



# GROBET USA®

*The World Leader of Precision Files  
and Cutting Tools*

**Distributed by Polishers & Jewelers Supply**  
**401-454-2888 [Jewelers-Supply@verizon.net](mailto:Jewelers-Supply@verizon.net)**

- **American Pattern Files**
- **Carbide Rotary Files**
- **High Speed Steel  
Rotary Files**

ISO Certification



### ***Growing to serve you better!***

*Our 40,000 square-foot state-of-the-art production plant in Cheyenne, WY is allowing us to meet the increased demand for our products and will accommodate the further expansion of our product design & manufacturing capabilities.*

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Welcome to the **GROBET USA®** File Catalog.

We have a proud heritage of over 140 years in the design, production and distribution of precision tools for professional technicians and craftsmen.

**GROBET USA®** maintains state-of-the-art production facilities in the US and Switzerland, as well as a global network of suppliers to provide an offering of more than 18,000 products used by:

- Manufacturers
- Machinists / Metal Workers
- Jewelers
- Lapidaries
- Dental Laboratory Technicians
- Hobbyists & Model Makers

**GROBET USA®** products are available worldwide through our international network of authorized distributors.

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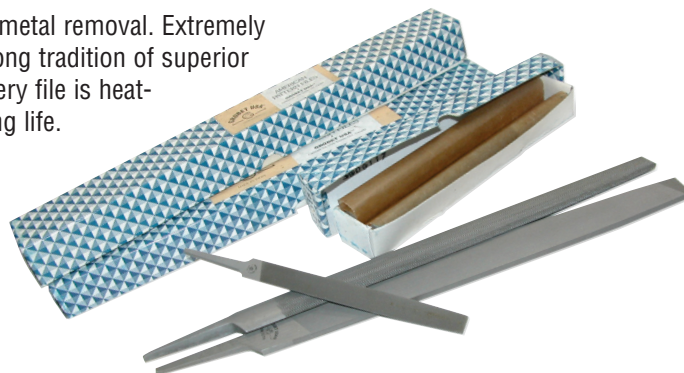




# American Pattern Files

**Grobet American Pattern Files** are uniform in cut to permit fast metal removal. Extremely durable and scientifically balanced, each file is the product of a long tradition of superior craftsmanship combined with the most advanced technology. Every file is heat-treated to exacting standards to provide top performance and long life.

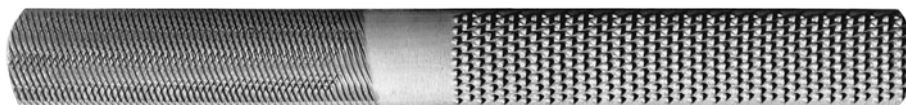
- **GROBET BRAND**
- In Stock for Immediate Delivery
- Strict Quality Control Program
- Excellent Cutting Efficiency
- ISO 9001 : 2000 Certified
- Superior Longevity



## COMPARABLE CUT DESIGNATIONS FOR SWISS PRECISION AND AMERICAN PATTERN FILES

SWISS	No. 00	No. 0	No. 2
AMERICAN PATTERN	Bastard	Second Cut	Smooth Cut

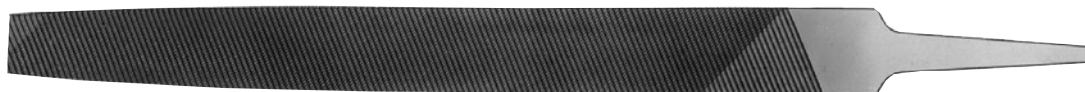
There is no equivalent in American Pattern Files for Swiss cuts numbered from No. 4 to No. 8.



### ALL PURPOSE FILE

For the homeowner, home craftsman, boat builder and mechanic. Half-round shape. Has file section and rasp section on both flat side and half-round side. **Both sides of file section are double cut – Both sides of rasp section are rasp cut.**

Length	Width	GROBET Thickness	Bastard Cut
8"	7/8"	1/4"	32.502



### ALUMINUM TYPE A, FLAT

Special tooth construction is effective in eliminating clogging. Developed for use on soft material, such as aluminum. This double cut file tapers in thickness and width. **Double cut top and bottom – Both edges are single cut.**

Length	Width	Thickness	Bastard Cut
6"	5/8"	5/32"	32.260
8"	25/32"	7/32"	32.261
10"	31/32"	1/4"	32.262
12"	1-5/32"	9/32"	32.263

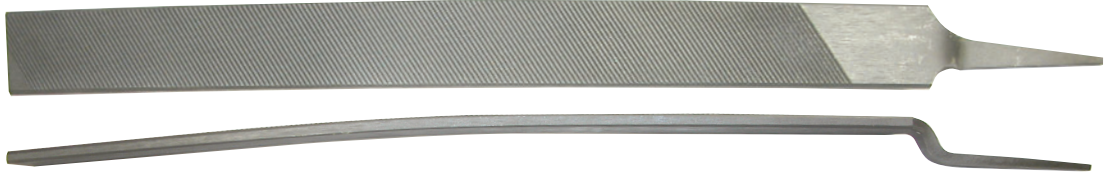


### ALUMINUM TYPE A, HALF-ROUND

Eliminates chip clogging. Designed for soft materials, such as aluminum. The Half-Round file allows modification of concave surfaces and holes. This tapered file is rounded on one side and flat on the other. **Double cut on both sides.**

Length	Width	GROBET Thickness	Bastard Cut
6"	19/32"	5/32"	32.265
8"	3/4"	7/32"	32.266
10"	15/16"	9/32"	32.267
12"	1-1/8"	11/32"	32.268

*Note: See pages 33-35 for our complete file handle line, including charts on plastic file handles.*



### BENT BODY

Grobet's Body Files are precision hand cutting tools designed to cut or level off a metal surface. Body Files are commonly used in Automotive industry for metal finishing and repair work. The thin metal and aluminum used to form the auto body is easily damaged or dented. Before painting, all dents and deep scratches have to be removed. This file tapers toward the end. **Cut bottom - Top is safe - Both edges are safe.**

Length	Width	Thickness	TPI	Second Cut	Smooth Cut
14"	1-5/16"	7/32"	13	<b>32.48801</b>	—
14"	1-21/64"	7/32"	20	—	<b>32.48802</b>



### CHAIN SAW, ROUND - See page 11 for Chain Saw File Sets

Use for sharpening all sizes of chain saw teeth. This file maintains the proper tooth shape throughout extensive use. The chain saw file user will experience a fast, smooth cutting action creating an excellent finish. **Double cut.**

Length	Diameter	GROBET	GROBET PREMIUM
		Smooth Cut	Smooth Cut
8"	13/64"	<b>32.27001</b>	<b>32.270</b>
8"	3/16"	<b>32.27101</b>	<b>32.271</b>
8"	5/32"	<b>32.27201</b>	<b>32.272</b>
8"	7/32"	<b>32.27301</b>	<b>32.273</b>
8"	1/4"	<b>32.27401</b>	<b>32.274</b>



### CONTACT POINT

Use for cleaning engine distributor points, contact points of magnets, switches, electric bell, etc. and spark plugs. **Single cut top and bottom - Both edges are safe.**

Length	No.
5"	<b>32.500</b>



### FARMER'S OWN FILE

General purpose file with rectangular shape. **One side double cut - One side single cut - One edge single cut - One edge is safe.**

Length	Width	Thickness	Bastard Cut
8"	31/32"	3/16"	<b>32.498</b>
10"	31/32"	3/16"	<b>32.499</b>



### FLAT

Most often used by machinists, machinery builders and repair personnel. Use when rapid material removal is required. This double cut file is tapered in width and thickness. **Double cut top and bottom - Both edges are single cut.**

Length	Width	Thickness	Bastard Cut	Second Cut	Smooth Cut
4"	15/32"	5/64"	<b>32.288</b>	<b>32.295</b>	<b>32.302</b>
6"	5/8"	5/32"	<b>32.289</b>	<b>32.296</b>	<b>32.303</b>
8"	25/32"	7/32"	<b>32.290</b>	<b>32.297</b>	<b>32.304</b>
10"	31/32"	1/4"	<b>32.291</b>	<b>32.298</b>	<b>32.305</b>
12"	1-5/32"	9/32"	<b>32.292</b>	<b>32.299</b>	<b>32.306</b>
14"	1-11/32"	5/16"	<b>32.293</b>	<b>32.300</b>	<b>32.307</b>



