GROBET USA®

Tools, Supplies, and Equipment for Technicians & Craftsmen





















Growing to serve you better!

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

Welcome to the **GROBET USA**™ catalog.

We have a proud heritage of over 134 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, Switzerland and the Caribbean, as well as a global network of suppliers to provide an offering of more than 18,000 products used by:

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

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

Look for these symbols throughout this catalog:

NEW! = *a new product*

IMPROVED = *a new model*

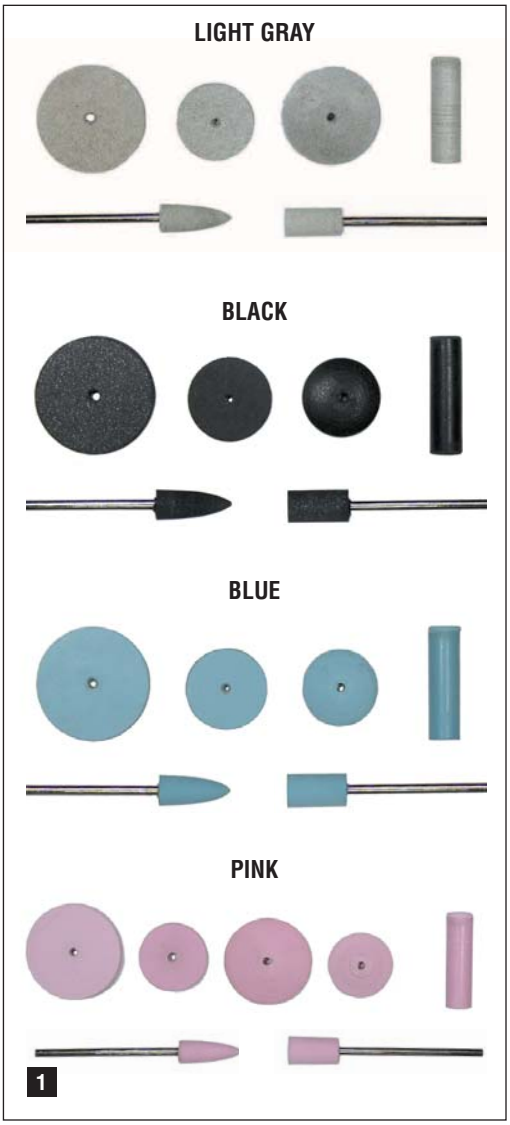
EXCLUSIVE = *exclusively from* **GROBET USA**™

HAZARDOUS = *handle with care*

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FABULUSTRE ABRASIVES

1 FABULUSTRE SILICONE ABRASIVES

Premium silicone rubber abrasives provide a superior finish without messy compounds. Each wheel is impregnated with graded silicon carbide for the smoothest cut and brightest finish. Pack of 100.

LIGHT GRAY Silicone coarse pre-polish wheels and cylinders are excellent for smoothing surfaces.

11.600	7/8 x 1/8 x 1/16	Light Gray Silicone	Coarse Wheel
11.601	5/8 x .093 x 1/16	Light Gray Silicone	Coarse Wheel
11.602	7/8 Knife Edge	Light Gray Silicone	Coarse
11.603	5/8 Knife Edge	Light Gray Silicone	Coarse
11.604	1/4 x 7/8 Cylinder	Light Gray Silicone	Coarse
11.605	Mounted Cylinder	Light Gray Silicone	Coarse
11.606	Mounted Cone	Light Gray Silicone	Coarse

BLACK Silicone is medium grit, making it soft and flexible. Great for smoothing surfaces and rounding edges.

11.607	7/8 x 1/8 x 1/16	Black Silicone	Medium Wheel
11.608	5/8 x .093 x 1/16	Black Silicone	Medium Wheel
11.609	7/8 Knife Edge	Black Silicone	Medium
11.610	5/8 Knife Edge	Black Silicone	Medium
11.611	1/4 x 7/8 Cylinder	Black Silicone	Medium
11.612	Mounted Cylinder	Black Silicone	Medium
11.613	Mounted Cone	Black Silicone	Medium

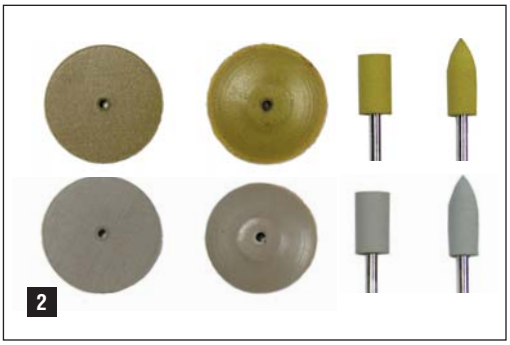
BLUE Silicone is fine grit. Is is soft and flexible. Creates a medium luster or matte finish.

11.614	7/8 x 1/8 x 1/16	Blue Silicone	Fine Wheel
11.615	5/8 x .093 x 1/16	Blue Silicone	Fine Wheel
11.616	7/8 Knife Edge	Blue Silicone	Fine
11.617	5/8 Knife Edge	Blue Silicone	Fine
11.618	1/4 x 7/8 Cylinder	Blue Silicone	Fine
11.619	Mounted Cylinder	Blue Silicone	Fine
11.620	Mounted Cone	Blue Silicone	Fine

PINK Silicone is ultra fine for a superior, high luster final finish.

11.621	7/8 x 1/8 x 1/16	Pink Silicone	Ultra Fine Wheel
11.622	5/8 x .093 x 1/16	Pink Silicone	Ultra Fine Wheel
11.623	7/8 Knife Edge	Pink Silicone	Ultra Fine
11.624	5/8 Knife Edge	Pink Silicone	Ultra Fine
11.625	1/4 x 7/8 Cylinder	Pink Silicone	Ultra Fine
11.626	Mounted Cylinder	Pink Silicone	Ultra Fine
11.627*	Mounted Cone	Pink Silicone	Ultra Fine

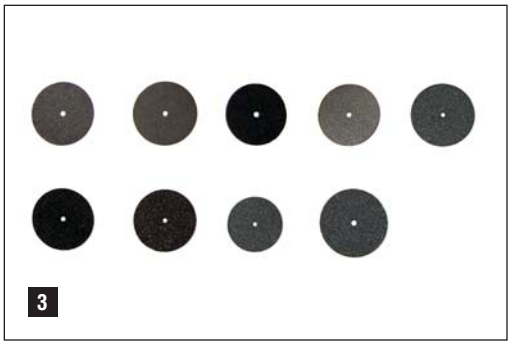
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2 FABULUSTRE PUMICE POLISHERS

Pumice polishers are excellent for cleaning, polishing and finishing. Produces a smooth finish on soft metals. Excellent for use on prong and bezel finishing with set stones. Medium Pumice is used for pre-polishing; fine pumice is used for final finishing. Operating speed 5,000 to 10,000 RPM. Pack of 100.

11.628	7/8 x 1/8 x 1/16	Medium Pumice Wheel
11.629	7/8 Knife Edge	Medium Pumice Wheel
11.630	Mounted Cylinder	Medium Pumice
11.631	Mounted Bullet	Medium Pumice
11.632	7/8 x 1/8 x 1/16	Fine Pumice Wheel
11.633	7/8 Knife Edge	Fine Pumice Wheel
11.634	Mounted Cylinder	Fine Pumice
11.635	Mounted Bullet	Fine Pumice



3 FABULUSTRE CUTTING DISCS

High-speed cutting discs provide fast, cool cutting on all metals. These strong and durable discs are cut on both sides and available in a variety of sizes. Operating speed 10,000 to 25,000 RPM. Pack of 100.

11.636	7/8 x .005 x 1/16	Cutting Disc
11.637	7/8 x .009 x 1/16	Cutting Disc
11.638	7/8 x .011 x 1/16	Cutting Disc
11.639	7/8 x .015 x 1/16	Cutting Disc
11.640	7/8 x .023 x 1/16	Cutting Disc
11.641	7/8 x .025 x 1/16	Cutting Disc
11.642	7/8 x .030 x 1/16	Cutting Disc
11.643	3/4 x .023 x 1/16	Cutting Disc
11.644	1 x .023 x 1/16	Cutting Disc

1 FABULUSTRE DIAMOND ABRASIVES

These extremely durable abrasives get the job done when no other abrasive will. Fast cool cutting, for pre-polishing and polishing. Operating speed 5,000 to 10,000 RPM.

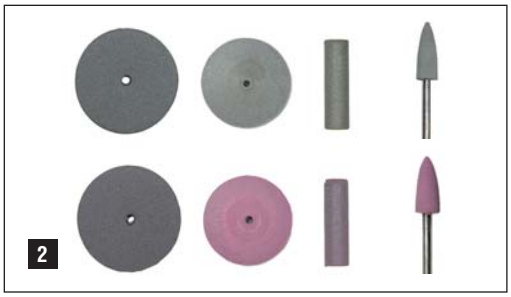
11.645	5/8 x .110 Mounted	Diamond Medium Wheel - Pack of 1
11.646	5/8 x .110 Mounted	Diamond Coarse Wheel - Pack of 1
11.647	5/8 x .110 Mounted	Diamond Fine Wheel - Pack of 1
11.648	Mounted Bullet	Diamond Medium - Pack of 1
11.649	Mounted Bullet	Diamond Coarse - Pack of 1
11.650	Mounted Bullet	Diamond Fine - Pack of 1
11.653	7/8 x .060 Mounted	Diamond Roughing Wheel - Pack of 1
11.651	7/8 x .015 x 1/16	Diamond Cutting Disc - Pack of 12
11.652	7/8 x .020 x 1/16	Diamond Cutting Disc - Pack of 12



2 FABULUSTRE ABRASIVE POLISHING WHEELS

Excellent for use on platinum, titanium, stainless steel and precious alloys. Medium abrasive is used for pre-polishing, while the extra fine achieves a high gloss. Pure Silicon Carbide Abrasives are flexible and long lasting. Operating speed 5,000 to 15,000 RPM. Pack of 100.

11.654	7/8 x 1/8 x 1/16	Medium Wheel
11.655	7/8 Knife Edge	Medium Wheel
11.656	1/4 x 7/8 Cylinder	Medium
11.657	Mounted Bullet	Medium
11.658	7/8 x 1/8 x 1/16	X-Fine Wheel
11.659	7/8 Knife Edge	X-Fine Wheel
11.660	1/4 x 7/8 Cylinder	X-Fine
11.661	Mounted Bullet	X-Fine



3 FABULUSTRE SANDING DISCS

Aluminum-oxide grit, mounted on thin paper backing, provides excellent results in sanding and smoothing. The flexible backing allows access in hard to reach area. Sold in master packs 12 boxes of 50 each.

11.662	3/4 Coarse	**11.667**	1/2 Medium
11.663	7/8 Coarse	**11.668**	3/4 Fine
11.664	1/2 Coarse	**11.669**	7/8 Fine
11.665	3/4 Medium	**11.670**	1/2 Fine
11.666	7/8 Medium		



4 FABULUSTRE PIN HOLE SANDING DISCS

Aluminum-oxide grit, mounted on thin paper backing, provides excellent results in sanding and smoothing. The flexible backing allows access in hard to reach areas. Sold by packs of 100. Pin hole centers are to be to be used with reinforced mandrel 43.128. Pack of 100.

11.671	1 1/2 Medium	**11.677**	3/4 Medium
11.672	1 1/2 Fine	**11.678**	3/4 Fine
11.673	7/8 Coarse	**11.679**	1/2 Coarse
11.674	7/8 Medium	**11.680**	1/2 Medium
11.675	7/8 Fine	**11.681**	1/2 Fine
11.676	3/4 Coarse		



5 FABULUSTRE SANDING DISCS

Special reinforced plastic backing increases the life of the aluminum oxide disc. Recommended for fast cutting of acrylics and is excellent for polishing non-precious alloys. Brass centers are used with mandrel number 10.740. Pack of 100.

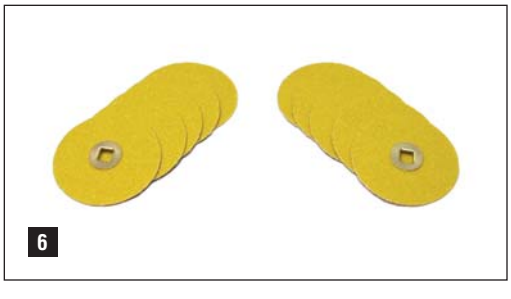
11.682	7/8 Fine	**11.687**	5/8 Medium
11.683	3/4 Fine	**11.688**	7/8 Coarse
11.684	5/8 Fine	**11.689**	3/4 Coarse
11.685	7/8 Medium	**11.690**	5/8 Coarse
11.686	3/4 Medium		



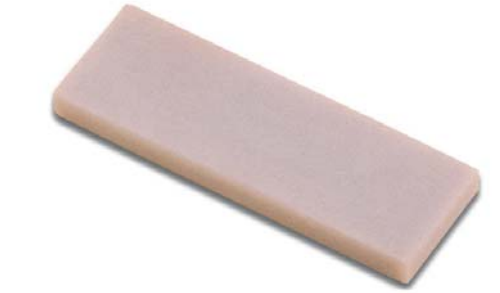
6 FABULUSTRE YELLOW SANDING DISCS

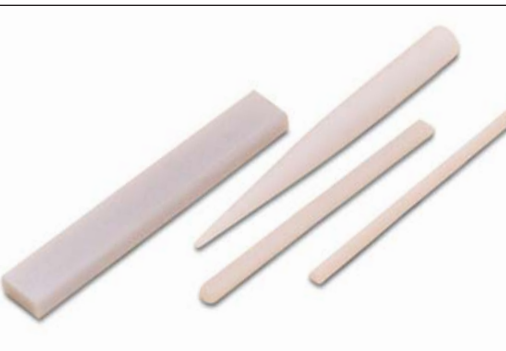
Yellow, abrasive discs with snap-on feature are used in the pre-finishing process. Aluminum-oxide grit, mounted on thin paper backing, provides excellent results in sanding and smoothing. The flexible backing allows access in hard to reach area. Pack of 100.

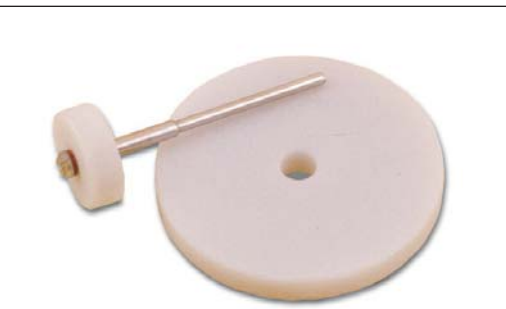
11.69001	Set	**11.69005**	7/8 Coarse
11.69002	3/4 Coarse	**11.69006**	7/8 Medium
11.69003	3/4 Medium	**11.69007**	7/8 Fine
11.69004	3/4 Fine		




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HARD ARKANSAS STONES

Natural, close-density oilstones with qualities that make them unequalled for sharpening tools such as gravers, knives, etc.

1 BENCH STONES

Mounted

No.	Description	Diameter
10.547	Extra Fine	4" x 1½" x ½"
10.548	Extra Fine	6" x 2" x ½"
10.549	Extra Fine	8" x 2" x ½"
10.550	Extra Fine	3" x 1" x ½"
10.552	Extra Fine	4" x 2" x ½"
10.554	Extra Fine	5" x 2" x ½"
10.551	Hard/Fine	4" x 2" x ½"
10.553	Hard/Fine	5" x 2" x ½"
10.555	Hard/Fine	6" x 2" x ½"
10.557	Hard/Fine	8" x 2" x ½"

Unmounted

No. **10.564** Extra fine 4" x 2" x ½" (not shown)

2 PENKNIFE PIECES

Unmounted stones in leather pouch. Translucent (extra fine).

No.	Diameter
10.560	3" x 1" x ¼"
10.561	4" x 1" x ¼"

3 HARD ARKANSAS SLIPS

Available in a variety of shapes and sizes.

No.	Shape	Diameter
10.574	Beveled	3" x ⅜" x ⅛"
10.578	Pointed	4" x ¼"
10.580	Square	2½" x ⅛"
10.588	Triangular	2½" x ⅛"

4 HARD ARKANSAS WHEELS

No.	Style	Diameter	Thickness	Mandrel Dia.
10.599	Mounted	¾"	¼"	3/32"
10.604	Unmounted	2"	¼"	—

5 ARKERAM BENCH STONES

Made from Arkansas stone powder, solidified by fire. Has more cutting action than regular Arkansas stones. Bench stone can be used on both sides with oil. Packed in hardwood box.

No.	Diameter
10.608	4" x 1" x ½"
10.609	5" x 2" x ⅞"
10.610	6" x 2" x 1"

6 NORTON PIKE OIL

Primarily used as sharpening oil, but also useful as a general purpose machine oil. Net contents 4½ oz.

No. **42.480**

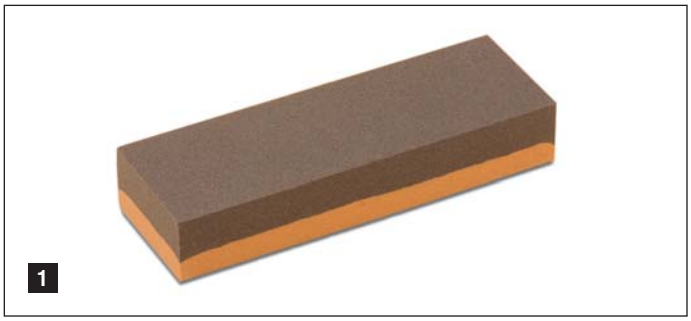
INDIA STONE

Long recognized for the clean, sharp surfaces they produce on tools, dies, blades, molds and almost any other metal piece requiring sharpening or smoothing. These hard, tough, aluminum oxide stones are available in various shapes and grits.

1 COMBINATION and SINGLE GRIT BENCH STONES

Use both sides. Combination stones have fine grit on one side, coarse on the other.

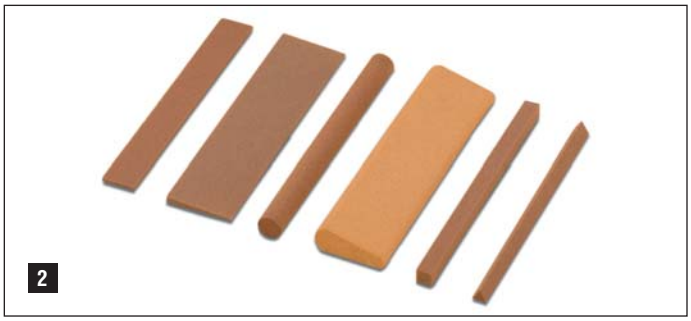
Combination	Diameter
10.450	4" x 1¾" x ⅝"
10.451	6" x 2" x 1"
10.452	8" x 2" x 1"
Fine	
10.456	4" x 1" x ½"
10.457	6" x 2" x 1"
10.458	8" x 2" x 1"
Medium	
10.461	4" x 1" x ½"
10.462	6" x 2" x 1"
10.463	8" x 2" x 1"



2 SLIPS

Available in 6 different shapes, in fine or medium grits.

Shape	Diameter	Fine	Medium
Flat	4" x ½"	—	**10.472**
Knife	4" x 1"	**10.478**	**10.479**
Round	4" x ⅜	—	**10.485**
Round Edge	4" x 1"	**10.486**	—
Square	4" x ¼"	**10.489**	**10.490**
Square	4" x ½"	—	**10.497**



ALUMINUM OXIDE WHEELS

3 WHITE LATHE WHEELS

These coarse, knock-down wheels are designed for fast material removal. They are supplied with 1/4" leaded arbor hole.

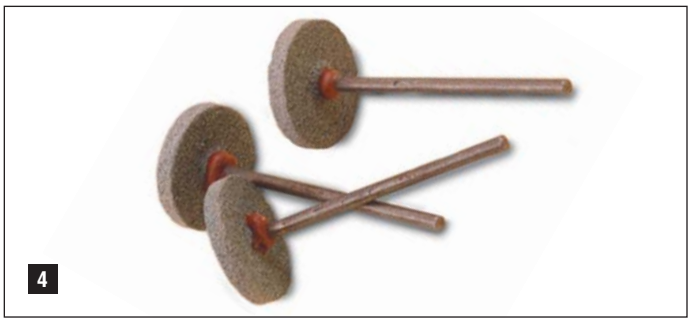
No.	Diameter
10.525	3" x ⅜"
10.526	4" x ⅜"
10.527	4" x ½"



CUT-OFF WHEELS

4 STONE WHEEL with ARBOR

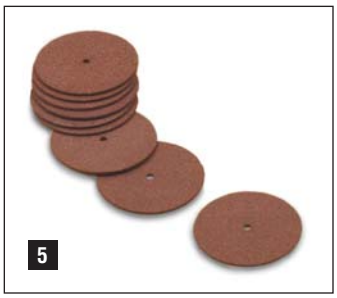
Square edge stone wheel with 3/4" diameter.
No. **11.0805**



5 UNMOUNTED CUT-OFF WHEELS

Made of rubber-bonded aluminum oxide grains. Excellent for sprue removal and other cut-off operations. Mount on mandrels.

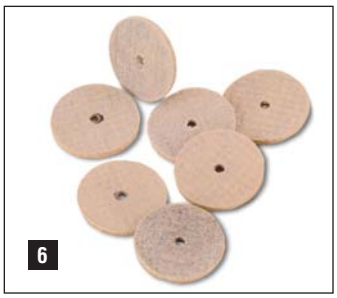
No.	Diameter	Thickness	Max Safe Speed (RPM's)
10.541	⅞"	.010"	30,000
10.537	⅞"	.030"	30,000
10.538	1"	.030"	30,000
10.542	1"	.015"	30,000
10.539	1¼"	.033"	25,000
10.540	1½"	.025"	25,000



6 CRATEX MX SMALL WHEELS

Maximum RPM: 36,000. 1/8" holes.

