ12XR
0.100	0.300	1.200	0.125	2.50	S70-100-5-SQ12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	S70-118-5-SQ12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	S70-125-5-SQ12XR

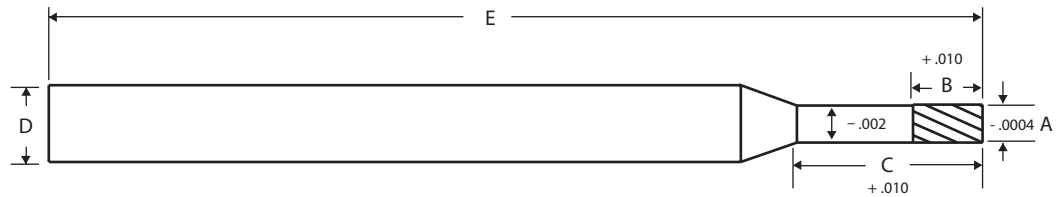
FLUTES  
5

3X  
LENGTH  
OF CUT

12X  
REACH

+  
SWISS-TYPE  
OAL

QUICK TURN  
SPECIALS



## MITGI RESULTS: Delivery, Fast and On-Time

"We appreciate all of the work you're doing for us. When the owner asked for your tools, I wanted to get the quote in your hands quickly. I think he's impressed with the quality and delivery that MITGI provides!"

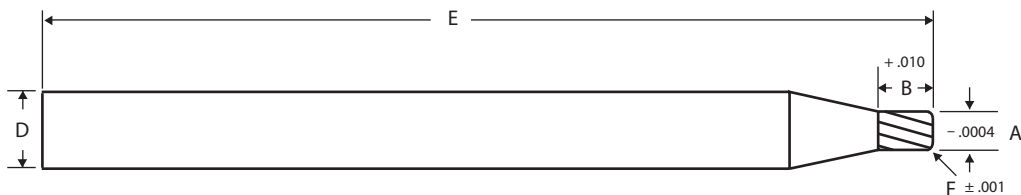
I'm impressed with your customer service team.  
THANK YOU!  
- Teresa



**FLUTES  
5**
**1.5X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS

Cutter Diameter A	Length of Cut B	Shank Diameter D	Overall Length E	Corner Radius F	5 Flute Tool #
0.031 (1/32)	0.047	0.125	1.50	0.005	S83-031-5-.005R
0.035	0.053	0.125	1.50	0.005	S83-035-5-.005R
0.039 (1mm)	0.059	0.125	1.50	0.005	S83-039-5-.005R
0.040	0.060	0.125	1.50	0.005	S83-040-5-.005R
0.045	0.068	0.125	1.50	0.005	S83-045-5-.005R
0.047 (3/64)	0.071	0.125	1.50	0.005	S83-047-5-.005R
0.050	0.075	0.125	1.50	0.005	S83-050-5-.005R
0.055	0.083	0.125	1.50	0.005	S83-055-5-.005R
0.060	0.090	0.125	1.50	0.005	S83-060-5-.005R
0.062 (1/16)	0.093	0.125	1.50	0.005	S83-062-5-.005R
0.065	0.098	0.125	1.50	0.005	S83-065-5-.005R
0.070	0.105	0.125	1.50	0.005	S83-070-5-.005R
0.070	0.105	0.125	1.50	0.010	S83-070-5-.010R
0.075	0.113	0.125	1.50	0.005	S83-075-5-.005R
0.075	0.113	0.125	1.50	0.010	S83-075-5-.010R
0.078 (5/64)	0.117	0.125	1.50	0.005	S83-078-5-.005R
0.078 (5/64)	0.117	0.125	1.50	0.010	S83-078-5-.010R
0.080	0.120	0.125	1.50	0.005	S83-080-5-.005R
0.080	0.120	0.125	1.50	0.010	S83-080-5-.010R
0.085	0.128	0.125	1.50	0.005	S83-085-5-.005R
0.085	0.128	0.125	1.50	0.010	S83-085-5-.010R
0.090	0.135	0.125	1.50	0.005	S83-090-5-.005R
0.090	0.135	0.125	1.50	0.010	S83-090-5-.010R
0.093 (3/32)	0.140	0.125	1.50	0.005	S83-093-5-.005R
0.093 (3/32)	0.140	0.125	1.50	0.010	S83-093-5-.010R
0.095	0.143	0.125	1.50	0.005	S83-095-5-.005R
0.095	0.143	0.125	1.50	0.010	S83-095-5-.010R
0.100	0.150	0.125	1.50	0.005	S83-100-5-.005R
0.100	0.150	0.125	1.50	0.010	S83-100-5-.010R
0.100	0.150	0.125	1.50	0.015	S83-100-5-.015R
0.118 (3mm)	0.177	0.125	1.50	0.005	S83-118-5-.005R
0.118 (3mm)	0.177	0.125	1.50	0.010	S83-118-5-.010R
0.118 (3mm)	0.177	0.125	1.50	0.015	S83-118-5-.015R
0.125 (1/8)	0.188	0.125	1.50	0.005	S83-125-5-.005R
0.125 (1/8)	0.188	0.125	1.50	0.010	S83-125-5-.010R
0.125 (1/8)	0.188	0.125	1.50	0.015	S83-125-5-.015R
0.125 (1/8)	0.188	0.125	1.50	0.020	S83-125-5-.020R



# Corner Radius Micro End Mills

S58

Cutter Diameter A	Length of Cut B	Shank Diameter D	Overall Length E	Corner Radius F	5 Flute Tool #
0.031 (1/32)	0.093	0.125	1.50	0.005	S58-031-5-.005R
0.035	0.105	0.125	1.50	0.005	S58-035-5-.005R
0.039 (1mm)	0.117	0.125	1.50	0.005	S58-039-5-.005R
0.040	0.120	0.125	1.50	0.005	S58-040-5-.005R
0.045	0.135	0.125	1.50	0.005	S58-045-5-.005R
0.047 (3/64)	0.141	0.125	1.50	0.005	S58-047-5-.005R
0.050	0.150	0.125	1.50	0.005	S58-050-5-.005R
0.055	0.165	0.125	1.50	0.005	S58-055-5-.005R
0.060	0.180	0.125	1.50	0.005	S58-060-5-.005R
0.062 (1/16)	0.187	0.125	1.50	0.005	S58-062-5-.005R
0.065	0.195	0.125	1.50	0.005	S58-065-5-.005R
0.070	0.210	0.125	1.50	0.005	S58-070-5-.005R
0.070	0.210	0.125	1.50	0.010	S58-070-5-.010R
0.075	0.225	0.125	1.50	0.005	S58-075-5-.005R
0.075	0.225	0.125	1.50	0.010	S58-075-5-.010R
0.078 (5/64)	0.234	0.125	1.50	0.005	S58-078-5-.005R
0.078 (5/64)	0.234	0.125	1.50	0.010	S58-078-5-.010R
0.080	0.240	0.125	1.50	0.005	S58-080-5-.005R
0.080	0.240	0.125	1.50	0.010	S58-080-5-.010R
0.085	0.255	0.125	1.50	0.005	S58-085-5-.005R
0.085	0.255	0.125	1.50	0.010	S58-085-5-.010R
0.090	0.270	0.125	1.50	0.005	S58-090-5-.005R
0.090	0.270	0.125	1.50	0.010	S58-090-5-.010R
0.093 (3/32)	0.279	0.125	1.50	0.005	S58-093-5-.005R
0.093 (3/32)	0.279	0.125	1.50	0.010	S58-093-5-.010R
0.095	0.285	0.125	1.50	0.005	S58-095-5-.005R
0.095	0.285	0.125	1.50	0.010	S58-095-5-.010R
0.100	0.300	0.125	1.50	0.005	S58-100-5-.005R
0.100	0.300	0.125	1.50	0.010	S58-100-5-.010R
0.100	0.300	0.125	1.50	0.015	S58-100-5-.015R
0.118 (3mm)	0.354	0.125	1.50	0.005	S58-118-5-.005R
0.118 (3mm)	0.354	0.125	1.50	0.010	S58-118-5-.010R
0.118 (3mm)	0.354	0.125	1.50	0.015	S58-118-5-.015R
0.125 (1/8)	0.375	0.125	1.50	0.005	S58-125-5-.005R
0.125 (1/8)	0.375	0.125	1.50	0.010	S58-125-5-.010R
0.125 (1/8)	0.375	0.125	1.50	0.015	S58-125-5-.015R

FLUTES  
5

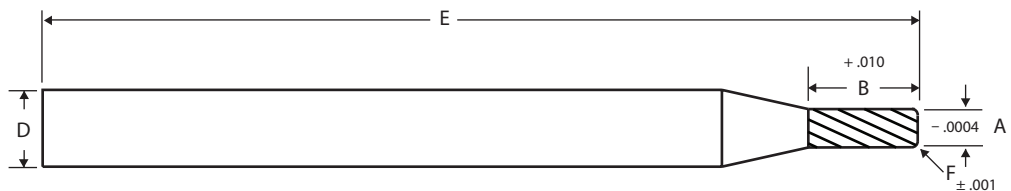
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



FLUTES  
5

5X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.031 (1/32)	0.155	0.125	2.50	0.005	S107-031-5-.005R
0.031 (1/32)	0.155	0.125	2.50	0.010	S107-031-5-.010R
0.035	0.175	0.125	2.50	0.005	S107-035-5-.005R
0.035	0.175	0.125	2.50	0.010	S107-035-5-.010R
0.039 (1mm)	0.195	0.125	2.50	0.005	S107-039-5-.005R
0.039 (1mm)	0.195	0.125	2.50	0.010	S107-039-5-.010R
0.040	0.200	0.125	2.50	0.005	S107-040-5-.005R
0.040	0.200	0.125	2.50	0.010	S107-040-5-.010R
0.045	0.225	0.125	2.50	0.005	S107-045-5-.005R
0.045	0.225	0.125	2.50	0.010	S107-045-5-.010R
0.045	0.225	0.125	2.50	0.015	S107-045-5-.015R
0.047 (3/64)	0.235	0.125	2.50	0.005	S107-047-5-.005R
0.047 (3/64)	0.235	0.125	2.50	0.010	S107-047-5-.010R
0.047 (3/64)	0.235	0.125	2.50	0.015	S107-047-5-.015R
0.050	0.250	0.125	2.50	0.005	S107-050-5-.005R
0.050	0.250	0.125	2.50	0.010	S107-050-5-.010R
0.050	0.250	0.125	2.50	0.015	S107-050-5-.015R
0.055	0.275	0.125	2.50	0.005	S107-055-5-.005R
0.055	0.275	0.125	2.50	0.010	S107-055-5-.010R
0.055	0.275	0.125	2.50	0.015	S107-055-5-.015R
0.060	0.300	0.125	2.50	0.005	S107-060-5-.005R
0.060	0.300	0.125	2.50	0.010	S107-060-5-.010R
0.060	0.300	0.125	2.50	0.015	S107-060-5-.015R
0.062 (1/16)	0.310	0.125	2.50	0.005	S107-062-5-.005R
0.062 (1/16)	0.310	0.125	2.50	0.010	S107-062-5-.010R
0.062 (1/16)	0.310	0.125	2.50	0.015	S107-062-5-.015R
0.062 (1/16)	0.310	0.125	2.50	0.020	S107-062-5-.020R
0.065	0.325	0.125	2.50	0.005	S107-065-5-.005R
0.065	0.325	0.125	2.50	0.010	S107-065-5-.010R
0.065	0.325	0.125	2.50	0.015	S107-065-5-.015R
0.070	0.350	0.125	2.50	0.005	S107-070-5-.005R
0.070	0.350	0.125	2.50	0.010	S107-070-5-.010R
0.070	0.350	0.125	2.50	0.015	S107-070-5-.015R
0.075	0.375	0.125	2.50	0.005	S107-075-5-.005R
0.075	0.375	0.125	2.50	0.010	S107-075-5-.010R
0.075	0.375	0.125	2.50	0.015	S107-075-5-.015R
0.078 (5/64)	0.390	0.125	2.50	0.005	S107-078-5-.005R
0.078 (5/64)	0.390	0.125	2.50	0.010	S107-078-5-.010R
0.078 (5/64)	0.390	0.125	2.50	0.015	S107-078-5-.015R
0.078 (5/64)	0.390	0.125	2.50	0.020	S107-078-5-.020R
0.080	0.400	0.125	2.50	0.005	S107-080-5-.005R
0.080	0.400	0.125	2.50	0.010	S107-080-5-.010R
0.080	0.400	0.125	2.50	0.015	S107-080-5-.015R



# Corner Radius Micro End Mills

S107

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.085	0.425	0.125	2.50	0.005	S107-085-5-.005R
0.085	0.425	0.125	2.50	0.010	S107-085-5-.010R
0.085	0.425	0.125	2.50	0.015	S107-085-5-.015R
0.090	0.450	0.125	2.50	0.005	S107-090-5-.005R
0.090	0.450	0.125	2.50	0.010	S107-090-5-.010R
0.090	0.450	0.125	2.50	0.015	S107-090-5-.015R
0.093 (3/32)	0.465	0.125	2.50	0.005	S107-093-5-.005R
0.093 (3/32)	0.465	0.125	2.50	0.010	S107-093-5-.010R
0.093 (3/32)	0.465	0.125	2.50	0.015	S107-093-5-.015R
0.093 (3/32)	0.465	0.125	2.50	0.020	S107-093-5-.020R
0.095	0.475	0.125	2.50	0.005	S107-095-5-.005R
0.095	0.475	0.125	2.50	0.010	S107-095-5-.010R
0.095	0.475	0.125	2.50	0.015	S107-095-5-.015R
0.100	0.500	0.125	2.50	0.005	S107-100-5-.005R
0.100	0.500	0.125	2.50	0.010	S107-100-5-.010R
0.100	0.500	0.125	2.50	0.015	S107-100-5-.015R
0.118 (3mm)	0.590	0.125	2.50	0.005	S107-118-5-.005R
0.118 (3mm)	0.590	0.125	2.50	0.010	S107-118-5-.010R
0.118 (3mm)	0.590	0.125	2.50	0.015	S107-118-5-.015R
0.118 (3mm)	0.590	0.125	2.50	0.020	S107-118-5-.020R
0.125 (1/8)	0.625	0.125	2.50	0.005	S107-125-5-.005R
0.125 (1/8)	0.625	0.125	2.50	0.010	S107-125-5-.010R
0.125 (1/8)	0.625	0.125	2.50	0.015	S107-125-5-.015R
0.125 (1/8)	0.625	0.125	2.50	0.020	S107-125-5-.020R

FLUTES  
5

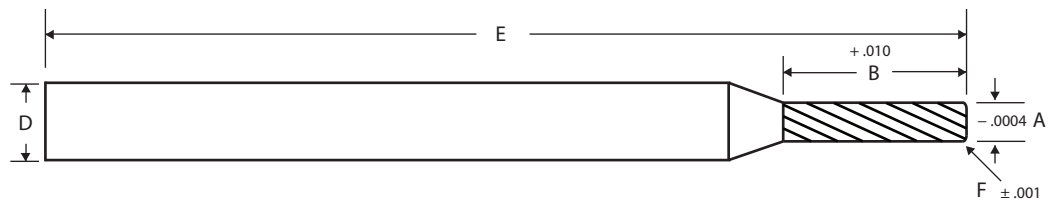
5X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



## MANUFACTURED BY MITGI: Custom Tools

### Can't find a standard tool to meet your exact specifications?

Specials or modified standards may be the answer. Learn more about working with MITGI to create tools from tool prints, part prints, or to discuss combination tools.

See page 206-207: Custom tools



**FLUTES  
5**
**8X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.031 (1/32)	0.248	0.125	2.50	0.005	S108-031-5-.005R
0.031 (1/32)	0.248	0.125	2.50	0.010	S108-031-5-.010R
0.035	0.280	0.125	2.50	0.005	S108-035-5-.005R
0.035	0.280	0.125	2.50	0.010	S108-035-5-.010R
0.039 (1mm)	0.312	0.125	2.50	0.005	S108-039-5-.005R
0.039 (1mm)	0.312	0.125	2.50	0.010	S108-039-5-.010R
0.040	0.320	0.125	2.50	0.005	S108-040-5-.005R
0.040	0.320	0.125	2.50	0.010	S108-040-5-.010R
0.045	0.360	0.125	2.50	0.005	S108-045-5-.005R
0.045	0.360	0.125	2.50	0.010	S108-045-5-.010R
0.045	0.360	0.125	2.50	0.015	S108-045-5-.015R
0.047 (3/64)	0.376	0.125	2.50	0.005	S108-047-5-.005R
0.047 (3/64)	0.376	0.125	2.50	0.010	S108-047-5-.010R
0.047 (3/64)	0.376	0.125	2.50	0.015	S108-047-5-.015R
0.050	0.400	0.125	2.50	0.005	S108-050-5-.005R
0.050	0.400	0.125	2.50	0.010	S108-050-5-.010R
0.050	0.400	0.125	2.50	0.015	S108-050-5-.015R
0.055	0.440	0.125	2.50	0.005	S108-055-5-.005R
0.055	0.440	0.125	2.50	0.010	S108-055-5-.010R
0.055	0.440	0.125	2.50	0.015	S108-055-5-.015R
0.060	0.480	0.125	2.50	0.005	S108-060-5-.005R
0.060	0.480	0.125	2.50	0.010	S108-060-5-.010R
0.060	0.480	0.125	2.50	0.015	S108-060-5-.015R
0.062 (1/16)	0.496	0.125	2.50	0.005	S108-062-5-.005R
0.062 (1/16)	0.496	0.125	2.50	0.010	S108-062-5-.010R
0.062 (1/16)	0.496	0.125	2.50	0.015	S108-062-5-.015R
0.062 (1/16)	0.496	0.125	2.50	0.020	S108-062-5-.020R
0.065	0.520	0.125	2.50	0.005	S108-065-5-.005R
0.065	0.520	0.125	2.50	0.010	S108-065-5-.010R
0.065	0.520	0.125	2.50	0.015	S108-065-5-.015R
0.070	0.560	0.125	2.50	0.005	S108-070-5-.005R
0.070	0.560	0.125	2.50	0.010	S108-070-5-.010R
0.070	0.560	0.125	2.50	0.015	S108-070-5-.015R
0.075	0.600	0.125	2.50	0.005	S108-075-5-.005R
0.075	0.600	0.125	2.50	0.010	S108-075-5-.010R
0.075	0.600	0.125	2.50	0.015	S108-075-5-.015R
0.078 (5/64)	0.624	0.125	2.50	0.005	S108-078-5-.005R
0.078 (5/64)	0.624	0.125	2.50	0.010	S108-078-5-.010R
0.078 (5/64)	0.624	0.125	2.50	0.015	S108-078-5-.015R
0.078 (5/64)	0.624	0.125	2.50	0.020	S108-078-5-.020R
0.080	0.640	0.125	2.50	0.005	S108-080-5-.005R
0.080	0.640	0.125	2.50	0.010	S108-080-5-.010R
0.080	0.640	0.125	2.50	0.015	S108-080-5-.015R

# Corner Radius Micro End Mills

# S108

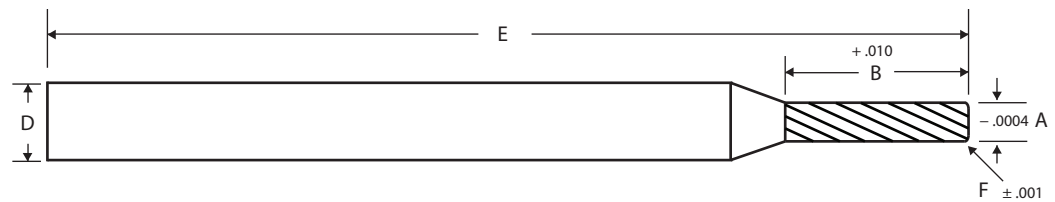
Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.085	0.680	0.125	2.50	0.005	S108-085-5-.005R
0.085	0.680	0.125	2.50	0.010	S108-085-5-.010R
0.085	0.680	0.125	2.50	0.015	S108-085-5-.015R
0.090	0.720	0.125	2.50	0.005	S108-090-5-.005R
0.090	0.720	0.125	2.50	0.010	S108-090-5-.010R
0.090	0.720	0.125	2.50	0.015	S108-090-5-.015R
0.093 (3/32)	0.744	0.125	2.50	0.005	S108-093-5-.005R
0.093 (3/32)	0.744	0.125	2.50	0.010	S108-093-5-.010R
0.093 (3/32)	0.744	0.125	2.50	0.015	S108-093-5-.015R
0.093 (3/32)	0.744	0.125	2.50	0.020	S108-093-5-.020R
0.095	0.760	0.125	2.50	0.005	S108-095-5-.005R
0.095	0.760	0.125	2.50	0.010	S108-095-5-.010R
0.095	0.760	0.125	2.50	0.015	S108-095-5-.015R
0.100	0.800	0.125	2.50	0.005	S108-100-5-.005R
0.100	0.800	0.125	2.50	0.010	S108-100-5-.010R
0.100	0.800	0.125	2.50	0.015	S108-100-5-.015R
0.118 (3mm)	0.944	0.125	2.50	0.005	S108-118-5-.005R
0.118 (3mm)	0.944	0.125	2.50	0.010	S108-118-5-.010R
0.118 (3mm)	0.944	0.125	2.50	0.015	S108-118-5-.015R
0.118 (3mm)	0.944	0.125	2.50	0.020	S108-118-5-.020R
0.125 (1/8)	1.000	0.125	2.50	0.005	S108-125-5-.005R
0.125 (1/8)	1.000	0.125	2.50	0.010	S108-125-5-.010R
0.125 (1/8)	1.000	0.125	2.50	0.015	S108-125-5-.015R
0.125 (1/8)	1.000	0.125	2.50	0.020	S108-125-5-.020R

**FLUTES**  
**5**

**8X**  
LENGTH  
OF CUT

**+**  
SWISS-TYPE  
OAL

**Q**  
QUICK TURN  
SPECIALS



## Tips on Selecting the Right Tool for the Job

Number of Flutes	Primary Uses	Ideal Cutting Materials
2-3	Tools with fewer flutes allow optimal space for chip removal when milling or slotting softer materials. Also used for roughing.	Soft materials, such as aluminum and plastics.
3-4	Adding flutes provides greater strength. Recommended for use with roughing, milling, and slotting a variety of materials. Can also be used for finishing softer materials.	Hard materials, such as stainless steel, steel, and titanium.
5 +	Ideal for use in finishing work, when using faster feed rates, and with reduced chip load.	Harder materials, such as steel, or for finishing a variety of materials.



**FLUTES  
5**
**12X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.031 (1/32)	0.372	0.125	2.50	0.005	S109-031-5-.005R
0.031 (1/32)	0.372	0.125	2.50	0.010	S109-031-5-.010R
0.035	0.420	0.125	2.50	0.005	S109-035-5-.005R
0.035	0.420	0.125	2.50	0.010	S109-035-5-.010R
0.039 (1mm)	0.468	0.125	2.50	0.005	S109-039-5-.005R
0.039 (1mm)	0.468	0.125	2.50	0.010	S109-039-5-.010R
0.040	0.480	0.125	2.50	0.005	S109-040-5-.005R
0.040	0.480	0.125	2.50	0.010	S109-040-5-.010R
0.045	0.540	0.125	2.50	0.005	S109-045-5-.005R
0.045	0.540	0.125	2.50	0.010	S109-045-5-.010R
0.045	0.540	0.125	2.50	0.015	S109-045-5-.015R
0.047 (3/64)	0.564	0.125	2.50	0.005	S109-047-5-.005R
0.047 (3/64)	0.564	0.125	2.50	0.010	S109-047-5-.010R
0.047 (3/64)	0.564	0.125	2.50	0.015	S109-047-5-.015R
0.050	0.600	0.125	2.50	0.005	S109-050-5-.005R
0.050	0.600	0.125	2.50	0.010	S109-050-5-.010R
0.050	0.600	0.125	2.50	0.015	S109-050-5-.015R
0.055	0.660	0.125	2.50	0.005	S109-055-5-.005R
0.055	0.660	0.125	2.50	0.010	S109-055-5-.010R
0.055	0.660	0.125	2.50	0.015	S109-055-5-.015R
0.060	0.720	0.125	2.50	0.005	S109-060-5-.005R
0.060	0.720	0.125	2.50	0.010	S109-060-5-.010R
0.060	0.720	0.125	2.50	0.015	S109-060-5-.015R
0.062 (1/16)	0.744	0.125	2.50	0.005	S109-062-5-.005R
0.062 (1/16)	0.744	0.125	2.50	0.010	S109-062-5-.010R
0.062 (1/16)	0.744	0.125	2.50	0.015	S109-062-5-.015R
0.062 (1/16)	0.744	0.125	2.50	0.020	S109-062-5-.020R
0.065	0.780	0.125	2.50	0.005	S109-065-5-.005R
0.065	0.780	0.125	2.50	0.010	S109-065-5-.010R
0.065	0.780	0.125	2.50	0.015	S109-065-5-.015R
0.070	0.840	0.125	2.50	0.005	S109-070-5-.005R
0.070	0.840	0.125	2.50	0.010	S109-070-5-.010R
0.070	0.840	0.125	2.50	0.015	S109-070-5-.015R
0.075	0.900	0.125	2.50	0.005	S109-075-5-.005R
0.075	0.900	0.125	2.50	0.010	S109-075-5-.010R
0.075	0.900	0.125	2.50	0.015	S109-075-5-.015R
0.078 (5/64)	0.936	0.125	2.50	0.005	S109-078-5-.005R
0.078 (5/64)	0.936	0.125	2.50	0.010	S109-078-5-.010R
0.078 (5/64)	0.936	0.125	2.50	0.015	S109-078-5-.015R
0.078 (5/64)	0.936	0.125	2.50	0.020	S109-078-5-.020R
0.080	0.960	0.125	2.50	0.005	S109-080-5-.005R
0.080	0.960	0.125	2.50	0.010	S109-080-5-.010R
0.080	0.960	0.125	2.50	0.015	S109-080-5-.015R

# Corner Radius Micro End Mills

S109

Cutter Diameter A	Length of Cut B	Shank Diameter D	Overall Length E	Corner Radius F	5 Flute Tool #
0.085	1.020	0.125	2.50	0.005	S109-085-5-.005R
0.085	1.020	0.125	2.50	0.010	S109-085-5-.010R
0.085	1.020	0.125	2.50	0.015	S109-085-5-.015R
0.090	1.080	0.125	2.50	0.005	S109-090-5-.005R
0.090	1.080	0.125	2.50	0.010	S109-090-5-.010R
0.090	1.080	0.125	2.50	0.015	S109-090-5-.015R
0.093 (3/32)	1.116	0.125	2.50	0.005	S109-093-5-.005R
0.093 (3/32)	1.116	0.125	2.50	0.010	S109-093-5-.010R
0.093 (3/32)	1.116	0.125	2.50	0.015	S109-093-5-.015R
0.093 (3/32)	1.116	0.125	2.50	0.020	S109-093-5-.020R
0.095	1.140	0.125	2.50	0.005	S109-095-5-.005R
0.095	1.140	0.125	2.50	0.010	S109-095-5-.010R
0.095	1.140	0.125	2.50	0.015	S109-095-5-.015R
0.100	1.200	0.125	2.50	0.005	S109-100-5-.005R
0.100	1.200	0.125	2.50	0.010	S109-100-5-.010R
0.100	1.200	0.125	2.50	0.015	S109-100-5-.015R
0.118 (3mm)	1.416	0.125	2.50	0.005	S109-118-5-.005R
0.118 (3mm)	1.416	0.125	2.50	0.010	S109-118-5-.010R
0.118 (3mm)	1.416	0.125	2.50	0.015	S109-118-5-.015R
0.118 (3mm)	1.416	0.125	2.50	0.020	S109-118-5-.020R
0.125 (1/8)	1.500	0.125	2.50	0.005	S109-125-5-.005R
0.125 (1/8)	1.500	0.125	2.50	0.010	S109-125-5-.010R
0.125 (1/8)	1.500	0.125	2.50	0.015	S109-125-5-.015R
0.125 (1/8)	1.500	0.125	2.50	0.020	S109-125-5-.020R

FLUTES  
5

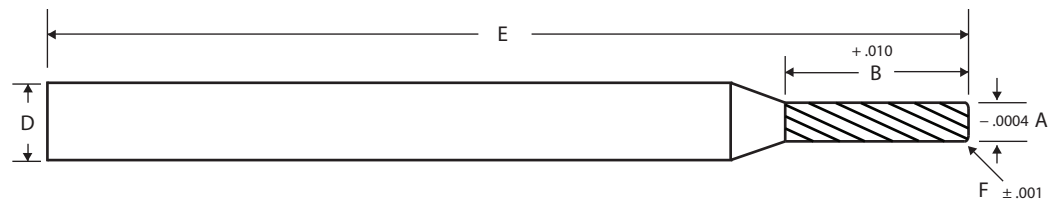
12X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



## MITGI INSIDE ACCOUNT REPRESENTATIVES

P. 2

MITGI Inside Account Representatives are the right resources for quote requests, to place orders, check inventory, or provide tracking. See page 2 for more info.



**FLUTES**  
5

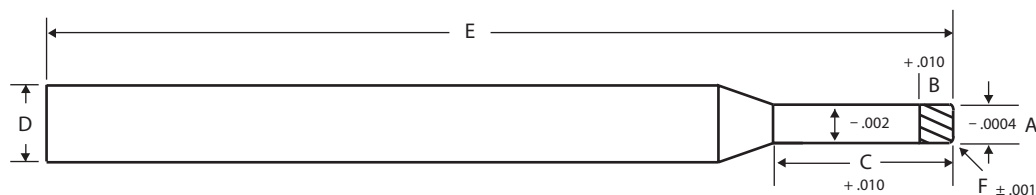
**1.5X**  
LENGTH  
OF CUT

**5X**  
REACH

**+**  
SWISS-TYPE  
OAL

**Q**  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	C	D	E	F	
0.031 (1/32)	0.047	0.155	0.125	2.50	0.005	S87-031-5-.005R5XR
0.035	0.053	0.175	0.125	2.50	0.005	S87-035-5-.005R5XR
0.039 (1mm)	0.059	0.195	0.125	2.50	0.005	S87-039-5-.005R5XR
0.040	0.060	0.200	0.125	2.50	0.005	S87-040-5-.005R5XR
0.045	0.068	0.225	0.125	2.50	0.005	S87-045-5-.005R5XR
0.047 (3/64)	0.071	0.235	0.125	2.50	0.005	S87-047-5-.005R5XR
0.050	0.075	0.250	0.125	2.50	0.005	S87-050-5-.005R5XR
0.055	0.083	0.275	0.125	2.50	0.005	S87-055-5-.005R5XR
0.060	0.090	0.300	0.125	2.50	0.005	S87-060-5-.005R5XR
0.062 (1/16)	0.093	0.310	0.125	2.50	0.005	S87-062-5-.005R5XR
0.065	0.098	0.325	0.125	2.50	0.005	S87-065-5-.005R5XR
0.070	0.105	0.350	0.125	2.50	0.005	S87-070-5-.005R5XR
0.070	0.105	0.350	0.125	2.50	0.010	S87-070-5-.010R5XR
0.075	0.113	0.375	0.125	2.50	0.005	S87-075-5-.005R5XR
0.075	0.113	0.375	0.125	2.50	0.010	S87-075-5-.010R5XR
0.078 (5/64)	0.117	0.390	0.125	2.50	0.005	S87-078-5-.005R5XR
0.078 (5/64)	0.117	0.390	0.125	2.50	0.010	S87-078-5-.010R5XR
0.080	0.120	0.400	0.125	2.50	0.005	S87-080-5-.005R5XR
0.080	0.120	0.400	0.125	2.50	0.010	S87-080-5-.010R5XR
0.085	0.128	0.425	0.125	2.50	0.005	S87-085-5-.005R5XR
0.085	0.128	0.425	0.125	2.50	0.010	S87-085-5-.010R5XR
0.090	0.135	0.450	0.125	2.50	0.005	S87-090-5-.005R5XR
0.090	0.135	0.450	0.125	2.50	0.010	S87-090-5-.010R5XR
0.090	0.135	0.450	0.125	2.50	0.015	S87-090-5-.015R5XR
0.093 (3/32)	0.140	0.465	0.125	2.50	0.005	S87-093-5-.005R5XR
0.093 (3/32)	0.140	0.465	0.125	2.50	0.010	S87-093-5-.010R5XR
0.095	0.143	0.475	0.125	2.50	0.005	S87-095-5-.005R5XR
0.095	0.143	0.475	0.125	2.50	0.010	S87-095-5-.010R5XR
0.100	0.150	0.500	0.125	2.50	0.005	S87-100-5-.005R5XR
0.100	0.150	0.500	0.125	2.50	0.010	S87-100-5-.010R5XR
0.100	0.150	0.500	0.125	2.50	0.015	S87-100-5-.015R5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	0.005	S87-118-5-.005R5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	0.010	S87-118-5-.010R5XR
0.118 (3mm)	0.177	0.590	0.125	2.50	0.015	S87-118-5-.015R5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	0.005	S87-125-5-.005R5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	0.010	S87-125-5-.010R5XR
0.125 (1/8)	0.188	0.625	0.125	2.50	0.015	S87-125-5-.015R5XR



# Corner Radius Micro End Mills

S84

Cutter Diameter A	Length of Cut B	Overall Reach C	Shank Diameter D	Overall Length E	Corner Radius F	5 Flute Tool #
0.031 (1/32)	0.093	0.155	0.125	2.50	0.005	S84-031-5-.005R5XR
0.035	0.105	0.175	0.125	2.50	0.005	S84-035-5-.005R5XR
0.039 (1mm)	0.117	0.195	0.125	2.50	0.005	S84-039-5-.005R5XR
0.040	0.120	0.200	0.125	2.50	0.005	S84-040-5-.005R5XR
0.045	0.135	0.225	0.125	2.50	0.005	S84-045-5-.005R5XR
0.047 (3/64)	0.141	0.235	0.125	2.50	0.005	S84-047-5-.005R5XR
0.050	0.150	0.250	0.125	2.50	0.005	S84-050-5-.005R5XR
0.055	0.165	0.275	0.125	2.50	0.005	S84-055-5-.005R5XR
0.060	0.180	0.300	0.125	2.50	0.005	S84-060-5-.005R5XR
0.062 (1/16)	0.186	0.310	0.125	2.50	0.005	S84-062-5-.005R5XR
0.065	0.195	0.325	0.125	2.50	0.005	S84-065-5-.005R5XR
0.070	0.210	0.350	0.125	2.50	0.005	S84-070-5-.005R5XR
0.070	0.210	0.350	0.125	2.50	0.010	S84-070-5-.010R5XR
0.075	0.225	0.375	0.125	2.50	0.005	S84-075-5-.005R5XR
0.075	0.225	0.375	0.125	2.50	0.010	S84-075-5-.010R5XR
0.078 (5/64)	0.234	0.390	0.125	2.50	0.005	S84-078-5-.005R5XR
0.078 (5/64)	0.234	0.390	0.125	2.50	0.010	S84-078-5-.010R5XR
0.080	0.240	0.400	0.125	2.50	0.005	S84-080-5-.005R5XR
0.080	0.240	0.400	0.125	2.50	0.010	S84-080-5-.010R5XR
0.085	0.255	0.425	0.125	2.50	0.005	S84-085-5-.005R5XR
0.085	0.255	0.425	0.125	2.50	0.010	S84-085-5-.010R5XR
0.090	0.270	0.450	0.125	2.50	0.005	S84-090-5-.005R5XR
0.090	0.270	0.450	0.125	2.50	0.010	S84-090-5-.010R5XR
0.093 (3/32)	0.279	0.465	0.125	2.50	0.005	S84-093-5-.005R5XR
0.093 (3/32)	0.279	0.465	0.125	2.50	0.010	S84-093-5-.010R5XR
0.095	0.285	0.475	0.125	2.50	0.005	S84-095-5-.005R5XR
0.095	0.285	0.475	0.125	2.50	0.010	S84-095-5-.010R5XR
0.100	0.300	0.500	0.125	2.50	0.005	S84-100-5-.005R5XR
0.100	0.300	0.500	0.125	2.50	0.010	S84-100-5-.010R5XR
0.100	0.300	0.500	0.125	2.50	0.015	S84-100-5-.015R5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	0.005	S84-118-5-.005R5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	0.010	S84-118-5-.010R5XR
0.118 (3mm)	0.354	0.590	0.125	2.50	0.015	S84-118-5-.015R5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	0.005	S84-125-5-.005R5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	0.010	S84-125-5-.010R5XR
0.125 (1/8)	0.375	0.625	0.125	2.50	0.015	S84-125-5-.015R5XR

FLUTES  
5

3X  
LENGTH  
OF CUT

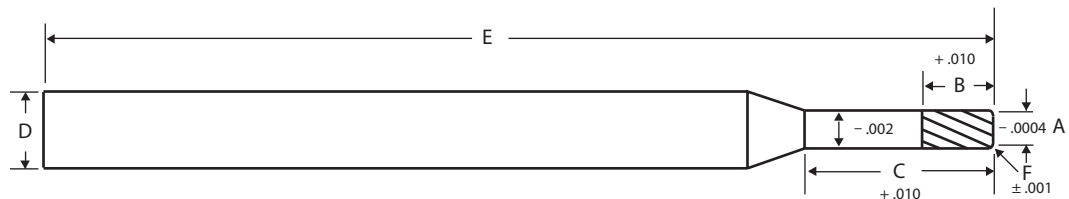
5X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



# S88

# Corner Radius Micro End Mills

**FLUTES**  
5

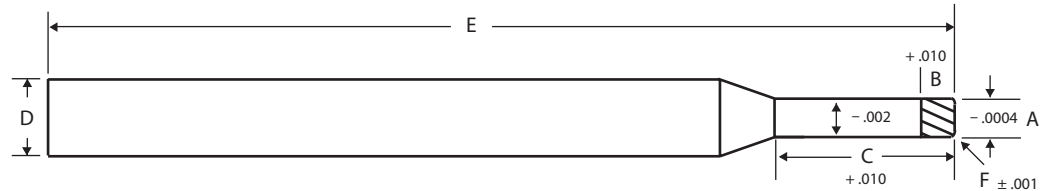
**1.5X**  
LENGTH  
OF CUT

**8X**  
REACH

**+**  
SWISS-TYPE  
OAL

**Q**  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	C	D	E	F	
0.031 (1/32)	0.047	0.248	0.125	2.50	0.005	S88-031-5-.005R8XR
0.035	0.053	0.280	0.125	2.50	0.005	S88-035-5-.005R8XR
0.039 (1mm)	0.059	0.312	0.125	2.50	0.005	S88-039-5-.005R8XR
0.040	0.060	0.320	0.125	2.50	0.005	S88-040-5-.005R8XR
0.045	0.068	0.360	0.125	2.50	0.005	S88-045-5-.005R8XR
0.047 (3/64)	0.071	0.376	0.125	2.50	0.005	S88-047-5-.005R8XR
0.050	0.075	0.400	0.125	2.50	0.005	S88-050-5-.005R8XR
0.055	0.083	0.440	0.125	2.50	0.005	S88-055-5-.005R8XR
0.060	0.090	0.480	0.125	2.50	0.005	S88-060-5-.005R8XR
0.062 (1/16)	0.093	0.496	0.125	2.50	0.005	S88-062-5-.005R8XR
0.065	0.098	0.520	0.125	2.50	0.005	S88-065-5-.005R8XR
0.070	0.105	0.560	0.125	2.50	0.005	S88-070-5-.005R8XR
0.070	0.105	0.560	0.125	2.50	0.010	S88-070-5-.010R8XR
0.075	0.113	0.600	0.125	2.50	0.005	S88-075-5-.005R8XR
0.075	0.113	0.600	0.125	2.50	0.010	S88-075-5-.010R8XR
0.078 (5/64)	0.117	0.624	0.125	2.50	0.005	S88-078-5-.005R8XR
0.078 (5/64)	0.117	0.624	0.125	2.50	0.010	S88-078-5-.010R8XR
0.080	0.120	0.640	0.125	2.50	0.005	S88-080-5-.005R8XR
0.080	0.120	0.640	0.125	2.50	0.010	S88-080-5-.010R8XR
0.085	0.128	0.680	0.125	2.50	0.005	S88-085-5-.005R8XR
0.085	0.128	0.680	0.125	2.50	0.010	S88-085-5-.010R8XR
0.090	0.135	0.720	0.125	2.50	0.005	S88-090-5-.005R8XR
0.090	0.135	0.720	0.125	2.50	0.010	S88-090-5-.010R8XR
0.093 (3/32)	0.140	0.744	0.125	2.50	0.005	S88-093-5-.005R8XR
0.093 (3/32)	0.140	0.744	0.125	2.50	0.010	S88-093-5-.010R8XR
0.095	0.143	0.760	0.125	2.50	0.005	S88-095-5-.005R8XR
0.095	0.143	0.760	0.125	2.50	0.010	S88-095-5-.010R8XR
0.100	0.150	0.800	0.125	2.50	0.005	S88-100-5-.005R8XR
0.100	0.150	0.800	0.125	2.50	0.010	S88-100-5-.010R8XR
0.100	0.150	0.800	0.125	2.50	0.015	S88-100-5-.015R8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	0.005	S88-118-5-.005R8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	0.010	S88-118-5-.010R8XR
0.118 (3mm)	0.177	0.944	0.125	2.50	0.015	S88-118-5-.015R8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	0.005	S88-125-5-.005R8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	0.010	S88-125-5-.010R8XR
0.125 (1/8)	0.188	1.000	0.125	2.50	0.015	S88-125-5-.015R8XR



# Corner Radius Micro End Mills

S85

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	C	D	E	F	
0.031 (1/32)	0.093	0.248	0.125	2.50	0.005	S85-031-5-.005R8XR
0.035	0.105	0.280	0.125	2.50	0.005	S85-035-5-.005R8XR
0.039 (1mm)	0.117	0.312	0.125	2.50	0.005	S85-039-5-.005R8XR
0.040	0.120	0.320	0.125	2.50	0.005	S85-040-5-.005R8XR
0.045	0.135	0.360	0.125	2.50	0.005	S85-045-5-.005R8XR
0.047 (3/64)	0.141	0.376	0.125	2.50	0.005	S85-047-5-.005R8XR
0.050	0.150	0.400	0.125	2.50	0.005	S85-050-5-.005R8XR
0.055	0.165	0.440	0.125	2.50	0.005	S85-055-5-.005R8XR
0.060	0.180	0.480	0.125	2.50	0.005	S85-060-5-.005R8XR
0.062 (1/16)	0.186	0.496	0.125	2.50	0.005	S85-062-5-.005R8XR
0.065	0.195	0.520	0.125	2.50	0.005	S85-065-5-.005R8XR
0.070	0.210	0.560	0.125	2.50	0.005	S85-070-5-.005R8XR
0.070	0.210	0.560	0.125	2.50	0.010	S85-070-5-.010R8XR
0.075	0.225	0.600	0.125	2.50	0.005	S85-075-5-.005R8XR
0.075	0.225	0.600	0.125	2.50	0.010	S85-075-5-.010R8XR
0.078 (5/64)	0.234	0.624	0.125	2.50	0.005	S85-078-5-.005R8XR
0.078 (5/64)	0.234	0.624	0.125	2.50	0.010	S85-078-5-.010R8XR
0.080	0.240	0.640	0.125	2.50	0.005	S85-080-5-.005R8XR
0.080	0.240	0.640	0.125	2.50	0.010	S85-080-5-.010R8XR
0.085	0.255	0.680	0.125	2.50	0.005	S85-085-5-.005R8XR
0.085	0.255	0.680	0.125	2.50	0.010	S85-085-5-.010R8XR
0.090	0.270	0.720	0.125	2.50	0.005	S85-090-5-.005R8XR
0.090	0.270	0.720	0.125	2.50	0.010	S85-090-5-.010R8XR
0.093 (3/32)	0.279	0.744	0.125	2.50	0.005	S85-093-5-.005R8XR
0.093 (3/32)	0.279	0.744	0.125	2.50	0.010	S85-093-5-.010R8XR
0.095	0.285	0.760	0.125	2.50	0.005	S85-095-5-.005R8XR
0.095	0.285	0.760	0.125	2.50	0.010	S85-095-5-.010R8XR
0.100	0.300	0.800	0.125	2.50	0.005	S85-100-5-.005R8XR
0.100	0.300	0.800	0.125	2.50	0.010	S85-100-5-.010R8XR
0.100	0.300	0.800	0.125	2.50	0.015	S85-100-5-.015R8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	0.005	S85-118-5-.005R8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	0.010	S85-118-5-.010R8XR
0.118 (3mm)	0.354	0.944	0.125	2.50	0.015	S85-118-5-.015R8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	0.005	S85-125-5-.005R8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	0.010	S85-125-5-.010R8XR
0.125 (1/8)	0.375	1.000	0.125	2.50	0.015	S85-125-5-.015R8XR

FLUTES  
5

3X  
LENGTH  
OF CUT

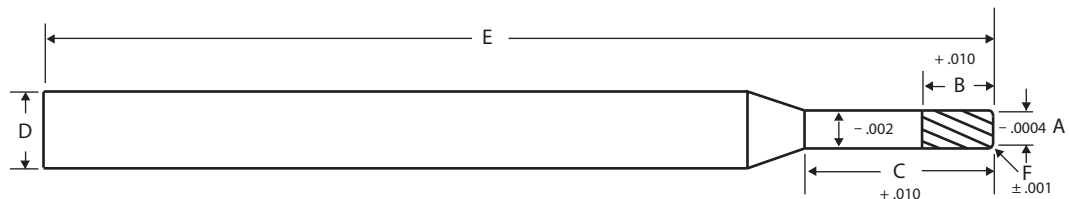
8X  
REACH

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



**FLUTES**  
5

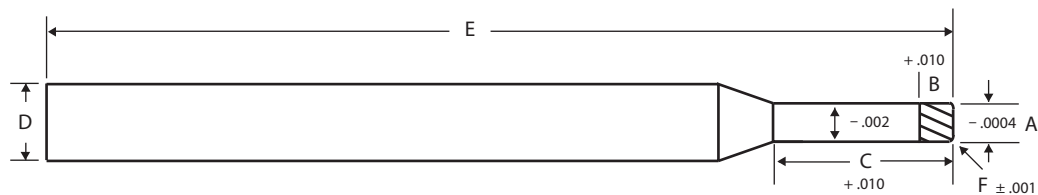
**1.5X**  
LENGTH  
OF CUT

**12X**  
REACH

**+**  
SWISS-TYPE  
OAL

**QT**  
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	C	D	E	F	
0.031 (1/32)	0.047	0.372	0.125	2.50	0.005	S89-031-5-.005R12XR
0.035	0.053	0.420	0.125	2.50	0.005	S89-035-5-.005R12XR
0.039 (1mm)	0.059	0.468	0.125	2.50	0.005	S89-039-5-.005R12XR
0.040	0.060	0.480	0.125	2.50	0.005	S89-040-5-.005R12XR
0.045	0.068	0.540	0.125	2.50	0.005	S89-045-5-.005R12XR
0.047 (3/64)	0.071	0.564	0.125	2.50	0.005	S89-047-5-.005R12XR
0.050	0.075	0.600	0.125	2.50	0.005	S89-050-5-.005R12XR
0.055	0.083	0.660	0.125	2.50	0.005	S89-055-5-.005R12XR
0.060	0.090	0.720	0.125	2.50	0.005	S89-060-5-.005R12XR
0.062 (1/16)	0.093	0.744	0.125	2.50	0.005	S89-062-5-.005R12XR
0.065	0.098	0.780	0.125	2.50	0.005	S89-065-5-.005R12XR
0.070	0.105	0.840	0.125	2.50	0.005	S89-070-5-.005R12XR
0.070	0.105	0.840	0.125	2.50	0.010	S89-070-5-.010R12XR
0.075	0.113	0.900	0.125	2.50	0.005	S89-075-5-.005R12XR
0.075	0.113	0.900	0.125	2.50	0.010	S89-075-5-.010R12XR
0.078 (5/64)	0.117	0.936	0.125	2.50	0.005	S89-078-5-.005R12XR
0.078 (5/64)	0.117	0.936	0.125	2.50	0.010	S89-078-5-.010R12XR
0.080	0.120	0.960	0.125	2.50	0.005	S89-080-5-.005R12XR
0.080	0.120	0.960	0.125	2.50	0.010	S89-080-5-.010R12XR
0.085	0.128	1.020	0.125	2.50	0.005	S89-085-5-.005R12XR
0.085	0.128	1.020	0.125	2.50	0.010	S89-085-5-.010R12XR
0.090	0.135	1.080	0.125	2.50	0.005	S89-090-5-.005R12XR
0.090	0.135	1.080	0.125	2.50	0.010	S89-090-5-.010R12XR
0.093 (3/32)	0.140	1.116	0.125	2.50	0.005	S89-093-5-.005R12XR
0.093 (3/32)	0.140	1.116	0.125	2.50	0.010	S89-093-5-.010R12XR
0.095	0.143	1.140	0.125	2.50	0.005	S89-095-5-.005R12XR
0.095	0.143	1.140	0.125	2.50	0.010	S89-095-5-.010R12XR
0.100	0.150	1.200	0.125	2.50	0.005	S89-100-5-.005R12XR
0.100	0.150	1.200	0.125	2.50	0.010	S89-100-5-.010R12XR
0.100	0.150	1.200	0.125	2.50	0.015	S89-100-5-.015R12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	0.005	S89-118-5-.005R12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	0.010	S89-118-5-.010R12XR
0.118 (3mm)	0.177	1.416	0.125	2.50	0.015	S89-118-5-.015R12XR
0.125 (1/8)	0.188	1.500	0.125	2.50	0.005	S89-125-5-.005R12XR
0.125 (1/8)	0.188	1.500	0.125	2.50	0.010	S89-125-5-.010R12XR
0.125 (1/8)	0.188	1.500	0.125	2.50	0.015	S89-125-5-.015R12XR



# Corner Radius Micro End Mills

S86

Cutter Diameter A	Length of Cut B	Overall Reach C	Shank Diameter D	Overall Length E	Corner Radius F	5 Flute Tool #
0.031 (1/32)	0.093	0.372	0.125	2.50	0.005	S86-031-5-.005R12XR
0.035	0.105	0.420	0.125	2.50	0.005	S86-035-5-.005R12XR
0.039 (1mm)	0.117	0.468	0.125	2.50	0.005	S86-039-5-.005R12XR
0.040	0.120	0.480	0.125	2.50	0.005	S86-040-5-.005R12XR
0.045	0.135	0.540	0.125	2.50	0.005	S86-045-5-.005R12XR
0.047 (3/64)	0.141	0.564	0.125	2.50	0.005	S86-047-5-.005R12XR
0.050	0.150	0.600	0.125	2.50	0.005	S86-050-5-.005R12XR
0.055	0.165	0.660	0.125	2.50	0.005	S86-055-5-.005R12XR
0.060	0.180	0.720	0.125	2.50	0.005	S86-060-5-.005R12XR
0.062 (1/16)	0.186	0.744	0.125	2.50	0.005	S86-062-5-.005R12XR
0.065	0.195	0.780	0.125	2.50	0.005	S86-065-5-.005R12XR
0.070	0.210	0.840	0.125	2.50	0.005	S86-070-5-.005R12XR
0.070	0.210	0.840	0.125	2.50	0.010	S86-070-5-.010R12XR
0.075	0.225	0.900	0.125	2.50	0.005	S86-075-5-.005R12XR
0.075	0.225	0.900	0.125	2.50	0.010	S86-075-5-.010R12XR
0.078 (5/64)	0.234	0.936	0.125	2.50	0.005	S86-078-5-.005R12XR
0.078 (5/64)	0.234	0.936	0.125	2.50	0.010	S86-078-5-.010R12XR
0.080	0.240	0.960	0.125	2.50	0.005	S86-080-5-.005R12XR
0.080	0.240	0.960	0.125	2.50	0.010	S86-080-5-.010R12XR
0.085	0.255	1.020	0.125	2.50	0.005	S86-085-5-.005R12XR
0.085	0.255	1.020	0.125	2.50	0.010	S86-085-5-.010R12XR
0.090	0.270	1.080	0.125	2.50	0.005	S86-090-5-.005R12XR
0.090	0.270	1.080	0.125	2.50	0.010	S86-090-5-.010R12XR
0.093 (3/32)	0.279	1.116	0.125	2.50	0.005	S86-093-5-.005R12XR
0.093 (3/32)	0.279	1.116	0.125	2.50	0.010	S86-093-5-.010R12XR
0.095	0.285	1.140	0.125	2.50	0.005	S86-095-5-.005R12XR
0.095	0.285	1.140	0.125	2.50	0.010	S86-095-5-.010R12XR
0.100	0.300	1.200	0.125	2.50	0.005	S86-100-5-.005R12XR
0.100	0.300	1.200	0.125	2.50	0.010	S86-100-5-.010R12XR
0.100	0.300	1.200	0.125	2.50	0.015	S86-100-5-.015R12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	0.005	S86-118-5-.005R12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	0.010	S86-118-5-.010R12XR
0.118 (3mm)	0.354	1.416	0.125	2.50	0.015	S86-118-5-.015R12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	0.005	S86-125-5-.005R12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	0.010	S86-125-5-.010R12XR
0.125 (1/8)	0.375	1.500	0.125	2.50	0.015	S86-125-5-.015R12XR

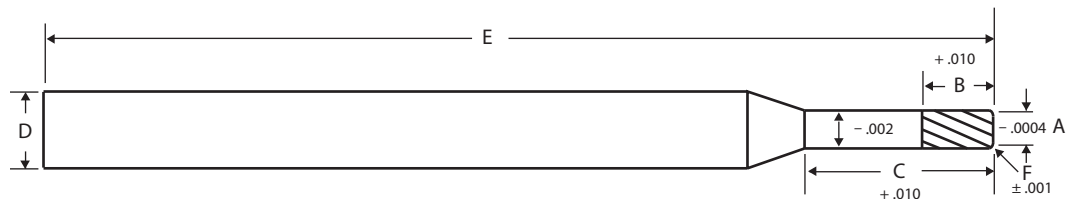
FLUTES  
5

3X  
LENGTH  
OF CUT

12X  
REACH

+  
SWISS-TYPE  
OAL

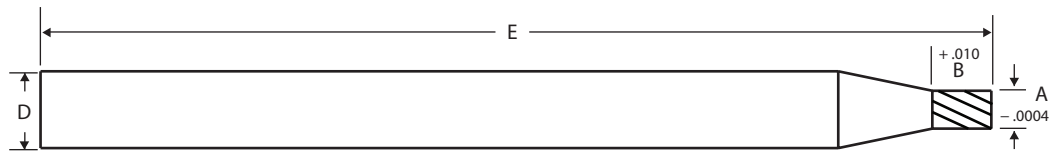
Q  
QUICK TURN  
SPECIALS



**FLUTES  
2,4**
**1.5X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL

**Q**  
QUICK TURN  
SPECIALS

Cutter Diameter (mm)	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.20	0.0119	0.125	1.50	S35-.20mm-2-SST	S35-.20mm-4-SST
0.25	0.0147	0.125	1.50	S35-.25mm-2-SST	S35-.25mm-4-SST
0.30	0.0177	0.125	1.50	S35-.30mm-2-SST	S35-.30mm-4-SST
0.35	0.0207	0.125	1.50	S35-.35mm-2-SST	S35-.35mm-4-SST
0.40	0.0236	0.125	1.50	S35-.40mm-2-SST	S35-.40mm-4-SST
0.45	0.0266	0.125	1.50	S35-.45mm-2-SST	S35-.45mm-4-SST
0.50	0.0296	0.125	1.50	S35-.50mm-2-SST	S35-.50mm-4-SST
0.55	0.0326	0.125	1.50	S35-.55mm-2-SST	S35-.55mm-4-SST
0.60	0.0354	0.125	1.50	S35-.60mm-2-SST	S35-.60mm-4-SST
0.65	0.0384	0.125	1.50	S35-.65mm-2-SST	S35-.65mm-4-SST
0.70	0.0414	0.125	1.50	S35-.70mm-2-SST	S35-.70mm-4-SST
0.75	0.0443	0.125	1.50	S35-.75mm-2-SST	S35-.75mm-4-SST
0.80	0.0473	0.125	1.50	S35-.80mm-2-SST	S35-.80mm-4-SST
0.85	0.0503	0.125	1.50	S35-.85mm-2-SST	S35-.85mm-4-SST
0.90	0.0531	0.125	1.50	S35-.90mm-2-SST	S35-.90mm-4-SST
0.95	0.0561	0.125	1.50	S35-.95mm-2-SST	S35-.95mm-4-SST
1.00	0.0591	0.125	1.50	S35-1.00mm-2-SST	S35-1.00mm-4-SST
1.25	0.0738	0.125	1.50	S35-1.25mm-2-SST	S35-1.25mm-4-SST
1.50	0.0887	0.125	1.50	S35-1.50mm-2-SST	S35-1.50mm-4-SST
1.75	0.1034	0.125	1.50	S35-1.75mm-2-SST	S35-1.75mm-4-SST
2.00	0.1181	0.125	1.50	S35-2.00mm-2-SST	S35-2.00mm-4-SST
2.25	0.1329	0.125	1.50	S35-2.25mm-2-SST	S35-2.25mm-4-SST
2.50	0.1476	0.125	1.50	S35-2.50mm-2-SST	S35-2.50mm-4-SST
2.75	0.1625	0.125	1.50	S35-2.75mm-2-SST	S35-2.75mm-4-SST
3.00	0.1772	0.125	1.50	S35-3.00mm-2-SST	S35-3.00mm-4-SST


**MANUFACTURED BY MITGI: Optimized Quality Control**

**At MITGI, quality isn't just the end goal, it's embedded throughout the entire manufacturing process.**

From securing tool print accuracy, to mid-job inspections, through pre-shipping approvals, we ensure that each tool meets our quality standards before it leaves our door. Since all MITGI tools are manufactured on-location, we can ensure that all tools meet our standards of manufacturing and are in spec before they leave the building.

For micro tooling, quality control and manufacturing to tight tolerances are closely linked. The smaller the tool, the more important it is that every detail is checked. Our quality process requires skilled operators, equipment kept in perfect condition, carefully dressed wheels, and meticulous setup.

# Metric Square Micro End Mills

S34

Cutter Diameter (mm)	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.20	0.0237	0.125	1.50	S34-.20mm-2-SEM	S34-.20mm-4-SEM
0.25	0.0294	0.125	1.50	S34-.25mm-2-SEM	S34-.25mm-4-SEM
0.30	0.0354	0.125	1.50	S34-.30mm-2-SEM	S34-.30mm-4-SEM
0.35	0.0414	0.125	1.50	S34-.35mm-2-SEM	S34-.35mm-4-SEM
0.40	0.0471	0.125	1.50	S34-.40mm-2-SEM	S34-.40mm-4-SEM
0.45	0.0531	0.125	1.50	S34-.45mm-2-SEM	S34-.45mm-4-SEM
0.50	0.0591	0.125	1.50	S34-.50mm-2-SEM	S34-.50mm-4-SEM
0.55	0.0651	0.125	1.50	S34-.55mm-2-SEM	S34-.55mm-4-SEM
0.60	0.0708	0.125	1.50	S34-.60mm-2-SEM	S34-.60mm-4-SEM
0.65	0.0768	0.125	1.50	S34-.65mm-2-SEM	S34-.65mm-4-SEM
0.70	0.0828	0.125	1.50	S34-.70mm-2-SEM	S34-.70mm-4-SEM
0.75	0.0885	0.125	1.50	S34-.75mm-2-SEM	S34-.75mm-4-SEM
0.80	0.0945	0.125	1.50	S34-.80mm-2-SEM	S34-.80mm-4-SEM
0.85	0.1005	0.125	1.50	S34-.85mm-2-SEM	S34-.85mm-4-SEM
0.90	0.1062	0.125	1.50	S34-.90mm-2-SEM	S34-.90mm-4-SEM
0.95	0.1122	0.125	1.50	S34-.95mm-2-SEM	S34-.95mm-4-SEM
1.00	0.1181	0.125	1.50	S34-1.00mm-2-SEM	S34-1.00mm-4-SEM
1.25	0.1476	0.125	1.50	S34-1.25mm-2-SEM	S34-1.25mm-4-SEM
1.50	0.1773	0.125	1.50	S34-1.50mm-2-SEM	S34-1.50mm-4-SEM
1.75	0.2067	0.125	1.50	S34-1.75mm-2-SEM	S34-1.75mm-4-SEM
2.00	0.2361	0.125	1.50	S34-2.00mm-2-SEM	S34-2.00mm-4-SEM
2.25	0.2658	0.125	1.50	S34-2.25mm-2-SEM	S34-2.25mm-4-SEM
2.50	0.2952	0.125	1.50	S34-2.50mm-2-SEM	S34-2.50mm-4-SEM
2.75	0.3249	0.125	1.50	S34-2.75mm-2-SEM	S34-2.75mm-4-SEM
3.00	0.3543	0.125	1.50	S34-3.00mm-2-SEM	S34-3.00mm-4-SEM

FLUTES  
2,4

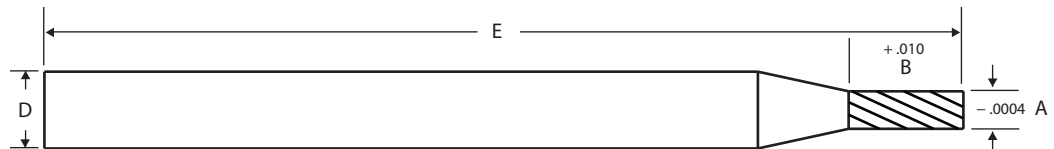
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



## MITGI RESULTS: High Performance Products & Service

"Thank you so much for the 'Above and Beyond' approach you had with our job. We truly appreciate it.