## HALF-ROUND

These files are popular with foundries and machinists. Use for rapid material removal while leaving a smooth finish. Used for filing concave, convex and flat surfaces as well as rounding out holes. This file is rounded on one side and flat on the other. **Double cut on both sides.**

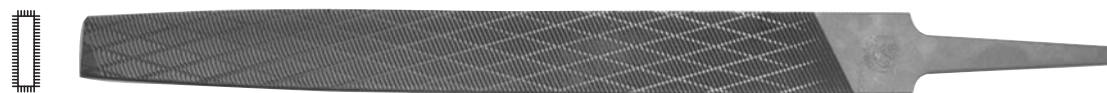
Length	Width	Thickness	Bastard Cut	Second Cut	Smooth Cut
4"	7/16"	1/8"	<b>32.309</b>	<b>32.317</b>	<b>32.324</b>
6"	19/32"	5/32"	<b>32.310</b>	<b>32.318</b>	<b>32.325</b>
8"	3/4"	7/32"	<b>32.311</b>	<b>32.319</b>	<b>32.326</b>
10"	15/16"	9/32"	<b>32.312</b>	<b>32.320</b>	<b>32.327</b>
12"	1-1/8"	11/32"	<b>32.313</b>	<b>32.321</b>	<b>32.328</b>
14"	1-9/32"	13/32"	<b>32.314</b>	<b>32.322</b>	<b>32.329</b>



## HAND

Use for rapid metal removal on sharp corners, shoulders and flat surfaces. This double cut file is similar to the Flat file without the taper. The Hand file offers one safe edge which reduces damage to the workpiece when filing up to a corner. **Double cut top and bottom – One edge single cut – One edge is safe.**

Length	Width	Thickness	Bastard Cut	Second Cut	Smooth Cut
6"	5/8"	5/32"	<b>32.331</b>	<b>32.336</b>	<b>32.341</b>
8"	25/32"	7/32"	<b>32.332</b>	<b>32.337</b>	<b>32.342</b>
10"	31/32"	1/4"	<b>32.333</b>	<b>32.338</b>	<b>32.343</b>
12"	1-5/32"	9/32"	<b>32.334</b>	<b>32.339</b>	<b>32.344</b>



## HIGH SPEED CHIPBREAKER

This tapered file features two sets of chipbreakers, forming a diamond pattern. The High Speed chipbreaker reduces chip clogging and generates a smooth finish. The coarse teeth remove metal quickly. This file can also be used on cast iron, bronze, brass and plastics.

**Diamond Pattern cut top and bottom – Both edges are single cut.**

Length	Width	Thickness	Bastard Cut
8"	25/32"	7/32"	<b>32.345</b>
10"	31/32"	1/4"	<b>32.346</b>
12"	1-5/32"	9/32"	<b>32.347</b>

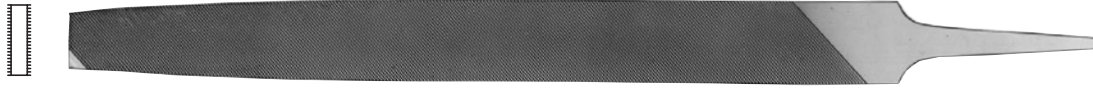


## KNIFE

The Knife file is the file of choice by tool and die makers for filing keyways, slots and acute angles. **Both sides are double cut – top edge is safe – knife edge is single cut.**

Length	Width	Thickness	Bastard Cut	Second Cut	Smooth Cut
4"	15/32"	7/64"	—	<b>32.354</b>	<b>32.359</b>
6"	21/32"	5/32"	<b>32.350</b>	<b>32.355</b>	<b>32.360</b>
8"	27/32"	3/16"	<b>32.351</b>	<b>32.356</b>	<b>32.361</b>
10"	1-1/32"	1/4"	<b>32.352</b>	<b>32.357</b>	<b>32.362</b>

*Note: See pages 33-35 for our complete file handle line, including charts on plastic file handles.*



### LONG ANGLE LATHE

Primarily for lathe work, the Long Angle Lathe file can be used for bench filing of brass, bronze and aluminum. The teeth were designed with a long angle which provide for free cutting, rapid filing. **Single cut top and bottom – Both edges are safe.**

Length	Width	Thickness	Bastard Cut
10"	31/32"	1/4"	<b>32.364</b>
12"	1-5/32"	9/32"	<b>32.365</b>
14"	1-11/32"	5/16"	<b>32.366</b>



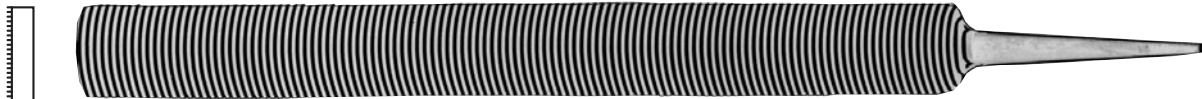
### MILL

Where a smooth finish is desired, a Mill file is the file of choice. The Mill file has many applications such as sharpening saws and tools, finishing metal, lathe work, draw filing as well as general shop use. **All sides are single cut.**

Length	Width	Thickness	Bastard Cut	Second Cut	Smooth Cut
4"	7/16"	5/64"	<b>32.368</b>	<b>32.378</b>	<b>32.384</b>
6"	19/32"	7/64"	<b>32.369</b>	<b>32.379</b>	<b>32.385</b>
8"	25/32"	9/64"	<b>32.370</b>	<b>32.380</b>	<b>32.386</b>
10"	31/32"	11/64"	<b>32.371</b>	<b>32.381</b>	<b>32.387</b>
12"	1-5/32"	7/32"	<b>32.372</b>	<b>32.382</b>	<b>32.388</b>
14"	1-5/16"	1/4"	<b>32.373</b>	<b>32.383</b>	<b>32.389</b>
8"	2 Round Edges		<b>32.376</b>	—	—
10"	2 Round Edges		<b>32.377</b>	—	—

### MILLED CURVED TOOTH FILES

Designed for automotive and aircraft manufacturers, these efficient files are known for their fast cutting action and longer life. The sharp edges are also popular with machinists, foundries, railroad and shipyards.



### FLAT WITH TANG

Designed for use on aluminum, brass, copper, steel and hard rubber. Essential when fast filing is required.

Length	Width	Thickness	No.
10"	1"	7/32"	<b>32.48201</b>
12"	1-5/32"	17/64"	<b>32.48301</b>
14"	1-11/32"	5/16"	<b>32.48401</b>

### ADJUSTABLE FLEXIBLE FILE HOLDER



See Page 39

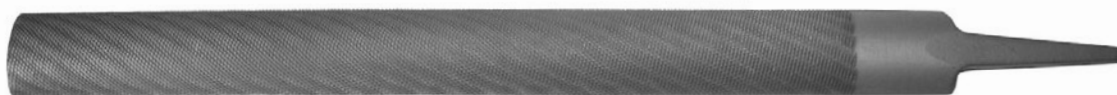
### FLEXIBLE WITHOUT TANG

When working with sheet metal, this is the file of choice. A holder is required when using this file. This file was designed for outward, inward and flat use as teeth are present on both sides of the file.

Length	Width	Thickness	No.
10"	1"	5/32"	<b>32.49001</b>
12"	1-5/32"	3/16"	<b>32.49101</b>
14"	1-11/32"	3/16"	<b>32.49201</b>

*Note: See pages 33-35 for our complete file handle line, including charts on plastic file handles.*





## PIPE-LINER

This file is used to file weld beads and scale off pipeline. **Double cut on both sides.**

Length	Width	Thickness	No.
14"	1-9/32"	13/32"	32.497



## RASP, HALF-ROUND

When working with plywood, plastics, wallboard or other soft materials, rasps are the file of choice for cabinet makers and woodworkers. The teeth of a rasp are uniform and individually formed.

