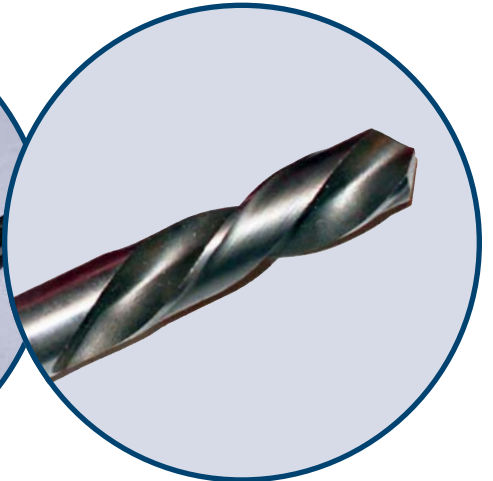
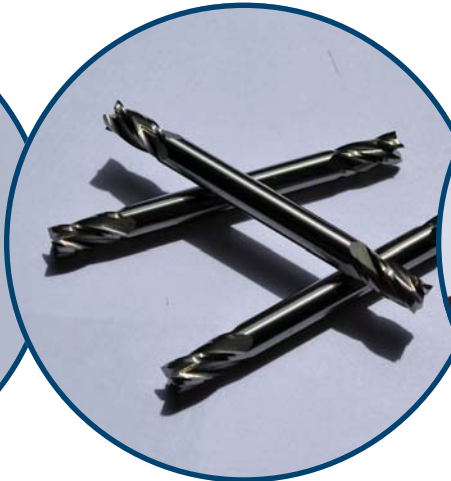
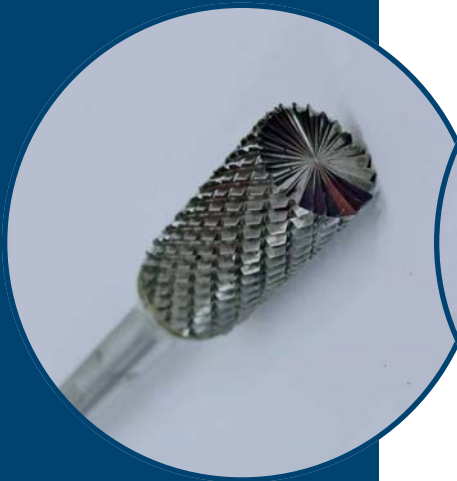




**Precision reground solid  
carbide and high speed tools**

**Special high speed and  
carbide tools to print**

**Quality service  
for over 40 years**



**Fox Tool Co.**

1471 Main Street • Cuyahoga Falls, Ohio 44221

(Phone) 330.928.3402 • (Fax) 330.928.8220

[www.foxtoolcompany.com](http://www.foxtoolcompany.com)

[sales@foxtoolcompany.com](mailto:sales@foxtoolcompany.com)



### **24-Hour Service Available**

- Competitive pricing
- Full-service provider

### **Able to Supply**

- New cutting tools
- Special cutting tools to prints
- Hi-performance cutting tools

### **Services Include**

- Regrinds of:
  - End mills, ball mills, hi-performance mills
  - Hi-performance drills
  - Step tools
  - Carbide burs
  - Saw blades
  - Spade drills
  - Reamers and taps
- Repair Indexable Tool Holders
- AlTiN, TiN, TiCN PVD Coatings



***Let Fox Tool Co give you the cutting edge!***



**Custom cutting tools, form tools, lathe tools**

**Special end mills, corner rounding tools, pilot reamers**

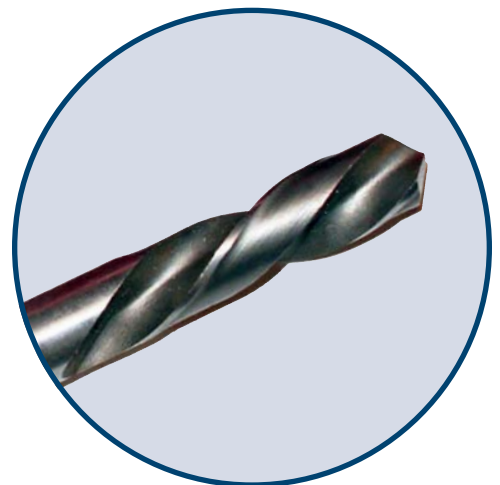


**Special length burs, double end burs, router bits, pins**



**Hi-Performance Drills:**

- 
- |               |            |
|---------------|------------|
| Hertel Drills | SECO       |
| Cham Drills   | Toshiba    |
| Pilot Drills  | OSG        |
| SE Dynapoint  | Titex      |
| Radial        | Komet      |
| Bickford      | Sandvik    |
| Helical       | Sumitomo   |
|               | Iscar      |
|               | Guhring    |
|               | Mitsubishi |