Your company is a joy to work with, not only for the fast and

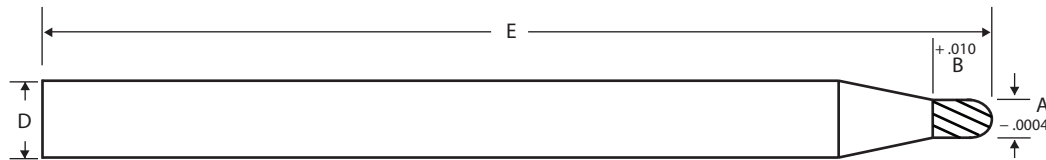
friendly service, but also the technical advice that you provide.

Many thanks!"  
- Donna





Cutter Diameter (mm)	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.20	0.0119	0.125	1.50	S37-.20mm-2-BST	S37-.20mm-4-BST
0.25	0.0147	0.125	1.50	S37-.25mm-2-BST	S37-.25mm-4-BST
0.30	0.0177	0.125	1.50	S37-.30mm-2-BST	S37-.30mm-4-BST
0.35	0.0207	0.125	1.50	S37-.35mm-2-BST	S37-.35mm-4-BST
0.40	0.0236	0.125	1.50	S37-.40mm-2-BST	S37-.40mm-4-BST
0.45	0.0266	0.125	1.50	S37-.45mm-2-BST	S37-.45mm-4-BST
0.50	0.0296	0.125	1.50	S37-.50mm-2-BST	S37-.50mm-4-BST
0.55	0.0326	0.125	1.50	S37-.55mm-2-BST	S37-.55mm-4-BST
0.60	0.0354	0.125	1.50	S37-.60mm-2-BST	S37-.60mm-4-BST
0.65	0.0384	0.125	1.50	S37-.65mm-2-BST	S37-.65mm-4-BST
0.70	0.0414	0.125	1.50	S37-.70mm-2-BST	S37-.70mm-4-BST
0.75	0.0443	0.125	1.50	S37-.75mm-2-BST	S37-.75mm-4-BST
0.80	0.0473	0.125	1.50	S37-.80mm-2-BST	S37-.80mm-4-BST
0.85	0.0503	0.125	1.50	S37-.85mm-2-BST	S37-.85mm-4-BST
0.90	0.0531	0.125	1.50	S37-.90mm-2-BST	S37-.90mm-4-BST
0.95	0.0561	0.125	1.50	S37-.95mm-2-BST	S37-.95mm-4-BST
1.00	0.0591	0.125	1.50	S37-1.00mm-2-BST	S37-1.00mm-4-BST
1.25	0.0738	0.125	1.50	S37-1.25mm-2-BST	S37-1.25mm-4-BST
1.50	0.0887	0.125	1.50	S37-1.50mm-2-BST	S37-1.50mm-4-BST
1.75	0.1034	0.125	1.50	S37-1.75mm-2-BST	S37-1.75mm-4-BST
2.00	0.1181	0.125	1.50	S37-2.00mm-2-BST	S37-2.00mm-4-BST
2.25	0.1329	0.125	1.50	S37-2.25mm-2-BST	S37-2.25mm-4-BST
2.50	0.1476	0.125	1.50	S37-2.50mm-2-BST	S37-2.50mm-4-BST
2.75	0.1625	0.125	1.50	S37-2.75mm-2-BST	S37-2.75mm-4-BST
3.00	0.1772	0.125	1.50	S37-3.00mm-2-BST	S37-3.00mm-4-BST



**MANUFACTURED BY MITGI: In-House Coating**

**Coating can enhance tool life and overall performance, but it can also add to the length of the production schedule of the tool. In-house coating at MITGI helps to shorten lead times, while ensuring consistent results.**

Adding a coating to the tool surface can extend the life of the tool, help create a smoother finish in manufacturing, and can reduce heat. In-house coating gives us the ability to coat tools in batches of like sizes, allowing us to ensure evenly applied and consistent coating each time you place an order.

MITGI Level I coating runs through a weekly production schedule rotation. Level II coatings are available upon request and can usually run within 1-2 weeks. Contact us for more information about coated tools and coating services.



# Metric Ball Micro End Mills

S36

Cutter Diameter (mm)	Length of Cut	Shank Diameter	Overall Length	2 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.20	0.0237	0.125	1.50	S36-.20mm-2-BEM	S36-.20mm-4-BEM
0.25	0.0294	0.125	1.50	S36-.25mm-2-BEM	S36-.25mm-4-BEM
0.30	0.0354	0.125	1.50	S36-.30mm-2-BEM	S36-.30mm-4-BEM
0.35	0.0414	0.125	1.50	S36-.35mm-2-BEM	S36-.35mm-4-BEM
0.40	0.0471	0.125	1.50	S36-.40mm-2-BEM	S36-.40mm-4-BEM
0.45	0.0531	0.125	1.50	S36-.45mm-2-BEM	S36-.45mm-4-BEM
0.50	0.0591	0.125	1.50	S36-.50mm-2-BEM	S36-.50mm-4-BEM
0.55	0.0651	0.125	1.50	S36-.55mm-2-BEM	S36-.55mm-4-BEM
0.60	0.0708	0.125	1.50	S36-.60mm-2-BEM	S36-.60mm-4-BEM
0.65	0.0768	0.125	1.50	S36-.65mm-2-BEM	S36-.65mm-4-BEM
0.70	0.0828	0.125	1.50	S36-.70mm-2-BEM	S36-.70mm-4-BEM
0.75	0.0885	0.125	1.50	S36-.75mm-2-BEM	S36-.75mm-4-BEM
0.80	0.0945	0.125	1.50	S36-.80mm-2-BEM	S36-.80mm-4-BEM
0.85	0.1005	0.125	1.50	S36-.85mm-2-BEM	S36-.85mm-4-BEM
0.90	0.1062	0.125	1.50	S36-.90mm-2-BEM	S36-.90mm-4-BEM
0.95	0.1122	0.125	1.50	S36-.95mm-2-BEM	S36-.95mm-4-BEM
1.00	0.1181	0.125	1.50	S36-1.00mm-2-BEM	S36-1.00mm-4-BEM
1.25	0.1476	0.125	1.50	S36-1.25mm-2-BEM	S36-1.25mm-4-BEM
1.50	0.1773	0.125	1.50	S36-1.50mm-2-BEM	S36-1.50mm-4-BEM
1.75	0.2067	0.125	1.50	S36-1.75mm-2-BEM	S36-1.75mm-4-BEM
2.00	0.2361	0.125	1.50	S36-2.00mm-2-BEM	S36-2.00mm-4-BEM
2.25	0.2658	0.125	1.50	S36-2.25mm-2-BEM	S36-2.25mm-4-BEM
2.50	0.2952	0.125	1.50	S36-2.50mm-2-BEM	S36-2.50mm-4-BEM
2.75	0.3249	0.125	1.50	S36-2.75mm-2-BEM	S36-2.75mm-4-BEM
3.00	0.3543	0.125	1.50	S36-3.00mm-2-BEM	S36-3.00mm-4-BEM

FLUTES  
2,4

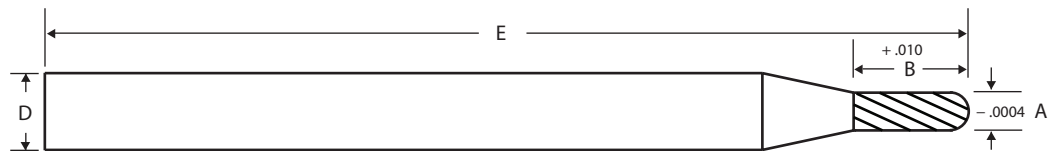
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



## MITGI RESULTS: Fast Service with In-House Coating

"The standard coated tool we ordered worked better than other tools we've tried. We were cutting Cobalt Chrome, so it was a struggle. The turnaround for coating from other

places was a killer for us, and we were far behind schedule. Your coating was quick, and results look good.

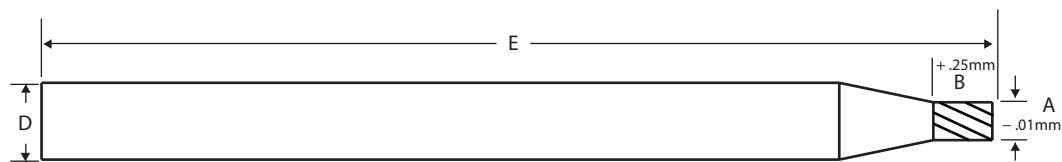
Thanks for all you guys do!"  
- Justin



**S309**
**Metric Square Micro End Mills (Metric Shank)**
**FLUTES  
2,4**
**1.5X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter (mm)	Length of Cut (mm)	Shank Diameter (mm)	Overall Length (in.)	2 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.20	0.30	3.00	1.50	S309-.20mm-2-SQEM	S309-.20mm-4-SQEM
0.25	0.38	3.00	1.50	S309-.25mm-2-SQEM	S309-.25mm-4-SQEM
0.30	0.45	3.00	1.50	S309-.30mm-2-SQEM	S309-.30mm-4-SQEM
0.35	0.53	3.00	1.50	S309-.35mm-2-SQEM	S309-.35mm-4-SQEM
0.40	0.60	3.00	1.50	S309-.40mm-2-SQEM	S309-.40mm-4-SQEM
0.45	0.68	3.00	1.50	S309-.45mm-2-SQEM	S309-.45mm-4-SQEM
0.50	0.75	3.00	1.50	S309-.50mm-2-SQEM	S309-.50mm-4-SQEM
0.55	0.83	3.00	1.50	S309-.55mm-2-SQEM	S309-.55mm-4-SQEM
0.60	0.90	3.00	1.50	S309-.60mm-2-SQEM	S309-.60mm-4-SQEM
0.65	0.98	3.00	1.50	S309-.65mm-2-SQEM	S309-.65mm-4-SQEM
0.70	1.05	3.00	1.50	S309-.70mm-2-SQEM	S309-.70mm-4-SQEM
0.75	1.13	3.00	1.50	S309-.75mm-2-SQEM	S309-.75mm-4-SQEM
0.80	1.20	3.00	1.50	S309-.80mm-2-SQEM	S309-.80mm-4-SQEM
0.85	1.28	3.00	1.50	S309-.85mm-2-SQEM	S309-.85mm-4-SQEM
0.90	1.35	3.00	1.50	S309-.90mm-2-SQEM	S309-.90mm-4-SQEM
0.95	1.43	3.00	1.50	S309-.95mm-2-SQEM	S309-.95mm-4-SQEM
1.00	1.50	3.00	1.50	S309-1.00mm-2-SQEM	S309-1.00mm-4-SQEM
1.25	1.88	3.00	1.50	S309-1.25mm-2-SQEM	S309-1.25mm-4-SQEM
1.50	2.25	3.00	1.50	S309-1.50mm-2-SQEM	S309-1.50mm-4-SQEM
1.75	2.63	3.00	1.50	S309-1.75mm-2-SQEM	S309-1.75mm-4-SQEM
2.00	3.00	3.00	1.50	S309-2.00mm-2-SQEM	S309-2.00mm-4-SQEM
2.25	3.38	3.00	1.50	S309-2.25mm-2-SQEM	S309-2.25mm-4-SQEM
2.50	3.75	3.00	1.50	S309-2.50mm-2-SQEM	S309-2.50mm-4-SQEM
2.75	4.13	3.00	1.50	S309-2.75mm-2-SQEM	S309-2.75mm-4-SQEM
3.00	4.50	3.00	1.50	S309-3.00mm-2-SQEM	S309-3.00mm-4-SQEM



# Metric Square Micro End Mills (Metric Shank)

## S310

Cutter Diameter (mm)	Length of Cut (mm)	Shank Diameter (mm)	Overall Length (in.)	2 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.20	0.60	3.00	1.50	S310-.20mm-2-SQEM	S310-.20mm-4-SQEM
0.25	0.75	3.00	1.50	S310-.25mm-2-SQEM	S310-.25mm-4-SQEM
0.30	0.90	3.00	1.50	S310-.30mm-2-SQEM	S310-.30mm-4-SQEM
0.35	1.05	3.00	1.50	S310-.35mm-2-SQEM	S310-.35mm-4-SQEM
0.40	1.20	3.00	1.50	S310-.40mm-2-SQEM	S310-.40mm-4-SQEM
0.45	1.35	3.00	1.50	S310-.45mm-2-SQEM	S310-.45mm-4-SQEM
0.50	1.50	3.00	1.50	S310-.50mm-2-SQEM	S310-.50mm-4-SQEM
0.55	1.65	3.00	1.50	S310-.55mm-2-SQEM	S310-.55mm-4-SQEM
0.60	1.80	3.00	1.50	S310-.60mm-2-SQEM	S310-.60mm-4-SQEM
0.65	1.95	3.00	1.50	S310-.65mm-2-SQEM	S310-.65mm-4-SQEM
0.70	2.10	3.00	1.50	S310-.70mm-2-SQEM	S310-.70mm-4-SQEM
0.75	2.25	3.00	1.50	S310-.75mm-2-SQEM	S310-.75mm-4-SQEM
0.80	2.40	3.00	1.50	S310-.80mm-2-SQEM	S310-.80mm-4-SQEM
0.85	2.55	3.00	1.50	S310-.85mm-2-SQEM	S310-.85mm-4-SQEM
0.90	2.70	3.00	1.50	S310-.90mm-2-SQEM	S310-.90mm-4-SQEM
0.95	2.85	3.00	1.50	S310-.95mm-2-SQEM	S310-.95mm-4-SQEM
1.00	3.00	3.00	1.50	S310-1.00mm-2-SQEM	S310-1.00mm-4-SQEM
1.25	3.75	3.00	1.50	S310-1.25mm-2-SQEM	S310-1.25mm-4-SQEM
1.50	4.50	3.00	1.50	S310-1.50mm-2-SQEM	S310-1.50mm-4-SQEM
1.75	5.25	3.00	1.50	S310-1.75mm-2-SQEM	S310-1.75mm-4-SQEM
2.00	6.00	3.00	1.50	S310-2.00mm-2-SQEM	S310-2.00mm-4-SQEM
2.25	6.75	3.00	1.50	S310-2.25mm-2-SQEM	S310-2.25mm-4-SQEM
2.50	7.50	3.00	1.50	S310-2.50mm-2-SQEM	S310-2.50mm-4-SQEM
2.75	8.25	3.00	1.50	S310-2.75mm-2-SQEM	S310-2.75mm-4-SQEM
3.00	9.00	3.00	1.50	S310-3.00mm-2-SQEM	S310-3.00mm-4-SQEM

FLUTES  
2,4

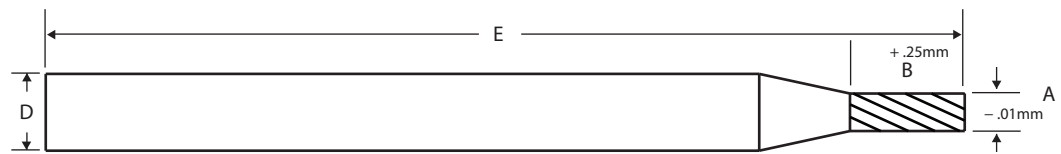
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q  
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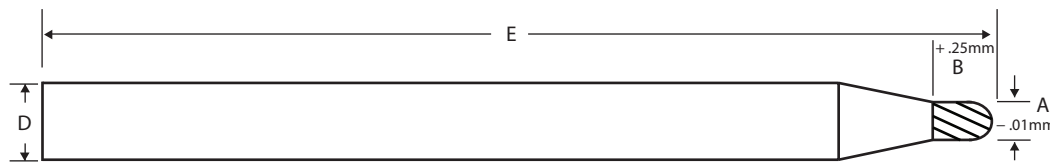
QUICK TURN  
SPECIALS



**S311**
**Metric Ball Micro End Mills (Metric Shank)**
**FLUTES  
2,4**
**1.5X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter (mm)	Length of Cut (mm)	Shank Diameter (mm)	Overall Length (in.)	2 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.20	0.30	3.00	1.50	S311-.20mm-2-BLEM	S311-.20mm-4-BLEM
0.25	0.38	3.00	1.50	S311-.25mm-2-BLEM	S311-.25mm-4-BLEM
0.30	0.45	3.00	1.50	S311-.30mm-2-BLEM	S311-.30mm-4-BLEM
0.35	0.53	3.00	1.50	S311-.35mm-2-BLEM	S311-.35mm-4-BLEM
0.40	0.60	3.00	1.50	S311-.40mm-2-BLEM	S311-.40mm-4-BLEM
0.45	0.68	3.00	1.50	S311-.45mm-2-BLEM	S311-.45mm-4-BLEM
0.50	0.75	3.00	1.50	S311-.50mm-2-BLEM	S311-.50mm-4-BLEM
0.55	0.83	3.00	1.50	S311-.55mm-2-BLEM	S311-.55mm-4-BLEM
0.60	0.90	3.00	1.50	S311-.60mm-2-BLEM	S311-.60mm-4-BLEM
0.65	0.98	3.00	1.50	S311-.65mm-2-BLEM	S311-.65mm-4-BLEM
0.70	1.05	3.00	1.50	S311-.70mm-2-BLEM	S311-.70mm-4-BLEM
0.75	1.13	3.00	1.50	S311-.75mm-2-BLEM	S311-.75mm-4-BLEM
0.80	1.20	3.00	1.50	S311-.80mm-2-BLEM	S311-.80mm-4-BLEM
0.85	1.28	3.00	1.50	S311-.85mm-2-BLEM	S311-.85mm-4-BLEM
0.90	1.35	3.00	1.50	S311-.90mm-2-BLEM	S311-.90mm-4-BLEM
0.95	1.43	3.00	1.50	S311-.95mm-2-BLEM	S311-.95mm-4-BLEM
1.00	1.50	3.00	1.50	S311-1.00mm-2-BLEM	S311-1.00mm-4-BLEM
1.25	1.88	3.00	1.50	S311-1.25mm-2-BLEM	S311-1.25mm-4-BLEM
1.50	2.25	3.00	1.50	S311-1.50mm-2-BLEM	S311-1.50mm-4-BLEM
1.75	2.63	3.00	1.50	S311-1.75mm-2-BLEM	S311-1.75mm-4-BLEM
2.00	3.00	3.00	1.50	S311-2.00mm-2-BLEM	S311-2.00mm-4-BLEM
2.25	3.38	3.00	1.50	S311-2.25mm-2-BLEM	S311-2.25mm-4-BLEM
2.50	3.75	3.00	1.50	S311-2.50mm-2-BLEM	S311-2.50mm-4-BLEM
2.75	4.13	3.00	1.50	S311-2.75mm-2-BLEM	S311-2.75mm-4-BLEM
3.00	4.50	3.00	1.50	S311-3.00mm-2-BLEM	S311-3.00mm-4-BLEM


**MANUFACTURED BY MITGI: Customer Focus**

**At MITGI, your deadline and specifications are ours too. Our customer service, design, and manufacturing teams work together to ensure that your needs are represented every step along the way.**

Short turnaround times and tight tolerances are the nature of our business. Our teams are responsive and ready to help get your order started and out the door on time. Through personal and professional customer service, we make sure that our tools and delivery times meet specs and exceed expectations every time an order is placed.

Contact us to start working with MITGI today.

# Metric Ball Micro End Mills (Metric Shank)

S312

Cutter Diameter (mm)	Length of Cut (mm)	Shank Diameter (mm)	Overall Length (in.)	2 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.20	0.60	3.00	1.50	S312-.20mm-2-BLEM	S312-.20mm-4-BLEM
0.25	0.75	3.00	1.50	S312-.25mm-2-BLEM	S312-.25mm-4-BLEM
0.30	0.90	3.00	1.50	S312-.30mm-2-BLEM	S312-.30mm-4-BLEM
0.35	1.05	3.00	1.50	S312-.35mm-2-BLEM	S312-.35mm-4-BLEM
0.40	1.20	3.00	1.50	S312-.40mm-2-BLEM	S312-.40mm-4-BLEM
0.45	1.35	3.00	1.50	S312-.45mm-2-BLEM	S312-.45mm-4-BLEM
0.50	1.50	3.00	1.50	S312-.50mm-2-BLEM	S312-.50mm-4-BLEM
0.55	1.65	3.00	1.50	S312-.55mm-2-BLEM	S312-.55mm-4-BLEM
0.60	1.80	3.00	1.50	S312-.60mm-2-BLEM	S312-.60mm-4-BLEM
0.65	1.95	3.00	1.50	S312-.65mm-2-BLEM	S312-.65mm-4-BLEM
0.70	2.10	3.00	1.50	S312-.70mm-2-BLEM	S312-.70mm-4-BLEM
0.75	2.25	3.00	1.50	S312-.75mm-2-BLEM	S312-.75mm-4-BLEM
0.80	2.40	3.00	1.50	S312-.80mm-2-BLEM	S312-.80mm-4-BLEM
0.85	2.55	3.00	1.50	S312-.85mm-2-BLEM	S312-.85mm-4-BLEM
0.90	2.70	3.00	1.50	S312-.90mm-2-BLEM	S312-.90mm-4-BLEM
0.95	2.85	3.00	1.50	S312-.95mm-2-BLEM	S312-.95mm-4-BLEM
1.00	3.00	3.00	1.50	S312-1.00mm-2-BLEM	S312-1.00mm-4-BLEM
1.25	3.75	3.00	1.50	S312-1.25mm-2-BLEM	S312-1.25mm-4-BLEM
1.50	4.50	3.00	1.50	S312-1.50mm-2-BLEM	S312-1.50mm-4-BLEM
1.75	5.25	3.00	1.50	S312-1.75mm-2-BLEM	S312-1.75mm-4-BLEM
2.00	6.00	3.00	1.50	S312-2.00mm-2-BLEM	S312-2.00mm-4-BLEM
2.25	6.75	3.00	1.50	S312-2.25mm-2-BLEM	S312-2.25mm-4-BLEM
2.50	7.50	3.00	1.50	S312-2.50mm-2-BLEM	S312-2.50mm-4-BLEM
2.75	8.25	3.00	1.50	S312-2.75mm-2-BLEM	S312-2.75mm-4-BLEM
3.00	9.00	3.00	1.50	S312-3.00mm-2-BLEM	S312-3.00mm-4-BLEM

FLUTES  
2,4

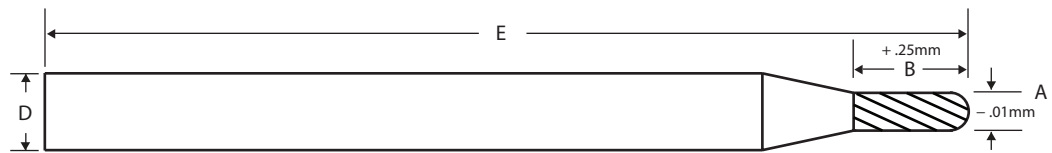
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



## MITGI RESULTS: Service and Performance

"As always, your tools, delivery, service, and tool performance, were wonderful. I can't tell you enough what a pleasure it is to do business with MITGI.

We currently utilize a number of different suppliers, but your service is unparalleled. I love your new tools; they blow the doors off of everyone else."  
- Chad



# S277

## Square Variable Helix Micro End Mills

FLUTES  
3,4

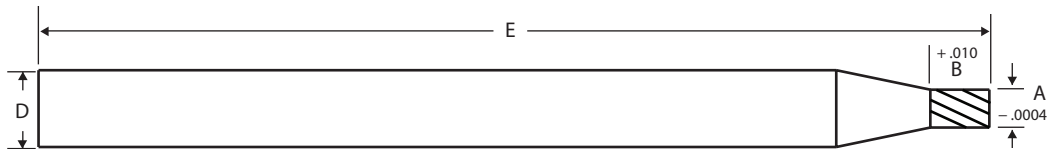
1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

SWISS-TYPE  
OAL

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.031 (1/32)	0.047	0.125	1.50	S277-031-3-VHSM	S277-031-4-VHSM
0.035	0.053	0.125	1.50	S277-035-3-VHSM	S277-035-4-VHSM
0.039 (1mm)	0.059	0.125	1.50	S277-039-3-VHSM	S277-039-4-VHSM
0.040	0.060	0.125	1.50	S277-040-3-VHSM	S277-040-4-VHSM
0.045	0.068	0.125	1.50	S277-045-3-VHSM	S277-045-4-VHSM
0.047 (3/64)	0.071	0.125	1.50	S277-047-3-VHSM	S277-047-4-VHSM
0.050	0.075	0.125	1.50	S277-050-3-VHSM	S277-050-4-VHSM
0.055	0.083	0.125	1.50	S277-055-3-VHSM	S277-055-4-VHSM
0.060	0.090	0.125	1.50	S277-060-3-VHSM	S277-060-4-VHSM
0.062 (1/16)	0.093	0.125	1.50	S277-062-3-VHSM	S277-062-4-VHSM
0.065	0.098	0.125	1.50	S277-065-3-VHSM	S277-065-4-VHSM
0.070	0.105	0.125	1.50	S277-070-3-VHSM	S277-070-4-VHSM
0.075	0.113	0.125	1.50	S277-075-3-VHSM	S277-075-4-VHSM
0.078 (5/64)	0.117	0.125	1.50	S277-078-3-VHSM	S277-078-4-VHSM
0.080	0.120	0.125	1.50	S277-080-3-VHSM	S277-080-4-VHSM
0.085	0.128	0.125	1.50	S277-085-3-VHSM	S277-085-4-VHSM
0.090	0.135	0.125	1.50	S277-090-3-VHSM	S277-090-4-VHSM
0.093 (3/32)	0.140	0.125	1.50	S277-093-3-VHSM	S277-093-4-VHSM
0.095	0.143	0.125	1.50	S277-095-3-VHSM	S277-095-4-VHSM
0.100	0.150	0.125	1.50	S277-100-3-VHSM	S277-100-4-VHSM
0.118 (3mm)	0.177	0.125	1.50	S277-118-3-VHSM	S277-118-4-VHSM
0.125 (1/8)	0.188	0.125	1.50	S277-125-3-VHSM	S277-125-4-VHSM



# S278

## Square Variable Helix Micro End Mills

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.031 (1/32)	0.093	0.125	1.50	S278-031-3-VHSM	S278-031-4-VHSM
0.035	0.105	0.125	1.50	S278-035-3-VHSM	S278-035-4-VHSM
0.039 (1mm)	0.117	0.125	1.50	S278-039-3-VHSM	S278-039-4-VHSM
0.040	0.120	0.125	1.50	S278-040-3-VHSM	S278-040-4-VHSM
0.045	0.135	0.125	1.50	S278-045-3-VHSM	S278-045-4-VHSM
0.047 (3/64)	0.141	0.125	1.50	S278-047-3-VHSM	S278-047-4-VHSM
0.050	0.150	0.125	1.50	S278-050-3-VHSM	S278-050-4-VHSM
0.055	0.165	0.125	1.50	S278-055-3-VHSM	S278-055-4-VHSM

## Square Variable Helix Micro End Mills (con't)

S278

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.060	0.180	0.125	1.50	S278-060-3-VHSM	S278-060-4-VHSM
0.062 (1/16)	0.187	0.125	1.50	S278-062-3-VHSM	S278-062-4-VHSM
0.065	0.195	0.125	1.50	S278-065-3-VHSM	S278-065-4-VHSM
0.070	0.210	0.125	1.50	S278-070-3-VHSM	S278-070-4-VHSM
0.075	0.225	0.125	1.50	S278-075-3-VHSM	S278-075-4-VHSM
0.078 (5/64)	0.234	0.125	1.50	S278-078-3-VHSM	S278-078-4-VHSM
0.080	0.240	0.125	1.50	S278-080-3-VHSM	S278-080-4-VHSM
0.085	0.255	0.125	1.50	S278-085-3-VHSM	S278-085-4-VHSM
0.090	0.270	0.125	1.50	S278-090-3-VHSM	S278-090-4-VHSM
0.093 (3/32)	0.279	0.125	1.50	S278-093-3-VHSM	S278-093-4-VHSM
0.095	0.285	0.125	1.50	S278-095-3-VHSM	S278-095-4-VHSM
0.100	0.300	0.125	1.50	S278-100-3-VHSM	S278-100-4-VHSM
0.118 (3mm)	0.354	0.125	1.50	S278-118-3-VHSM	S278-118-4-VHSM
0.125 (1/8)	0.375	0.125	1.50	S278-125-3-VHSM	S278-125-4-VHSM

FLUTES  
3,4

3X  
LENGTH  
OF CUT

VARIABLE  
HELIX

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS

## Square Variable Helix Micro End Mills

S279

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.031 (1/32)	0.155	0.125	2.50	S279-031-3-VHSM	S279-031-4-VHSM
0.035	0.175	0.125	2.50	S279-035-3-VHSM	S279-035-4-VHSM
0.039 (1mm)	0.195	0.125	2.50	S279-039-3-VHSM	S279-039-4-VHSM
0.040	0.200	0.125	2.50	S279-040-3-VHSM	S279-040-4-VHSM
0.045	0.225	0.125	2.50	S279-045-3-VHSM	S279-045-4-VHSM
0.047 (3/64)	0.235	0.125	2.50	S279-047-3-VHSM	S279-047-4-VHSM
0.050	0.250	0.125	2.50	S279-050-3-VHSM	S279-050-4-VHSM
0.055	0.275	0.125	2.50	S279-055-3-VHSM	S279-055-4-VHSM
0.060	0.300	0.125	2.50	S279-060-3-VHSM	S279-060-4-VHSM
0.062 (1/16)	0.310	0.125	2.50	S279-062-3-VHSM	S279-062-4-VHSM
0.065	0.325	0.125	2.50	S279-065-3-VHSM	S279-065-4-VHSM
0.070	0.350	0.125	2.50	S279-070-3-VHSM	S279-070-4-VHSM
0.075	0.375	0.125	2.50	S279-075-3-VHSM	S279-075-4-VHSM
0.078 (5/64)	0.390	0.125	2.50	S279-078-3-VHSM	S279-078-4-VHSM
0.080	0.400	0.125	2.50	S279-080-3-VHSM	S279-080-4-VHSM
0.085	0.425	0.125	2.50	S279-085-3-VHSM	S279-085-4-VHSM
0.090	0.450	0.125	2.50	S279-090-3-VHSM	S279-090-4-VHSM
0.093 (3/32)	0.465	0.125	2.50	S279-093-3-VHSM	S279-093-4-VHSM
0.095	0.475	0.125	2.50	S279-095-3-VHSM	S279-095-4-VHSM
0.100	0.500	0.125	2.50	S279-100-3-VHSM	S279-100-4-VHSM
0.118 (3mm)	0.590	0.125	2.50	S279-118-3-VHSM	S279-118-4-VHSM
0.125 (1/8)	0.625	0.125	2.50	S279-125-3-VHSM	S279-125-4-VHSM

FLUTES  
3,4

5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



# S286

# Corner Radius Variable Helix Micro End Mills

FLUTES  
3,4

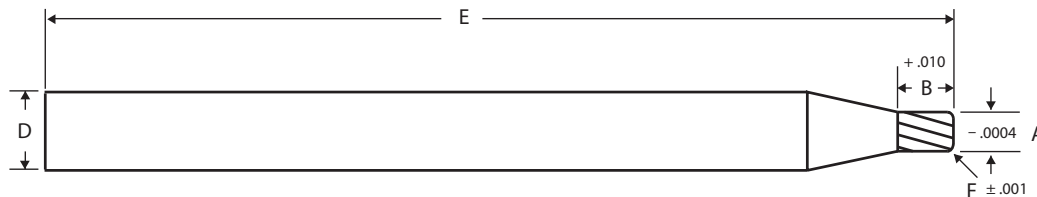
1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

SWISS-TYPE  
OAL

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F		
0.031 (1/32)	0.047	0.125	1.50	0.005	S286-031-3-.005R-VHCM	S286-031-4-.005R-VHCM
0.035	0.053	0.125	1.50	0.005	S286-035-3-.005R-VHCM	S286-035-4-.005R-VHCM
0.039 (1mm)	0.059	0.125	1.50	0.005	S286-039-3-.005R-VHCM	S286-039-4-.005R-VHCM
0.040	0.060	0.125	1.50	0.005	S286-040-3-.005R-VHCM	S286-040-4-.005R-VHCM
0.045	0.068	0.125	1.50	0.005	S286-045-3-.005R-VHCM	S286-045-4-.005R-VHCM
0.047 (3/64)	0.071	0.125	1.50	0.005	S286-047-3-.005R-VHCM	S286-047-4-.005R-VHCM
0.050	0.075	0.125	1.50	0.005	S286-050-3-.005R-VHCM	S286-050-4-.005R-VHCM
0.055	0.083	0.125	1.50	0.005	S286-055-3-.005R-VHCM	S286-055-4-.005R-VHCM
0.060	0.090	0.125	1.50	0.005	S286-060-3-.005R-VHCM	S286-060-4-.005R-VHCM
0.062 (1/16)	0.093	0.125	1.50	0.005	S286-062-3-.005R-VHCM	S286-062-4-.005R-VHCM
0.065	0.098	0.125	1.50	0.005	S286-065-3-.005R-VHCM	S286-065-4-.005R-VHCM
0.070	0.105	0.125	1.50	0.005	S286-070-3-.005R-VHCM	S286-070-4-.005R-VHCM
0.070	0.105	0.125	1.50	0.010	S286-070-3-.010R-VHCM	S286-070-4-.010R-VHCM
0.075	0.113	0.125	1.50	0.005	S286-075-3-.005R-VHCM	S286-075-4-.005R-VHCM
0.075	0.113	0.125	1.50	0.010	S286-075-3-.010R-VHCM	S286-075-4-.010R-VHCM
0.078 (5/64)	0.117	0.125	1.50	0.005	S286-078-3-.005R-VHCM	S286-078-4-.005R-VHCM
0.078 (5/64)	0.117	0.125	1.50	0.010	S286-078-3-.010R-VHCM	S286-078-4-.010R-VHCM
0.080	0.120	0.125	1.50	0.005	S286-080-3-.005R-VHCM	S286-080-4-.005R-VHCM
0.080	0.120	0.125	1.50	0.010	S286-080-3-.010R-VHCM	S286-080-4-.010R-VHCM
0.085	0.128	0.125	1.50	0.005	S286-085-3-.005R-VHCM	S286-085-4-.005R-VHCM
0.085	0.128	0.125	1.50	0.010	S286-085-3-.010R-VHCM	S286-085-4-.010R-VHCM
0.090	0.135	0.125	1.50	0.005	S286-090-3-.005R-VHCM	S286-090-4-.005R-VHCM
0.090	0.135	0.125	1.50	0.010	S286-090-3-.010R-VHCM	S286-090-4-.010R-VHCM
0.093 (3/32)	0.140	0.125	1.50	0.005	S286-093-3-.005R-VHCM	S286-093-4-.005R-VHCM
0.093 (3/32)	0.140	0.125	1.50	0.010	S286-093-3-.010R-VHCM	S286-093-4-.010R-VHCM
0.095	0.143	0.125	1.50	0.005	S286-095-3-.005R-VHCM	S286-095-4-.005R-VHCM
0.095	0.143	0.125	1.50	0.010	S286-095-3-.010R-VHCM	S286-095-4-.010R-VHCM
0.100	0.150	0.125	1.50	0.005	S286-100-3-.005R-VHCM	S286-100-4-.005R-VHCM
0.100	0.150	0.125	1.50	0.010	S286-100-3-.010R-VHCM	S286-100-4-.010R-VHCM
0.100	0.150	0.125	1.50	0.015	S286-100-3-.015R-VHCM	S286-100-4-.015R-VHCM
0.118 (3mm)	0.177	0.125	1.50	0.005	S286-118-3-.005R-VHCM	S286-118-4-.005R-VHCM
0.118 (3mm)	0.177	0.125	1.50	0.010	S286-118-3-.010R-VHCM	S286-118-4-.010R-VHCM
0.118 (3mm)	0.177	0.125	1.50	0.015	S286-118-3-.015R-VHCM	S286-118-4-.015R-VHCM
0.125 (1/8)	0.188	0.125	1.50	0.005	S286-125-3-.005R-VHCM	S286-125-4-.005R-VHCM
0.125 (1/8)	0.188	0.125	1.50	0.010	S286-125-3-.010R-VHCM	S286-125-4-.010R-VHCM
0.125 (1/8)	0.188	0.125	1.50	0.015	S286-125-3-.015R-VHCM	S286-125-4-.015R-VHCM
0.125 (1/8)	0.188	0.125	1.50	0.020	S286-125-3-.020R-VHCM	S286-125-4-.020R-VHCM



# Corner Radius Variable Helix Micro End Mills

## S287

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F		
0.031 (1/32)	0.093	0.125	1.50	0.005	S287-031-3-.005R-VHCM	S287-031-4-.005R-VHCM
0.035	0.105	0.125	1.50	0.005	S287-035-3-.005R-VHCM	S287-035-4-.005R-VHCM
0.039 (1mm)	0.117	0.125	1.50	0.005	S287-039-3-.005R-VHCM	S287-039-4-.005R-VHCM
0.040	0.120	0.125	1.50	0.005	S287-040-3-.005R-VHCM	S287-040-4-.005R-VHCM
0.045	0.135	0.125	1.50	0.005	S287-045-3-.005R-VHCM	S287-045-4-.005R-VHCM
0.047 (3/64)	0.141	0.125	1.50	0.005	S287-047-3-.005R-VHCM	S287-047-4-.005R-VHCM
0.050	0.150	0.125	1.50	0.005	S287-050-3-.005R-VHCM	S287-050-4-.005R-VHCM
0.055	0.165	0.125	1.50	0.005	S287-055-3-.005R-VHCM	S287-055-4-.005R-VHCM
0.060	0.180	0.125	1.50	0.005	S287-060-3-.005R-VHCM	S287-060-4-.005R-VHCM
0.062 (1/16)	0.187	0.125	1.50	0.005	S287-062-3-.005R-VHCM	S287-062-4-.005R-VHCM
0.065	0.195	0.125	1.50	0.005	S287-065-3-.005R-VHCM	S287-065-4-.005R-VHCM
0.070	0.210	0.125	1.50	0.005	S287-070-3-.005R-VHCM	S287-070-4-.005R-VHCM
0.070	0.210	0.125	1.50	0.010	S287-070-3-.010R-VHCM	S287-070-4-.010R-VHCM
0.075	0.225	0.125	1.50	0.005	S287-075-3-.005R-VHCM	S287-075-4-.005R-VHCM
0.075	0.225	0.125	1.50	0.010	S287-075-3-.010R-VHCM	S287-075-4-.010R-VHCM
0.078 (5/64)	0.234	0.125	1.50	0.005	S287-078-3-.005R-VHCM	S287-078-4-.005R-VHCM
0.078 (5/64)	0.234	0.125	1.50	0.010	S287-078-3-.010R-VHCM	S287-078-4-.010R-VHCM
0.080	0.240	0.125	1.50	0.005	S287-080-3-.005R-VHCM	S287-080-4-.005R-VHCM
0.080	0.240	0.125	1.50	0.010	S287-080-3-.010R-VHCM	S287-080-4-.010R-VHCM
0.085	0.255	0.125	1.50	0.005	S287-085-3-.005R-VHCM	S287-085-4-.005R-VHCM
0.085	0.255	0.125	1.50	0.010	S287-085-3-.010R-VHCM	S287-085-4-.010R-VHCM
0.090	0.270	0.125	1.50	0.005	S287-090-3-.005R-VHCM	S287-090-4-.005R-VHCM
0.090	0.270	0.125	1.50	0.010	S287-090-3-.010R-VHCM	S287-090-4-.010R-VHCM
0.093 (3/32)	0.279	0.125	1.50	0.005	S287-093-3-.005R-VHCM	S287-093-4-.005R-VHCM
0.093 (3/32)	0.279	0.125	1.50	0.010	S287-093-3-.010R-VHCM	S287-093-4-.010R-VHCM
0.095	0.285	0.125	1.50	0.005	S287-095-3-.005R-VHCM	S287-095-4-.005R-VHCM
0.095	0.285	0.125	1.50	0.010	S287-095-3-.010R-VHCM	S287-095-4-.010R-VHCM
0.100	0.300	0.125	1.50	0.005	S287-100-3-.005R-VHCM	S287-100-4-.005R-VHCM
0.100	0.300	0.125	1.50	0.010	S287-100-3-.010R-VHCM	S287-100-4-.010R-VHCM
0.100	0.300	0.125	1.50	0.015	S287-100-3-.015R-VHCM	S287-100-4-.015R-VHCM
0.118 (3mm)	0.354	0.125	1.50	0.005	S287-118-3-.005R-VHCM	S287-118-4-.005R-VHCM
0.118 (3mm)	0.354	0.125	1.50	0.010	S287-118-3-.010R-VHCM	S287-118-4-.010R-VHCM
0.118 (3mm)	0.354	0.125	1.50	0.015	S287-118-3-.015R-VHCM	S287-118-4-.015R-VHCM
0.125 (1/8)	0.375	0.125	1.50	0.005	S287-125-3-.005R-VHCM	S287-125-4-.005R-VHCM
0.125 (1/8)	0.375	0.125	1.50	0.010	S287-125-3-.010R-VHCM	S287-125-4-.010R-VHCM
0.125 (1/8)	0.375	0.125	1.50	0.015	S287-125-3-.015R-VHCM	S287-125-4-.015R-VHCM
0.125 (1/8)	0.375	0.125	1.50	0.020	S287-125-3-.020R-VHCM	S287-125-4-.020R-VHCM

FLUTES  
3,4

3X  
LENGTH  
OF CUT

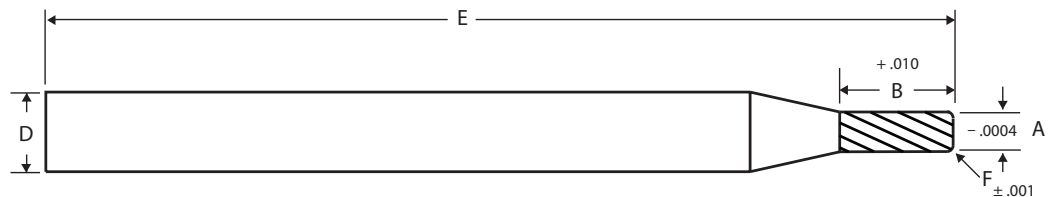
VARIABLE  
HELIX

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



FLUTES  
3,4

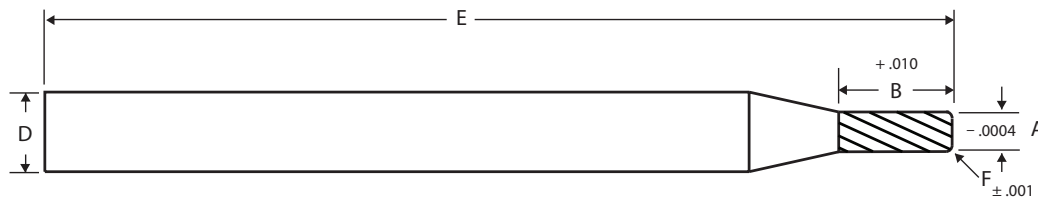
5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

SWISS-TYPE  
OAL

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F		
0.031 (1/32)	0.155	0.125	2.50	0.005	S288-031-3-.005R-VHCM	S288-031-4-.005R-VHCM
0.035	0.175	0.125	2.50	0.005	S288-035-3-.005R-VHCM	S288-035-4-.005R-VHCM
0.039 (1mm)	0.195	0.125	2.50	0.005	S288-039-3-.005R-VHCM	S288-039-4-.005R-VHCM
0.040	0.200	0.125	2.50	0.005	S288-040-3-.005R-VHCM	S288-040-4-.005R-VHCM
0.045	0.225	0.125	2.50	0.005	S288-045-3-.005R-VHCM	S288-045-4-.005R-VHCM
0.047 (3/64)	0.235	0.125	2.50	0.005	S288-047-3-.005R-VHCM	S288-047-4-.005R-VHCM
0.050	0.250	0.125	2.50	0.005	S288-050-3-.005R-VHCM	S288-050-4-.005R-VHCM
0.055	0.275	0.125	2.50	0.005	S288-055-3-.005R-VHCM	S288-055-4-.005R-VHCM
0.060	0.300	0.125	2.50	0.005	S288-060-3-.005R-VHCM	S288-060-4-.005R-VHCM
0.062 (1/16)	0.310	0.125	2.50	0.005	S288-062-3-.005R-VHCM	S288-062-4-.005R-VHCM
0.065	0.325	0.125	2.50	0.005	S288-065-3-.005R-VHCM	S288-065-4-.005R-VHCM
0.070	0.350	0.125	2.50	0.005	S288-070-3-.005R-VHCM	S288-070-4-.005R-VHCM
0.070	0.350	0.125	2.50	0.015	S288-070-3-.015R-VHCM	S288-070-4-.015R-VHCM
0.075	0.375	0.125	2.50	0.005	S288-075-3-.005R-VHCM	S288-075-4-.005R-VHCM
0.075	0.375	0.125	2.50	0.010	S288-075-3-.010R-VHCM	S288-075-4-.010R-VHCM
0.078 (5/64)	0.390	0.125	2.50	0.005	S288-078-3-.005R-VHCM	S288-078-4-.005R-VHCM
0.078 (5/64)	0.390	0.125	2.50	0.010	S288-078-3-.010R-VHCM	S288-078-4-.010R-VHCM
0.080	0.400	0.125	2.50	0.005	S288-080-3-.005R-VHCM	S288-080-4-.005R-VHCM
0.080	0.400	0.125	2.50	0.010	S288-080-3-.010R-VHCM	S288-080-4-.010R-VHCM
0.085	0.425	0.125	2.50	0.005	S288-085-3-.005R-VHCM	S288-085-4-.005R-VHCM
0.085	0.425	0.125	2.50	0.010	S288-085-3-.010R-VHCM	S288-085-4-.010R-VHCM
0.090	0.450	0.125	2.50	0.005	S288-090-3-.005R-VHCM	S288-090-4-.005R-VHCM
0.090	0.450	0.125	2.50	0.010	S288-090-3-.010R-VHCM	S288-090-4-.010R-VHCM
0.093 (3/32)	0.465	0.125	2.50	0.005	S288-093-3-.005R-VHCM	S288-093-4-.005R-VHCM
0.093 (3/32)	0.465	0.125	2.50	0.010	S288-093-3-.010R-VHCM	S288-093-4-.010R-VHCM
0.095	0.475	0.125	2.50	0.005	S288-095-3-.005R-VHCM	S288-095-4-.005R-VHCM
0.095	0.475	0.125	2.50	0.010	S288-095-3-.010R-VHCM	S288-095-4-.010R-VHCM
0.100	0.500	0.125	2.50	0.005	S288-100-3-.005R-VHCM	S288-100-4-.005R-VHCM
0.100	0.500	0.125	2.50	0.010	S288-100-3-.010R-VHCM	S288-100-4-.010R-VHCM
0.100	0.500	0.125	2.50	0.015	S288-100-3-.015R-VHCM	S288-100-4-.015R-VHCM
0.118 (3mm)	0.590	0.125	2.50	0.005	S288-118-3-.005R-VHCM	S288-118-4-.005R-VHCM
0.118 (3mm)	0.590	0.125	2.50	0.010	S288-118-3-.010R-VHCM	S288-118-4-.010R-VHCM
0.118 (3mm)	0.590	0.125	2.50	0.015	S288-118-3-.015R-VHCM	S288-118-4-.015R-VHCM
0.125 (1/8)	0.625	0.125	2.50	0.005	S288-125-3-.005R-VHCM	S288-125-4-.005R-VHCM
0.125 (1/8)	0.625	0.125	2.50	0.010	S288-125-3-.010R-VHCM	S288-125-4-.010R-VHCM
0.125 (1/8)	0.625	0.125	2.50	0.015	S288-125-3-.015R-VHCM	S288-125-4-.015R-VHCM
0.125 (1/8)	0.625	0.125	2.50	0.020	S288-125-3-.020R-VHCM	S288-125-4-.020R-VHCM





## DEPENDABILITY

Manufacturers face increasingly tight production schedules and cannot afford downtime. MITGI understands that short lead times and the ability to deliver tools on time are essential to keep lines running and efficient. Our teams keep both your lead times and tool specs in mind when quoting, manufacturing, and delivering your tools. MITGI delivers performance and timelines you can depend on.

## ON-SITE MANUFACTURING

Companies that specialize in medical device manufacturing, aerospace, automotive, and all forms of precision manufacturing require tools with tight tolerances that are often hard to make. On-site manufacturing gives MITGI the ability to assess complex applications with our technical team and gives us flexibility in scheduling to meet customer demand. Our shop is well-equipped with an array of machines, inspection equipment, and experienced staff. This means that MITGI is capable and ready to make the tools you need, when you need them, and are well-positioned to support your growth.



# RELIABLE SERVICE & SUPPORT

## PERFORMANCE DRIVEN INNOVATION

Many of our customers first came to us to make tools that other manufacturers could not provide or when available lead times were too long. We're skilled at solving problems like these and we like knowing that the tools we manufacture help to empower innovation and performance in manufacturing facilities across the U.S. and throughout the world.

## TECHNICAL SUPPORT

Precision manufacturing requires tools that ensure repeatable performance, can handle complex manufacturing tasks, and help to boost productivity. MITGI employs service and support teams who can help solve tool problems that are difficult to assess or manufacture. Our teams are adept at helping to solve technical issues remotely or on-site, depending on location.

Contact MITGI for more information.



# S300

## Ball Variable Helix Micro End Mills

FLUTES  
3,4

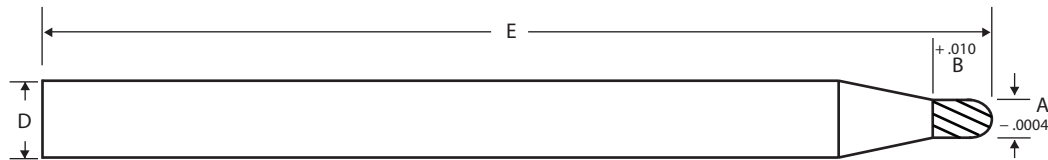
1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

SWISS-TYPE  
OAL

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.031 (1/32)	0.047	0.125	1.50	S300-031-3-VHBM	S300-031-4-VHBM
0.035	0.053	0.125	1.50	S300-035-3-VHBM	S300-035-4-VHBM
0.039 (1mm)	0.059	0.125	1.50	S300-039-3-VHBM	S300-039-4-VHBM
0.040	0.060	0.125	1.50	S300-040-3-VHBM	S300-040-4-VHBM
0.045	0.068	0.125	1.50	S300-045-3-VHBM	S300-045-4-VHBM
0.047 (3/64)	0.071	0.125	1.50	S300-047-3-VHBM	S300-047-4-VHBM
0.050	0.075	0.125	1.50	S300-050-3-VHBM	S300-050-4-VHBM
0.055	0.083	0.125	1.50	S300-055-3-VHBM	S300-055-4-VHBM
0.060	0.090	0.125	1.50	S300-060-3-VHBM	S300-060-4-VHBM
0.062 (1/16)	0.093	0.125	1.50	S300-062-3-VHBM	S300-062-4-VHBM
0.065	0.098	0.125	1.50	S300-065-3-VHBM	S300-065-4-VHBM
0.070	0.105	0.125	1.50	S300-070-3-VHBM	S300-070-4-VHBM
0.075	0.113	0.125	1.50	S300-075-3-VHBM	S300-075-4-VHBM
0.078 (5/64)	0.117	0.125	1.50	S300-078-3-VHBM	S300-078-4-VHBM
0.080	0.120	0.125	1.50	S300-080-3-VHBM	S300-080-4-VHBM
0.085	0.128	0.125	1.50	S300-085-3-VHBM	S300-085-4-VHBM
0.090	0.135	0.125	1.50	S300-090-3-VHBM	S300-090-4-VHBM
0.093 (3/32)	0.140	0.125	1.50	S300-093-3-VHBM	S300-093-4-VHBM
0.095	0.143	0.125	1.50	S300-095-3-VHBM	S300-095-4-VHBM
0.100	0.150	0.125	1.50	S300-100-3-VHBM	S300-100-4-VHBM
0.118 (3mm)	0.177	0.125	1.50	S300-118-3-VHBM	S300-118-4-VHBM
0.125 (1/8)	0.188	0.125	1.50	S300-125-3-VHBM	S300-125-4-VHBM



# S301

## Ball Variable Helix Micro End Mills

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.031 (1/32)	0.093	0.125	1.50	S301-031-3-VHBM	S301-031-4-VHBM
0.035	0.105	0.125	1.50	S301-035-3-VHBM	S301-035-4-VHBM
0.039 (1mm)	0.117	0.125	1.50	S301-039-3-VHBM	S301-039-4-VHBM
0.040	0.120	0.125	1.50	S301-040-3-VHBM	S301-040-4-VHBM
0.045	0.135	0.125	1.50	S301-045-3-VHBM	S301-045-4-VHBM
0.047 (3/64)	0.141	0.125	1.50	S301-047-3-VHBM	S301-047-4-VHBM
0.050	0.150	0.125	1.50	S301-050-3-VHBM	S301-050-4-VHBM
0.055	0.165	0.125	1.50	S301-055-3-VHBM	S301-055-4-VHBM



## Ball Variable Helix Micro End Mills (con't)

### S301

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.060	0.180	0.125	1.50	S301-060-3-VHBM	S301-060-4-VHBM
0.062 (1/16)	0.187	0.125	1.50	S301-062-3-VHBM	S301-062-4-VHBM
0.065	0.195	0.125	1.50	S301-065-3-VHBM	S301-065-4-VHBM
0.070	0.210	0.125	1.50	S301-070-3-VHBM	S301-070-4-VHBM
0.075	0.225	0.125	1.50	S301-075-3-VHBM	S301-075-4-VHBM
0.078 (5/64)	0.234	0.125	1.50	S301-078-3-VHBM	S301-078-4-VHBM
0.080	0.240	0.125	1.50	S301-080-3-VHBM	S301-080-4-VHBM
0.085	0.255	0.125	1.50	S301-085-3-VHBM	S301-085-4-VHBM
0.090	0.270	0.125	1.50	S301-090-3-VHBM	S301-090-4-VHBM
0.093 (3/32)	0.279	0.125	1.50	S301-093-3-VHBM	S301-093-4-VHBM
0.095	0.285	0.125	1.50	S301-095-3-VHBM	S301-095-4-VHBM
0.100	0.300	0.125	1.50	S301-100-3-VHBM	S301-100-4-VHBM
0.118 (3mm)	0.354	0.125	1.50	S301-118-3-VHBM	S301-118-4-VHBM
0.125 (1/8)	0.375	0.125	1.50	S301-125-3-VHBM	S301-125-4-VHBM

FLUTES  
3,4

3X  
LENGTH  
OF CUT

VARIABLE  
HELIX

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS

## Ball Variable Helix Micro End Mills

### S302

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.031 (1/32)	0.155	0.125	2.50	S302-031-3-VHBM	S302-031-4-VHBM
0.035	0.175	0.125	2.50	S302-035-3-VHBM	S302-035-4-VHBM
0.039 (1mm)	0.195	0.125	2.50	S302-039-3-VHBM	S302-039-4-VHBM
0.040	0.200	0.125	2.50	S302-040-3-VHBM	S302-040-4-VHBM
0.045	0.225	0.125	2.50	S302-045-3-VHBM	S302-045-4-VHBM
0.047 (3/64)	0.235	0.125	2.50	S302-047-3-VHBM	S302-047-4-VHBM
0.050	0.250	0.125	2.50	S302-050-3-VHBM	S302-050-4-VHBM
0.055	0.275	0.125	2.50	S302-055-3-VHBM	S302-055-4-VHBM
0.060	0.300	0.125	2.50	S302-060-3-VHBM	S302-060-4-VHBM
0.062 (1/16)	0.310	0.125	2.50	S302-062-3-VHBM	S302-062-4-VHBM
0.065	0.325	0.125	2.50	S302-065-3-VHBM	S302-065-4-VHBM
0.070	0.350	0.125	2.50	S302-070-3-VHBM	S302-070-4-VHBM
0.075	0.375	0.125	2.50	S302-075-3-VHBM	S302-075-4-VHBM
0.078 (5/64)	0.390	0.125	2.50	S302-078-3-VHBM	S302-078-4-VHBM
0.080	0.400	0.125	2.50	S302-080-3-VHBM	S302-080-4-VHBM
0.085	0.425	0.125	2.50	S302-085-3-VHBM	S302-085-4-VHBM
0.090	0.450	0.125	2.50	S302-090-3-VHBM	S302-090-4-VHBM
0.093 (3/32)	0.465	0.125	2.50	S302-093-3-VHBM	S302-093-4-VHBM
0.095	0.475	0.125	2.50	S302-095-3-VHBM	S302-095-4-VHBM
0.100	0.500	0.125	2.50	S302-100-3-VHBM	S302-100-4-VHBM
0.118 (3mm)	0.590	0.125	2.50	S302-118-3-VHBM	S302-118-4-VHBM
0.125 (1/8)	0.625	0.125	2.50	S302-125-3-VHBM	S302-125-4-VHBM