**Rasp cut on top and bottom – Both edges are single cut.**

Length	Diameter	Bastard Cut	Second Cut
8"	5/16"	32.503	32.507
10"	3/8"	32.504	32.508
12"	1/2"	32.505	32.509
14"	5/8"	32.506	



## ROUND

When holes need enlarging and corners rounding, a round file is the solution. This file tapers, making it adaptable to a variety of hole sizes.

**Double cut.**

Length	Diameter	Bastard Cut	Second Cut	Smooth Cut
4"	5/32"	32.395	32.402	32.408
6"	7/32"	32.396	32.403	32.409
8"	5/16"	32.397	32.404	32.410
10"	3/8"	32.398	32.405	32.411
12"	1/2"	32.399	32.406	32.412
14"	5/8"	32.400	—	—



## SQUARE

This double cut file is used when filing slots, grooves, keyways, inside corners and square holes. Tapered toward the point, all four sides are equal filing surfaces. **Double cut on all four sides.**

Length	Diameter	Bastard Cut	Second Cut	Smooth Cut
4"	5/32"	32.414	32.421	32.427
6"	7/32"	32.415	32.422	32.428
8"	5/16"	32.416	32.423	32.429
10"	3/8"	32.417	32.424	32.430
12"	1/2"	32.418	32.425	32.431
14"	5/8"	32.419	—	32.432

*Note: See pages 33-35 for our complete file handle line, including charts on plastic file handles.*

## TAPER SAW, SINGLE CUT

The Taper Saw file is a triangular, single cut file designed for filing a variety of saws with 60 degree angled teeth. Tapered toward a point, this file has cut edges for filing gullets between saw teeth. Taper saw files are available in a number of widths: regular, slim, extra slim and double extra slim. **Single cut on all three sides.**



### REGULAR TAPER

Length	Width	No.	Length	Width	No.
4"	1/4"	32.43101	7"	17/32"	32.434
5"	5/16"	32.43201	8"	19/32"	32.435
6"	15/32"	32.433	10"	23/32"	32.436



### SLIM TAPER

Length	Width	No.	Length	Width	No.
4"	7/32"	32.438	7"	13/32"	32.441
5"	9/32"	32.439	8"	15/32"	32.442
6"	11/32"	32.440	10"	5/8"	32.443



### EXTRA SLIM TAPER

Length	Width	No.	Length	Width	No.
4"	3/16"	32.445	7"	5/16"	32.448
5"	15/64"	32.446	8"	13/32"	32.449
6"	9/32"	32.447			



### DOUBLE EXTRA SLIM

Length	Width	No.	Length	Width	No.
4"	5/32"	32.450	7"	1/4"	32.453
5"	3/16"	32.451	8"	5/16"	32.454
6"	7/32"	32.452			



## THREE - SQUARE

The Three Square file is the file of choice by machinists when filing angles more acute than 90 degrees, for cleaning out corners and filing taps and cutters. This triangular file is tapered to the point. This file can get into corners other files cannot. **Double cut on all three sides.**

Length	Width	Bastard Cut	Second Cut	Smooth Cut
4"	11/32"	32.455	32.45501	32.45502
6"	15/32"	32.456	32.460	32.464
8"	5/8"	32.457	32.461	32.465
10"	3/4"	32.458	32.462	32.466
12"	31/64"	32.459	32.463	32.467



## WARDING

A popular file with locksmiths, the Warding file was designed for filing or repairing "wards" in locks and keys. As the Warding file is thin, it is also suited for any application where the space is too narrow for other files to fit. This file tapers toward the end. **Double cut top and bottom – Both edges are single cut.**

Length	Width	Thickness	Bastard Cut	Second Cut	Smooth Cut
4"	15/32"	3/64"	32.468	32.473	32.477
6"	5/8"	5/64"	32.469	32.474	32.478
8"	25/32"	3/32"	32.470	32.475	32.479

*Note: See pages 33-35 for our complete file handle line, including charts on plastic file handles.*



## FILE HANDLE SIZE RECOMMENDED

### AMERICAN PATTERN FILES

File Length	4"	5"	6"	7"	8"	10"	12"	14"	16"
<b>Type/Shape</b>									
Aluminum Type A Flat	—	—	4	—	5	5	6	—	—
Aluminum Type A, Half-Round	—	—	4	—	5	6	7	—	—
Cabinet Rasp, Half-Round	—	—	—	—	5	5/6	6	—	—
Cant Saw	—	—	4	—	5	5	—	—	—
Chain Saw Round									
5/32" (4.0 mm), 3/16" (4.8 mm) dia.	—	—	—	—	2	—	—	—	—
Chain Saw Rnd 13/64" (5.2 mm) dia.	—	—	—	—	3	—	—	—	—
Cross Cut	—	—	—	—	5	6	—	—	—
Flat	3	—	4	—	5	6	6	7	8
Half- Round	3	—	4	—	5	6	7	7	7
Hand	—	—	4	—	5	5/6	7	—	—
High Speed Chipbreaker	—	—	—	—	5	6	7	—	—
Knife	3	—	4	—	4/5	5/6	—	—	—
Long Angle Lathe	—	—	—	—	—	5/6	6	7/8	—
Mill	3	—	4	—	5	5/6	6/7	7	8
Pillar	—	—	4	—	5	—	—	—	—
Pipe-Liner	—	—	—	—	—	—	—	7	—
Round	1	—	3	—	4	4	5	6	—
Square	1/2	—	3/4	—	4	4/5	5/6	6/7	—
Taper, Regular	—	—	4	4	5	5/6	—	—	—
Taper, Slim	1	2	3	3/4	4	5	—	—	—
Taper, Extra Slim	1	2	2	2/3	3	—	—	—	—
Taper, Double Extra Slim	—	1	1	—	3	—	—	—	—
Three Square	—	—	4	—	5	6	—	—	—
Warding	3	—	4	—	5	5	—	—	—
Milled Curved Tooth, Flat	—	—	—	—	5	5	6	7	—
Milled Curved Tooth, Flat Utility	—	—	—	—	5	6	—	—	—
Half Round Solid	—	—	—	—	5	6	7	—	—

1



2



3



4



5



## FILE HANDLES

### 1 BLUE PLASTIC FILE HANDLES/METAL GRIPPING INSERT

Unbreakable plastic, with textured surface for a non-slip grip. Specially shaped to fit the hand for working comfort even over long periods. Hole at top permits convenient hang-up storage. Tang-gripping insert is tempered metal, with two threaded sections of different diameters. This assures proper alignment and positive hold for files, and also allows handle to be reused. Simply unscrew the file in use and insert a new one. Refer to separate charts on page 38 for American Pattern files.

No.	File Handle Size	No.	File Handle Size
37.781	1	37.785	5
37.782	2	37.786	6
37.783	3	37.787	7
37.784	4	37.788	8

### 2 BLUE PLASTIC FILE HANDLES/PLASTIC GRIPPING INSERT

Unbreakable plastic, with textured surface for non-slip grip and specially shaped to fit the hand for working comfort even over long periods. Hole at top permits convenient hang-up storage near work bench. Has plastic gripping insert.

No.	ID (mm)
37.815	4 mm
37.816	6 mm
37.817	8 mm
37.818	10 mm

### 3 BLACK PLASTIC FILE HANDLES/PLASTIC GRIPPING INSERT

Unbreakable plastic, with textured surface for non-slip grip and specially shaped to fit the hand for working comfort even over long periods. Hole at top permits convenient hang-up storage near work bench. Has five plastic gripping inserts.

No. 37.854

### 4 RED PLASTIC FILE HANDLES/PLASTIC GRIPPING INSERT

Unbreakable plastic, with textured surface for non-slip grip and specially shaped to fit the hand for working comfort even over long periods. Has five plastic gripping inserts.

No. 37.855

### 5 ADJUSTABLE FLEXIBLE FILE HOLDER

Holder can easily be adjusted for curving file outward or inward. Holder can be used with either 12" or 14" files.

No. 37.840



## 1 WOOD FILE HANDLES

With natural finish. Wound wire ferrule provides extra strength to prevent splitting. Select handle to fit files 2" to 20" (5.1 to 51 cm).