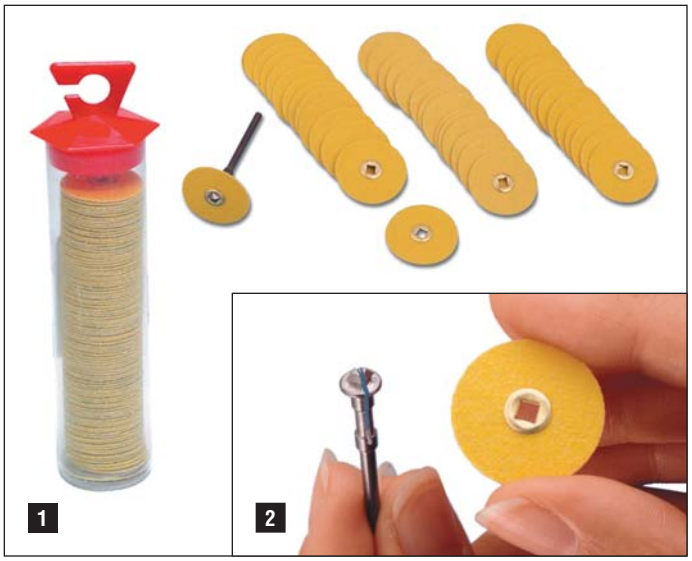
No.	Size	Grit
10.9821	1" x ⅛"	80-Coarse
10.9822	1" x ⅛"	120-Medium
10.9823	1" x ⅛"	180-Fine
10.9824	1" x ⅛"	320-Extra fine



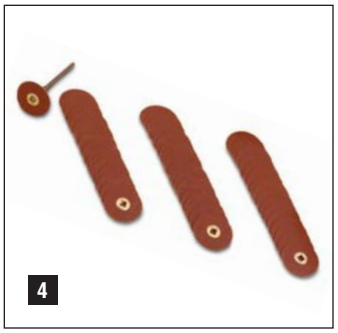
Cratex MX laminated products are excellent for cutting, blending and polishing in one easy step. The #80 grit is suited for sprue removal and deep imperfections. The #120 grit is suited for small burrs and line removal. The #180 and #320 grits are suited for final polishing and blending.

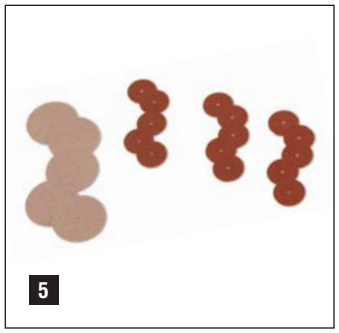
SANDING DISCS

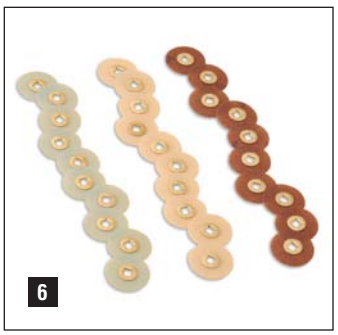
Yellow abrasive with press-on/flip-off center hole feature. Exclusive grit and backing are designed for jewelry applications and provide exceptionally long life. Aluminum oxide grit in three grades, mounted on thin backing, provides outstanding results in sanding and smoothing operations. The flexible backing allows accessibility to hard-to-reach areas. Available in 3/4" or 7/8" diameter. Used with 3/32" mandrel number 10.740.













1 SINGLE GRIT DISCS

Supplied in tubes of 100.

Diameter	Coarse Grit	Medium Grit	Fine Grit
3/4"	**10.714**	**10.715**	**10.716**
7/8"	**10.718**	**10.719**	**10.720**

DISC ASSORTMENT

Contains 25 fine, 25 coarse, and 50 medium, 7/8" sanding discs, plus one mandrel, in compartmented plastic box.
No. **10.712**

2 PRESS-ON/FLIP-OFF MANDREL

High-quality steel with 3/32" shank.
No. **10.740**

3 MOORE SANDING DISCS MASTER PACK

Buy in bulk and save - 12 boxes of 50 discs per box.

Coarse	Medium	Fine	Diameter
10.01077/B	**10.01082/B**	**10.01087/B**	1/2"
10.01075/B	**10.01080/B**	**10.01085/B**	3/4"
10.01076/B	**10.01081/B**	**10.01086/B**	7/8"

4 ADALOX® ABRASIVE SANDING DISCS

Aluminum oxide grit, mounted on thin backing, provides excellent results in sanding and smoothing operations. The flexible backing allows accessibility to hard-to-reach areas. Use with 3/32" mandrel No. **10.740**. Sold by box of 100 with mandrel.

Coarse (Brown)	Medium (White)	Fine (Green)	Diameter
10.01077	**10.01082**	**10.01087**	1/2"
10.01075	**10.01080**	**10.01085**	3/4"
10.01076	**10.01081**	**10.01086**	7/8"

5 ADALOX® PIN HOLE SANDING DISCS

Aluminum oxide grit mounted on flexible backing allows for easy accessibility into those hard-to-reach places. With pin hole centers for use with reinforced mandrel No. **43.128**. Sold by pack of 100 discs.

Coarse	Medium	Fine	Diameter
—	**10.01101**	**10.01102**	1 1/2"
10.01103	**10.01104**	**10.01105**	7/8"

6 MAGNUM SANDING DISCS

Aluminum oxide grit mounted on a special reinforced plastic backing. Lasts 2 to 3 times longer than conventional paper-backed discs. Brass centers for use with press-on/flip-off 3/32" mandrel No. **10.740**. Sold by pack of 100 discs.

Fine (Green)	Medium (White)	Coarse (Brown)	Diameter
10.01120	**10.01123**	**10.01126**	7/8"
10.01121	**10.01124**	**10.01127**	3/4"
10.01122	**10.01125**	**10.01128**	5/8"

7 HIGH-SPEED SEPARATING DISC

Resin-bonded aluminum oxide is fast, cool, odor-free and long-lasting. Cuts all metals smoothly and rapidly. Box of 100. Measures 7/8" x .025".
No. **11.01310**

FINISHING STONES

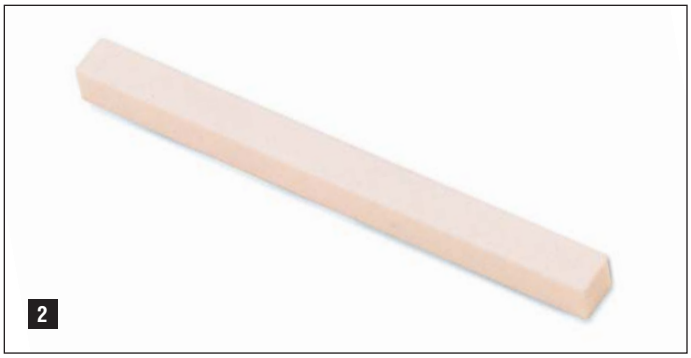
1 TRU-STONE

Quickly reshapes and resurfaces abrasive stones to like-new condition. A very hard and coarse silicon carbide stone with 4 different sized half-round grooves on one side measuring 1/16", 1/8", 3/16", and 1/4". Measures 3 1/2" x 1 3/8" x 9/16" overall.
No. **10.408**



2 DRESSER STICK for DIAMOND WHEELS

Premium quality white aluminum oxide for dressing, truing, roughing and finishing diamond wheels. Measures 6" x 1/2" x 1/2".
No. **10.406** 100 grit
No. **10.411** 320 grit



RUBY® STONES

3 RUBY® BENCH STONES

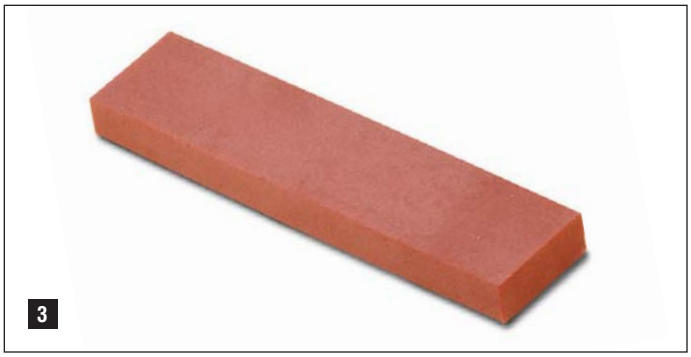
For sharpening and flattening hard metals, as well as glass, quartz and porcelain.

Finished Both Sides (Loose)

Diameter	Medium	Fine
4" x 1" x 3/8"	**10.421**	**10.422**

Finished One Side (Boxed)

Diameter	Medium
4" x 1" x 3/8"	**10.423**
4 3/4" x 2" x 3/8"	**10.425**

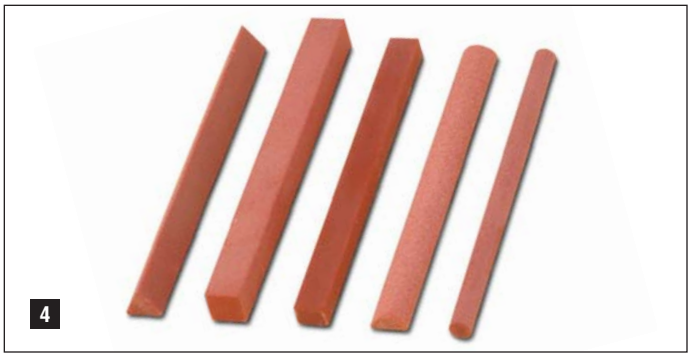


4 RUBY® STONE KIT

No. **10.429**

Contains one of each of the following:

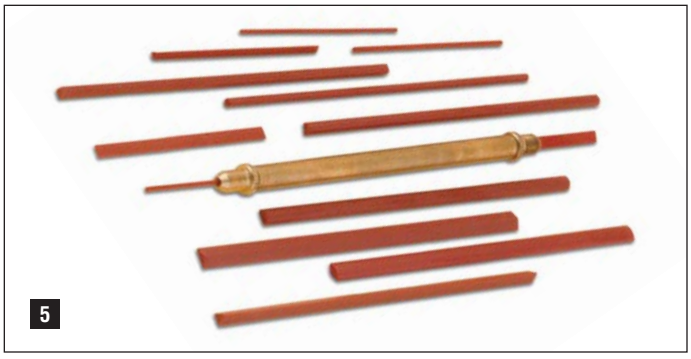
Shape	Diameter	Grit
Triangular	4" x 3/8"	Medium
Square	4" x 3/8"	Medium
Flat	4" x 5/16" x 1/4"	Fine
Half Round	4" x 3/8"	Coarse
Round	4" x 1/4"	Medium



5 RUBY® MIDGET FILES

For high-detail and ultra-precision work. Files may be broken off and cemented onto a holder or used with a pin vise. Fine grit only.

No.	Shape	Length & Thickness
10.431	Square	2" x .04"
10.432	Round	2" x .04"
10.433	Triangular	2" x .08"
10.434	Square	4" x .08"
10.435	Round	4" x .08"
10.436	Round	4" x .12"
10.437	Flat	2" x .12" x .001"
10.438	Half-Round	4" x .16"
10.439	Barrette	4" x .2" x .06"
10.440	Crossing	4" x .16" x .06"
10.441	Triangular	4" x .12"



MIDGET FILE KIT

For high detail and ultra-precision work. Kit contains one of each file listed above, plus one double-ended holder with two reversible collets.
No. **10.445**

CRATEX® ABRASIVES

Grit Textures: Each Cratex size and shape is made in four standard grit textures or compositions which differ in accordance with the mesh size of the abrasive grain used: COARSE (Green); MEDIUM (Dark Brown); FINE (Reddish Brown); EXTRA FINE (Grey Green).

CONES

For use with light pressure at much less than 20,000 RPM maximum safe speed. **Use with No. 43.166 steel mandrel.** Sold individually.



Style No	Length	Diameter	Coarse	Medium	Fine	Extra Fine	Shape
1350	1"	7/8"	**10.790**	**10.791**	**10.792**	**10.793**	Cylinder
1357	1 1/4"	7/8"	**10.798**	**10.799**	**10.800**	—	Pt.Cyl.
1340	1"	5/8" to 1/4"	**10.780**	**10.781**	**10.782**	**10.783**	Tapered
4707	1 3/4"	7/8"	**10.80101**	**10.80102**	**10.80103**	**10.80104**	Bullet

POINTS

For use with light pressure at much less than 25,000 RPM maximum safe speed. 1/16" holes for **use with mandrel Nos. 43.124 or 43.154.** Sold by box of 100.



Style No	Length	Diameter	Coarse	Medium	Fine	Extra Fine	Shape
6	7/8"	1/4"	**10.804**	**10.805**	**10.806**	**10.807**	Cylinder
8	1"	9/32"	**10.809**	**10.810**	**10.811**	**10.812**	Bullet
10	5/8"	3/8"	**10.80801**	**10.80802**	**10.80803**	—	Bullet
11	1"	3/8"	**10.80805**	**10.80806**	**10.80807**	**10.80808**	Bullet

BLOCKS & STICKS

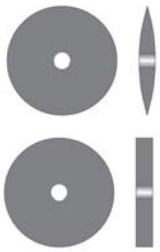
For manual or mechanical applications. Can be mounted in fixtures, chucks or cradles. Dependable for automated operations. Sold individually.



Style No.	Dimensions	Coarse	Medium	Fine	Extra Fine	Shape
036	6" x 3/16"	—	**10.82702**	**10.82703**	**10.82704**	Round
046	6" x 1/4"	**10.818**	**10.819**	**10.820**	**10.821**	Round
066	6" x 3/8"	**10.823**	**10.824**	**10.825**	**10.826**	Round
086	6" x 1/2"	**10.828**	**10.829**	**10.830**	**10.831**	Round
0126	6" x 3/4"	**10.815**	**10.816**	**10.817**	—	Round
6404	6" x 1/2" x 1/2"	**10.758**	**10.757**	—	**10.759**	Square
6803	6" x 1" x 3/8"	**10.772**	**10.773**	**10.774**	—	Oblong

SMALL WHEELS

Available in diameters from 5/8" to 1". Supplied with 1/16" center hole and can be used with mandrels with 3/32" or 1/8" shank in power tools with safe maximum speed of 25,000 RPM. Sold by box of 100.



Style No.	Diameter	Thickness	Edge	Coarse	Medium	Fine	Extra Fine	Pumitex
2	5/8"	3/32"	Tapered	**10.837**	**10.838**	**10.839**	**10.840**	**10.846**
5	1"	1/8"	Tapered	**10.842**	**10.843**	**10.844**	**10.845**	**10.841**
53	5/8"	3/32"	Square	**10.855**	**10.856**	**10.857**	**10.858**	**10.859**
54	5/8"	1/8"	Square	**10.860**	**10.861**	**10.862**	**10.863**	—
59	5/8"	1/4"	Square	**10.849**	**10.850**	**10.851**	**10.852**	—
74	7/8"	1/8"	Square	**10.865**	**10.866**	**10.867**	**10.868**	**10.869**
80	1"	1/8"	Square	**10.875**	**10.876**	**10.877**	**10.878**	—
*88-2	1"	1/4"	Square	**10.879**	**10.880**	**10.881**	**10.882**	—

**Has 1/8" hole*

LARGE WHEELS

Diameters from 1 1/2" to 6". Best performance speed may be well below the maximum safe speed indicated. Sold individually.



Style No.	Diameter	Thickness	Hole	Coarse	Medium	Fine	Extra Fine	Max. Safe
202	2"	1/8"	1/4"	—	**10.89202**	**10.89203**	—	10,500
204	2"	1/4"	1/4"	**10.894**	**10.895**	**10.896**	**10.897**	10,500
208	2"	1/2"	1/4"	—	**10.899**	**10.900**	**10.901**	10,500
302	3"	1/8"	1/4"	**10.91201**	**10.91202**	**10.91203**	**10.91204**	7,000
304	3"	1/4"	1/4"	**10.913**	**10.914**	**10.915**	**10.916**	7,000
306	3"	3/8"	1/4"	**10.918**	**10.919**	**10.920**	**10.921**	7,000
308	3"	1/2"	1/4"	**10.923**	**10.924**	**10.925**	**10.926**	7,000
404	4"	1/4"	1/2"	**10.928**	**10.929**	**10.930**	—	5,250
408	4"	1/2"	1/2"	**10.937**	**10.938**	**10.939**	**10.940**	5,250
506	5"	3/8"	1/2"	—	—	—	**10.950**	4,200
508	5"	1/2"	1/2"	**10.952**	**10.953**	**10.954**	**10.955**	4,200
512	5"	3/4"	1/2"	**10.956**	**10.957**	—	—	4,200
604	6"	1/4"	1/2"	—	**10.962**	**10.963**	**10.964**	3,500
608	6"	1/2"	1/2"	**10.970**	**10.971**	**10.972**	**10.973**	3,500
612	6"	3/4"	1/2"	**10.975**	**10.976**	**10.977**	**10.978**	3,500
616	6"	1"	1/2"	**10.97801**	**10.97802**	**10.97803**	**10.97804**	3,500

Other sizes and styles available upon request.

CRATEX® ABRASIVE ASSORTMENTS

Rubberized abrasives for light deburring, smoothing and polishing. Made from a special formula, combining pure silicon carbide granules with a special oil-resistant rubber bond. They deliver cushion-action performance in a variety of applications on a wide range of materials such as metal, plastic, glass and porcelain. Cratex abrasives can be shaped with conventional wheel dressers and do not harden or soften during use or storage.

1 26-PIECE INTRODUCTORY KIT

Contains a popular selection of wheels and points, in 5/8", 7/8" and 1" diameters, in various grit textures, plus one point mandrel and one wheel mandrel. Packed in a handy box. Style #773.
No. **10.750**



1

2 796-PIECE PRODUCTION ASSORTMENT

Designed to meet the demands of a production shop. 200 tapered wheels, 300 straight wheels, and 200 points, in various textures. Plus 96 mandrels. Compartmented dispensing tray is a real time-saver. Style #796.
No. **10.755**



2

3 44-PIECE SMALL POINT KIT

Contains two points each of the five most popular small points, in each of the four grit textures, plus 4 mandrels. Packed in a convenient plastic case. Style #767.
No. **10.751**


3

4 46-PIECE SMALL WHEEL KIT

Contains two each of the most popular small wheels, 44 pieces, equally assorted in sizes and textures, plus two mandrels. Packed in a convenient plastic case. Style #707.
No. **10.752**


4

5 68-PIECE POINT KIT

Contains two each of all eight point shapes, equally assorted in four grit textures, for a total of 64 points, plus four mandrels. Packed in a convenient plastic case. Style #778.
No. **10.754**


5

6 123-PIECE TIME-SAVER KIT

Practical kit contains 120 wheels and points, plus two wheel mandrels and one point mandrel. Packed in a convenient plastic case. Style #776.
No. **10.749**


6

7 49-PIECE SANDING KIT

Contains 45 wheels and points, plus four mandrels, for all of your sanding needs. Packed in a convenient plastic case. Style #779.
No. **10.756**


7

8 80-PIECE ALL PURPOSE KIT

Contains the most popular wheels ranging from 5/8" to 1" in diameter, and points from 5/8" to 1" in length, along with 2 wheel mandrels and 2 point mandrels. Packed in a convenient plastic case. Style #777.
No. **10.753**


8

MANDRELS for USE with CRATEX ABRASIVES (see page 7)


1


2


3


4


5


6

WR PUMICE WHEELS

For cleaning, polishing and finishing. Made from natural rubber with graded pumice grain evenly distributed to assure uniform results. The light action produces a smooth finish on soft metals. All holes are 1/16".

1 PUMICE 72 WHEEL ASSORTMENT

Kit includes 12 wheels each of all six styles and 3 mandrels with 1/8" shanks.
No. **11.465**

INDIVIDUAL WHEELS

Sold by box of 100.

No.	Style	Shape	Diameter	Thickness
11.450	822	Square	5/8"	3/32"
11.453	888	Square	7/8"	1/8"
11.458*	908	Taper	3/8"	—
11.459	908	Taper	3/8"	—
11.461	999	Taper	5/8"	—
11.463*	999	Taper	5/8"	—

**White version with more aggressive action.*

BRIGHTBOY®

For deburring, finishing and polishing. The resilient rubber binder cushions the aluminum oxide abrasive and bridges the gap between grinding and polishing. Recommended for use on stainless steel, chrome and precious metals. All approximately 70 grit.

2 BRIGHTBOY® ASSORTMENT

57-piece kit contains wheels, cylinders, points, mandrels and chuck. Ideal for those who want a selection on hand to meet the needs of specific production requirements.
No. **10.650**

3 BRIGHTBOY® ROD

Cleans in deep cavities otherwise unreachable by hand. Measures 5/8" W x 5" L. Plastic holder available separately.
No. **10.656** Rod only
No. **10.657** Plastic holder only

4 BRIGHTBOY® MINIATURE WHEELS

Use with mandrels on flexible shaft machines. With 1/16" center holes. Sold by box of 100.

No.	Diameter	Thickness
10.672	5/8"	1/4"
10.670	5/8"	1/8"
10.687	5/8"	Tapered
10.678	7/8"	1/8"
10.684	1"	1/8"

5 BRIGHTBOY® LARGE WHEELS

For use on standard polishing motors.