***Special tooling to your print!***



# Carbide and HSS End Mills



**Ball mills, corner radius mills**



**Hi-performance mills**



**Roughing mills**



**LHS end mills, micro-miniature mills, tapered mills**



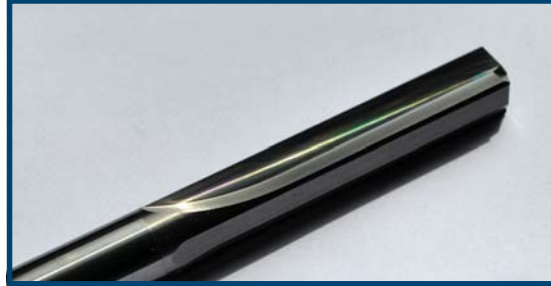
**Special geometry mills**

Special makes for tough to cut welds, aluminum, many different stainless steels, brass, inconel, cast iron, nickel, and 4140 Alloy steel. Can be made to any specific diameter, flute length, and overall length.

## Taps



## Reamers



## Counter sinks



## Annular cutters



## Milling cutters and saw blades



## Bandsaw blades



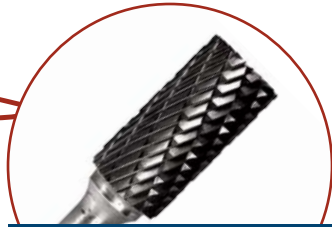
## Spade drills



## Repair Tool Holders

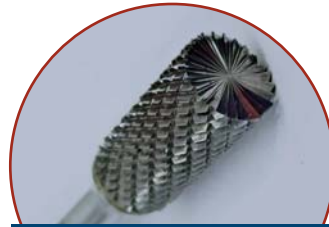


**Additional Services**



### Cylindrical (SA)

Item #	Cut dia.	Flute length	Shk. dia.
SA-41	1/16	1/4	1/8
SA-61	1/16	1/4	3/32
SA-63	3/32	3/8	3/32
SA-42	3/32	7/16	1/8
SA-11	1/8	1/2	1/4
SA-43	1/8	9/16	1/8
SA-12	1/8	5/8	1/4
SA-81	3/16	5/8	3/16
SA-53	3/16	1/2	1/8
SA-14	3/16	5/8	1/4
SA-51	1/4	1/2	1/8
SA-1	1/4	5/8	1/4
SA-2	5/16	3/4	1/4
SA-3	3/8	3/4	1/4
SA-4	7/16	1	1/4
SA-5	1/2	1	1/4
SA-6	5/8	1	1/4
SA-15	3/4	1/2	1/4
SA-7	3/4	1	1/4
SA-8	7/8	1	1/4
SA-9	1	1	1/4



### Cyl. End Cut (SB)

Item #	Cut dia.	Flute length	Shk. dia.
SB-41	1/16	1/4	1/8
SB-42	3/32	7/16	1/8
SB-11	1/8	1/2	1/4
SB-12	1/8	5/8	1/4
SB-43	1/8	9/16	1/8
SB-14	3/16	5/8	1/4
SB-51	1/4	3/16	1/8
SB-1	1/4	5/8	1/4
SB-2	5/16	3/4	1/4
SB-3	3/8	3/4	1/4
SB-4	7/16	1	1/4
SB-5	1/2	1	1/4
SB-6	5/8	1	1/4
SB-15	3/4	1/2	1/4
SB-16	3/4	3/4	1/4
SB-7	3/4	1	1/4
SB-8	7/8	1	1/4
SB-9	1	1	1/4