FLUTES  
3,4

5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



# S131

# Micro Drills

FLUTES  
2

5X  
FLUTE  
LENGTH

  
CIRCULAR

  
SWISS-TYPE  
OAL

  
QUICK TURN  
SPECIALS

Cutter Diameter	Flute Length	Shank Diameter	Overall Length	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.0040	0.020	0.125	1.50	2	S131-004-118-5X	S131-004-140-5X
0.0050	0.025	0.125	1.50	2	S131-005-118-5X	S131-005-140-5X
0.0060	0.030	0.125	1.50	2	S131-006-118-5X	S131-006-140-5X
0.0070	0.035	0.125	1.50	2	S131-007-118-5X	S131-007-140-5X
0.0080	0.040	0.125	1.50	2	S131-008-118-5X	S131-008-140-5X
0.0090	0.045	0.125	1.50	2	S131-009-118-5X	S131-009-140-5X
0.0100	0.050	0.125	1.50	2	S131-010-118-5X	S131-010-140-5X
0.0110	0.055	0.125	1.50	2	S131-011-118-5X	S131-011-140-5X
0.0120	0.060	0.125	1.50	2	S131-012-118-5X	S131-012-140-5X
0.0130	0.065	0.125	1.50	2	S131-013-118-5X	S131-013-140-5X
0.0140	0.070	0.125	1.50	2	S131-014-118-5X	S131-014-140-5X
0.0156 (1/64)	0.078	0.125	1.50	2	S131-015-118-5X	S131-015-140-5X
0.0160	0.080	0.125	1.50	2	S131-016-118-5X	S131-016-140-5X
0.0170	0.085	0.125	1.50	2	S131-017-118-5X	S131-017-140-5X
0.0180	0.090	0.125	1.50	2	S131-018-118-5X	S131-018-140-5X
0.0190	0.095	0.125	1.50	2	S131-019-118-5X	S131-019-140-5X
0.0200	0.100	0.125	1.50	2	S131-020-118-5X	S131-020-140-5X
0.0210	0.105	0.125	1.50	2	S131-021-118-5X	S131-021-140-5X
0.0220	0.110	0.125	1.50	2	S131-022-118-5X	S131-022-140-5X
0.0230	0.115	0.125	1.50	2	S131-023-118-5X	S131-023-140-5X
0.0240	0.120	0.125	1.50	2	S131-024-118-5X	S131-024-140-5X
0.0250	0.125	0.125	1.50	2	S131-025-118-5X	S131-025-140-5X
0.0260	0.130	0.125	1.50	2	S131-026-118-5X	S131-026-140-5X
0.0270	0.135	0.125	1.50	2	S131-027-118-5X	S131-027-140-5X
0.0280	0.140	0.125	1.50	2	S131-028-118-5X	S131-028-140-5X
0.0290	0.145	0.125	1.50	2	S131-029-118-5X	S131-029-140-5X
0.0300	0.150	0.125	1.50	2	S131-030-118-5X	S131-030-140-5X
0.0313 (1/32)	0.156	0.125	1.50	2	S131-031-118-5X	S131-031-140-5X
0.0350	0.175	0.125	1.50	2	S131-035-118-5X	S131-035-140-5X
0.0400	0.200	0.125	1.50	2	S131-040-118-5X	S131-040-140-5X
0.0450	0.225	0.125	1.50	2	S131-045-118-5X	S131-045-140-5X
0.0469 (3/64)	0.235	0.125	1.50	2	S131-047-118-5X	S131-047-140-5X
0.0500	0.250	0.125	1.50	2	S131-050-118-5X	S131-050-140-5X
0.0550	0.275	0.125	1.50	2	S131-055-118-5X	S131-055-140-5X
0.0600	0.300	0.125	1.50	2	S131-060-118-5X	S131-060-140-5X
0.0625 (1/16)	0.313	0.125	2.00	2	S131-062-118-5X	S131-062-140-5X
0.0650	0.325	0.125	2.00	2	S131-065-118-5X	S131-065-140-5X
0.0700	0.350	0.125	2.00	2	S131-070-118-5X	S131-070-140-5X
0.0750	0.375	0.125	2.00	2	S131-075-118-5X	S131-075-140-5X
0.0781 (5/64)	0.391	0.125	2.00	2	S131-078-118-5X	S131-078-140-5X
0.0800	0.400	0.125	2.00	2	S131-080-118-5X	S131-080-140-5X
0.0850	0.425	0.125	2.00	2	S131-085-118-5X	S131-085-140-5X



Cutter Diameter	Flute Length	Shank Diameter	Overall Length	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.0900	0.450	0.125	2.00	2	S131-090-118-5X	S131-090-140-5X
0.0938 (3/32)	0.469	0.125	2.00	2	S131-093-118-5X	S131-093-140-5X
0.0950	0.475	0.125	2.00	2	S131-095-118-5X	S131-095-140-5X
0.1000	0.500	0.125	2.00	2	S131-100-118-5X	S131-100-140-5X
0.1050	0.525	0.125	2.00	2	S131-105-118-5X	S131-105-140-5X
0.1094 (7/64)	0.547	0.125	2.00	2	S131-109-118-5X	S131-109-140-5X
0.1100	0.550	0.125	2.00	2	S131-110-118-5X	S131-110-140-5X
0.1150	0.575	0.125	2.00	2	S131-115-118-5X	S131-115-140-5X
0.1200	0.600	0.125	2.00	2	S131-120-118-5X	S131-120-140-5X
0.1250 (1/8)	0.625	0.1875	2.00	2	S131-125-118-5X	S131-125-140-5X

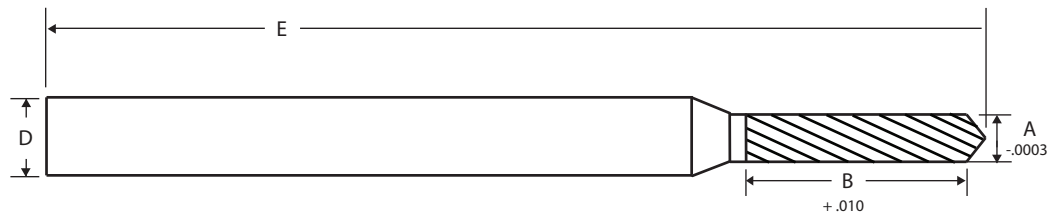
**FLUTES**  
2

**5X**  
FLUTE  
LENGTH

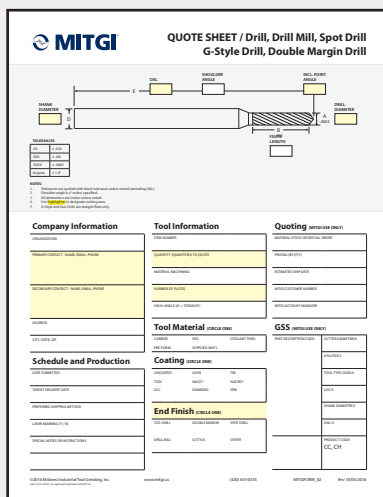
**C**  
CIRCULAR

**+**  
SWISS-TYPE  
OAL

**Q**  
QUICK TURN  
SPECIALS



## Custom Drills



**Can't find a tool to meet your exact specifications?  
Specials or modified standards may be the answer.**

### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances and flute types vary by design
- Custom drill types: Drills, Spot Drills, G-Style Drills, Double Margin Drills, Spade Drills
- Specs include shoulder angle, flute length, included point angle, and drill diameter
- Extended reach and extended flute length options
- Specials usually available in two weeks or less

**Quote forms available on our website and upon request.  
Contact us for an estimate today.**



# S132

# Micro Drills

FLUTES  
2

8X  
FLUTE  
LENGTH

C  
CIRCULAR

+

SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS

Cutter Diameter	Flute Length	Shank Diameter	Overall Length	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.0040	0.032	0.125	1.50	2	S132-004-118-8X	S132-004-140-8X
0.0050	0.040	0.125	1.50	2	S132-005-118-8X	S132-005-140-8X
0.0060	0.048	0.125	1.50	2	S132-006-118-8X	S132-006-140-8X
0.0070	0.056	0.125	1.50	2	S132-007-118-8X	S132-007-140-8X
0.0080	0.064	0.125	1.50	2	S132-008-118-8X	S132-008-140-8X
0.0090	0.072	0.125	1.50	2	S132-009-118-8X	S132-009-140-8X
0.0100	0.080	0.125	1.50	2	S132-010-118-8X	S132-010-140-8X
0.0110	0.088	0.125	1.50	2	S132-011-118-8X	S132-011-140-8X
0.0120	0.096	0.125	1.50	2	S132-012-118-8X	S132-012-140-8X
0.0130	0.104	0.125	1.50	2	S132-013-118-8X	S132-013-140-8X
0.0140	0.112	0.125	1.50	2	S132-014-118-8X	S132-014-140-8X
0.0156 (1/64)	0.125	0.125	1.50	2	S132-015-118-8X	S132-015-140-8X
0.0160	0.128	0.125	1.50	2	S132-016-118-8X	S132-016-140-8X
0.0170	0.136	0.125	1.50	2	S132-017-118-8X	S132-017-140-8X
0.0180	0.144	0.125	1.50	2	S132-018-118-8X	S132-018-140-8X
0.0190	0.152	0.125	1.50	2	S132-019-118-8X	S132-019-140-8X
0.0200	0.160	0.125	1.50	2	S132-020-118-8X	S132-020-140-8X
0.0210	0.168	0.125	1.50	2	S132-021-118-8X	S132-021-140-8X
0.0220	0.176	0.125	1.50	2	S132-022-118-8X	S132-022-140-8X
0.0230	0.184	0.125	1.50	2	S132-023-118-8X	S132-023-140-8X
0.0240	0.192	0.125	1.50	2	S132-024-118-8X	S132-024-140-8X
0.0250	0.200	0.125	1.50	2	S132-025-118-8X	S132-025-140-8X
0.0260	0.208	0.125	1.50	2	S132-026-118-8X	S132-026-140-8X
0.0270	0.216	0.125	1.50	2	S132-027-118-8X	S132-027-140-8X
0.0280	0.224	0.125	1.50	2	S132-028-118-8X	S132-028-140-8X
0.0290	0.232	0.125	1.50	2	S132-029-118-8X	S132-029-140-8X
0.0300	0.240	0.125	1.50	2	S132-030-118-8X	S132-030-140-8X
0.0313 (1/32)	0.250	0.125	1.50	2	S132-031-118-8X	S132-031-140-8X
0.0350	0.280	0.125	1.50	2	S132-035-118-8X	S132-035-140-8X
0.0400	0.320	0.125	1.50	2	S132-040-118-8X	S132-040-140-8X
0.0450	0.360	0.125	1.50	2	S132-045-118-8X	S132-045-140-8X
0.0469 (3/64)	0.375	0.125	1.50	2	S132-047-118-8X	S132-047-140-8X
0.0500	0.400	0.125	1.50	2	S132-050-118-8X	S132-050-140-8X
0.0550	0.440	0.125	1.50	2	S132-055-118-8X	S132-055-140-8X
0.0600	0.480	0.125	1.50	2	S132-060-118-8X	S132-060-140-8X
0.0625 (1/16)	0.500	0.125	2.00	2	S132-062-118-8X	S132-062-140-8X
0.0650	0.520	0.125	2.00	2	S132-065-118-8X	S132-065-140-8X
0.0700	0.560	0.125	2.00	2	S132-070-118-8X	S132-070-140-8X
0.0750	0.600	0.125	2.00	2	S132-075-118-8X	S132-075-140-8X
0.0781 (5/64)	0.625	0.125	2.00	2	S132-078-118-8X	S132-078-140-8X
0.0800	0.640	0.125	2.00	2	S132-080-118-8X	S132-080-140-8X
0.0850	0.680	0.125	2.00	2	S132-085-118-8X	S132-085-140-8X



Cutter Diameter	Flute Length	Shank Diameter	Overall Length	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.0900	0.720	0.125	2.00	2	S132-090-118-8X	S132-090-140-8X
0.0938 (3/32)	0.750	0.125	2.00	2	S132-093-118-8X	S132-093-140-8X
0.0950	0.760	0.125	2.00	2	S132-095-118-8X	S132-095-140-8X
0.1000	0.800	0.125	2.00	2	S132-100-118-8X	S132-100-140-8X
0.1050	0.840	0.125	2.00	2	S132-105-118-8X	S132-105-140-8X
0.1094 (7/64)	0.875	0.125	2.00	2	S132-109-118-8X	S132-109-140-8X
0.1100	0.880	0.125	2.00	2	S132-110-118-8X	S132-110-140-8X
0.1150	0.920	0.125	2.00	2	S132-115-118-8X	S132-115-140-8X
0.1200	0.960	0.125	2.00	2	S132-120-118-8X	S132-120-140-8X
0.1250 (1/8)	1.000	0.1875	2.00	2	S132-125-118-8X	S132-125-140-8X

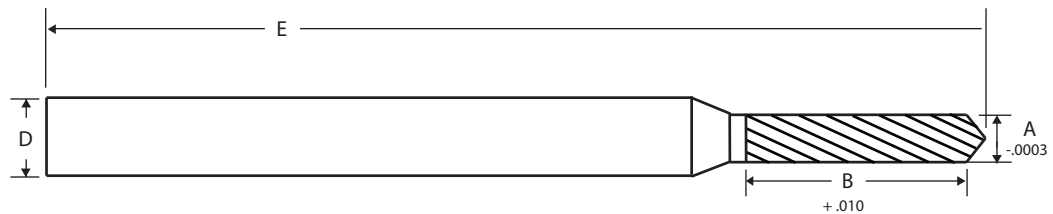
FLUTES  
2

8X  
FLUTE  
LENGTH

C  
CIRCULAR

+  
SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS



## MANUFACTURED BY MITGI: Stocking Options and Blanket Purchase Orders

**Avoid long lead times or back order situations by ensuring that the tools you need are always in stock and ready to ship.**

Once an order has been placed, those tools can be stocked and available for reorder. By establishing minimum inventory levels, custom tools can be stocked and ready for same day shipment.

Blanket POs allow you to schedule tools for regular delivery while taking advantage of the lower price point available when ordering in larger quantities.

Ready to get started? See page 2 for contact information.



# S133

# Micro Drills

FLUTES  
2

12X  
FLUTE  
LENGTH

C  
CIRCULAR

+

SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS

Cutter Diameter	Flute Length	Shank Diameter	Overall Length	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.0040	0.048	0.125	1.50	2	S133-004-118-12X	S133-004-140-12X
0.0050	0.060	0.125	1.50	2	S133-005-118-12X	S133-005-140-12X
0.0060	0.072	0.125	1.50	2	S133-006-118-12X	S133-006-140-12X
0.0070	0.084	0.125	1.50	2	S133-007-118-12X	S133-007-140-12X
0.0080	0.096	0.125	1.50	2	S133-008-118-12X	S133-008-140-12X
0.0090	0.108	0.125	1.50	2	S133-009-118-12X	S133-009-140-12X
0.0100	0.120	0.125	1.50	2	S133-010-118-12X	S133-010-140-12X
0.0110	0.132	0.125	1.50	2	S133-011-118-12X	S133-011-140-12X
0.0120	0.144	0.125	1.50	2	S133-012-118-12X	S133-012-140-12X
0.0130	0.156	0.125	1.50	2	S133-013-118-12X	S133-013-140-12X
0.0140	0.168	0.125	1.50	2	S133-014-118-12X	S133-014-140-12X
0.0156 (1/64)	0.187	0.125	1.50	2	S133-015-118-12X	S133-015-140-12X
0.0160	0.192	0.125	1.50	2	S133-016-118-12X	S133-016-140-12X
0.0170	0.204	0.125	1.50	2	S133-017-118-12X	S133-017-140-12X
0.0180	0.216	0.125	1.50	2	S133-018-118-12X	S133-018-140-12X
0.0190	0.228	0.125	1.50	2	S133-019-118-12X	S133-019-140-12X
0.0200	0.240	0.125	1.50	2	S133-020-118-12X	S133-020-140-12X
0.0210	0.252	0.125	1.50	2	S133-021-118-12X	S133-021-140-12X
0.0220	0.264	0.125	1.50	2	S133-022-118-12X	S133-022-140-12X
0.0230	0.276	0.125	1.50	2	S133-023-118-12X	S133-023-140-12X
0.0240	0.288	0.125	1.50	2	S133-024-118-12X	S133-024-140-12X
0.0250	0.300	0.125	1.50	2	S133-025-118-12X	S133-025-140-12X
0.0260	0.312	0.125	1.50	2	S133-026-118-12X	S133-026-140-12X
0.0270	0.324	0.125	1.50	2	S133-027-118-12X	S133-027-140-12X
0.0280	0.336	0.125	1.50	2	S133-028-118-12X	S133-028-140-12X
0.0290	0.348	0.125	1.50	2	S133-029-118-12X	S133-029-140-12X
0.0300	0.360	0.125	1.50	2	S133-030-118-12X	S133-030-140-12X
0.0313 (1/32)	0.376	0.125	1.50	2	S133-031-118-12X	S133-031-140-12X
0.0350	0.420	0.125	1.50	2	S133-035-118-12X	S133-035-140-12X
0.0400	0.480	0.125	1.50	2	S133-040-118-12X	S133-040-140-12X
0.0450	0.540	0.125	2.00	2	S133-045-118-12X	S133-045-140-12X
0.0469 (3/64)	0.563	0.125	2.00	2	S133-047-118-12X	S133-047-140-12X
0.0500	0.600	0.125	2.00	2	S133-050-118-12X	S133-050-140-12X
0.0550	0.660	0.125	2.00	2	S133-055-118-12X	S133-055-140-12X
0.0600	0.720	0.125	2.00	2	S133-060-118-12X	S133-060-140-12X
0.0625 (1/16)	0.750	0.125	2.00	2	S133-062-118-12X	S133-062-140-12X
0.0650	0.780	0.125	2.00	2	S133-065-118-12X	S133-065-140-12X
0.0700	0.840	0.125	2.00	2	S133-070-118-12X	S133-070-140-12X
0.0750	0.900	0.125	2.00	2	S133-075-118-12X	S133-075-140-12X
0.0781 (5/64)	0.937	0.125	2.00	2	S133-078-118-12X	S133-078-140-12X
0.0800	0.960	0.125	2.00	2	S133-080-118-12X	S133-080-140-12X
0.0850	1.020	0.125	2.50	2	S133-085-118-12X	S133-085-140-12X



Cutter Diameter	Flute Length	Shank Diameter	Overall Length	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.0900	1.080	0.125	2.50	2	S133-090-118-12X	S133-090-140-12X
0.0938 (3/32)	1.126	0.125	2.50	2	S133-093-118-12X	S133-093-140-12X
0.0950	1.140	0.125	2.50	2	S133-095-118-12X	S133-095-140-12X
0.1000	1.200	0.125	2.50	2	S133-100-118-12X	S133-100-140-12X
0.1050	1.260	0.125	2.50	2	S133-105-118-12X	S133-105-140-12X
0.1094 (7/64)	1.313	0.125	2.50	2	S133-109-118-12X	S133-109-140-12X
0.1100	1.320	0.125	2.50	2	S133-110-118-12X	S133-110-140-12X
0.1150	1.380	0.125	2.50	2	S133-115-118-12X	S133-115-140-12X
0.1200	1.440	0.125	2.50	2	S133-120-118-12X	S133-120-140-12X
0.1250 (1/8)	1.500	0.1875	2.50	2	S133-125-118-12X	S133-125-140-12X

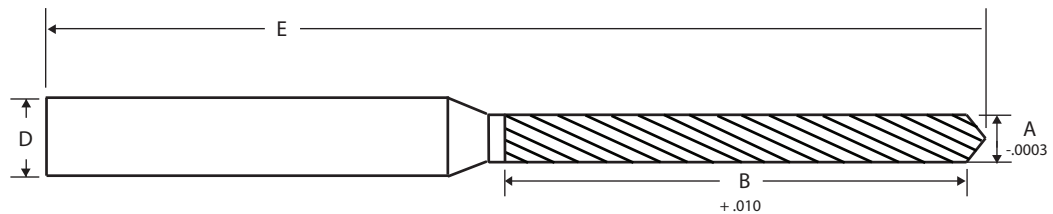
FLUTES  
2

12X  
FLUTE  
LENGTH

C  
CIRCULAR

+  
SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS



## MANUFACTURED BY MITGI: Selecting the Right Tool for the Job

**On-site manufacturing means that MITGI can be your one-stop shop for both standards and specials. How do you know which is better for the job at hand?**

To determine which option is the best for each job, consider the following:

- Is there a MITGI standard tool that meets all of the job requirements?
- How complex is the part?
- What's the scale of the project?
- Would making changes to a standard tool increase tool life or save production time?

Ready to get started? See page 2 for contact information.



**S134**
**Micro Drills**
**FLUTES  
2**
**15X  
FLUTE  
LENGTH**

**CIRCULAR**

**SWISS-TYPE  
OAL**

**QUICK TURN  
SPECIALS**

Cutter Diameter	Flute Length	Shank Diameter	Overall Length	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.0040	0.060	0.125	1.50	2	S134-004-118-15X	S134-004-140-15X
0.0050	0.075	0.125	1.50	2	S134-005-118-15X	S134-005-140-15X
0.0060	0.090	0.125	1.50	2	S134-006-118-15X	S134-006-140-15X
0.0070	0.105	0.125	1.50	2	S134-007-118-15X	S134-007-140-15X
0.0080	0.120	0.125	1.50	2	S134-008-118-15X	S134-008-140-15X
0.0090	0.135	0.125	1.50	2	S134-009-118-15X	S134-009-140-15X
0.0100	0.150	0.125	1.50	2	S134-010-118-15X	S134-010-140-15X
0.0110	0.165	0.125	1.50	2	S134-011-118-15X	S134-011-140-15X
0.0120	0.180	0.125	1.50	2	S134-012-118-15X	S134-012-140-15X
0.0130	0.195	0.125	1.50	2	S134-013-118-15X	S134-013-140-15X
0.0140	0.210	0.125	1.50	2	S134-014-118-15X	S134-014-140-15X
0.0156 (1/64)	0.234	0.125	1.50	2	S134-015-118-15X	S134-015-140-15X
0.0160	0.240	0.125	1.50	2	S134-016-118-15X	S134-016-140-15X
0.0170	0.255	0.125	1.50	2	S134-017-118-15X	S134-017-140-15X
0.0180	0.270	0.125	1.50	2	S134-018-118-15X	S134-018-140-15X
0.0190	0.285	0.125	1.50	2	S134-019-118-15X	S134-019-140-15X
0.0200	0.300	0.125	1.50	2	S134-020-118-15X	S134-020-140-15X
0.0210	0.315	0.125	1.50	2	S134-021-118-15X	S134-021-140-15X
0.0220	0.330	0.125	1.50	2	S134-022-118-15X	S134-022-140-15X
0.0230	0.345	0.125	1.50	2	S134-023-118-15X	S134-023-140-15X
0.0240	0.360	0.125	1.50	2	S134-024-118-15X	S134-024-140-15X
0.0250	0.375	0.125	1.50	2	S134-025-118-15X	S134-025-140-15X
0.0260	0.390	0.125	1.50	2	S134-026-118-15X	S134-026-140-15X
0.0270	0.405	0.125	1.50	2	S134-027-118-15X	S134-027-140-15X
0.0280	0.420	0.125	1.50	2	S134-028-118-15X	S134-028-140-15X
0.0290	0.435	0.125	1.50	2	S134-029-118-15X	S134-029-140-15X
0.0300	0.450	0.125	1.50	2	S134-030-118-15X	S134-030-140-15X
0.0313 (1/32)	0.470	0.125	1.50	2	S134-031-118-15X	S134-031-140-15X
0.0350	0.525	0.125	2.00	2	S134-035-118-15X	S134-035-140-15X
0.0400	0.600	0.125	2.00	2	S134-040-118-15X	S134-040-140-15X
0.0450	0.675	0.125	2.00	2	S134-045-118-15X	S134-045-140-15X
0.0469 (3/64)	0.704	0.125	2.00	2	S134-047-118-15X	S134-047-140-15X
0.0500	0.750	0.125	2.00	2	S134-050-118-15X	S134-050-140-15X
0.0550	0.825	0.125	2.00	2	S134-055-118-15X	S134-055-140-15X
0.0600	0.900	0.125	2.00	2	S134-060-118-15X	S134-060-140-15X
0.0625 (1/16)	0.938	0.125	2.00	2	S134-062-118-15X	S134-062-140-15X
0.0650	0.975	0.125	2.00	2	S134-065-118-15X	S134-065-140-15X
0.0700	1.050	0.125	2.50	2	S134-070-118-15X	S134-070-140-15X
0.0750	1.125	0.125	2.50	2	S134-075-118-15X	S134-075-140-15X
0.0781 (5/64)	1.172	0.125	2.50	2	S134-078-118-15X	S134-078-140-15X
0.0800	1.200	0.125	2.50	2	S134-080-118-15X	S134-080-140-15X
0.0850	1.275	0.125	2.50	2	S134-085-118-15X	S134-085-140-15X



Cutter Diameter	Flute Length	Shank Diameter	Overall Length	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.0900	1.350	0.125	2.50	2	S134-090-118-15X	S134-090-140-15X
0.0938 (3/32)	1.407	0.125	2.50	2	S134-093-118-15X	S134-093-140-15X
0.0950	1.425	0.125	2.50	2	S134-095-118-15X	S134-095-140-15X
0.1000	1.500	0.125	2.50	2	S134-100-118-15X	S134-100-140-15X
0.1050	1.575	0.125	3.00	2	S134-105-118-15X	S134-105-140-15X
0.1094 (7/64)	1.641	0.125	3.00	2	S134-109-118-15X	S134-109-140-15X
0.1100	1.650	0.125	3.00	2	S134-110-118-15X	S134-110-140-15X
0.1150	1.725	0.125	3.00	2	S134-115-118-15X	S134-115-140-15X
0.1200	1.800	0.125	3.00	2	S134-120-118-15X	S134-120-140-15X
0.1250 (1/8)	1.875	0.1875	3.00	2	S134-125-118-15X	S134-125-140-15X

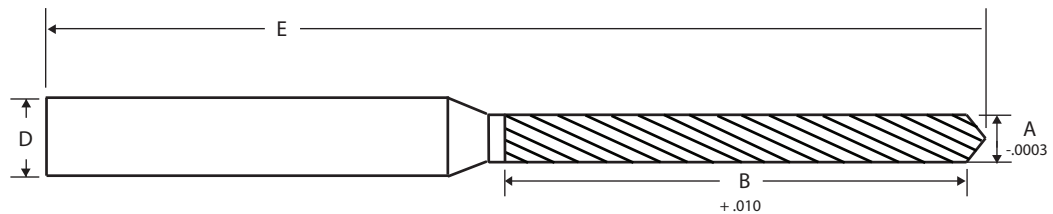
FLUTES  
2

15X  
FLUTE  
LENGTH

C  
CIRCULAR

+  
SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS



## MANUFACTURED BY MITGI: Tool Performance Review

### A manufacturing process may work, but could a tooling change drive improvement?

There are many options to consider when reviewing the performance of tools with any given job. The production and design teams at MITGI work together to evaluate variables such as material being machined, existing speeds and feeds, coating, tool geometry, and application. With this information, they can help determine whether changes can be made to help increase parts per tool, improve surface finish, reduce burrs, or improve work with hard to machine materials.

Have a project you'd like to review with our team?  
See page 2 for contact information.



# S131

## Metric Micro Drills (on Metric Shank)

FLUTES  
2

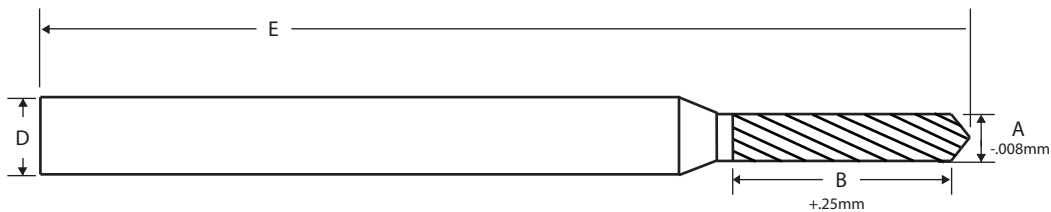
5X  
FLUTE  
LENGTH

C  
CIRCULAR

+  
SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS

Cutter Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (in.)	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.15	0.75	3.00	1.50	2	S131-0.15mm-118-5X	S131-0.15mm-140-5X
0.20	1.00	3.00	1.50	2	S131-0.20mm-118-5X	S131-0.20mm-140-5X
0.25	1.25	3.00	1.50	2	S131-0.25mm-118-5X	S131-0.25mm-140-5X
0.30	1.50	3.00	1.50	2	S131-0.30mm-118-5X	S131-0.30mm-140-5X
0.35	1.75	3.00	1.50	2	S131-0.35mm-118-5X	S131-0.35mm-140-5X
0.40	2.00	3.00	1.50	2	S131-0.40mm-118-5X	S131-0.40mm-140-5X
0.45	2.25	3.00	1.50	2	S131-0.45mm-118-5X	S131-0.45mm-140-5X
0.50	2.50	3.00	1.50	2	S131-0.50mm-118-5X	S131-0.50mm-140-5X
0.55	2.75	3.00	1.50	2	S131-0.55mm-118-5X	S131-0.55mm-140-5X
0.60	3.00	3.00	1.50	2	S131-0.60mm-118-5X	S131-0.60mm-140-5X
0.65	3.25	3.00	1.50	2	S131-0.65mm-118-5X	S131-0.65mm-140-5X
0.70	3.50	3.00	1.50	2	S131-0.70mm-118-5X	S131-0.70mm-140-5X
0.75	3.75	3.00	1.50	2	S131-0.75mm-118-5X	S131-0.75mm-140-5X
0.80	4.00	3.00	1.50	2	S131-0.80mm-118-5X	S131-0.80mm-140-5X
0.85	4.25	3.00	1.50	2	S131-0.85mm-118-5X	S131-0.85mm-140-5X
0.90	4.50	3.00	1.50	2	S131-0.90mm-118-5X	S131-0.90mm-140-5X
0.95	4.75	3.00	1.50	2	S131-0.95mm-118-5X	S131-0.95mm-140-5X
1.00	5.00	3.00	1.50	2	S131-1.00mm-118-5X	S131-1.00mm-140-5X
1.25	6.25	3.00	1.50	2	S131-1.25mm-118-5X	S131-1.25mm-140-5X
1.50	7.50	3.00	1.50	2	S131-1.50mm-118-5X	S131-1.50mm-140-5X
1.75	8.75	3.00	1.50	2	S131-1.75mm-118-5X	S131-1.75mm-140-5X
2.00	10.00	3.00	1.50	2	S131-2.00mm-118-5X	S131-2.00mm-140-5X
2.25	11.25	3.00	1.50	2	S131-2.25mm-118-5X	S131-2.25mm-140-5X
2.50	12.50	3.00	1.50	2	S131-2.50mm-118-5X	S131-2.50mm-140-5X
2.75	13.75	3.00	2.00	2	S131-2.75mm-118-5X	S131-2.75mm-140-5X
3.00	15.00	4.00	2.00	2	S131-3.00mm-118-5X	S131-3.00mm-140-5X



# Metric Micro Drills (on Metric Shank)

S132

Cutter Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (in.)	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.15	1.20	3.00	1.50	2	S132-0.15mm-118-8X	S132-0.15mm-140-8X
0.20	1.60	3.00	1.50	2	S132-0.20mm-118-8X	S132-0.20mm-140-8X
0.25	2.00	3.00	1.50	2	S132-0.25mm-118-8X	S132-0.25mm-140-8X
0.30	2.40	3.00	1.50	2	S132-0.30mm-118-8X	S132-0.30mm-140-8X
0.35	2.80	3.00	1.50	2	S132-0.35mm-118-8X	S132-0.35mm-140-8X
0.40	3.20	3.00	1.50	2	S132-0.40mm-118-8X	S132-0.40mm-140-8X
0.45	3.60	3.00	1.50	2	S132-0.45mm-118-8X	S132-0.45mm-140-8X
0.50	4.00	3.00	1.50	2	S132-0.50mm-118-8X	S132-0.50mm-140-8X
0.55	4.40	3.00	1.50	2	S132-0.55mm-118-8X	S132-0.55mm-140-8X
0.60	4.80	3.00	1.50	2	S132-0.60mm-118-8X	S132-0.60mm-140-8X
0.65	5.20	3.00	1.50	2	S132-0.65mm-118-8X	S132-0.65mm-140-8X
0.70	5.60	3.00	1.50	2	S132-0.70mm-118-8X	S132-0.70mm-140-8X
0.75	6.00	3.00	1.50	2	S132-0.75mm-118-8X	S132-0.75mm-140-8X
0.80	6.40	3.00	1.50	2	S132-0.80mm-118-8X	S132-0.80mm-140-8X
0.85	6.80	3.00	1.50	2	S132-0.85mm-118-8X	S132-0.85mm-140-8X
0.90	7.20	3.00	1.50	2	S132-0.90mm-118-8X	S132-0.90mm-140-8X
0.95	7.60	3.00	1.50	2	S132-0.95mm-118-8X	S132-0.95mm-140-8X
1.00	8.00	3.00	1.50	2	S132-1.00mm-118-8X	S132-1.00mm-140-8X
1.25	10.00	3.00	1.50	2	S132-1.25mm-118-8X	S132-1.25mm-140-8X
1.50	12.00	3.00	1.50	2	S132-1.50mm-118-8X	S132-1.50mm-140-8X
1.75	14.00	3.00	2.00	2	S132-1.75mm-118-8X	S132-1.75mm-140-8X
2.00	16.00	3.00	2.00	2	S132-2.00mm-118-8X	S132-2.00mm-140-8X
2.25	18.00	3.00	2.00	2	S132-2.25mm-118-8X	S132-2.25mm-140-8X
2.50	20.00	3.00	2.00	2	S132-2.50mm-118-8X	S132-2.50mm-140-8X
2.75	22.00	3.00	2.00	2	S132-2.75mm-118-8X	S132-2.75mm-140-8X
3.00	24.00	4.00	2.00	2	S132-3.00mm-118-8X	S132-3.00mm-140-8X

FLUTES  
2

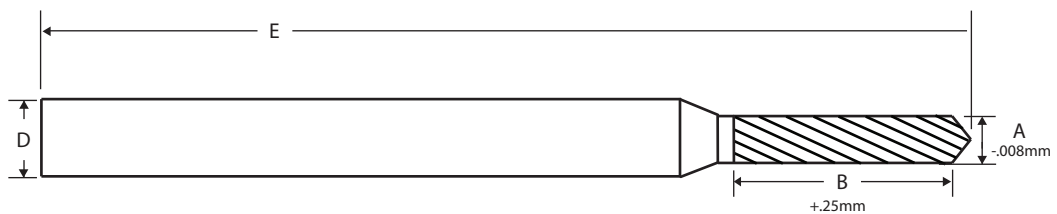
8X  
FLUTE  
LENGTH

C  
CIRCULAR

+

SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



# S133

## Metric Micro Drills (on Metric Shank)

FLUTES  
2

12X  
FLUTE  
LENGTH

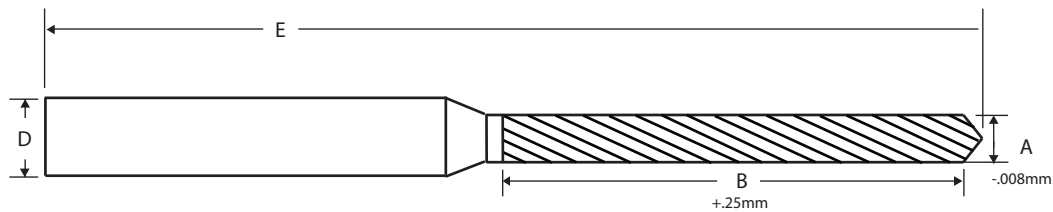
C  
CIRCULAR

+

SWISS-TYPE  
OAL

Q  
QUICK TURN  
SPECIALS

Cutter Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (in.)	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.15	1.80	3.00	1.50	2	S133-0.15mm-118-12X	S133-0.15mm-140-12X
0.20	2.40	3.00	1.50	2	S133-0.20mm-118-12X	S133-0.20mm-140-12X
0.25	3.00	3.00	1.50	2	S133-0.25mm-118-12X	S133-0.25mm-140-12X
0.30	3.60	3.00	1.50	2	S133-0.30mm-118-12X	S133-0.30mm-140-12X
0.35	4.20	3.00	1.50	2	S133-0.35mm-118-12X	S133-0.35mm-140-12X
0.40	4.80	3.00	1.50	2	S133-0.40mm-118-12X	S133-0.40mm-140-12X
0.45	5.40	3.00	1.50	2	S133-0.45mm-118-12X	S133-0.45mm-140-12X
0.50	6.00	3.00	1.50	2	S133-0.50mm-118-12X	S133-0.50mm-140-12X
0.55	6.60	3.00	1.50	2	S133-0.55mm-118-12X	S133-0.55mm-140-12X
0.60	7.20	3.00	1.50	2	S133-0.60mm-118-12X	S133-0.60mm-140-12X
0.65	7.80	3.00	1.50	2	S133-0.65mm-118-12X	S133-0.65mm-140-12X
0.70	8.40	3.00	1.50	2	S133-0.70mm-118-12X	S133-0.70mm-140-12X
0.75	9.00	3.00	1.50	2	S133-0.75mm-118-12X	S133-0.75mm-140-12X
0.80	9.60	3.00	1.50	2	S133-0.80mm-118-12X	S133-0.80mm-140-12X
0.85	10.20	3.00	1.50	2	S133-0.85mm-118-12X	S133-0.85mm-140-12X
0.90	10.80	3.00	1.50	2	S133-0.90mm-118-12X	S133-0.90mm-140-12X
0.95	11.40	3.00	1.50	2	S133-0.95mm-118-12X	S133-0.95mm-140-12X
1.00	12.00	3.00	1.50	2	S133-1.00mm-118-12X	S133-1.00mm-140-12X
1.25	15.00	3.00	2.00	2	S133-1.25mm-118-12X	S133-1.25mm-140-12X
1.50	18.00	3.00	2.00	2	S133-1.50mm-118-12X	S133-1.50mm-140-12X
1.75	21.00	3.00	2.00	2	S133-1.75mm-118-12X	S133-1.75mm-140-12X
2.00	24.00	3.00	2.00	2	S133-2.00mm-118-12X	S133-2.00mm-140-12X
2.25	27.00	3.00	2.50	2	S133-2.25mm-118-12X	S133-2.25mm-140-12X
2.50	30.00	3.00	2.50	2	S133-2.50mm-118-12X	S133-2.50mm-140-12X
2.75	33.00	3.00	2.50	2	S133-2.75mm-118-12X	S133-2.75mm-140-12X
3.00	36.00	4.00	2.50	2	S133-3.00mm-118-12X	S133-3.00mm-140-12X



# Metric Micro Drills (on Metric Shank)

# S134

Cutter Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (in.)	# of Flutes	118° Drill Point Tool #	140° Drill Point Tool #
A	B	D	E			
0.15	2.25	3.00	1.50	2	S134-0.15mm-118-15X	S134-0.15mm-140-15X
0.20	3.00	3.00	1.50	2	S134-0.20mm-118-15X	S134-0.20mm-140-15X
0.25	3.75	3.00	1.50	2	S134-0.25mm-118-15X	S134-0.25mm-140-15X
0.30	4.50	3.00	1.50	2	S134-0.30mm-118-15X	S134-0.30mm-140-15X
0.35	5.25	3.00	1.50	2	S134-0.35mm-118-15X	S134-0.35mm-140-15X
0.40	6.00	3.00	1.50	2	S134-0.40mm-118-15X	S134-0.40mm-140-15X
0.45	6.75	3.00	1.50	2	S134-0.45mm-118-15X	S134-0.45mm-140-15X
0.50	7.50	3.00	1.50	2	S134-0.50mm-118-15X	S134-0.50mm-140-15X
0.55	8.25	3.00	1.50	2	S134-0.55mm-118-15X	S134-0.55mm-140-15X
0.60	9.00	3.00	1.50	2	S134-0.60mm-118-15X	S134-0.60mm-140-15X
0.65	9.75	3.00	1.50	2	S134-0.65mm-118-15X	S134-0.65mm-140-15X
0.70	10.50	3.00	1.50	2	S134-0.70mm-118-15X	S134-0.70mm-140-15X
0.75	11.25	3.00	1.50	2	S134-0.75mm-118-15X	S134-0.75mm-140-15X
0.80	12.00	3.00	1.50	2	S134-0.80mm-118-15X	S134-0.80mm-140-15X
0.85	12.75	3.00	2.00	2	S134-0.85mm-118-15X	S134-0.85mm-140-15X
0.90	13.50	3.00	2.00	2	S134-0.90mm-118-15X	S134-0.90mm-140-15X
0.95	14.25	3.00	2.00	2	S134-0.95mm-118-15X	S134-0.95mm-140-15X
1.00	15.00	3.00	2.00	2	S134-1.00mm-118-15X	S134-1.00mm-140-15X
1.25	18.75	3.00	2.00	2	S134-1.25mm-118-15X	S134-1.25mm-140-15X
1.50	22.50	3.00	2.00	2	S134-1.50mm-118-15X	S134-1.50mm-140-15X
1.75	26.25	3.00	2.50	2	S134-1.75mm-118-15X	S134-1.75mm-140-15X
2.00	30.00	3.00	2.50	2	S134-2.00mm-118-15X	S134-2.00mm-140-15X
2.25	33.75	3.00	2.50	2	S134-2.25mm-118-15X	S134-2.25mm-140-15X
2.50	37.50	3.00	2.50	2	S134-2.50mm-118-15X	S134-2.50mm-140-15X
2.75	41.25	3.00	3.00	2	S134-2.75mm-118-15X	S134-2.75mm-140-15X
3.00	45.00	4.00	3.00	2	S134-3.00mm-118-15X	S134-3.00mm-140-15X

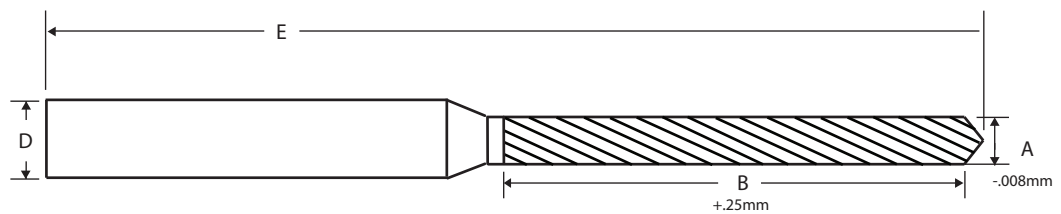
**FLUTES**  
2

**15X**  
FLUTE  
LENGTH

**C**  
CIRCULAR

**+**  
SWISS-TYPE  
OAL

**Q**  
QUICK TURN  
SPECIALS



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# S61

## 140° Coolant Thru Micro Drills

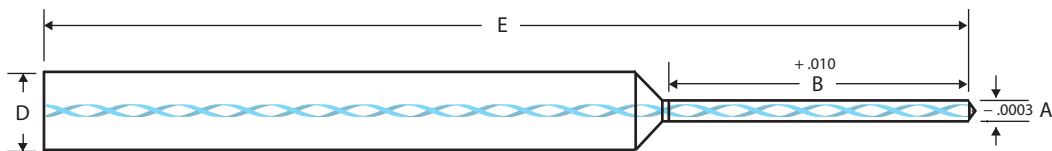
FLUTES  
2

8X  
FLUTE  
LENGTH

COOLANT  
THRU

CIRCULAR

Cutter Diameter	Flute Length	Shank Diameter	Overall Length	140° Drill Point Tool #
A	B	D	E	
0.031 (1/32)	0.248	0.125	2.00	S61-031-8X
0.039 (1mm)	0.312	0.125	2.00	S61-039-8X
0.047 (3/64)	0.376	0.125	2.00	S61-047-8X
0.062 (1/16)	0.496	0.125	2.00	S61-062-8X
0.078 (5/64)	0.624	0.125	2.00	S61-078-8X
0.093 (3/32)	0.744	0.125	2.00	S61-093-8X
0.109 (7/64)	0.872	0.125	2.50	S61-109-8X
0.118 (3mm)	0.944	0.125	2.50	S61-118-8X
0.125 (1/8)	1.000	0.1875	2.50	S61-125-8X



# S111

## 140° Coolant Thru Micro Drills

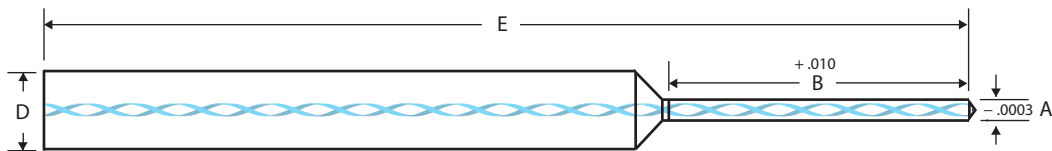
FLUTES  
2

12X  
FLUTE  
LENGTH

COOLANT  
THRU

CIRCULAR

Cutter Diameter	Flute Length	Shank Diameter	Overall Length	140° Drill Point Tool #
A	B	D	E	
0.031 (1/32)	0.372	0.125	2.00	S111-031-12X
0.039 (1mm)	0.468	0.125	2.00	S111-039-12X
0.047 (3/64)	0.564	0.125	2.00	S111-047-12X
0.062 (1/16)	0.744	0.125	2.00	S111-062-12X
0.078 (5/64)	0.936	0.125	2.50	S111-078-12X
0.093 (3/32)	1.116	0.125	2.50	S111-093-12X
0.109 (7/64)	1.308	0.125	2.50	S111-109-12X
0.118 (3mm)	1.416	0.125	2.50	S111-118-12X
0.125 (1/8)	1.500	0.1875	2.50	S111-125-12X



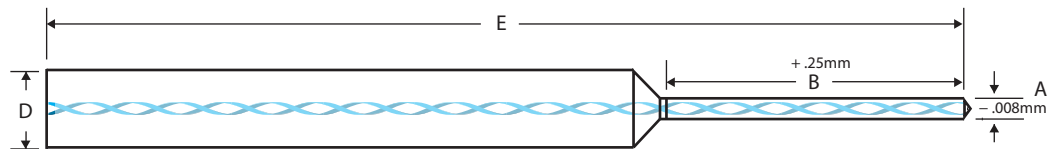
Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



## 140° Metric Coolant Thru Micro Drills

S112

Cutter Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (in.)	140° Drill Point Tool #
A	B	D	E	
0.80	6.40	3.00	2.00	S112-0.80mm-8X
0.90	7.20	3.00	2.00	S112-0.90mm-8X
1.00	8.00	3.00	2.00	S112-1.00mm-8X
1.25	10.00	3.00	2.00	S112-1.25mm-8X
1.50	12.00	3.00	2.00	S112-1.50mm-8X
1.75	14.00	3.00	2.00	S112-1.75mm-8X
2.00	16.00	3.00	2.50	S112-2.00mm-8X
2.50	20.00	3.00	2.50	S112-2.50mm-8X
3.00	24.00	4.00	2.50	S112-3.00mm-8X



FLUTES  
2

8X  
FLUTE  
LENGTH

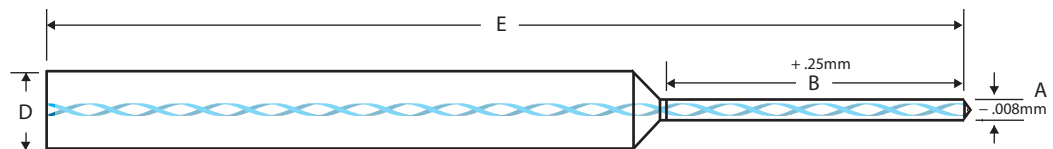
COOLANT  
THRU

CIRCLAR

## 140° Metric Coolant Thru Micro Drills

S113

Cutter Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	Overall Length (in.)	140° Drill Point Tool #
A	B	D	E	
0.80	9.60	3.00	2.00	S113-0.80mm-12X
0.90	10.80	3.00	2.00	S113-0.90mm-12X
1.00	12.00	3.00	2.00	S113-1.00mm-12X
1.25	15.00	3.00	2.00	S113-1.25mm-12X
1.50	18.00	3.00	2.50	S113-1.50mm-12X
1.75	21.00	3.00	2.50	S113-1.75mm-12X
2.00	24.00	3.00	2.50	S113-2.00mm-12X
2.50	30.00	3.00	2.50	S113-2.50mm-12X
3.00	36.00	4.00	2.50	S113-3.00mm-12X



FLUTES  
2

12X  
FLUTE  
LENGTH

COOLANT  
THRU

CIRCLAR



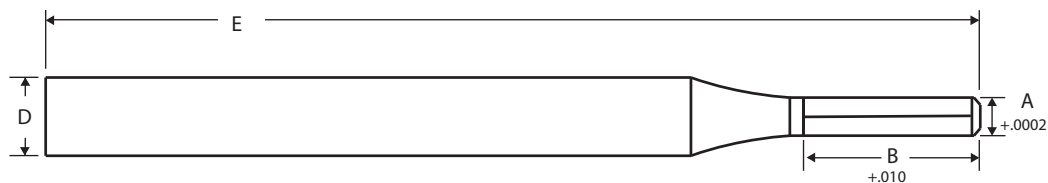
**S135**
**Reamers / +0.0002 Tolerance**
**FLUTES  
2,3,4**
**8X  
FLUTE  
LENGTH**

**CIRCULAR**

**SWISS-TYPE  
OAL**

**QUICK TURN  
SPECIALS**

Cutter Diameter	Flute Length	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.0050	0.040	0.125	2.00	S135-005-2-REAM8X	N/A	N/A
0.0100	0.080	0.125	2.00	S135-010-2-REAM8X	S135-010-3-REAM8X	S135-010-4-REAM8X
0.0150	0.120	0.125	2.00	S135-015-2-REAM8X	S135-015-3-REAM8X	S135-015-4-REAM8X
0.0156 (1/64)	0.125	0.125	2.00	S135-016-2-REAM8X	S135-016-3-REAM8X	S135-016-4-REAM8X
0.0200	0.160	0.125	2.00	S135-020-2-REAM8X	S135-020-3-REAM8X	S135-020-4-REAM8X
0.0250	0.200	0.125	2.00	S135-025-2-REAM8X	S135-025-3-REAM8X	S135-025-4-REAM8X
0.0300	0.240	0.125	2.00	S135-030-2-REAM8X	S135-030-3-REAM8X	S135-030-4-REAM8X
0.0313 (1/32)	0.250	0.125	2.00	S135-031-2-REAM8X	S135-031-3-REAM8X	S135-031-4-REAM8X
0.0350	0.280	0.125	2.00	S135-035-2-REAM8X	S135-035-3-REAM8X	S135-035-4-REAM8X
0.0400	0.320	0.125	2.00	S135-040-2-REAM8X	S135-040-3-REAM8X	S135-040-4-REAM8X
0.0450	0.360	0.125	2.00	S135-045-2-REAM8X	S135-045-3-REAM8X	S135-045-4-REAM8X
0.0469 (3/64)	0.375	0.125	2.00	S135-047-2-REAM8X	S135-047-3-REAM8X	S135-047-4-REAM8X
0.0500	0.400	0.125	2.00	S135-050-2-REAM8X	S135-050-3-REAM8X	S135-050-4-REAM8X
0.0550	0.440	0.125	2.00	S135-055-2-REAM8X	S135-055-3-REAM8X	S135-055-4-REAM8X
0.0600	0.480	0.125	2.00	S135-060-2-REAM8X	S135-060-3-REAM8X	S135-060-4-REAM8X
0.0625 (1/16)	0.500	0.125	2.00	S135-062-2-REAM8X	S135-062-3-REAM8X	S135-062-4-REAM8X
0.0650	0.520	0.125	2.00	S135-065-2-REAM8X	S135-065-3-REAM8X	S135-065-4-REAM8X
0.0700	0.560	0.125	2.00	S135-070-2-REAM8X	S135-070-3-REAM8X	S135-070-4-REAM8X
0.0750	0.600	0.125	2.00	S135-075-2-REAM8X	S135-075-3-REAM8X	S135-075-4-REAM8X
0.0781 (5/64)	0.625	0.125	2.00	S135-078-2-REAM8X	S135-078-3-REAM8X	S135-078-4-REAM8X
0.0800	0.640	0.125	2.50	S135-080-2-REAM8X	S135-080-3-REAM8X	S135-080-4-REAM8X
0.0850	0.680	0.125	2.50	S135-085-2-REAM8X	S135-085-3-REAM8X	S135-085-4-REAM8X
0.0900	0.720	0.125	2.50	S135-090-2-REAM8X	S135-090-3-REAM8X	S135-090-4-REAM8X
0.0938 (3/32)	0.750	0.125	2.50	S135-093-2-REAM8X	S135-093-3-REAM8X	S135-093-4-REAM8X
0.0950	0.760	0.125	2.50	S135-095-2-REAM8X	S135-095-3-REAM8X	S135-095-4-REAM8X
0.1000	0.800	0.125	2.50	S135-100-2-REAM8X	S135-100-3-REAM8X	S135-100-4-REAM8X
0.1050	0.840	0.125	2.50	S135-105-2-REAM8X	S135-105-3-REAM8X	S135-105-4-REAM8X
0.1094 (7/64)	0.875	0.125	2.50	S135-109-2-REAM8X	S135-109-3-REAM8X	S135-109-4-REAM8X
0.1100	0.880	0.125	2.50	S135-110-2-REAM8X	S135-110-3-REAM8X	S135-110-4-REAM8X
0.1150	0.920	0.125	2.50	S135-115-2-REAM8X	S135-115-3-REAM8X	S135-115-4-REAM8X
0.1200	0.960	0.125	2.50	S135-120-2-REAM8X	S135-120-3-REAM8X	S135-120-4-REAM8X
0.1250 (1/8)	1.000	0.1875	2.50	S135-125-2-REAM8X	S135-125-3-REAM8X	S135-125-4-REAM8X



# Reamers / +0.0002 Tolerance

# S136

Cutter Diameter	Flute Length	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.0100	0.080	0.120	0.125	2.00	S136-010-2-REAM12XR	S136-010-3-REAM12XR	S136-010-4-REAM12XR
0.0150	0.120	0.180	0.125	2.00	S136-015-2-REAM12XR	S136-015-3-REAM12XR	S136-015-4-REAM12XR
0.0156 (1/64)	0.125	0.187	0.125	2.00	S136-016-2-REAM12XR	S136-016-3-REAM12XR	S136-016-4-REAM12XR
0.0200	0.160	0.240	0.125	2.00	S136-020-2-REAM12XR	S136-020-3-REAM12XR	S136-020-4-REAM12XR
0.0250	0.200	0.300	0.125	2.00	S136-025-2-REAM12XR	S136-025-3-REAM12XR	S136-025-4-REAM12XR
0.0300	0.240	0.360	0.125	2.00	S136-030-2-REAM12XR	S136-030-3-REAM12XR	S136-030-4-REAM12XR
0.0313 (1/32)	0.250	0.376	0.125	2.00	S136-031-2-REAM12XR	S136-031-3-REAM12XR	S136-031-4-REAM12XR
0.0350	0.280	0.420	0.125	2.00	S136-035-2-REAM12XR	S136-035-3-REAM12XR	S136-035-4-REAM12XR
0.0400	0.320	0.480	0.125	2.00	S136-040-2-REAM12XR	S136-040-3-REAM12XR	S136-040-4-REAM12XR
0.0450	0.360	0.540	0.125	2.00	S136-045-2-REAM12XR	S136-045-3-REAM12XR	S136-045-4-REAM12XR
0.0469 (3/64)	0.375	0.563	0.125	2.00	S136-047-2-REAM12XR	S136-047-3-REAM12XR	S136-047-4-REAM12XR
0.0500	0.400	0.600	0.125	2.00	S136-050-2-REAM12XR	S136-050-3-REAM12XR	S136-050-4-REAM12XR
0.0550	0.440	0.660	0.125	2.00	S136-055-2-REAM12XR	S136-055-3-REAM12XR	S136-055-4-REAM12XR
0.0600	0.480	0.720	0.125	2.00	S136-060-2-REAM12XR	S136-060-3-REAM12XR	S136-060-4-REAM12XR
0.0625 (1/16)	0.500	0.750	0.125	2.00	S136-062-2-REAM12XR	S136-062-3-REAM12XR	S136-062-4-REAM12XR
0.0650	0.520	0.780	0.125	2.00	S136-065-2-REAM12XR	S136-065-3-REAM12XR	S136-065-4-REAM12XR
0.0700	0.560	0.840	0.125	2.00	S136-070-2-REAM12XR	S136-070-3-REAM12XR	S136-070-4-REAM12XR
0.0750	0.600	0.900	0.125	2.00	S136-075-2-REAM12XR	S136-075-3-REAM12XR	S136-075-4-REAM12XR
0.0781 (5/64)	0.625	0.937	0.125	2.00	S136-078-2-REAM12XR	S136-078-3-REAM12XR	S136-078-4-REAM12XR
0.0800	0.640	0.960	0.125	2.50	S136-080-2-REAM12XR	S136-080-3-REAM12XR	S136-080-4-REAM12XR
0.0850	0.680	1.020	0.125	2.50	S136-085-2-REAM12XR	S136-085-3-REAM12XR	S136-085-4-REAM12XR
0.0900	0.720	1.080	0.125	2.50	S136-090-2-REAM12XR	S136-090-3-REAM12XR	S136-090-4-REAM12XR
0.0938 (3/32)	0.750	1.126	0.125	2.50	S136-093-2-REAM12XR	S136-093-3-REAM12XR	S136-093-4-REAM12XR
0.0950	0.760	1.140	0.125	2.50	S136-095-2-REAM12XR	S136-095-3-REAM12XR	S136-095-4-REAM12XR
0.1000	0.800	1.200	0.125	2.50	S136-100-2-REAM12XR	S136-100-3-REAM12XR	S136-100-4-REAM12XR
0.1050	0.840	1.260	0.125	2.50	S136-105-2-REAM12XR	S136-105-3-REAM12XR	S136-105-4-REAM12XR
0.1094 (7/64)	0.875	1.313	0.125	2.50	S136-109-2-REAM12XR	S136-109-3-REAM12XR	S136-109-4-REAM12XR
0.1100	0.880	1.320	0.125	2.50	S136-110-2-REAM12XR	S136-110-3-REAM12XR	S136-110-4-REAM12XR
0.1150	0.920	1.380	0.125	2.50	S136-115-2-REAM12XR	S136-115-3-REAM12XR	S136-115-4-REAM12XR
0.1200	0.960	1.440	0.125	2.50	S136-120-2-REAM12XR	S136-120-3-REAM12XR	S136-120-4-REAM12XR
0.1250 (1/8)	1.000	1.500	0.1875	2.50	S136-125-2-REAM12XR	S136-125-3-REAM12XR	S136-125-4-REAM12XR

**FLUTES  
2,3,4**

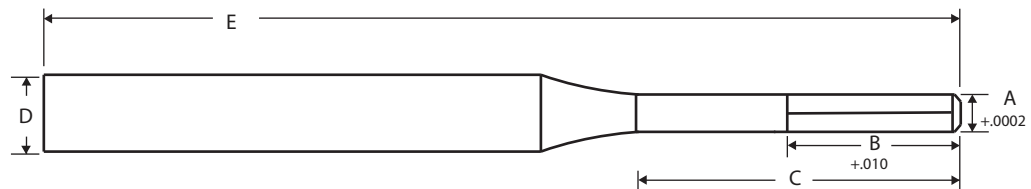
**8X  
FLUTE  
LENGTH**

**12X  
REACH**

**C  
CIRCULAR**

**+  
SWISS-TYPE  
OAL**

**Q  
QUICK TURN  
SPECIALS**



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



# S135

# Metric Reamers / +0.005mm Tolerance

**FLUTES  
2,3,4**

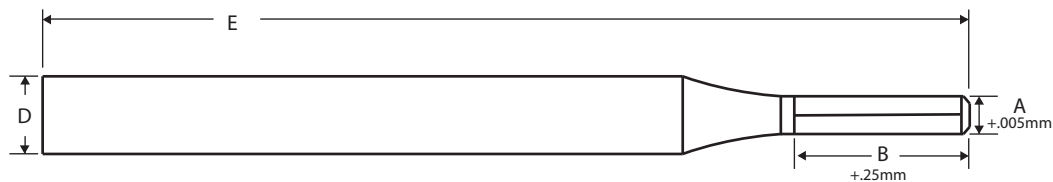
**8X  
FLUTE  
LENGTH**

**C  
CIRCULAR**

**+  
SWISS-TYPE  
OAL**

**Q  
QUICK TURN  
SPECIALS**

Cutter Diameter (mm)	Flute Length (mm)	Shank Diameter (mm)	OAL (in.)	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.20	1.60	3.00	2.00	S135-0.20mm-2-REAM8X	N/A	N/A
0.25	2.00	3.00	2.00	S135-0.25mm-2-REAM8X	N/A	N/A
0.30	2.40	3.00	2.00	S135-0.30mm-2-REAM8X	S135-0.30mm-3-REAM8X	S135-0.30mm-4-REAM8X
0.35	2.80	3.00	2.00	S135-0.35mm-2-REAM8X	S135-0.35mm-3-REAM8X	S135-0.35mm-4-REAM8X
0.40	3.20	3.00	2.00	S135-0.40mm-2-REAM8X	S135-0.40mm-3-REAM8X	S135-0.40mm-4-REAM8X
0.45	3.60	3.00	2.00	S135-0.45mm-2-REAM8X	S135-0.45mm-3-REAM8X	S135-0.45mm-4-REAM8X
0.50	4.00	3.00	2.00	S135-0.50mm-2-REAM8X	S135-0.50mm-3-REAM8X	S135-0.50mm-4-REAM8X
0.55	4.40	3.00	2.00	S135-0.55mm-2-REAM8X	S135-0.55mm-3-REAM8X	S135-0.55mm-4-REAM8X
0.60	4.80	3.00	2.00	S135-0.60mm-2-REAM8X	S135-0.60mm-3-REAM8X	S135-0.60mm-4-REAM8X
0.65	5.20	3.00	2.00	S135-0.65mm-2-REAM8X	S135-0.65mm-3-REAM8X	S135-0.65mm-4-REAM8X
0.70	5.60	3.00	2.00	S135-0.70mm-2-REAM8X	S135-0.70mm-3-REAM8X	S135-0.70mm-4-REAM8X
0.75	6.00	3.00	2.00	S135-0.75mm-2-REAM8X	S135-0.75mm-3-REAM8X	S135-0.75mm-4-REAM8X
0.80	6.40	3.00	2.00	S135-0.80mm-2-REAM8X	S135-0.80mm-3-REAM8X	S135-0.80mm-4-REAM8X
0.85	6.80	3.00	2.00	S135-0.85mm-2-REAM8X	S135-0.85mm-3-REAM8X	S135-0.85mm-4-REAM8X
0.90	7.20	3.00	2.00	S135-0.90mm-2-REAM8X	S135-0.90mm-3-REAM8X	S135-0.90mm-4-REAM8X
0.95	7.60	3.00	2.00	S135-0.95mm-2-REAM8X	S135-0.95mm-3-REAM8X	S135-0.95mm-4-REAM8X
1.00	8.00	3.00	2.00	S135-1.00mm-2-REAM8X	S135-1.00mm-3-REAM8X	S135-1.00mm-4-REAM8X
1.25	10.00	3.00	2.00	S135-1.25mm-2-REAM8X	S135-1.25mm-3-REAM8X	S135-1.25mm-4-REAM8X
1.50	12.00	3.00	2.00	S135-1.50mm-2-REAM8X	S135-1.50mm-3-REAM8X	S135-1.50mm-4-REAM8X
1.75	14.00	3.00	2.00	S135-1.75mm-2-REAM8X	S135-1.75mm-3-REAM8X	S135-1.75mm-4-REAM8X
2.00	16.00	3.00	2.00	S135-2.00mm-2-REAM8X	S135-2.00mm-3-REAM8X	S135-2.00mm-4-REAM8X
2.25	18.00	3.00	2.50	S135-2.25mm-2-REAM8X	S135-2.25mm-3-REAM8X	S135-2.25mm-4-REAM8X
2.50	20.00	3.00	2.50	S135-2.50mm-2-REAM8X	S135-2.50mm-3-REAM8X	S135-2.50mm-4-REAM8X
2.75	22.00	3.00	2.50	S135-2.75mm-2-REAM8X	S135-2.75mm-3-REAM8X	S135-2.75mm-4-REAM8X
3.00	24.00	4.00	2.50	S135-3.00mm-2-REAM8X	S135-3.00mm-3-REAM8X	S135-3.00mm-4-REAM8X