\No.	Diameter	Thickness	Hole Size
10.690	1 1/2"	3/16"	1/4"
10.691	2"	1/4"	1/4"
10.692	2 1/2"	1/2"	1/4"
10.693	3"	3/8"	1/4"
10.694	3"	1/2"	1/4"
10.699	4"	1/4"	1/2"
10.695	4"	1/2"	1/2"
10.698	4"	3/4"	1/2"
10.696	5"	1/2"	1/2"
10.697	5"	3/4"	1/2"
10.701	6"	1/2"	1/2"

6 BRIGHTBOY® TABLET

Ideal for removing scratches and rust, as well as general surface cleaning and finishing. Measures 2 1/4" x 1 1/8" x 3/8".
No. **10.658**

SAFETY TIPS

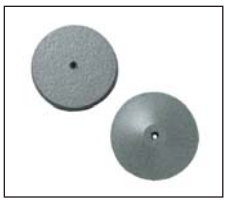
Improper use of grinding wheels is dangerous. Comply with American National Standards Institute Safety Code B7.1 and Occupational Safety and Health Act covering: speed, safety guards, flanges, mounting procedures, general operating rules, handling, storage and inspection, and general machine conditions. Maximum RPM for the wheels listed in this section is as follows:

Miniature Wheels		Standard Wheels	
Diameter	Maximum RPM	Diameter	Maximum RPM
1/2"	20,350	1 1/2"	10,125
5/8"	16,250	2"	7,625
3/4"	13,540	2 1/2"	6,100
7/8"	11,600	3"	5,060
1"	10,175	4"	3,800
1 1/4"	10,125	5"	3,050

PACIFIC SILICONE CARBIDE ABRASIVES

A unique system for polishing gold and semi-precious alloys without the use of messy compounds or agents.

UNMOUNTED WHEELS, CYLINDERS and POINTS











Small Wheels

Size	Hole	Edge	Boxed	Extra Fine	Silipum Pumice	Lapidary Touch Ups Coarse	Lapidary Touch Ups Hi-Shine
7/8" x 1/8"	1/16"	Square	20	**11.861**	**11.851**	**11.917**	**11.909**
7/8" x 1/8"	1/16"	Square	100	**11.862**	**11.852**	**11.916**	**11.908**
5/8" x 1/8"	1/16"	Square	20	**11.865**	**11.853**	**11.919**	**11.911**
5/8" x 1/8"	1/16"	Square	100	**11.866**	**11.854**	**11.918**	**11.910**
7/8"	1/16"	Knife	20	**11.863**	**11.855**	**11.913**	**11.905**
7/8"	1/16"	Knife	100	**11.864**	**11.856**	**11.912**	**11.904**
5/8"	1/16"	Knife	20	**11.867**	**11.857**	**11.915**	**11.907**
5/8"	1/16"	Knife	100	**11.868**	**11.858**	**11.914**	**11.906**

Size	Hole	Edge	Boxed	Long Life Coarse Very Hard	Dark Grey for Softer Metals	White for Harder Metals	Pink Hi-Shine
7/8" x 1/8"	1/16"	Square	20	**11.841**	**11.811**	**11.819**	**11.827**
7/8" x 1/8"	1/16"	Square	100	**11.842**	**11.812**	**11.820**	**11.828**
5/8" x 1/8"	1/16"	Square	20	—	**11.813**	**11.821**	**11.829**
5/8" x 1/8"	1/16"	Square	100	—	**11.814**	**11.822**	**11.830**
7/8"	1/16"	Knife	20	—	**11.815**	**11.823**	**11.831**
7/8"	1/16"	Knife	100	—	**11.816**	**11.824**	**11.832**
5/8"	1/16"	Knife	20	—	**11.817**	**11.825**	**11.833**
5/8"	1/16"	Knife	100	—	**11.818**	**11.826**	**11.834**

Cylinder

Size	Boxed	Blue Coarse	Grey Fine	Green X-Fine	Pink Hi-Shine
1" x ½"	12	**11.845**	**11.846**	**11.847**	**11.848**

Mini-Points

Dark Brown Boxed	Brown Hard	Green Medium	Hi-Shine
25	**11.835**	**11.837**	**11.839**
100	**11.836**	**11.838**	**11.840**

Mandrels

Size		Item No.
3/32"	1" x ½" cylinders. Pk 3	**11.898**
1/8"	1" x ½" cylinders. Pk 10	**11.899**
3/32"	For mini points	**11.894**

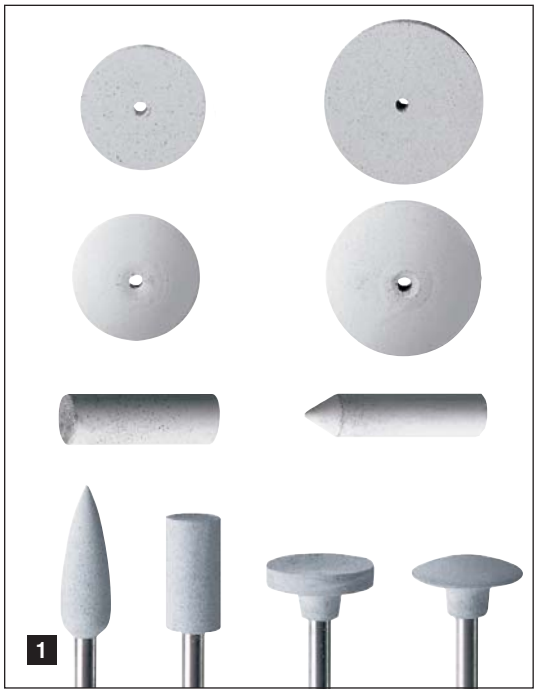
2 KITS

Assorted shapes, sizes and grits plus mandrels.
No. **11.809** 70 piece kit
No. **11.810** 44 piece kit



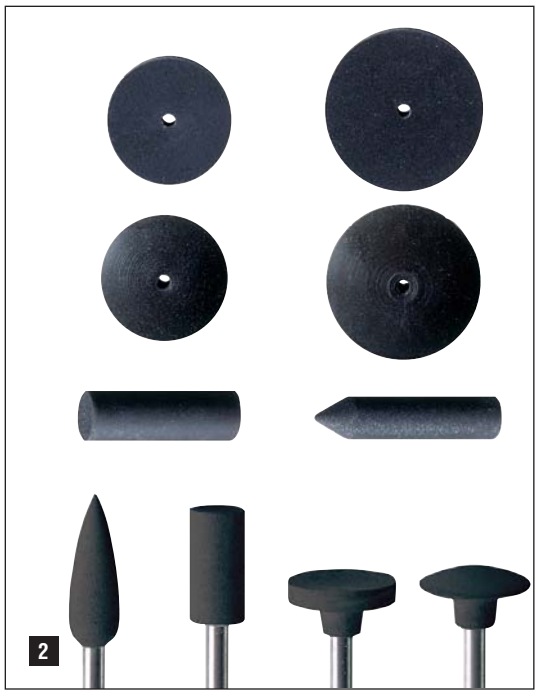
UNMOUNTED & MOUNTED SILICONE POLISHING WHEELS

Premium silicone-carbide impregnated wheels, specially formulated to provide the smoothest finish possible without the use of messy polishing compounds. Mounted wheels are on 3/32" shanks. Available in the following grits: Coarse - 100G, white color; Medium - 220G, black color, Fine - 800G, blue color; and Extra Fine - 1,200G, pink color. Mtd wheels on 3/32" shank.



1 WHITE (100G) Coarse pre-polish wheels and cylinders. For smoothing surfaces. Operating speed range is 5,000 to 12,000 RPM.

Shape	Dia.	Description/Thickness	Shank	No.	No.
Wheel	7/8"	Sq. Edge	No	**10.01368**	**10.1368/C**
Wheel	5/8"	Sq. Edge	No	**10.01371**	**10.1371/C**
Wheel	7/8"	Kf. Edge	No	**10.01370**	**10.1370/C**
Wheel	5/8"	Kf. Edge	No	**10.01369**	**10.1369/C**
Cylinder	13/16"	1/4"	No	**10.01372**	**10.1372/C**
Bullet	1"	1/4"	No	**10.01373**	**10.1373/C**
Cone	5/8"	7/32"	Yes	**10.01441**	**10.1441C**
Cylinder	7/16"	1/4"	Yes	**10.01442**	**10.1442/C**
Wheel	7/16"	Sq. Edge	Yes	**10.01443**	**10.1443/C**
Wheel	7/16"	Kf. Edge	Yes	**10.01444**	**10.1444/C**

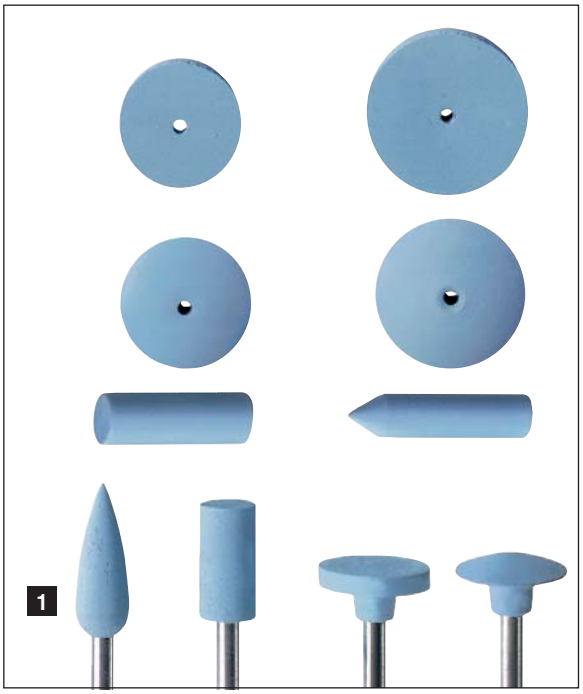


2 BLACK (220G) Medium, soft and flexible. For smoothing surfaces and refining edges. Operating speed range is 5,000 to 12,000 RPM.

Shape	Dia.	Description/Thickness	Shank	No.	No.
Wheel	5/8"	Sq. Edge	No	**10.01374**	**10.1374/C**
Wheel	7/8"	Sq. Edge	No	**10.01375**	**10.1375/C**
Wheel	5/8"	Kf. Edge	No	**10.01376**	**10.1376/C**
Wheel	7/8"	Kf. Edge	No	**10.01377**	**10.1377/C**
Cylinder	13/16"	1/4"	No	**10.01378**	**10.1378/C**
Bullet	1"	1/4"	No	**10.01379**	**10.1379/C**
Cone	5/8"	7/32"	Yes	**10.1445**	**10.1445/C**
Cylinder	7/16"	1/4"	Yes	**10.01446**	**10.1446/C**
Wheel	7/16"	Sq. Edge	Yes	**10.01447**	**10.1447/C**
Wheel	7/16"	Kf. Edge	Yes	**10.01448**	**10.1448/C**

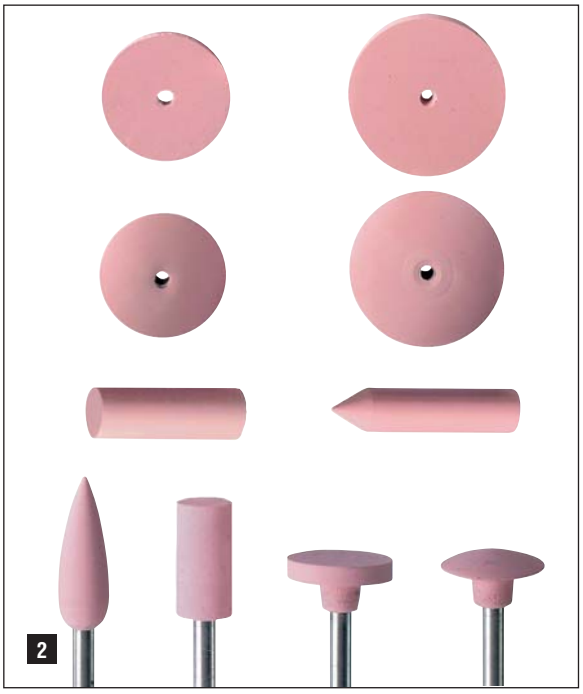
1 BLUE (800G) Fine, soft and flexible. For medium lustre or smooth matte finish. Operating speed range is 5,000 to 10,000 rpm.

Shape	Dia.	Description/Thickness	Shank	No.	No.
Wheel	5/8"	Sq. Edge	No	**10.01364**	**10.1364/C**
Wheel	7/8"	Sq. Edge	No	**10.01365**	**10.1365/C**
Wheel	5/8"	Kf.Edge	No	**10.01366**	**10.1366/C**
Wheel	7/8"	Kf.Edge	No	**10.01367**	**10.1367/C**
Cylinder	13/16"	1/4"	No	**10.01362**	**10.1362/C**
Bullet	1"	1/4"	No	**10.01363**	**10.1363/C**
Cone	5/8"	7/32"	Yes	**10.01437**	**10.1437/C**
Cylinder	7/16"	1/4"	Yes	**10.01438**	**10.1438/C**
Wheel	7/16"	Sq. Edge	Yes	**10.01439**	**10.1439/C**
Wheel	7/16"	Kf. Edge	Yes	**10.01440**	**10.1440/C**

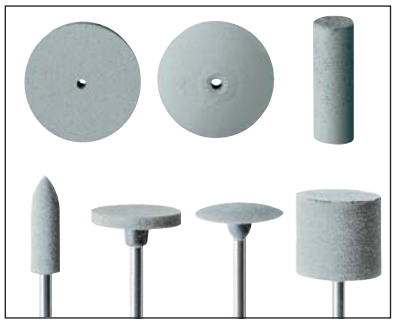


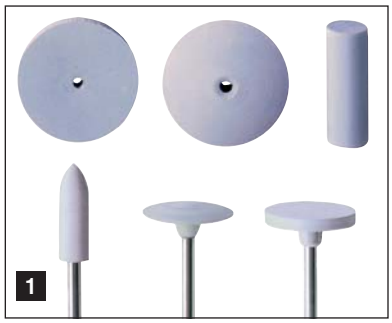
2 PINK (1200G) Ultra Fine, soft and flexible for a super high lustre; final finish. For medium lustre or smooth matte finish. Operating speed range is 5,000 to 10,000 rpm.

Shape	Dia.	Description/Thickness	Shank	No.	No.
Wheel	5/8"	Sq. Edge	No	**10.01380**	**10.1380/C**
Wheel	7/8"	Sq. Edge	No	**10.01381**	**10.1381/C**
Wheel	5/8"	Kf. Edge	No	**10.01382**	**10.1382/C**
Wheel	5/8"	Kf. Edge	No	**10.01383**	**10.1383/C**
Cylinder	13/16"	1/4"	No	**10.01384**	**10.1384/C**
Bullet	1"	1/4"	No	**10.01385**	**10.1385/C**
Cone	5/8"	7/32"	Yes	**10.01449**	**10.1449/C**
Cylinder	7/16"	1/4"	Yes	**10.01450**	**10.1450/C**
Wheel	7/16"	Sq. Edge	Yes	**10.01451**	**10.1451/C**
Wheel	7/16"	Kf. Edge	Yes	**10.01452**	**10.1452/C**



Great For Platinum!





1 SMALL HIGH-PERFORMANCE POLISHING WHEELS (Mounted and Unmounted)

These long-lasting wheels are excellent for use on precious alloys, platinum, titanium and stainless steel. Made from the finest raw material available. All wheel shapes are 7/8". Medium grit is for smoothing platinum and titanium. Extra Fine is for high lustre polishing. Mounted wheels on 3/32" shank. Operating speed range is 5,000 - 10,000 RPM.

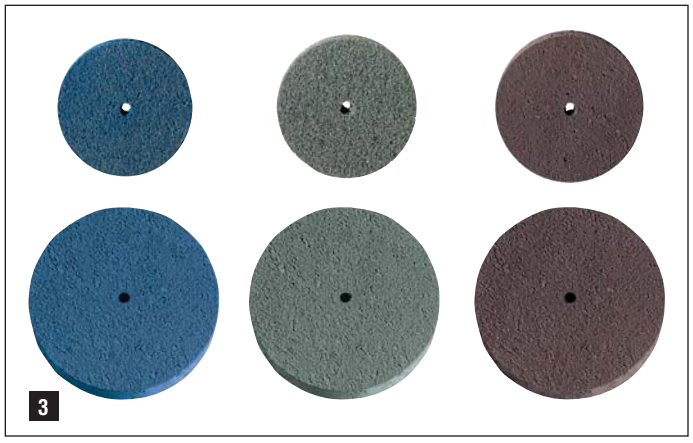
Shape	Shank	Description/Thickness	Grit	Part No.	Part No.
Wheel-Sq. Edge	No	1/8"	Grey-Medium	**10.01392**	**10.1392/C**
Wheel-Kf. Edge	No	1/8"	Grey-Medium	**10.01393**	**10.1393/C**
Cylinder	No	1/4" x 13/16"	Grey-Medium	**10.01394**	**10.1394/C**
Bullet	Yes	3/16" x 5/8"	Grey-Medium	**10.01430**	**10.1430/C**
Wheel-Sq. Edge	Yes	3/32" x 9/16"	Grey-Medium	**10.01432**	**10.1432/C**
Wheel-Kf. Edge	Yes	1/8" x 9/16"	Grey-Medium	**10.01433**	**10.1433/C**
Barrel	Yes	1/2" x 9/16"	Grey-Medium	**10.01431**	**10.1431/C**
Wheel-Sq. Edge	No	1/8"	Lilac-Ex.Fine	**10.01395**	**10.1395/C**
Wheel-Kf. Edge	No	1/8"	Lilac-Ex.Fine	**10.01396**	**10.1396/C**
Cylinder	No	1/4" x 13/16"	Lilac-Ex.Fine	**10.01397**	**10.1397/C**
Bullet	Yes	3/16" x 5/8"	Lilac-Ex.Fine	**10.01434**	**10.1434/C**
Wheel-Sq. Edge	Yes	3/32" x 9/16"	Lilac-Ex.Fine	**10.01435**	**10.1435/C**
Wheel-Kf.Edge	Yes	1/8" x 9/16"	Lilac-Ex.Fine	**10.01436**	**10.1436/C**



2 LARGE 4" PREMIUM SILICONE POLISHING WHEELS

Specially formulated to provide the smoothest finish possible without the use of messy polishing compounds. Light pressure required with speeds up to 4000 RPM. Sold individually. Size is 4" x 5/8".

Part Number	Shape	Grit
10.01423	Wheel	White-Coarse
10.01424	Wheel	Black-Medium
10.01425	Wheel	Blue-Fine
10.01426	Wheel	Pink-Ultra Fine



3 AIRFLEX POLISHERS

For aggressive material removal, these wheels are more flexible than standard heatless wheels. Use on all types of metal, including titanium. The "open-pores" distributed throughout these wheels provide for a cool-running wheel. The large wheels operate at 3000 RPM. The small wheels operate between 5,000-10,000 RPM. Sold by dozen.

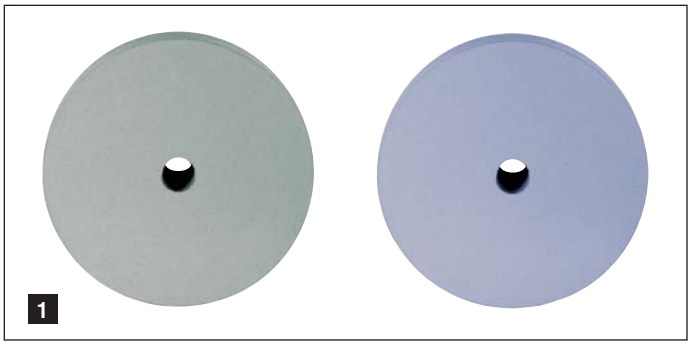
Part Number	Shape	Description/Thickness	Grit
10.01420	Wheel	4" x 5/8"	Blue-Coarse
10.01400	Wheel	7/8" x 1/8"	Blue-Coarse
10.01421	Wheel	4" x 5/8"	Gray-Medium
10.01401	Wheel	7/8" x 1/8"	Gray-Medium
10.01422	Wheel	4" x 5/8"	Brown-Fine
10.01402	Wheel	7/8" x 1/8"	Brown-Fine

Great For Platinum!

1 LARGE 4" HIGH-PERFORMANCE POLISHING WHEELS (Unmounted)

Long-lasting large, unmounted polishing wheels. Excellent for use on precious alloys, platinum, titanium and stainless steel. Center hole is 1/2" and requires tapered spindle. Operate at maximum 3,000 RPM. Sold individually. Thickness is 4" x 5/8".

Part Number	Shape	Grit
10.01427	Wheel	Grey-Medium
10.01428	Wheel	Lilac-Fine



2 9-PIECE DIAMOND IMPREGNATED POLISHER KIT

This 9-piece kit contains one each of the following polishers: 10.1399/1, 10.1399/2, 10.1399/3, 10.1399/4, 10.1399/5, 10.1399/6, 10.1399/7, 10.1399/8 & 10.1399/9.
No. **10.01399**



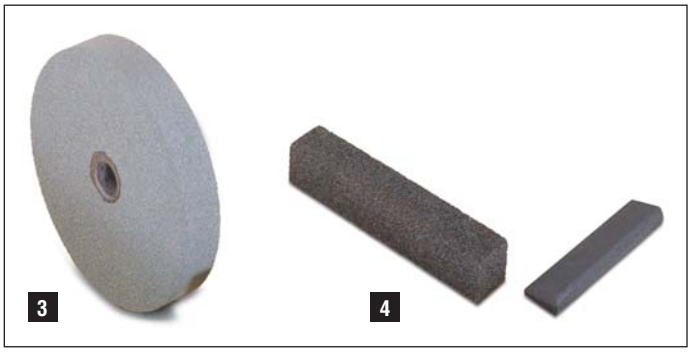
SILICON CARBIDE

Grinding stones in a variety of shapes for grinding mild steel, soft metals, such as copper, bronze, gold, silver, etc., and some gemstones.