### Cyl. Ball Nose (SC)

Item #	Cut dia.	Flute length	Shk. dia.
SC-61	3/32	3/8	3/32
SC-41	3/32	7/16	1/8
SC-42	1/8	9/16	1/8
SC-11	1/8	1/2	1/4
SC-12	1/8	5/8	1/4
SC-81	3/16	1/2	3/16
SC-53	3/16	1/2	1/8
SC-14	3/16	5/8	1/4
SC-51	1/4	1/2	1/8
SC-1	1/4	5/8	1/4
SC-2	5/16	3/4	1/4
SC-3	3/8	3/4	1/4
SC-4	7/16	1	1/4
SC-5	1/2	1	1/4
SC-6	5/8	1	1/4
SC-15	3/4	1/2	1/4
SC-16	3/4	3/4	1/4
SC-7	3/4	1	1/4
SC-9	1	1	1/4



### Egg Shape (SE)

Item #	Cut dia.	Flute length	Shk. dia.
SE-61	3/32	1/8	3/32
SE-41	1/8	7/32	1/8
SE-81	3/16	9/32	3/16
SE-53	3/16	9/32	1/8
SE-11	3/16	5/16	1/4
SE-1	1/4	3/8	1/4
SE-51	1/4	3/8	1/8
SE-3	3/8	5/8	1/4
SE-5	1/2	7/8	1/4
SE-6	5/8	1	1/4
SE-7	3/4	1	1/4



### Ball Shape (SD)

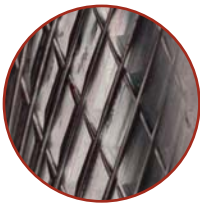
Item #	Cut dia.	Flute length	Shk. dia.
SD-41	3/32	3/32	1/8
SD-61	3/32	3/32	3/32
SD-11	1/8	3/32	1/4
SD-42	1/8	1/8	1/8
SD-14	3/16	1/8	1/4
SD-81	3/16	5/32	3/16
SD-53	3/16	5/32	1/8
SD-1	1/4	7/32	1/4
SD-51	1/4	7/32	1/8
SD-2	5/16	1/4	1/4
SD-3	3/8	5/16	1/4
SD-4	7/16	3/16	1/4
SD-5	1/2	7/16	1/4
SD-6	5/8	9/16	1/4
SD-7	3/4	11/16	1/4
SD-9	1	15/16	1/4



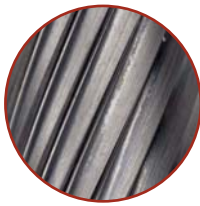
### Round Tree Shape (SF)

Item #	Cut dia.	Flute length	Shk. dia.
SF-61	3/32	1/4	3/32
SF-41	1/8	1/4	1/8
SF-11	1/8	1/2	1/4
SF-42	1/8	1/2	1/8
SF-81	3/16	1/2	3/16
SF-53	3/16	1/2	1/8
SF-51	1/4	1/2	1/8
SF-1	1/4	3/4	1/4
SF-3	3/8	3/4	1/4
SF-4	7/16	1	1/4
SF-5	1/2	1	1/4
SF-6	5/8	1	1/4
SF-7	3/4	1	1/4
SF-14	3/4	1.25	1/4
SF-15	3/4	1.5	1/4

## STYLES OF FLUTING FOR CARBIDE BURS



**Double Cut:**  
Ideal for heavy stock removal and quality finish.



**Single Cut:**  
General purpose. Ideal for most materials.



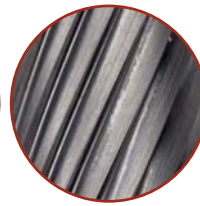
**Nonferrous:**  
Ideal for aluminum and plastics.



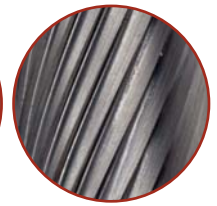
**Chip Breaker:**  
Reduces chip size. Ideal for most steels.



**Diamond Cut:**  
Provides excellent finish for tough alloys.



**Coarse Cut:**  
Ideal for softer ferrous metals.



**Fine Cut:**  
For use on materials that require fine finish.



### Pointed Tree Shape (SG)

Item #	Cut dia.	Flute length	Shk. dia.
SG-61	3/32	1/4	3/32
SG-41	1/8	1/4	1/8
SG-42	1/8	5/16	1/8
SG-43	1/8	3/8	1/8
SG-44	1/8	1/2	1/8
SG-81	3/16	1/2	3/16
SG-53	3/16	1/2	1/8
SG-1	1/4	5/8	1/4
SG-51	1/4	1/2	1/8
SG-2	5/16	3/4	1/4
SG-3	3/8	3/4	1/4
SG-5	1/2	1	1/4
SG-6	5/8	1	1/4
SG-7	3/4	1	1/4
SG-15	3/4	1.5	1/4