No. 37.791 2"-4" (5-10 cm)

No. 37.792 4"-6" (10-15 cm)

No. 37.793 6"-10" (15-25 cm)

No. 37.794 10"-14" (25-35 cm)

No. 37.795 14"-16" (35-40 cm)

No. 37.796 16"-20" (40-50 cm)

## 2 LUTZ WOOD FILE HANDLES

Sturdy, force-fit type of handle.

No. 37.801 3"-6" (7.5-15 cm)

No. 37.802 6"-8" (15-20 cm)

No. 37.803 8"-12" (20-30 cm)

No. 37.804 14"-16" (35-40 cm)



## 3 SKROO-ZON WOOD FILE HANDLES

Steel die inside wood handle cuts its own thread on file tang.

No. 37.820 For 6" (152 mm) files only.

## 4 FILE and BURNISHER HANDLE

Hardwood handle with metal ferrule. Overall length 3-3/4" (95.3 mm), 1/2" (12.7 mm) diameter.

No. 37.822

## 5 NEEDLE FILE HANDLE

Precision chuck in smooth wooden handle holds 5-1/2" (14 cm) and 6-1/4" (16 cm) needle files securely.

No. 37.830

## 6 NEEDLE FILE STAND

Attractive metal stand conveniently holds and displays up to 12 needle files in 4" (10 cm), 5-1/2" (14 cm), or 6-1/4" (16 cm) lengths. Free-standing on workbench, hanging on a peg, or snapped closed for carrying, this stand keeps your frequently used files visible and handy at all times. (Files not included.)

No. 31.685

## 7 FILE CLEANER with BRUSH

Steel wire bristles mounted on wood handle with handy brush on reverse side. Overall length 10" (25 cm).

No. 33.979

## 8 FILE CLEANER

Steel wire bristles mounted on wood handle, for removing particles clogging teeth of file. Overall length 10" (25 cm).

No. 33.981







### STANDARD CUT

Most commonly used for general purpose deburring of steel, cast iron and other ferrous materials.



### DOUBLE CUT

Basically a standard cut tool, with cuts made on the left hand spiral. The design produces a finer finish on material and reduces the size of the chips and slivers. It gives greater tool control.



### BEAR CUT

Designed to substantially cut manufacturing production costs. This design and cut removes more material per hour. Engineered for heavy-duty applications. More durable due to the depth of the teeth. More resistant to chipping. Wider teeth make longer chips, which break up easier, and the profile of the teeth makes them less prone to filling up with chips.



### ALUMNA CUT

For use on aluminum, magnesium, soft steel and non-ferrous materials such as hard plastic, rubber and wood. Provides easy chip flow and faster stock removal with little or no clogging.

## MAXIMUM RECOMMENDED SPEEDS FOR STANDARD CUT CARBIDE ROTARY FILES

Head Diameter	Table 1*	Table 2*	Head Diameter	Table 1*	Table 2*	Head Diameter	Table 1*	Table 2*
1/16"	50,000	75,000	5/16"	20,000	30,000	5/8"	15,000	23,000
3/32"	40,000	60,000	3/8"	18,000	27,000	3/4"	14,000	21,000
1/8"	35,000	53,000	7/16"	17,000	26,000	7/8"	13,000	20,000
3/16"	25,000	38,000	1/2"	16,000	24,000	1"	12,000	18,000
1/4"	22,000	33,000						

Table 1 - for use in determining maximum recommended speeds for malleable iron, steel welds, cast iron, tool steels, die steels, bronze, brass and aluminum

Table 2 - for use in determining maximum recommended speeds for stainless steel.

## IMPORTANT: 6" SHANKS SHOULD BE RUN 20% TO 25% LESS RPM

### CYLINDRICAL - Plain end



SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SA61	1/16"	1/4"	1-1/2"	3/32"	32.80902	32.80903	—	—
SA41	1/16"	1/4"	1-1/2"	1/8"	32.81502	32.81503	—	—
SA62	5/64"	5/16"	1-1/2"	3/32"	32.810	32.811	—	—
SA63	3/32"	3/8"	1-1/2"	3/32"	32.814	32.815	—	—
SA42	3/32"	1/2"	1-1/2"	1/8"	32.832	32.833	—	—
SA43	1/8"	1/2"	1-1/2"	1/8"	32.835	32.836	—	—
SA11	1/8"	1/2"	2"	1/4"	32.540	32.541	—	—
SA12	1/8"	5/8"	2"	1/4"	32.54102	32.54103	—	—
SA13	5/32"	5/8"	2"	1/4"	32.54110	32.54111	—	—
SA14	3/16"	5/8"	2"	1/4"	32.543	32.544	—	—
SA51	1/4"	1/2"	2"	1/8"	32.838	32.839	—	—
SA1	1/4"	5/8"	2"	1/4"	32.546	32.547	32.546SY	32.95002
SA1L6	1/4"	1/2"	6"	1/4"	32.93522	32.93523	—	—
SA1L	1/4"	1"	2"	1/4"	32.54702	32.54703	—	—
SA2	5/16"	3/4"	2-1/2"	1/4"	32.549	32.550	—	—
SA3	3/8"	3/4"	2-1/2"	1/4"	32.552	32.553	32.552SY	32.95011
SA3L6	3/8"	3/4"	6"	1/4"	32.93537	32.93538	—	—
SA3L	3/8"	1"	2-3/4"	1/4"	32.55302	32.55303	—	—
SA3X	3/8"	1-1/2"	3-1/4"	1/4"	32.55310	32.55311	—	—
SA4	7/16"	1"	2-3/4"	1/4"	32.55320	32.55321	32.55320SY	—
SA5	1/2"	1"	2-3/4"	1/4"	32.555	32.556	32.555SY	32.95017
SA5L6	1/2"	1"	6"	1/4"	32.93557	32.93558	—	—
SA6	5/8"	1"	2-3/4"	1/4"	32.558	32.559	32.558SY	32.95020
SA15	3/4"	1/2"	2-1/4"	1/4"	32.55902	32.55903	—	—
SA16	3/4"	3/4"	2-1/2"	1/4"	32.561	32.562	—	—
SA7	3/4"	1"	2-3/4"	1/4"	32.564	32.565	—	32.95023
SA8	7/8"	1"	2-3/4"	1/4"	32.56502	32.56503	—	—
SA9	1"	1"	2-3/4"	1/4"	32.567	32.568	—	—

## CYLINDRICAL - End cut

SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SB43	1/8"	9/16"	1-1/2"	1/8"	32.83902	32.83903	—	—
SB11	1/8"	1/2"	2"	1/4"	32.573	32.574	—	—
SB12	1/8"	5/8"	2"	1/4"	32.57402	32.57403	—	—
SB13	5/32"	5/8"	2"	1/4"	32.57410	32.57411	—	—
SB14	3/16"	5/8"	2"	1/4"	32.576	32.577	—	—
SB51	1/4"	3/16"	2"	1/8"	32.83910	32.83911	—	—
SB1	1/4"	5/8"	2"	1/4"	32.579	32.580	—	—
SB1L	1/4"	1"	2"	1/4"	32.58002	32.58003	—	—
SB2	5/16"	3/4"	2-1/2"	1/4"	32.582	32.583	—	—
SB3	3/8"	3/4"	2-1/2"	1/4"	32.585	32.586	—	—
SB3L	3/8"	1"	2-3/4"	1/4"	32.58602	32.58603	—	—
SB3X	3/8"	1-1/2"	3-1/4"	1/4"	32.58611	32.58612	—	—
SB4	7/16"	1"	2-3/4"	1/4"	32.58621	32.58622	—	—
SB5	1/2"	1"	2-3/4"	1/4"	32.588	32.589	—	—
SB6	5/8"	1"	2-3/4"	1/4"	32.591	32.592	—	—
SB15	3/4"	1/2"	2-1/4"	1/4"	32.59202	32.59203	—	—
SB16	3/4"	3/4"	2-1/2"	1/4"	32.594	32.595	—	—
SB7	3/4"	1"	2-3/4"	1/4"	32.597	32.598	—	—
SB8	7/8"	1"	2-3/4"	1/4"	32.59802	32.59803	—	—
SB9	1"	1"	2-3/4"	1/4"	32.600	32.601	—	—



## CYLINDRICAL - Double End cut

SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SBECO	1/8"	—	1-1/2"	1/8"	32.841	—	—	—