3 SILICON CARBIDE WHEELS

Available in fine (180) and medium (150) grits. The rating on these wheels is not to exceed 8500 RPM.

Fine	Medium	Diameter	Thickness	Hole
11.740	**11.741**	2"	1/4"	1/4"
11.754	**11.755**	3"	1/2"	3/8"
11.760	**11.761**	3"	1/2"	1/4"
11.763	**11.764**	3"	1/2"	1/2"



4 SILICON CARBIDE STONES

Specially shaped for dressing, sharpening and truing wheels that have become rounded or chipped.
No. **11.715** Sharpening stone. 4" x 1" x 7/16"
No. **11.716** Dressing and truing stone. 6" x 1" x 1"

5 SILICON CARBIDE SEPARATING DISKS

Thin grinding disks cut on the edge and on one or both sides Excellent for cutting chrome casting and non-precious metal casting sprues. Available in 3/4", 7/8" and 1" diameters, with pin hole for mandrel mounting. Sold by box of 100.

No.	Diameter	Thickness	Cutting Sides
11.778	3/4"	.022"	Both
11.777	7/8"	.005"	Both
11.776	7/8"	.015"	Both
11.780	7/8"	.022"	Both
11.781	7/8"	.020"	One
11.782	1"	.022"	Both



1 3M™ 3-RADIAL BRISTLE DISCS

Great for cleaning and maintaining hard to reach areas on platinum, gold, silver, copper, pewter and brass pieces. Embedded mineral abrasive is harder than most metals. Removes oxides-without messy compounds. These discs do not generate the same amount of heat as rubber wheels do. Can be used individually, or stacked.

Note: *Bristle brushes up to 1" diameter use with mandrel hole 1/16" or 1/8". Those of 2" & 3" are to be used with adaptor mount, our p/n* ***10.3541****.*



1

Part No.	Grit or Mesh	Diameter	Color	Min
10.3501	80	3/4"	Yellow	48
10.3502	220	3/4"	Red	48
10.3503	400	3/4"	Blue	48
10.3504	Pumice	3/4"	Pink	48
10.3505	6 Micron	3/4"	Peach	48
10.3506	1 Micron	3/4"	Lt. Green	48
10.3507	120	9/16"	White	48
10.3508	220	9/16"	Red	48
10.3509	400	9/16"	Blue	48
10.3510	Pumice	9/16"	Pink	48
10.3511	Polish II	9/16"	Peach	48
10.3512	Polish I	9/16"	Lt. Green	48
10.3513	36	1"	Brown	24
10.3514	50	1"	Green	24
10.3515	80	1"	Yellow	24
10.3516	120	1"	White	24
10.3517	80	2"	Yellow	40
10.3518	120	2"	White	40
10.3519	220	2"	Red	40
10.3520	400	2"	Blue	40
10.3521	Pumice	2"	Pink	40
10.3522	6 Micron	2"	Peach	40
10.3523	1 Micron	2"	Lt. Green	40
10.3524	80	3"	Yellow	40
10.3525	120	3"	White	40
10.3526	220	3"	Red	40
10.3527	400	3"	Blue	40
10.3528	Pumice	3"	Pink	40
10.3529	6 Micron	3"	Peach	40
10.3530	1 Micron	3"	Lt. Green	40
10.3531	80	6"	Yellow	1
10.3532	120	6"	White	1
10.3533	220	6"	Red	1
10.3534	400	6"	Blue	1
10.3536	6 Micron	6"	Peach	1
10.3537	1 Micron	6"	Lt. Green	1

Package quantity varies. See price list or call for details.



2

2 3M™ SPINDLE ADAPTORS

No.**10.3541** 3/8" Tapered spindle Mount adaptor

1 3M™ FLEXIBLE DIAMOND HAND FILES

Made of rigid plastic with flex diamond laminated on the filing surface. The best sanding tool on the market and is ideal for hand sanding in small, hard-to-reach areas. Available in four sets. Sets contain the same four styles in different grits. Set contains 1 1/2" x 3/4" flat, a 1 3/4" x 1/2" flat, a 2 1/2" x 1/4" flat, and a half-round, 1 3/4" x 3/8".

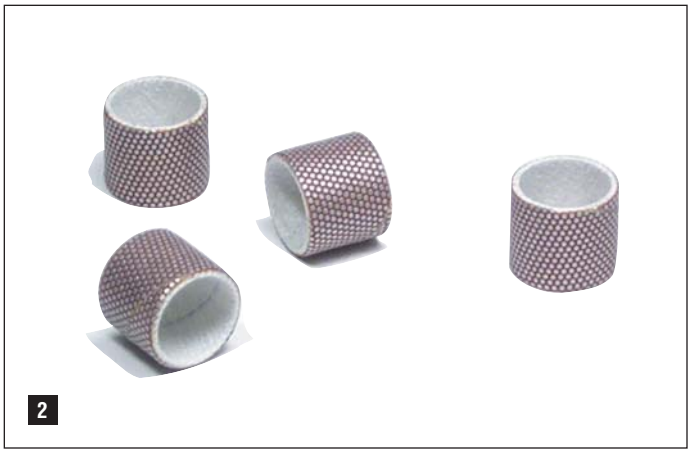
Part No.	Micron	Grit or Mesh	Color
10.39101	M125	120	Black
10.39102	M74	200	Red
10.39103	M40	400	Yellow



2 3M™ FLEXIBLE DIAMOND BANDS

Metal-bonded diamond bands cut sanding time in half. Excellent for shaping and carving on metal or stone. Great for quickly removing material on the inside of rings. Use water or coolant with bands to prolong life (try our 19.928 Pro-Cut Lubricant). Diameter on all measures 1/2" x 1/2" x 1/2".

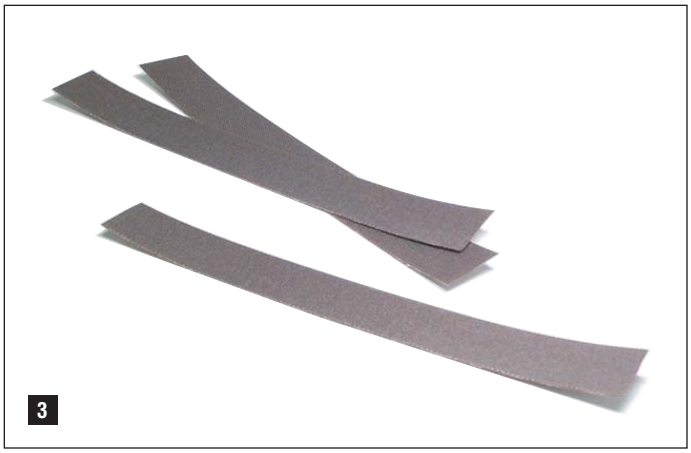
Part No.	Micron	Grit or Mesh	Color
10.170	250	60	Green
10.171	125	120	Black
10.172	74	200	Red
10.173	40	400	Yellow
10.174	20	800	White



3 3M™ FLEXIBLE DIAMOND STRIPS

These flexible 1" x 8" strips can be wrapped around a dowel or attached to a sanding stick with the pressure sensitive adhesive. Smooths and shapes most materials.

Part No.	Micron	Grit or Mesh
10.33801	125	120
10.339	74	200
10.340	40	400
10.341	20	800



4 3M™ TRIZACT™ ABRASIVE BELTS

Advanced technology makes these aluminum oxide abrasive belts time savers. Save 50% in buffing time and achieve unprecedented consistency and precision with these aluminum oxide abrasive belts. When using Trizact belts it is important to use a grade finer than one you would normally use.

Part No.	Micron	Grit or Mesh	Belt Size	Drum Size
10.255	A80	220	18 15/16" x 1 1/2"	6" x 1 1/2"
10.256	A65	320	18 15/16" x 1 1/2"	6" x 1 1/2"
10.257	A45	400	18 15/16" x 1 1/2"	6" x 1 1/2"
10.258	A30	700	18 15/16" x 1 1/2"	6" x 1 1/2"
10.259	A16	1200	18 15/16" x 1 1/2"	6" x 1 1/2"
10.260	A80	220	18 15/16" x 2 1/2"	6" x 2 1/2"
10.261	A65	320	18 15/16" x 2 1/2"	6" x 2 1/2"
10.262	A45	400	18 15/16" x 2 1/2"	6" x 2 1/2"
10.263	A30	700	18 15/16" x 2 1/2"	6" x 2 1/2"
10.264	A16	1200	18 15/16" x 2 1/2"	6" x 2 1/2"





1 3M™ MICROFINISHING FILM SANDING BELTS

Can be used wet or dry. Suitable for both lapidary and metalworking applications. Fast-cutting silicon carbide and aluminum oxide abrasives are resin-bonded onto a flexible film backing. Your finishes will be uniform and precise.

Part No.	Micron	Grit or Mesh	Belt Size	Drum Size
10.232	60	220	$18^{15}/_{16}$" x $1^{1}/_{2}$"	6" x $1^{1}/_{2}$"
10.233	30	400	$18^{15}/_{16}$" x $1^{1}/_{2}$"	6" x $1^{1}/_{2}$"
10.234	15	600	$18^{15}/_{16}$" x $1^{1}/_{2}$"	6" x $1^{1}/_{2}$"
10.235	9	1200	$18^{15}/_{16}$" x $1^{1}/_{2}$"	6" x $1^{1}/_{2}$"
10.236	60	220	$18^{15}/_{16}$" x $2^{1}/_{2}$"	6" x $2^{1}/_{2}$"
10.237	30	400	$18^{15}/_{16}$" x $2^{1}/_{2}$"	6" x $2^{1}/_{2}$"
10.238	15	600	$18^{15}/_{16}$" x $2^{1}/_{2}$"	6" x $2^{1}/_{2}$"
10.239	9	1200	$18^{15}/_{16}$" x $2^{1}/_{2}$"	6" x $2^{1}/_{2}$"
10.240	60	220	$25^{7}/_{23}$" x 3"	8" x 3"
10.241	30	400	$25^{7}/_{23}$" x 3"	8" x 3"
10.242	15	600	$25^{7}/_{23}$" x 3"	8" x 3"
10.243	9	1200	$25^{7}/_{23}$" x 3"	8" x 3"



2 3M™ MICROFINISHING FILM SELF-ADHESIVE (PSA) DISCS

Long-wearing, flexible film back and the resin-bonded abrasives are suitable for both lapidary and metalworking. Discs can be used wet or dry. Size 6"

Part No.	Micron	Grit or Mesh
10.320	60	220
10.321	30	400
10.322	15	600
10.323	9	1200



3 3M™ MICROFINISHING FILM STRIPS

For preparing metals, these strips can be applied to a file or stick. Use wet or dry. Size is $8^{1}/_{2}$" x $^{3}/_{4}$". Sold by pack of 100.

Part No.	Micron	Grit or Mesh	Color
10.360	60	220	Brown
10.361	30	400	Green
10.362	15	600	Orange
10.363	9	1200	Blue



4 NORTON® METALITE ROLLS

Aluminum oxide, glue-bonded to a cloth backing. Available in 50yd rolls in two convenient widths. Suitable for use in numerous applications: making flaps, regular or tapered cones, and split mandrels. May be used for pre-finishing all materials.

Part No.	Grit	Size
11.556	120	1" x 50yds
11.557	150	1" x 50yds
11.558	180	1" x 50yds
11.559	220	1" x 50yds
11.560	600	1" x 50yds
11.561	80	1" x 50yds
11.562	120	$1^{1}/_{2}$" x 50yds
11.563	150	$1^{1}/_{2}$" x 50yds
11.564	180	$1^{1}/_{2}$" x 50yds
11.565	220	$1^{1}/_{2}$" x 50yds
11.566	80	$1^{1}/_{2}$" x 50yds

1 3M™ ROLLS

Metalite abrasive roll for use on a sanding drum.

Part No.	Grit	Size
11.56902	500	1½" x 50yds
11.560902	240	1½" x 50yds
11.560903	320	1½" x 50yds
11.560904	600	1½" x 50yds



1

2 3M™ VETRAP

Natural latex rubber sticks to itself, not to your skin. It protects skin from burns and abrasions and provides excellent gripping ability for small workpieces. This wrap is light and durable. Individual roll: 2" x 5 yds. Available in 5 colors.

Part No.	Color
10.3569	White
10.3570	Pink
10.3571	Red
10.3572	Green
10.3573	Blue


2

3 3M™ 96 GREEN PAD

New to the Scotchbrite family. Medium grade 3M 96 green pad leaves a smooth, satin finish and no scratches.
No. **10.301**


3

4 3M™ SCOTCHBRITE™ HAND PADS

Excellent for hand finishing of metals and composites. Also used wood finishing, paint prep, and general cleaning. Available in four grades as shown. Size is 6" x 9"

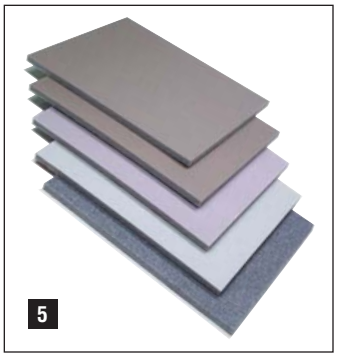
Part No.	Grade	Color
10.302	Ultra Fine	Gold
10.303	Coarse	Tan
10.304	Medium	Maroon
10.305	Fine	Gray

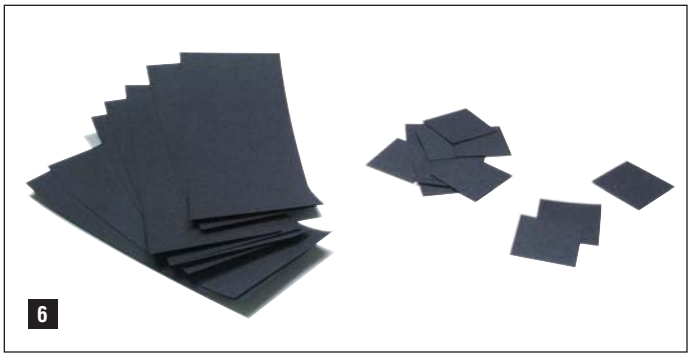

4

5 3M™ SANDING SPONGES

These closed-cell foam rubber sanding pads are great for working with platinum, and flexible enough to conform to almost any contour or surface. Can be folded or trimmed to fit into small spaces. Can be used wet or dry. Micron-graded aluminum oxide abrasives make them safe for a variety
of applications.

Part No.	Grade
10.295	Micro Fine
10.296	Ultra Fine
10.297	Superfine
10.298	Fine
10.299	Medium


5


6

6 3M™ TARNI-SHIELD STRIPS

Convenient anti-tarnish strips and tabs are safe to use with silver, nickel, copper, bronze, brass, tin and gold. Place in box or bag with jewelry. Lasts one year in a sealed environment.

Part No.	Size
10.384	1" x 1"
10.385	2" x 2"
10.386	2" x 5"



1

1 3M™ FILM SHEETS and POLISHING PAPER

Microfinishing Film Sheets

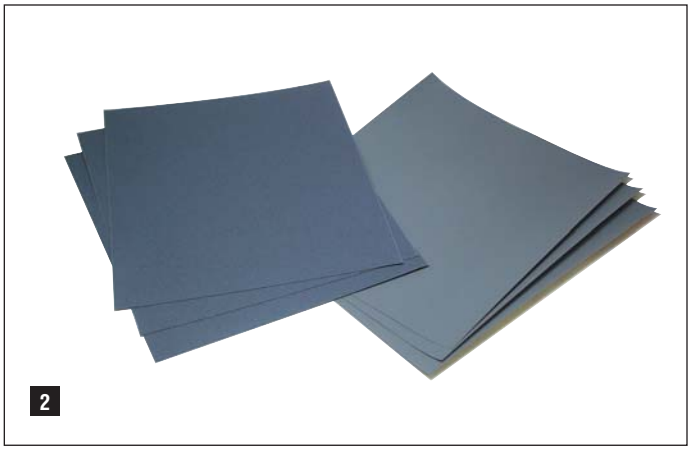
Use these 8½" x 12" sheets wet or dry. The micron grading technique produces particles of exactly the same size and shape so that you get consistent finishing every time.

Part No.	Micron	Grit or Mesh	Color
10.328	60	220	Black
10.329	30	400	Green
10.331	15	600	Orange
10.332	9	1200	Lt. Blue

WETorDRY™ Polishing Paper

Get around almost any contoured surface with these 8½" x 11" polishing papers. Soft, cloth-like backing and precise micron grading provide a unique, consistent finish. Can be used wet or dry.

Part No.	Micron	Grit or Mesh	Color
10.274	30	400	Green
10.275	15	600	Grey
10.276	9	1200	Blue
10.277	3	4000	Pink
10.278	2	6000	Mint
10.279	1	8000	Pale Green



2

2 3M™ IMPERIAL™ WET or DRY ABRASIVE SHEETS

Special resin-over-resin bonding technique resists heat and holds the abrasive particles gives you a more uniform cut. Highly wear-resistant and waterproof. All sheets are silicon carbide and can be used wet or dry. The lowest grit is the coarsest. Sheets are 9" x 11".

Part No.	Grit
10.284	180
10.285	220
10.286	280
10.287	320
10.288	400
10.289	600
10.290	1000
10.291	1200
10.292	1500
10.293	2000
10.294	2500



3

3 3M™ PLATINUM 405N PAPER SHEET

Use this abrasive paper as a pre-polish on platinum. Sheet size 8" x 10" in grits of 360, 400, and 500.

Part No.	Micron	Grit or Mesh	Color
10.281	35	360	Gray
10.282	30	400	Gray
10.283	20	500	Gray



4

4 3M™ 011K EMERY CLOTH

Silicon carbide abrasive on an "A" weight paper backing. Sheets are 9" x 11" in both medium and fine grits.

Part No.	Grade	Grit or Mesh
10.271	Medium	60
10.272	Fine	100

NORTON® EMERY CLOTH & PAPER

1 METALITE EMERY CLOTH

Cloth sheets 9" x 11" with extra sharp particles for faster cutting. Sold individually.

No.	Grit
11.276	#320 (Fine)
11.277	#240
11.278	#180

2 EMERY CLOTH

Cloth sheets 9" x 11" with grits from fine to very coarse. Sold individually.

No.	Grit
11.269	Fine
11.270	Medium
11.271	Coarse

3 EMERY PAPER

Sheet size 9" x 13 3/4". Grits from 4/0 (finest) to 3 (coarsest). Sold individually or by boxes of 100.

Grit	Mesh	Individual Sheets	Box of 100
4/0	800	**11.0776 4/0**	**11.297**
3/0	600	**11.0776 3/0**	**11.298**
2/0	500	**11.0776 2/0**	**11.299**
1/0	400	**11.0776/0**	**11.300**
1	280	**11.0776/1**	**11.301**
2	240	**11.0776/2**	**11.302**
3	180	**11.0776/3**	**11.303**

4 FLAT EMERY STICKS

Emery paper glued to wood handles, 11" long x 3/4" wide. Grits from 4/0 (finest) to 4 (coarsest). Sold by the dozen.

No.	Grit
11.340	4/0
11.341	3/0
11.342	2/0
11.343	1/0
11.344	1
11.345	2
11.346	3
11.347	4

5 POLISHING STICK and STRIPS

Plastic handle, 10 1/2" long, holds strips of emery paper or cloth 11" x 1". Strips can easily be replaced. Supplied with 2 strips, grit 120 and 240.
No. **11.350** Stick and strips
No. **11.351** Emery refills in 12 assorted grits

SANTAPER STICKS & BELTS

Fast, easy, economical way to reach detailed, hard-to-reach areas. Plastic stick, tapered at the end, holds a replaceable 1/4" wide sanding belt. The aluminum oxide belt is held in place by a patented spring-loaded mechanism that allows the belt to be rotated 360°. Rotating the belt exposes a new sanding surface and allows the entire belt to be used.

6 SANTAPER STICKS

Sold individually.

No.	Color	Grit
11.571	Red	120
11.572	Blue	240
11.573	Green	320
11.574	Yellow	400
11.575	Black	600

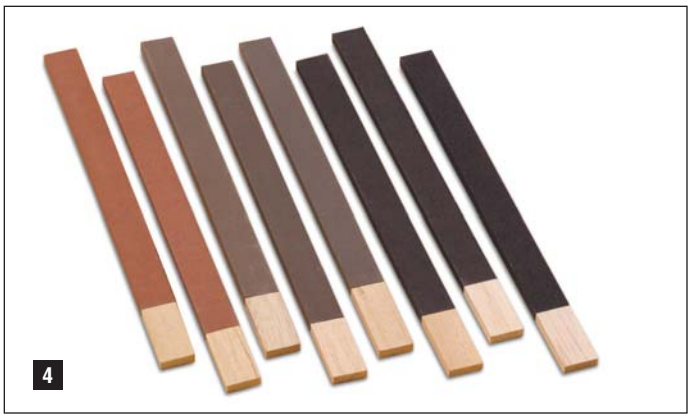
7 SANTAPER BELTS

Sold by pack of 10.