# Metric Reamers / +0.005mm Tolerance

# S136

Cutter Diameter (mm)	Flute Length (mm)	Overall Reach (mm)	Shank Diameter (mm)	OAL (in.)	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.25	2.00	3.00	3.00	2.00	S136-0.25mm-2-REAM12XR	N/A	N/A
0.30	2.40	3.60	3.00	2.00	S136-0.30mm-2-REAM12XR	S136-0.30mm-3-REAM12XR	S136-0.30mm-4-REAM12XR
0.35	2.80	4.20	3.00	2.00	S136-0.35mm-2-REAM12XR	S136-0.35mm-3-REAM12XR	S136-0.35mm-4-REAM12XR
0.40	3.20	4.80	3.00	2.00	S136-0.40mm-2-REAM12XR	S136-0.40mm-3-REAM12XR	S136-0.40mm-4-REAM12XR
0.45	3.60	5.40	3.00	2.00	S136-0.45mm-2-REAM12XR	S136-0.45mm-3-REAM12XR	S136-0.45mm-4-REAM12XR
0.50	4.00	6.00	3.00	2.00	S136-0.50mm-2-REAM12XR	S136-0.50mm-3-REAM12XR	S136-0.50mm-4-REAM12XR
0.55	4.40	6.60	3.00	2.00	S136-0.55mm-2-REAM12XR	S136-0.55mm-3-REAM12XR	S136-0.55mm-4-REAM12XR
0.60	4.80	7.20	3.00	2.00	S136-0.60mm-2-REAM12XR	S136-0.60mm-3-REAM12XR	S136-0.60mm-4-REAM12XR
0.65	5.20	7.80	3.00	2.00	S136-0.65mm-2-REAM12XR	S136-0.65mm-3-REAM12XR	S136-0.65mm-4-REAM12XR
0.70	5.60	8.40	3.00	2.00	S136-0.70mm-2-REAM12XR	S136-0.70mm-3-REAM12XR	S136-0.70mm-4-REAM12XR
0.75	6.00	9.00	3.00	2.00	S136-0.75mm-2-REAM12XR	S136-0.75mm-3-REAM12XR	S136-0.75mm-4-REAM12XR
0.80	6.40	9.60	3.00	2.00	S136-0.80mm-2-REAM12XR	S136-0.80mm-3-REAM12XR	S136-0.80mm-4-REAM12XR
0.85	6.80	10.20	3.00	2.00	S136-0.85mm-2-REAM12XR	S136-0.85mm-3-REAM12XR	S136-0.85mm-4-REAM12XR
0.90	7.20	10.80	3.00	2.00	S136-0.90mm-2-REAM12XR	S136-0.90mm-3-REAM12XR	S136-0.90mm-4-REAM12XR
0.95	7.60	11.40	3.00	2.00	S136-0.95mm-2-REAM12XR	S136-0.95mm-3-REAM12XR	S136-0.95mm-4-REAM12XR
1.00	8.00	12.00	3.00	2.00	S136-1.00mm-2-REAM12XR	S136-1.00mm-3-REAM12XR	S136-1.00mm-4-REAM12XR
1.25	10.00	15.00	3.00	2.00	S136-1.25mm-2-REAM12XR	S136-1.25mm-3-REAM12XR	S136-1.25mm-4-REAM12XR
1.50	12.00	18.00	3.00	2.00	S136-1.50mm-2-REAM12XR	S136-1.50mm-3-REAM12XR	S136-1.50mm-4-REAM12XR
1.75	14.00	21.00	3.00	2.00	S136-1.75mm-2-REAM12XR	S136-1.75mm-3-REAM12XR	S136-1.75mm-4-REAM12XR
2.00	16.00	24.00	3.00	2.00	S136-2.00mm-2-REAM12XR	S136-2.00mm-3-REAM12XR	S136-2.00mm-4-REAM12XR
2.25	18.00	27.00	3.00	2.50	S136-2.25mm-2-REAM12XR	S136-2.25mm-3-REAM12XR	S136-2.25mm-4-REAM12XR
2.50	20.00	30.00	3.00	2.50	S136-2.50mm-2-REAM12XR	S136-2.50mm-3-REAM12XR	S136-2.50mm-4-REAM12XR
2.75	22.00	33.00	3.00	2.50	S136-2.75mm-2-REAM12XR	S136-2.75mm-3-REAM12XR	S136-2.75mm-4-REAM12XR
3.00	24.00	36.00	4.00	2.50	S136-3.00mm-2-REAM12XR	S136-3.00mm-3-REAM12XR	S136-3.00mm-4-REAM12XR

**FLUTES 2,3,4**

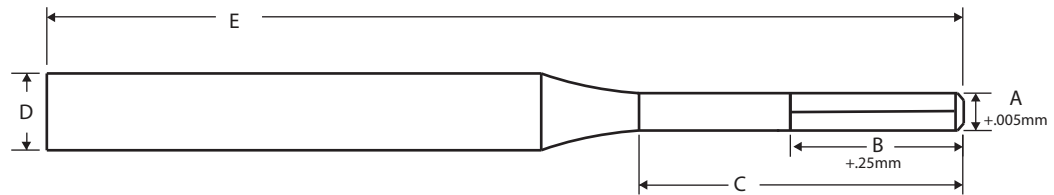
**8X FLUTE LENGTH**

**12X REACH**

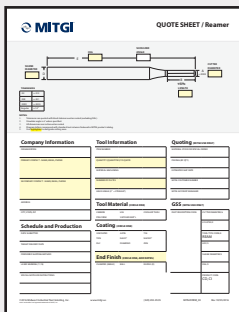
**CIRCULAR**

**SWISS-TYPE OAL**

**QUICK TURN SPECIALS**



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# S137

## 2° Square Drafted Mold Tools

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.015 (1/64)	0.023	2.537	0.1875	4.00	S137-015-2-DVSM	S137-015-3-DVSM	S137-015-4-DVSM
0.031 (1/32)	0.047	2.356	0.1875	4.00	S137-031-2-DVSM	S137-031-3-DVSM	S137-031-4-DVSM
0.047 (3/64)	0.071	2.175	0.1875	4.00	S137-047-2-DVSM	S137-047-3-DVSM	S137-047-4-DVSM
0.062 (1/16)	0.093	2.004	0.1875	4.00	S137-062-2-DVSM	S137-062-3-DVSM	S137-062-4-DVSM
0.078 (5/64)	0.117	1.823	0.1875	4.00	S137-078-2-DVSM	S137-078-3-DVSM	S137-078-4-DVSM
0.093 (3/32)	0.140	1.654	0.1875	4.00	S137-093-2-DVSM	S137-093-3-DVSM	S137-093-4-DVSM
0.109 (7/64)	0.164	1.473	0.1875	4.00	S137-109-2-DVSM	S137-109-3-DVSM	S137-109-4-DVSM
0.125 (1/8)	0.188	2.180	0.250	4.00	S137-125-2-DVSM	S137-125-3-DVSM	S137-125-4-DVSM
0.156 (5/32)*	0.234	1.828	0.250	4.00	S137-156-2-DVSM	S137-156-3-DVSM	S137-156-4-DVSM
0.187 (3/16)*	0.281	1.492	0.250	4.00	S137-188-2-DVSM	S137-188-3-DVSM	S137-188-4-DVSM
0.219 (7/32)*	0.329	2.905	0.375	4.00	S137-219-2-DVSM	S137-219-3-DVSM	S137-219-4-DVSM
0.250 (1/4)*	0.375	2.554	0.375	4.00	S137-250-2-DVSM	S137-250-3-DVSM	S137-250-4-DVSM

## 2° Square Drafted Mold Tools

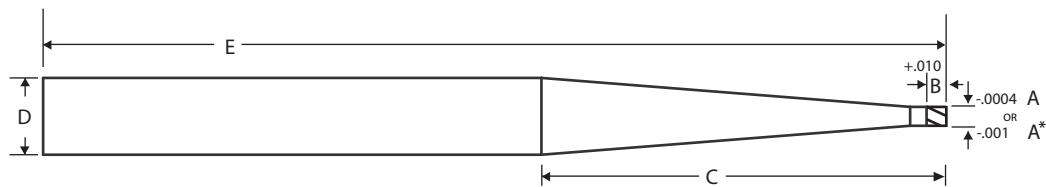
FLUTES  
5

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	5 Flute Tool #
A	B	C	D	E	
0.031 (1/32)	0.047	2.356	0.1875	4.00	S137-031-5-DVSM
0.047 (3/64)	0.071	2.175	0.1875	4.00	S137-047-5-DVSM
0.062 (1/16)	0.093	2.004	0.1875	4.00	S137-062-5-DVSM
0.078 (5/64)	0.117	1.823	0.1875	4.00	S137-078-5-DVSM
0.093 (3/32)	0.140	1.654	0.1875	4.00	S137-093-5-DVSM
0.109 (7/64)	0.164	1.473	0.1875	4.00	S137-109-5-DVSM
0.125 (1/8)	0.188	2.180	0.250	4.00	S137-125-5-DVSM
0.156 (5/32)*	0.234	1.828	0.250	4.00	S137-156-5-DVSM
0.187 (3/16)*	0.281	1.492	0.250	4.00	S137-188-5-DVSM
0.219 (7/32)*	0.329	2.905	0.375	4.00	S137-219-5-DVSM
0.250 (1/4)*	0.375	2.554	0.375	4.00	S137-250-5-DVSM



## 3° Square Drafted Mold Tools

S138

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.015 (1/64)	0.023	1.706	0.1875	3.00	S138-015-2-DVSM	S138-015-3-DVSM	S138-015-4-DVSM
0.031 (1/32)	0.047	1.601	0.1875	3.00	S138-031-2-DVSM	S138-031-3-DVSM	S138-031-4-DVSM
0.047 (3/64)	0.071	1.496	0.1875	3.00	S138-047-2-DVSM	S138-047-3-DVSM	S138-047-4-DVSM
0.062 (1/16)	0.093	1.398	0.1875	3.00	S138-062-2-DVSM	S138-062-3-DVSM	S138-062-4-DVSM
0.078 (5/64)	0.117	1.293	0.1875	3.00	S138-078-2-DVSM	S138-078-3-DVSM	S138-078-4-DVSM
0.093 (3/32)	0.140	1.195	0.1875	3.00	S138-093-2-DVSM	S138-093-3-DVSM	S138-093-4-DVSM
0.109 (7/64)	0.164	1.091	0.1875	3.00	S138-109-2-DVSM	S138-109-3-DVSM	S138-109-4-DVSM
0.125 (1/8)	0.188	1.578	0.250	3.00	S138-125-2-DVSM	S138-125-3-DVSM	S138-125-4-DVSM
0.156 (5/32)*	0.234	1.374	0.250	3.00	S138-156-2-DVSM	S138-156-3-DVSM	S138-156-4-DVSM
0.187 (3/16)*	0.281	1.182	0.250	3.00	S138-188-2-DVSM	S138-188-3-DVSM	S138-188-4-DVSM
0.219 (7/32)*	0.329	2.155	0.375	4.00	S138-219-2-DVSM	S138-219-3-DVSM	S138-219-4-DVSM
0.250 (1/4)*	0.375	1.952	0.375	4.00	S138-250-2-DVSM	S138-250-3-DVSM	S138-250-4-DVSM

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

## 3° Square Drafted Mold Tools

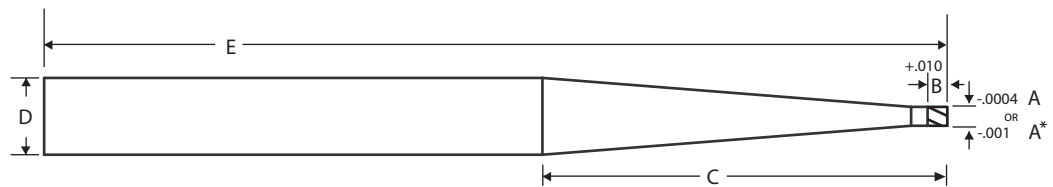
Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	5 Flute Tool #
A	B	C	D	E	
0.031 (1/32)	0.047	1.601	0.1875	3.00	S138-031-5-DVSM
0.047 (3/64)	0.071	1.496	0.1875	3.00	S138-047-5-DVSM
0.062 (1/16)	0.093	1.398	0.1875	3.00	S138-062-5-DVSM
0.078 (5/64)	0.117	1.293	0.1875	3.00	S138-078-5-DVSM
0.093 (3/32)	0.140	1.195	0.1875	3.00	S138-093-5-DVSM
0.109 (7/64)	0.164	1.091	0.1875	3.00	S138-109-5-DVSM
0.125 (1/8)	0.188	1.578	0.250	3.00	S138-125-5-DVSM
0.156 (5/32)*	0.234	1.374	0.250	3.00	S138-156-5-DVSM
0.187 (3/16)*	0.281	1.182	0.250	3.00	S138-188-5-DVSM
0.219 (7/32)*	0.329	2.155	0.375	4.00	S138-219-5-DVSM
0.250 (1/4)*	0.375	1.952	0.375	4.00	S138-250-5-DVSM

FLUTES  
5

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



# S139

## 5° Square Drafted Mold Tools

FLUTES  
2,3,4

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.015 (1/64)	0.023	1.040	0.1875	3.00	S139-015-2-DVSM	S139-015-3-DVSM	S139-015-4-DVSM
0.031 (1/32)	0.047	0.997	0.1875	3.00	S139-031-2-DVSM	S139-031-3-DVSM	S139-031-4-DVSM
0.047 (3/64)	0.071	0.953	0.1875	3.00	S139-047-2-DVSM	S139-047-3-DVSM	S139-047-4-DVSM
0.062 (1/16)	0.093	0.912	0.1875	3.00	S139-062-2-DVSM	S139-062-3-DVSM	S139-062-4-DVSM
0.078 (5/64)	0.117	0.868	0.1875	3.00	S139-078-2-DVSM	S139-078-3-DVSM	S139-078-4-DVSM
0.093 (3/32)	0.140	0.828	0.1875	3.00	S139-093-2-DVSM	S139-093-3-DVSM	S139-093-4-DVSM
0.109 (7/64)	0.164	0.785	0.1875	3.00	S139-109-2-DVSM	S139-109-3-DVSM	S139-109-4-DVSM
0.125 (1/8)	0.188	1.096	0.250	3.00	S139-125-2-DVSM	S139-125-3-DVSM	S139-125-4-DVSM
0.156 (5/32)*	0.234	1.011	0.250	3.00	S139-156-2-DVSM	S139-156-3-DVSM	S139-156-4-DVSM
0.187 (3/16)*	0.281	0.933	0.250	3.00	S139-188-2-DVSM	S139-188-3-DVSM	S139-188-4-DVSM
0.219 (7/32)*	0.329	1.555	0.375	4.00	S139-219-2-DVSM	S139-219-3-DVSM	S139-219-4-DVSM
0.250 (1/4)*	0.375	1.470	0.375	4.00	S139-250-2-DVSM	S139-250-3-DVSM	S139-250-4-DVSM

## 5° Square Drafted Mold Tools

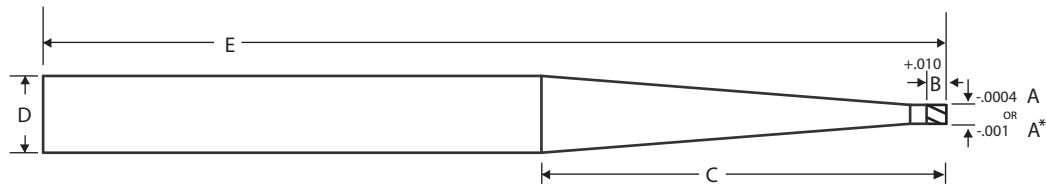
FLUTES  
5

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	5 Flute Tool #
A	B	C	D	E	
0.031 (1/32)	0.047	0.997	0.1875	3.00	S139-031-5-DVSM
0.047 (3/64)	0.071	0.953	0.1875	3.00	S139-047-5-DVSM
0.062 (1/16)	0.093	0.912	0.1875	3.00	S139-062-5-DVSM
0.078 (5/64)	0.117	0.868	0.1875	3.00	S139-078-5-DVSM
0.093 (3/32)	0.140	0.828	0.1875	3.00	S139-093-5-DVSM
0.109 (7/64)	0.164	0.785	0.1875	3.00	S139-109-5-DVSM
0.125 (1/8)	0.188	1.096	0.250	3.00	S139-125-5-DVSM
0.156 (5/32)*	0.234	1.011	0.250	3.00	S139-156-5-DVSM
0.187 (3/16)*	0.281	0.933	0.250	3.00	S139-188-5-DVSM
0.219 (7/32)*	0.329	1.555	0.375	4.00	S139-219-5-DVSM
0.250 (1/4)*	0.375	1.470	0.375	4.00	S139-250-5-DVSM





### STOCKING OPTIONS & BLANKET ORDERS

Once an order has been placed (standard or custom), those tools can be stocked and available for same day shipment on reorders. Blanket POs allow you to schedule tools for regular delivery while taking advantage of lower price points available when ordering in larger quantities. Ask your Account Manager for more information regarding stocking options and blanket POs.

### APPROVAL BASED SAMPLES

No one makes better tools than MITGI. We're so confident that we encourage you to give them a try on approval.

In most cases, the Approval Based Sample Program allows you to order a standard tool and give it a try before placing the full order. This lets you see the catalog tool in action, allows you to compare it to the tools of our competitors, and helps determine whether it matches the specifications required for your project.

Contact MITGI to request a standard tool sample.



# STOCKING & SHIPPING OPTIONS

### SHIPPING & LOCAL DELIVERY

Orders ship via UPS or FedEx; expedited delivery options are available. For customers within 90 miles of Hutchinson, MN, same day courier or pick up options may be available for standard or custom stocked tools. Ask for more information.

### EXPEDITED ORDERS

Our manufacturing facility is set up for flexibility and can produce standard or custom orders quickly and efficiently. Contact us for quick turn and expedited order options.

Expedited delivery is available on a case-by-case basis.

### PRODUCTION TIME LINES

Standard Tools:	3 days or less
Quick Turn Specials:	3 days or less
Custom Tools:	2 weeks or less
Coating:	1 week or less

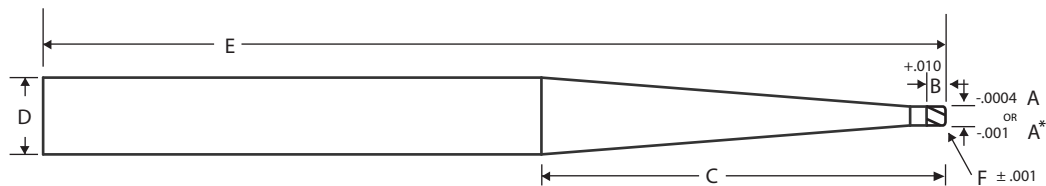


**FLUTES  
2,4**
**1.5X  
LENGTH  
OF CUT**

**VARIABLE  
HELIX**

**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F		
0.015 (1/64)	0.023	2.537	0.1875	4.00	0.003	S140-015-2-.003DVCM	N/A
0.031 (1/32)	0.047	2.356	0.1875	4.00	0.005	S140-031-2-.005DVCM	S140-031-4-.005DVCM
0.047 (3/64)	0.071	2.175	0.1875	4.00	0.005	S140-047-2-.005DVCM	S140-047-4-.005DVCM
0.047 (3/64)	0.071	2.175	0.1875	4.00	0.010	S140-047-2-.010DVCM	S140-047-4-.010DVCM
0.062 (1/16)	0.093	2.004	0.1875	4.00	0.010	S140-062-2-.010DVCM	S140-062-4-.010DVCM
0.062 (1/16)	0.093	2.004	0.1875	4.00	0.015	S140-062-2-.015DVCM	S140-062-4-.015DVCM
0.078 (5/64)	0.117	1.823	0.1875	4.00	0.010	S140-078-2-.010DVCM	S140-078-4-.010DVCM
0.078 (5/64)	0.117	1.823	0.1875	4.00	0.015	S140-078-2-.015DVCM	S140-078-4-.015DVCM
0.093 (3/32)	0.140	1.654	0.1875	4.00	0.010	S140-093-2-.010DVCM	S140-093-4-.010DVCM
0.093 (3/32)	0.140	1.654	0.1875	4.00	0.015	S140-093-2-.015DVCM	S140-093-4-.015DVCM
0.109 (7/64)	0.164	1.473	0.1875	4.00	0.015	S140-109-2-.015DVCM	S140-109-4-.015DVCM
0.109 (7/64)	0.164	1.473	0.1875	4.00	0.020	S140-109-2-.020DVCM	S140-109-4-.020DVCM
0.125 (1/8)	0.188	2.180	0.250	4.00	0.015	S140-125-2-.015DVCM	S140-125-4-.015DVCM
0.125 (1/8)	0.188	2.180	0.250	4.00	0.020	S140-125-2-.020DVCM	S140-125-4-.020DVCM
0.156 (5/32)*	0.234	1.828	0.250	4.00	0.015	S140-156-2-.015DVCM	S140-156-4-.015DVCM
0.156 (5/32)*	0.234	1.828	0.250	4.00	0.020	S140-156-2-.020DVCM	S140-156-4-.020DVCM
0.187 (3/16)*	0.281	1.492	0.250	4.00	0.015	S140-188-2-.015DVCM	S140-188-4-.015DVCM
0.187 (3/16)*	0.281	1.492	0.250	4.00	0.020	S140-188-2-.020DVCM	S140-188-4-.020DVCM
0.187 (3/16)*	0.281	1.492	0.250	4.00	0.031	S140-188-2-.031DVCM	S140-188-4-.031DVCM
0.219 (7/32)*	0.329	2.905	0.375	4.00	0.015	S140-219-2-.015DVCM	S140-219-4-.015DVCM
0.219 (7/32)*	0.329	2.905	0.375	4.00	0.020	S140-219-2-.020DVCM	S140-219-4-.020DVCM
0.219 (7/32)*	0.329	2.905	0.375	4.00	0.031	S140-219-2-.031DVCM	S140-219-4-.031DVCM
0.250 (1/4)*	0.375	2.554	0.375	4.00	0.015	S140-250-2-.015DVCM	S140-250-4-.015DVCM
0.250 (1/4)*	0.375	2.554	0.375	4.00	0.020	S140-250-2-.020DVCM	S140-250-4-.020DVCM
0.250 (1/4)*	0.375	2.554	0.375	4.00	0.031	S140-250-2-.031DVCM	S140-250-4-.031DVCM



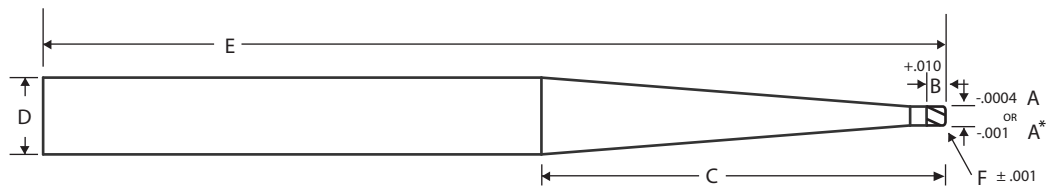


**FLUTES  
2,4**
**1.5X  
LENGTH  
OF CUT**

**VARIABLE  
HELIX**

**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F		
0.015 (1/64)	0.023	1.706	0.1875	3.00	0.003	S141-015-2-.003DVCM	N/A
0.031 (1/32)	0.047	1.601	0.1875	3.00	0.005	S141-031-2-.005DVCM	S141-031-4-.005DVCM
0.047 (3/64)	0.071	1.496	0.1875	3.00	0.005	S141-047-2-.005DVCM	S141-047-4-.005DVCM
0.047 (3/64)	0.071	1.496	0.1875	3.00	0.010	S141-047-2-.010DVCM	S141-047-4-.010DVCM
0.062 (1/16)	0.093	1.398	0.1875	3.00	0.010	S141-062-2-.010DVCM	S141-062-4-.010DVCM
0.062 (1/16)	0.093	1.398	0.1875	3.00	0.015	S141-062-2-.015DVCM	S141-062-4-.015DVCM
0.078 (5/64)	0.117	1.293	0.1875	3.00	0.010	S141-078-2-.010DVCM	S141-078-4-.010DVCM
0.078 (5/64)	0.117	1.293	0.1875	3.00	0.015	S141-078-2-.015DVCM	S141-078-4-.015DVCM
0.093 (3/32)	0.140	1.195	0.1875	3.00	0.010	S141-093-2-.010DVCM	S141-093-4-.010DVCM
0.093 (3/32)	0.140	1.195	0.1875	3.00	0.015	S141-093-2-.015DVCM	S141-093-4-.015DVCM
0.109 (7/64)	0.164	1.091	0.1875	3.00	0.015	S141-109-2-.015DVCM	S141-109-4-.015DVCM
0.109 (7/64)	0.164	1.091	0.1875	3.00	0.020	S141-109-2-.020DVCM	S141-109-4-.020DVCM
0.125 (1/8)	0.188	1.578	0.250	3.00	0.015	S141-125-2-.015DVCM	S141-125-4-.015DVCM
0.125 (1/8)	0.188	1.578	0.250	3.00	0.020	S141-125-2-.020DVCM	S141-125-4-.020DVCM
0.156 (5/32)*	0.234	1.374	0.250	3.00	0.015	S141-156-2-.015DVCM	S141-156-4-.015DVCM
0.156 (5/32)*	0.234	1.374	0.250	3.00	0.020	S141-156-2-.020DVCM	S141-156-4-.020DVCM
0.187 (3/16)*	0.281	1.182	0.250	3.00	0.015	S141-188-2-.015DVCM	S141-188-4-.015DVCM
0.187 (3/16)*	0.281	1.182	0.250	3.00	0.020	S141-188-2-.020DVCM	S141-188-4-.020DVCM
0.187 (3/16)*	0.281	1.182	0.250	3.00	0.031	S141-188-2-.031DVCM	S141-188-4-.031DVCM
0.219 (7/32)*	0.329	2.155	0.375	4.00	0.015	S141-219-2-.015DVCM	S141-219-4-.015DVCM
0.219 (7/32)*	0.329	2.155	0.375	4.00	0.020	S141-219-2-.020DVCM	S141-219-4-.020DVCM
0.219 (7/32)*	0.329	2.155	0.375	4.00	0.031	S141-219-2-.031DVCM	S141-219-4-.031DVCM
0.250 (1/4)*	0.375	1.952	0.375	4.00	0.015	S141-250-2-.015DVCM	S141-250-4-.015DVCM
0.250 (1/4)*	0.375	1.952	0.375	4.00	0.020	S141-250-2-.020DVCM	S141-250-4-.020DVCM
0.250 (1/4)*	0.375	1.952	0.375	4.00	0.031	S141-250-2-.031DVCM	S141-250-4-.031DVCM



## 3° Corner Radius Drafted Mold Tools

S141

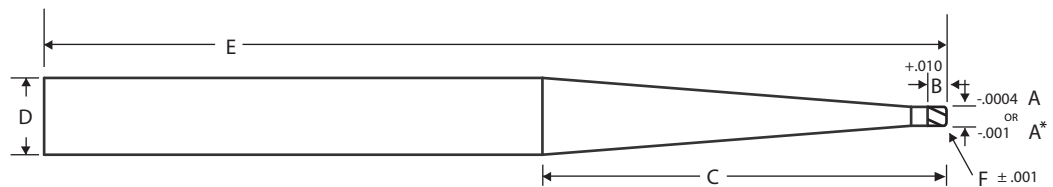
Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	C	D	E	F	
0.047 (3/64)	0.071	1.496	0.1875	3.00	0.005	S141-047-5-.005DVCM
0.047 (3/64)	0.071	1.496	0.1875	3.00	0.010	S141-047-5-.010DVCM
0.062 (1/16)	0.093	1.398	0.1875	3.00	0.010	S141-062-5-.010DVCM
0.062 (1/16)	0.093	1.398	0.1875	3.00	0.015	S141-062-5-.015DVCM
0.078 (5/64)	0.117	1.293	0.1875	3.00	0.010	S141-078-5-.010DVCM
0.078 (5/64)	0.117	1.293	0.1875	3.00	0.015	S141-078-5-.015DVCM
0.093 (3/32)	0.140	1.195	0.1875	3.00	0.010	S141-093-5-.010DVCM
0.093 (3/32)	0.140	1.195	0.1875	3.00	0.015	S141-093-5-.015DVCM
0.109 (7/64)	0.164	1.091	0.1875	3.00	0.015	S141-109-5-.015DVCM
0.109 (7/64)	0.164	1.091	0.1875	3.00	0.020	S141-109-5-.020DVCM
0.125 (1/8)	0.188	1.578	0.250	3.00	0.015	S141-125-5-.015DVCM
0.125 (1/8)	0.188	1.578	0.250	3.00	0.020	S141-125-5-.020DVCM
0.156 (5/32)*	0.234	1.374	0.250	3.00	0.015	S141-156-5-.015DVCM
0.156 (5/32)*	0.234	1.374	0.250	3.00	0.020	S141-156-5-.020DVCM
0.187 (3/16)*	0.281	1.182	0.250	3.00	0.015	S141-188-5-.015DVCM
0.187 (3/16)*	0.281	1.182	0.250	3.00	0.020	S141-188-5-.020DVCM
0.187 (3/16)*	0.281	1.182	0.250	3.00	0.031	S141-188-5-.031DVCM
0.219 (7/32)*	0.329	2.155	0.375	4.00	0.015	S141-219-5-.015DVCM
0.219 (7/32)*	0.329	2.155	0.375	4.00	0.020	S141-219-5-.020DVCM
0.219 (7/32)*	0.329	2.155	0.375	4.00	0.031	S141-219-5-.031DVCM
0.250 (1/4)*	0.375	1.952	0.375	4.00	0.015	S141-250-5-.015DVCM
0.250 (1/4)*	0.375	1.952	0.375	4.00	0.020	S141-250-5-.020DVCM
0.250 (1/4)*	0.375	1.952	0.375	4.00	0.031	S141-250-5-.031DVCM

FLUTES  
5

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



### MITGI INSIDE ACCOUNT REPRESENTATIVES

P. 2

MITGI Inside Account Representatives are the right resources for quote requests, to place orders, check inventory, or provide tracking. See page 2 for more info.

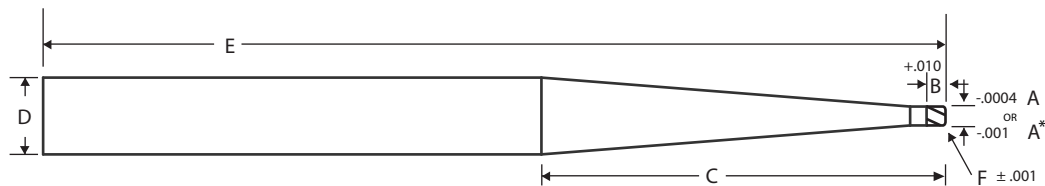


**FLUTES  
2,4**
**1.5X  
LENGTH  
OF CUT**

**VARIABLE  
HELIX**

**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F		
0.015 (1/64)	0.023	1.040	0.1875	3.00	0.003	S142-015-2-.003DVCM	N/A
0.031 (1/32)	0.047	0.997	0.1875	3.00	0.005	S142-031-2-.005DVCM	S142-031-4-.005DVCM
0.047 (3/64)	0.071	0.953	0.1875	3.00	0.005	S142-047-2-.005DVCM	S142-047-4-.005DVCM
0.047 (3/64)	0.071	0.953	0.1875	3.00	0.010	S142-047-2-.010DVCM	S142-047-4-.010DVCM
0.062 (1/16)	0.093	0.912	0.1875	3.00	0.010	S142-062-2-.010DVCM	S142-062-4-.010DVCM
0.062 (1/16)	0.093	0.912	0.1875	3.00	0.015	S142-062-2-.015DVCM	S142-062-4-.015DVCM
0.078 (5/64)	0.117	0.868	0.1875	3.00	0.010	S142-078-2-.010DVCM	S142-078-4-.010DVCM
0.078 (5/64)	0.117	0.868	0.1875	3.00	0.015	S142-078-2-.015DVCM	S142-078-4-.015DVCM
0.093 (3/32)	0.140	0.828	0.1875	3.00	0.010	S142-093-2-.010DVCM	S142-093-4-.010DVCM
0.093 (3/32)	0.140	0.828	0.1875	3.00	0.015	S142-093-2-.015DVCM	S142-093-4-.015DVCM
0.109 (7/64)	0.164	0.785	0.1875	3.00	0.015	S142-109-2-.015DVCM	S142-109-4-.015DVCM
0.109 (7/64)	0.164	0.785	0.1875	3.00	0.020	S142-109-2-.020DVCM	S142-109-4-.020DVCM
0.125 (1/8)	0.188	1.096	0.250	3.00	0.015	S142-125-2-.015DVCM	S142-125-4-.015DVCM
0.125 (1/8)	0.188	1.096	0.250	3.00	0.020	S142-125-2-.020DVCM	S142-125-4-.020DVCM
0.156 (5/32)*	0.234	1.011	0.250	3.00	0.015	S142-156-2-.015DVCM	S142-156-4-.015DVCM
0.156 (5/32)*	0.234	1.011	0.250	3.00	0.020	S142-156-2-.020DVCM	S142-156-4-.020DVCM
0.187 (3/16)*	0.281	0.933	0.250	3.00	0.015	S142-188-2-.015DVCM	S142-188-4-.015DVCM
0.187 (3/16)*	0.281	0.933	0.250	3.00	0.020	S142-188-2-.020DVCM	S142-188-4-.020DVCM
0.187 (3/16)*	0.281	0.933	0.250	3.00	0.031	S142-188-2-.031DVCM	S142-188-4-.031DVCM
0.219 (7/32)*	0.329	1.555	0.375	4.00	0.015	S142-219-2-.015DVCM	S142-219-4-.015DVCM
0.219 (7/32)*	0.329	1.555	0.375	4.00	0.020	S142-219-2-.020DVCM	S142-219-4-.020DVCM
0.219 (7/32)*	0.329	1.555	0.375	4.00	0.031	S142-219-2-.031DVCM	S142-219-4-.031DVCM
0.250 (1/4)*	0.375	1.470	0.375	4.00	0.015	S142-250-2-.015DVCM	S142-250-4-.015DVCM
0.250 (1/4)*	0.375	1.470	0.375	4.00	0.020	S142-250-2-.020DVCM	S142-250-4-.020DVCM
0.250 (1/4)*	0.375	1.470	0.375	4.00	0.031	S142-250-2-.031DVCM	S142-250-4-.031DVCM



## 5° Corner Radius Drafted Mold Tools

S142

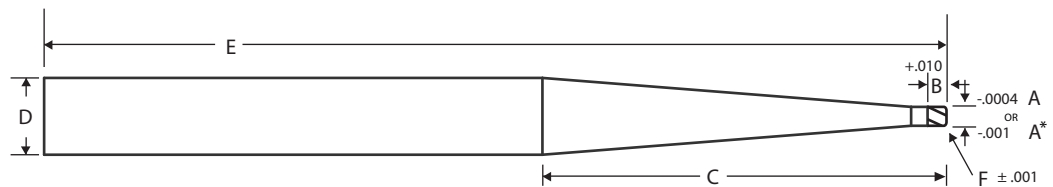
Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	C	D	E	F	
0.047 (3/64)	0.071	0.953	0.1875	3.00	0.005	S142-047-5-.005DVCM
0.047 (3/64)	0.071	0.953	0.1875	3.00	0.010	S142-047-5-.010DVCM
0.062 (1/16)	0.093	0.912	0.1875	3.00	0.010	S142-062-5-.010DVCM
0.062 (1/16)	0.093	0.912	0.1875	3.00	0.015	S142-062-5-.015DVCM
0.078 (5/64)	0.117	0.868	0.1875	3.00	0.010	S142-078-5-.010DVCM
0.078 (5/64)	0.117	0.868	0.1875	3.00	0.015	S142-078-5-.015DVCM
0.093 (3/32)	0.140	0.828	0.1875	3.00	0.010	S142-093-5-.010DVCM
0.093 (3/32)	0.140	0.828	0.1875	3.00	0.015	S142-093-5-.015DVCM
0.109 (7/64)	0.164	0.785	0.1875	3.00	0.015	S142-109-5-.015DVCM
0.109 (7/64)	0.164	0.785	0.1875	3.00	0.020	S142-109-5-.020DVCM
0.125 (1/8)	0.188	1.096	0.250	3.00	0.015	S142-125-5-.015DVCM
0.125 (1/8)	0.188	1.096	0.250	3.00	0.020	S142-125-5-.020DVCM
0.156 (5/32)*	0.234	1.011	0.250	3.00	0.015	S142-156-5-.015DVCM
0.156 (5/32)*	0.234	1.011	0.250	3.00	0.020	S142-156-5-.020DVCM
0.187 (3/16)*	0.281	0.933	0.250	3.00	0.015	S142-188-5-.015DVCM
0.187 (3/16)*	0.281	0.933	0.250	3.00	0.020	S142-188-5-.020DVCM
0.187 (3/16)*	0.281	0.933	0.250	3.00	0.031	S142-188-5-.031DVCM
0.219 (7/32)*	0.329	1.555	0.375	4.00	0.015	S142-219-5-.015DVCM
0.219 (7/32)*	0.329	1.555	0.375	4.00	0.020	S142-219-5-.020DVCM
0.219 (7/32)*	0.329	1.555	0.375	4.00	0.031	S142-219-5-.031DVCM
0.250 (1/4)*	0.375	1.470	0.375	4.00	0.015	S142-250-5-.015DVCM
0.250 (1/4)*	0.375	1.470	0.375	4.00	0.020	S142-250-5-.020DVCM
0.250 (1/4)*	0.375	1.470	0.375	4.00	0.031	S142-250-5-.031DVCM

FLUTES  
5

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



# S143

## 2° Ball Drafted Mold Tools

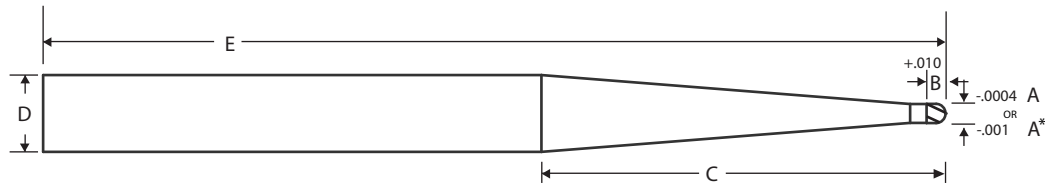
FLUTES  
2,4

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	2 Flute Tool #	4 Flute Tool #
A	B	C	D	E		
0.015 (1/64)	0.023	2.537	0.1875	4.00	S143-015-2-DVBM	N/A
0.031 (1/32)	0.047	2.356	0.1875	4.00	S143-031-2-DVBM	S143-031-4-DVBM
0.047 (3/64)	0.071	2.175	0.1875	4.00	S143-047-2-DVBM	S143-047-4-DVBM
0.062 (1/16)	0.093	2.004	0.1875	4.00	S143-062-2-DVBM	S143-062-4-DVBM
0.078 (5/64)	0.117	1.823	0.1875	4.00	S143-078-2-DVBM	S143-078-4-DVBM
0.093 (3/32)	0.140	1.654	0.1875	4.00	S143-093-2-DVBM	S143-093-4-DVBM
0.109 (7/64)	0.164	1.473	0.1875	4.00	S143-109-2-DVBM	S143-109-4-DVBM
0.125 (1/8)	0.188	2.180	0.250	4.00	S143-125-2-DVBM	S143-125-4-DVBM
0.156 (5/32)*	0.234	1.828	0.250	4.00	S143-156-2-DVBM	S143-156-4-DVBM
0.187 (3/16)*	0.281	1.492	0.250	4.00	S143-188-2-DVBM	S143-188-4-DVBM
0.219 (7/32)*	0.329	2.905	0.375	4.00	S143-219-2-DVBM	S143-219-4-DVBM
0.250 (1/4)*	0.375	2.554	0.375	4.00	S143-250-2-DVBM	S143-250-4-DVBM



# S144

## 3° Ball Drafted Mold Tools

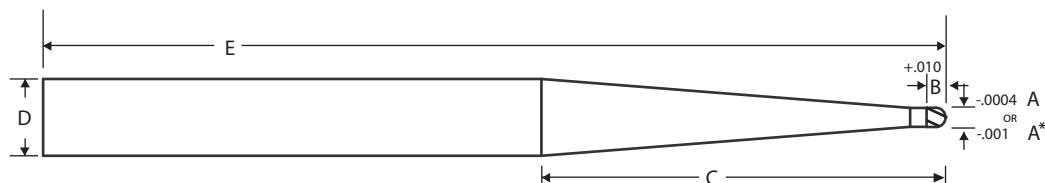
FLUTES  
2,4

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	2 Flute Tool #	4 Flute Tool #
A	B	C	D	E		
0.015 (1/64)	0.023	1.706	0.1875	3.00	S144-015-2-DVBM	N/A
0.031 (1/32)	0.047	1.601	0.1875	3.00	S144-031-2-DVBM	S144-031-4-DVBM
0.047 (3/64)	0.071	1.496	0.1875	3.00	S144-047-2-DVBM	S144-047-4-DVBM
0.062 (1/16)	0.093	1.398	0.1875	3.00	S144-062-2-DVBM	S144-062-4-DVBM
0.078 (5/64)	0.117	1.293	0.1875	3.00	S144-078-2-DVBM	S144-078-4-DVBM
0.093 (3/32)	0.140	1.195	0.1875	3.00	S144-093-2-DVBM	S144-093-4-DVBM
0.109 (7/64)	0.164	1.091	0.1875	3.00	S144-109-2-DVBM	S144-109-4-DVBM
0.125 (1/8)	0.188	1.578	0.250	3.00	S144-125-2-DVBM	S144-125-4-DVBM
0.156 (5/32)*	0.234	1.374	0.250	3.00	S144-156-2-DVBM	S144-156-4-DVBM
0.187 (3/16)*	0.281	1.182	0.250	3.00	S144-188-2-DVBM	S144-188-4-DVBM
0.219 (7/32)*	0.329	2.155	0.375	4.00	S144-219-2-DVBM	S144-219-4-DVBM
0.250 (1/4)*	0.375	1.952	0.375	4.00	S144-250-2-DVBM	S144-250-4-DVBM



## 5° Ball Drafted Mold Tools

S145

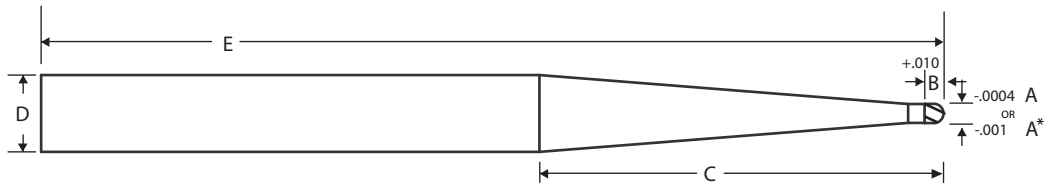
Cutter Diameter	Length of Cut	Approx. Reach	Shank Diameter	Overall Length	2 Flute Tool #	4 Flute Tool #
A	B	C	D	E		
0.015 (1/64)	0.023	1.040	0.1875	3.00	S145-015-2-DVBM	N/A
0.031 (1/32)	0.047	0.997	0.1875	3.00	S145-031-2-DVBM	S145-031-4-DVBM
0.047 (3/64)	0.071	0.953	0.1875	3.00	S145-047-2-DVBM	S145-047-4-DVBM
0.062 (1/16)	0.093	0.912	0.1875	3.00	S145-062-2-DVBM	S145-062-4-DVBM
0.078 (5/64)	0.117	0.868	0.1875	3.00	S145-078-2-DVBM	S145-078-4-DVBM
0.093 (3/32)	0.140	0.828	0.1875	3.00	S145-093-2-DVBM	S145-093-4-DVBM
0.109 (7/64)	0.164	0.785	0.1875	3.00	S145-109-2-DVBM	S145-109-4-DVBM
0.125 (1/8)	0.188	1.096	0.250	3.00	S145-125-2-DVBM	S145-125-4-DVBM
0.156 (5/32)*	0.234	1.011	0.250	3.00	S145-156-2-DVBM	S145-156-4-DVBM
0.187 (3/16)*	0.281	0.933	0.250	3.00	S145-188-2-DVBM	S145-188-4-DVBM
0.219 (7/32)*	0.329	1.555	0.375	4.00	S145-219-2-DVBM	S145-219-4-DVBM
0.250 (1/4)*	0.375	1.470	0.375	4.00	S145-250-2-DVBM	S145-250-4-DVBM

FLUTES  
2,4

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



### MANUFACTURED BY MITGI: The Standard Advantage

**On-site manufacturing means MITGI can ensure the quality and quick turn availability of every tool in our standard lines. But how do they compare?**

For many years, MITGI has been a reliable source for high quality, hard to find specials. Manufactured with the same attention to detail, MITGI standard tools deliver the same great quality and performance that customers have come to expect from our specials.

**Customers tell us that MITGI standards consistently outperform other standard tools in the marketplace. Ready to try for yourself? See page 2 for contact information.**



# S146

## 2° Square Clearance Cutter Mold Tools

FLUTES  
2,4

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
A	B	C	D	E			
0.015 (1/64)	0.023	1.50	0.1875	3.00	S146-015-2-CVSM	S146-015-3-CVSM	S146-015-4-CVSM
0.031 (1/32)	0.047	1.50	0.1875	3.00	S146-031-2-CVSM	S146-031-3-CVSM	S146-031-4-CVSM
0.047 (3/64)	0.071	1.50	0.1875	3.00	S146-047-2-CVSM	S146-047-3-CVSM	S146-047-4-CVSM
0.062 (1/16)	0.093	1.50	0.1875	3.00	S146-062-2-CVSM	S146-062-3-CVSM	S146-062-4-CVSM
0.078 (5/64)	0.117	1.50	0.1875	3.00	S146-078-2-CVSM	S146-078-3-CVSM	S146-078-4-CVSM
0.093 (3/32)	0.140	1.50	0.1875	3.00	S146-093-2-CVSM	S146-093-3-CVSM	S146-093-4-CVSM
0.109 (7/64)	0.164	1.50	0.1875	3.00	S146-109-2-CVSM	S146-109-3-CVSM	S146-109-4-CVSM
0.125 (1/8)	0.188	1.50	0.250	3.00	S146-125-2-CVSM	S146-125-3-CVSM	S146-125-4-CVSM
0.156 (5/32)*	0.234	1.50	0.250	3.00	S146-156-2-CVSM	S146-156-3-CVSM	S146-156-4-CVSM
0.187 (3/16)*	0.281	1.50	0.250	3.00	S146-188-2-CVSM	S146-188-3-CVSM	S146-188-4-CVSM
0.219 (7/32)*	0.329	1.50	0.375	4.00	S146-219-2-CVSM	S146-219-3-CVSM	S146-219-4-CVSM
0.250 (1/4)*	0.375	1.50	0.375	4.00	S146-250-2-CVSM	S146-250-3-CVSM	S146-250-4-CVSM

## 2° Square Clearance Cutter Mold Tools

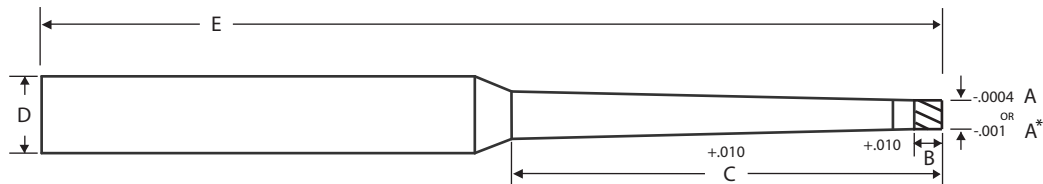
FLUTES  
5

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	5 Flute Tool #
A	B	C	D	E	
0.031 (1/32)	0.047	1.50	0.1875	3.00	S146-031-5-CVSM
0.047 (3/64)	0.071	1.50	0.1875	3.00	S146-047-5-CVSM
0.062 (1/16)	0.093	1.50	0.1875	3.00	S146-062-5-CVSM
0.078 (5/64)	0.117	1.50	0.1875	3.00	S146-078-5-CVSM
0.093 (3/32)	0.140	1.50	0.1875	3.00	S146-093-5-CVSM
0.109 (7/64)	0.164	1.50	0.1875	3.00	S146-109-5-CVSM
0.125 (1/8)	0.188	1.50	0.250	3.00	S146-125-5-CVSM
0.156 (5/32)*	0.234	1.50	0.250	3.00	S146-156-5-CVSM
0.187 (3/16)*	0.281	1.50	0.250	3.00	S146-188-5-CVSM
0.219 (7/32)*	0.329	1.50	0.375	4.00	S146-219-5-CVSM
0.250 (1/4)*	0.375	1.50	0.375	4.00	S146-250-5-CVSM



## 2° Ball Clearance Cutter Mold Tools

S148

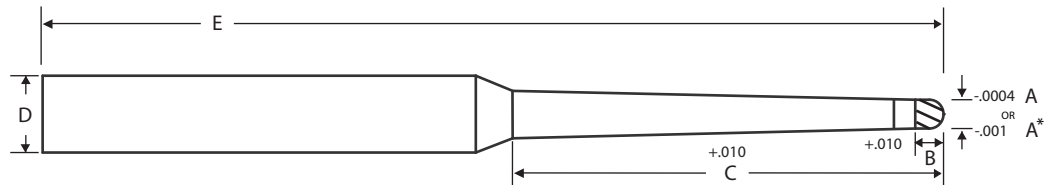
Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	2 Flute Tool #	4 Flute Tool #
A	B	C	D	E		
0.015 (1/64)	0.023	1.50	0.1875	3.00	S148-015-2-CVBM	N/A
0.031 (1/32)	0.047	1.50	0.1875	3.00	S148-031-2-CVBM	S148-031-4-CVBM
0.047 (3/64)	0.071	1.50	0.1875	3.00	S148-047-2-CVBM	S148-047-4-CVBM
0.062 (1/16)	0.093	1.50	0.1875	3.00	S148-062-2-CVBM	S148-062-4-CVBM
0.078 (5/64)	0.117	1.50	0.1875	3.00	S148-078-2-CVBM	S148-078-4-CVBM
0.093 (3/32)	0.140	1.50	0.1875	3.00	S148-093-2-CVBM	S148-093-4-CVBM
0.109 (7/64)	0.164	1.50	0.1875	3.00	S148-109-2-CVBM	S148-109-4-CVBM
0.125 (1/8)	0.188	1.50	0.250	3.00	S148-125-2-CVBM	S148-125-4-CVBM
0.156 (5/32)*	0.234	1.50	0.250	3.00	S148-156-2-CVBM	S148-156-4-CVBM
0.187 (3/16)*	0.281	1.50	0.250	3.00	S148-188-2-CVBM	S148-188-4-CVBM
0.219 (7/32)*	0.329	1.50	0.375	4.00	S148-219-2-CVBM	S148-219-4-CVBM
0.250 (1/4)*	0.375	1.50	0.375	4.00	S148-250-2-CVBM	S148-250-4-CVBM

FLUTES  
2,4

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



## Custom Clearance Cutter Mold Tools

Can't find a tool to meet your exact specifications?  
Specials or modified standards may be the answer.

### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances and number of flutes vary by design
- Specs include shoulder angle, taper angle per side, overall reach, length of cut, and cutter diameter
- Coated and uncoated
- Specials usually available in two weeks or less

Quote forms available on our website and upon request.  
Contact us for an estimate today.

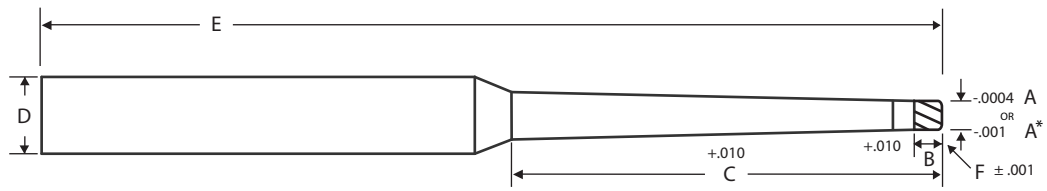


**FLUTES  
2,4**
**1.5X  
LENGTH  
OF CUT**

**VARIABLE  
HELIX**

**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	2 Flute Tool #	4 Flute Tool #
A	B	C	D	E	F		
0.015 (1/64)	0.023	1.50	0.1875	3.00	0.003	S147-015-2-.003CVCM	N/A
0.031 (1/32)	0.047	1.50	0.1875	3.00	0.005	S147-031-2-.005CVCM	S147-031-4-.005CVCM
0.047 (3/64)	0.071	1.50	0.1875	3.00	0.005	S147-047-2-.005CVCM	S147-047-4-.005CVCM
0.047 (3/64)	0.071	1.50	0.1875	3.00	0.010	S147-047-2-.010CVCM	S147-047-4-.010CVCM
0.062 (1/16)	0.093	1.50	0.1875	3.00	0.010	S147-062-2-.010CVCM	S147-062-4-.010CVCM
0.062 (1/16)	0.093	1.50	0.1875	3.00	0.015	S147-062-2-.015CVCM	S147-062-4-.015CVCM
0.078 (5/64)	0.117	1.50	0.1875	3.00	0.010	S147-078-2-.010CVCM	S147-078-4-.010CVCM
0.078 (5/64)	0.117	1.50	0.1875	3.00	0.015	S147-078-2-.015CVCM	S147-078-4-.015CVCM
0.093 (3/32)	0.140	1.50	0.1875	3.00	0.010	S147-093-2-.010CVCM	S147-093-4-.010CVCM
0.093 (3/32)	0.140	1.50	0.1875	3.00	0.015	S147-093-2-.015CVCM	S147-093-4-.015CVCM
0.109 (7/64)	0.164	1.50	0.1875	3.00	0.015	S147-109-2-.015CVCM	S147-109-4-.015CVCM
0.109 (7/64)	0.164	1.50	0.1875	3.00	0.020	S147-109-2-.020CVCM	S147-109-4-.020CVCM
0.125 (1/8)	0.188	1.50	0.250	3.00	0.015	S147-125-2-.015CVCM	S147-125-4-.015CVCM
0.125 (1/8)	0.188	1.50	0.250	3.00	0.020	S147-125-2-.020CVCM	S147-125-4-.020CVCM
0.156 (5/32)*	0.234	1.50	0.250	3.00	0.015	S147-156-2-.015CVCM	S147-156-4-.015CVCM
0.156 (5/32)*	0.234	1.50	0.250	3.00	0.020	S147-156-2-.020CVCM	S147-156-4-.020CVCM
0.187 (3/16)*	0.281	1.50	0.250	3.00	0.015	S147-188-2-.015CVCM	S147-188-4-.015CVCM
0.187 (3/16)*	0.281	1.50	0.250	3.00	0.020	S147-188-2-.020CVCM	S147-188-4-.020CVCM
0.187 (3/16)*	0.281	1.50	0.250	3.00	0.031	S147-188-2-.031CVCM	S147-188-4-.031CVCM
0.219 (7/32)*	0.329	1.50	0.375	4.00	0.015	S147-219-2-.015CVCM	S147-219-4-.015CVCM
0.219 (7/32)*	0.329	1.50	0.375	4.00	0.020	S147-219-2-.020CVCM	S147-219-4-.020CVCM
0.219 (7/32)*	0.329	1.50	0.375	4.00	0.031	S147-219-2-.031CVCM	S147-219-4-.031CVCM
0.250 (1/4)*	0.375	1.50	0.375	4.00	0.015	S147-250-2-.015CVCM	S147-250-4-.015CVCM
0.250 (1/4)*	0.375	1.50	0.375	4.00	0.020	S147-250-2-.020CVCM	S147-250-4-.020CVCM
0.250 (1/4)*	0.375	1.50	0.375	4.00	0.031	S147-250-2-.031CVCM	S147-250-4-.031CVCM



## 2° Corner Radius Clearance Cutter Mold Tools

S147

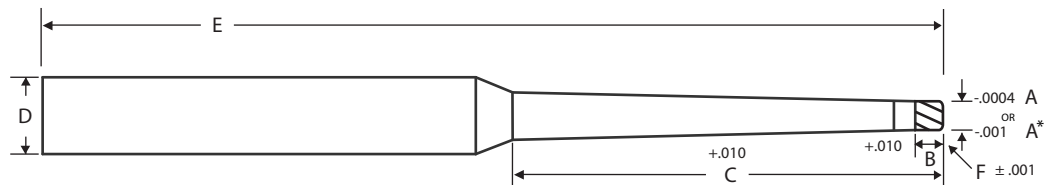
Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	C	D	E	F	
0.047 (3/64)	0.071	1.50	0.1875	3.00	0.005	S147-047-5-.005CVCM
0.047 (3/64)	0.071	1.50	0.1875	3.00	0.010	S147-047-5-.010CVCM
0.062 (1/16)	0.093	1.50	0.1875	3.00	0.010	S147-062-5-.010CVCM
0.062 (1/16)	0.093	1.50	0.1875	3.00	0.015	S147-062-5-.015CVCM
0.078 (5/64)	0.117	1.50	0.1875	3.00	0.010	S147-078-5-.010CVCM
0.078 (5/64)	0.117	1.50	0.1875	3.00	0.015	S147-078-5-.015CVCM
0.093 (3/32)	0.140	1.50	0.1875	3.00	0.010	S147-093-5-.010CVCM
0.093 (3/32)	0.140	1.50	0.1875	3.00	0.015	S147-093-5-.015CVCM
0.109 (7/64)	0.164	1.50	0.1875	3.00	0.015	S147-109-5-.015CVCM
0.109 (7/64)	0.164	1.50	0.1875	3.00	0.020	S147-109-5-.020CVCM
0.125 (1/8)	0.188	1.50	0.250	3.00	0.015	S147-125-5-.015CVCM
0.125 (1/8)	0.188	1.50	0.250	3.00	0.020	S147-125-5-.020CVCM
0.156 (5/32)*	0.234	1.50	0.250	3.00	0.015	S147-156-5-.015CVCM
0.156 (5/32)*	0.234	1.50	0.250	3.00	0.020	S147-156-5-.020CVCM
0.187 (3/16)*	0.281	1.50	0.250	3.00	0.015	S147-188-5-.015CVCM
0.187 (3/16)*	0.281	1.50	0.250	3.00	0.020	S147-188-5-.020CVCM
0.187 (3/16)*	0.281	1.50	0.250	3.00	0.031	S147-188-5-.031CVCM
0.219 (7/32)*	0.329	1.50	0.375	4.00	0.015	S147-219-5-.015CVCM
0.219 (7/32)*	0.329	1.50	0.375	4.00	0.020	S147-219-5-.020CVCM
0.219 (7/32)*	0.329	1.50	0.375	4.00	0.031	S147-219-5-.031CVCM
0.250 (1/4)*	0.375	1.50	0.375	4.00	0.015	S147-250-5-.015CVCM
0.250 (1/4)*	0.375	1.50	0.375	4.00	0.020	S147-250-5-.020CVCM
0.250 (1/4)*	0.375	1.50	0.375	4.00	0.031	S147-250-5-.031CVCM

FLUTES  
5

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



IN STOCK, ON DEMAND

P.117

All standard tools can be manufactured and shipped within 3 days of receiving the purchase order. See page 117 for more information regarding turnaround times, stocking programs, and delivery times for both standard and custom tools.