## CYLINDRICAL - Radius end

SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SC61	3/32"	3/8"	1-1/2"	3/32"	32.817	32.818	—	—
SC41	3/32"	1/2"	1-1/2"	1/8"	32.844	32.845	—	—
SC42	1/8"	1/2"	1-1/2"	1/8"	32.847	32.848	—	—
SC11	1/8"	1/2"	2"	1/4"	32.606	32.607	—	—
SC12	1/8"	5/8"	2"	1/4"	32.60702	32.60703	—	—
SC13	5/32"	5/8"	2"	1/4"	32.60710	32.60711	—	—
SC14	3/16"	5/8"	2"	1/4"	32.609	32.610	—	—
SC53	3/16"	1/2"	2"	1/8"	—	32.85111	—	—
SC51	1/4"	1/2"	2"	1/8"	32.850	32.851	—	—
SC1	1/4"	5/8"	2"	1/4"	32.612	32.613	—	32.95102
SC1L6	1/4"	1/2"	6"	1/4"	32.93722	32.93723	—	—
SC1L	1/4"	1"	2"	1/4"	32.61302	32.61303	—	—
SC2	5/16"	3/4"	2-1/2"	1/4"	32.615	32.616	—	—
SC3	3/8"	3/4"	2-1/2"	1/4"	32.618	32.619	32.618SY	32.95111
SC3L6	3/8"	3/4"	6"	1/4"	32.93737	32.93738	—	—
SC3L	3/8"	1"	2-3/4"	1/4"	32.61902	32.61903	—	—
SC3X	3/8"	1-1/2"	3-1/4"	1/4"	32.61910	32.61911	—	—
SC4	7/16"	1"	2-3/4"	1/4"	32.61912	32.61913	32.61912SY	—
SC5	1/2"	1"	2-3/4"	1/4"	32.621	32.622	32.621SY	32.95117
SC5L6	1/2"	1"	6"	1/4"	32.93757	32.93758	—	—
SC6	5/8"	1"	2-3/4"	1/4"	32.624	32.625	32.624SY	32.95120
SC15	3/4"	1/2"	2-1/4"	1/4"	32.62502	32.62503	—	—
SC16	3/4"	3/4"	2-1/2"	1/4"	32.62510	32.62511	—	—
SC7	3/4"	1"	2-3/4"	1/4"	32.627	32.628	—	32.95123
SC9	1"	1"	2-3/4"	1/4"	32.62802	32.62803	—	—



**BALL**



SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SD41	3/32"	1/8"	1-1/2"	1/8"	32.853	32.854	—	—
SD61	3/32"	1/8"	1-1/2"	3/32"	32.820	32.821	—	—
SD42	1/8"	1/8"	1-1/2"	1/8"	32.856	32.857	—	—
SD11	1/8"	1/8"	2"	1/4"	32.633	32.634	—	—
SD53	3/16"	3/16"	1-11/16"	1/8"	32.858	32.861	—	—
SD14	3/16"	1/4"	2"	1/4"	32.636	32.637	—	—
SD51	1/4"	1/4"	1-3/4"	1/8"	32.859	32.860	—	—
SD1	1/4"	7/32"	2"	1/4"	32.639	32.640	—	32.95305
SD1L6	1/4"	7/32"	6"	1/4"	32.93812	32.93813	—	—
SD2	5/16"	5/16"	2-1/16"	1/4"	32.642	32.644	—	—
SD3	3/8"	5/16"	2-1/16"	1/4"	32.645	32.646	32.645SY	32.95311
SD3L6	3/8"	5/16"	6"	1/4"	32.93822	32.93823	—	—
SD4	7/16"	3/8"	2-1/8"	1/4"	32.64602	32.64603	32.64602SY	—
SD5	1/2"	7/16"	2-3/16"	1/4"	32.648	32.649	32.648SY	32.95317
SD5L6	1/2"	7/16"	6"	1/4"	32.93832	32.93833	—	—
SD6	5/8"	9/16"	2-5/16"	1/4"	32.651	32.652	32.651SY	32.95320
SD7	3/4"	11/16"	2-7/16"	1/4"	32.654	32.655	—	32.95323
SD9	1"	15/16"	2-11/16"	1/4"	32.65502	32.65503	—	—

**OVAL**



SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SE61	3/32"	1/8"	1-1/2"	3/32"	32.86102	32.86103	—	—
SE41	1/8"	7/32"	1-1/2"	1/8"	32.862	32.863	—	—
SE11	3/16"	5/16"	2"	1/4"	32.65902	32.65903	—	—
SE53	3/16"	9/32"	1-1/2"	1/8"	—	32.86603	—	—
SE51	1/4"	3/8"	1-7/8"	1/8"	32.865	32.866	—	—
SE1	1/4"	3/8"	2"	1/4"	32.660	32.661	—	—
SE1L6	1/4"	3/8"	6"	1/4"	32.93907	32.93908	—	—
SE3	3/8"	19/32"	2-11/32"	1/4"	32.663	32.664	32.663SY	32.95411
SE3L6	3/8"	19/32"	6"	1/4"	32.93912	32.93913	—	—
SE5	1/2"	7/8"	2-5/8"	1/4"	32.666	32.667	32.666SY	32.95417
SE5L6	1/2"	7/8"	6"	1/4"	32.93917	32.93918	—	—
SE6	5/8"	1"	2-3/4"	1/4"	32.669	32.670	32.669SY	32.95420
SE7	3/4"	1"	2-3/4"	1/4"	32.67002	32.67003	—	32.95423

**TREE RADIUS**



SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SF61	3/32"	1/4"	1-1/2"	3/32"	32.88802	32.88803	—	—
SF41	1/8"	1/4"	1-1/2"	1/8"	32.889	32.890	—	—
SF42	1/8"	1/2"	1-1/2"	1/8"	32.892	32.893	—	—
SF51	1/4"	1/2"	2"	1/8"	32.895	32.896	—	—
SF11	1/4"	1/2"	2"	1/4"	32.70102	32.70103	—	—
SF1	1/4"	5/8"	2"	1/4"	32.702	32.703	—	32.95705
SF1L6	1/4"	1/2"	6"	1/4"	32.94207	32.94208	—	—
SF3	3/8"	3/4"	2-1/2"	1/4"	32.705	32.706	32.705SY	32.95711
SF3L6	3/8"	3/4"	6"	1/4"	32.94212	32.94213	—	—
SF4	7/16"	1"	2-3/4"	1/4"	32.70602	32.70603	32.70602SY	—
SF13	1/2"	3/4"	2-1/2"	1/4"	32.70610	32.70611	32.70610SY	—
SF5	1/2"	1"	2-3/4"	1/4"	32.708	32.709	32.708SY	32.95717
SF5L6	1/2"	1"	6"	1/4"	32.94227	32.94228	—	—
SF6	5/8"	1"	2-3/4"	1/4"	32.711	32.712	32.711SY	32.95720
SF7	3/4"	1"	2-3/4"	1/4"	32.71202	32.71203	—	—
SF14	3/4"	1-1/4"	3"	1/4"	32.714	32.715	—	32.95744
SF15	3/4"	1-1/2"	3-1/4"	1/4"	32.71502	32.71503	—	—



## TREE POINTED

SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SG61	3/32"	1/4"	1-1/2"	3/32"	32.87902	32.87903	—	—
SG41	1/8"	1/4"	1-1/2"	1/8"	32.880	32.881	—	—
SG42	1/8"	5/16"	1-1/2"	1/8"	32.88102	32.88103	—	—
SG43	1/8"	3/8"	1-1/2"	1/8"	32.883	32.884	—	—
SG44	1/8"	1/2"	1-1/2"	1/8"	32.88402	32.88403	—	—
SG51	1/4"	1/2"	2"	1/8"	32.886	32.887	—	—
SG1	1/4"	5/8"	2"	1/4"	32.684	32.685	—	—
SG1L6	1/4"	1/2"	6"	1/4"	32.94102	32.94103	—	—
SG2	5/16"	3/4"	2-1/2"	1/4"	32.68502	32.68503	—	—
SG3	3/8"	3/4"	2-1/2"	1/4"	32.687	32.688	32.687SY	—
SG3L6	3/8"	3/4"	6"	1/4"	32.94112	32.94113	—	—
SG13	1/2"	3/4"	2-1/2"	1/4"	32.690	32.691	32.690SY	—
SG5	1/2"	1"	2-3/4"	1/4"	32.693	32.694	32.693SY	—
SG5L6	1/2"	1"	6"	1/4"	32.94122	32.94123	—	—
SG6	5/8"	1"	2-3/4"	1/4"	32.696	32.697	32.696SY	—
SG7	3/4"	1"	2-3/4"	1/4"	32.69702	32.69703	—	—
SG15	3/4"	1-1/2"	3-1/4"	1/4"	32.69710	32.69711	—	—