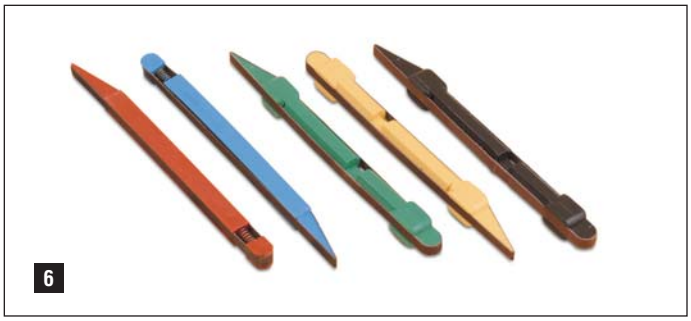
No.	Grit
11.576	120
11.577	240
11.578	320
11.579	400
11.580	600

SANTAPER KIT (not shown)
Includes three sticks and fifteen belts, three each of all five grits.
No. **11.570**



















NO-LAP ABRASIVE BANDS

1 ABRASIVE BANDS

Glue bonded, silicon carbide for fast cutting. Far outlasts lapped bands. All are 1/2" long. Grit textures: COARSE (60); MEDIUM (80); FINE (120).

Grit	Diameter	Box 100
Fine	1/4"	**11.217**
Medium	1/4"	**11.218**
Coarse	1/4"	**11.219**
Fine	3/8"	**11.220**
Medium	3/8"	**11.221**
Coarse	3/8"	**11.222**
Fine	1/2"	**11.223**
Medium	1/2"	**11.224**
Coarse	1/2"	**11.225**
Fine	3/4"	**11.226**
Medium	3/4"	**11.227**
Coarse	3/4"	**11.228**

2 ABRASIVE BAND ARBORS

Rubber heads on 3/32" and 1/8" shanks.

3/32" Shank Diameter	1/8" Shank Diameter	Band Diameter
11.200	**11.201**	1/4"
11.204	**11.205**	3/8"
11.208	**11.209**	1/2"
—	**11.211**	3/4"

ABRASIVE BAND SET

Contains 2 arbors with 1/4" and 3/8" diameter and 3/32" shank and 12 assorted bands.
No. **11.213**

3 CARTRIDGE ROLLS

Rolled aluminum oxide abrasive material used for polishing and deburring. Use with special mandrels listed below. Sold by pack of 25. Measures 1/2" diameter, 1/8" hole.

Fine	Medium	Coarse	Length
11.01270	**11.01271**	**11.01272**	1"
11.01273	**11.01274**	**11.01275**	1 1/2"

MANDRELS for CARTRIDGE ROLLS

No.	Use with Rolls	Shank Diameter
11.01280	1" long	1/8"
11.01281	1 1/2" long	1/8"
11.01282	1" long	3/32"
11.01283	1 1/2" long	3/32"

4 SANGERS® EMERY INSIDE RING SHELLS

The finest made! To smooth and polish the insides of rings. Fits snugly over wood mandrel. Made in both emery paper and longer lasting cloth. Grits from 4/0 (finest) to 3 (coarsest).
Packed one dozen per box.

Note: *Grits are not marked on individual shells.*

Grit	Cloth	Paper
4/0	**11.310**	**11.320**
3/0	—	**11.321**
2/0	**11.311**	**11.322**
1/0	—	**11.323**
1	**11.312**	**11.324**
2	—	**11.325**
3	**11.313**	**11.326**

SANGERS® SHELL ASSORTMENTS

No. **11.317** Cloth, 12 shells in assorted grits
No. **11.330** Paper, 12 shells in assorted grits
No. **11.318** Cloth, 6 assorted shells and wood mandrel
No. **11.331** Paper, 6 assorted shells and wood mandrel

1 WOOD MANDREL for INSIDE RING SHELLS

Use with Sangers® emery shells . Drilled to fit on a tappered spindle. Also handy as a holder for polishing rings, chains, etc. 4 1/4" with 1/8" arbor hole.
No. **11.333**

2 WOOD ARBOR

Coat with adhesive and roll in abrasive to form a polishing stick. Has 1/4" arbor hole for tapered spindle mounting. Made of birchwood. Sold by dozen.
No. **11.266** 7"
No. **11.267** 6"

3 SPLIT WOOD MANDREL

Slot holds emery paper so it can be wound around mandrel to desired thickness. Sold by dozen.
No. **11.306**

4 SPLIT MANDRELS for HANDPIECE

Emery paper is wound around mandrel for polishing smaller pieces. 2 1/4" long, with 3/32" shank to fit in handpiece. Sold by dozen.
No. **11.308** Straight
No. **11.309** Tapered

5 DIAMOND TEXTURING TOOLS

Create interesting textured finishes with this long-lasting diamond impregnated cylinder shaped tool. Mounted on 3/32" mandrels.

No.	Head Diameter	Head Length
11.140	1/4"	3/8"
11.141	1/4"	1/2"

6 DIAMOND ROUGHING TOOL

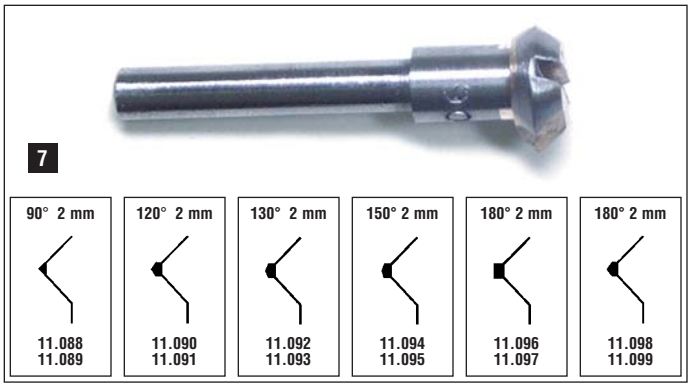
For grinding and texturing. Extremely durable diamond impregnated wheel will stand up to high-speed use for a long period of time. Measures 5/8" x 1/8". Mandrel with 1/8" shank included.
No. **11.142**

7 DIAMOND FLYWHEELS

Create interesting, unusual, and beautiful jewelry designs. Use with a high-speed handpiece up to 35,000 RPM to form faceting cuts, backgrounds, etc. Tool contains finest grade of diamond set in steel. Diameter of diamond is 5/64".

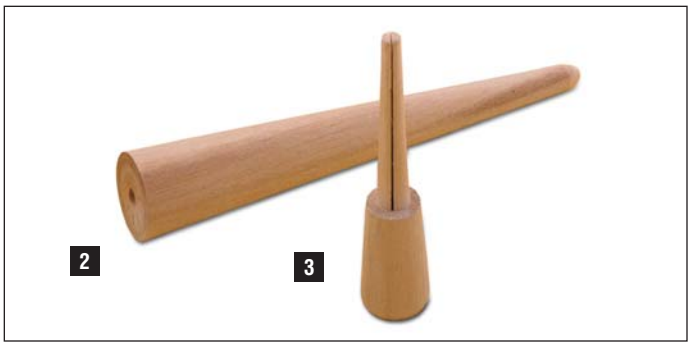
4mm Shank	3mm Shank	Description
11.088	**11.089**	90° Angle
11.090	**11.091**	120° Angle
11.092	**11.093**	130° Angle
11.094	**11.095**	150° Angle
11.096	**11.097**	Flat
11.098	**11.099**	180° Angle

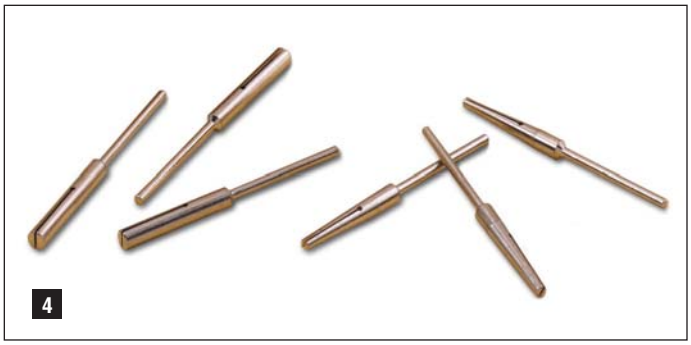
Special shapes available on request. Not returnable.



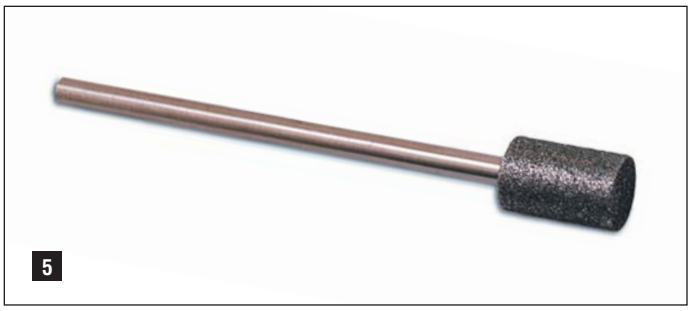
Important! Tools must be used with high-speed hand piece.



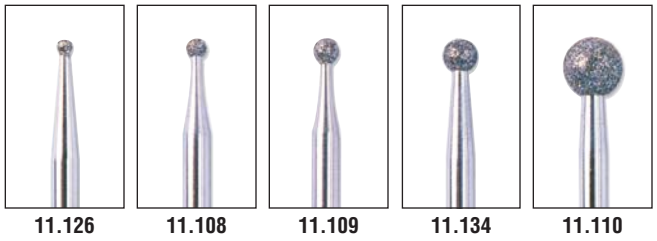




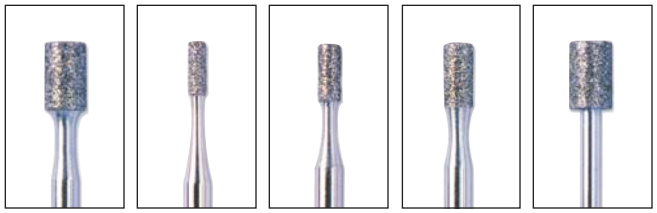
Safety Tip: Always wear eye protection.

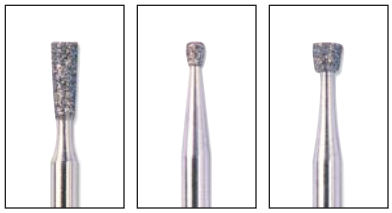


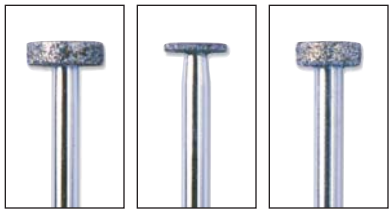


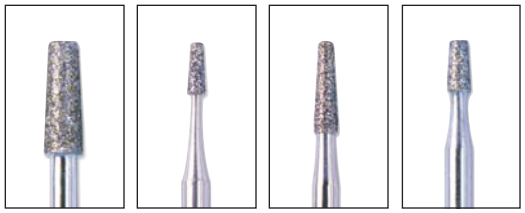

11.126 11.108 11.109 11.134 11.110

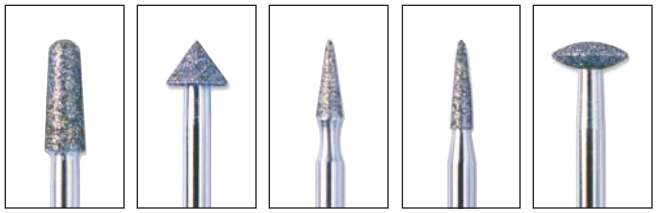

11.127 11.123 11.124 11.125


11.128 11.114 11.115 11.116 11.117


11.129 11.111 11.112


11.130 11.121 11.122


11.131 11.113 11.136 11.119


11.120 11.132 11.118 11.133 11.137

1 DIAMOND POINTS MOUNTED on 3/32" SHANKS

Long-lasting, high-quality industrial grade diamond points. Highly effective for fine detail work: carving ceramics, enlarging holes, and carving of all types. Exceptionally long lasting. Use with a light touch at 10,000 RPM. Made in Israel.

Part No.	Style	Shape
11.126	H11	Round
11.108	H12	Round
11.109	H13	Round
11.134	H14	Round
11.110	H14B	Round
11.127	H34	Inv. Cone 75°
11.123	H33	Inv. Cone 75°
11.124	H35	Inv. Cone 75°
11.125	H36	Inv. Cone 75°
11.128	H23	Flat Cylinder
11.114	H20	Flat Cylinder
11.115	H21	Flat Cylinder
11.116	H22	Flat Cylinder
11.117	H23B	Flat Cylinder
11.129	H17	Inv. Cone
11.111	H15	Inv. Cone
11.112	H16	Inv. Cone
11.130	H30	Square Wheel
11.121	H28	Square Wheel
11.122	H29	Square Wheel
11.131	H27	Flat End Taper
11.113	H18	Flat End Taper
11.136	H19	Flat End Taper
11.119	H26	Flat End Taper
11.120	H27R	Round End Taper
11.132	H32	Tpd Cone
11.118	H24	Tpd Cone
11.133	H25	Flame
11.137	H31	Knife

Important! Keep shanks lubricated to avoid overheating.

1 MIZZY HEATLESS® WHEELS

Used for deburring and finishing. Hard, square-edged wheels. Loose, coarse construction. Keeps the grinding process cool and suitable for materials such as plastic and metal. Can be used to produce a matte finish. With pin-hole for mounting on mandrel. The wheels may be trued with a file. Use with mandrels. White also available, see price list for details.

1/2" Diameter	5/8" Diameter	3/4" Diameter	7/8" Diameter	1" Diameter	Thickness
11.426	**11.429**	**11.432**	**11.435**	**11.438**	3/32"
11.427	**11.430**	**11.433**	**11.436**	**11.439**	1/8"
11.428	**11.431**	**11.434**	**11.437**	**11.440**	3/16"



RUBY CRYSTAL POINTS

Fast cutting, tough points and cones for accurate grinding of steel, porcelain and glass, as well as for soft and precious metals.

2 INDIVIDUAL MOUNTED POINTS

Shapes are securely mounted on 3/32" mandrels for use on flexible shaft machines. See illustrations for individual shapes. Sold per dozen. Prices vary.

SET of 12 MOUNTED POINTS

Contains one each of the most popular points: Nos: 11.502, 11.507, 11.508, 11.510, 11.512, 11.513, 11.518, 11.520, 11.524, 11.525, 11.526 and 11.530.
No. **11.502**



MOUNTED GRINDING STONES

3 GREEN MOUNTED GRINDING STONES

Green Silicon Carbide-Mounted Grinding Stones for Porcelain and Ceramic Binders. Cuts fast, lasts long.

10.120	1/2" x 1/8"	wheel sq	**10.127**	3/16" x 3/32"	invert cone
10.121	1/2" x 1/16"	wheel sq	**10.128**	3/16" x 1/8"	bullet flame
10.122	1/4" x 1/32"	wheel sq	**10.129**	1/4" x 1/8"	bullet flame
10.123	1/2" x 1/8"	umbrella	**10.130**	1/2" x 1/8"	taper cone
10.124	1/2" x 1/4"	invert cone	**10.131**	1/4" x 1/16"	taper cone
10.125	1/2" x 1/4"	invert cone	**10.132**	1/4" x 3/16"	cylinder
10.126	5/16" x 1/8"	invert cone			



4 BLUE MOUNTED GRINDING STONES

Non-Contaminating, Blue Aluminum Oxide-Mounted Grinding Stones Compressed of Aluminum Oxide. For Grinding, Shaping and Contouring Non-Precious Alloys, Chrome-Cobalt, and nickel. Rough grinding before rubber wheeling. Ideal softness per long

10.133	1/2" x 1/4"	cylinder	**10.138**	7/32" x 5/16"	invert cone
10.134	1/2" x 3/16"	cylinder	**10.139**	3/16" x 3/8"	umbrella
10.135	7/16" x 5/32"	taper cone	**10.140**	11/16" x 5/16"	cylinder
10.136	3/8" x 1/8"	taper cone	**10.141**	1/2" x 1/8"	cylinder
10.137	3/16" x 5/16"	invert cone	**10.142**	1/2" x 1/16"	wheel sq



5 PINK MOUNTED GRINDING STONES

Long-lasting, Non-Contaminating. Compressed of Aluminum Oxide. Grind Fast. Excellent for finishing Semi-precious and Precious Alloys (High Nobel)

10.143	1/2" x 1/16"	wheel sq	**10.148**	1/2" x 1/8"	taper cone
10.144	1/2" x 1/8"	wheel kf	**10.149**	1/2" x 3/16"	cylinder
10.145	3/8" x 1/8"	invert cone	**10.150**	1/2" x 1/4"	cylinder
10.146	5/16" x 1/8"	invert cone	**10.151**	11/16" x 5/16"	cylinder
10.147	1/4" x 1/8"	taper cone			





1

1 3M™ SCOTCHBRITE™ DEBURRING and FINISHING WHEELS

Well suited for a wide range of deburring and finishing jobs. Superior performance on stainless steel, titanium and high nickel alloys. The "convolute", or "wrapped", construction is widely used for fine deburring and polishing because of conformability. These wheels will maintain critical tolerances and will still provide a highly polished finish. Use to debur fine threads, finish prior to buffing or for conditioning a soft metal surface before welding. Maximum RPM - 6,000.

Part No.	Grade	Diameter/Thickness/Hole	Color
10.3562	7S Fine	6" x 1" x 1"	Grey
10.3563	9S Fin/Medium	6" x 1" x 1"	Grey
10.3574	6A Medium	4" x 1/2" x 1/2"	Grey
10.3575	2S Fine	6" x 1/2" x 1/2"	Grey



2

2 3M™ CLEAN and FINISH WHEELS

Aluminum oxide wheels provide a uniform satin finish. Wheels can be stacked to build thickness you need. These wheels work fast to give you the right cut every time. 1/4" thick. Hole size 1/8".

Part No.	Grit or Mesh	Diameter
10.311	Medium	6"
10.312	Fine	6"
10.313	Very Fine	6"



3

3 3M™ CUT and POLISH UNITIZED WHEELS

Unitized, or "layered" construction provides an excellent starting point where small diameters and narrow widths are needed in heavy duty blending and finishing jobs. Use instead of rubber bonded wheels. Maximum RPM - 18,100.

Part No.	Grade	Diameter/Thickness/Hole	Color
10.3559	5A Fine	3" x 3/4" x 1/4"	Tan
10.3560	5A Fine	6" x 1" x 1"	Tan

3M™ PARTICULATE and WELDING RESPIRATORS

Innovative respirators from 3M feature patented technologies. The N95 classification means 95% of particles down to 0.3 microns are screened out. Observe manufacturer recommendations regarding usage.

1. **Cool Flow Exhalation Valve:** Patented one-way valve for easy exhalation and cool, dry comfort.
2. **M-Noseclip:** Adjusts easily for fewer pressure points and greater comfort.
3. **Electret Media:** Advanced electrostatically charged microfibers help make breathing easier and cooler.
4. **3M Welding Web:** Fiber media is flame resistant. Not a substitute for a faceshield.



4

4 RESPIRATOR – 3M™ 8511

Features 1, 2, & 3 listed above.
No. **10.387**



5

5 WELDING RESPIRATOR – 3M™ 8515

Features 1, 2, 3, & 4 listed above.
No. **10.388**



6

6 PARTICULATE RESPIRATOR – 3M™ 9211

Flat folding. Features 1, 2, & 3 listed above.
No. **10.389**



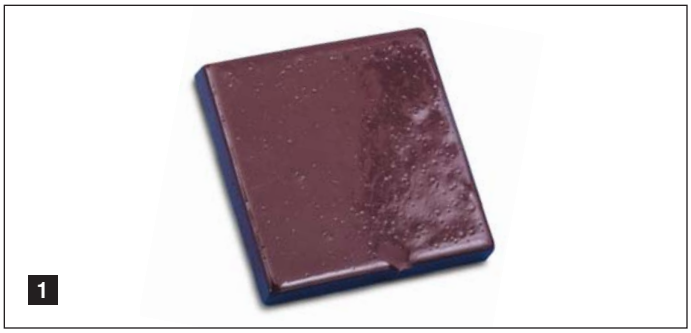
7

7 3M™ HALF FACEPIECE RESPIRATORS

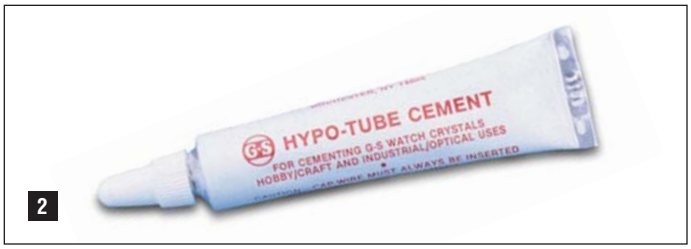
Ultimate comfort. Advanced silicone material for a softer feel on the face. Unique adjustment design to reduce tension and pressure points. New Cool Flow Exhalation Valve makes breathing easier and provides cool, dry comfort. Recommended for use when exposed to organic vapors and mists associated with spray painting, varnishes, etc. Can be converted for use in the positive pressure, supplied air mode.
No. **10.38901** Small
No. **10.38902** Medium

SPECIALTY ADHESIVES

1 DIAMOND SETTER'S CEMENT
Melted and applied to a wooden dowel, it securely holds bracelets and rings for setting. Measures 4" x 4" x 5/16".
No. **12.208**



2 CRYSTAL CEMENT
Provides excellent bond between plastic or glass watch crystal and bezel without flaking or cracking. Convenient tube with pin-point applicator.
No. **12.205**



3 SUC ROCKET CEMENT
Quality adhesive cement can be used on unbreakable crystal or foil back jobs. Pin point applicator ensures accurate dispensing.
No. **12.206**



4 3M™ FEATHERING DISC ADHESIVE TYPE 2
Pressure-sensitive adhesive holds firmly and peels away easily for quick interchange of discs.
No. **10.333**



5 SEALING WAX
Seals packages and envelopes securely and efficiently. Also excellent as a setters cement. Melting point 170°. Box contains four 1/4 lb. red sticks.
No. **12.225**

6 CHASER'S CEMENT
Melts easily and is used to attach items in boxwood slips for engraving. Can be cleaned with alcohol. Sold in bar form. Two 1/2 lb. bars per box.
No. **12.203**





7 SHELLAC STICKS
Use the opaque stick to set jewels and stones or to hold work temporarily. The transparent stick inconspicuously fills holes, dents, and scratches. Heat to apply. Sticks are 7" long.
No. **12.230** Opaque stick
No. **12.231** Transparent stick

8 ORANGE SHELLAC
Orange flake shellac holds objects for chasing, engraving, or setting. Heat to apply.
No. **12.227** 6 oz. container
No. **12.228** 5 lb. container







1



2



3



4



5



6



7



8



9


10

1 VIGOR® JEWELER'S EPOXY
For making and repairing jewelry. Will not shrink and is unaffected by water, oil or gasoline. Clear, permanent bond sets in 5 minutes. Withstands temperatures up to 175°F.
No. **12.0451**

VIGOR® SUPER GLUES

- Strong cyanoacrylate adhesive bonds any combination of metal, plastic, rubber, ceramic, or glass.
- Sets and cures rapidly at room temperature.
- Requires no surface treatment beyond cleaning.
- High resistance to chemicals and low temperatures.
- Bond is colorless and transparent with almost no shrinkage.
- Low viscosity ensures smooth spreading over entire bonding area using a minimum amount of glue.