# S149

## 0.5° Square Tapered Rib Cutter Mold Tools

FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S149-015-3-TASM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S149-015-3-TASM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S149-031-3-TASM8X	S149-031-4-TASM8X
0.031 (1/32)	0.372	0.1875	3.00	S149-031-3-TASM12X	S149-031-4-TASM12X
0.047 (3/64)	0.376	0.1875	3.00	S149-047-3-TASM8X	S149-047-4-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S149-047-3-TASM12X	S149-047-4-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S149-062-3-TASM8X	S149-062-4-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S149-062-3-TASM12X	S149-062-4-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S149-078-3-TASM8X	S149-078-4-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S149-078-3-TASM12X	S149-078-4-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S149-093-3-TASM8X	S149-093-4-TASM8X
0.093 (3/32)	1.116	0.1875	3.00	S149-093-3-TASM12X	S149-093-4-TASM12X
0.109 (7/64)	0.872	0.1875	3.00	S149-109-3-TASM8X	S149-109-4-TASM8X
0.125 (1/8)	1.000	0.1875	3.00	S149-125-3-TASM8X	S149-125-4-TASM8X
0.156 (5/32)*	1.248	0.250	3.00	S149-156-3-TASM8X	S149-156-4-TASM8X
0.187 (3/16)*	1.496	0.250	4.00	S149-188-3-TASM8X	S149-188-4-TASM8X

## 0.5° Square Tapered Rib Cutter Mold Tools

FLUTES  
5

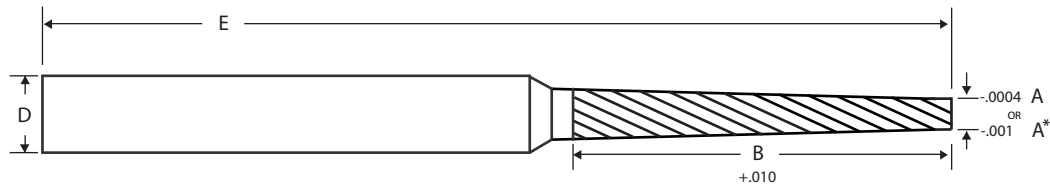
8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.047 (3/64)	0.376	0.1875	3.00	S149-047-5-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S149-047-5-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S149-062-5-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S149-062-5-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S149-078-5-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S149-078-5-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S149-093-5-TASM8X
0.093 (3/32)	1.116	0.1875	3.00	S149-093-5-TASM12X
0.109 (7/64)	0.872	0.1875	3.00	S149-109-5-TASM8X
0.125 (1/8)	1.000	0.1875	3.00	S149-125-5-TASM8X
0.156 (5/32)*	1.248	0.250	3.00	S149-156-5-TASM8X
0.187 (3/16)*	1.496	0.250	4.00	S149-188-5-TASM8X



# 1° Square Tapered Rib Cutter Mold Tools

S150

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S150-015-3-TASM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S150-015-3-TASM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S150-031-3-TASM8X	S150-031-4-TASM8X
0.031 (1/32)	0.372	0.1875	3.00	S150-031-3-TASM12X	S150-031-4-TASM12X
0.047 (3/64)	0.376	0.1875	3.00	S150-047-3-TASM8X	S150-047-4-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S150-047-3-TASM12X	S150-047-4-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S150-062-3-TASM8X	S150-062-4-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S150-062-3-TASM12X	S150-062-4-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S150-078-3-TASM8X	S150-078-4-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S150-078-3-TASM12X	S150-078-4-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S150-093-3-TASM8X	S150-093-4-TASM8X
0.093 (3/32)	1.116	0.1875	3.00	S150-093-3-TASM12X	S150-093-4-TASM12X
0.109 (7/64)	0.872	0.1875	3.00	S150-109-3-TASM8X	S150-109-4-TASM8X
0.125 (1/8)	1.000	0.1875	3.00	S150-125-3-TASM8X	S150-125-4-TASM8X
0.156 (5/32)*	1.248	0.250	3.00	S150-156-3-TASM8X	S150-156-4-TASM8X
0.187 (3/16)*	1.496	0.250	4.00	S150-188-3-TASM8X	S150-188-4-TASM8X

FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

# 1° Square Tapered Rib Cutter Mold Tools

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.047 (3/64)	0.376	0.1875	3.00	S150-047-5-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S150-047-5-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S150-062-5-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S150-062-5-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S150-078-5-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S150-078-5-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S150-093-5-TASM8X
0.093 (3/32)	1.116	0.1875	3.00	S150-093-5-TASM12X
0.109 (7/64)	0.872	0.1875	3.00	S150-109-5-TASM8X
0.125 (1/8)	1.000	0.1875	3.00	S150-125-5-TASM8X
0.156 (5/32)*	1.248	0.250	3.00	S150-156-5-TASM8X
0.187 (3/16)*	1.496	0.250	4.00	S150-188-5-TASM8X

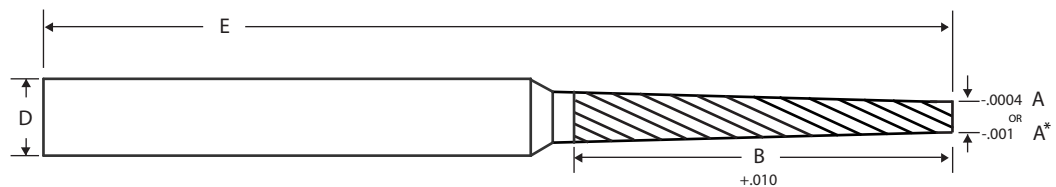
FLUTES  
5

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



# S151

## 1.5° Square Tapered Rib Cutter Mold Tools

FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S151-015-3-TASM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S151-015-3-TASM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S151-031-3-TASM8X	S151-031-4-TASM8X
0.031 (1/32)	0.372	0.1875	3.00	S151-031-3-TASM12X	S151-031-4-TASM12X
0.047 (3/64)	0.376	0.1875	3.00	S151-047-3-TASM8X	S151-047-4-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S151-047-3-TASM12X	S151-047-4-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S151-062-3-TASM8X	S151-062-4-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S151-062-3-TASM12X	S151-062-4-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S151-078-3-TASM8X	S151-078-4-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S151-078-3-TASM12X	S151-078-4-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S151-093-3-TASM8X	S151-093-4-TASM8X
0.093 (3/32)	1.116	0.1875	3.00	S151-093-3-TASM12X	S151-093-4-TASM12X
0.109 (7/64)	0.872	0.1875	3.00	S151-109-3-TASM8X	S151-109-4-TASM8X
0.125 (1/8)	1.000	0.1875	3.00	S151-125-3-TASM8X	S151-125-4-TASM8X
0.156 (5/32)*	1.248	0.250	3.00	S151-156-3-TASM8X	S151-156-4-TASM8X
0.187 (3/16)*	1.496	0.375	4.00	S151-188-3-TASM8X	S151-188-4-TASM8X

## 1.5° Square Tapered Rib Cutter Mold Tools

FLUTES  
5

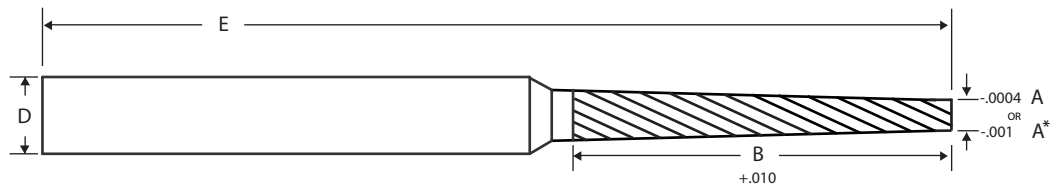
8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.047 (3/64)	0.376	0.1875	3.00	S151-047-5-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S151-047-5-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S151-062-5-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S151-062-5-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S151-078-5-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S151-078-5-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S151-093-5-TASM8X
0.093 (3/32)	1.116	0.1875	3.00	S151-093-5-TASM12X
0.109 (7/64)	0.872	0.1875	3.00	S151-109-5-TASM8X
0.125 (1/8)	1.000	0.1875	3.00	S151-125-5-TASM8X
0.156 (5/32)*	1.248	0.250	3.00	S151-156-5-TASM8X
0.187 (3/16)*	1.496	0.375	4.00	S151-188-5-TASM8X



## 2° Square Tapered Rib Cutter Mold Tools

S152

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S152-015-3-TASM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S152-015-3-TASM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S152-031-3-TASM8X	S152-031-4-TASM8X
0.031 (1/32)	0.372	0.1875	3.00	S152-031-3-TASM12X	S152-031-4-TASM12X
0.047 (3/64)	0.376	0.1875	3.00	S152-047-3-TASM8X	S152-047-4-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S152-047-3-TASM12X	S152-047-4-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S152-062-3-TASM8X	S152-062-4-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S152-062-3-TASM12X	S152-062-4-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S152-078-3-TASM8X	S152-078-4-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S152-078-3-TASM12X	S152-078-4-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S152-093-3-TASM8X	S152-093-4-TASM8X
0.093 (3/32)	1.116	0.1875	3.00	S152-093-3-TASM12X	S152-093-4-TASM12X
0.109 (7/64)	0.872	0.1875	3.00	S152-109-3-TASM8X	S152-109-4-TASM8X
0.125 (1/8)	1.000	0.250	3.00	S152-125-3-TASM8X	S152-125-4-TASM8X
0.156 (5/32)*	1.248	0.250	3.00	S152-156-3-TASM8X	S152-156-4-TASM8X
0.187 (3/16)*	1.496	0.375	4.00	S152-188-3-TASM8X	S152-188-4-TASM8X

FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

## 2° Square Tapered Rib Cutter Mold Tools

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.047 (3/64)	0.376	0.1875	3.00	S152-047-5-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S152-047-5-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S152-062-5-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S152-062-5-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S152-078-5-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S152-078-5-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S152-093-5-TASM8X
0.093 (3/32)	1.116	0.1875	3.00	S152-093-5-TASM12X
0.109 (7/64)	0.872	0.1875	3.00	S152-109-5-TASM8X
0.125 (1/8)	1.000	0.250	3.00	S152-125-5-TASM8X
0.156 (5/32)*	1.248	0.250	3.00	S152-156-5-TASM8X
0.187 (3/16)*	1.496	0.375	4.00	S152-188-5-TASM8X

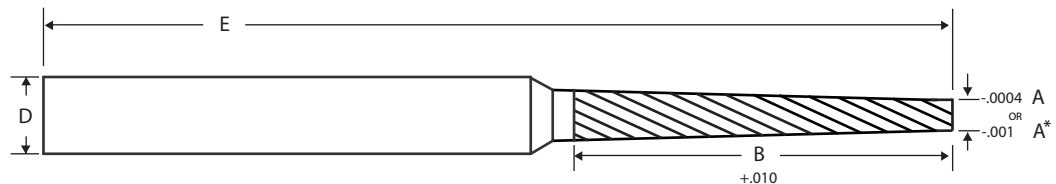
FLUTES  
5

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



# S153

## 3° Square Tapered Rib Cutter Mold Tools

FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S153-015-3-TASM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S153-015-3-TASM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S153-031-3-TASM8X	S153-031-4-TASM8X
0.031 (1/32)	0.372	0.1875	3.00	S153-031-3-TASM12X	S153-031-4-TASM12X
0.047 (3/64)	0.376	0.1875	3.00	S153-047-3-TASM8X	S153-047-4-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S153-047-3-TASM12X	S153-047-4-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S153-062-3-TASM8X	S153-062-4-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S153-062-3-TASM12X	S153-062-4-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S153-078-3-TASM8X	S153-078-4-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S153-078-3-TASM12X	S153-078-4-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S153-093-3-TASM8X	S153-093-4-TASM8X
0.093 (3/32)	1.116	0.250	3.00	S153-093-3-TASM12X	S153-093-4-TASM12X
0.109 (7/64)	0.872	0.250	3.00	S153-109-3-TASM8X	S153-109-4-TASM8X
0.125 (1/8)	1.000	0.250	3.00	S153-125-3-TASM8X	S153-125-4-TASM8X
0.156 (5/32)*	1.248	0.375	3.00	S153-156-3-TASM8X	S153-156-4-TASM8X
0.187 (3/16)*	1.496	0.375	4.00	S153-188-3-TASM8X	S153-188-4-TASM8X

## 3° Square Tapered Rib Cutter Mold Tools

FLUTES  
5

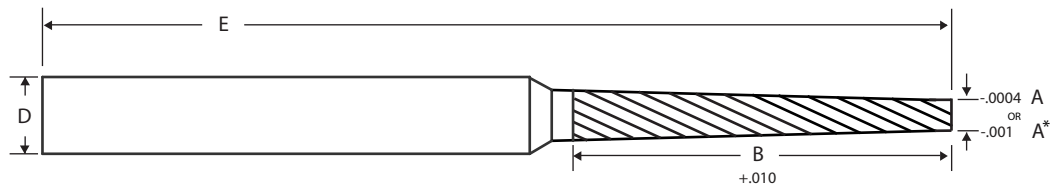
8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.047 (3/64)	0.376	0.1875	3.00	S153-047-5-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S153-047-5-TASM12X
0.062 (1/16)	0.496	0.1875	3.00	S153-062-5-TASM8X
0.062 (1/16)	0.744	0.1875	3.00	S153-062-5-TASM12X
0.078 (5/64)	0.624	0.1875	3.00	S153-078-5-TASM8X
0.078 (5/64)	0.936	0.1875	3.00	S153-078-5-TASM12X
0.093 (3/32)	0.744	0.1875	3.00	S153-093-5-TASM8X
0.093 (3/32)	1.116	0.250	3.00	S153-093-5-TASM12X
0.109 (7/64)	0.872	0.250	3.00	S153-109-5-TASM8X
0.125 (1/8)	1.000	0.250	3.00	S153-125-5-TASM8X
0.156 (5/32)*	1.248	0.375	3.00	S153-156-5-TASM8X
0.187 (3/16)*	1.496	0.375	4.00	S153-188-5-TASM8X



## 5° Square Tapered Rib Cutter Mold Tools

S154

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S154-015-3-TASM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S154-015-3-TASM12X	N/A
0.020	0.160	0.1875	3.00	S154-020-3-TASM8X	N/A
0.020	0.240	0.1875	3.00	S154-020-3-TASM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S154-031-3-TASM8X	S154-031-4-TASM8X
0.031 (1/32)	0.372	0.1875	3.00	S154-031-3-TASM12X	S154-031-4-TASM12X
0.047 (3/64)	0.376	0.1875	3.00	S154-047-3-TASM8X	S154-047-4-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S154-047-3-TASM12X	S154-047-4-TASM12X
0.062 (1/16)	0.496	0.250	3.00	S154-062-3-TASM8X	S154-062-4-TASM8X
0.062 (1/16)	0.744	0.250	3.00	S154-062-3-TASM12X	S154-062-4-TASM12X
0.078 (5/64)	0.624	0.250	3.00	S154-078-3-TASM8X	S154-078-4-TASM8X
0.078 (5/64)	0.936	0.250	3.00	S154-078-3-TASM12X	S154-078-4-TASM12X
0.093 (3/32)	0.744	0.3125	3.00	S154-093-3-TASM8X	S154-093-4-TASM8X
0.093 (3/32)	1.116	0.3125	3.00	S154-093-3-TASM12X	S154-093-4-TASM12X
0.109 (7/64)	0.872	0.3125	3.00	S154-109-3-TASM8X	S154-109-4-TASM8X
0.125 (1/8)	1.000	0.3125	3.00	S154-125-3-TASM8X	S154-125-4-TASM8X
0.156 (5/32)*	1.248	0.375	3.00	S154-156-3-TASM8X	S154-156-4-TASM8X
0.187 (3/16)*	1.496	0.500	4.00	S154-188-3-TASM8X	S154-188-4-TASM8X

FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

## 5° Square Tapered Rib Cutter Mold Tools

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	5 Flute Tool #
A	B	D	E	
0.047 (3/64)	0.376	0.1875	3.00	S154-047-5-TASM8X
0.047 (3/64)	0.564	0.1875	3.00	S154-047-5-TASM12X
0.062 (1/16)	0.496	0.250	3.00	S154-062-5-TASM8X
0.062 (1/16)	0.744	0.250	3.00	S154-062-5-TASM12X
0.078 (5/64)	0.624	0.250	3.00	S154-078-5-TASM8X
0.078 (5/64)	0.936	0.250	3.00	S154-078-5-TASM12X
0.093 (3/32)	0.744	0.3125	3.00	S154-093-5-TASM8X
0.093 (3/32)	1.116	0.3125	3.00	S154-093-5-TASM12X
0.109 (7/64)	0.872	0.3125	3.00	S154-109-5-TASM8X
0.125 (1/8)	1.000	0.3125	3.00	S154-125-5-TASM8X
0.156 (5/32)*	1.248	0.375	3.00	S154-156-5-TASM8X
0.187 (3/16)*	1.496	0.500	4.00	S154-188-5-TASM8X

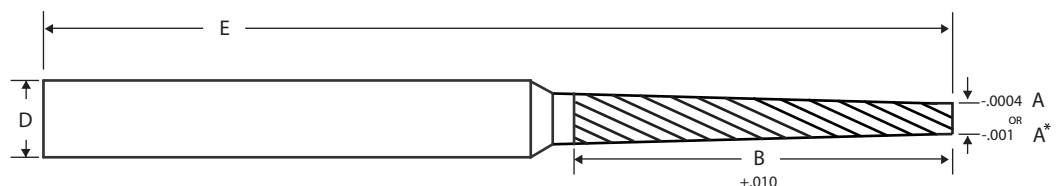
FLUTES  
5

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



FLUTES  
3,4

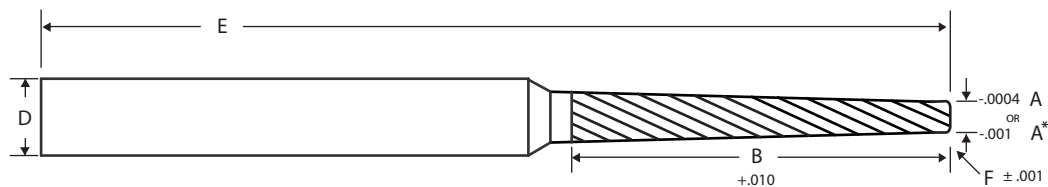
8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F		
0.015 (1/64)	0.120	0.1875	3.00	0.003	S155-015-3-.003TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.003	S155-015-3-.003TACM12X	N/A
0.015 (1/64)	0.120	0.1875	3.00	0.005	S155-015-3-.005TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.005	S155-015-3-.005TACM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	0.003	S155-031-3-.003TACM8X	S155-031-4-.003TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.003	S155-031-3-.003TACM12X	S155-031-4-.003TACM12X
0.031 (1/32)	0.248	0.1875	3.00	0.005	S155-031-3-.005TACM8X	S155-031-4-.005TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.005	S155-031-3-.005TACM12X	S155-031-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.005	S155-047-3-.005TACM8X	S155-047-4-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S155-047-3-.005TACM12X	S155-047-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S155-047-3-.010TACM8X	S155-047-4-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S155-047-3-.010TACM12X	S155-047-4-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S155-062-3-.005TACM8X	S155-062-4-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S155-062-3-.005TACM12X	S155-062-4-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S155-062-3-.015TACM8X	S155-062-4-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S155-062-3-.015TACM12X	S155-062-4-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S155-078-3-.005TACM8X	S155-078-4-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S155-078-3-.005TACM12X	S155-078-4-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S155-078-3-.015TACM8X	S155-078-4-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S155-078-3-.015TACM12X	S155-078-4-.015TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.005	S155-093-3-.005TACM8X	S155-093-4-.005TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.005	S155-093-3-.005TACM12X	S155-093-4-.005TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.015	S155-093-3-.015TACM8X	S155-093-4-.015TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.015	S155-093-3-.015TACM12X	S155-093-4-.015TACM12X
0.109 (7/64)	0.872	0.1875	3.00	0.005	S155-109-3-.005TACM8X	S155-109-4-.005TACM8X
0.109 (7/64)	0.872	0.1875	3.00	0.015	S155-109-3-.015TACM8X	S155-109-4-.015TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.005	S155-125-3-.005TACM8X	S155-125-4-.005TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.015	S155-125-3-.015TACM8X	S155-125-4-.015TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.005	S155-156-3-.005TACM8X	S155-156-4-.005TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.015	S155-156-3-.015TACM8X	S155-156-4-.015TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.005	S155-188-3-.005TACM8X	S155-188-4-.005TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.015	S155-188-3-.015TACM8X	S155-188-4-.015TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.031	S155-188-3-.031TACM8X	S155-188-4-.031TACM8X



# 0.5° Corner Radius Tapered Rib Cutter Mold Tools

S155

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.047 (3/64)	0.376	0.1875	3.00	0.005	S155-047-5-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S155-047-5-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S155-047-5-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S155-047-5-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S155-062-5-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S155-062-5-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S155-062-5-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S155-062-5-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S155-078-5-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S155-078-5-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S155-078-5-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S155-078-5-.015TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.005	S155-093-5-.005TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.005	S155-093-5-.005TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.015	S155-093-5-.015TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.015	S155-093-5-.015TACM12X
0.109 (7/64)	0.872	0.1875	3.00	0.005	S155-109-5-.005TACM8X
0.109 (7/64)	0.872	0.1875	3.00	0.015	S155-109-5-.015TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.005	S155-125-5-.005TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.015	S155-125-5-.015TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.005	S155-156-5-.005TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.015	S155-156-5-.015TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.005	S155-188-5-.005TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.015	S155-188-5-.015TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.031	S155-188-5-.031TACM8X

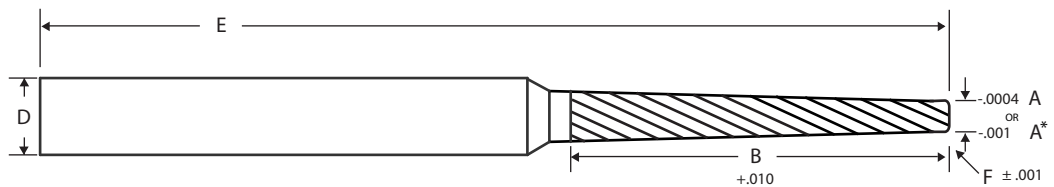
FLUTES  
5

8X  
LENGTH  
OF CUT

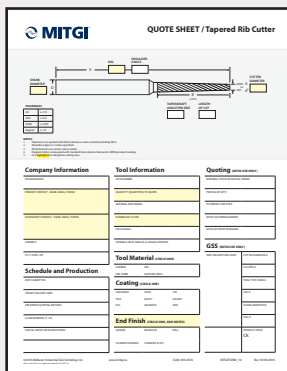
12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



## Custom Tapered Rib Cutters



**Can't find a tool to meet your exact specifications? Specials or modified standards may be the answer.**

### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances and number of flutes vary by design
- End finishes: square, corner radius, ball, chamfer
- Options: taper angle, cutter diameter, overall reach
- Specials usually available in two weeks or less

Quote forms available on our website and upon request.  
Contact us for an estimate today.



# S156

# 1° Corner Radius Tapered Rib Cutter Mold Tools

**FLUTES**  
3,4

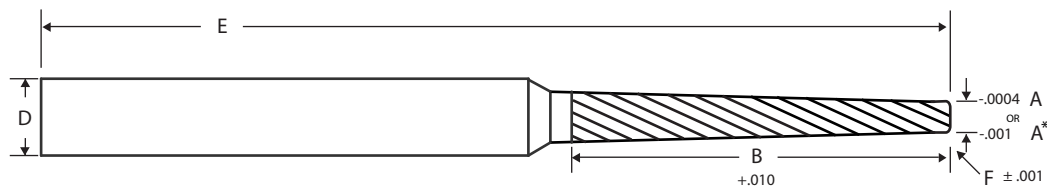
**8X**  
LENGTH  
OF CUT

**12X**  
LENGTH  
OF CUT

**VARIABLE  
HELIX**

**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F		
0.015 (1/64)	0.120	0.1875	3.00	0.003	S156-015-3-.003TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.003	S156-015-3-.003TACM12X	N/A
0.015 (1/64)	0.120	0.1875	3.00	0.005	S156-015-3-.005TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.005	S156-015-3-.005TACM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	0.003	S156-031-3-.003TACM8X	S156-031-4-.003TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.003	S156-031-3-.003TACM12X	S156-031-4-.003TACM12X
0.031 (1/32)	0.248	0.1875	3.00	0.005	S156-031-3-.005TACM8X	S156-031-4-.005TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.005	S156-031-3-.005TACM12X	S156-031-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.005	S156-047-3-.005TACM8X	S156-047-4-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S156-047-3-.005TACM12X	S156-047-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S156-047-3-.010TACM8X	S156-047-4-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S156-047-3-.010TACM12X	S156-047-4-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S156-062-3-.005TACM8X	S156-062-4-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S156-062-3-.005TACM12X	S156-062-4-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S156-062-3-.015TACM8X	S156-062-4-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S156-062-3-.015TACM12X	S156-062-4-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S156-078-3-.005TACM8X	S156-078-4-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S156-078-3-.005TACM12X	S156-078-4-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S156-078-3-.015TACM8X	S156-078-4-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S156-078-3-.015TACM12X	S156-078-4-.015TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.005	S156-093-3-.005TACM8X	S156-093-4-.005TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.005	S156-093-3-.005TACM12X	S156-093-4-.005TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.015	S156-093-3-.015TACM8X	S156-093-4-.015TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.015	S156-093-3-.015TACM12X	S156-093-4-.015TACM12X
0.109 (7/64)	0.872	0.1875	3.00	0.005	S156-109-3-.005TACM8X	S156-109-4-.005TACM8X
0.109 (7/64)	0.872	0.1875	3.00	0.015	S156-109-3-.015TACM8X	S156-109-4-.015TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.005	S156-125-3-.005TACM8X	S156-125-4-.005TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.015	S156-125-3-.015TACM8X	S156-125-4-.015TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.005	S156-156-3-.005TACM8X	S156-156-4-.005TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.015	S156-156-3-.015TACM8X	S156-156-4-.015TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.005	S156-188-3-.005TACM8X	S156-188-4-.005TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.015	S156-188-3-.015TACM8X	S156-188-4-.015TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.031	S156-188-3-.031TACM8X	S156-188-4-.031TACM8X



# 1° Corner Radius Tapered Rib Cutter Mold Tools

S156

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.047 (3/64)	0.376	0.1875	3.00	0.005	S156-047-5-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S156-047-5-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S156-047-5-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S156-047-5-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S156-062-5-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S156-062-5-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S156-062-5-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S156-062-5-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S156-078-5-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S156-078-5-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S156-078-5-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S156-078-5-.015TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.005	S156-093-5-.005TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.005	S156-093-5-.005TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.015	S156-093-5-.015TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.015	S156-093-5-.015TACM12X
0.109 (7/64)	0.872	0.1875	3.00	0.005	S156-109-5-.005TACM8X
0.109 (7/64)	0.872	0.1875	3.00	0.015	S156-109-5-.015TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.005	S156-125-5-.005TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.015	S156-125-5-.015TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.005	S156-156-5-.005TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.015	S156-156-5-.015TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.005	S156-188-5-.005TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.015	S156-188-5-.015TACM8X
0.187 (3/16)*	1.496	0.250	4.00	0.031	S156-188-5-.031TACM8X

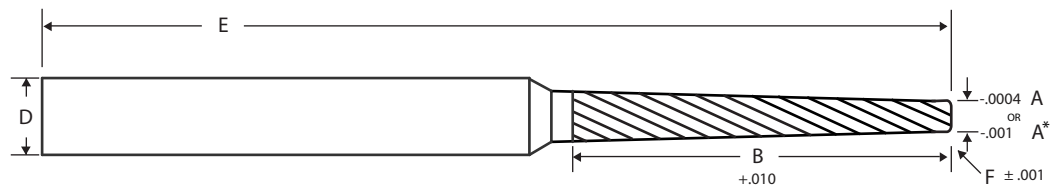
FLUTES  
5

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



## Tips on Selecting the Right Tool for the Job

Number of Flutes	Primary Uses	Ideal Cutting Materials
2-3	Tools with fewer flutes allow optimal space for chip removal when milling or slotting softer materials. Also used for roughing.	Soft materials, such as aluminum and plastics.
3-4	Adding flutes provides greater strength. Recommended for use with roughing, milling, and slotting a variety of materials. Can also be used for finishing softer materials.	Hard materials, such as stainless steel, steel, and titanium.
5 +	Ideal for use in finishing work, when using faster feed rates, and with reduced chip load.	Harder materials, such as steel, or for finishing a variety of materials.



# 1.5° Corner Radius Tapered Rib Cutter Mold Tools

FLUTES  
3,4

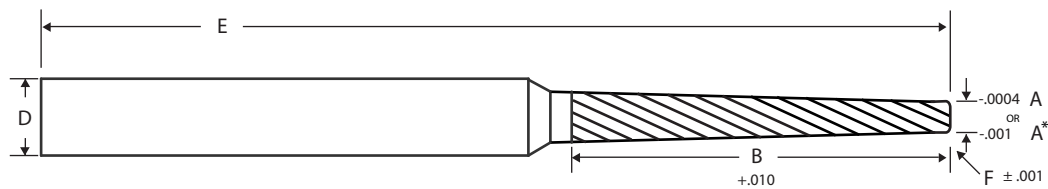
8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F		
0.015 (1/64)	0.120	0.1875	3.00	0.003	S157-015-3-.003TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.003	S157-015-3-.003TACM12X	N/A
0.015 (1/64)	0.120	0.1875	3.00	0.005	S157-015-3-.005TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.005	S157-015-3-.005TACM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	0.003	S157-031-3-.003TACM8X	S157-031-4-.003TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.003	S157-031-3-.003TACM12X	S157-031-4-.003TACM12X
0.031 (1/32)	0.248	0.1875	3.00	0.005	S157-031-3-.005TACM8X	S157-031-4-.005TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.005	S157-031-3-.005TACM12X	S157-031-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.005	S157-047-3-.005TACM8X	S157-047-4-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S157-047-3-.005TACM12X	S157-047-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S157-047-3-.010TACM8X	S157-047-4-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S157-047-3-.010TACM12X	S157-047-4-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S157-062-3-.005TACM8X	S157-062-4-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S157-062-3-.005TACM12X	S157-062-4-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S157-062-3-.015TACM8X	S157-062-4-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S157-062-3-.015TACM12X	S157-062-4-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S157-078-3-.005TACM8X	S157-078-4-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S157-078-3-.005TACM12X	S157-078-4-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S157-078-3-.015TACM8X	S157-078-4-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S157-078-3-.015TACM12X	S157-078-4-.015TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.005	S157-093-3-.005TACM8X	S157-093-4-.005TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.005	S157-093-3-.005TACM12X	S157-093-4-.005TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.015	S157-093-3-.015TACM8X	S157-093-4-.015TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.015	S157-093-3-.015TACM12X	S157-093-4-.015TACM12X
0.109 (7/64)	0.872	0.1875	3.00	0.005	S157-109-3-.005TACM8X	S157-109-4-.005TACM8X
0.109 (7/64)	0.872	0.1875	3.00	0.015	S157-109-3-.015TACM8X	S157-109-4-.015TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.005	S157-125-3-.005TACM8X	S157-125-4-.005TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.015	S157-125-3-.015TACM8X	S157-125-4-.015TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.005	S157-156-3-.005TACM8X	S157-156-4-.005TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.015	S157-156-3-.015TACM8X	S157-156-4-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.005	S157-188-3-.005TACM8X	S157-188-4-.005TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.015	S157-188-3-.015TACM8X	S157-188-4-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.031	S157-188-3-.031TACM8X	S157-188-4-.031TACM8X



# 1.5° Corner Radius Tapered Rib Cutter Mold Tools

S157

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.047 (3/64)	0.376	0.1875	3.00	0.005	S157-047-5-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S157-047-5-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S157-047-5-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S157-047-5-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S157-062-5-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S157-062-5-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S157-062-5-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S157-062-5-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S157-078-5-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S157-078-5-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S157-078-5-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S157-078-5-.015TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.005	S157-093-5-.005TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.005	S157-093-5-.005TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.015	S157-093-5-.015TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.015	S157-093-5-.015TACM12X
0.109 (7/64)	0.872	0.1875	3.00	0.005	S157-109-5-.005TACM8X
0.109 (7/64)	0.872	0.1875	3.00	0.015	S157-109-5-.015TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.005	S157-125-5-.005TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.015	S157-125-5-.015TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.005	S157-156-5-.005TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.015	S157-156-5-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.005	S157-188-5-.005TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.015	S157-188-5-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.031	S157-188-5-.031TACM8X

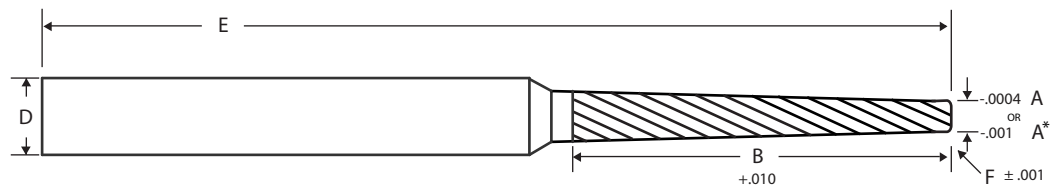
FLUTES  
5

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



Need your coated tool quickly? All standard tools are available AITiN coated in 3 days or less. See page 117 for more details.



FLUTES  
3,4

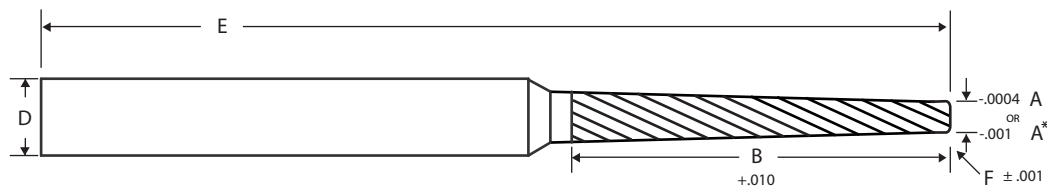
8X  
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OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F		
0.015 (1/64)	0.120	0.1875	3.00	0.003	S158-015-3-.003TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.003	S158-015-3-.003TACM12X	N/A
0.015 (1/64)	0.120	0.1875	3.00	0.005	S158-015-3-.005TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.005	S158-015-3-.005TACM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	0.003	S158-031-3-.003TACM8X	S158-031-4-.003TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.003	S158-031-3-.003TACM12X	S158-031-4-.003TACM12X
0.031 (1/32)	0.248	0.1875	3.00	0.005	S158-031-3-.005TACM8X	S158-031-4-.005TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.005	S158-031-3-.005TACM12X	S158-031-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.005	S158-047-3-.005TACM8X	S158-047-4-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S158-047-3-.005TACM12X	S158-047-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S158-047-3-.010TACM8X	S158-047-4-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S158-047-3-.010TACM12X	S158-047-4-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S158-062-3-.005TACM8X	S158-062-4-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S158-062-3-.005TACM12X	S158-062-4-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S158-062-3-.015TACM8X	S158-062-4-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S158-062-3-.015TACM12X	S158-062-4-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S158-078-3-.005TACM8X	S158-078-4-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S158-078-3-.005TACM12X	S158-078-4-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S158-078-3-.015TACM8X	S158-078-4-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S158-078-3-.015TACM12X	S158-078-4-.015TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.005	S158-093-3-.005TACM8X	S158-093-4-.005TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.005	S158-093-3-.005TACM12X	S158-093-4-.005TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.015	S158-093-3-.015TACM8X	S158-093-4-.015TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.015	S158-093-3-.015TACM12X	S158-093-4-.015TACM12X
0.109 (7/64)	0.872	0.1875	3.00	0.005	S158-109-3-.005TACM8X	S158-109-4-.005TACM8X
0.109 (7/64)	0.872	0.1875	3.00	0.015	S158-109-3-.015TACM8X	S158-109-4-.015TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.005	S158-125-3-.005TACM8X	S158-125-4-.005TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.015	S158-125-3-.015TACM8X	S158-125-4-.015TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.005	S158-156-3-.005TACM8X	S158-156-4-.005TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.015	S158-156-3-.015TACM8X	S158-156-4-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.005	S158-188-3-.005TACM8X	S158-188-4-.005TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.015	S158-188-3-.015TACM8X	S158-188-4-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.031	S158-188-3-.031TACM8X	S158-188-4-.031TACM8X



## 2° Corner Radius Tapered Rib Cutter Mold Tools

S158

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.047 (3/64)	0.376	0.1875	3.00	0.005	S158-047-5-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S158-047-5-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S158-047-5-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S158-047-5-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S158-062-5-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S158-062-5-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S158-062-5-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S158-062-5-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S158-078-5-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S158-078-5-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S158-078-5-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S158-078-5-.015TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.005	S158-093-5-.005TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.005	S158-093-5-.005TACM12X
0.093 (3/32)	0.744	0.1875	3.00	0.015	S158-093-5-.015TACM8X
0.093 (3/32)	1.116	0.1875	3.00	0.015	S158-093-5-.015TACM12X
0.109 (7/64)	0.872	0.1875	3.00	0.005	S158-109-5-.005TACM8X
0.109 (7/64)	0.872	0.1875	3.00	0.015	S158-109-5-.015TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.005	S158-125-5-.005TACM8X
0.125 (1/8)	1.000	0.1875	3.00	0.015	S158-125-5-.015TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.005	S158-156-5-.005TACM8X
0.156 (5/32)*	1.248	0.250	3.00	0.015	S158-156-5-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.005	S158-188-5-.005TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.015	S158-188-5-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.031	S158-188-5-.031TACM8X

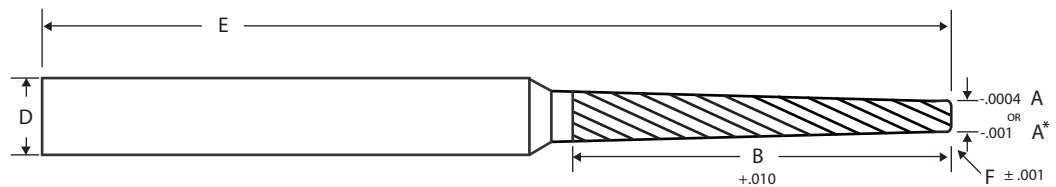
FLUTES  
5

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



### MITGI INSIDE ACCOUNT REPRESENTATIVES

P. 2

MITGI Inside Account Representatives are the right resources for quote requests, to place orders, check inventory, or provide tracking. See page 2 for more info.



FLUTES  
3,4

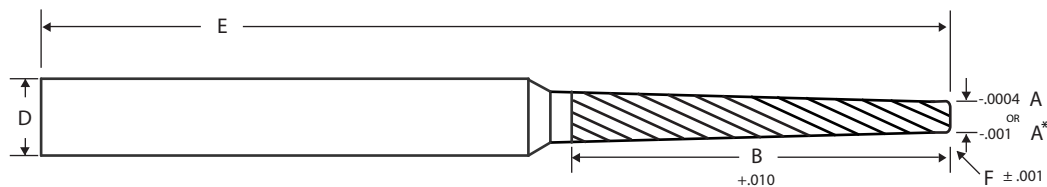
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HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F		
0.015 (1/64)	0.120	0.1875	3.00	0.003	S159-015-3-.003TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.003	S159-015-3-.003TACM12X	N/A
0.015 (1/64)	0.120	0.1875	3.00	0.005	S159-015-3-.005TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.005	S159-015-3-.005TACM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	0.003	S159-031-3-.003TACM8X	S159-031-4-.003TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.003	S159-031-3-.003TACM12X	S159-031-4-.003TACM12X
0.031 (1/32)	0.248	0.1875	3.00	0.005	S159-031-3-.005TACM8X	S159-031-4-.005TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.005	S159-031-3-.005TACM12X	S159-031-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.005	S159-047-3-.005TACM8X	S159-047-4-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S159-047-3-.005TACM12X	S159-047-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S159-047-3-.010TACM8X	S159-047-4-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S159-047-3-.010TACM12X	S159-047-4-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S159-062-3-.005TACM8X	S159-062-4-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S159-062-3-.005TACM12X	S159-062-4-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S159-062-3-.015TACM8X	S159-062-4-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S159-062-3-.015TACM12X	S159-062-4-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S159-078-3-.005TACM8X	S159-078-4-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S159-078-3-.005TACM12X	S159-078-4-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S159-078-3-.015TACM8X	S159-078-4-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S159-078-3-.015TACM12X	S159-078-4-.015TACM12X
0.093 (3/32)	0.744	0.250	3.00	0.005	S159-093-3-.005TACM8X	S159-093-4-.005TACM8X
0.093 (3/32)	1.116	0.250	3.00	0.005	S159-093-3-.005TACM12X	S159-093-4-.005TACM12X
0.093 (3/32)	0.744	0.250	3.00	0.015	S159-093-3-.015TACM8X	S159-093-4-.015TACM8X
0.093 (3/32)	1.116	0.250	3.00	0.015	S159-093-3-.015TACM12X	S159-093-4-.015TACM12X
0.109 (7/64)	0.872	0.250	3.00	0.005	S159-109-3-.005TACM8X	S159-109-4-.005TACM8X
0.109 (7/64)	0.872	0.250	3.00	0.015	S159-109-3-.015TACM8X	S159-109-4-.015TACM8X
0.125 (1/8)	1.000	0.250	3.00	0.005	S159-125-3-.005TACM8X	S159-125-4-.005TACM8X
0.125 (1/8)	1.000	0.250	3.00	0.015	S159-125-3-.015TACM8X	S159-125-4-.015TACM8X
0.156 (5/32)*	1.248	0.375	3.00	0.005	S159-156-3-.005TACM8X	S159-156-4-.005TACM8X
0.156 (5/32)*	1.248	0.375	3.00	0.015	S159-156-3-.015TACM8X	S159-156-4-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.005	S159-188-3-.005TACM8X	S159-188-4-.005TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.015	S159-188-3-.015TACM8X	S159-188-4-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.031	S159-188-3-.031TACM8X	S159-188-4-.031TACM8X



## 3° Corner Radius Tapered Rib Cutter Mold Tools

S159

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.047 (3/64)	0.376	0.1875	3.00	0.005	S159-047-5-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S159-047-5-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S159-047-5-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S159-047-5-.010TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.005	S159-062-5-.005TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.005	S159-062-5-.005TACM12X
0.062 (1/16)	0.496	0.1875	3.00	0.015	S159-062-5-.015TACM8X
0.062 (1/16)	0.744	0.1875	3.00	0.015	S159-062-5-.015TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.005	S159-078-5-.005TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.005	S159-078-5-.005TACM12X
0.078 (5/64)	0.624	0.1875	3.00	0.015	S159-078-5-.015TACM8X
0.078 (5/64)	0.936	0.1875	3.00	0.015	S159-078-5-.015TACM12X
0.093 (3/32)	0.744	0.250	3.00	0.005	S159-093-5-.005TACM8X
0.093 (3/32)	1.116	0.250	3.00	0.005	S159-093-5-.005TACM12X
0.093 (3/32)	0.744	0.250	3.00	0.015	S159-093-5-.015TACM8X
0.093 (3/32)	1.116	0.250	3.00	0.015	S159-093-5-.015TACM12X
0.109 (7/64)	0.872	0.250	3.00	0.005	S159-109-5-.005TACM8X
0.109 (7/64)	0.872	0.250	3.00	0.015	S159-109-5-.015TACM8X
0.125 (1/8)	1.000	0.250	3.00	0.005	S159-125-5-.005TACM8X
0.125 (1/8)	1.000	0.250	3.00	0.015	S159-125-5-.015TACM8X
0.156 (5/32)*	1.248	0.375	3.00	0.005	S159-156-5-.005TACM8X
0.156 (5/32)*	1.248	0.375	3.00	0.015	S159-156-5-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.005	S159-188-5-.005TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.015	S159-188-5-.015TACM8X
0.187 (3/16)*	1.496	0.375	4.00	0.031	S159-188-5-.031TACM8X

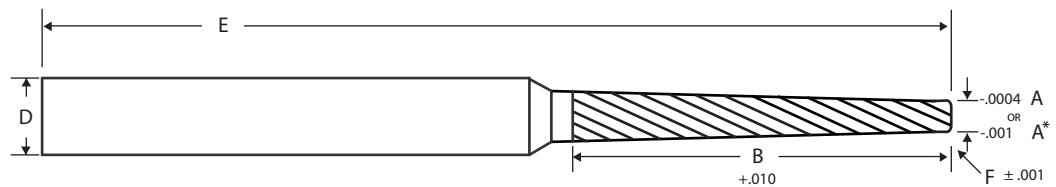
FLUTES  
5

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



### SPECIALS

# P.206

MITGI specializes in custom micro tools that are needed quickly or are difficult to find. See pages 206-207 for more info regarding custom tool capabilities, estimated production times, and information about how to place an order.



# S160

## 5° Corner Radius Tapered Rib Cutter Mold Tools

**FLUTES**  
3,4

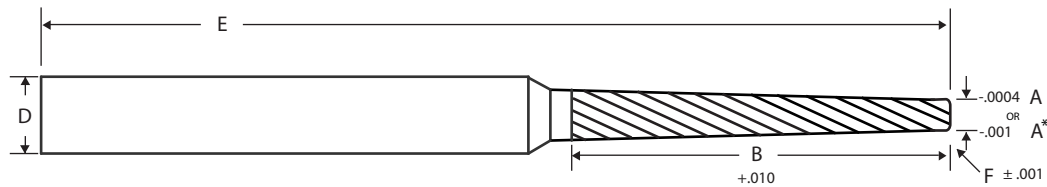
**8X**  
LENGTH  
OF CUT

**12X**  
LENGTH  
OF CUT

**VARIABLE**  
HELIX

**QUICK TURN**  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	3 Flute Tool #	4 Flute Tool #
A	B	D	E	F		
0.015 (1/64)	0.120	0.1875	3.00	0.003	S160-015-3-.003TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.003	S160-015-3-.003TACM12X	N/A
0.015 (1/64)	0.120	0.1875	3.00	0.005	S160-015-3-.005TACM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	0.005	S160-015-3-.005TACM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	0.003	S160-031-3-.003TACM8X	S160-031-4-.003TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.003	S160-031-3-.003TACM12X	S160-031-4-.003TACM12X
0.031 (1/32)	0.248	0.1875	3.00	0.005	S160-031-3-.005TACM8X	S160-031-4-.005TACM8X
0.031 (1/32)	0.372	0.1875	3.00	0.005	S160-031-3-.005TACM12X	S160-031-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.005	S160-047-3-.005TACM8X	S160-047-4-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S160-047-3-.005TACM12X	S160-047-4-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S160-047-3-.010TACM8X	S160-047-4-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S160-047-3-.010TACM12X	S160-047-4-.010TACM12X
0.062 (1/16)	0.496	0.250	3.00	0.005	S160-062-3-.005TACM8X	S160-062-4-.005TACM8X
0.062 (1/16)	0.744	0.250	3.00	0.005	S160-062-3-.005TACM12X	S160-062-4-.005TACM12X
0.062 (1/16)	0.496	0.250	3.00	0.015	S160-062-3-.015TACM8X	S160-062-4-.015TACM8X
0.062 (1/16)	0.744	0.250	3.00	0.015	S160-062-3-.015TACM12X	S160-062-4-.015TACM12X
0.078 (5/64)	0.624	0.250	3.00	0.005	S160-078-3-.005TACM8X	S160-078-4-.005TACM8X
0.078 (5/64)	0.936	0.250	3.00	0.005	S160-078-3-.005TACM12X	S160-078-4-.005TACM12X
0.078 (5/64)	0.624	0.250	3.00	0.015	S160-078-3-.015TACM8X	S160-078-4-.015TACM8X
0.078 (5/64)	0.936	0.250	3.00	0.015	S160-078-3-.015TACM12X	S160-078-4-.015TACM12X
0.093 (3/32)	0.744	0.3125	3.00	0.005	S160-093-3-.005TACM8X	S160-093-4-.005TACM8X
0.093 (3/32)	1.116	0.3125	3.00	0.005	S160-093-3-.005TACM12X	S160-093-4-.005TACM12X
0.093 (3/32)	0.744	0.3125	3.00	0.015	S160-093-3-.015TACM8X	S160-093-4-.015TACM8X
0.093 (3/32)	1.116	0.3125	3.00	0.015	S160-093-3-.015TACM12X	S160-093-4-.015TACM12X
0.109 (7/64)	0.872	0.3125	3.00	0.005	S160-109-3-.005TACM8X	S160-109-4-.005TACM8X
0.109 (7/64)	0.872	0.3125	3.00	0.015	S160-109-3-.015TACM8X	S160-109-4-.015TACM8X
0.125 (1/8)	1.000	0.3125	3.00	0.005	S160-125-3-.005TACM8X	S160-125-4-.005TACM8X
0.125 (1/8)	1.000	0.3125	3.00	0.015	S160-125-3-.015TACM8X	S160-125-4-.015TACM8X
0.156 (5/32)*	1.248	0.375	3.00	0.005	S160-156-3-.005TACM8X	S160-156-4-.005TACM8X
0.156 (5/32)*	1.248	0.375	3.00	0.015	S160-156-3-.015TACM8X	S160-156-4-.015TACM8X
0.187 (3/16)*	1.496	0.500	4.00	0.005	S160-188-3-.005TACM8X	S160-188-4-.005TACM8X
0.187 (3/16)*	1.496	0.500	4.00	0.015	S160-188-3-.015TACM8X	S160-188-4-.015TACM8X
0.187 (3/16)*	1.496	0.500	4.00	0.031	S160-188-3-.031TACM8X	S160-188-4-.031TACM8X



# 5° Corner Radius Tapered Rib Cutter Mold Tools

S160

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Corner Radius	5 Flute Tool #
A	B	D	E	F	
0.047 (3/64)	0.376	0.1875	3.00	0.005	S160-047-5-.005TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.005	S160-047-5-.005TACM12X
0.047 (3/64)	0.376	0.1875	3.00	0.010	S160-047-5-.010TACM8X
0.047 (3/64)	0.564	0.1875	3.00	0.010	S160-047-5-.010TACM12X
0.062 (1/16)	0.496	0.250	3.00	0.005	S160-062-5-.005TACM8X
0.062 (1/16)	0.744	0.250	3.00	0.005	S160-062-5-.005TACM12X
0.062 (1/16)	0.496	0.250	3.00	0.015	S160-062-5-.015TACM8X
0.062 (1/16)	0.744	0.250	3.00	0.015	S160-062-5-.015TACM12X
0.078 (5/64)	0.624	0.250	3.00	0.005	S160-078-5-.005TACM8X
0.078 (5/64)	0.936	0.250	3.00	0.005	S160-078-5-.005TACM12X
0.078 (5/64)	0.624	0.250	3.00	0.015	S160-078-5-.015TACM8X
0.078 (5/64)	0.936	0.250	3.00	0.015	S160-078-5-.015TACM12X
0.093 (3/32)	0.744	0.3125	3.00	0.005	S160-093-5-.005TACM8X
0.093 (3/32)	1.116	0.3125	3.00	0.005	S160-093-5-.005TACM12X
0.093 (3/32)	0.744	0.3125	3.00	0.015	S160-093-5-.015TACM8X
0.093 (3/32)	1.116	0.3125	3.00	0.015	S160-093-5-.015TACM12X
0.109 (7/64)	0.872	0.3125	3.00	0.005	S160-109-5-.005TACM8X
0.109 (7/64)	0.872	0.3125	3.00	0.015	S160-109-5-.015TACM8X
0.125 (1/8)	1.000	0.3125	3.00	0.005	S160-125-5-.005TACM8X
0.125 (1/8)	1.000	0.3125	3.00	0.015	S160-125-5-.015TACM8X
0.156 (5/32)*	1.248	0.375	3.00	0.005	S160-156-5-.005TACM8X
0.156 (5/32)*	1.248	0.375	3.00	0.015	S160-156-5-.015TACM8X
0.187 (3/16)*	1.496	0.500	4.00	0.005	S160-188-5-.005TACM8X
0.187 (3/16)*	1.496	0.500	4.00	0.015	S160-188-5-.015TACM8X
0.187 (3/16)*	1.496	0.500	4.00	0.031	S160-188-5-.031TACM8X

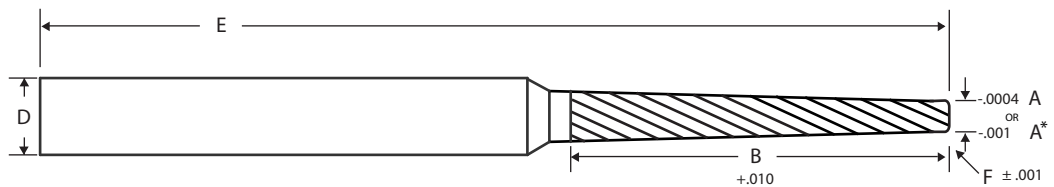
FLUTES  
5

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.