## FLAME

SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SH41	1/8"	1/4"	1-1/2"	1/8"	32.868	32.869	—	—
SH53	3/16"	3/8"	1-7/8"	1/8"	—	32.86903	—	—
SH1	1/4"	5/8"	2"	1/4"	32.673	32.674	—	—
SH2	5/16"	3/4"	2-1/2"	1/4"	32.675	32.676	—	—
SH2L6	5/16"	3/4"	6"	1/4"	32.94007	32.94008	—	—
SH5	1/2"	1-1/4"	3"	1/4"	32.678	32.679	—	—
SH5L6	1/2"	1-1/4"	6"	1/4"	32.94012	32.94013	—	—
SH6	5/8"	1-7/16"	3-3/16"	1/4"	32.67902	32.67903	—	—
SH7	3/4"	1-5/8"	3-3/8"	1/4"	32.67910	32.67911	—	—



## DEBURRING 60°

SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SJ1	1/4"	3/16"	2"	1/4"	32.777	32.778	—	—
SJ3	3/8"	5/16"	2-1/16"	1/4"	32.780	32.781	—	—
SJ5	1/2"	7/16"	2-3/16"	1/4"	32.783	32.784	—	—
SJ6	5/8"	9/16"	2-5/16"	1/4"	32.78402	32.78403	—	—
SJ7	3/4"	11/16"	2-7/16"	1/4"	32.78410	32.78411	—	—
SJ9	1"	15/16"	2-11/16"	1/4"	32.78420	32.78421	—	—



## DEBURRING 90°

SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SK1	1/4"	1/8"	2"	1/4"	32.789	32.790	—	—
SK3	3/8"	3/16"	1-15/16"	1/4"	32.792	32.793	—	—
SK5	1/2"	1/4"	2"	1/4"	32.795	32.796	—	—
SK6	5/8"	5/16"	2-1/16"	1/4"	32.798	32.799	—	—
SK7	3/4"	3/8"	2-1/8"	1/4"	32.801	32.802	—	—
SK9	1"	1/2"	2-1/4"	1/4"	32.804	32.805	—	—



## DEBURRING - Double end

SCTI	Head Dia.	Head Length	Overall Length	Angle	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SJ42	1/8"	3/32"	1-1/2"	60°	1/8"	32.871	32.872	—	—
SK42	1/8"	1/16"	1-1/2"	90°	1/8"	32.874	32.875	—	—



## CONE - Radius nose 14° taper



SCTI	Head Dia.	Head Length	Overall Length	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SL41	1/8"	3/8"	1-1/2"	1/8", 6°	32.89702	32.89703	—	—
SL42	1/8"	1/2"	1-1/2"	1/8", 7°	32.898	32.899	—	—
SL1	1/4"	5/8"	2"	1/4"	32.720	32.721	—	—
SL1L6	1/4"	5/8"	6"	1/4"	32.94302	32.94303	—	—
SL2	5/16"	7/8"	2-5/8"	1/4"	32.723	32.724	—	—
SL3	3/8"	1-1/16"	2-13/16"	1/4"	32.726	32.727	32.726SY	32.95811
SL3L6	3/8"	1-1/16"	6"	1/4"	32.94312	32.94313	—	—
SL4	1/2"	1-1/8"	2-7/8"	1/4"	32.729	32.730	32.729SY	32.95814
SL4L6	1/2"	1-1/8"	6"	1/4"	32.94317	32.94318	—	—
SL5	5/8"	1-3/16"	2-15/16"	1/4"	32.73002	32.73003	32.73002SY	32.95817
SL6	5/8"	1-5/16"	3-1/16"	1/4"	32.732	32.733	32.732SY	32.95820
SL7	3/4"	1-1/2"	3-1/4"	1/4"	32.73302	32.73303	—	32.95823

## CONE



SCTI	Head Dia.	Head Length	Overall Length	Angle	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SM61	3/32"	5/16"	1-1/2"	10°	3/32"	32.826	32.827	—	—
SM41	1/8"	3/8"	1-1/2"	14°	1/8"	32.913	32.914	—	—
SM42	1/8"	1/2"	1-1/2"	12°	1/8"	32.916	32.917	—	—
SM43	1/8"	5/8"	1-1/2"	9°	1/8"	32.919	32.920	—	—
SM51	1/4"	1/2"	2"	22°	1/8"	32.910	32.911	—	—
SM1	1/4"	1/2"	2"	22°	1/4"	32.738	32.739	—	—
SM2	1/4"	3/4"	2"	14°	1/4"	32.741	32.742	—	—
SM3	1/4"	1"	2"	12°	1/4"	32.744	32.745	—	—
SM4	3/8"	3/4"	2-1/2"	28°	1/4"	32.747	32.748	32.747SY	—
SM5	1/2"	1"	2-3/4"	28°	1/4"	32.750	32.751	32.750SY	—
SM6	5/8"	1-1/8"	2-7/8"	31°	1/4"	32.753	32.754	32.753SY	—

## INVERTED CONE - End cut



SCTI	Head Dia.	Head Length	Overall Length	Angle	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SN1	1/4"	1/4"	2"	10°	1/4"	32.768	32.769	—	—
SN4	1/2"	1/2"	2-1/2"	14°	1/4"	32.771	32.772	—	—

## INVERTED CONE - Plain end



SCTI	Head Dia.	Head Length	Overall Length	Angle	Shank	Standard	Double Cut	Bear Cut	Alumna Cut
SN41	3/32"	1/8"	1-1/2"	10°	1/8"	32.901	32.902	—	—
SN61	3/32"	1/8"	1-1/2"	10°	3/32"	32.823	32.824	—	—
SN42	1/8"	1/8"	1-1/2"	14°	1/8"	32.904	32.905	—	—
SN51	1/4"	1/4"	1-3/4"	10°	1/8"	32.907	32.908	—	—
SN1	1/4"	1/4"	2"	10°	1/4"	32.759	32.760	—	—
SN2	3/8"	3/8"	2-1/8"	13°	1/4"	32.761	32.76102	—	—
SN4	1/2"	1/2"	2-1/2"	14°	1/4"	32.762	32.763	—	—
SN6	5/8"	3/4"	2-1/2"	18°	1/4"	32.76302	32.76303	—	—
SN7	3/4"	5/8"	2-5/8"	30°	1/4"	32.76310	32.76311	—	—

## CARBIDE SETS

### BUR SETS IN HINGED WOODEN CASES



#### 1/4" SHANK SETS

wood case measures 3-3/16" x 3-3/16" x 3-3/8"

Specially designed Bear Cut removes more material per hour and is engineered for heavy duty applications. 8-piece set includes; SA5, SC5, SE5, SF3, SF5, SG5, SL3, SL4  
No. **32.931SY** - Bear Cut set

8-piece sets of most popular shapes and sizes include;  
SA5, SC1, SC3, SD3, SE5, SF5, SG1, SK5  
No. **32.924** - Standard Cut set  
No. **32.925** - Double Cut set



#### 1/8" SHANK SETS

wood case measures 3-5/8" x 2- 5/8" x 2-1/8"

12-piece sets of most popular shapes and sizes include; SA43, SA51, SC42, SC51, SD42, SD51, SF51, SG43, SL42, SM51, SN42, SN51,