45/60 Series-Setting time of 45-60 seconds

	No.	Size
2	**12.215**	2-Gram Tube
3	**12.216**	2-Gram Tubes - 5 Pk.
4	**12.217**	20-Gram Bottle
5	**12.218**	2-Gram Pen

10/20 Series-Setting time of 10-20 seconds

	No.	Size
6	**12.219**	2-Gram Tube
7	**12.220**	2-Gram Tubes - 5 Pk.
8	**12.221**	20-Gram Bottle

9 VIGOR® LIQUID LOCK NUT
Eliminates the need for lock nuts and washers. Locks, seals and secures. Prevents screws from loosening due to shock and vibration. Ideal for sealing against leakage and corrosion. Locked parts can easily be disassembled and used again. .20 fl. oz. plastic bottle.
No. **12.213**

MASCOT® INSTANT ADHESIVE

High performance, extended range cyanoacrylate adhesive bonds metals, most plastics, rubber, ceramics and glass. Requires only a clean surface. Bonds colorless and sets in about 30 seconds. Made in USA.

10 MASCOT® INSTANT ADHESIVE
Gel, No-drip formula fills gaps and is ideal for use on vertical surfaces. Supplied in 10 oz. tubes. Sold individually.
No. **12.214** Packed one dozen per ctn

Important! Cyanoacrylate-based adhesives are eye irritants and will also bond body tissue in seconds. Follow all label information and do not allow adhesive to contact skin or eyes. These adhesives must always be stored in a cool place. Keep out of the reach of children.

1 STEEL BENCH BLOCK
Supports work for flattening and laying out designs. Case-hardened. Ground flat and smooth.
No. **12.317** 2½" sq. x 1"
No. **12.319** 4" sq. x ¾"


1

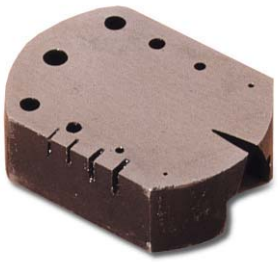
2 HORN ANVIL
Polished round and flat horns with hole in the top for riveting. Used for flattening and shaping.
No. **12.305** 4½" tip to tip, 1 3/16" wide, 1 5/8" high
No. **12.306** 4¼" tip to tip, 1" wide, 3½" high
No. **12.307** 8" tip to tip, 1¾" wide, 5" high


2

3 HORN ANVIL ON BASE
Used for flattening and shaping. Polished round and flat horns. Measures 3 7/8" from tip to tip across the horns and 2 5/8" high.
No. **12.301**

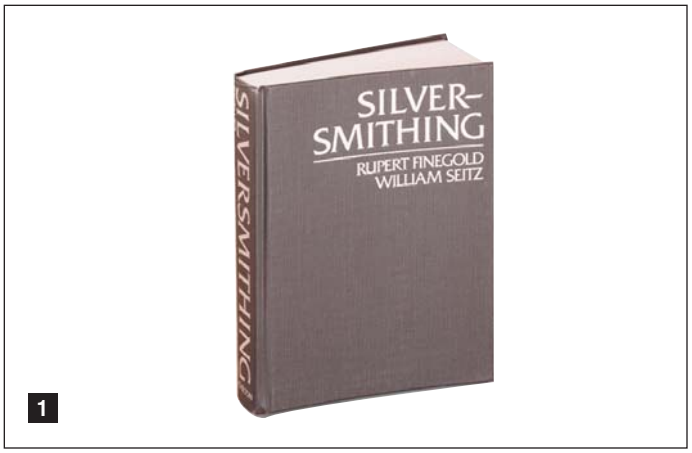

3

4 SLOT ANVIL
These anvils have a flat smooth case hardened surface and can be used as a base for staking, riveting and drilling small parts. V-slot is handy for removing pinions and similar items. Has 9 graduated holes, with one size for stumps, and 5 milled slots. Measures 1 3/4" long, 1 1/4" wide and 1/2" thick.
No. **12.315**


4

5 HEXAGON ANVIL
Has 16 holes, graduated from 3/64" to 1/4", and 5 milled slots. Measures 1 5/8" across the flat sides and 3/4" thick.
No. **12.312**


5



1

SILVERSMITHING

Silversmithing is the ancient art of shaping or raising metal from sheet form. For over 100 years, our silversmithing tools have had the reputation as the finest made, and their quality matches their reputation. Designed by silversmiths for silversmiths, as well as for students, these tools will provide a lifetime of service.

1 "SILVERSMITHING"
by Rupert Finegold and William Seitz.
The authors, experts in the field of silversmithing, include hundreds of details on how to form extraordinary work. Hard cover, 460 pages.
No. **62.501**


2


3

FORMING & RAISING STAKES

Raising is the technique of forming metal with hammers and stakes into the basic shape of the object being created.

2 DOME HEAD #1
For shaping small rounded objects such as ladles. Head diameter 2".
No. **12.501**

3 SPOON or LADLE HEAD #2
Primarily used for making spoons and ladles. Head $2\frac{3}{4}$" long, tapering from $2\frac{3}{8}$" width to blunt, rounded point.
No. **12.502**


4

4 COMBINATION #3
Anvil shaped, 10" long, with one cylindrical arm $3\frac{1}{4}$" long, $1\frac{3}{8}$" diameter, and the other arm 4" long and $1\frac{1}{2}$" wide. Flat top measures $2\frac{3}{4}$" x $1\frac{1}{2}$".
No. **12.503**


5


6

5 ROUNDED TOP with ANGULAR FACE #4
Head diameter $2\frac{1}{2}$".
No. **12.504**

6 CURVED ENDS #5
Overall length $7\frac{1}{4}$" with working faces $1\frac{3}{8}$" wide.
No. **12.505**

1 SLIGHT ROUND - INVERTED ROCKER #9
11 3/4" long with center width 1 1/2" tapering to 1 1/4" at tips.
No. **12.509**



1

2 SLIGHT ROUND - UNDERCUT END AND ROLLED END #10
11 3/4" long with center width 1 1/2" tapering to 1 1/4" at tips.
No. **12.510**



2

3 ANVIL SHAPE #12
For small conical and rectangular work. Length 12". Flat top 1 1/4" wide at center. Arms taper to 3/8".
No. **12.512**



3

4 KNOB ENDS #13
End widths are 1 1/8" and 7/8".
No. **12.513**


4

5 DEPRESSED #14
Horn shape, ideal for working depressed surfaces. 10" long x 1 1/4" wide.
No. **12.514**

6 STAKE #90
Used by makers of fine tableware. All working surfaces are highly polished. High dome for cups and ladles. 2 1/2" diameter x 2" deep.
No. **12.690**



5


6

For holder suitable for mounting these stakes, see No. 12.788 on page 33.

PLANISHING STAKES

Planishing occurs after completion of the forming stage. Choose the stakes below that conforms to the desired shape of the finished work. Using a lightweight hammer and starting at the middle, strike the piece with a steady pattern and work towards the edge. Each of these stakes has a highly polished, specially shaped working surface.





1 #19 SPOON STAKE
1 5/8" long x 7/8" wide at center.
No. **12.419**

2 #20 SLIGHTLY CURVED TOP
For slightly depressed curves. 1 3/4" long. Width tapers from 1 1/8" to 7/8".
No. **12.420**





3 #21 SHARPLY CURVED TOP
For greatly depressed curves. 2" long. Width tapers from 1" to 3/4".
No. **12.421**

4 #23 CURVED TOP
For planishing curved surfaces. 2 1/4" long. Width tapers from 1 3/8" to 1".
No. **12.423**





5 #25 CURVED TOP
For planishing curved surfaces. 2 1/4" long. Width tapers from 1 3/8" to 1 1/4".
No. **12.425**

6 #41 WEDGE SHAPED
For rolled-over edges. 1 1/2" high x 1 1/2" long x 1 5/8" wide.
No. **12.441**

For holders suitable for mounting these stakes, see No. 12.788 & 12.790 on page 33.

SPOON STAKES

1 INDIVIDUAL SPOON STAKES
For use in bench vise. Working surfaces are highly polished.
No. **12.583** #83 dessert spoon
No. **12.584** #83A coffee spoon
No. **12.585** #83B tablespoon
No. **12.586** #83C teaspoon


1

LARGE SPECIAL PURPOSE STAKE

2 STAKE #116
For forming cylinders, such as cups and jiggers, as small as 1" (25 mm) diameter. 14" (355 mm) long.
No. **12.716**


2

HEAVY ROUNDED PLANISHING STAKES
Use holder No. 12.717 listed below.

	No.	Type/Use	Diameter	Surface Radius
3	**12.712**	112/Small bowls	4" (102 mm)	3" (76 mm)
4	**12.713**	113/Large bowls	5½" (140 mm)	5" (127 mm)
5	**12.714**	114/Dishes and medium trays	3⅞" (98 mm)	—


3


4

STAKE HOLDERS

6 HOLDER for HEAVY ROUNDED PLANISHING STAKES #117
This is the only holder that takes type #112 to 115 stakes described above.
No. **12.717**


5


6

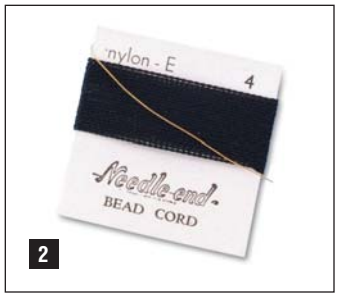
7 HOLDER for MOUNTING all STAKES and ANVIL HEADS
Holds all except the heavy rounded planishing stakes (Nos. 12.712 to 12.715) and the spoon stakes (Nos. 12.583 to 12.587). Measures 7¾" long x 4" wide (197 x102 mm) , with holes in the base for permanent mounting.
No. **12.788**


7

8 HOLDER ADAPTER
Fits into No. 12.788 holder for mounting small stakes and anvil heads. 6" (152 mm) high.
No. **12.790**


8





CHAMPION BEAD CORD

World renowned Champion trademark. Your creation deserves the finest, and for over 100 years, these premium bead cords have had that reputation. The sizes are consistent from batch to batch and those experienced in bead cord work appreciate their strength and ease of knotting.

1 WHITE CHAMPION SILK BEAD CORD on SPOOLS

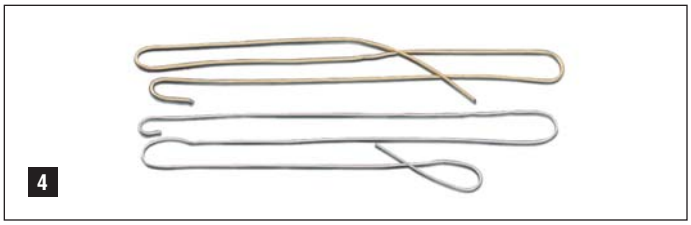
Convenient spools make bead stringing easier. Spools are 2/3 oz. with length varying with size of cord (thinnest size "A/1" is 630 yds. long, thickest "FFF" is 135 yds.

A/1	B/1½	D/2	E/4	F/5	FF/8	FFF
38.074	**38.075**	**38.076**	**38.077**	**38.078**	**38.079**	**38.083**



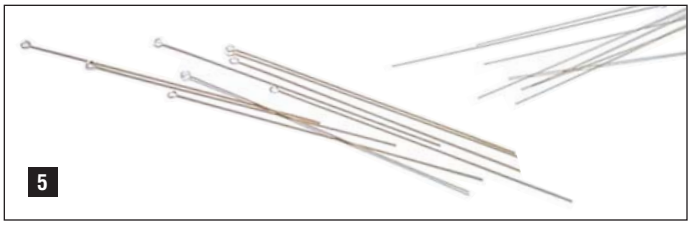
2 CHAMPION BLACK NYLON BEAD CORD on CARDS

72" (183 cm) of twisted nylon bead cord attached to bead needle and mounted on card.
No. **38.021** Size 4
No. **38.022** Size 8



3 STRING LINE CORD

Stainless steel nylon-coated cord. Can be knotted and tied, but cannot be cut by rough edges of drilled stones. 30' in length on spools.
No. **38.01001** .012" (.3 mm) Fine
No. **38.01003** .018" (.5 mm) Medium
No. **38.01005** .021" (.53 mm) Heavy



4 FRENCH WIRE

Sold in 11" lengths.
No. **38.01911** Gold-filled
No. **38.01912** Sterling silver



5 BEADING NEEDLES

50 needles per pack.

Brass:
No. **38.0907** Small
No. **38.0908** Medium
No. **38.0909** Large

Stainless Steel:
No. **38.0911** Small
No. **38.0912** Medium
No. **38.0913** Large



6 TRI-CORD™ REGULAR BEAD STRINGING KIT

Includes: Tri-Cord™ knotter (No. 38.01910); white silk thread (400 yds. of size E); tube of glue; thread snips; chain nose pliers; Tri-Cord™ "Professional Bead Stringing" video tape (No. 63.01513); 30 stainless steel beading needles-10 each of small, medium, large; 40 bead tips-20 each silver-plated and gold-plated; and french wire in gold-filled and sterling silver. Comes in a sturdy organizer case with detachable lid which can be used as a designing tray.
No. **38.01900**

7 TRI-CORD™ KNOTTING TOOL

An easy way to increase your bead and pearl stringing creativity.
No. **38.01910**

1 FINDINGS CRIMP

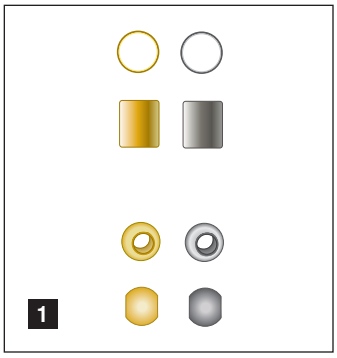
Crimp beads and tubes yield a secure and professional start and finish for beading designs. Use with bead crimping pliers No. 46.411. Pack of 12.

Tube

No.	Plating	Size	I.D. mm	O.D mm	Approcimate Piece Per Pack
15.144	Gold	#3	1.5	2.0	1280
15.145	Silver	#3	1.5	2.0	1280

Bead

No.	Plating	Size	I.D. mm	O.D mm	Approcimate Piece Per Pack
15.146	Gold	#2	1.5	2.5	800
15.147	Silver	#2	1.5	2.5	800


1

2 PLASTIC BOTTLES with PLASTIC TOPS

Perfect for storing parts. Sold by the dozen.
No. **15.112** 15/32" x 1 7/32"
No. **15.113** 5/8" x 1 1/2"


2

3 PLASTIC VIALS with CAPS

Made of crystal clear plastic which will not cloud. Sold by the dozen.
No. **15.0234** 1 1/4" x 3/8"
No. **15.0241** 4" x 1/2"
No. **15.0254** 3" x 1/2"
No. **15.0255** 2 1/8" x 5/16"


3

4 GLASS BOTTLES with SCREW TOP

Ideal for storing small parts. Measures 19/32" x 1 13/16". Sold by the dozen.
No. **15.108**


4


5

5 PLASTIC BOXES with COMPARTMENTS

For storing abrasives, small parts and mandrels.

No.	Dimensions	Compartments
15.136	4 3/8" x 2 5/8" x 1"	6
15.137	8 1/4" x 4 1/4" x 1 1/4"	12
15.139	10 3/4" x 6 3/8" x 1 3/4"	18
15.140	8 1/4" x 4 1/8" x 1 1/4"	18

6 SMALL PLASTIC BOXES

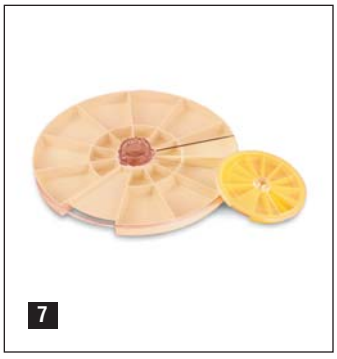
Great, inexpensive way to store parts safely.

No.	Dimensions
15.128	1 7/8" x 1 7/8" x 3/4"
15.129	1 1/8" x 1 1/8" x 3/4"
15.130	1" x 1" x 3/4"
15.131	1" x 2" x 3/4"
15.132	2" x 2" x 3/4"


6

7 SMALL PARTS TRAYS with COMPARTMENTS

Sliding top opens one compartment at a time so parts will not spill or mix.
No. **15.610** 20 compartments w/a 7 1/2" diameter
No. **15.611** 12 compartments w/a 3 1/2" diameter


7

8 STACKABLE ROUND TRAY (Set x6)

Trays have threaded bottoms that securely screw to the tray below allowing access to any tray at any level. Translucent plastic. Each tray measures 1" in height and 2" in diameter.
No. **15.148**



8

9 SORTING TRAYS

Sort pearls, stones, findings, etc. Trays have grooves to assist stringing and round indentations for size sorting. Measures 7" x 3 3/4".
No. **38.102** White for dark colors
No. **38.103** Black for light colors


9



1 PEARL and STONE TRAY

This holding tray will secure all your pearl and stones in one area.
No. **38.106** Plastic, measures 3½" x 2"



2 BEAD STRINGING BOARDS

Used to align beads prior to stringing. Grooves are perfectly spaced for organizing work.
No. **38.100** Plastic, measures 14½" x 4"
No. **38.105** Plastic, measures 8¾" x 13¼"
No. **38.01287** Wood, measures 22" x 4"
No. **38.116** Plastic, measures 12¼" x 8⅞" w/6 compartments
No. **38.117** Plastic, measures 20⅝" x 7½" w/6 compartments
No. **38.118** Plastic, measures 20⅝" x 7½" w/3 compartments



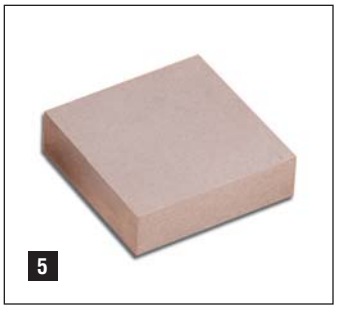
3 SHOVELS with HANDLES

Excellent for handling diamonds, pearls and other precious gemstones.
No. **51.095** Nickel-plated with chrome finish
No. **51.0552** Non-reflective black finish
No. **51.096** Bead Scoop
No. **51.099** Tweezer with shovel



4 NYLON HAMMERS

Faces can be changed to provide any combination desired and can be replaced when worn. Supplied with two different faces and wrench to tighten or remove collars.
No. **37.536** 9/16" face



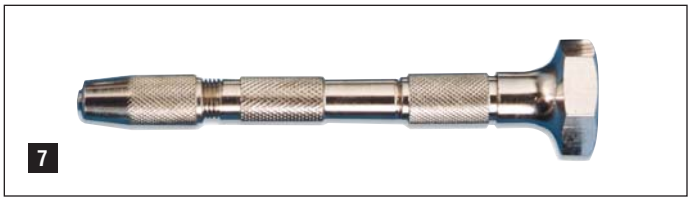
5 STEEL BENCH BLOCK

Supports work for flattening and when laying out designs. Case-hardened. Ground flat and smooth.
No. **12.317** Measures 2½" sq. x 1"
No. **12.319** Measures 4" sq. x ¾"



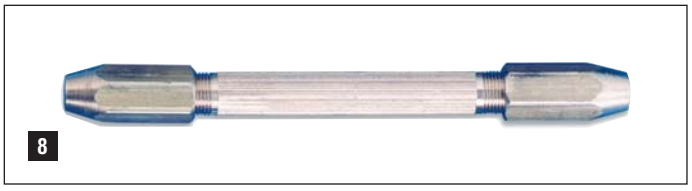
6 HORN ANVIL ON BASE

For flattening and shaping. Has polished round and flat horns. Measures 3⅞" from tip to tip across the horns and 2⅝" high.
No. **12.301**