### Taper with Round End (SL)

Item #	Cut dia.	Flute length	Shk. dia.	Incl. Angle
SL-41	1/8	3/8	1/8	8
SL-42	1/8	1/2	1/8	8
SL-53	3/16	1/2	1/8	8
SL-1	1/4	5/8	1/4	14
SL-2	5/16	7/8	1/4	14
SL-3	3/8	1.0625	1/4	14
SL-4	1/2	1.125	1/4	14
SL-5	5/8	1.187	1/4	14
SL-7	3/4	1.5	1/4	14



### Cone Shape (SM)

Item #	Cut dia.	Flute length	Shk. dia.	Incl. Angle
SM-61	3/32	1/4	3/32	10
SM-41	1/8	11/32	1/8	12
SM-42	1/8	7/16	1/8	14
SM-43	1/8	5/8	1/8	7
SM-53	3/16	1/2	1/8	16
SM-1	1/4	1/2	1/4	22
SM-51	1/4	1/2	1/8	22
SM-2	1/4	3/4	1/4	14
SM-3	1/4	1	1/4	10
SM-4	3/8	5/8	1/4	28
SM-5	1/2	7/16	1/4	28
SM-6	5/8	1	1/4	31



### Flame Shape (SH)

Item #	Cut dia.	Flute length	Shk. dia.
SH-41	1/8	1/4	1/8
SH-53	3/16	3/8	1/8
SH-1	1/4	5/8	1/4
SH-2	5/16	3/4	1/4
SH-5	1/2	1.25	1/4
SH-6	5/8	1	1/4
SH-7	3/4	1.4375	1/4



### 60 Cone Shape (SJ)

Item #	Cut dia.	Flute length	Shk. dia.
SJ-42	1/8	3/32	1/8
SJ-1	1/4	3/16	1/4
SJ-3	3/8	5/16	1/4
SJ-5	1/2	7/16	1/4
SJ-6	5/8	9/16	1/4
SJ-7	3/4	11/16	1/4
SJ-9	1	15/16	1/4



### 90 Cone Shape (SK)

Item #	Cut dia.	Flute length	Shk. dia.
SK-42	1/8	1/16	1/8
SK-1	1/4	1/8	1/4
SK-3	3/8	3/16	1/4
SK-5	1/2	1/4	1/4
SK-6	5/8	5/16	1/4
SK-7	3/4	3/8	1/4
SK-9	1	1/2	1/4



### Inverted Cone Shape (SN)

Item #	Cut dia.	Flute length	Shk. dia.
SN-61	3/32	1/8	3/32
SN-42	1/8	3/16	1/8
SN-81	3/16	1/4	3/16
SN-1	1/4	5/16	1/4
SN-2	3/8	3/8	1/4
SN-4	1/2	1/2	1/4
SN-7	3/4	5/8	1/4



# PVD Coatings

Coating suggestions are a recommendation only. Customers should note that in some cases different coatings may work better.

## AlTiN—Aluminum Titanium Nitride

- Offers superior performance for a range of metal machining applications.
- Can be run at more aggressive speeds and feeds and with lower amounts of coolant.
- The best coating for tough to cut material

## TiCN—Titanium Carbon Nitride

- Best for use when cutting nonferrous, cast iron, and aluminum.
- Great for abrasive material machining.

## TiN—Titanium Nitride

- General purpose coating; good for wide range of applications.
- Will improve speeds and feeds as well as tool life.
- High anti-adhesion ability.



Workplace Materials	Applications				
	Drilling	Turning	Milling	Tapping	Reaming
Steel: general types	AlTiN	AlTiN	AlTiN	TiN	AlTiN
Highly alloyed steel: stainless steel, super alloys	AlTiN	AlTiN	AlTiN	TiCN	TiCN
Mg alloys	AlTiN	AlTiN	AlTiN	TiCN AlTiN	TiCN
Cast iron	AlTiN	AlTiN	TiCN AlTiN	TiCN AlTiN	TiCN AlTiN
Copper	TiN	TiN	TiN	TiN	TiN
Brass/bronze	TiCN	TiCN	TiCN	TiCN	TiCN
Plastics	TiN AlTiN	TiN AlTiN	AlTiN	TiN	TiN