No. **32.926** - Standard Cut set  
No. **32.929** - Double Cut set



#### 5-PC BUR SET IN DURABLE PLASTIC CASES, 1/4" SHANK

Double Cut set; SB3, SC3, SC5, SF3, SF5,  
No. **32.950** - Double Cut set

Bear Cut set; SA5, SC5, SE5, SF5, SL4  
No. **32.951SY** - Bear Cut set



#### SPECIAL APPLICATION BUR SETS

supplied in a handy plastic container that measures 2-3/4" dia. X 3-3/4" high

8-piece double cut set of popular shapes and sizes on 1/4" shank. Excellent assortment for a variety of uses, including metal grinding, smoothing out welds, enlarging holes or porting heads. Includes: SA5, SA3, SC3, SC1, SD1, SD3, SF3, SF5.  
No. **32.932** - Double Cut set

5-piece Alumna Cut set, for use in applications such as aluminum, copper, brass and softer alloys. This kit contains 5 popular shapes with a 3/8" head diameter on 1/4" shank: SA3, SC3, SE3, SF3, SL3.  
No. **32.933** - Alumna Cut set

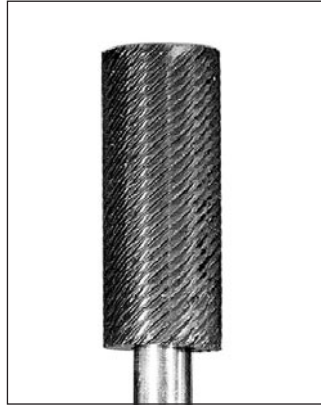


## HIGH SPEED STEEL BURS



### GROUND-FROM-THE-SOLID ROTARY FILES

Ground from blanks of hardened high speed steel, these files have smooth, unbroken flutes. The design is particularly well-suited for filing mild steels and ductile, stringy materials such as aluminum, brass, lead and magnesium. They can also be used on some grades of plastics. Ground cut rotary files perform best at medium speeds in flexible shaft machines and air tools. The teeth have standard helix angles of approximately 30 with C/L.



### CHISEL (HAND) CUT ROTARY FILES

The skilled hand crafting required to produce these files sets them apart from the others. Even those files which are machine chiseled must be completed with hand detailing. Teeth of these high speed steel files are staggered in contrast to the smooth flutes of ground-from-the-solid files. This irregular tooth design especially suits the requirements for working on dense, tough materials, such as die steels, steel forgings and other ferrous materials. They are best suited for operation at lower speeds such as in hand flexible shaft machines, drill presses, lathes, etc. Standard chisel cut high speed steel rotary files have 18 teeth per inch.

## SCALE OF CUTS FOR HSS, STANDARD CUT GROUND-FROM-THE-SOLID ROTARY FILES

Head Diameter									
1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1-1/8"
Teeth To The Circumference									
10	12	15	18	20	25	25	25	30	30

**IMPORTANT NOTE ON OPERATING SPEEDS:** Before using any rotary file, be certain to check the maximum recommended speed chart, since speed recommendations vary according to type of file, file diameter and material being removed or finished.

### MAXIMUM RECOMMENDED SPEEDS FOR HIGH SPEED STEEL ROTARY FILES USED ON THE FOLLOWING MATERIALS:

	MILD STEEL	CAST IRON	ALUMINUM
Diameter	Maximum Speed (RPM)		
1/8"	4,000	6,000	15,000
1/4"	2,500	3,400	10,000
3/8"	2,000	2,250	8,000
1/2"	1,500	1,750	6,000
5/8"	1,350	1,450	5,000
3/4"	1,200	1,250	4,000
1"	800	1,000	2,500

	BRASS	BRONZE	MAGNESIUM
Diameter	Maximum Speed (RPM)		
1/8"	15,000	15,000	8,000
1/4"	10,000	10,000	7,000
3/8"	8,000	8,000	6,500
1/2"	6,000	6,000	6,000
5/8"	5,000	5,000	5,000
3/4"	4,000	4,000	4,000
1"	2,500	2,500	4,000

**NOTE:** Rotary files must be chucked true and to the full capacity of the machine chuck. Also, when using double cut rotary files, reduce speed by approximately 1/3 to 1/2 from that shown for standard cut.

## CYLINDRICAL - Plain end



Head Dia. (1/4" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/8"	1/2"	2-1/4"	33.026	33.401
3/16"	1/2"	2-1/4"	33.029	—
1/4"	1"	2-1/4"	33.032	33.407
5/16"	1"	2-1/4"	33.035	—
3/8"	1"	2-1/4"	33.038	33.410
1/2"	1"	2-1/4"	33.041	33.413
5/8"	1"	2-1/4"	33.044	33.416
1/4"	1-1/2"	2-3/4"	33.047	33.419
5/16"	1-1/2"	2-3/4"	—	33.422
3/8"	1-1/2"	2-3/4"	33.050	33.425
1/2"	1-1/2"	2-3/4"	33.053	33.428
3/4"	3/4"	2-1/4"	33.056	33.438
1"	1"	2-1/4"	33.059	33.441
Head Dia. (1/8" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/8"	5/8"	1-1/2"	33.298	33.640
1/4"	1/2"	1-1/2"	33.301	33.643

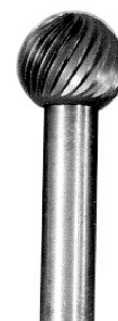
## CYLINDRICAL - Radius end

Head Dia. (1/4" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/8"	1/2"	2-1/4"	33.065	33.444
1/4"	1"	2-1/4"	33.071	33.447
5/16"	1"	2-1/4"	33.074	—
3/8"	1"	2-1/4"	33.077	33.450
1/2"	1"	2-1/4"	33.083	33.453
5/8"	1"	2-1/4"	33.086	—
3/4"	1-1/4"	2-1/2"	33.089	33.459
1/4"	1-1/2"	2-3/4"	33.092	33.462
3/8"	1-1/2"	2-3/4"	33.095	33.468
1/2"	1-1/2"	2-3/4"	33.098	—
Head Dia. (1/8" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/8"	5/8"	1-1/2"	33.304	33.646
1/4"	1/4"	1-1/2"	33.307	—



## BALL

Head Dia. (1/4" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/8"	1/8"	2-1/4"	33.106	33.477
3/16"	3/16"	2-1/4"	33.109	33.479
1/4"	1/4"	2-1/4"	33.112	33.482
5/16"	5/16"	2-1/4"	33.115	33.485
3/8"	3/8"	2-1/4"	33.118	33.488
1/2"	1/2"	2-1/4"	33.121	33.491
5/8"	5/8"	2-1/4"	33.124	33.494
3/4"	3/4"	2-1/4"	33.127	33.497
1"	1"	2-3/16"	33.130	33.500
Head Dia. (1/8" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/4"	1/4"	1-3/8"	33.313	33.649
3/8"	3/8"	1-1/2"	33.317	33.652



## TREE POINTED

Head Dia. (1/4" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/4"	3/4"	2-1/4"	33.184	33.543
3/8"	3/4"	2-1/4"	33.187	33.546
1/2"	3/4"	2-1/4"	33.190	33.549
5/8"	1"	2-1/2"	33.193	33.552
1/2"	1-1/8"	2-1/2"	33.196	33.555
Head Dia. (1/8" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/8"	1/2"	1-1/2"	33.334	33.664



## TREE RADIUS

Head Dia. (1/4" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/4"	3/4"	2 3/4"	33.202	33.558
1/4"	1 1/2"	2 3/4"	33.205	—
3/8"	3/4"	2 1/4"	33.208	33.564
1/2"	1"	2 1/2"	33.211	—
1/2"	1 1/8"	2 3/8"	—	33.567
1/2"	1 1/8"	2 3/8"	33.214	—
5/8"	1 1/8"	2 5/8"	33.217	—
3/4"	1 1/4"	2 1/2"	33.220	—
3/4"	1 1/4"	3 1/4"	—	33.570
1 1/8"	2"	3 1/4"	33.223	—



OVAL



Head Dia. (1/4" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
3/8"	5/8"	2-1/4"	33.136	33.503
3/4"	1-1/8"	2-1/2"	33.142	33.509
1"	1-3/8"	2-5/8"	—	33.512
1/4"	1/2"	2-1/4"	33.148	33.516
1/2"	7/8"	2-1/4"	33.151	33.519
1/2"	1"	2-1/4"	—	33.522
5/8"	1"	2-1/2"	—	33.525
Head Dia. (1/8" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/4"	1/2"	1-1/2"	33.322	33.655