7 SWIVEL HEAD PIN VISE

With large free wheeling head, making it suitable for drilling, tapping, using as a screwdriver, etc. Comes with two double-ended collets, one in screw chuck and the other stored in the handle. Capacity 0 to .125", overall length 3½".
No. **58.221**



8 DOUBLE-ENDED PIN VISE

Reversible steel collets in each end and hexagonal heads prevent rolling. Hollow handle and heads made of brass. Capacity is 0 to .125", overall length 4⅛".
No. **58.240**

1 WOOD RING CLAMP
Quality wood clamp with leather-lined jaws for holding rings and other pieces. One side is rounded, the other is squared off. Wedge can be driven into either end to close the other jaw tight.
No. **48.125**

2 WOOD HOLDER FOR BEADS
Will not scratch beads. Securely holds beads during cleaning and drilling. 7" overall length
No. **57.9000**

3 PLASTIC RING STICK
Graduated in quarter sizes from 0 to 15. Economical, rigid plastic with groove for stone set rings.
No. **35.0194A**

4 FINGER GAUGE
Half-round.
No. **35.260**

5 BANGLE BRACELET GAUGE
No. **35.270**

6 POCKET SLIDING GAUGES
Combination inch and millimeter gauges. Capacity 3". Graduations by 1/16ths and 1.0 mm.
No. **35.156** Brass

7 STONE GAUGE
Aluminum pocket gauge for measuring loose stones and settings ranging from .03 points to 4 carats. A birthstone chart is embossed on the reverse side.
No. **35.562** Stone gauge

8 MILLIMETER GAUGE
Calibrated in 0.1mm, capacity 0 to 10mm. Used for measuring stones, beads, pearls, as well as thickness of glass.
Packaged in hard plastic case
No. **35.096**

9 SCREWDRIVER
Precision screwdrivers with hex shaped heads, heat treated blades range from size .80 to 2 mm. Set of 6 in plastic pouch
No. **52.320**

10 NEEDLE FILES, Set of 6
Genuine swiss needle file set at economy prices. Great for shaping metal and waxes.
No. **LAT0140**

11 STEEL SCRATCH BRUSH with WOOD HANDLE
With four rows of lightly crimped .003" (.08 mm) wire. Brush is 4 1/2" L x 3/4" H. Overall length 8 1/4".
No. **16.350**

12 PEER® PEARL-HOLDING TWEEZERS
Tips are cup-shaped to hold small round objects. Overall length 4 1/2".
No. **57.641**

13 ECONOMY PEARL-HOLDING TWEEZERS
Provides easy way to hold, select or examine pearls or any round stone. Nickel-plated steel. Overall length 4" .
No. **57.0345**





1 BEAD TWEEZER
No. **57.0346** 6 1/4"



2 PATTERN AA-STAINLESS STEEL
For assembly, inspection, sorting, soldering, etc. of small parts. A non-glare black oxidized finish is available in this pattern and solder will not adhere to this finish. Overall length 4 3/4" (121 mm).
No. **57.0738**



3 PATTERN NO. 5
Similar to pattern No. 4, except but has very narrow needle-like points. Overall length 4 1/2" (114 mm).
No. **57.0755** Stainless Steel



4 KNOTTING TWEEZERS
For holding and tying knots. Length 4 1/4" (108 mm).
No. **57.821**



5 BEADING AWL STAINLESS STEEL
Knotting needle for beading.
No. **15.180** 5 3/4"



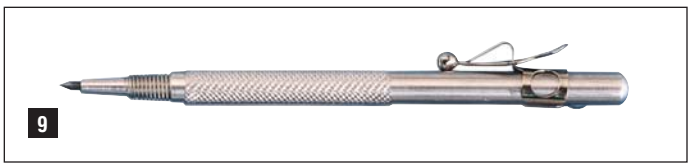
6 BEAD STRINGING AWL
Designed to slide a knot down into the bead tip or between two beads. Also useful for cleaning holes.
No. **38.330**



7 BEAD REAMER SET
Set of 3 high quality diamond tip reamers. For enlarging, deburring and rounding out bead holes. 1 large reamer, 1 small reamer and 1 45° angle reamer. (replacement tips sold separately)
No. **15.181**



8 REPLACEMENT DIAMOND REAMER TIPS
No. **15.182** Small
No. **15.183** Large
No. **15.184** 45° angle



9 WALLER SCRIBER W/ CARBIDE TIP
Ends are reversible so that point is covered while carrying.
No. **52.950**



10 SLIM BLADE BURNISHERS
Especially useful for jewel settings. Blade 2" (51 mm) long.
No. **18.058** Curved blade
No. **18.059** Straight blade

1 CRYSTAL CEMENT
The needle-like applicator tip puts small amounts of cement where it's needed. Prevents bead cord from fraying. 1 oz. tube.
No. **12.205**



1

2 EPOXY 330
EPOXY 330 is a water clear epoxy system. Good for assembly of stones to metal findings. EPOXY 330 has a fast setting time. Will harden in about 1 hour at room temperature and in about 10 minutes under a heat lamp.
No. **12.210**



2

3 VIGOR® SUPER GLUE
Strong ethyl adhesive bonds any combination of metal, plastic, rubber, ceramic, or glass.
No.**12.215** 2 Gram (.07 fl oz.) tube



3

4 SYNTHETIC BEESWAX
When rubbed on surface, leaves a film on which design can be marked. Also used as a lubricant for sawblades and wire drawing.
No. **26.100** 1 oz. (28 g) tube



4

PLIERS

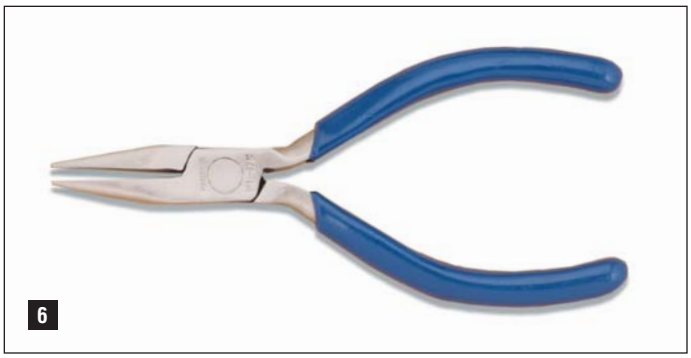
5 GROBET USA™ FOAM GRIP BOX JOINT PLIERS
Top quality box joint construction - smooth, non-mar jaws. Brushed satin finish and double leaf spring return. Foam grip comfort handles. Overall length is 4 3/4".

No.	Description
46.080	Chain nose
46.081	Round nose
46.082	Flat nose
46.083	Bent chain nose
46.084	Side cutter


5

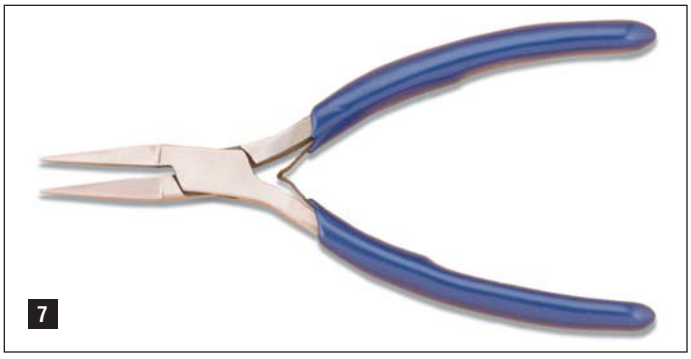
6 PRIDELINE® LAP JOINT PLIERS
Good quality carbon steel work pliers have smooth jaws with polished heads to prevent marking on soft metals and cushion grip handles. Overall length is 4 1/2".

No.	Description
46.0170	Flat nose
46.0175	Chain nose
46.0180	Round nose
46.0185	Side cutter


6

7 GROBET USA™ ECONOMY SLIMLINE PLIERS
Box joint construction polished heads and double leaf spring return. Plastic grip handles. Overall length is 4 1/2".

No.	Description
46.421	Chain nose
46.422	Round nose
46.423	Flat nose


7



8

8 SHEAR CUTTERS
This economical shear-action cutter is indispensable for anyone involved with bead stringing. It easily cuts regular bead cord and "Tigertail." Comfortable grip handles. Overall length is 4 1/2".
No. **46.573**



1 WIRE LOOPING PLIERS
Three tier design for forming three loop sizes. Lower jaw concave and fits over looping jaw to allow for easy bending. Overall lenght 5"
No. **46.070**



2 ROSARY PLIERS
Conbination round nose and side cutter. Use for making loops, bends and cutting wire without changing tools. Overall length 5 1/4"
No. **46.071**



3 FORMING PLIERS, SMALL ROUND/FLAT
Small round/flat-nosed pliers for light duty work. Overall length is 4 3/4".
No. **46.371**



4 CURVE NOSE PLIERS
Plier with bend nose to allow better visability and to reach into tight places. Overall length 4 1/2"
No. **46.072**



5 LOOP CLOSING PLIERS
Jaws are shaped and smoothly finished to close loops, jump rings, bracelet links, bows, etc., without distorting or scratching. With box joint and cushion grip handles. Overall length is 4 1/2" (114 mm).
No. **46.0057**



6 BEAD CRIMPING PLIERS
A revolutionary low cost hand tool that allows you to form smooth, unobtrusive crimps. Eliminates the unsightly sharp-edged crimps that result from traditional methods. Works equally well with either round or tube crimps. Length is 5 1/2" (130 mm).
No. **46.411**

1 WOODEN PLIER RACK with DRAWER

Has slots for seven pliers, shelf for miscellaneous small tools and a handy storage drawer. Varnished natural finish. Measures 6" x 5" x 7½" (152 x 127 x 191 mm).
No. **13.376**



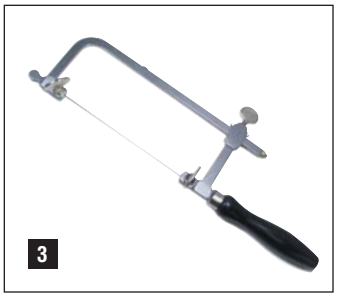
2 WOOD HOLDER for PLIERS

Economy hardwood racks for organizing your pliers. Holes are beveled for easy in-and-out handling. Felt pads on bottom.
No. **13.385** 3-Plier holder
No. **13.386** 6-Plier holder
No. **13.387** 8-Plier holder



3 SAW FRAMES

For use with piercing, flat and spiral sawblades. Serrated clamps hold blades firmly. Strongly constructed with flat steel frames, hardwood handles and thumb screw locking devices.
No. **49.703** 3"
No. **49.704** 4"





4 FLAT SAW BLADES

		Thickness		Width	
No.	Size	(in)	(mm)	(in)	(mm)
49.206	6	.0080"	0.20	.0590"	1.50



5 SHARP POINT BEAD STRINGING SCISSORS

For reaching into tight places to snip cord. Length 3½" (89 mm).
No. **53.201**



6 MICRO SNIP

The perfect tool for bead stringing and thread snipping. Well-tempered steel with very sharp edges. Unique reflex action makes light work fast and easy. Length is 4" (102 mm)
No. **46.555**



7 THREAD SNIPS

Easily cut cord and snip apart knotted strands before restringing. Length 4½" (114 mm).
No. **53.01400**



8 SPEEDY WAX PEN

Battery-operated, all-purpose wax pen. Instant heat with fingertip pressure control. Design or repair wax models with specially shaped interchangeable micro-tips. Cover protects tip and power switch. Includes AA-1.5V alkaline battery and one micro-tip.
No. **21.260**



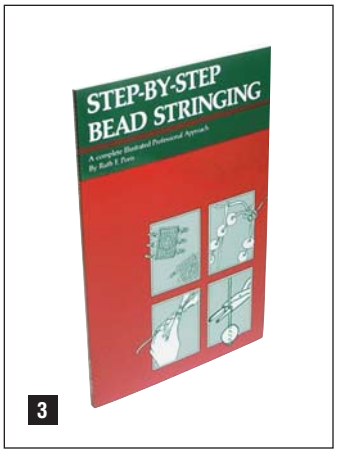
1 GROBET USA™ 10X MAGNIFIERS

Though only a single lens magnifier, the special construction with a grooved diaphragm around its circumference, gives a good, distortion-free definition of the object being viewed.
No. **29.665** Chrome
No. **29.666** Black Satin
No. **29.667** Gold



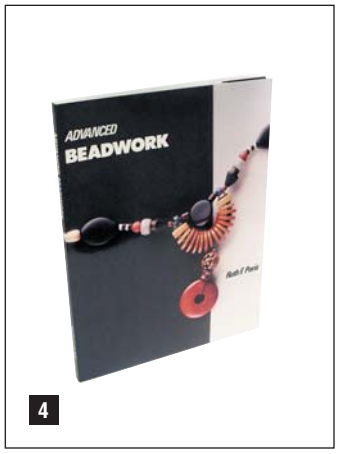
2 MIRROR

Adjustable to any angle.
No. **15.175** Adjustable frame, 6¼" x 14½"
No. **15.176** Brass trim Single- sided mirror, 12" x 16"



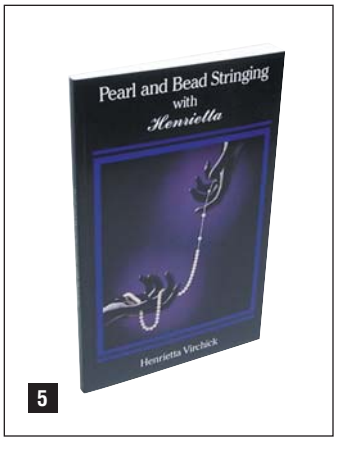
3 STEP-BY-STEP BEAD STRINGING

By Ruth F. Poris
Describes basic tools, supplies and findings for bead stringing and describes in detail the techniques necessary to string multiple strands, endless strands and plain strands. Soft cover, 45 pages.
No. **62.463**



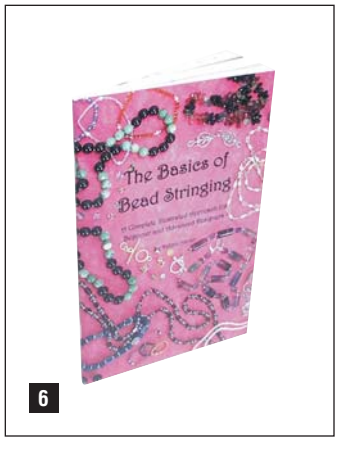
4 ADVANCED BEADWORK

By Ruth F. Poris
With over 300 illustrations and photographs. A perfect book for teachers or individuals having an interest in beadwork. Soft cover, 146 pages.
No. **62.466**



5 PEARL and BEAD STRINGING with HENRIETTA

By Henrietta Virchick
Step-by-step demonstrations enable you to create genuine, precious and semi-precious jewelry, or restring pearls and beads quickly and easily. Included are various beading techniques such as finger knotting and using tools correctly. Contains many illustrations and color photographs of finished products. Soft cover, 78 pages.
No. **62.01453**

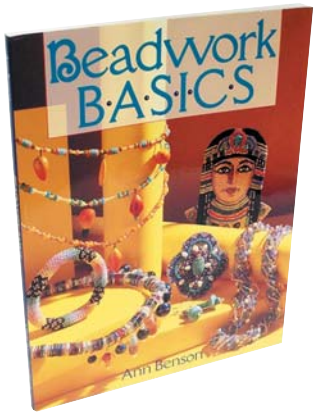


6 THE BASICS of BEAD STRINGING

By Debby Kanan
Well illustrated, completely updated, including: tools, bead selection, stringing materials, getting started, hand knotting a necklace and helpful tips. Illustrations are life sized and very easy to follow.
Soft cover, 48 pages.
No. **62.465**

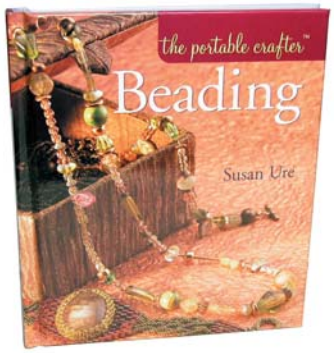
BOOKS & VIDEOS

1 BEADWORK BASICS
By Ann Benson
This book will help you discover the infinite potential of beadwork in a wide variety of jewelry and accessories. Includes 29 projects, each shown in a gorgeous, full-color photograph. Soft cover, 128 pages.
No. **62.468**



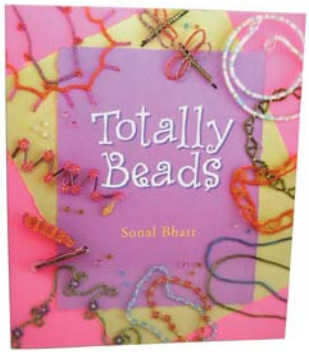
1

2 BEADING, THE PORTABLE CRAFT
by Susan Ure
This book contains quick and easy projects that can be completed anywhere. Create bracelets, pins, earrings and more!
No. **62.508**



2

3 TOTALLY BEADS
by Sonal Bhatt
Beaded projects that are fun, fashionable and easy to make. This book is great for any beginner or teenager interested in beading.
No. **62.509**



3

4 VIDEOS

Tri-Cord™ Professional Bead Stringing
An instructional video tape demonstrating use of the Tri-Cord™ knotting tool. Running time: 30 minutes. See our Tri-Cord™ knotting tool and kits on page 23.
No. **63.01513**

Pearl and Bead Stringing with Henrietta
Henrietta Virchick teaches you how to make a beautiful mother-of-pearl necklace and bracelet. You are given step-by-step instructions on various techniques for creating genuine, precious and semi-precious high fashion jewelry. Useful for beginners or experienced craftsmen. Running time: 50 minutes.
No. **63.1514**


4

GROBET USA™ JEWELER'S WORKBENCHES

- Built to the standards demanded by professional jewelers
- Designed with the features of the repair shop bench
- Sturdy, durable construction
- For jewelers, watchmakers, engravers, hobbyists, technicians



1 GROBET USA™ HEAVY DUTY JEWELER'S WORKBENCH

Sturdy well-designed bench. Helps provide comfort and increased productivity. A lip around three sides keeps articles from falling off. Three draws for storage, pull-out tray with two shelves, two arm rests and a plastic laminate lined catch drawer. Full skirt provides privacy. Shipped fully assembled. Solid hardwood top measures 39" W x 19 1/2" D x 39" H. Made in USA. Shipping weight 95 lbs. Must ship by motor freight only.
No. **13.044**



2 PROFESSIONAL JEWELER'S WORKBENCH

Built to the standards demanded by professional jewelers and designed with all the features for the repair shop bench. Sturdy finger-joint construction for durability. 1 1/4" high lip surrounds top on three sides to prevent parts from rolling off. Two sturdy, removable arm rests and extra dowel holes for a more comfortable working position. Three 10" wide side drawers with furniture-finish pulls provide storage space for tools, parts or materials. Tool slide rack to store instruments out of the way when not in use. Extra retractable work surface extension between armrests, 10" W x 15"L x 1" thick. Lined lap tray to recover precious metals. Easy assembly with only ten screws. Overall dimensions are 37 1/8" W x 18 1/2" D x 36 1/2" H. Made in USA. Shipping weight 96 lbs.
No. **13.042**
No. **13.042S** Security drawer



3 GROBET USA™ WATCHMAKER'S WORKBENCH

Designed for watchmakers, jewelers, engravers, hobbyists and technicians. Beautifully finished in natural wood on three sides, suitable for storefront use. Safety groove across the front of the hardwood surface and a ledge on three sides prevent parts from rolling. Top surface has three coats of polyurethane. Features eye-level work area, 15 drawers in assorted sizes and a catch-all tray with a heavy canvas covering. Measures 39 1/4" W x 21 1/2" D x 37 1/2" H. Made in USA.
Shipping weight 126 lbs.
No. **13.047**



4 CUSTOM DELUXE JEWELERS BENCH

Well-constructed hardwood work bench features a recessed metal plate top. The bench is complemented with three storage drawers and two aluminum catch trays. Includes a slide out work platter and is pre-drilled for mounting mandrels. Supplied with a slot for a bench pin. Measures 36 1/2" W x 24 1/4" D x 38" H. Made in the USA. Shipping weight 130 lb.
No. **13.051**

NOTE: We recommend shipping work benches via motor freight.