# S161

## 0.5° Ball Tapered Rib Cutter Mold Tools

FLUTES  
3,4

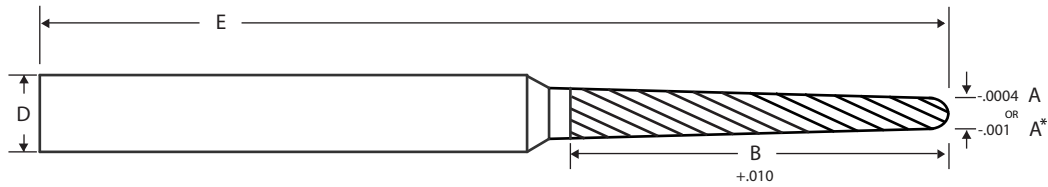
8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S161-015-3-TABM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S161-015-3-TABM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S161-031-3-TABM8X	S161-031-4-TABM8X
0.031 (1/32)	0.372	0.1875	3.00	S161-031-3-TABM12X	S161-031-4-TABM12X
0.047 (3/64)	0.376	0.1875	3.00	S161-047-3-TABM8X	S161-047-4-TABM8X
0.047 (3/64)	0.564	0.1875	3.00	S161-047-3-TABM12X	S161-047-4-TABM12X
0.062 (1/16)	0.496	0.1875	3.00	S161-062-3-TABM8X	S161-062-4-TABM8X
0.062 (1/16)	0.744	0.1875	3.00	S161-062-3-TABM12X	S161-062-4-TABM12X
0.078 (5/64)	0.624	0.1875	3.00	S161-078-3-TABM8X	S161-078-4-TABM8X
0.078 (5/64)	0.936	0.1875	3.00	S161-078-3-TABM12X	S161-078-4-TABM12X
0.093 (3/32)	0.744	0.1875	3.00	S161-093-3-TABM8X	S161-093-4-TABM8X
0.093 (3/32)	1.116	0.1875	3.00	S161-093-3-TABM12X	S161-093-4-TABM12X
0.109 (7/64)	0.872	0.1875	3.00	S161-109-3-TABM8X	S161-109-4-TABM8X
0.125 (1/8)	1.000	0.1875	3.00	S161-125-3-TABM8X	S161-125-4-TABM8X
0.156 (5/32)*	1.248	0.250	3.00	S161-156-3-TABM8X	S161-156-4-TABM8X
0.187 (3/16)*	1.496	0.250	4.00	S161-188-3-TABM8X	S161-188-4-TABM8X



# S162

## 1° Ball Tapered Rib Cutter Mold Tools

FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

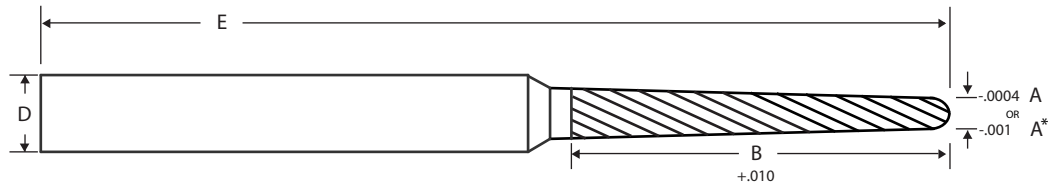
QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S162-015-3-TABM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S162-015-3-TABM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S162-031-3-TABM8X	S162-031-4-TABM8X
0.031 (1/32)	0.372	0.1875	3.00	S162-031-3-TABM12X	S162-031-4-TABM12X
0.047 (3/64)	0.376	0.1875	3.00	S162-047-3-TABM8X	S162-047-4-TABM8X
0.047 (3/64)	0.564	0.1875	3.00	S162-047-3-TABM12X	S162-047-4-TABM12X
0.062 (1/16)	0.496	0.1875	3.00	S162-062-3-TABM8X	S162-062-4-TABM8X
0.062 (1/16)	0.744	0.1875	3.00	S162-062-3-TABM12X	S162-062-4-TABM12X
0.078 (5/64)	0.624	0.1875	3.00	S162-078-3-TABM8X	S162-078-4-TABM8X
0.078 (5/64)	0.936	0.1875	3.00	S162-078-3-TABM12X	S162-078-4-TABM12X
0.093 (3/32)	0.744	0.1875	3.00	S162-093-3-TABM8X	S162-093-4-TABM8X
0.093 (3/32)	1.116	0.1875	3.00	S162-093-3-TABM12X	S162-093-4-TABM12X
0.109 (7/64)	0.872	0.1875	3.00	S162-109-3-TABM8X	S162-109-4-TABM8X
0.125 (1/8)	1.000	0.1875	3.00	S162-125-3-TABM8X	S162-125-4-TABM8X
0.156 (5/32)*	1.248	0.250	3.00	S162-156-3-TABM8X	S162-156-4-TABM8X
0.187 (3/16)*	1.496	0.250	4.00	S162-188-3-TABM8X	S162-188-4-TABM8X

## 1.5° Ball Tapered Rib Cutter Mold Tools

S163

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S163-015-3-TABM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S163-015-3-TABM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S163-031-3-TABM8X	S163-031-4-TABM8X
0.031 (1/32)	0.372	0.1875	3.00	S163-031-3-TABM12X	S163-031-4-TABM12X
0.047 (3/64)	0.376	0.1875	3.00	S163-047-3-TABM8X	S163-047-4-TABM8X
0.047 (3/64)	0.564	0.1875	3.00	S163-047-3-TABM12X	S163-047-4-TABM12X
0.062 (1/16)	0.496	0.1875	3.00	S163-062-3-TABM8X	S163-062-4-TABM8X
0.062 (1/16)	0.744	0.1875	3.00	S163-062-3-TABM12X	S163-062-4-TABM12X
0.078 (5/64)	0.624	0.1875	3.00	S163-078-3-TABM8X	S163-078-4-TABM8X
0.078 (5/64)	0.936	0.1875	3.00	S163-078-3-TABM12X	S163-078-4-TABM12X
0.093 (3/32)	0.744	0.1875	3.00	S163-093-3-TABM8X	S163-093-4-TABM8X
0.093 (3/32)	1.116	0.1875	3.00	S163-093-3-TABM12X	S163-093-4-TABM12X
0.109 (7/64)	0.872	0.1875	3.00	S163-109-3-TABM8X	S163-109-4-TABM8X
0.125 (1/8)	1.000	0.1875	3.00	S163-125-3-TABM8X	S163-125-4-TABM8X
0.156 (5/32)*	1.248	0.250	3.00	S163-156-3-TABM8X	S163-156-4-TABM8X
0.187 (3/16)*	1.496	0.375	4.00	S163-188-3-TABM8X	S163-188-4-TABM8X



FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

## 2° Ball Tapered Rib Cutter Mold Tools

S164

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S164-015-3-TABM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S164-015-3-TABM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S164-031-3-TABM8X	S164-031-4-TABM8X
0.031 (1/32)	0.372	0.1875	3.00	S164-031-3-TABM12X	S164-031-4-TABM12X
0.047 (3/64)	0.376	0.1875	3.00	S164-047-3-TABM8X	S164-047-4-TABM8X
0.047 (3/64)	0.564	0.1875	3.00	S164-047-3-TABM12X	S164-047-4-TABM12X
0.062 (1/16)	0.496	0.1875	3.00	S164-062-3-TABM8X	S164-062-4-TABM8X
0.062 (1/16)	0.744	0.1875	3.00	S164-062-3-TABM12X	S164-062-4-TABM12X
0.078 (5/64)	0.624	0.1875	3.00	S164-078-3-TABM8X	S164-078-4-TABM8X
0.078 (5/64)	0.936	0.1875	3.00	S164-078-3-TABM12X	S164-078-4-TABM12X
0.093 (3/32)	0.744	0.1875	3.00	S164-093-3-TABM8X	S164-093-4-TABM8X
0.093 (3/32)	1.116	0.1875	3.00	S164-093-3-TABM12X	S164-093-4-TABM12X
0.109 (7/64)	0.872	0.1875	3.00	S164-109-3-TABM8X	S164-109-4-TABM8X
0.125 (1/8)	1.000	0.250	3.00	S164-125-3-TABM8X	S164-125-4-TABM8X
0.156 (5/32)*	1.248	0.250	3.00	S164-156-3-TABM8X	S164-156-4-TABM8X
0.187 (3/16)*	1.496	0.375	4.00	S164-188-3-TABM8X	S164-188-4-TABM8X

FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS



# S165

## 3° Ball Tapered Rib Cutter Mold Tools

FLUTES  
3,4

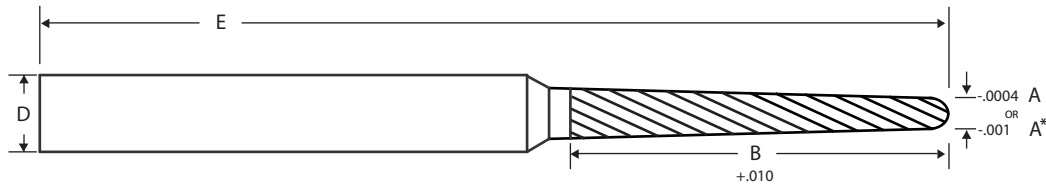
8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S165-015-3-TABM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S165-015-3-TABM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S165-031-3-TABM8X	S165-031-4-TABM8X
0.031 (1/32)	0.372	0.1875	3.00	S165-031-3-TABM12X	S165-031-4-TABM12X
0.047 (3/64)	0.376	0.1875	3.00	S165-047-3-TABM8X	S165-047-4-TABM8X
0.047 (3/64)	0.564	0.1875	3.00	S165-047-3-TABM12X	S165-047-4-TABM12X
0.062 (1/16)	0.496	0.1875	3.00	S165-062-3-TABM8X	S165-062-4-TABM8X
0.062 (1/16)	0.744	0.1875	3.00	S165-062-3-TABM12X	S165-062-4-TABM12X
0.078 (5/64)	0.624	0.1875	3.00	S165-078-3-TABM8X	S165-078-4-TABM8X
0.078 (5/64)	0.936	0.1875	3.00	S165-078-3-TABM12X	S165-078-4-TABM12X
0.093 (3/32)	0.744	0.1875	3.00	S165-093-3-TABM8X	S165-093-4-TABM8X
0.093 (3/32)	1.116	0.250	3.00	S165-093-3-TABM12X	S165-093-4-TABM12X
0.109 (7/64)	0.872	0.250	3.00	S165-109-3-TABM8X	S165-109-4-TABM8X
0.125 (1/8)	1.000	0.250	3.00	S165-125-3-TABM8X	S165-125-4-TABM8X
0.156 (5/32)*	1.248	0.375	3.00	S165-156-3-TABM8X	S165-156-4-TABM8X
0.187 (3/16)*	1.496	0.375	4.00	S165-188-3-TABM8X	S165-188-4-TABM8X



# S166

## 5° Ball Tapered Rib Cutter Mold Tools

FLUTES  
3,4

8X  
LENGTH  
OF CUT

12X  
LENGTH  
OF CUT

VARIABLE  
HELIX

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	3 Flute Tool #	4 Flute Tool #
A	B	D	E		
0.015 (1/64)	0.120	0.1875	3.00	S166-015-3-TABM8X	N/A
0.015 (1/64)	0.180	0.1875	3.00	S166-015-3-TABM12X	N/A
0.031 (1/32)	0.248	0.1875	3.00	S166-031-3-TABM8X	S166-031-4-TABM8X
0.031 (1/32)	0.372	0.1875	3.00	S166-031-3-TABM12X	S166-031-4-TABM12X
0.047 (3/64)	0.376	0.1875	3.00	S166-047-3-TABM8X	S166-047-4-TABM8X
0.047 (3/64)	0.564	0.1875	3.00	S166-047-3-TABM12X	S166-047-4-TABM12X
0.062 (1/16)	0.496	0.250	3.00	S166-062-3-TABM8X	S166-062-4-TABM8X
0.062 (1/16)	0.744	0.250	3.00	S166-062-3-TABM12X	S166-062-4-TABM12X
0.078 (5/64)	0.624	0.250	3.00	S166-078-3-TABM8X	S166-078-4-TABM8X
0.078 (5/64)	0.936	0.250	3.00	S166-078-3-TABM12X	S166-078-4-TABM12X
0.093 (3/32)	0.744	0.3125	3.00	S166-093-3-TABM8X	S166-093-4-TABM8X
0.093 (3/32)	1.116	0.3125	3.00	S166-093-3-TABM12X	S166-093-4-TABM12X
0.109 (7/64)	0.872	0.3125	3.00	S166-109-3-TABM8X	S166-109-4-TABM8X
0.125 (1/8)	1.000	0.3125	3.00	S166-125-3-TABM8X	S166-125-4-TABM8X
0.156 (5/32)*	1.248	0.375	3.00	S166-156-3-TABM8X	S166-156-4-TABM8X
0.187 (3/16)*	1.496	0.500	4.00	S166-188-3-TABM8X	S166-188-4-TABM8X



# STANDARDS VS. SPECIALS

## MITGI STANDARDS

For many jobs, standard tools are the preferred option, especially when time is the top priority. Standard tools provide an immediate manufacturing solution that can be utilized in many situations.

### Key Benefits

- Readily available in a wide array of sizes, depths, geometries, and radii
- Short turn around time
- Economical choice

MITGI standards are available in 3 days or less. See product charts for available standard options.

## MITGI SPECIALS

When a standard tool won't accomplish the task, turning to a custom tool is often the answer. Complex tool requirements, the need to consolidate tools in a tool station, or slight modifications to a standard tool, are all indications that moving to specials may be advantageous.

### Key Benefits

- Efficiencies gained in saving machine time
- Tool geometry designed for specific material
- Reduction in labor to implement tool changes
- Greater design freedom for part design and manufacturing optimization

Simply submit a drawing or set of specifications, and we can provide a quote to match. MITGI specializes in custom work with tight tolerances, elaborate form tools, and complex combination tools. MITGI specials are usually available in 2 weeks or less. See pages 206-207 for more information.

Some tools may qualify as QUICK TURN SPECIALS and can be manufactured in three days or less. A QUICK TURN REVIEW can be requested at the time of quoting.

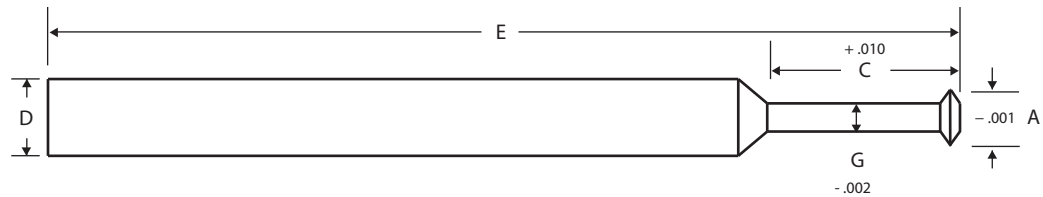


**FLUTES  
4**

Thread Size	Cutter Diameter	Max Depth of Thread	Shank Diameter	Overall Length	Neck Diameter	4 Flute Tool #
	A	C	D	E	G	
0	0.044	0.094	0.125	1.50	0.024	S17-0-TM
0	0.044	0.125	0.125	1.50	0.024	S17-0-TML-.125
0	0.044	0.156	0.125	1.50	0.024	S17-0-TML-.156
0	0.044	0.250	0.125	1.50	0.024	S17-0-TML-.250
1	0.054	0.125	0.125	1.50	0.032	S17-1-TM
1	0.054	0.188	0.125	1.50	0.032	S17-1-TML-.188
1	0.054	0.250	0.125	1.50	0.032	S17-1-TML-.250
1	0.054	0.313	0.125	1.50	0.032	S17-1-TML-.313
2	0.064	0.156	0.125	1.50	0.038	S17-2-TM
2	0.064	0.219	0.125	1.50	0.038	S17-2-TML-.219
2	0.064	0.313	0.125	1.50	0.038	S17-2-TML-.313
2	0.064	0.438	0.125	1.50	0.038	S17-2-TML-.438
3	0.072	0.156	0.125	1.50	0.040	S17-3-TM
3	0.072	0.250	0.125	1.50	0.040	S17-3-TML-.250
3	0.072	0.375	0.125	1.50	0.040	S17-3-TML-.375
3	0.072	0.500	0.125	1.50	0.040	S17-3-TML-.500
4	0.080	0.125	0.125	1.50	0.035	S17-4-TM
4	0.080	0.250	0.125	1.50	0.035	S17-4-TML
4	0.080	0.375	0.125	1.50	0.035	S17-4-TML-.375
4	0.080	0.500	0.125	1.50	0.035	S17-4-TML-.500
5	0.093	0.188	0.125	1.50	0.050	S17-5-TM
5	0.093	0.250	0.125	1.50	0.050	S17-5-TML-.250
5	0.093	0.375	0.125	1.50	0.050	S17-5-TML-.375
5	0.093	0.500	0.125	1.50	0.050	S17-5-TML-.500
6	0.098	0.250	0.188	2.00	0.042	S17-6-TM
6	0.098	0.375	0.188	2.00	0.042	S17-6-TML
6	0.098	0.500	0.188	2.00	0.042	S17-6-TML-.500
6	0.098	0.625	0.188	2.00	0.042	S17-6-TML-.625
8	0.120	0.313	0.250	2.50	0.056	S17-8-TM
8	0.120	0.500	0.250	2.50	0.056	S17-8-TML
8	0.120	0.625	0.250	2.50	0.056	S17-8-TML-.625
8	0.120	0.750	0.250	2.50	0.056	S17-8-TML-.750
10	0.135	0.313	0.250	2.50	0.061	S17-10-TM
10	0.135	0.500	0.250	2.50	0.061	S17-10-TML
10	0.135	0.625	0.250	2.50	0.061	S17-10-TML-.625
10	0.135	0.875	0.250	2.50	0.061	S17-10-TML-.875
12	0.160	0.313	0.250	2.50	0.085	S17-12-TM
12	0.160	0.375	0.250	2.50	0.085	S17-12-TML-.375
12	0.160	0.625	0.250	2.50	0.085	S17-12-TML-.625
12	0.160	0.875	0.250	2.50	0.085	S17-12-TML-.875
1/4	0.180	0.500	0.250	2.50	0.091	S17-250-TM
1/4	0.180	0.750	0.250	2.50	0.091	S17-250-TML
1/4	0.180	1.000	0.250	2.50	0.091	S17-250-TML-1.00
1/4	0.180	1.250	0.250	2.50	0.091	S17-250-TML-1.25



Thread Size	Cutter Diameter	Max Depth of Thread	Shank Diameter	Overall Length	Neck Diameter	4 Flute Tool #
	A	C	D	E	G	
5/16	0.240	0.500	0.250	2.50	0.142	S17-3125-TM
5/16	0.240	0.750	0.250	2.50	0.142	S17-3125-TML
5/16	0.240	1.000	0.250	2.50	0.142	S17-3125-TML-1.00
5/16	0.240	1.250	0.250	2.50	0.142	S17-3125-TML-1.25
3/8	0.300	0.750	0.375	2.50	0.190	S17-375-TM
3/8	0.300	1.000	0.375	2.50	0.190	S17-375-TML
3/8	0.300	1.250	0.375	2.50	0.190	S17-375-TML-1.25
3/8	0.300	1.500	0.375	2.50	0.190	S17-375-TML-1.50
1/2	0.388	0.750	0.500	3.00	0.230	S17-500-TM
1/2	0.388	1.250	0.500	3.00	0.230	S17-500-TML
1/2	0.388	1.750	0.500	3.00	0.230	S17-500-TML-1.75
1/2	0.388	2.250	0.500	3.00	0.230	S17-500-TML-2.25
3/4	0.495	1.000	0.500	3.00	0.325	S17-750-TM
3/4	0.495	1.375	0.500	3.00	0.325	S17-750-TML
3/4	0.495	1.750	0.500	3.00	0.325	S17-750-TML-1.75
3/4	0.495	2.250	0.500	3.00	0.325	S17-750-TML-2.25



### NOTES:

1. Any pitch (standard or metric), RH and LH threads, and fine or coarse threads
2. All S17 thread mills have an included 60° thread angle

## MANUFACTURED BY MITGI: Coolant Thru Materials

### MITGI coolant thru materials will do more than just help you keep your cool.

Coolant thru materials can help improve many common manufacturing issues. Use MITGI coolant thru materials to:

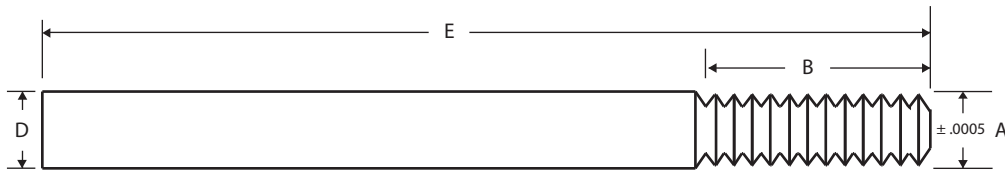
- Help improve chip removal
- Reduce heat
- Reduce temperature fluctuations at the cutting edge
- Aid deep pocket or hole manufacturing operations
- Decrease cycle times
- Improve finishes by alleviating double cutting and chip smearing

Ready to get started? See page 2 for contact information.



**FLUTES  
3,4**

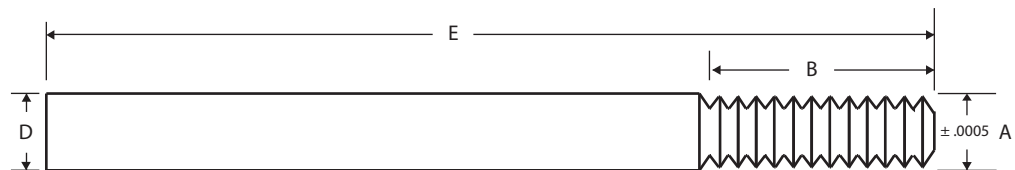
Min. Thread Size and Pitch	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
	A	B	D	E		
2-56	0.065	0.125	0.125	2.00	3	S39-011
2-64	0.065	0.125	0.125	2.00	3	S39-087
3-48	0.075	0.167	0.125	2.00	3	S39-024
3-56	0.075	0.167	0.125	2.00	3	S39-088
4-40	0.085	0.175	0.125	2.00	3	S39-012
4-48	0.085	0.175	0.125	2.00	3	S39-089
5-40	0.095	0.228	0.125	2.00	3	S39-090
5-44	0.095	0.228	0.125	2.00	3	S39-025
6-32	0.100	0.218	0.125	2.00	3	S39-013
6-40	0.100	0.218	0.125	2.00	3	S39-091
8-32	0.124	0.250	0.125	2.00	4	S39-014
8-36	0.124	0.250	0.125	2.00	4	S39-092
10-24	0.124	0.312	0.125	2.00	3	S39-015
10-32	0.124	0.312	0.125	2.00	4	S39-016
12-24	0.134	0.312	0.1875	2.00	4	S39-026
12-28	0.134	0.312	0.1875	2.00	4	S39-027
1/4-20	0.180	0.500	0.1875	2.50	4	S39-001
1/4-24	0.180	0.500	0.1875	2.50	4	S39-028
1/4-28	0.180	0.500	0.1875	2.50	4	S39-017
1/4-32	0.180	0.500	0.1875	2.50	4	S39-029
1/4-36	0.180	0.500	0.1875	2.50	4	S39-030
1/4-40	0.180	0.500	0.1875	2.50	4	S39-031
1/4-48	0.180	0.500	0.1875	2.50	4	S39-032
1/4-56	0.180	0.500	0.1875	2.50	4	S39-033
5/16-18	0.240	0.625	0.250	2.50	4	S39-003
5/16-20	0.240	0.625	0.250	2.50	4	S39-035
5/16-24	0.240	0.625	0.250	2.50	4	S39-018
5/16-28	0.240	0.625	0.250	2.50	4	S39-036
5/16-32	0.240	0.625	0.250	2.50	4	S39-037
5/16-36	0.240	0.625	0.250	2.50	4	S39-038
5/16-40	0.240	0.625	0.250	2.50	4	S39-039
5/16-48	0.240	0.625	0.250	2.50	4	S39-040



# UN Full Form Helical Thread Mills

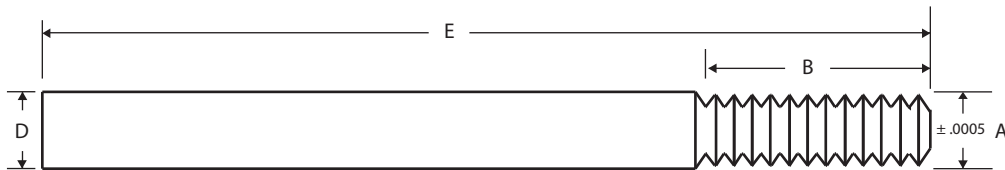
**S39**
**FLUTES  
3,4**

Min. Thread Size and Pitch	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
	A	B	D	E		
3/8-16	0.290	0.750	0.3125	3.00	4	S39-019
3/8-18	0.290	0.750	0.3125	3.00	4	S39-041
3/8-20	0.290	0.750	0.3125	3.00	4	S39-042
3/8-24	0.290	0.750	0.3125	3.00	4	S39-010
3/8-28	0.290	0.750	0.3125	3.00	4	S39-043
3/8-32	0.290	0.750	0.3125	3.00	4	S39-044
3/8-36	0.290	0.750	0.3125	3.00	4	S39-045
3/8-40	0.290	0.750	0.3125	3.00	4	S39-046
7/16-14	0.340	0.750	0.375	3.00	4	S39-020
7/16-16	0.340	0.750	0.375	3.00	4	S39-047
7/16-18	0.340	0.750	0.375	3.00	4	S39-048
7/16-20	0.340	0.875	0.375	3.00	4	S39-002
7/16-24	0.340	0.875	0.375	3.00	4	S39-049
7/16-28	0.340	0.875	0.375	3.00	4	S39-050
7/16-32	0.340	0.875	0.375	3.00	4	S39-051
1/2-12	0.370	0.875	0.375	3.00	4	S39-052
1/2-13	0.370	0.875	0.375	3.00	4	S39-007
1/2-14	0.370	0.875	0.375	3.00	4	S39-053
1/2-16	0.370	0.875	0.375	3.00	4	S39-054
1/2-18	0.370	0.875	0.375	3.00	4	S39-055
1/2-20	0.370	0.875	0.375	3.00	4	S39-056
1/2-24	0.370	0.875	0.375	3.00	4	S39-057
1/2-28	0.370	0.875	0.375	3.00	4	S39-058
1/2-32	0.370	0.875	0.375	3.00	4	S39-059
9/16-12	0.370	0.875	0.375	3.00	4	S39-008
9/16-14	0.370	0.875	0.375	3.00	4	S39-060
9/16-16	0.370	0.875	0.375	3.00	4	S39-061
9/16-18	0.370	0.875	0.375	3.00	4	S39-004
9/16-20	0.370	0.875	0.375	3.00	4	S39-062
9/16-24	0.370	0.875	0.375	3.00	4	S39-063
9/16-28	0.370	0.875	0.375	3.00	4	S39-064
9/16-32	0.370	0.875	0.375	3.00	4	S39-065



**FLUTES  
3,4**

Min. Thread Size and Pitch	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
	A	B	D	E		
5/8-11	0.490	1.250	0.500	4.00	4	S39-021
5/8-12	0.490	1.250	0.500	4.00	4	S39-066
5/8-14	0.490	1.250	0.500	4.00	4	S39-067
5/8-16	0.490	1.250	0.500	4.00	4	S39-068
5/8-18	0.490	1.250	0.500	4.00	4	S39-069
5/8-20	0.490	1.250	0.500	4.00	4	S39-070
5/8-24	0.490	1.250	0.500	4.00	4	S39-071
5/8-28	0.490	1.250	0.500	4.00	4	S39-072
5/8-32	0.490	1.250	0.500	4.00	4	S39-073
3/4-10	0.490	1.250	0.500	4.00	4	S39-022
3/4-12	0.490	1.250	0.500	4.00	4	S39-009
3/4-14	0.490	1.250	0.500	4.00	4	S39-074
3/4-16	0.490	1.250	0.500	4.00	4	S39-005
3/4-18	0.490	1.250	0.500	4.00	4	S39-075
3/4-20	0.490	1.250	0.500	4.00	4	S39-076
3/4-24	0.490	1.250	0.500	4.00	4	S39-077
3/4-28	0.490	1.250	0.500	4.00	4	S39-078
3/4-32	0.490	1.250	0.500	4.00	4	S39-079
7/8-9	0.490	1.250	0.500	4.00	4	S39-080
7/8-12	0.490	1.250	0.500	4.00	4	S39-081
7/8-14	0.490	1.250	0.500	4.00	4	S39-006
7/8-16	0.490	1.250	0.500	4.00	4	S39-082
7/8-18	0.490	1.250	0.500	4.00	4	S39-083
7/8-20	0.490	1.250	0.500	4.00	4	S39-093
7/8-24	0.490	1.250	0.500	4.00	4	S39-084
7/8-28	0.490	1.250	0.500	4.00	4	S39-085
7/8-32	0.490	1.250	0.500	4.00	4	S39-086





## QUALITY. PRECISION. MITGI.

For more than 30 years, MITGI has delivered on our reputation for manufacturing hard-to-find or difficult-to-make custom cutting tools. We apply that same attention to detail, repeatability, and precision to the manufacturing of standard tools.

Our state-of-the-art facility has a diverse group of CNC cutter grinders that allow us to build both custom and standard cutting tools with a high degree of accuracy and repeatability. Our goal is to provide high quality tools that meet the specific needs of each customer.

Regardless of the equipment you're using today, we can offer a solution that will meet your current specifications through our standard product lines and custom tools.

## ON-SITE MANUFACTURING

All tools sold by MITGI are manufactured on-site, which makes it easy for MITGI to stand behind the quality of the products and services provided. Customers tell us that whether using standards or specials, MITGI carbide cutting tools consistently outperform the competition.

Working with MITGI to design and manufacture tools provides several advantages:

- A Minnesota-based team that provides on-site manufacturing, inspections, drafting, customer service, shipping, and technical support
- A reliable source for standards and specials, both available with tight timelines – specials can usually be manufactured within two weeks, standards and QUICK TURN SPECIALS are available in three days or less
- In-house coating allows consistent quality control and a reduction in lead times for coated tools

# ON-SITE MANUFACTURING

## MANUFACTURED BY MITGI

Ordering from MITGI means that you can always be certain that the tool you receive from us today will meet the same requirements the next time it's ordered.

On-site manufacturing ensures:

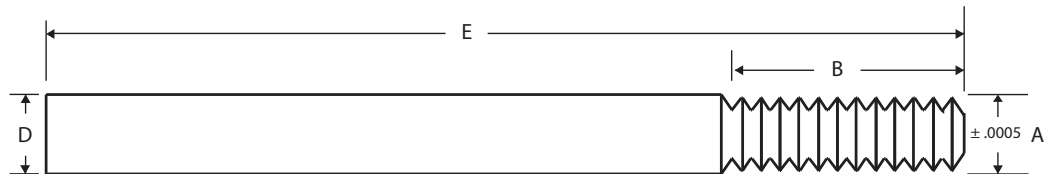
- Same quality carbide used across all tool categories
- Repeatable quality
- Consistent inspection methods
- Diligent inspection tracking
- Internal quality processes throughout all stages of production
- On-site logistics to reduce project management hassles

 **Ready to get started?**  
**Contact us:**  
**Phone: (320) 455-0535**  
**Email: [info@mitgi.us](mailto:info@mitgi.us)**  
**Web: [www.mitgi.us](http://www.mitgi.us)**



**FLUTES  
3,4**

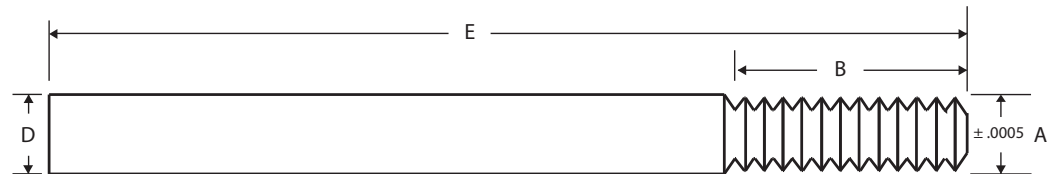
Min. Thread Size and Pitch	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
	A	B	D	E		
2-56	0.065	0.125	0.125	2.00	3	S105-001
2-64	0.065	0.125	0.125	2.00	3	S105-086
3-48	0.075	0.167	0.125	2.00	3	S105-002
3-56	0.075	0.167	0.125	2.00	3	S105-087
4-40	0.085	0.175	0.125	2.00	3	S105-003
4-48	0.085	0.175	0.125	2.00	3	S105-088
5-40	0.095	0.228	0.125	2.00	3	S105-089
5-44	0.095	0.228	0.125	2.00	3	S105-004
6-32	0.100	0.218	0.125	2.00	3	S105-005
6-40	0.100	0.218	0.125	2.00	3	S105-090
8-32	0.124	0.250	0.125	2.00	4	S105-006
8-36	0.124	0.250	0.125	2.00	4	S105-091
10-24	0.124	0.312	0.125	2.00	3	S105-007
10-32	0.124	0.312	0.125	2.00	4	S105-008
12-24	0.134	0.312	0.1875	2.00	4	S105-009
12-28	0.134	0.312	0.1875	2.00	4	S105-010
1/4-20	0.180	0.500	0.1875	2.50	4	S105-011
1/4-24	0.180	0.500	0.1875	2.50	4	S105-012
1/4-28	0.180	0.500	0.1875	2.50	4	S105-013
1/4-32	0.180	0.500	0.1875	2.50	4	S105-014
1/4-36	0.180	0.500	0.1875	2.50	4	S105-015
1/4-40	0.180	0.500	0.1875	2.50	4	S105-016
1/4-48	0.180	0.500	0.1875	2.50	4	S105-017
1/4-56	0.180	0.500	0.1875	2.50	4	S105-018
5/16-18	0.240	0.625	0.250	2.50	4	S105-020
5/16-20	0.240	0.625	0.250	2.50	4	S105-021
5/16-24	0.240	0.625	0.250	2.50	4	S105-022
5/16-28	0.240	0.625	0.250	2.50	4	S105-023
5/16-32	0.240	0.625	0.250	2.50	4	S105-024
5/16-36	0.240	0.625	0.250	2.50	4	S105-025
5/16-40	0.240	0.625	0.250	2.50	4	S105-026
5/16-48	0.240	0.625	0.250	2.50	4	S105-027



# UN Full Form Straight Flute Thread Mills

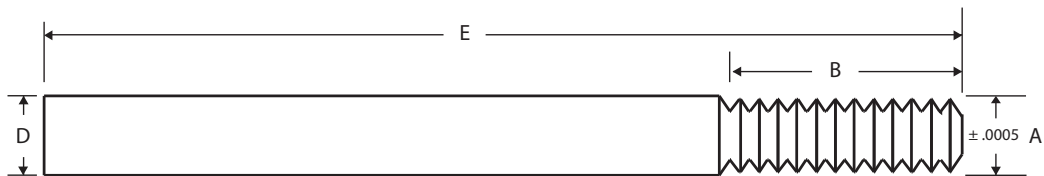
**S105**
**FLUTES  
3,4**

Min. Thread Size and Pitch	Cutter Diameter		Length of Cut		# of Flutes	Tool #
	A	B	D	E		
3/8-16	0.290	0.750	0.3125	3.00	4	S105-028
3/8-18	0.290	0.750	0.3125	3.00	4	S105-029
3/8-20	0.290	0.750	0.3125	3.00	4	S105-030
3/8-24	0.290	0.750	0.3125	3.00	4	S105-031
3/8-28	0.290	0.750	0.3125	3.00	4	S105-032
3/8-32	0.290	0.750	0.3125	3.00	4	S105-033
3/8-36	0.290	0.750	0.3125	3.00	4	S105-034
3/8-40	0.290	0.750	0.3125	3.00	4	S105-035
7/16-14	0.340	0.750	0.375	3.00	4	S105-036
7/16-16	0.340	0.750	0.375	3.00	4	S105-037
7/16-18	0.340	0.750	0.375	3.00	4	S105-038
7/16-20	0.340	0.875	0.375	3.00	4	S105-039
7/16-24	0.340	0.875	0.375	3.00	4	S105-040
7/16-28	0.340	0.875	0.375	3.00	4	S105-041
7/16-32	0.340	0.875	0.375	3.00	4	S105-042
1/2-12	0.370	0.875	0.375	3.00	4	S105-043
1/2-13	0.370	0.875	0.375	3.00	4	S105-044
1/2-14	0.370	0.875	0.375	3.00	4	S105-045
1/2-16	0.370	0.875	0.375	3.00	4	S105-046
1/2-18	0.370	0.875	0.375	3.00	4	S105-047
1/2-20	0.370	0.875	0.375	3.00	4	S105-048
1/2-24	0.370	0.875	0.375	3.00	4	S105-049
1/2-28	0.370	0.875	0.375	3.00	4	S105-050
1/2-32	0.370	0.875	0.375	3.00	4	S105-051
9/16-12	0.370	0.875	0.375	3.00	4	S105-052
9/16-14	0.370	0.875	0.375	3.00	4	S105-053
9/16-16	0.370	0.875	0.375	3.00	4	S105-054
9/16-18	0.370	0.875	0.375	3.00	4	S105-055
9/16-20	0.370	0.875	0.375	3.00	4	S105-056
9/16-24	0.370	0.875	0.375	3.00	4	S105-057
9/16-28	0.370	0.875	0.375	3.00	4	S105-058
9/16-32	0.370	0.875	0.375	3.00	4	S105-059




**FLUTES  
3,4**

Min. Thread Size and Pitch	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
	A	B	D	E		
5/8-11	0.490	1.250	0.500	4.00	4	S105-060
5/8-12	0.490	1.250	0.500	4.00	4	S105-061
5/8-14	0.490	1.250	0.500	4.00	4	S105-062
5/8-16	0.490	1.250	0.500	4.00	4	S105-063
5/8-18	0.490	1.250	0.500	4.00	4	S105-064
5/8-20	0.490	1.250	0.500	4.00	4	S105-065
5/8-24	0.490	1.250	0.500	4.00	4	S105-066
5/8-28	0.490	1.250	0.500	4.00	4	S105-067
5/8-32	0.490	1.250	0.500	4.00	4	S105-068
3/4-10	0.490	1.250	0.500	4.00	4	S105-069
3/4-12	0.490	1.250	0.500	4.00	4	S105-070
3/4-14	0.490	1.250	0.500	4.00	4	S105-071
3/4-16	0.490	1.250	0.500	4.00	4	S105-072
3/4-18	0.490	1.250	0.500	4.00	4	S105-073
3/4-20	0.490	1.250	0.500	4.00	4	S105-074
3/4-24	0.490	1.250	0.500	4.00	4	S105-075
3/4-28	0.490	1.250	0.500	4.00	4	S105-076
3/4-32	0.490	1.250	0.500	4.00	4	S105-077
7/8-9	0.490	1.250	0.500	4.00	4	S105-078
7/8-12	0.490	1.250	0.500	4.00	4	S105-079
7/8-14	0.490	1.250	0.500	4.00	4	S105-080
7/8-16	0.490	1.250	0.500	4.00	4	S105-081
7/8-18	0.490	1.250	0.500	4.00	4	S105-082
7/8-20	0.490	1.250	0.500	4.00	4	S105-092
7/8-24	0.490	1.250	0.500	4.00	4	S105-083
7/8-28	0.490	1.250	0.500	4.00	4	S105-084
7/8-32	0.490	1.250	0.500	4.00	4	S105-085





# CUSTOM TOOL QUOTE FORMS



### QUOTE SHEET / Keyseat Cutter Woodruff Cutter

**TOLERANCES**

.XX	±.010
.XXX	±.001
.XXXX	±.0005
Angular	± 1.0°

**NOTES:**

- Tolerances are quoted with black tolerance unless noted (excluding OAL).
- Shoulder angle is "x" unless specified.
- All dimensions are inches unless noted.
- Diagram letters correspond with standard tool columns featured in MITGI product catalog.
- Use **highlighted** to designate cutting area.

<b>Company Information</b>	<b>Tool Information</b>	<b>Quoting (MITGI USE ONLY)</b>
ORGANIZATION	ITEM NUMBER	MATERIAL STOCK OR SPECIAL ORDER
PRIMARY CONTACT - NAME, EMAIL, PHONE	QUANTITY (QUANTITIES TO QUOTE)	PRICING (BY QTY)
SECONDARY CONTACT - NAME, EMAIL, PHONE	MATERIAL MACHINING	ESTIMATED SHIP DATE
ADDRESS	NUMBER OF TEETH	MITGI CUSTOMER NUMBER
CITY, STATE, ZIP	HELIX ANGLE (0° = STRAIGHT)	MITGI ACCOUNT MANAGER
<b>Schedule and Production</b>	<b>Tool Material (CIRCLE ONE)</b>	<b>GSS (MITGI USE ONLY)</b>
DATE SUBMITTED	CARBIDE HSS COOLANT THRU	PART DESCRIPTION CODE: CUTTER DIAMETER/6
TARGET DELIVERY DATE	PRE-FORM SUPPLIED MATL	# FLUTES/2
PREFERRED SHIPPING METHOD	<b>Coating (CIRCLE ONE)</b>	TOOL TYPE CODE/4
LASER MARKING (Y/N)	UNCOATED ALTiN TiN	KEYS
SPECIAL NOTES OR INSTRUCTIONS	TiCN NACO* NACKO*	LOC/5
	DLC DIAMOND ZiRN	SHANK DIAMETER/5
	<b>End Finish (CIRCLE ONE, ADD NOTES)</b>	OAL/3
	SQUARE CORNER RADIUS (R) FULL RADIUS	PRODUCT CODE
	CHAMFER (DEGREE) CHAMFER (FLAT)	CA, CF

©2016 Midwest Industrial Tool Grinding, Inc. www.mitgi.us (320) 455-0535 MITGI FORM\_06 Rev 10/05/2016

## ORDERING CUSTOM TOOLS

The process to get exactly the right tool you need does not have to be complicated. Working with our design and manufacturing teams, your specifications can turn into a working tool within two weeks of print approval.

There are a number of ways to get started:

1. Send a tool print for an existing tool
2. Email tool specs
3. Provide a sketch of the tool concept
4. Complete a QUOTE SHEET (available at [www.mitgi.us](http://www.mitgi.us))

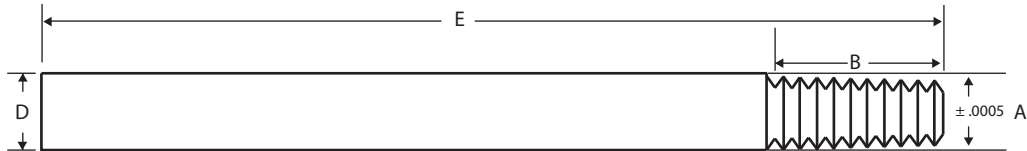
After we receive the tool information, we'll prepare a quote and timeline. After receipt of the purchase order, we'll complete a MITGI tool print for your review. With your approval, the tool will move into production.

Contact us to get started today.

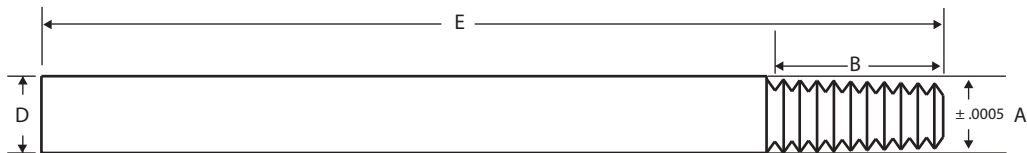


**S41**
**NPTF Full Form Helical Thread Mills**
**FLUTES  
4**

Min. Thread Size	Pitch	Large End Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
		A	B	D	E		
1/16 & 1/8	27	0.245	0.437	0.250	2.50	4	S41-001
1/4 & 3/8	18	0.305	0.625	0.3125	3.00	4	S41-002
1/2 & 3/4	14	0.495	0.825	0.500	4.00	4	S41-003
1 & 2	11.5	0.620	1.125	0.625	4.00	4	S41-005


**S104**
**NPTF Full Form Straight Flute Thread Mills**
**FLUTES  
4**

Min. Thread Size	Pitch	Large End Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
		A	B	D	E		
1/16 & 1/8	27	0.245	0.437	0.250	2.50	4	S104-001
1/4 & 3/8	18	0.305	0.625	0.3125	3.00	4	S104-002
1/2 & 3/4	14	0.495	0.825	0.500	4.00	4	S104-003
1 & 2	11.5	0.620	1.125	0.625	4.00	4	S104-004

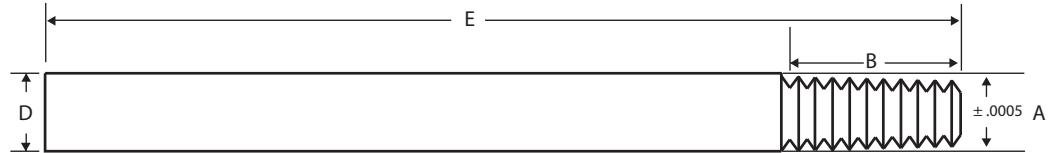


## NPT Full Form Helical Thread Mills

S51

FLUTES  
4

Min. Thread Size	Pitch	Large End Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
		A	B	D	E		
1/16 & 1/8	27	0.245	0.437	0.250	2.50	4	S51-001
1/4 & 3/8	18	0.305	0.625	0.3125	3.00	4	S51-002
1/2 & 3/4	14	0.495	0.825	0.500	4.00	4	S51-003
1 & 2	11.5	0.620	1.125	0.625	4.00	4	S51-005

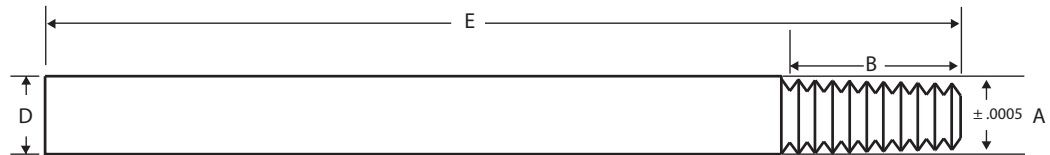


## NPT Full Form Straight Flute Thread Mills

S103

FLUTES  
4

Min. Thread Size	Pitch	Large End Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
		A	B	D	E		
1/16 & 1/8	27	0.245	0.437	0.250	2.50	4	S103-001
1/4 & 3/8	18	0.305	0.625	0.3125	3.00	4	S103-002
1/2 & 3/4	14	0.495	0.825	0.500	4.00	4	S103-003
1 & 2	11.5	0.620	1.125	0.625	4.00	4	S103-004

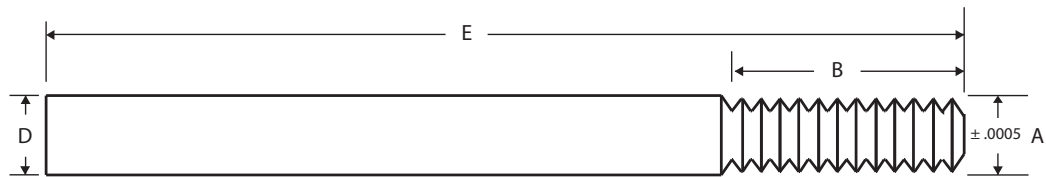


Need your coated tool quickly? All standard tools are available AITIN coated in 3 days or less. See page 117 for more details.



**FLUTES  
4**

Min. Thread Size	Pitch (mm)	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
		A	B	D	E		
M3	0.50	0.085	0.178	0.125	2.00	4	S40-010
M3.5	0.60	0.095	0.235	0.125	2.00	4	S40-011
M4	0.70	0.115	0.276	0.125	2.00	4	S40-012
M4.5	0.75	0.120	0.313	0.125	2.00	4	S40-013
M5	0.80	0.120	0.312	0.125	2.00	4	S40-005
M6	1.00	0.170	0.500	0.1875	2.50	4	S40-006
M8	1.25	0.235	0.625	0.250	3.00	4	S40-001
M10	1.50	0.300	0.750	0.3125	3.00	4	S40-007
M12	1.75	0.360	0.875	0.375	3.00	4	S40-003
M14	1.50	0.370	0.875	0.375	3.00	4	S40-002
M16	2.00	0.490	1.250	0.500	4.00	4	S40-004
M18	1.50	0.490	1.250	0.500	4.00	4	S40-008
M20	2.50	0.495	1.250	0.500	4.00	4	S40-009
M22	2.50	0.620	1.250	0.625	4.00	4	S40-014
M24	3.00	0.620	1.250	0.625	4.00	4	S40-015
M30	3.50	0.620	1.250	0.625	4.00	4	S40-016
M36	4.00	0.620	1.250	0.625	4.00	4	S40-017

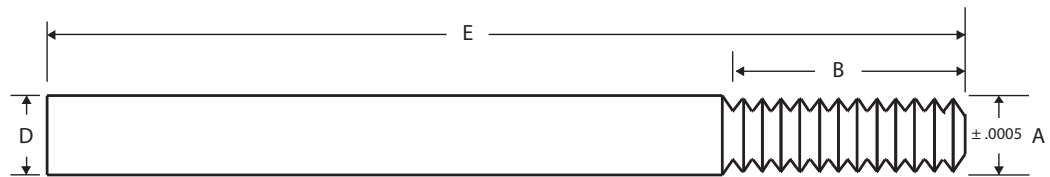


# Metric Full Form Straight Flute Thread Mills

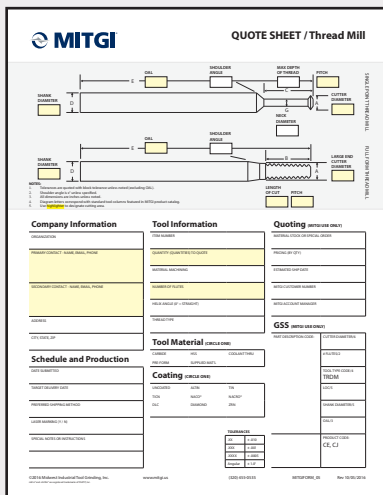
**S106**

**FLUTES  
4**

Min. Thread Size	Pitch (mm)	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
		A	B	D	E		
M3	0.50	0.085	0.178	0.125	2.00	4	S106-001
M3.5	0.60	0.095	0.235	0.125	2.00	4	S106-002
M4	0.70	0.115	0.276	0.125	2.00	4	S106-003
M4.5	0.75	0.120	0.313	0.125	2.00	4	S106-004
M5	0.80	0.120	0.312	0.125	2.00	4	S106-005
M6	1.00	0.170	0.500	0.1875	2.50	4	S106-006
M8	1.25	0.235	0.625	0.250	3.00	4	S106-007
M10	1.50	0.300	0.750	0.3125	3.00	4	S106-008
M12	1.75	0.360	0.875	0.375	3.00	4	S106-009
M14	1.50	0.370	0.875	0.375	3.00	4	S106-010
M16	2.00	0.490	1.250	0.500	4.00	4	S106-011
M18	1.50	0.490	1.250	0.500	4.00	4	S106-012
M20	2.50	0.495	1.250	0.500	4.00	4	S106-013
M22	2.50	0.620	1.250	0.625	4.00	4	S106-014
M24	3.00	0.620	1.250	0.625	4.00	4	S106-015
M30	3.50	0.620	1.250	0.625	4.00	4	S106-016
M36	4.00	0.620	1.250	0.625	4.00	4	S106-017



## Custom Thread Mills



**Can't find a tool to meet your exact specifications?  
Specials or modified standards may be the answer.**

**MANUFACTURED BY MITGI**

- Shank diameter = 3mm – 1.250 in
- Tolerances and number of flutes vary by design
- Custom thread mill types: single point, full form, and coolant thru
- Specs: shoulder angle, depth of thread, pitch, cutter diameter, length of cut, neck diameter, straight or helical flutes, reach
- Coated or uncoated
- Specials usually available in two weeks or less

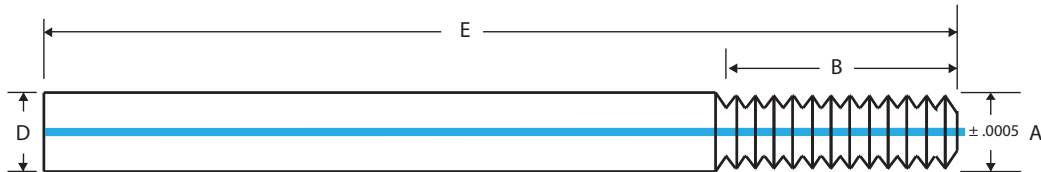
**Quote forms available on our website and upon request.  
Contact us for an estimate today.**



**FLUTES  
3,4**

**COOLANT  
THRU**

Min. Thread Size and Pitch	Cutter Diameter		Length of Cut		Shank Diameter	Overall Length	# of Flutes	Tool #
	A	B	D	E				
2-56	0.065	0.125	0.125	2.00	3	S172-001		
2-64	0.065	0.125	0.125	2.00	3	S172-084		
3-48	0.075	0.167	0.125	2.00	3	S172-002		
3-56	0.075	0.167	0.125	2.00	3	S172-085		
4-40	0.085	0.175	0.125	2.00	3	S172-003		
4-48	0.085	0.175	0.125	2.00	3	S172-086		
5-40	0.095	0.228	0.125	2.00	3	S172-087		
5-44	0.095	0.228	0.125	2.00	3	S172-004		
6-32	0.100	0.218	0.125	2.00	3	S172-005		
6-40	0.100	0.218	0.125	2.00	3	S172-088		
8-32	0.124	0.250	0.125	2.00	4	S172-006		
8-36	0.124	0.250	0.125	2.00	4	S172-089		
10-24	0.124	0.312	0.125	2.00	3	S172-007		
10-32	0.124	0.312	0.125	2.00	4	S172-008		
12-24	0.134	0.312	0.1875	2.00	4	S172-091		
12-28	0.134	0.312	0.1875	2.00	4	S172-092		
1/4-20	0.180	0.500	0.1875	2.50	4	S172-009		
1/4-24	0.180	0.500	0.1875	2.50	4	S172-010		
1/4-28	0.180	0.500	0.1875	2.50	4	S172-011		
1/4-32	0.180	0.500	0.1875	2.50	4	S172-012		
1/4-36	0.180	0.500	0.1875	2.50	4	S172-013		
1/4-40	0.180	0.500	0.1875	2.50	4	S172-014		
1/4-48	0.180	0.500	0.1875	2.50	4	S172-015		
1/4-56	0.180	0.500	0.1875	2.50	4	S172-016		
5/16-18	0.240	0.625	0.250	2.50	4	S172-018		
5/16-20	0.240	0.625	0.250	2.50	4	S172-019		
5/16-24	0.240	0.625	0.250	2.50	4	S172-020		
5/16-28	0.240	0.625	0.250	2.50	4	S172-021		
5/16-32	0.240	0.625	0.250	2.50	4	S172-022		
5/16-36	0.240	0.625	0.250	2.50	4	S172-023		
5/16-40	0.240	0.625	0.250	2.50	4	S172-024		
5/16-48	0.240	0.625	0.250	2.50	4	S172-025		



# Coolant Thru UN Full Form Helical Thread Mills

S172

Min. Thread Size and Pitch	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
	A	B	D	E		
3/8-16	0.290	0.750	0.3125	3.00	4	S172-026
3/8-18	0.290	0.750	0.3125	3.00	4	S172-027
3/8-20	0.290	0.750	0.3125	3.00	4	S172-028
3/8-24	0.290	0.750	0.3125	3.00	4	S172-029
3/8-28	0.290	0.750	0.3125	3.00	4	S172-030
3/8-32	0.290	0.750	0.3125	3.00	4	S172-031
3/8-36	0.290	0.750	0.3125	3.00	4	S172-032
3/8-40	0.290	0.750	0.3125	3.00	4	S172-033
7/16-14	0.340	0.750	0.375	3.00	4	S172-034
7/16-16	0.340	0.750	0.375	3.00	4	S172-035
7/16-18	0.340	0.750	0.375	3.00	4	S172-036
7/16-20	0.340	0.875	0.375	3.00	4	S172-037
7/16-24	0.340	0.875	0.375	3.00	4	S172-038
7/16-28	0.340	0.875	0.375	3.00	4	S172-039
7/16-32	0.340	0.875	0.375	3.00	4	S172-040
1/2-12	0.370	0.875	0.375	3.00	4	S172-041
1/2-13	0.370	0.875	0.375	3.00	4	S172-042
1/2-14	0.370	0.875	0.375	3.00	4	S172-043
1/2-16	0.370	0.875	0.375	3.00	4	S172-044
1/2-18	0.370	0.875	0.375	3.00	4	S172-045
1/2-20	0.370	0.875	0.375	3.00	4	S172-046
1/2-24	0.370	0.875	0.375	3.00	4	S172-047
1/2-28	0.370	0.875	0.375	3.00	4	S172-048
1/2-32	0.370	0.875	0.375	3.00	4	S172-049
9/16-12	0.370	0.875	0.375	3.00	4	S172-050
9/16-14	0.370	0.875	0.375	3.00	4	S172-051
9/16-16	0.370	0.875	0.375	3.00	4	S172-052
9/16-18	0.370	0.875	0.375	3.00	4	S172-053
9/16-20	0.370	0.875	0.375	3.00	4	S172-054
9/16-24	0.370	0.875	0.375	3.00	4	S172-055
9/16-28	0.370	0.875	0.375	3.00	4	S172-056
9/16-32	0.370	0.875	0.375	3.00	4	S172-057

FLUTES  
3,4

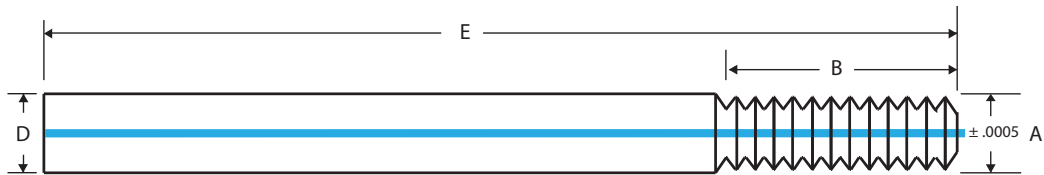
COOLANT  
THRU

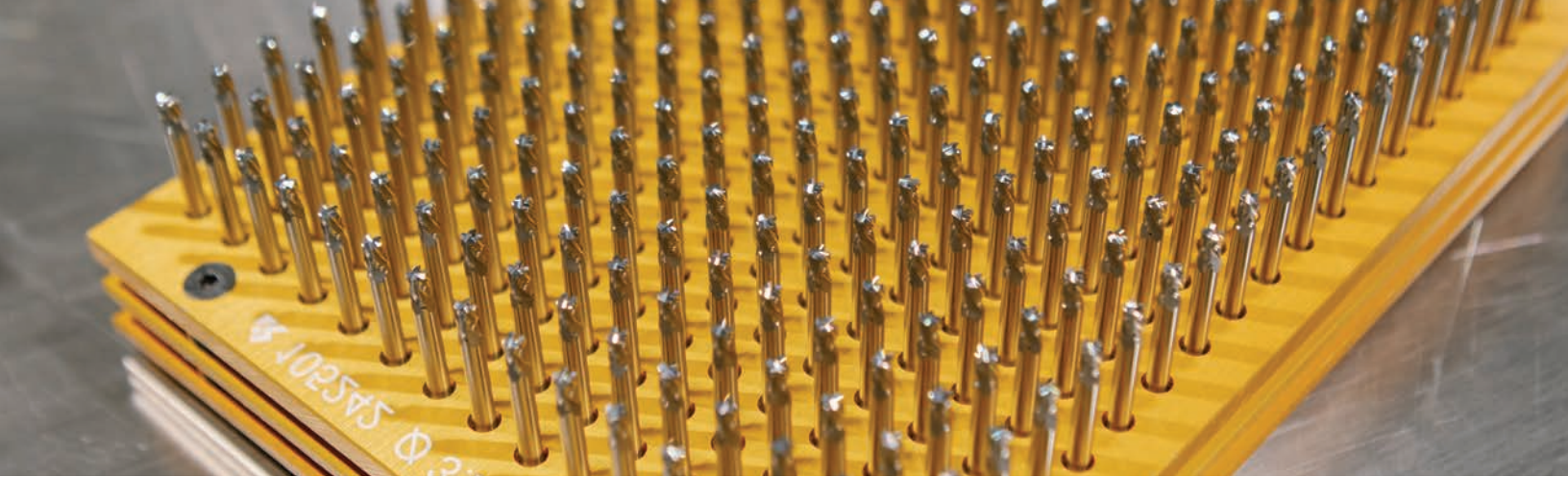


**FLUTES  
3,4**

**COOLANT  
THRU**

Min. Thread Size and Pitch	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
	A	B	D	E		
5/8-11	0.490	1.250	0.500	4.00	4	S172-058
5/8-12	0.490	1.250	0.500	4.00	4	S172-059
5/8-14	0.490	1.250	0.500	4.00	4	S172-060
5/8-16	0.490	1.250	0.500	4.00	4	S172-061
5/8-18	0.490	1.250	0.500	4.00	4	S172-062
5/8-20	0.490	1.250	0.500	4.00	4	S172-063
5/8-24	0.490	1.250	0.500	4.00	4	S172-064
5/8-28	0.490	1.250	0.500	4.00	4	S172-065
5/8-32	0.490	1.250	0.500	4.00	4	S172-066
3/4-10	0.490	1.250	0.500	4.00	4	S172-067
3/4-12	0.490	1.250	0.500	4.00	4	S172-068
3/4-14	0.490	1.250	0.500	4.00	4	S172-069
3/4-16	0.490	1.250	0.500	4.00	4	S172-070
3/4-18	0.490	1.250	0.500	4.00	4	S172-071
3/4-20	0.490	1.250	0.500	4.00	4	S172-072
3/4-24	0.490	1.250	0.500	4.00	4	S172-073
3/4-28	0.490	1.250	0.500	4.00	4	S172-074
3/4-32	0.490	1.250	0.500	4.00	4	S172-075
7/8-9	0.490	1.250	0.500	4.00	4	S172-076
7/8-12	0.490	1.250	0.500	4.00	4	S172-077
7/8-14	0.490	1.250	0.500	4.00	4	S172-078
7/8-16	0.490	1.250	0.500	4.00	4	S172-079
7/8-18	0.490	1.250	0.500	4.00	4	S172-080
7/8-20	0.490	1.250	0.500	4.00	4	S172-090
7/8-24	0.490	1.250	0.500	4.00	4	S172-081
7/8-28	0.490	1.250	0.500	4.00	4	S172-082
7/8-32	0.490	1.250	0.500	4.00	4	S172-083





# MEASUREMENT CHART

	Inches	MM
	1/64	.015625 .39688
	1/32	.03125 .79375
	3/64	.046875 1.19063
1/16		.0625 1.58750
	5/64	.078125 1.98438
	3/32	.09375 2.38125
	7/64	.109375 2.77813
1/8		.125 3.17500
	9/64	.140625 3.57188
	5/32	.15625 3.96875
	11/64	.171875 4.36563
3/16		.1875 4.76250
	13/64	.203125 5.15938
	7/32	.21875 5.55625
	15/64	.234375 5.95313
1/4		.250 6.35000
	17/64	.265625 6.74688
	9/32	.28125 7.14375
	19/64	.296875 7.54063
5/16		.3125 7.93750
	21/64	.328125 8.33438
	11/32	.34375 8.73125
	23/64	.359375 9.12813
3/8		.375 9.52500
	25/64	.390625 9.92188
	13/32	.40625 10.31875
	27/64	.421875 10.71563
7/16		.4375 11.11250
	29/64	.453125 11.50938
	15/32	.46875 11.90625
	31/64	.484375 12.30313
1/2		.500 12.70000

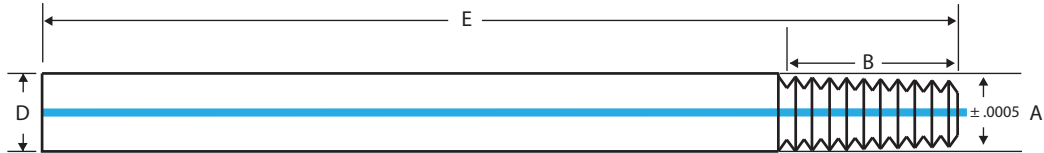
	Inches	MM
	33/64	.515625 13.09688
	17/32	.53125 13.49375
	35/64	.546875 13.89063
9/16		.5625 14.28750
	37/64	.578125 14.68438
	19/32	.59375 15.08125
	39/64	.609375 15.47813
5/8		.625 15.87500
	41/64	.640625 16.27188
	21/32	.65625 16.66875
	43/64	.671875 17.06563
11/16		.6875 17.46250
	45/64	.703125 17.85938
	23/32	.71875 18.25625
	47/64	.734375 18.65313
3/4		.750 19.05000
	49/64	.765625 19.44688
	25/32	.78125 19.84375
	51/64	.796875 20.24063
13/16		.8125 20.63750
	53/64	.828125 21.03438
	27/32	.84375 21.43125
	55/64	.859375 21.82813
7/8		.875 22.22500
	57/64	.890625 22.62188
	29/32	.90625 23.01875
	59/64	.921875 23.41563
15/16		.9375 23.81250
	61/64	.953125 24.20938
	31/32	.96875 24.60625
	63/64	.984375 25.00313
1		1.00 25.40000



**S170**
**Coolant Thru NPTF Full Form Helical Thread Mills**
**FLUTES  
4**

**COOLANT  
THRU**

Min. Thread Size	Pitch	Large End Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
		A	B	D	E		
1/16 & 1/8	27	0.245	0.437	0.250	2.50	4	S170-001
1/4 & 3/8	18	0.305	0.625	0.3125	3.00	4	S170-002
1/2 & 3/4	14	0.495	0.825	0.500	4.00	4	S170-003
1 & 2	11.5	0.620	1.125	0.625	4.00	4	S170-004


**S171**
**Coolant Thru NPT Full Form Helical Thread Mills**
**FLUTES  
4**

**COOLANT  
THRU**

Min. Thread Size	Pitch	Large End Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
		A	B	D	E		
1/16 & 1/8	27	0.245	0.437	0.250	2.50	4	S171-001
1/4 & 3/8	18	0.305	0.625	0.3125	3.00	4	S171-002
1/2 & 3/4	14	0.495	0.825	0.500	4.00	4	S171-003
1 & 2	11.5	0.620	1.125	0.625	4.00	4	S171-004


**MITGI INSIDE ACCOUNT REPRESENTATIVES**
**P. 2**

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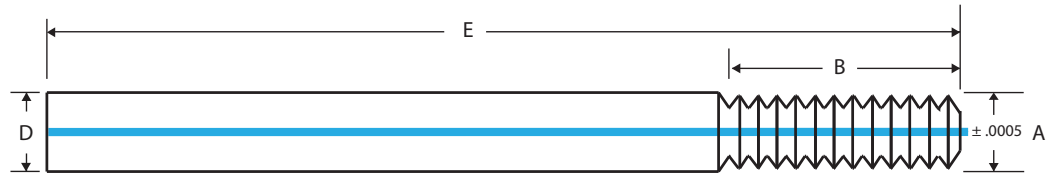
# Metric Coolant Thru Full Form Helical Thread Mills

S173

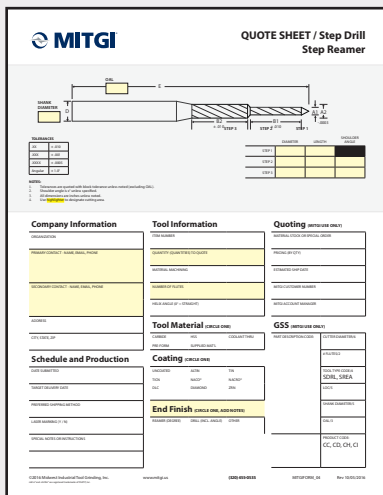
Min. Thread Size	Pitch (mm)	Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	# of Flutes	Tool #
		A	B	D	E		
M3	0.50	0.085	0.178	0.125	2.00	4	S173-001
M3.5	0.60	0.095	0.235	0.125	2.00	4	S173-002
M4	0.70	0.115	0.276	0.125	2.00	4	S173-003
M4.5	0.75	0.120	0.313	0.125	2.00	4	S173-004
M5	0.80	0.120	0.312	0.125	2.00	4	S173-005
M6	1.00	0.170	0.500	0.1875	2.50	4	S173-006
M8	1.25	0.235	0.625	0.250	3.00	4	S173-007
M10	1.50	0.300	0.750	0.3125	3.00	4	S173-008
M12	1.75	0.360	0.875	0.375	3.00	4	S173-009
M14	1.50	0.370	0.875	0.375	3.00	4	S173-010
M16	2.00	0.490	1.250	0.500	4.00	4	S173-011
M18	1.50	0.490	1.250	0.500	4.00	4	S173-012
M20	2.50	0.495	1.250	0.500	4.00	4	S173-013
M22	2.50	0.620	1.250	0.625	4.00	4	S173-014
M24	3.00	0.620	1.250	0.625	4.00	4	S173-015
M30	3.50	0.620	1.250	0.625	4.00	4	S173-016
M36	4.00	0.620	1.250	0.625	4.00	4	S173-017

FLUTES  
4

COOLANT  
THRU



## Custom Coolant Thru Tools



Can't find a tool to meet your exact specifications?  
Specials or modified standards may be the answer.