CONE



Head Dia. (1/4" Shank)	Head Length	Overall Length	Angle	Ground Cut Standard	Chisel Cut Standard
1/4"	1/2"	2-1/4"	24°	33.229	33.576
1/4"	3/4"	2-1/2"	16°	33.232	33.579
1/4"	1"	2-1/2"	12°	33.235	33.582
1/4"	1-1/8"	2-1/2"	11°	33.238	33.585
5/16"	3/4"	2-1/4"	21°	33.241	—
5/16"	1"	2-1/2"	16°	—	33.591
5/16"	1"	2-1/2"	15.5°	33.244	—
3/8"	5/8"	2-1/4"	30°	—	33.594
1/2"	7/8"	2-3/8"	30°	—	33.600
1/2"	7/8"	2-9/16"	30°	33.253	—
Head Dia. (1/8" Shank)	Head Length	Overall Length	Angle	Ground Cut Standard	Chisel Cut Standard
1/8"	9/16"	1-1/2"	9.5°	33.346	33.673
1/4"	1/4"	1-3/8"	50°	33.355	—
1/4"	1/2"	1-1/2"	24°	—	33.676
3/8"	3/8"	1-1/2"	51°	33.358	—

INVERTED CONE - Plain end



Head Dia. (1/4" Shank)	Head Length	Overall Length	Angle	Ground Cut Standard	Chisel Cut Standard
1/2"	3/4"	2 1/4"	18°	—	33.528
3/4"	5/8"	2 1/4"	34°	—	33.531

CONE - Radius nose



Head Dia. (1/4" Shank)	Head Length	Overall Length	Angle	Ground Cut Standard	Chisel Cut Standard
5/8"	13/16"	2-1/4"	36°	—	33.603
1"	1-3/8"	2-5/8"	36°	—	33.606
5/16"	5/8"	2-3/4"	19°	33.265	33.609
5/16"	1-1/4"	2-3/4"	8°	33.268	33.612
3/8"	1-3/4"	3"	7.5°	33.271	—
3/8"	1-3/4"	3"	8°	—	33.615
5/8"	15/16"	2-11/16"	31.5°	33.274	—



## FLAME

Head Dia. (1/4" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
5/8"	1-7/16"	2-3/4"	33.172	33.534
5/8"	7/8"	2-1/2"	33.178	—
3/4"	1-3/4"	3"	—	33.537
Head Dia. (1/8" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/4"	1/2"	1-1/2"	33.331	33.661



## WHEEL - End and underside cut

KNIFE EDGE Head Dia. (1/8" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
5/8"	1/8"	1-1/4"	33.370	33.688



## WHEEL - Plain end

ROUND EDGE Head Dia. (1/8" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
5/8"	1/8"	1-1/4"	33.364	33.682
SQUARE EDGE Head Dia. (1/8" Shank)	Head Length	Overall Length		Chisel Cut Standard
5/8"	1/8"	1-1/4"		33.685



## CONVEX-CONCAVE

Head Dia. (1/4" Shank)	Head Length	Overall Length	Ground Cut Standard	Chisel Cut Standard
1/4"	1"	2-1/4"	33.280	33.618
5/16"	1-1/8"	2-1/2"	33.283	—



## CONCAVE

Head Dia. (1/4" Shank)	Head Length	Overall Length	Chisel Cut Standard
3/4"	15/32"	2-1/4"	33.624



## INSIDE TUBE DEBURRING - CHISEL CUT



### DEBURRING 90°

Head Dia. (1/4" Shank)	Length of Cut	Length Overall	Chisel Cut Standard
1/2"	1/4"	1-13/16"	<b>33.713</b>
5/8"	5/16"	2-1/8"	<b>33.716</b>
3/4"	3/8"	2"	<b>33.719</b>
1"	1/2"	2-1/8"	<b>33.722</b>

## INSIDE & OUTSIDE TUBE DEBURRING GROUND-FROM-THE-SOLID

Grobet's combination inside and outside tube deburring rotary files are adjustable so as to increase or decrease the relative amount of chamfer between inside and outside wall tubing. Standard files make a 45° chamfer on outside wall of tubing and a 30° on the inside. Speed ranges from 50 to 250 RPM, according to size. Tube may be fed to file by hand, but better finish is obtained with rigid guides or support.



Tube Outside Diameter	Tube Inside Diameter	Standard
1/4"	3/16"	<b>33.749</b>
3/8"	5/16"	<b>33.751</b>
1/2"	7/16"	<b>33.753</b>
5/8"	9/16"	<b>33.755</b>
3/4"	5/8"	<b>33.756</b>
7/8"	3/4"	<b>33.757</b>
1"	7/8"	<b>33.758</b>

## CHATTERLESS COUNTERSINKS



Head Diameter	Overall Length	82° Angle	90° Angle
1/4"	1-1/2"	—	<b>33.767</b>
5/16"	1-3/4"	<b>33.771</b>	—
3/8"	1-3/4"	<b>33.776</b>	<b>33.777</b>
1/2"	2"	<b>33.781</b>	—
5/8"	2-1/4"	<b>33.786</b>	<b>33.787</b>

**Note:** Countersinks shown have a 82° or 90° angle C/L.  
Countersinks at angles other than these are also available.

## HIGH SPEED STEEL SHANK SETS

### BUR SETS IN HINGED WOODEN CASES

#### 1/8" SHANK SETS

(wood case measures 3-1/2" x 2-1/2" x 2-1/4")

Assortment of twelve popular shapes and sizes.

No. **33.376** - Standard Cut set

No. **33.691** - Chisel Cut set



#### 1/4" SHANK SETS

(wood case measures 3-1/8" x 3-7/16" x 3-1/8")

Assortment of eight popular shapes and sizes.

No. **33.375** - Standard Cut set

No. **33.690** - Chisel Cut set



## CHATTERLESS COUNTERSINKS SETS

These 6-flute countersinks are made with staggered cutting edges which give a shearing cut that eliminates practically all chatter.

#### EIGHT COUNTERSINKS

(1/4" diameter to 1" diameter) in a wood box measuring 4-7/8" x 3-1/4" x 4".

No. **33.808** 82° angle



## TERMS OF BUSINESS

### Design and Manufacture

The descriptions and pictured representations in this catalog resemble the actual product as closely as possible. However, because of continuing efforts to improve our merchandise, changes are unavoidable and designs & specifications will sometimes vary. If tolerances or dimensions are critical, please mention this on your order.

**Warning:** All products in this catalog are to be used according to directions, industry standards and governmental regulations such as the Occupational Safety and Health Act, Federal Hazardous Substance Act and the Environmental Protection Agency regulations.

Those who are not knowledgeable in the proper usage of hazardous materials as well as electrical, high-speed, grinding, and/or high-temperature equipment should NOT purchase these products as non-compliance with safety regulations can be dangerous to health and property.

**Keep all products out of the reach of children.**

### Prices

Prices are subject to change without notice. Price lists are published periodically and the latest price list will be sent upon request. You may also request quotations before shipment by submitting a list of the items you wish to order.

### Shipments

In the absence of special instructions on "how to ship" we will use our best judgment in forwarding merchandise. We will comply with your instructions insofar as DOT, ICC and other applicable government regulations permit. Hazardous materials are subject to strict government regulations and additional charges may be incurred.

### Returns

All products in this catalog should be free of defects in material and workmanship and perform the work for which they were designed. If, upon examination or first use, a product is found to be defective, contact us with the details. Items which have been abused or used for work for which they were not intended will not be replaced or credited. No merchandise may be returned without written authorization to do so.

### General

The products in this catalog were selected for use by technicians and craftsmen working in professional repair and maintenance shops, laboratories, and manufacturing facilities. Some of the products, particularly solutions and compounds, may be considered hazardous if used, stored, or disposed of in an improper manner. These products are intended for professionals and Federal law prohibits the use of some of them in the home. Possession of this catalog does not constitute a right to purchase and identification may be required to ascertain whether a buyer is qualified as a professional.



*Thank you for your interest in our catalog.  
You will find that the quality of our products, combined with fair pricing, represent outstanding value.*





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CATFILE10