### MANUFACTURED BY MITGI

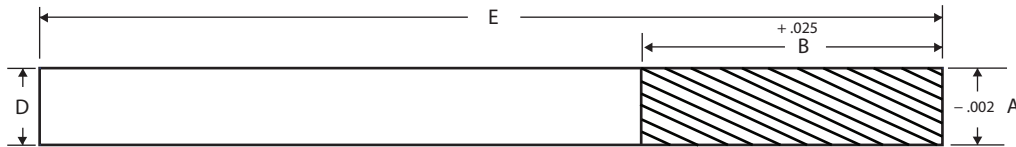
- Shank diameter = 3mm – 1.250 in
- Tolerances vary by design
- Tool types: end mills, drills, reamers, thread mills, broaches
- Custom options: diameter, flute length, overall length of cut, reach
- Standard coolant thru material stocked and on-hand
- Specialty coolant thru materials available by special order
- Coated and uncoated
- Specials usually available in two weeks or less

Quote forms available on our website and upon request.  
Contact us for an estimate today.



**S42**
**30° Helix Square End Mills**
**FLUTES  
4**

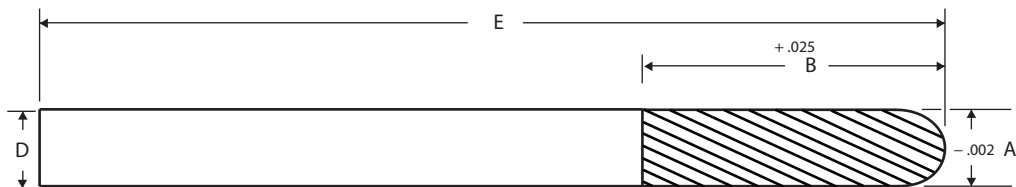
Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	4 Flute Tool #
A	B	D	E	
0.1875 (3/16)	0.500	0.1875	2.00	S42-001
0.250 (1/4)	0.625	0.250	2.50	S42-002
0.375 (3/8)	0.750	0.375	2.50	S42-003
0.500 (1/2)	1.00	0.500	3.00	S42-004
0.750 (3/4)	1.50	0.750	4.00	S42-005
1.00	1.50	1.00	4.00	S42-007
1.00	1.50	0.750	4.00	S42-006*


**NOTE:**

\* 3/4" Reduced Shank

**S47**
**30° Helix Ball End Mills**
**FLUTES  
4**

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	4 Flute Tool #
A	B	D	E	
0.1875 (3/16)	0.500	0.1875	2.00	S47-001
0.250 (1/4)	0.625	0.250	2.50	S47-002
0.375 (3/8)	0.750	0.375	2.50	S47-003
0.500 (1/2)	1.00	0.500	3.00	S47-004
0.750 (3/4)	1.50	0.750	4.00	S47-005
1.00	1.50	1.00	4.00	S47-006
1.00	1.50	0.750	4.00	S47-007*


**NOTE:**

\* 3/4" Reduced Shank



Need your tool quickly? All standard tools are available to ship within 3 days or less. See page 117 for more details.

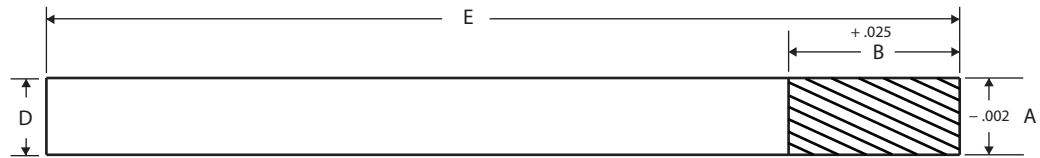
## 30° Helix Square End Mills

S20

Mill Diameter	Length of Cut	Shank Diameter	Overall Length	Tool #
A	B	D	E	
0.125 (1/8)	0.1875	0.125	2.00	S20-001
0.1875 (3/16)	0.2810	0.1875	2.00	S20-002
0.250 (1/4)	0.3750	0.250	2.00	S20-003
0.3125 (5/16)	0.4690	0.3125	2.00	S20-004
0.375 (3/8)	0.5620	0.375	2.50	S20-005
0.500 (1/2)	0.7500	0.500	3.00	S20-006

FLUTES  
5

1.5X  
LENGTH  
OF CUT



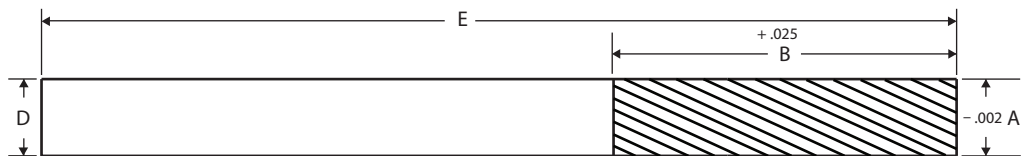
## 30° Helix Square End Mills

S26

Mill Diameter	Length of Cut	Shank Diameter	Overall Length	Tool #
A	B	D	E	
0.125 (1/8)	0.3750	0.125	2.00	S26-001
0.1875 (3/16)	0.5625	0.1875	2.00	S26-002
0.250 (1/4)	0.7500	0.250	2.00	S26-003
0.3125 (5/16)	0.9375	0.3125	2.00	S26-004
0.375 (3/8)	1.1250	0.375	2.50	S26-005
0.500 (1/2)	1.5000	0.500	3.00	S26-006

FLUTES  
5

3X  
LENGTH  
OF CUT



# S21

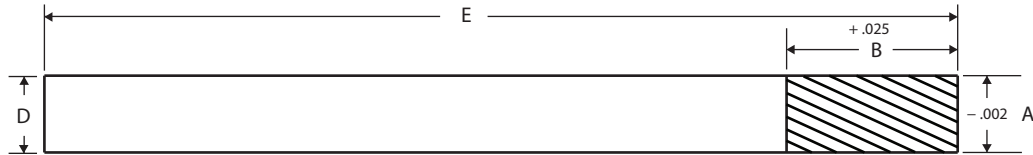
## Square Variable Helix End Mills

FLUTES  
5

1.5X  
LENGTH  
OF CUT

VARIABLE  
HELIX

Mill Diameter	Length of Cut	Shank Diameter	Overall Length	Tool #
A	B	D	E	
0.125 (1/8)	0.1875	0.125	1.50	S21-001
0.1875 (3/16)	0.2810	0.1875	2.00	S21-005
0.250 (1/4)	0.3750	0.250	2.00	S21-002
0.375 (3/8)	0.5630	0.375	2.50	S21-003
0.500 (1/2)	0.7500	0.500	3.00	S21-004



# S14

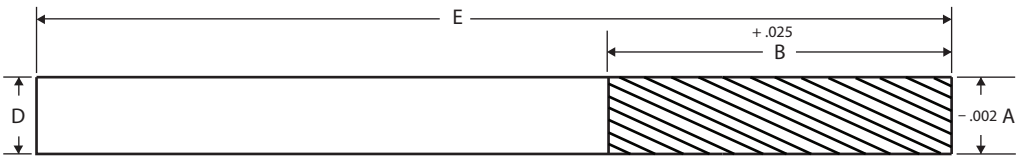
## Square Variable Helix End Mills

FLUTES  
5

3X  
LENGTH  
OF CUT

VARIABLE  
HELIX

Mill Diameter	Length of Cut	Shank Diameter	Overall Length	Tool #
A	B	D	E	
0.125 (1/8)	0.3750	0.125	1.50	S14-001
0.1875 (3/16)	0.5625	0.1875	2.00	S14-002
0.250 (1/4)	0.7500	0.250	2.00	S14-003
0.375 (3/8)	1.1250	0.375	3.00	S14-004
0.500 (1/2)	1.5000	0.500	3.00	S14-005



### MITGI INSIDE ACCOUNT REPRESENTATIVES

## P.2

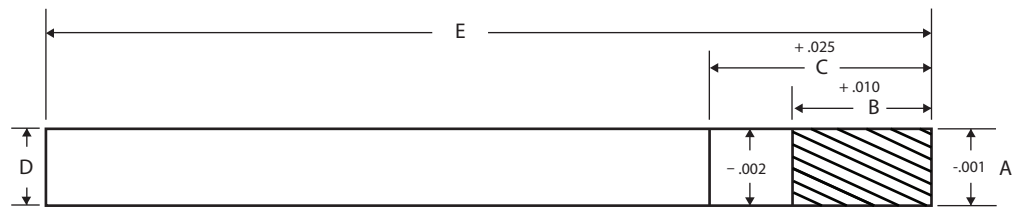
MITGI Inside Account Representatives are the right resources for quote requests, to place orders, check inventory, or provide tracking. See page 2 for more info.

## Square Aluminum Cutting End Mills

S43

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	Tool #
A	B	C	D	E	
0.125 (1/8)	0.250	N/A	0.125	1.50	S43-001
0.125 (1/8)	0.250	0.500	0.125	1.50	S43-002
0.125 (1/8)	0.250	1.375	0.125	3.00	S43-003
0.1875 (3/16)	0.3125	N/A	0.1875	2.00	S43-004
0.1875 (3/16)	0.3125	0.500	0.1875	2.00	S43-005
0.1875 (3/16)	0.3125	1.375	0.1875	3.00	S43-006
0.250 (1/4)	0.375	N/A	0.250	2.50	S43-007
0.250 (1/4)	0.375	1.125	0.250	2.50	S43-008
0.250 (1/4)	0.375	2.125	0.250	4.00	S43-009
0.375 (3/8)	0.500	N/A	0.375	2.50	S43-010
0.375 (3/8)	0.500	1.125	0.375	2.50	S43-011
0.375 (3/8)	0.500	2.125	0.375	4.00	S43-012
0.500 (1/2)	0.625	N/A	0.500	3.00	S43-013
0.500 (1/2)	0.625	1.375	0.500	3.00	S43-014
0.500 (1/2)	0.625	2.375	0.500	4.00	S43-015

FLUTES  
3

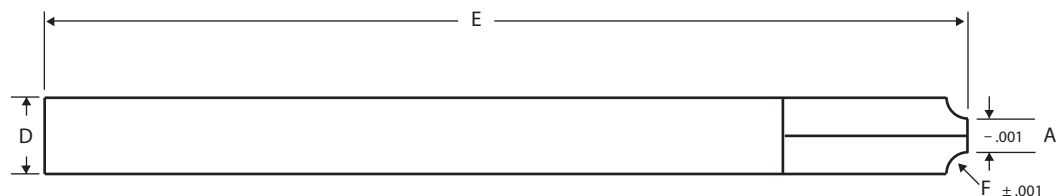


## Single End Corner Rounding End Mills

S22

Radius	Minor Diameter	Shank Diameter	Overall Length	# of Flutes	Tool #
F	A	D	E		
0.010	0.105	0.125	1.50	4	S22-001
0.015	0.095	0.125	1.50	4	S22-002
0.020	0.085	0.125	1.50	4	S22-003
0.025	0.075	0.125	1.50	4	S22-004
0.031	0.063	0.125	1.50	4	S22-005
0.035	0.055	0.125	1.50	4	S22-006
0.040	0.045	0.125	1.50	4	S22-007
0.047	0.094	0.1875	2.00	4	S22-008
0.050	0.087	0.1875	2.00	4	S22-009
0.055	0.077	0.1875	2.00	4	S22-010
0.062	0.063	0.1875	2.00	4	S22-011

FLUTES  
4



**FLUTES  
2,4**

Cutter Diameter	Overall Reach	Shank Diameter	Overall Length	Neck Diameter	2 Flute Tool #	4 Flute Tool #
A	C	D	E	G		
0.0156 (1/64)	0.016	0.125	1.50	0.0094	S100-001-270	N/A
0.0156 (1/64)	0.031	0.125	1.50	0.0094	S100-002-270	N/A
0.0156 (1/64)	0.063	0.125	1.50	0.0094	S100-003-270	N/A
0.50mm	0.016	3mm	1.50	0.0118	S100-004-270	N/A
0.50mm	0.031	3mm	1.50	0.0118	S100-005-270	N/A
0.50mm	0.063	3mm	1.50	0.0118	S100-006-270	N/A
0.03125 (1/32)	0.031	0.125	1.50	0.0188	S100-007-270	S100-008-270
0.03125 (1/32)	0.063	0.125	1.50	0.0188	S100-009-270	S100-010-270
0.03125 (1/32)	0.125	0.125	1.50	0.0188	S100-011-270	S100-012-270
1.00mm	0.031	3mm	1.50	0.0236	S100-013-270	S100-014-270
1.00mm	0.063	3mm	1.50	0.0236	S100-015-270	S100-016-270
1.00mm	0.125	3mm	1.50	0.0236	S100-017-270	S100-018-270
1.50mm	0.031	3mm	1.50	0.0354	S100-019-270	S100-020-270
1.50mm	0.063	3mm	1.50	0.0354	S100-021-270	S100-022-270
1.50mm	0.125	3mm	1.50	0.0354	S100-023-270	S100-024-270
0.0625 (1/16)	0.063	0.125	1.50	0.0375	S100-025-270	S100-026-270
0.0625 (1/16)	0.125	0.125	1.50	0.0375	S100-027-270	S100-028-270
0.0625 (1/16)	0.250	0.125	1.50	0.0375	S100-029-270	S100-030-270
2.00mm	0.063	3mm	1.50	0.0472	S100-031-270	S100-032-270
2.00mm	0.125	3mm	1.50	0.0472	S100-033-270	S100-034-270
2.00mm	0.250	3mm	1.50	0.0472	S100-035-270	S100-036-270
2.50mm	0.063	3mm	1.50	0.0591	S100-037-270	S100-038-270
2.50mm	0.125	3mm	1.50	0.0591	S100-039-270	S100-040-270
2.50mm	0.250	3mm	1.50	0.0591	S100-041-270	S100-042-270
3.00mm	0.125	3mm	1.50	0.0709	S100-043-270	S100-044-270
3.00mm	0.250	3mm	1.50	0.0709	S100-045-270	S100-046-270
3.00mm	0.500	3mm	1.50	0.0709	S100-047-270	S100-048-270
0.125 (1/8)	0.125	0.125	1.50	0.0750	S100-049-270	S100-050-270
0.125 (1/8)	0.250	0.125	1.50	0.0750	S100-051-270	S100-052-270
0.125 (1/8)	0.500	0.125	1.50	0.0750	S100-053-270	S100-054-270
3.50mm	0.125	4mm	2.50	0.0827	S100-055-270	S100-056-270
3.50mm	0.250	4mm	2.50	0.0827	S100-057-270	S100-058-270
3.50mm	0.500	4mm	2.50	0.0827	S100-059-270	S100-060-270
4.00mm	0.125	4mm	2.50	0.1024	S100-061-270	S100-062-270
4.00mm	0.250	4mm	2.50	0.1024	S100-063-270	S100-064-270
4.00mm	0.500	4mm	2.50	0.1024	S100-065-270	S100-066-270
0.1875 (3/16)	0.250	0.1875	2.50	0.1219	S100-067-270	S100-068-270
0.1875 (3/16)	0.500	0.1875	2.50	0.1219	S100-069-270	S100-070-270
0.1875 (3/16)	0.750	0.1875	2.50	0.1219	S100-071-270	S100-072-270
5.50mm	0.250	6mm	2.50	0.1407	S100-073-270	S100-074-270
5.50mm	0.500	6mm	2.50	0.1407	S100-075-270	S100-076-270
5.50mm	0.750	6mm	2.50	0.1407	S100-077-270	S100-078-270
6.00mm	0.250	6mm	2.50	0.1535	S100-079-270	S100-080-270
6.00mm	0.500	6mm	2.50	0.1535	S100-081-270	S100-082-270
6.00mm	0.750	6mm	2.50	0.1535	S100-083-270	S100-084-270

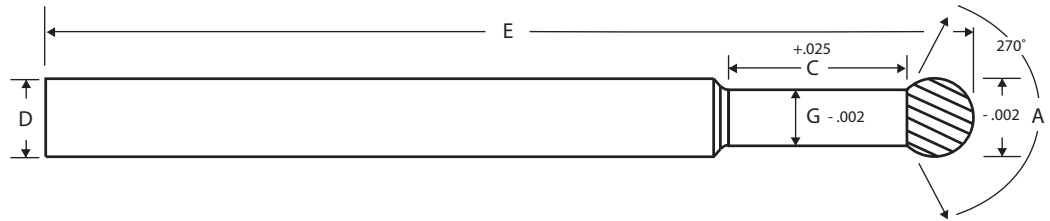


# 270° Undercutting End Mills / Cherry Ball Tools

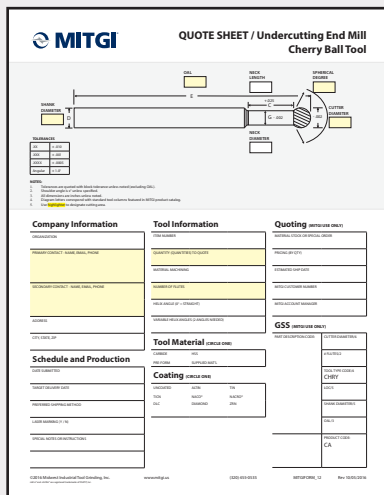
S100

FLUTES  
2,4

Cutter Diameter	Overall Reach	Shank Diameter	Overall Length	Neck Diameter	2 Flute Tool #	4 Flute Tool #
A	C	D	E	G		
0.250 (1/4)	0.250	0.250	2.50	0.1625	S100-085-270	S100-086-270
0.250 (1/4)	0.500	0.250	2.50	0.1625	S100-087-270	S100-088-270
0.250 (1/4)	0.750	0.250	2.50	0.1625	S100-089-270	S100-090-270
0.3125 (5/16)	0.250	0.3125	2.50	0.2031	S100-091-270	S100-092-270
0.3125 (5/16)	0.500	0.3125	2.50	0.2031	S100-093-270	S100-094-270
0.3125 (5/16)	0.750	0.3125	2.50	0.2031	S100-095-270	S100-096-270
0.375 (3/8)	0.250	0.375	2.50	0.2438	S100-097-270	S100-098-270
0.375 (3/8)	0.500	0.375	2.50	0.2438	S100-099-270	S100-100-270
0.375 (3/8)	0.750	0.375	2.50	0.2438	S100-101-270	S100-102-270



## Custom Undercutting, Cherry Ball, or Lollipop Tools



Can't find a tool to meet your exact specifications?  
Specials or modified standards may be the answer.

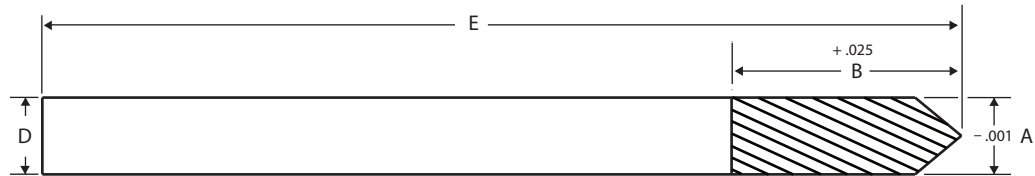
### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances and number of flutes vary by design
- Cutter diameter sizes = 0.0156 (1/64) to 0.375 (3/8)
- Any spherical ball size, multiple neck lengths, cutter diameter, reach
- Coated or uncoated
- Specials usually available in two weeks or less

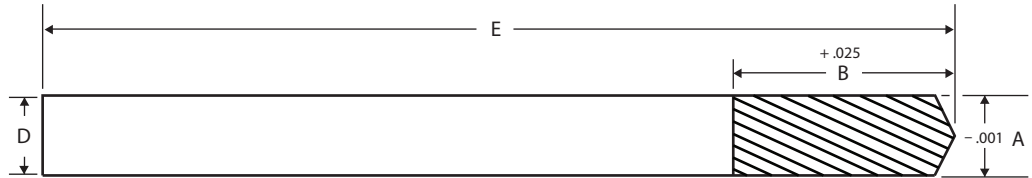
Quote forms available on our website and upon request.  
Contact us for an estimate today.



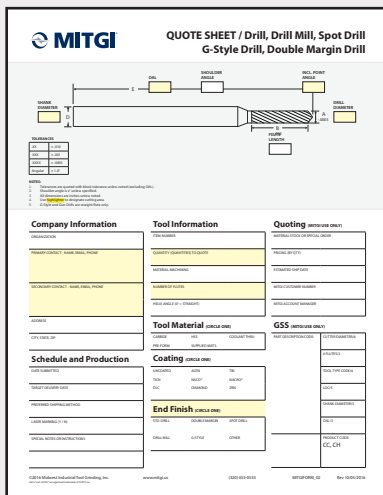
Cutter Diameter	Shank Diameter	Overall Length	Flute Length	Facet Point	Tool #
A	D	E	B		
0.0313 (1/32)	0.125 (1/8)	1.50	0.093	N/A	S16-017
0.0313 (1/32)	0.125 (1/8)	1.50	0.093	4 Facet Point	S16-018
0.0625 (1/16)	0.125 (1/8)	1.50	0.188	N/A	S16-019
0.0625 (1/16)	0.125 (1/8)	1.50	0.188	4 Facet Point	S16-020
0.125 (1/8)	0.125 (1/8)	2.00	0.375	N/A	S16-001
0.125 (1/8)	0.125 (1/8)	2.00	0.375	4 Facet Point	S16-002
0.1875 (3/16)	0.1875 (3/16)	2.00	0.625	N/A	S16-003
0.1875 (3/16)	0.1875 (3/16)	2.00	0.625	4 Facet Point	S16-004
0.250 (1/4)	0.250 (1/4)	2.00	0.625	N/A	S16-005
0.250 (1/4)	0.250 (1/4)	2.00	0.625	4 Facet Point	S16-006
0.3125 (5/16)	0.3125 (5/16)	2.00	0.750	N/A	S16-007
0.3125 (5/16)	0.3125 (5/16)	2.00	0.750	4 Facet Point	S16-008
0.375 (3/8)	0.375 (3/8)	2.50	0.750	N/A	S16-009
0.375 (3/8)	0.375 (3/8)	2.50	0.750	4 Facet Point	S16-010
0.500 (1/2)	0.500 (1/2)	3.00	1.000	N/A	S16-011
0.500 (1/2)	0.500 (1/2)	3.00	1.000	4 Facet Point	S16-012
0.625 (5/8)	0.625 (5/8)	3.50	1.125	N/A	S16-013
0.625 (5/8)	0.625 (5/8)	3.50	1.125	4 Facet Point	S16-014
0.750 (3/4)	0.750 (3/4)	4.00	1.250	N/A	S16-015
0.750 (3/4)	0.750 (3/4)	4.00	1.250	4 Facet Point	S16-016



Cutter Diameter	Shank Diameter	Overall Length	Flute Length	Facet Point	Tool #
A	D	E	B		
0.0313 (1/32)	0.125 (1/8)	1.50	0.093	N/A	S213-017
0.0313 (1/32)	0.125 (1/8)	1.50	0.093	4 Facet Point	S213-018
0.0625 (1/16)	0.125 (1/8)	1.50	0.188	N/A	S213-019
0.0625 (1/16)	0.125 (1/8)	1.50	0.188	4 Facet Point	S213-020
0.125 (1/8)	0.125 (1/8)	2.00	0.375	N/A	S213-001
0.125 (1/8)	0.125 (1/8)	2.00	0.375	4 Facet Point	S213-002
0.1875 (3/16)	0.1875 (3/16)	2.00	0.625	N/A	S213-003
0.1875 (3/16)	0.1875 (3/16)	2.00	0.625	4 Facet Point	S213-004
0.250 (1/4)	0.250 (1/4)	2.00	0.625	N/A	S213-005
0.250 (1/4)	0.250 (1/4)	2.00	0.625	4 Facet Point	S213-006
0.3125 (5/16)	0.3125 (5/16)	2.00	0.750	N/A	S213-007
0.3125 (5/16)	0.3125 (5/16)	2.00	0.750	4 Facet Point	S213-008
0.375 (3/8)	0.375 (3/8)	2.50	0.750	N/A	S213-009
0.375 (3/8)	0.375 (3/8)	2.50	0.750	4 Facet Point	S213-010
0.500 (1/2)	0.500 (1/2)	3.00	1.000	N/A	S213-011
0.500 (1/2)	0.500 (1/2)	3.00	1.000	4 Facet Point	S213-012
0.625 (5/8)	0.625 (5/8)	3.50	1.125	N/A	S213-013
0.625 (5/8)	0.625 (5/8)	3.50	1.125	4 Facet Point	S213-014
0.750 (3/4)	0.750 (3/4)	4.00	1.250	N/A	S213-015
0.750 (3/4)	0.750 (3/4)	4.00	1.250	4 Facet Point	S213-016



## Custom Spot Drills



**Can't find a tool to meet your exact specifications?  
Specials or modified standards may be the answer.**

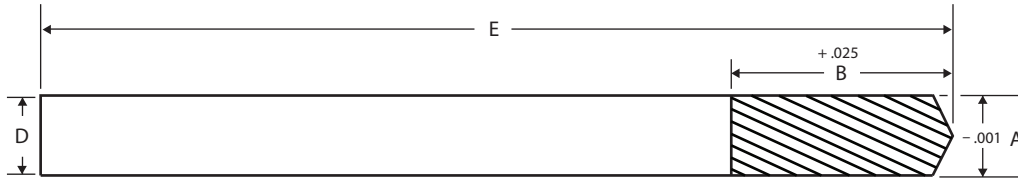
### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances and flute types vary by design
- Specs include: shoulder angle, flute length, included point angle, and drill diameter
- Extended reach and extended length of cut options
- Carbide or HSS
- Coated and uncoated
- Specials usually available in two weeks or less

**Quote forms available on our website and upon request.  
Contact us for an estimate today.**



Cutter Diameter A	Shank Diameter D	Overall Length E	Flute Length B	Facet Point	Tool #
0.0313 (1/32)	0.125 (1/8)	1.50	0.093	N/A	S110-017
0.0313 (1/32)	0.125 (1/8)	1.50	0.093	4 Facet Point	S110-018
0.0625 (1/16)	0.125 (1/8)	1.50	0.188	N/A	S110-019
0.0625 (1/16)	0.125 (1/8)	1.50	0.188	4 Facet Point	S110-020
0.125 (1/8)	0.125 (1/8)	2.00	0.375	N/A	S110-001
0.125 (1/8)	0.125 (1/8)	2.00	0.375	4 Facet Point	S110-002
0.1875 (3/16)	0.1875 (3/16)	2.00	0.625	N/A	S110-003
0.1875 (3/16)	0.1875 (3/16)	2.00	0.625	4 Facet Point	S110-004
0.250 (1/4)	0.250 (1/4)	2.00	0.625	N/A	S110-005
0.250 (1/4)	0.250 (1/4)	2.00	0.625	4 Facet Point	S110-006
0.3125 (5/16)	0.3125 (5/16)	2.00	0.750	N/A	S110-007
0.3125 (5/16)	0.3125 (5/16)	2.00	0.750	4 Facet Point	S110-008
0.375 (3/8)	0.375 (3/8)	2.50	0.750	N/A	S110-009
0.375 (3/8)	0.375 (3/8)	2.50	0.750	4 Facet Point	S110-010
0.500 (1/2)	0.500 (1/2)	3.00	1.000	N/A	S110-011
0.500 (1/2)	0.500 (1/2)	3.00	1.000	4 Facet Point	S110-012
0.625 (5/8)	0.625 (5/8)	3.50	1.125	N/A	S110-013
0.625 (5/8)	0.625 (5/8)	3.50	1.125	4 Facet Point	S110-014
0.750 (3/4)	0.750 (3/4)	4.00	1.250	N/A	S110-015
0.750 (3/4)	0.750 (3/4)	4.00	1.250	4 Facet Point	S110-016



## 60° Drill Mills, Carbide

S33

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Drill Point	2 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.125 (1/8)	0.500	0.125	1.50	60°	S33-003	S33-004
0.1875 (3/16)	0.625	0.1875	2.00	60°	S33-005	S33-006
0.250 (1/4)	0.750	0.250	2.50	60°	S33-007	S33-008

FLUTES  
2,4

## 90° Drill Mills, Carbide

S28

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Drill Point	2 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.125 (1/8)	0.500	0.125	1.50	90°	S28-001	S28-002
0.1875 (3/16)	0.625	0.1875	2.00	90°	S28-003	S28-004
0.250 (1/4)	0.750	0.250	2.50	90°	S28-005	S28-006

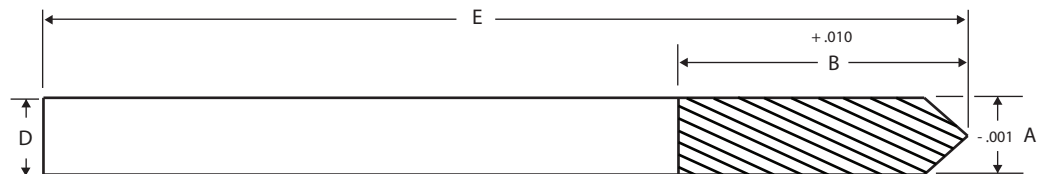
FLUTES  
2,4

## 120° Drill Mills, Carbide

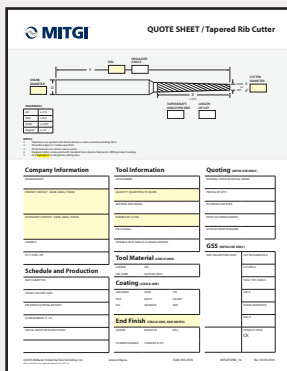
S29

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Drill Point	2 Flute Tool #	4 Flute Tool #
A	B	D	E			
0.125 (1/8)	0.500	0.125	1.50	120°	S29-001	S29-002
0.1875 (3/16)	0.625	0.1875	2.00	120°	S29-003	S29-004
0.250 (1/4)	0.750	0.250	2.50	120°	S29-005	S29-006

FLUTES  
2,4



## Custom Drill Mills



**Can't find a tool to meet your exact specifications? Specials or modified standards may be the answer.**

### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances and number of flutes vary by design
- Specs: shoulder angle, length of cut, included point angle, and cutter diameter
- Coated and uncoated
- Specials usually available in two weeks or less

Quote forms available on our website and upon request.  
Contact us for an estimate today.



**TEETH  
6,8**

**KEYSEAT CUTTER TOOL DIAGRAMS FOUND ON PAGE 183**

Cutter Diameter	Overall Reach	Shank Diameter	Overall Length	Neck Diameter	Cutter Width	# of Teeth	Tool #
A	C	D	E	G	H		
0.0625 (1/16)	0.094	0.125	1.50	0.031	0.016	6	S97-001-SQ
0.0625 (1/16)	0.188	0.125	1.50	0.031	0.016	6	S97-002-SQ
0.125 (1/8)	0.188	0.125	1.50	0.063	0.031	6	S97-003-SQ
0.125 (1/8)	0.375	0.125	1.50	0.063	0.031	6	S97-004-SQ
0.125 (1/8)	0.188	0.125	1.50	0.063	0.063	6	S97-005-SQ
0.125 (1/8)	0.375	0.125	1.50	0.063	0.063	6	S97-006-SQ
0.125 (1/8)	0.188	0.125	1.50	0.063	0.125	6	S97-007-SQ
0.125 (1/8)	0.375	0.125	1.50	0.063	0.125	6	S97-008-SQ
0.1875 (3/16)	0.375	0.1875	2.00	0.094	0.063	6	S97-009-SQ
0.1875 (3/16)	0.500	0.1875	2.00	0.094	0.063	6	S97-010-SQ
0.1875 (3/16)	0.375	0.1875	2.00	0.094	0.125	6	S97-011-SQ
0.1875 (3/16)	0.500	0.1875	2.00	0.094	0.125	6	S97-012-SQ
0.1875 (3/16)	0.375	0.1875	2.00	0.094	0.188	6	S97-013-SQ
0.1875 (3/16)	0.500	0.1875	2.00	0.094	0.188	6	S97-014-SQ
0.250 (1/4)	0.375	0.250	2.50	0.125	0.063	6	S97-015-SQ
0.250 (1/4)	0.750	0.250	2.50	0.125	0.063	6	S97-016-SQ
0.250 (1/4)	0.375	0.250	2.50	0.125	0.125	6	S97-017-SQ
0.250 (1/4)	0.750	0.250	2.50	0.125	0.125	6	S97-018-SQ
0.250 (1/4)	0.375	0.250	2.50	0.125	0.188	6	S97-019-SQ
0.250 (1/4)	0.750	0.250	2.50	0.125	0.188	6	S97-020-SQ
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.063	6	S97-021-SQ
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.063	6	S97-022-SQ
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.094	6	S97-041-SQ
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.094	6	S97-042-SQ
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.125	6	S97-023-SQ
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.125	6	S97-024-SQ
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.188	6	S97-025-SQ
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.188	6	S97-026-SQ
0.375 (3/8)	0.563	0.375	3.00	0.188	0.063	8	S97-027-SQ
0.375 (3/8)	1.125	0.375	3.00	0.188	0.063	8	S97-028-SQ
0.375 (3/8)	0.563	0.375	3.00	0.188	0.094	8	S97-043-SQ
0.375 (3/8)	1.125	0.375	3.00	0.188	0.094	8	S97-044-SQ
0.375 (3/8)	0.563	0.375	3.00	0.188	0.125	8	S97-029-SQ
0.375 (3/8)	1.125	0.375	3.00	0.188	0.125	8	S97-030-SQ
0.375 (3/8)	0.563	0.375	3.00	0.188	0.250	8	S97-031-SQ
0.375 (3/8)	1.125	0.375	3.00	0.188	0.250	8	S97-032-SQ
0.500 (1/2)	0.750	0.500	4.00	0.250	0.094	8	S97-033-SQ
0.500 (1/2)	1.500	0.500	4.00	0.250	0.094	8	S97-034-SQ
0.500 (1/2)	0.750	0.500	4.00	0.250	0.125	8	S97-035-SQ
0.500 (1/2)	1.500	0.500	4.00	0.250	0.125	8	S97-036-SQ
0.500 (1/2)	0.750	0.500	4.00	0.250	0.250	8	S97-037-SQ
0.500 (1/2)	1.500	0.500	4.00	0.250	0.250	8	S97-038-SQ
0.500 (1/2)	0.750	0.500	4.00	0.250	0.375	8	S97-039-SQ
0.500 (1/2)	1.500	0.500	4.00	0.250	0.375	8	S97-040-SQ

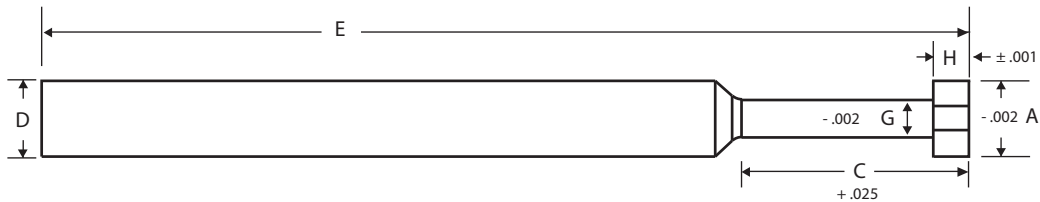


**Standard Keyseat Cutters are available in a variety of end finishes: square, corner radius, full radius, and 45° chamfer.**

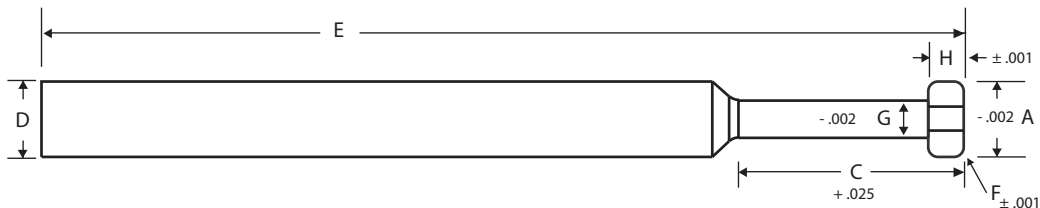
Each of our standard keyseat cutter lines include a variety of tools, all available in 3 days or less.

Don't see exactly what you need? Slight modifications to the specs on our standard keyseats may qualify for Quick Turn timelines. More complex keyseats are usually available in 2 weeks or less. Contact us with your modified standard or custom keyseat requests for timelines and production schedule availability.

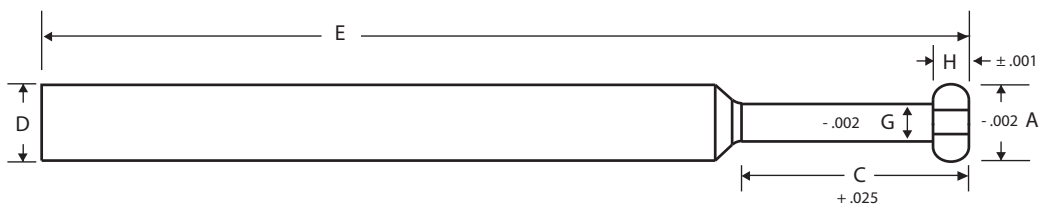
**SQUARE KEYSEAT CUTTERS, p. 182**



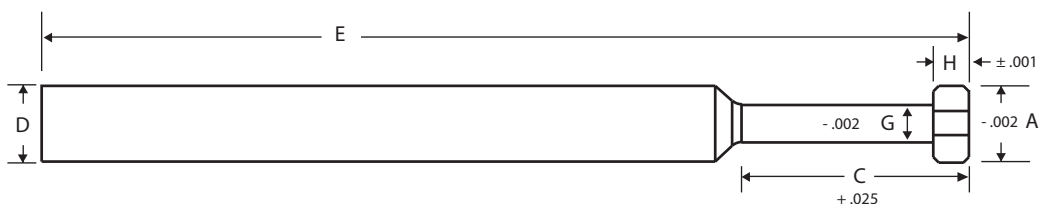
**CORNER RADIUS KEYSEAT CUTTERS, p. 184-185**



**FULL RADIUS KEYSEAT CUTTERS, p. 186**



**45° CHAMFER KEYSEAT CUTTERS, p. 187**



TEETH  
6,8



KEYSEAT CUTTER TOOL DIAGRAMS FOUND ON PAGE 183

Cutter Diameter	Overall Reach	Shank Diameter	Overall Length	Corner Radius	Neck Diameter	Cutter Width	# of Teeth	Tool #
A	C	D	E	F	G	H		
0.0625 (1/16)	0.094	0.125	1.50	0.005	0.031	0.016	6	S219-001-.005R
0.0625 (1/16)	0.094	0.125	1.50	0.010	0.031	0.016	6	S219-002-.010R
0.125 (1/8)	0.188	0.125	1.50	0.005	0.063	0.031	6	S219-003-.005R
0.125 (1/8)	0.188	0.125	1.50	0.010	0.063	0.031	6	S219-004-.010R
0.125 (1/8)	0.188	0.125	1.50	0.005	0.063	0.063	6	S219-005-.005R
0.125 (1/8)	0.188	0.125	1.50	0.010	0.063	0.063	6	S219-006-.010R
0.125 (1/8)	0.188	0.125	1.50	0.005	0.063	0.125	6	S219-007-.005R
0.125 (1/8)	0.188	0.125	1.50	0.010	0.063	0.125	6	S219-008-.010R
0.1875 (3/16)	0.375	0.1875	2.00	0.005	0.094	0.063	6	S219-009-.005R
0.1875 (3/16)	0.375	0.1875	2.00	0.010	0.094	0.063	6	S219-010-.010R
0.1875 (3/16)	0.375	0.1875	2.00	0.015	0.094	0.063	6	S219-011-.015R
0.1875 (3/16)	0.375	0.1875	2.00	0.005	0.094	0.125	6	S219-012-.005R
0.1875 (3/16)	0.375	0.1875	2.00	0.010	0.094	0.125	6	S219-013-.010R
0.1875 (3/16)	0.375	0.1875	2.00	0.015	0.094	0.125	6	S219-014-.015R
0.1875 (3/16)	0.375	0.1875	2.00	0.005	0.094	0.188	6	S219-015-.005R
0.1875 (3/16)	0.375	0.1875	2.00	0.010	0.094	0.188	6	S219-016-.010R
0.1875 (3/16)	0.375	0.1875	2.00	0.015	0.094	0.188	6	S219-017-.015R
0.250 (1/4)	0.375	0.250	2.50	0.005	0.125	0.063	6	S219-018-.005R
0.250 (1/4)	0.375	0.250	2.50	0.010	0.125	0.063	6	S219-019-.010R
0.250 (1/4)	0.375	0.250	2.50	0.015	0.125	0.063	6	S219-020-.015R
0.250 (1/4)	0.375	0.250	2.50	0.005	0.125	0.125	6	S219-021-.005R
0.250 (1/4)	0.375	0.250	2.50	0.010	0.125	0.125	6	S219-022-.010R
0.250 (1/4)	0.375	0.250	2.50	0.015	0.125	0.125	6	S219-023-.015R
0.250 (1/4)	0.375	0.250	2.50	0.005	0.125	0.188	6	S219-024-.005R
0.250 (1/4)	0.375	0.250	2.50	0.010	0.125	0.188	6	S219-025-.010R
0.250 (1/4)	0.375	0.250	2.50	0.015	0.125	0.188	6	S219-026-.015R
0.3125 (5/16)	0.500	0.3125	3.00	0.005	0.156	0.063	6	S219-027-.005R
0.3125 (5/16)	0.500	0.3125	3.00	0.010	0.156	0.063	6	S219-028-.010R
0.3125 (5/16)	0.500	0.3125	3.00	0.015	0.156	0.063	6	S219-029-.015R
0.3125 (5/16)	0.500	0.3125	3.00	0.005	0.156	0.094	6	S219-030-.005R
0.3125 (5/16)	0.500	0.3125	3.00	0.010	0.156	0.094	6	S219-031-.010R
0.3125 (5/16)	0.500	0.3125	3.00	0.015	0.156	0.094	6	S219-032-.015R
0.3125 (5/16)	0.500	0.3125	3.00	0.005	0.156	0.125	6	S219-033-.005R
0.3125 (5/16)	0.500	0.3125	3.00	0.010	0.156	0.125	6	S219-034-.010R
0.3125 (5/16)	0.500	0.3125	3.00	0.015	0.156	0.125	6	S219-035-.015R
0.3125 (5/16)	0.500	0.3125	3.00	0.005	0.156	0.188	6	S219-036-.005R
0.3125 (5/16)	0.500	0.3125	3.00	0.010	0.156	0.188	6	S219-037-.010R
0.3125 (5/16)	0.500	0.3125	3.00	0.015	0.156	0.188	6	S219-038-.015R
0.375 (3/8)	0.563	0.375	3.00	0.005	0.188	0.063	8	S219-039-.005R
0.375 (3/8)	0.563	0.375	3.00	0.010	0.188	0.063	8	S219-040-.010R
0.375 (3/8)	0.563	0.375	3.00	0.015	0.188	0.063	8	S219-041-.015R
0.375 (3/8)	0.563	0.375	3.00	0.005	0.188	0.094	8	S219-042-.005R
0.375 (3/8)	0.563	0.375	3.00	0.010	0.188	0.094	8	S219-043-.010R
0.375 (3/8)	0.563	0.375	3.00	0.015	0.188	0.094	8	S219-044-.015R



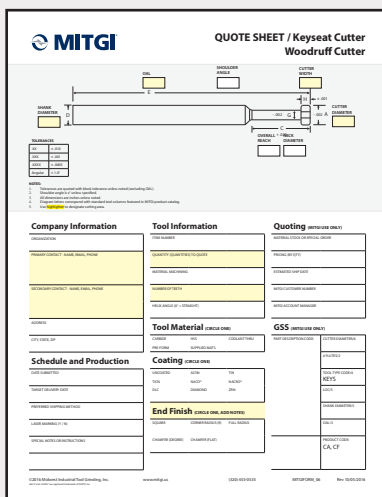
# Corner Radius Keyseat Cutters

S219



Cutter Diameter	Overall Reach	Shank Diameter	Overall Length	Corner Radius	Neck Diameter	Cutter Width	# of Teeth	Tool #
A	C	D	E	F	G	H		
0.375 (3/8)	0.563	0.375	3.00	0.005	0.188	0.125	8	S219-045-.005R
0.375 (3/8)	0.563	0.375	3.00	0.010	0.188	0.125	8	S219-046-.010R
0.375 (3/8)	0.563	0.375	3.00	0.015	0.188	0.125	8	S219-047-.015R
0.375 (3/8)	0.563	0.375	3.00	0.005	0.188	0.250	8	S219-048-.005R
0.375 (3/8)	0.563	0.375	3.00	0.010	0.188	0.250	8	S219-049-.010R
0.375 (3/8)	0.563	0.375	3.00	0.015	0.188	0.250	8	S219-050-.015R
0.500 (1/2)	0.750	0.500	4.00	0.005	0.250	0.094	8	S219-051-.005R
0.500 (1/2)	0.750	0.500	4.00	0.010	0.250	0.094	8	S219-052-.010R
0.500 (1/2)	0.750	0.500	4.00	0.015	0.250	0.094	8	S219-053-.015R
0.500 (1/2)	0.750	0.500	4.00	0.005	0.250	0.125	8	S219-054-.005R
0.500 (1/2)	0.750	0.500	4.00	0.010	0.250	0.125	8	S219-055-.010R
0.500 (1/2)	0.750	0.500	4.00	0.015	0.250	0.125	8	S219-056-.015R
0.500 (1/2)	0.750	0.500	4.00	0.005	0.250	0.250	8	S219-057-.005R
0.500 (1/2)	0.750	0.500	4.00	0.010	0.250	0.250	8	S219-058-.010R
0.500 (1/2)	0.750	0.500	4.00	0.015	0.250	0.250	8	S219-059-.015R
0.500 (1/2)	0.750	0.500	4.00	0.005	0.250	0.375	8	S219-060-.005R
0.500 (1/2)	0.750	0.500	4.00	0.010	0.250	0.375	8	S219-061-.010R
0.500 (1/2)	0.750	0.500	4.00	0.015	0.250	0.375	8	S219-062-.015R

## Custom Keyseat Cutters



The form includes a technical drawing of a woodruff cutter with dimensions A through H. Below the drawing are sections for: Company Information, Tool Information, Quoting, Schedule and Production, Coating, End Finish, Tool Material, and GSS. It also contains contact information for MITGI.

**Can't find a tool to meet your exact specifications?  
Specials or modified standards may be the answer.**

### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances vary by design
- Specs include: overall length, shoulder angle, cutter width, cutter diameter, neck diameter, number of teeth
- End finish: square, corner radius, chamfer, full radius, stagger tooth
- Extended reach options
- Coated and uncoated
- Specials usually available in two weeks or less

**Quote forms available on our website and upon request.  
Contact us for an estimate today.**



TEETH  
6,8



KEYSEAT CUTTER TOOL DIAGRAMS FOUND ON PAGE 183

Cutter Diameter	Overall Reach	Shank Diameter	Overall Length	Neck Diameter	Cutter Width	# of Teeth	Full Radius Tool #
A	C	D	E	G	H		
0.0625 (1/16)	0.094	0.125	1.50	0.031	0.016	6	S218-001-FR
0.0625 (1/16)	0.188	0.125	1.50	0.031	0.016	6	S218-002-FR
0.125 (1/8)	0.188	0.125	1.50	0.063	0.031	6	S218-003-FR
0.125 (1/8)	0.375	0.125	1.50	0.063	0.031	6	S218-004-FR
0.1875 (3/16)	0.375	0.1875	2.00	0.094	0.063	6	S218-009-FR
0.1875 (3/16)	0.500	0.1875	2.00	0.094	0.063	6	S218-010-FR
0.250 (1/4)	0.375	0.250	2.50	0.125	0.063	6	S218-015-FR
0.250 (1/4)	0.750	0.250	2.50	0.125	0.063	6	S218-016-FR
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.063	6	S218-021-FR
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.063	6	S218-022-FR
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.094	6	S218-023-FR
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.094	6	S218-024-FR
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.125	6	S218-025-FR
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.125	6	S218-026-FR
0.375 (3/8)	0.563	0.375	3.00	0.188	0.063	8	S218-029-FR
0.375 (3/8)	1.125	0.375	3.00	0.188	0.063	8	S218-030-FR
0.375 (3/8)	0.563	0.375	3.00	0.188	0.094	8	S218-031-FR
0.375 (3/8)	1.125	0.375	3.00	0.188	0.094	8	S218-032-FR
0.375 (3/8)	0.563	0.375	3.00	0.188	0.125	8	S218-033-FR
0.375 (3/8)	1.125	0.375	3.00	0.188	0.125	8	S218-034-FR
0.500 (1/2)	0.750	0.500	4.00	0.250	0.094	8	S218-037-FR
0.500 (1/2)	1.500	0.500	4.00	0.250	0.094	8	S218-038-FR
0.500 (1/2)	0.750	0.500	4.00	0.250	0.125	8	S218-039-FR
0.500 (1/2)	1.500	0.500	4.00	0.250	0.125	8	S218-040-FR



# 45° Chamfer Keyseat Cutters

S97

Cutter Diameter	Overall Reach	Shank Diameter	Overall Length	Neck Diameter	Cutter Width	# of Teeth	Tool #
A	C	D	E	G	H		
0.0625 (1/16)	0.094	0.125	1.50	0.031	0.016	6	S97-001-45
0.0625 (1/16)	0.188	0.125	1.50	0.031	0.016	6	S97-002-45
0.125 (1/8)	0.188	0.125	1.50	0.063	0.031	6	S97-003-45
0.125 (1/8)	0.375	0.125	1.50	0.063	0.031	6	S97-004-45
0.125 (1/8)	0.188	0.125	1.50	0.063	0.063	6	S97-005-45
0.125 (1/8)	0.375	0.125	1.50	0.063	0.063	6	S97-006-45
0.125 (1/8)	0.188	0.125	1.50	0.063	0.125	6	S97-007-45
0.125 (1/8)	0.375	0.125	1.50	0.063	0.125	6	S97-008-45
0.1875 (3/16)	0.375	0.1875	2.00	0.094	0.063	6	S97-009-45
0.1875 (3/16)	0.500	0.1875	2.00	0.094	0.063	6	S97-010-45
0.1875 (3/16)	0.375	0.1875	2.00	0.094	0.125	6	S97-011-45
0.1875 (3/16)	0.500	0.1875	2.00	0.094	0.125	6	S97-012-45
0.1875 (3/16)	0.375	0.1875	2.00	0.094	0.188	6	S97-013-45
0.1875 (3/16)	0.500	0.1875	2.00	0.094	0.188	6	S97-014-45
0.250 (1/4)	0.375	0.250	2.50	0.125	0.063	6	S97-015-45
0.250 (1/4)	0.750	0.250	2.50	0.125	0.063	6	S97-016-45
0.250 (1/4)	0.375	0.250	2.50	0.125	0.125	6	S97-017-45
0.250 (1/4)	0.750	0.250	2.50	0.125	0.125	6	S97-018-45
0.250 (1/4)	0.375	0.250	2.50	0.125	0.188	6	S97-019-45
0.250 (1/4)	0.750	0.250	2.50	0.125	0.188	6	S97-020-45
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.063	6	S97-021-45
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.063	6	S97-022-45
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.094	6	S97-041-45
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.094	6	S97-042-45
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.125	6	S97-023-45
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.125	6	S97-024-45
0.3125 (5/16)	0.500	0.3125	3.00	0.156	0.188	6	S97-025-45
0.3125 (5/16)	1.000	0.3125	3.00	0.156	0.188	6	S97-026-45
0.375 (3/8)	0.563	0.375	3.00	0.188	0.063	8	S97-027-45
0.375 (3/8)	1.125	0.375	3.00	0.188	0.063	8	S97-028-45
0.375 (3/8)	0.563	0.375	3.00	0.188	0.094	8	S97-043-45
0.375 (3/8)	1.125	0.375	3.00	0.188	0.094	8	S97-044-45
0.375 (3/8)	0.563	0.375	3.00	0.188	0.125	8	S97-029-45
0.375 (3/8)	1.125	0.375	3.00	0.188	0.125	8	S97-030-45
0.375 (3/8)	0.563	0.375	3.00	0.188	0.250	8	S97-031-45
0.375 (3/8)	1.125	0.375	3.00	0.188	0.250	8	S97-032-45
0.500 (1/2)	0.750	0.500	4.00	0.250	0.094	8	S97-033-45
0.500 (1/2)	1.500	0.500	4.00	0.250	0.094	8	S97-034-45
0.500 (1/2)	0.750	0.500	4.00	0.250	0.125	8	S97-035-45
0.500 (1/2)	1.500	0.500	4.00	0.250	0.125	8	S97-036-45
0.500 (1/2)	0.750	0.500	4.00	0.250	0.250	8	S97-037-45
0.500 (1/2)	1.500	0.500	4.00	0.250	0.250	8	S97-038-45
0.500 (1/2)	0.750	0.500	4.00	0.250	0.375	8	S97-039-45
0.500 (1/2)	1.500	0.500	4.00	0.250	0.375	8	S97-040-45

TEETH  
6,8



KEYSEAT CUTTER TOOL DIAGRAMS FOUND ON PAGE 183

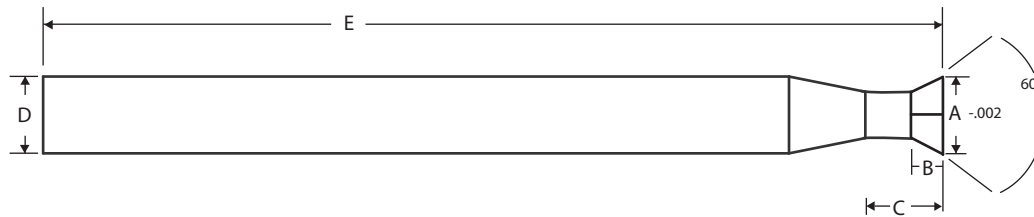


## S214

## 60° Dovetail Cutters

FLUTES  
4

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	# of Flutes	60° Tool #
A	B	C	D	E		
0.0625 (1/16)	0.028	0.094	0.125	1.50	4	S214-0625-DOVE
0.125 (1/8)	0.055	0.188	0.125	1.50	4	S214-125-DOVE
0.1875 (3/16)	0.083	0.281	0.1875	2.00	4	S214-1875-DOVE
0.250 (1/4)	0.110	0.375	0.250	2.00	4	S214-250-DOVE
0.3125 (5/16)	0.137	0.469	0.3125	2.50	4	S214-3125-DOVE
0.375 (3/8)	0.164	0.563	0.375	2.50	4	S214-375-DOVE
0.500 (1/2)	0.219	0.750	0.500	3.00	4	S214-500-DOVE



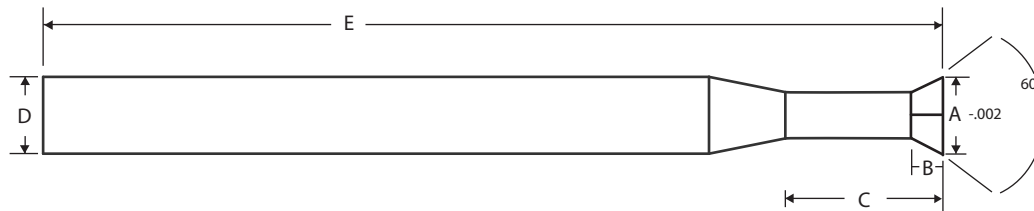
## S215

## 60° Dovetail Cutters

FLUTES  
4

3X  
REACH

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	# of Flutes	60° Tool #
A	B	C	D	E		
0.0625 (1/16)	0.028	0.188	0.125	1.50	4	S215-0625-DOVE3XR
0.125 (1/8)	0.055	0.375	0.125	1.50	4	S215-125-DOVE3XR
0.1875 (3/16)	0.083	0.563	0.1875	2.00	4	S215-1875-DOVE3XR
0.250 (1/4)	0.110	0.750	0.250	2.00	4	S215-250-DOVE3XR
0.3125 (5/16)	0.137	0.938	0.3125	2.50	4	S215-3125-DOVE3XR
0.375 (3/8)	0.164	1.125	0.375	2.50	4	S215-375-DOVE3XR
0.500 (1/2)	0.219	1.500	0.500	3.00	4	S215-500-DOVE3XR

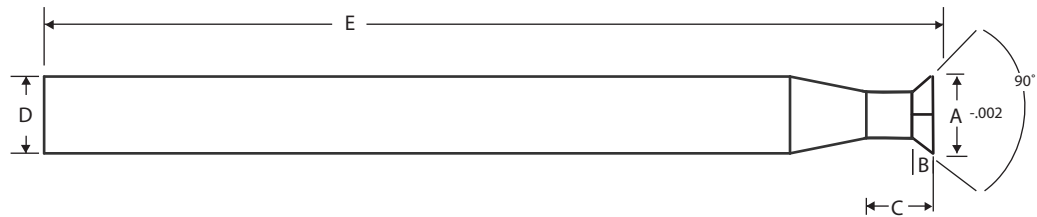


## 90° Dovetail Cutters

# S216

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	# of Flutes	90° Tool #
A	B	C	D	E		
0.0625 (1/16)	0.017	0.094	0.125	1.50	4	S216-0625-DOVE
0.125 (1/8)	0.032	0.188	0.125	1.50	4	S216-125-DOVE
0.1875 (3/16)	0.049	0.281	0.1875	2.00	4	S216-1875-DOVE
0.250 (1/4)	0.065	0.375	0.250	2.00	4	S216-250-DOVE
0.3125 (5/16)	0.080	0.469	0.3125	2.50	4	S216-3125-DOVE
0.375 (3/8)	0.096	0.563	0.375	2.50	4	S216-375-DOVE
0.500 (1/2)	0.127	0.750	0.500	3.00	4	S216-500-DOVE

**FLUTES**  
**4**



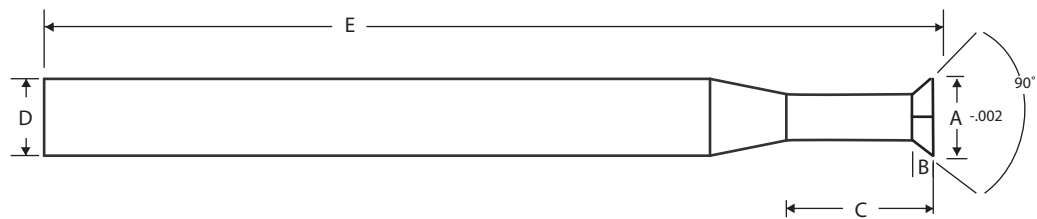
## 90° Dovetail Cutters

# S217

Cutter Diameter	Length of Cut	Overall Reach	Shank Diameter	Overall Length	# of Flutes	90° Tool #
A	B	C	D	E		
0.0625 (1/16)	0.017	0.188	0.125	1.50	4	S217-0625-DOVE3XR
0.125 (1/8)	0.032	0.375	0.125	1.50	4	S217-125-DOVE3XR
0.1875 (3/16)	0.049	0.563	0.1875	2.00	4	S217-1875-DOVE3XR
0.250 (1/4)	0.065	0.750	0.250	2.00	4	S217-250-DOVE3XR
0.3125 (5/16)	0.080	0.938	0.3125	2.50	4	S217-3125-DOVE3XR
0.375 (3/8)	0.096	1.125	0.375	2.50	4	S217-375-DOVE3XR
0.500 (1/2)	0.127	1.500	0.500	3.00	4	S217-500-DOVE3XR

**FLUTES**  
**4**

**3X**  
REACH



# S102

## 30° Chamfer Cutters

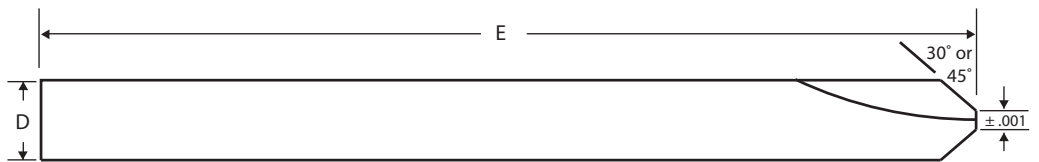
FLUTES  
2,3,4

QUICK TURN  
SPECIALS

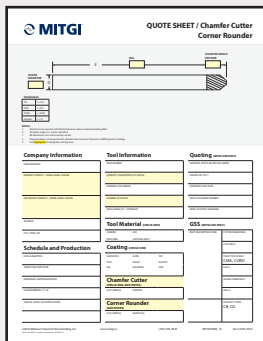
Cutter Diameter	Shank Diameter	Overall Length	Tip Diameter	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
	D	E	J			
0.125 (1/8)	0.125	1.50	0.010	S102-001-60	S102-002-60	S102-003-60
0.125 (1/8)	0.125	1.50	0.040	S102-004-60	S102-005-60	S102-006-60
0.1875 (3/16)	0.1875	2.00	0.010	S102-007-60	S102-008-60	S102-009-60
0.1875 (3/16)	0.1875	2.00	0.050	S102-010-60	S102-011-60	S102-012-60
0.250 (1/4)	0.250	2.50	0.010	S102-013-60	S102-014-60	S102-015-60
0.250 (1/4)	0.250	2.50	0.060	S102-016-60	S102-017-60	S102-018-60
0.3125 (5/16)	0.3125	2.50	0.010	S102-019-60	S102-020-60	S102-021-60
0.3125 (5/16)	0.3125	2.50	0.060	S102-022-60	S102-023-60	S102-024-60
0.375 (3/8)	0.375	2.50	0.010	S102-025-60	S102-026-60	S102-027-60
0.375 (3/8)	0.375	2.50	0.060	S102-028-60	S102-029-60	S102-030-60

## 45° Chamfer Cutters

Cutter Diameter	Shank Diameter	Overall Length	Tip Diameter	2 Flute Tool #	3 Flute Tool #	4 Flute Tool #
	D	E	J			
0.125 (1/8)	0.125	1.50	0.010	S102-001-45	S102-002-45	S102-003-45
0.125 (1/8)	0.125	1.50	0.040	S102-004-45	S102-005-45	S102-006-45
0.1875 (3/16)	0.1875	2.00	0.010	S102-007-45	S102-008-45	S102-009-45
0.1875 (3/16)	0.1875	2.00	0.050	S102-010-45	S102-011-45	S102-012-45
0.250 (1/4)	0.250	2.50	0.010	S102-013-45	S102-014-45	S102-015-45
0.250 (1/4)	0.250	2.50	0.060	S102-016-45	S102-017-45	S102-018-45
0.3125 (5/16)	0.3125	2.50	0.010	S102-019-45	S102-020-45	S102-021-45
0.3125 (5/16)	0.3125	2.50	0.060	S102-022-45	S102-023-45	S102-024-45
0.375 (3/8)	0.375	2.50	0.010	S102-025-45	S102-026-45	S102-027-45
0.375 (3/8)	0.375	2.50	0.060	S102-028-45	S102-029-45	S102-030-45



## Custom Chamfer Cutters, Corner Rounders



**Can't find a tool to meet your exact specifications? Specials or modified standards may be the answer.**

### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances and number of flutes vary by design
- End finishes: chamfer cutter, corner rounder
- Coated and uncoated
- Specials usually available in two weeks or less

Quote forms available on our website and upon request.  
Contact us for an estimate today.



## 7° Deburring Knives, HSS

**S04**

Size	Tool #
1mm x 1-1/4	S04-003
1/16 x 1-1/4	S04-007
3/32 x 1-1/4	S04-011
1/8 x 1-1/4	S04-005

## 7° Deburring Knives, Carbide

Size	Tool #
1mm x 1-1/2	S04-020
1/16 x 1-1/2	S04-013
3/32 x 1-1/2	S04-015
1/8 x 1-1/2	S04-017

## 10° Deburring Knives, HSS

Size	Tool #
1mm x 1-1/4	S04-002
1/16 x 1-1/4	S04-006
3/32 x 1-1/4	S04-012
1/8 x 1-1/4	S04-004

## 10° Deburring Knives, Carbide

Size	Tool #
1mm x 1-1/2	S04-019
1/16 x 1-1/2	S04-014
3/32 x 1-1/2	S04-016
1/8 x 1-1/2	S04-018



### SPECIALS

# P.206

MITGI specializes in custom micro tools that are needed quickly or are difficult to find. See pages 206-207 for more info regarding custom tool capabilities, estimated production times, and information about how to place an order.



Shank Diameter	Overall Length	Tip	Split Length	Tool #
D	E		K	
0.125 (1/8)	1.50	Point	0.375	S101-001-30
0.125 (1/8)	1.50	Radius - 0.005	0.375	S101-002-30
0.125 (1/8)	1.50	Radius - 0.010	0.375	S101-003-30
0.125 (1/8)	1.50	Flat - 0.005	0.375	S101-004-30
0.125 (1/8)	1.50	Flat - 0.010	0.375	S101-005-30
0.1875 (3/16)	2.00	Point	0.375	S101-006-30
0.1875 (3/16)	2.00	Radius - 0.005	0.375	S101-007-30
0.1875 (3/16)	2.00	Radius - 0.010	0.375	S101-008-30
0.1875 (3/16)	2.00	Flat - 0.005	0.375	S101-009-30
0.1875 (3/16)	2.00	Flat - 0.010	0.375	S101-010-30
0.250 (1/4)	2.50	Point	0.500	S101-011-30
0.250 (1/4)	2.50	Radius - 0.005	0.500	S101-012-30
0.250 (1/4)	2.50	Radius - 0.010	0.500	S101-013-30
0.250 (1/4)	2.50	Flat - 0.005	0.500	S101-014-30
0.250 (1/4)	2.50	Flat - 0.010	0.500	S101-015-30

## 60° Engraving Cutters

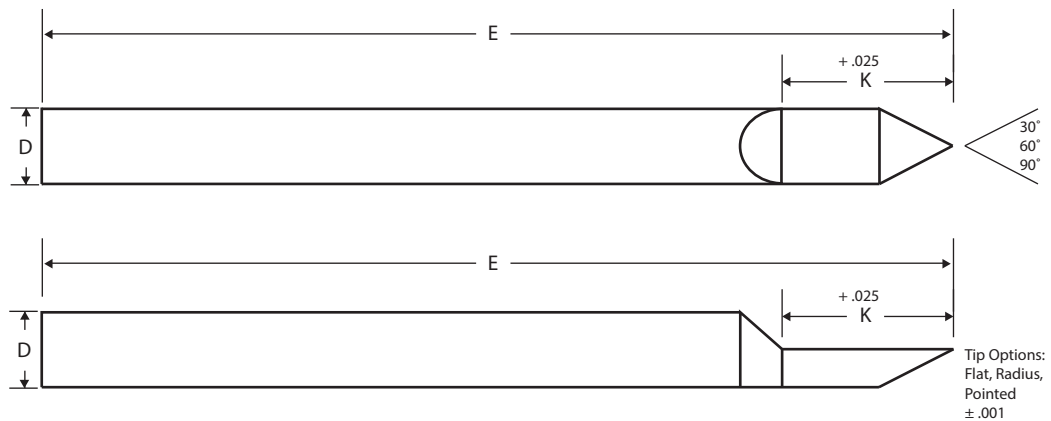
Shank Diameter	Overall Length	Tip	Split Length	Tool #
D	E		K	
0.125 (1/8)	1.50	Point	0.375	S101-001-60
0.125 (1/8)	1.50	Radius - 0.005	0.375	S101-002-60
0.125 (1/8)	1.50	Radius - 0.010	0.375	S101-003-60
0.125 (1/8)	1.50	Flat - 0.005	0.375	S101-004-60
0.125 (1/8)	1.50	Flat - 0.010	0.375	S101-005-60
0.1875 (3/16)	2.00	Point	0.375	S101-006-60
0.1875 (3/16)	2.00	Radius - 0.005	0.375	S101-007-60
0.1875 (3/16)	2.00	Radius - 0.010	0.375	S101-008-60
0.1875 (3/16)	2.00	Flat - 0.005	0.375	S101-009-60
0.1875 (3/16)	2.00	Flat - 0.010	0.375	S101-010-60
0.250 (1/4)	2.50	Point	0.500	S101-011-60
0.250 (1/4)	2.50	Radius - 0.005	0.500	S101-012-60
0.250 (1/4)	2.50	Radius - 0.010	0.500	S101-013-60
0.250 (1/4)	2.50	Flat - 0.005	0.500	S101-014-60
0.250 (1/4)	2.50	Flat - 0.010	0.500	S101-015-60

### MITGI INSIDE ACCOUNT REPRESENTATIVES

# P. 2

MITGI Inside Account Representatives are the right resources for quote requests, to place orders, check inventory, or provide tracking. See page 2 for more info.

Shank Diameter	Overall Length	Tip	Split Length	Tool #
D	E		K	
0.125 (1/8)	1.50	Point	0.375	S101-001-90
0.125 (1/8)	1.50	Radius - 0.005	0.375	S101-002-90
0.125 (1/8)	1.50	Radius - 0.010	0.375	S101-003-90
0.125 (1/8)	1.50	Flat - 0.005	0.375	S101-004-90
0.125 (1/8)	1.50	Flat - 0.010	0.375	S101-005-90
0.1875 (3/16)	2.00	Point	0.375	S101-006-90
0.1875 (3/16)	2.00	Radius - 0.005	0.375	S101-007-90
0.1875 (3/16)	2.00	Radius - 0.010	0.375	S101-008-90
0.1875 (3/16)	2.00	Flat - 0.005	0.375	S101-009-90
0.1875 (3/16)	2.00	Flat - 0.010	0.375	S101-010-90
0.250 (1/4)	2.50	Point	0.500	S101-011-90
0.250 (1/4)	2.50	Radius - 0.005	0.500	S101-012-90
0.250 (1/4)	2.50	Radius - 0.010	0.500	S101-013-90
0.250 (1/4)	2.50	Flat - 0.005	0.500	S101-014-90
0.250 (1/4)	2.50	Flat - 0.010	0.500	S101-015-90



## Custom Engraving Tools

**Can't find a tool to meet your exact specifications?  
Specials or modified standards may be the answer.**

### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances vary by design
- End finishes: flat, pointed, radius
- Specs: shoulder angle/radius, split length, included point angle
- Specials usually available in two weeks or less

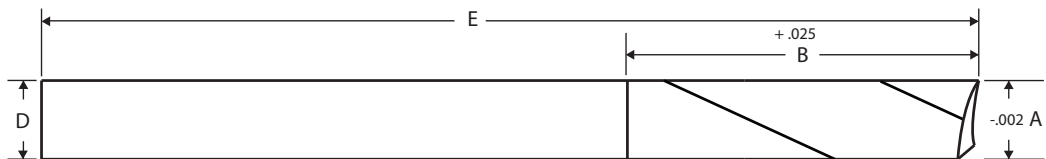
Quote forms available on our website and upon request.  
Contact us for an estimate today.



**S235**
**Square Upcut Plastic Cutters**
**FLUTE  
1**
**3X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Upcut 1 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.093	0.125	1.50	S235-031-1-SQUP3X
0.035	0.105	0.125	1.50	S235-035-1-SQUP3X
0.039 (1mm)	0.117	0.125	1.50	S235-039-1-SQUP3X
0.040	0.120	0.125	1.50	S235-040-1-SQUP3X
0.045	0.135	0.125	1.50	S235-045-1-SQUP3X
0.047 (3/64)	0.141	0.125	1.50	S235-047-1-SQUP3X
0.050	0.150	0.125	1.50	S235-050-1-SQUP3X
0.055	0.165	0.125	1.50	S235-055-1-SQUP3X
0.060	0.180	0.125	1.50	S235-060-1-SQUP3X
0.062 (1/16)	0.187	0.125	1.50	S235-062-1-SQUP3X
0.065	0.195	0.125	1.50	S235-065-1-SQUP3X
0.070	0.210	0.125	1.50	S235-070-1-SQUP3X
0.075	0.225	0.125	1.50	S235-075-1-SQUP3X
0.078 (5/64)	0.234	0.125	1.50	S235-078-1-SQUP3X
0.080	0.240	0.125	1.50	S235-080-1-SQUP3X
0.085	0.255	0.125	1.50	S235-085-1-SQUP3X
0.090	0.270	0.125	1.50	S235-090-1-SQUP3X
0.093 (3/32)	0.279	0.125	1.50	S235-093-1-SQUP3X
0.095	0.285	0.125	1.50	S235-095-1-SQUP3X
0.100	0.300	0.125	1.50	S235-100-1-SQUP3X
0.118 (3mm)	0.354	0.125	1.50	S235-118-1-SQUP3X
0.125 (1/8)*	0.375	0.125	1.50	S235-125-1-SQUP3X
0.1875 (3/16)*	0.563	0.1875	3.00	S235-188-1-SQUP3X
0.250 (1/4)*	0.750	0.250	3.00	S235-250-1-SQUP3X
0.3125 (5/16)*	0.938	0.3125	3.00	S235-313-1-SQUP3X
0.375 (3/8)*	1.125	0.375	4.00	S235-375-1-SQUP3X


**NOTE:**

\* Cutter diameter is manufactured slightly undersized in order to accommodate using same-sized shank diameter

# Square Upcut Plastic Cutters

## S295

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Upcut 1 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.124	0.125	2.00	S295-031-1-SQUP4X
0.035	0.140	0.125	2.00	S295-035-1-SQUP4X
0.039 (1mm)	0.156	0.125	2.00	S295-039-1-SQUP4X
0.040	0.160	0.125	2.00	S295-040-1-SQUP4X
0.045	0.180	0.125	2.00	S295-045-1-SQUP4X
0.047 (3/64)	0.188	0.125	2.00	S295-047-1-SQUP4X
0.050	0.200	0.125	2.00	S295-050-1-SQUP4X
0.055	0.220	0.125	2.00	S295-055-1-SQUP4X
0.060	0.240	0.125	2.00	S295-060-1-SQUP4X
0.062 (1/16)	0.248	0.125	2.00	S295-062-1-SQUP4X
0.065	0.260	0.125	2.00	S295-065-1-SQUP4X
0.070	0.280	0.125	2.00	S295-070-1-SQUP4X
0.075	0.300	0.125	2.00	S295-075-1-SQUP4X
0.078 (5/64)	0.312	0.125	2.00	S295-078-1-SQUP4X
0.080	0.320	0.125	2.00	S295-080-1-SQUP4X
0.085	0.340	0.125	2.00	S295-085-1-SQUP4X
0.090	0.360	0.125	2.00	S295-090-1-SQUP4X
0.093 (3/32)	0.372	0.125	2.00	S295-093-1-SQUP4X
0.095	0.380	0.125	2.00	S295-095-1-SQUP4X
0.100	0.400	0.125	2.00	S295-100-1-SQUP4X
0.118 (3mm)	0.472	0.125	2.00	S295-118-1-SQUP4X
0.125 (1/8)*	0.500	0.125	2.00	S295-125-1-SQUP4X
0.1875 (3/16)*	0.750	0.1875	3.00	S295-188-1-SQUP4X
0.250 (1/4)*	1.000	0.250	3.00	S295-250-1-SQUP4X
0.3125 (5/16)*	1.250	0.3125	4.00	S295-313-1-SQUP4X
0.375 (3/8)*	1.500	0.375	4.00	S295-375-1-SQUP4X

FLUTE  
1

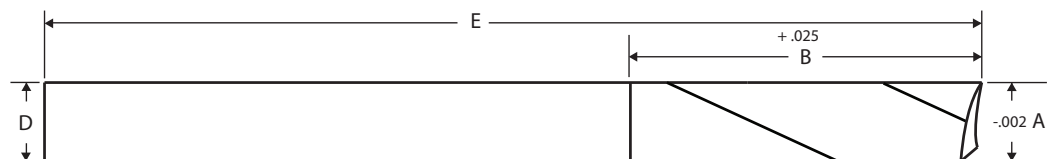
4X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



**NOTE:**

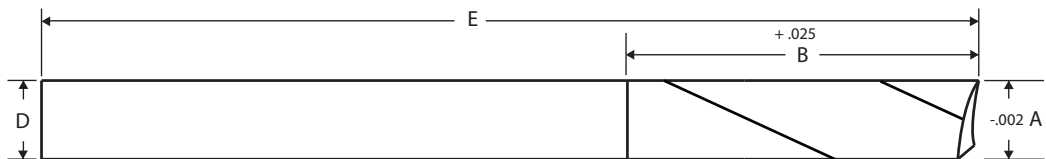
\* Cutter diameter is manufactured slightly undersized in order to accommodate using same-sized shank diameter



**S236**
**Square Upcut Plastic Cutters**
**FLUTE  
1**
**5X  
LENGTH  
OF CUT**
**+**  
SWISS-TYPE  
OAL


**QUICK TURN  
SPECIALS**

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Upcut 1 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.155	0.125	2.50	S236-031-1-SQUP5X
0.035	0.175	0.125	2.50	S236-035-1-SQUP5X
0.039 (1mm)	0.195	0.125	2.50	S236-039-1-SQUP5X
0.040	0.200	0.125	2.50	S236-040-1-SQUP5X
0.045	0.225	0.125	2.50	S236-045-1-SQUP5X
0.047 (3/64)	0.235	0.125	2.50	S236-047-1-SQUP5X
0.050	0.250	0.125	2.50	S236-050-1-SQUP5X
0.055	0.275	0.125	2.50	S236-055-1-SQUP5X
0.060	0.300	0.125	2.50	S236-060-1-SQUP5X
0.062 (1/16)	0.310	0.125	2.50	S236-062-1-SQUP5X
0.065	0.325	0.125	2.50	S236-065-1-SQUP5X
0.070	0.350	0.125	2.50	S236-070-1-SQUP5X
0.075	0.375	0.125	2.50	S236-075-1-SQUP5X
0.078 (5/64)	0.390	0.125	2.50	S236-078-1-SQUP5X
0.080	0.400	0.125	2.50	S236-080-1-SQUP5X
0.085	0.425	0.125	2.50	S236-085-1-SQUP5X
0.090	0.450	0.125	2.50	S236-090-1-SQUP5X
0.093 (3/32)	0.465	0.125	2.50	S236-093-1-SQUP5X
0.095	0.475	0.125	2.50	S236-095-1-SQUP5X
0.100	0.500	0.125	2.50	S236-100-1-SQUP5X
0.118 (3mm)	0.590	0.125	2.50	S236-118-1-SQUP5X
0.125 (1/8)*	0.625	0.125	2.50	S236-125-1-SQUP5X
0.1875 (3/16)*	0.938	0.1875	3.00	S236-188-1-SQUP5X
0.250 (1/4)*	1.250	0.250	4.00	S236-250-1-SQUP5X
0.3125 (5/16)*	1.563	0.3125	4.00	S236-313-1-SQUP5X
0.375 (3/8)*	1.875	0.375	4.00	S236-375-1-SQUP5X


**NOTE:**

\* Cutter diameter is manufactured slightly undersized in order to accommodate using same-sized shank diameter

# Square Upcut Plastic Cutters

## S259

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Upcut 2 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.093	0.125	1.50	S259-031-2-SQUP3X
0.035	0.105	0.125	1.50	S259-035-2-SQUP3X
0.039 (1mm)	0.117	0.125	1.50	S259-039-2-SQUP3X
0.040	0.120	0.125	1.50	S259-040-2-SQUP3X
0.045	0.135	0.125	1.50	S259-045-2-SQUP3X
0.047 (3/64)	0.141	0.125	1.50	S259-047-2-SQUP3X
0.050	0.150	0.125	1.50	S259-050-2-SQUP3X
0.055	0.165	0.125	1.50	S259-055-2-SQUP3X
0.060	0.180	0.125	1.50	S259-060-2-SQUP3X
0.062 (1/16)	0.187	0.125	1.50	S259-062-2-SQUP3X
0.065	0.195	0.125	1.50	S259-065-2-SQUP3X
0.070	0.210	0.125	1.50	S259-070-2-SQUP3X
0.075	0.225	0.125	1.50	S259-075-2-SQUP3X
0.078 (5/64)	0.234	0.125	1.50	S259-078-2-SQUP3X
0.080	0.240	0.125	1.50	S259-080-2-SQUP3X
0.085	0.255	0.125	1.50	S259-085-2-SQUP3X
0.090	0.270	0.125	1.50	S259-090-2-SQUP3X
0.093 (3/32)	0.279	0.125	1.50	S259-093-2-SQUP3X
0.095	0.285	0.125	1.50	S259-095-2-SQUP3X
0.100	0.300	0.125	1.50	S259-100-2-SQUP3X
0.118 (3mm)	0.354	0.125	1.50	S259-118-2-SQUP3X
0.125 (1/8)*	0.375	0.125	1.50	S259-125-2-SQUP3X
0.1875 (3/16)*	0.563	0.1875	2.00	S259-188-2-SQUP3X
0.250 (1/4)*	0.750	0.250	2.50	S259-250-2-SQUP3X
0.3125 (5/16)*	0.938	0.3125	2.50	S259-313-2-SQUP3X
0.375 (3/8)*	1.125	0.375	3.00	S259-375-2-SQUP3X

FLUTES  
2

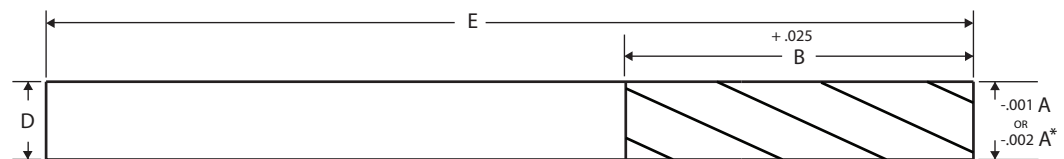
3X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS



### NOTE:

\* Cutter diameter is manufactured slightly undersized in order to accommodate using same-sized shank diameter



# S260

# Square Upcut Plastic Cutters

FLUTES  
2

5X  
LENGTH  
OF CUT

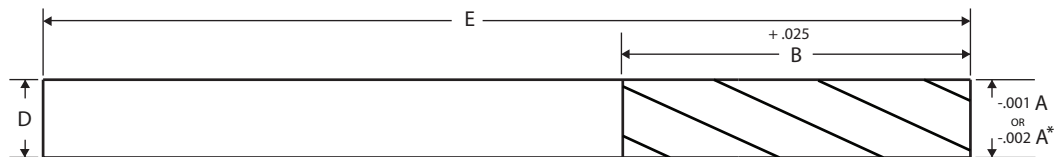
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SWISS-TYPE  
OAL

QT

QUICK TURN  
SPECIALS

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Upcut 2 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.155	0.125	1.50	S260-031-2-SQUP5X
0.035	0.175	0.125	1.50	S260-035-2-SQUP5X
0.039 (1mm)	0.195	0.125	1.50	S260-039-2-SQUP5X
0.040	0.200	0.125	1.50	S260-040-2-SQUP5X
0.045	0.225	0.125	1.50	S260-045-2-SQUP5X
0.047 (3/64)	0.235	0.125	1.50	S260-047-2-SQUP5X
0.050	0.250	0.125	1.50	S260-050-2-SQUP5X
0.055	0.275	0.125	1.50	S260-055-2-SQUP5X
0.060	0.300	0.125	1.50	S260-060-2-SQUP5X
0.062 (1/16)	0.310	0.125	1.50	S260-062-2-SQUP5X
0.065	0.325	0.125	1.50	S260-065-2-SQUP5X
0.070	0.350	0.125	1.50	S260-070-2-SQUP5X
0.075	0.375	0.125	1.50	S260-075-2-SQUP5X
0.078 (5/64)	0.390	0.125	2.00	S260-078-2-SQUP5X
0.080	0.400	0.125	2.00	S260-080-2-SQUP5X
0.085	0.425	0.125	2.00	S260-085-2-SQUP5X
0.090	0.450	0.125	2.00	S260-090-2-SQUP5X
0.093 (3/32)	0.465	0.125	2.00	S260-093-2-SQUP5X
0.095	0.475	0.125	2.00	S260-095-2-SQUP5X
0.100	0.500	0.125	2.00	S260-100-2-SQUP5X
0.118 (3mm)	0.590	0.125	2.00	S260-118-2-SQUP5X
0.125 (1/8)*	0.625	0.125	2.00	S260-125-2-SQUP5X
0.1875 (3/16)*	0.938	0.1875	2.50	S260-188-2-SQUP5X
0.250 (1/4)*	1.250	0.250	3.00	S260-250-2-SQUP5X
0.3125 (5/16)*	1.563	0.3125	4.00	S260-313-2-SQUP5X
0.375 (3/8)*	1.875	0.375	4.00	S260-375-2-SQUP5X



**NOTE:**

\* Cutter diameter is manufactured slightly undersized in order to accommodate using same-sized shank diameter



# Square Upcut Plastic Cutters

## S261

Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	Upcut 2 Flute Tool #
A	B	D	E	
0.031 (1/32)	0.248	0.125	1.50	S261-031-2-SQUP8X
0.035	0.280	0.125	1.50	S261-035-2-SQUP8X
0.039 (1mm)	0.312	0.125	1.50	S261-039-2-SQUP8X
0.040	0.320	0.125	1.50	S261-040-2-SQUP8X
0.045	0.360	0.125	1.50	S261-045-2-SQUP8X
0.047 (3/64)	0.376	0.125	1.50	S261-047-2-SQUP8X
0.050	0.400	0.125	2.00	S261-050-2-SQUP8X
0.055	0.440	0.125	2.00	S261-055-2-SQUP8X
0.060	0.480	0.125	2.00	S261-060-2-SQUP8X
0.062 (1/16)	0.496	0.125	2.00	S261-062-2-SQUP8X
0.065	0.520	0.125	2.00	S261-065-2-SQUP8X
0.070	0.560	0.125	2.00	S261-070-2-SQUP8X
0.075	0.600	0.125	2.00	S261-075-2-SQUP8X
0.078 (5/64)	0.624	0.125	2.00	S261-078-2-SQUP8X
0.080	0.640	0.125	2.50	S261-080-2-SQUP8X
0.085	0.680	0.125	2.50	S261-085-2-SQUP8X
0.090	0.720	0.125	2.50	S261-090-2-SQUP8X
0.093 (3/32)	0.744	0.125	2.50	S261-093-2-SQUP8X
0.095	0.760	0.125	2.50	S261-095-2-SQUP8X
0.100	0.800	0.125	2.50	S261-100-2-SQUP8X
0.118 (3mm)	0.944	0.125	2.50	S261-118-2-SQUP8X
0.125 (1/8)*	1.000	0.125	2.50	S261-125-2-SQUP8X
0.1875 (3/16)*	1.500	0.1875	3.00	S261-188-2-SQUP8X
0.250 (1/4)*	2.000	0.250	4.00	S261-250-2-SQUP8X
0.3125 (5/16)*	2.500	0.3125	4.00	S261-313-2-SQUP8X
0.375 (3/8)*	3.000	0.375	5.00	S261-375-2-SQUP8X

FLUTES  
2

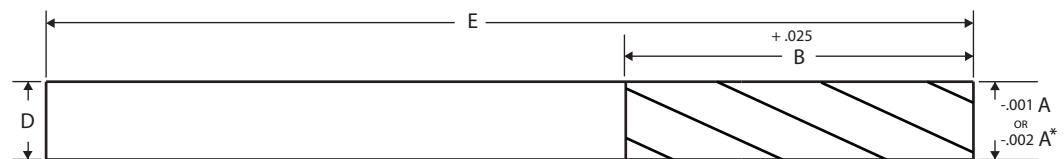
8X  
LENGTH  
OF CUT

+

SWISS-TYPE  
OAL

Q

QUICK TURN  
SPECIALS



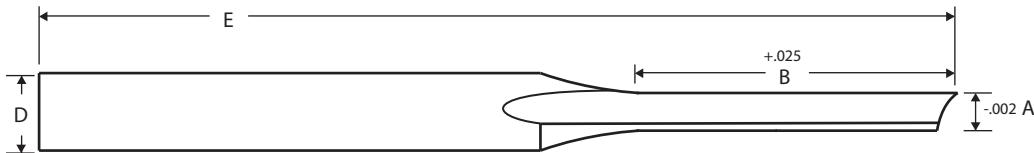
### NOTE:

\* Cutter diameter is manufactured slightly undersized in order to accommodate using same-sized shank diameter





Cutter Diameter	Length of Cut	Shank Diameter	Overall Length	1 Flute Tool #
A	B	D	E	
0.125 (1/8)	0.375	0.125	2.00	S276-001-1-ROUT
0.125 (1/8)	0.375	0.250	2.00	S276-002-1-ROUT
0.125 (1/8)	0.500	0.125	2.00	S276-003-1-ROUT
0.125 (1/8)	0.500	0.250	2.00	S276-004-1-ROUT
0.125 (1/8)	0.750	0.125	2.50	S276-005-1-ROUT
0.125 (1/8)	0.750	0.250	2.50	S276-006-1-ROUT
0.1875 (3/16)	0.500	0.1875	2.00	S276-007-1-ROUT
0.1875 (3/16)	0.500	0.250	2.00	S276-008-1-ROUT
0.1875 (3/16)	0.750	0.1875	2.50	S276-009-1-ROUT
0.1875 (3/16)	0.750	0.250	2.50	S276-010-1-ROUT
0.1875 (3/16)	1.000	0.1875	3.00	S276-011-1-ROUT
0.1875 (3/16)	1.000	0.250	3.00	S276-012-1-ROUT
0.1875 (3/16)	1.250	0.1875	4.00	S276-013-1-ROUT
0.1875 (3/16)	1.250	0.250	4.00	S276-014-1-ROUT
0.250 (1/4)	0.500	0.250	2.50	S276-015-1-ROUT
0.250 (1/4)	0.750	0.250	2.50	S276-016-1-ROUT
0.250 (1/4)	1.000	0.250	3.00	S276-017-1-ROUT
0.250 (1/4)	1.250	0.250	4.00	S276-018-1-ROUT
0.375 (3/8)	0.750	0.375	2.50	S276-019-1-ROUT
0.375 (3/8)	1.000	0.375	3.00	S276-020-1-ROUT
0.375 (3/8)	1.250	0.375	4.00	S276-021-1-ROUT


**NOTE:**

\* Cutter diameter is manufactured slightly undersized in order to accommodate using same-sized shank diameter



## QUALITY TOOLS, FAST

Manufacturers face increasingly tight production schedules and cannot afford downtime. MITGI understands that short lead times and the ability to deliver tools on time are essential to keep lines running and efficient. Our teams keep both your lead times and tool specs in mind when quoting, manufacturing, and ensuring tools arrive when expected. MITGI delivers performance and timelines you can depend on.

## BLANKET ORDERS

Blanket POs allow you to ensure that any tool can be available for same day shipment. With a blanket PO in place, tools are manufactured then stocked and ready to go when needed. Shipments for blanket orders can be scheduled for specific release dates or shipped upon request. We recommend utilizing blankets on tools used in long-running jobs and those with a stable estimated forecast. Blanket POs are also very useful for tools that have longer lead times due to complexity or special order material.

Contact MITGI or more information regarding stocking options and blanket orders.



# SHORT LEAD TIMES

## CUSTOM TOOLS

Most custom tools are available in two weeks or less, and some as quickly as three days. Contact MITGI to receive an estimate based on current production schedule.

## STOCK TOOLS

Most standard tools are available in three days or less. Once standard tools have been ordered they are stocked and available for same day shipment on reorders.

## EXPEDITED ORDERS

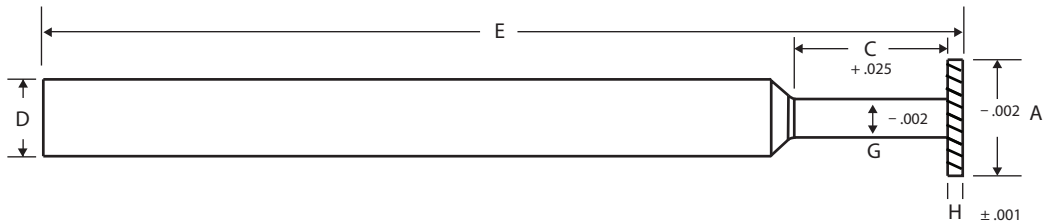
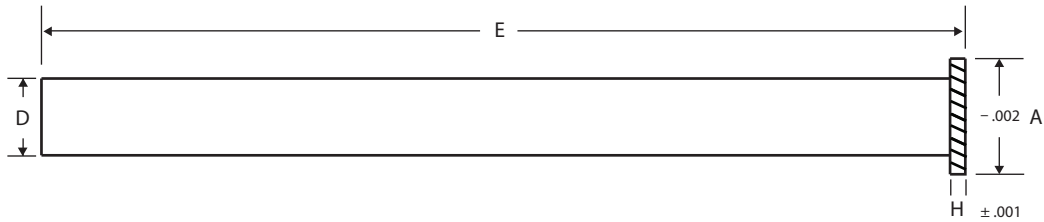
Our manufacturing facility is setup for flexibility and can produce standard or custom orders quickly and efficiently. Contact us for Quick Turn and expedited order options.

Expedited delivery is available on a case-by-case basis.



ALL SAWS ARE AVAILABLE IN 3 WEEKS OR LESS (4 WEEKS COATED)

Cutter Diameter	Shank Diameter	Overall Length	Neck Diameter	Neck Length	Cutter Width	10 Teeth	14 Teeth	18 Teeth
A	D	E	G	C	H			
0.375 (3/8)	0.250	3.00	N/A	N/A	0.030	S114-001-10	S114-001-14	S114-001-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.030	S114-002-10	S114-002-14	S114-002-18
0.375 (3/8)	0.250	3.00	N/A	N/A	0.035	S114-003-10	S114-003-14	S114-003-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.035	S114-004-10	S114-004-14	S114-004-18
0.375 (3/8)	0.250	3.00	N/A	N/A	0.040	S114-005-10	S114-005-14	S114-005-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.040	S114-006-10	S114-006-14	S114-006-18
0.375 (3/8)	0.250	3.00	N/A	N/A	0.045	S114-007-10	S114-007-14	S114-007-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.045	S114-008-10	S114-008-14	S114-008-18
0.375 (3/8)	0.250	3.00	N/A	N/A	0.050	S114-009-10	S114-009-14	S114-009-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.050	S114-010-10	S114-010-14	S114-010-18
0.375 (3/8)	0.250	3.00	N/A	N/A	0.055	S114-011-10	S114-011-14	S114-011-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.055	S114-012-10	S114-012-14	S114-012-18
0.375 (3/8)	0.250	3.00	N/A	N/A	0.060	S114-013-10	S114-013-14	S114-013-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.060	S114-014-10	S114-014-14	S114-014-18
0.375 (3/8)	0.250	3.00	N/A	N/A	0.065	S114-015-10	S114-015-14	S114-015-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.065	S114-016-10	S114-016-14	S114-016-18
0.375 (3/8)	0.250	3.00	N/A	N/A	0.070	S114-017-10	S114-017-14	S114-017-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.070	S114-018-10	S114-018-14	S114-018-18
0.375 (3/8)	0.250	3.00	N/A	N/A	0.075	S114-019-10	S114-019-14	S114-019-18
0.375 (3/8)	0.250	3.00	0.125	0.50	0.075	S114-020-10	S114-020-14	S114-020-18

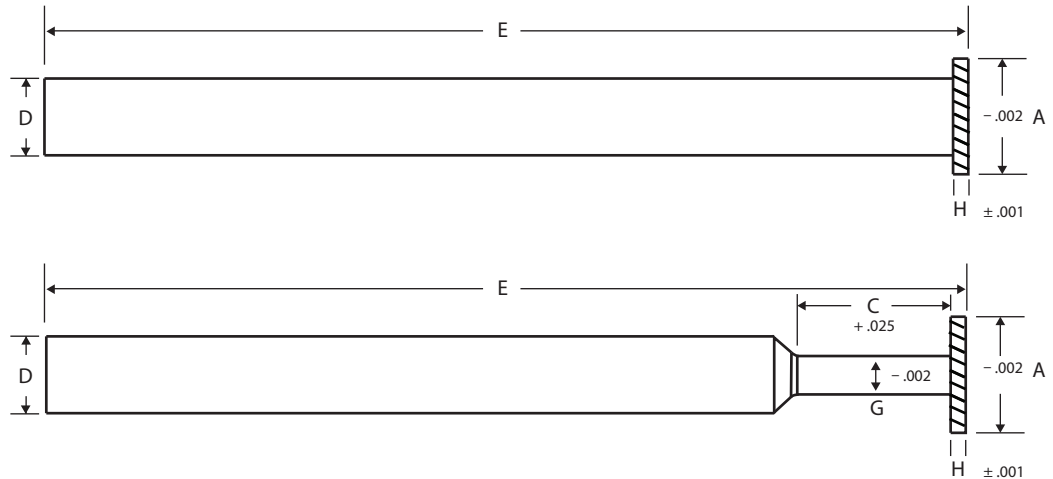


All MITGI Brazed Saws are available in 3 weeks or less (4 weeks coated). Contact us to order standards or request a custom saw quote.



Cutter Diameter	Shank Diameter	Overall Length	Neck Diameter	Neck Length	Cutter Width	10 Teeth	16 Teeth	20 Teeth
A	D	E	G	C	H			
0.500 (1/2)	0.250	3.00	N/A	N/A	0.030	S115-001-10	S115-001-16	S115-001-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.030	S115-002-10	S115-002-16	S115-002-20
0.500 (1/2)	0.250	3.00	N/A	N/A	0.035	S115-003-10	S115-003-16	S115-003-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.035	S115-004-10	S115-004-16	S115-004-20
0.500 (1/2)	0.250	3.00	N/A	N/A	0.040	S115-005-10	S115-005-16	S115-005-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.040	S115-006-10	S115-006-16	S115-006-20
0.500 (1/2)	0.250	3.00	N/A	N/A	0.045	S115-007-10	S115-007-16	S115-007-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.045	S115-008-10	S115-008-16	S115-008-20
0.500 (1/2)	0.250	3.00	N/A	N/A	0.050	S115-009-10	S115-009-16	S115-009-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.050	S115-010-10	S115-010-16	S115-010-20
0.500 (1/2)	0.250	3.00	N/A	N/A	0.055	S115-011-10	S115-011-16	S115-011-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.055	S115-012-10	S115-012-16	S115-012-20
0.500 (1/2)	0.250	3.00	N/A	N/A	0.060	S115-013-10	S115-013-16	S115-013-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.060	S115-014-10	S115-014-16	S115-014-20
0.500 (1/2)	0.250	3.00	N/A	N/A	0.065	S115-015-10	S115-015-16	S115-015-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.065	S115-016-10	S115-016-16	S115-016-20
0.500 (1/2)	0.250	3.00	N/A	N/A	0.070	S115-017-10	S115-017-16	S115-017-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.070	S115-018-10	S115-018-16	S115-018-20
0.500 (1/2)	0.250	3.00	N/A	N/A	0.075	S115-019-10	S115-019-16	S115-019-20
0.500 (1/2)	0.250	3.00	0.125	0.50	0.075	S115-020-10	S115-020-16	S115-020-20

ALL SAWS ARE AVAILABLE IN 3 WEEKS OR LESS (4 WEEKS COATED)



**S116**
**3/4" Brazed Saws**

Cutter Diameter	Shank Diameter	Overall Length	Neck Diameter	Neck Length	Cutter Width	10 Teeth	16 Teeth	22 Teeth
A	D	E	G	C	H			
0.750 (3/4)	0.250	3.00	N/A	N/A	0.030	S116-001-10	S116-001-16	S116-001-22
0.750 (3/4)	0.250	3.00	N/A	N/A	0.035	S116-002-10	S116-002-16	S116-002-22
0.750 (3/4)	0.250	3.00	N/A	N/A	0.040	S116-003-10	S116-003-16	S116-003-22
0.750 (3/4)	0.250	3.00	N/A	N/A	0.045	S116-004-10	S116-004-16	S116-004-22
0.750 (3/4)	0.250	3.00	N/A	N/A	0.050	S116-005-10	S116-005-16	S116-005-22
0.750 (3/4)	0.250	3.00	N/A	N/A	0.055	S116-006-10	S116-006-16	S116-006-22
0.750 (3/4)	0.250	3.00	N/A	N/A	0.060	S116-007-10	S116-007-16	S116-007-22
0.750 (3/4)	0.250	3.00	N/A	N/A	0.065	S116-008-10	S116-008-16	S116-008-22
0.750 (3/4)	0.250	3.00	N/A	N/A	0.070	S116-009-10	S116-009-16	S116-009-22
0.750 (3/4)	0.250	3.00	N/A	N/A	0.075	S116-010-10	S116-010-16	S116-010-22

**S117**
**3/4" Brazed Saws**

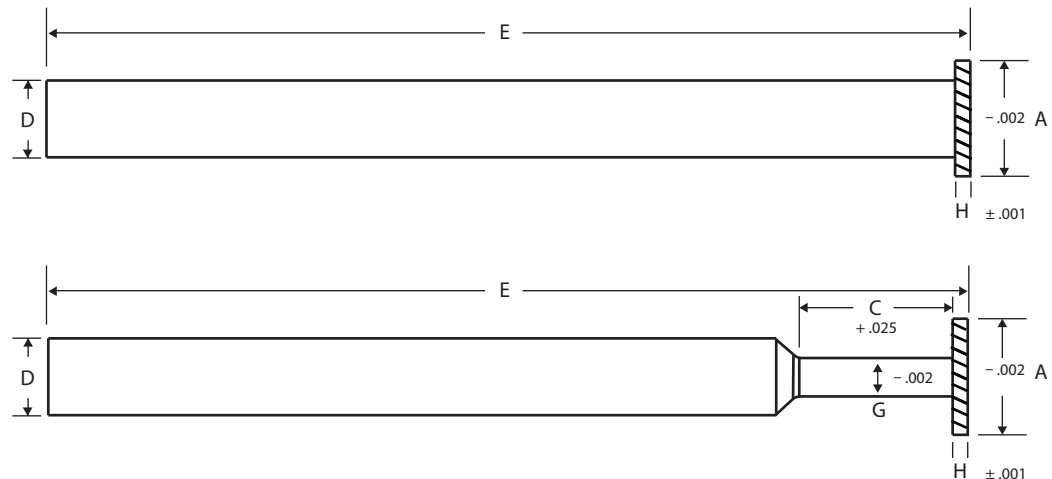
Cutter Diameter	Shank Diameter	Overall Length	Neck Diameter	Neck Length	Cutter Width	10 Teeth	16 Teeth	22 Teeth
A	D	E	G	C	H			
0.750 (3/4)	0.375	3.00	N/A	N/A	0.030	S117-001-10	S117-001-16	S117-001-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.030	S117-002-10	S117-002-16	S117-002-22
0.750 (3/4)	0.375	3.00	N/A	N/A	0.035	S117-003-10	S117-003-16	S117-003-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.035	S117-004-10	S117-004-16	S117-004-22
0.750 (3/4)	0.375	3.00	N/A	N/A	0.040	S117-005-10	S117-005-16	S117-005-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.040	S117-006-10	S117-006-16	S117-006-22
0.750 (3/4)	0.375	3.00	N/A	N/A	0.045	S117-007-10	S117-007-16	S117-007-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.045	S117-008-10	S117-008-16	S117-008-22
0.750 (3/4)	0.375	3.00	N/A	N/A	0.050	S117-009-10	S117-009-16	S117-009-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.050	S117-010-10	S117-010-16	S117-010-22
0.750 (3/4)	0.375	3.00	N/A	N/A	0.055	S117-011-10	S117-011-16	S117-011-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.055	S117-012-10	S117-012-16	S117-012-22
0.750 (3/4)	0.375	3.00	N/A	N/A	0.060	S117-013-10	S117-013-16	S117-013-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.060	S117-014-10	S117-014-16	S117-014-22
0.750 (3/4)	0.375	3.00	N/A	N/A	0.065	S117-015-10	S117-015-16	S117-015-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.065	S117-016-10	S117-016-16	S117-016-22
0.750 (3/4)	0.375	3.00	N/A	N/A	0.070	S117-017-10	S117-017-16	S117-017-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.070	S117-018-10	S117-018-16	S117-018-22
0.750 (3/4)	0.375	3.00	N/A	N/A	0.075	S117-019-10	S117-019-16	S117-019-22
0.750 (3/4)	0.375	3.00	0.25	0.50	0.075	S117-020-10	S117-020-16	S117-020-22



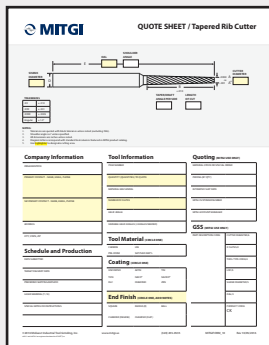
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Cutter Diameter	Shank Diameter	Overall Length	Neck Diameter	Neck Length	Cutter Width	12 Teeth	18 Teeth	24 Teeth
A	D	E	G	C	H			
1.00	0.375	3.00	N/A	N/A	0.030	S118-001-12	S118-001-18	S118-001-24
1.00	0.375	3.00	0.25	0.50	0.030	S118-002-12	S118-002-18	S118-002-24
1.00	0.375	3.00	N/A	N/A	0.035	S118-003-12	S118-003-18	S118-003-24
1.00	0.375	3.00	0.25	0.50	0.035	S118-004-12	S118-004-18	S118-004-24
1.00	0.375	3.00	N/A	N/A	0.040	S118-005-12	S118-005-18	S118-005-24
1.00	0.375	3.00	0.25	0.50	0.040	S118-006-12	S118-006-18	S118-006-24
1.00	0.375	3.00	N/A	N/A	0.045	S118-007-12	S118-007-18	S118-007-24
1.00	0.375	3.00	0.25	0.50	0.045	S118-008-12	S118-008-18	S118-008-24
1.00	0.375	3.00	N/A	N/A	0.050	S118-009-12	S118-009-18	S118-009-24
1.00	0.375	3.00	0.25	0.50	0.050	S118-010-12	S118-010-18	S118-010-24
1.00	0.375	3.00	N/A	N/A	0.055	S118-011-12	S118-011-18	S118-011-24
1.00	0.375	3.00	0.25	0.50	0.055	S118-012-12	S118-012-18	S118-012-24
1.00	0.375	3.00	N/A	N/A	0.060	S118-013-12	S118-013-18	S118-013-24
1.00	0.375	3.00	0.25	0.50	0.060	S118-014-12	S118-014-18	S118-014-24
1.00	0.375	3.00	N/A	N/A	0.065	S118-015-12	S118-015-18	S118-015-24
1.00	0.375	3.00	0.25	0.50	0.065	S118-016-12	S118-016-18	S118-016-24
1.00	0.375	3.00	N/A	N/A	0.070	S118-017-12	S118-017-18	S118-017-24
1.00	0.375	3.00	0.25	0.50	0.070	S118-018-12	S118-018-18	S118-018-24
1.00	0.375	3.00	N/A	N/A	0.075	S118-019-12	S118-019-18	S118-019-24
1.00	0.375	3.00	0.25	0.50	0.075	S118-020-12	S118-020-18	S118-020-24

**ALL SAWS ARE AVAILABLE IN 3 WEEKS OR LESS (4 WEEKS COATED)**


## Custom Brazed or Arbor Mounted Saws



**Can't find a tool to meet your exact specifications? Specials or modified standards may be the answer.**

### MANUFACTURED BY MITGI

- Shank diameter = 3mm – 1.250 in
- Tolerances and number of teeth vary by design
- Saws dished front to back for free cutting
- Options: modified or combined features, neck length, staggered form, end finishes, saw diameter
- Specials usually available in 3-4 weeks or less

Quote forms available on our website and upon request.  
Contact us for an estimate today.





## CUSTOM TOOLS

There are some situations in which a standard tool just doesn't fit the job. When a complicated application or other limitations exist, a custom tool can provide the unique capabilities required.

Custom tools can be manufactured from an existing design or created using our in-house design service. Within two weeks of print approval and receipt of a purchase order, we can have the custom tool in your hands and ready for use. To make re-ordering easier, we'll keep detailed records on each custom order so that we're always ready to manufacture the tool to the exact same specifications.

**TIMELINE: TWO WEEKS OR LESS**

## MODIFIED STANDARDS

Standard tools provide an immediate manufacturing solution. In some cases, the tool needed may be similar to a stocked tool, but requires some changes to improve efficiencies. For more information about each tool type, refer to QUOTE SHEETS on our website, or on the following pages:

- End Mills, pages 6-95 and 172-177
- Variable Helix Micro End Mills, pages 88-95
- Drills, pages 96-109
- Coolant Thru Tools, pages 108-109 and 166-171
- Reamers, pages 110-113
- Drafted Mold Tools, pages 114-125
- Clearance Cutter Mold Tools, pages 126-129
- Tapered Rib Cutters, pages 130-150
- Thread Mills, pages 152-165
- Corner Rounders, page 175
- Undercutting End Mills/Cherry Ball Tools, pages 176-177
- Spot Drills, pages 178-180
- Drill Mills, page 181
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Some modified standards may be able to be manufactured as quickly as three days. To determine the fastest production timeline, request a QUICK TURN REVIEW when submitting your quote request. QUICK TURN schedule availability may vary and capacity is limited.

**TIMELINE: TWO WEEKS OR LESS**

**QUICK TURN TIMELINE: THREE DAYS OR LESS**



# CUSTOM TOOLS AND MODIFIED STANDARDS

## CUSTOM TOOL TYPES

- Micro End Mills (standard, stub, extended reach, extended length of cut) including Ball, Square, Corner Radius, and Chamfer
- Variable Helix Micro End Mills
- Micro Drills
- Drills, Drill Mills, Spot Drills, G-Style Drills, Double Margin Drills, Spade Drills, Gun Drills
- Reamers
- Single Point and Full Form Thread Mills
- End Mills
- Hard Milling End Mills
- Undercutting End Mills/Cherry Ball Tools
- Deburring Knives
- Chamfer Cutters
- Engraving Cutters
- Drafted Mold Tools
- Clearance Cutter Mold Tools
- Tapered Rib Cutter Mold Tools
- Specialty Mold Tooling
- Keyseat Cutters, Woodruff Cutters, Staggered Tooth Keyseat Cutters
- Dovetails
- Multi-Diameter Step Tooling, Step Drills, Step Reamers
- Countersinks, Counterbores
- Broaches, Pins, Go/No-Go Gauges
- Corner Rounding End Mills
- Boring Bars
- Rebar Tools, Thread Bars
- Insert Modifications
- Port Tools
- Coolant Thru Thread Mills and Micro Drills
- Slitting Saws (mounted and arbor)
- Brazed Saws
- Form Tools
- Intersecting Form Tools
- Combination Tools
- Specialty Tool Manufacturing to Customer Print or Design



**Ready to get started?**

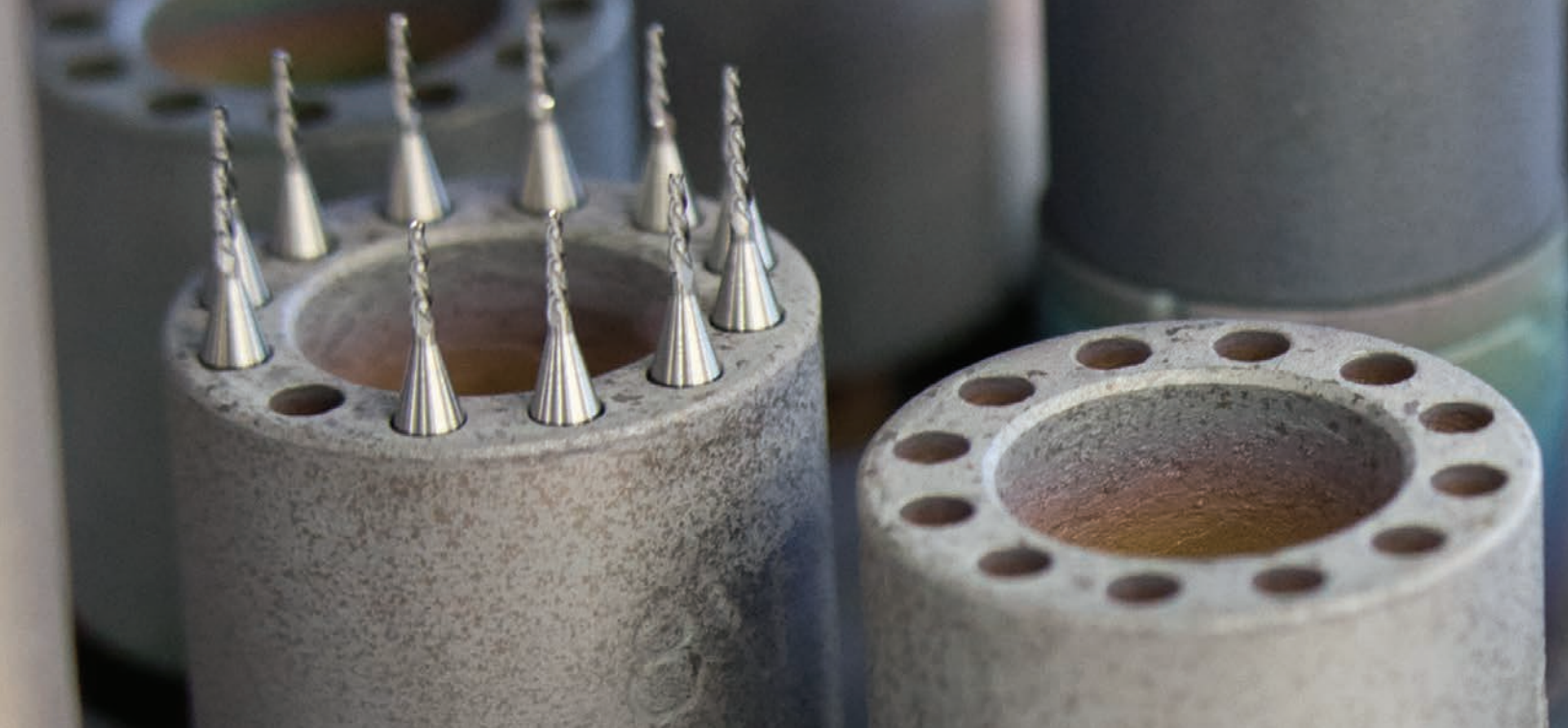
**Contact us:**

**Phone: (320) 455-0535**

**Email: [info@mitgi.us](mailto:info@mitgi.us)**

**Web: [www.mitgi.us](http://www.mitgi.us)**





# COATING OPTIONS

MITGI offers both in-house and outsourced coating options. Contact us to discuss which coating will deliver optimum results.



## **LEVEL I: AlTiN (Aluminum Titanium Nitride)**

**Ideal Cutting Material:** Hardened Steel, Alloy Steel, Low Carbon Steel, Carbon Steel, Stainless Steel, PH Stainless Steel, Titanium  
**Primary Features:** Longer tool life, especially in high speed applications

## **LEVEL II: TiN (Titanium Nitride)**

**Ideal Cutting Material:** Iron, Steel, Alloy Steel, Low Carbon Steel, Carbon Steel  
**Primary Features:** Reduction in overall tool wear

## **LEVEL II: TiCN (Titanium Carbon Nitride)**

**Ideal Cutting Material:** Aluminum, Steel  
**Primary Features:** Optimum coating for tools with sharp edges and corners

## **LEVEL II: nACo®**

**Ideal Cutting Material:** Steel, Hardened Steel, Alloyed Steel, Superalloys  
**Primary Features:** Drilling, Hard Milling

## **LEVEL III COATING OPTIONS**

Level III coating formulas may be run in-house or outsourced to approved vendors. Lead times vary based on tool type and quantity.

- ZrN
- nACRo®
- Diamond
- DLC (diamond-like coating)
- Other formulations as requested

nACo® and nACRo® are registered trademarks of PLATIT, Inc.





## IN-HOUSE COATING

In-house coating allows MITGI to provide coating that has the same great quality as the tools you've come to expect from MITGI. Tools are coated in small batches of like sizes to ensure consistent coating is applied at the optimum temperature. MITGI offers coating for carbide tools with a round shank diameters ranging from 1/8"-1", and with cutter dimensions commonly as low as 0.010" (smaller on a case-by-case basis).

## COATING AS A SERVICE

All MITGI in-house coatings are available for purchase by order or as a batch. For more information, contact your Inside Account Representative for pricing and scheduling options.

## PRODUCTION NOTES

- In-house coating generally adds 1-5 days to overall production schedule
- Level I coating types run every 1-2 days, depending on tool size
- Level II and Level III coatings are available upon request, with an average 1-2 week turnaround
- No double ended tools or brazed tools with MITGI in-house coating

 **Ready to get started?**

**Contact us:**

**Phone: (320) 455-0535**

**Email: [info@mitgi.us](mailto:info@mitgi.us)**

**Web: [www.mitgi.us](http://www.mitgi.us)**



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## MANUFACTURED BY MITGI

For more than 30 years, MITGI has proven that finding the right product with time lines that match your schedule does not have to be complicated. Through our standard and custom product lines, we can design and manufacture tools that will meet your specifications and exceed your expectations.

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