1 GROBET USA™ SINGLE STATION WORKBENCH
Designed to meet the special needs of the jewelry craftsman. Work surface has a 1 1/2" high lip on three sides. Sturdy metal legs, two arm rests, bench pin, spacious tool drawer and metal-lined lap tray are ideal for any professional. Measures 32 1/2" W x 17" D x 34" H. Made in USA. Shipping weight 68 lbs.
No. **13.020**



2 GROBET USA™ DOUBLE STATION WORKBENCH
Similar to No.13.020 but with 2 workstations. Measures 61 1/2" W x 16 1/2" D x 33 5/8" H. Must ship by motor freight. Shipping weight 104 lbs. Made in USA.
No. **13.021**



3 GROBET USA™ SINGLE STATION WORKBENCH
Extra storage space and reduced size make this bench perfect for those with limited space. Comes with 3 tool drawers and a metal-lined lap tray. The plastic laminate top is sturdy and easy to clean. The bench measures 28" W x 20" D x 36" H. Made in USA. Shipping weight 110 lbs.
No. **13.049**



BENCH CHAIRS

4 JEWELER'S BENCH CHAIR
Conventional, comfortable chair offers stability heavy-duty performance. The gray, five-legged, plastic base moves smoothly on casters. Height is manually adjustable from 17" to 21 1/2". Shipping weight 22 lbs.
No. **13.060**



5 WORKBENCH STOOL
Full-size casters provide great mobility at your workbench. Adjustable, large diameter vinyl seat is well-padded for all day comfort. Height adjustable from 18 1/2" to 25". Shipping weight 13 lbs.
No. **13.063**




1


2

1 BENCH FILING BLOCK
Provides a 3 1/4" extension of the work bench. Consists of rubber block, iron frame and chilled steel anvil. Overall length 5", width 2 1/4".
No. **13.200**
No. **13.201** Extra rubber block

2 BENCH PIN FOR RINGS
Shaped to hold rings. Easily screws to the top of your bench. Convenient slot has a channel for sawblades. Measures 5 1/2" x 1/2" x 3/8".
No. **13.303**


3


4

3 BENCH PIN for RING CLAMP
With hole to accommodate ring clamp with lip, No. 48.130.
No. **13.0202**

4 WOOD BENCH PINS
Fits into slot in your work bench. Use as support when filing, sawing, setting, etc.

No.	Size
No. **13.300**	5 1/4" x 2 1/8"
No. **13.301**	6 1/4" x 2 1/2"
No. **13.302**	7" x 2 1/2"


5


6

5 BENCH PIN in METAL HOLDER
Easily screws to edge of your work bench. Thumb screw locks in wood bench pin No. 13.300 supplied. Measures 4" wide.
No. **13.320**

6 V-SLOT BOARD and CLAMP
Use as support for filing, sawing, and drilling. Clamp fits any work surface up to 2" thick. Board measures 7 1/2" L x 2 1/2" W.
No. **13.361** Board and clamp
No. **13.362** Extra board


7


8

7 ENAMELED FIBERBOARD BENCH PLATE
Part-catching groove on all four sides. Will not warp.
Measures 9" W x 16" L.
No. **13.0183**

8 COMBINATION BENCH PIN and ANVIL
Use for support to flatten pieces or lay out work. Flat anvil is smoothly finished. Adjustable clamp enables you to use it on benches up to 2" thick. Anvil accepts bracelet mandrel. No. 43.052 (not included). Wood bench pin measures 1 3/4" W x 4" L.
No. **13.325**
No. **13.327** Extra bench pins

TOOL HOLDERS

Tools shown on this page for illustration purposes only.

1 MAGNETIC TOOL HOLDERS

Permanent magnets hold pliers, screwdrivers and many other tools in place. Available in three sizes. Mount on any surface that will support screws and weight of tools.

No. **13.380** 12" long
No. **13.381** 18" long
No. **13.382** 24" long


1

2 RUBBER BENCH BLOCK

Hard rubber is perfect for filing, detail work, and all jobs requiring a firm, but forgiving surface. Will not slide. A handy accessory for any workbench. Measures 4" x 4" x 1".

No. **13.500**


2

3 SCREW CATCHER

Magnetic pad prevents dropped stainless steel or other ferrous screws, nuts, or parts from bouncing and rolling. Will not slip or slide. Does not reflect light. Measures 10" x 12".

No. **61.199**

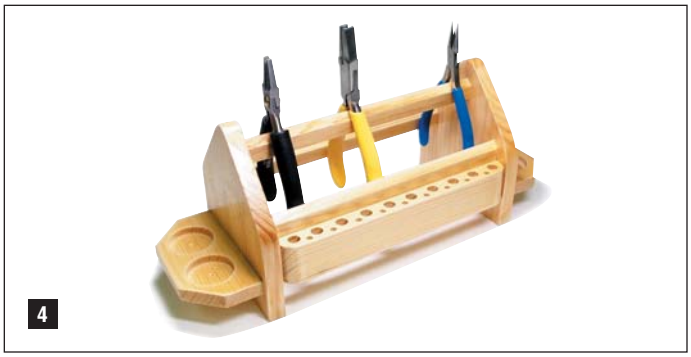

3

RACKS FOR PLIERS

4 WOODEN PLIERS RACK

This rack features a 7 1/2" bar area for easy accessibility to your favorite pliers. Two "tray extensions", each with two round depressions, for holding small parts or bits of solder. Ten 1" deep openings as wide as a pencil, that hold short solder wires or small jewelers screwdrivers. The additional nine drilled holes hold burs. Measures 12 1/2" L x 4 1/2" H x 4 5/16" W.

No. **13.370**


4

5 WOODEN PLIERS RACK with DRAWER

Has slots for seven pliers, shelf for miscellaneous small tools and a handy storage drawer. Varnished natural finish. Measures 6" x 5" x 7 1/2".

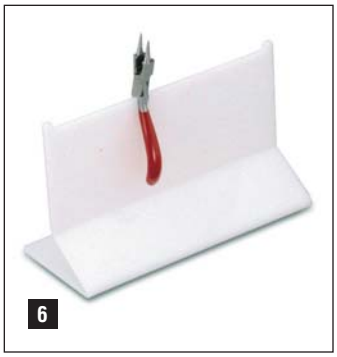
No. **13.376**


5

6 WHITE PLASTIC PLIERS RACK

White plastic with edges specially designed for safety. Keeps pliers organized, accessible, protected and easy to identify. Measures 5" x 5 1/2" x 9".

No. **13.377**


6

7 ACRYLIC TOOL HOLDER

Durable, clear acrylic holder is designed to keep all of your tools organized, accessible and protected. Five vertical pockets, a 12-hole shelf, and an angled pliers rack. Stands on bench or hangs from wall. Measures 12" x 5" x 7 3/4".

No. **13.379**


7

BENCH KNIVES



1 HEAVY DUTY BENCH KNIFE
Blade is firmly set in hardwood handle. Available in two lengths.

	Blade Length		Overall Length	
No.	(in)	(mm)	(in)	(mm)
39.105	1¾"	44	5¾"	146
39.110	2⅝"	67	6⅝"	168



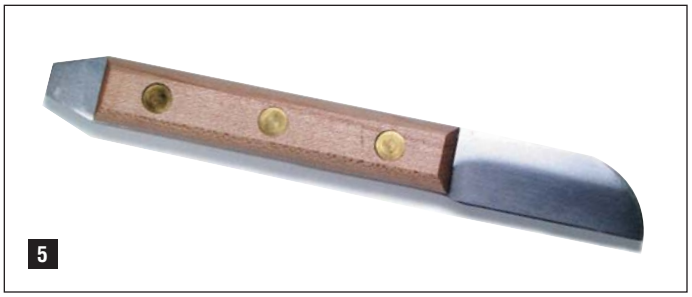
2 NO.7 SLOYD BENCH KNIFE
Hardwood handle. Plaster or compound knife. Overall length 5½", blade length 1¾".
No. **39.112** Carbon steel blade
No. **39.114** Stainless steel blade



3 SLOYD BENCH KNIFE
Heavy-duty bench knife with thick steel blade securely mounted in heavy hardwood handle. Overall length 5½", blade length 1⅝".
No. **39.0626**



4 MEDIUM DUTY BENCH KNIFE
Has slim 1¾" blade set firmly in hardwood handle. Overall length 5".
No. **39.180**



5 NO.10 GRITMAN PLASTER KNIFE
Overall length 7", with 2½" blade and blunt pry on opposite end.
No. **39.190**



6 BENCH KNIFE
Handy, all-purpose knife with sharp, well-tempered blade firmly mounted in hardwood handle. Overall length 5", blade length 1¾".
No. **39.104**

All knife blades above are exceptionally sharp. Use extreme caution.

MOLD TRIMMING KNIVES

1 MOLD CUTTING KNIFE HANDLES
Surgically sharp blades fit into comfortable plastic or metal handles. Widely used for cutting rubber molds.
No. **39.256** Stainless steel handle only
No. **39.257** Plastic handle only

Replacement Swann-Morton™ Knife Blades:
Carbon steel. Sold by box of 100.
No. **39.261** Straight #11
No. **39.262** Curved #12



1

2 LIGHTWEIGHT KNIFE with THREE BLADES
All-purpose, exceptionally sharp blades excellent for cutting patterns. Includes one #16 and two #11 blades.
No. **39.250**

Replacement Knife Blades:
Each style sold by pack of five.
No. **39.253** Style #11
No. **39.254** Style #16



2

3 CRAFTSMEN KNIFE & TOOL SET
28-piece set in handsome wood chest with molded storage trays. Contains lightweight knife, medium-weight knife, heavy-duty knife, awl, miter box, razor saw, sander, screwdriver and 20 assorted blades.
No. **39.268**



3

4 CRAFTSMEN KNIFE SET
13-piece set contains three knives plus ten assorted extra blades. Knives are lightweight, medium-weight and heavy-duty. The blades include one each of #'s 16, 19, 24, and 25 and two each of #'s 11, 22, and 23. Packed in a plastic case.
No. **39.267**



4

All knife blades above are exceptionally sharp. Use extreme caution.

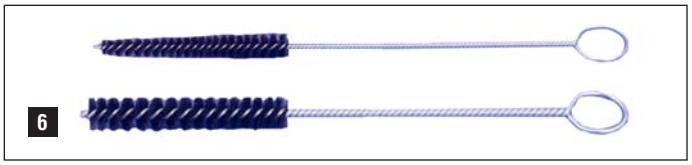








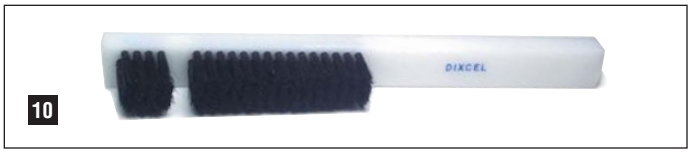


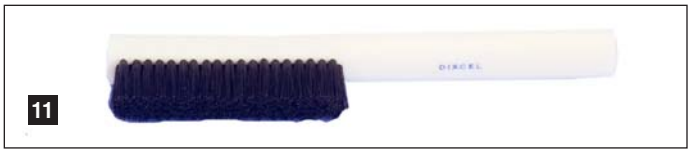












GROBET USA™ BRUSHES

1 BENCH DUSTER
Four rows of soft black bristles set in a wood handle. Suitable for sweeping filings and general purpose work. Overall length 9 1/2", brush length 4", brush height 1 3/8".
No. **16.051**

2 DRAFTSMAN'S BENCH DUSTER
14 1/2" overall length provides easy access to all wide table areas. Brush portion measures 8" long with one row of 2" high soft black bristles.
No. **16.055**

3 DUSTING BRUSH
Soft camel hair brush to remove dust from delicate surfaces. Wood handle. Overall length 4 1/4".
No. **16.060**

4 PLATER'S BRUSH
Ideal for removing polishing compositions from large pieces and plated work. Overall length 13", brush length 5 3/4", brush height 1".
Four rows of extra stiff tampico bristles (may vary in shade).
No. **16.069**

5 HAND and FINGERNAIL SCRUB BRUSH
Extra stiff white nylon bristles in a 3 1/2" x 1 1/2" block.
No. **16.076**

6 TWISTED WIRE BRUSHES
Designed for tube and handpiece cleaning. Overall length 8 5/8".
Extra stiff horsehair bristle is 3" long.
No. **16.080** Tapered ½" to ¼" diameter
No. **16.081** Straight ½" diameter

7 WOOD HANDLE WASHOUT BRUSH
Four rows of stiff natural bristles 3 1/2" long, 3/4" wide. Overall length 8 1/4".
No. **16.086**

8 WOOD HANDLE WASHOUT BRUSH
Four rows of stiff bristles 2 1/8" long, 5/8" wide. Overall length 8 1/4".
No. **16.087**

9 SMALL WOOD HANDLE WASHOUT BRUSH
For cleaning inside confined areas. Three rows of extra stiff bristles are 1 7/8" long, 3/8" high. Overall length 6".
No. **16.088**

10 PALATE CLEANING BRUSH
Specially designed with cutout to reach over periphery to palate interiors. Brush length tapers from 3/4" to 5/8". Clear handle.
No. **16.093**

11 PLASTIC HANDLE WASHOUT BRUSHES
Available with natural or stiff nylon bristles. Bristles measure 3" long and 1/2" wide. Overall length 7 1/2"
No. **16.095** 4 rows of natural bristles
No. **16.097** 3 rows of natural bristles
No. **16.098** 4 rows of nylon bristles

GENERAL CLEANING BRUSHES

1 BENT PLASTIC HANDLE WASHOUT BRUSH
Four rows of nylon bristles 1 3/4" long, 1/2" wide.
Angled lucite handle. Overall length 6 3/4".
No. **16.099**

2 WOOD HANDLE HAND BRUSH
Multi-purpose cleaning and dusting brush has 4 rows of medium-hard bristles 4 1/2" in length. Overall length 10 1/2".
No. **16.0562**

3 CLOCK and INSTRUMENT CLEANING BRUSHES
Bristle are available in varying degrees of hardness for cleaning and dusting clocks, instruments and parts. Bristles measure 4 1/2" long, 5/8" deep. Overall length 10 1/4".
No. **16.110** Hard for extra heavy grit
No. **16.111** 1/2-hard for general cleaning
No. **16.112** 1/2-soft for more delicate parts
No. **16.113** Soft for removing dust

HAND SCRATCH BRUSHES

4 STEEL SCRATCH BRUSH for CLEANING BURS
These uniquely designed brushes provide fast and easy cleaning of burs. Wire is firmly bound in plastic tubing which serves as a handle and can be cut away to expose more wire. 3" long.
No. **16.339**

5 STEEL SCRATCH BRUSH in HOLDER
Wood handle provides comfortable grip for bur cleaning. Has fine steel wire bound in plastic. Overall length 5".
No. **16.340**

6 BRASS SCRATCH BRUSH with PLASTIC HANDLE
Brush has four rows of .003" wire and is 3 1/4" L x 3/4" H.
Overall length 7 1/4".
No.**16.311**

7 BRASS SCRATCH BRUSH with WOOD HANDLE
Brush has four rows of .003" wire. Brush is 3 1/4" L x 3/4" H.
Overall length 8 1/4".
No. **16.310**

8 PLATER'S BRASS SCRATCH BRUSH
Brush has four rows of .004" wire and is 4 3/4" L x 1" H. Extra long 13" wood handle.
No. **16.313**

9 STEEL SCRATCH BRUSH with WOOD HANDLE
Four rows of lightly crimped .003" wire. Brush is 4 1/2" L x 3/4" H. Overall length 8 1/4".
No. **16.350**

10 DOUBLE-SIDED BRASS SCRATCH BRUSH
For cleaning work before soldering. Brass wire bristles are approximately 1 3/4" long and bound in metal holder.
No. **16.305**

11 FIBERGLASS BUR CLEANING/SCRATCH BRUSH
Removes rust and dirt from metal surfaces and polishes. Fine glass bristles are mounted in a plastic case. Bristles can be screw-fed as they wear down. Bristles measure 1/2" x 3/16".
No. **16.332**
No. **16.333** Set of 2 refills

12 GLASS BRISTLE SCRATCH BRUSH
Removes rust and dirt from metal surfaces. Fine glass bristles are bound in cord to unwind as bristles wear down. Length 7", diameter 1/2".
No. **16.334**



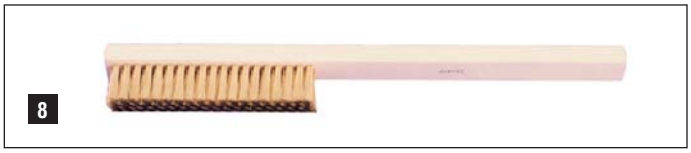






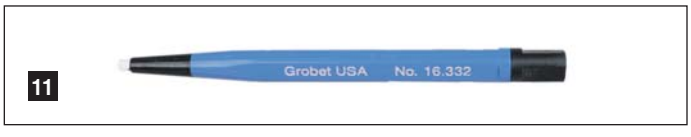


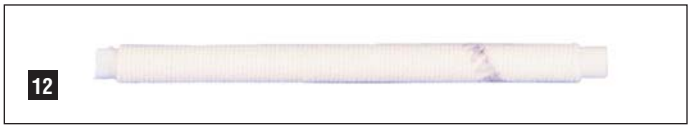












GROBET USA™ WHEEL BRUSHES

Clean, polish, and produce special finishes. Wood hubs are bored to fit on tapered spindles of polishing motors.



1



2



3

1 GROBET USA™ WOOD HUB WHEEL BRUSHES

Chungking bristles mounted into hardwood hubs with 1/4" arbor holes for use on the tapered spindles of polishing motors. Sold individually.

- Genuine Chungking bristles insure longer life & superior polishing action piece after piece
- Wood hubs of seasoned, oil-treated hardwood prevent splitting and guarantee long-lasting service
- Bristle tufts are "staple-set" into hubs to remain securely fastened until completely worn down
- A wide assortment for all your applications

Item No.	Style #	U/C/T	Rows	Hub Diameter	Trim Length	Overall Diameter
16.398	1A	U	1	1⅞"	⅝"	3⅛"
16.404	1B	U	1	1⅞"	½"	2⅞"
16.399	1C	U	1	1⅞"	⅜"	2⅝"
16.396	2A	C	2	1⅞"	⅝"	3⅛"
16.403	2B	C	2	1⅞"	½"	2⅞"
16.397	2C	C	2	1⅞"	⅜"	2⅝"
16.372	5A	U	1	1¼"	⅝"	2½"
16.371	5C	U	1	1¼"	⅜"	2"
16.383	6A	C,T	2	1¼"	⅝"	2½"
16.381	6B	C,T	2	1¼"	½"	2¼"
16.380	6C	C,T	2	1¼"	⅜"	2"
16.384	7A	C,T	3	1⅜"	⅝"	2⅝"
16.389	7B	C,T	3	1⅜"	½"	2⅜"
16.387	7C	C,T	3	1⅜"	⅜"	2⅛"
16.405	8A	C,T	4	1¼"	⅝"	2½"
16.406	8B	C,T	4	1¼"	⅝"	2½"
16.407	8C	C,T	4	1¼"	⅜"	2"
16.374	—	U	1	1¼"	⅞"	3"
16.408	—	U	1	⅞"	½"	1⅛"
16.376	—	C	2	⅞"	7/16"	1¾"
16.378	—	C	2	⅞"	½"	1⅞"
16.410	—	C	2	⅞"	9/16"	2"
16.385	—	C	2	2⅛"	¼"	2⅝"
16.386	—	C	2	1⅝"	11/16"	3"
16.388	—	C	2	2⅛"	⅝"	3⅜"
16.412	—	C	3	1⅜"	11/16"	2¾"
16.413	—	U	3	1⅜"	11/16"	2¾"
16.390	—	C	3	1⅝"	11/16"	3"
16.391	—	C	3	1⅞"	13/16"	3½"
16.393	—	C	4	1½"	¾"	3"
16.394	—	U	4	1⅝"	11/16"	3"
16.395	—	C	4	1⅞"	13/16"	3½"

U = Upright **C** = Converging **T** = Tapered Hole

Note: The stiffness of each brush is determined by the number of rows (the more, the stiffer), bristle length (the shorter, the stiffer), and style ("converging" will be stiffer than "upright").

2 WHITE BRISTLE WHEEL BRUSH on WOOD HUBS

Four rows of soft bristles. Mounted on hardwood hub with 1/4" straight hole. Overall diameter 3".
No. **16.420**

3 BLACK BRISTLE WHEEL BRUSHES on STEEL HUBS

Medium stiff bristles mounted on steel hub. Center of hub is nylon.
No. **16.400** 1¾" diameter, 3/16" hole
No. **16.401** 2½" diameter, ¼" hole

1 HEAVY DUTY CRIMPED STEEL WIRE BRUSH
Removes rust, scale, grease, etc. from metal surfaces. .005 wire mounted on steel hub with flanges to provide extra strength. 6" diameter, with 1/2" arbor hole.
No. **16.470**

2 LIGHTLY CRIMPED STRAIGHT STEEL SATIN FINISH BRUSH
Produces a frosted finish when run at high speeds. One row of .0055" steel wire bristles mounted on wood hub with reinforced metal center. Diameter 5".
No. **16.472**

3 STEEL BUR and FILE CLEANING BRUSH
Easily removes particles of metal clogged between teeth of files and burs. Also strips insulation from small electric wires. Two rows of lightly crimped .003" steel wire mounted on wood hub. Diameter 1 5/8".
No. **16.475**


1

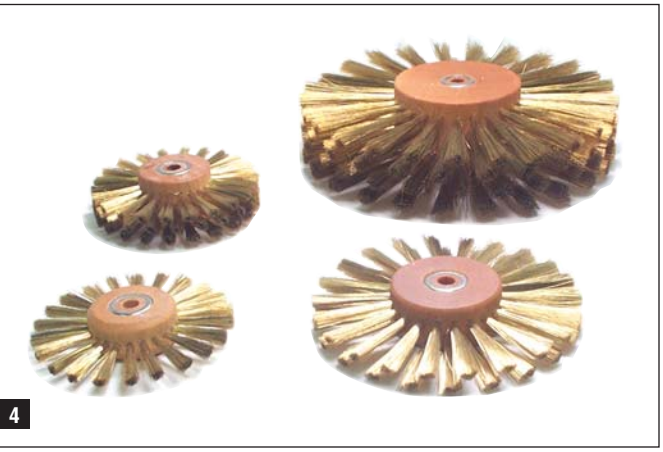

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WHEEL SCRATCH BRUSHES
Clean and finish a variety of metal surfaces. Wire bristles are mounted on seasoned hardwood hubs with metal reinforced centers to fit tapered spindles. All brushes have a 1/4" arbor hole.

4 STRAIGHT BRASS WIRE BRUSHES
Clean and surface-finish brass and other soft metals. Straight wire produces a coarser finish. Strands are .003".

No.	Rows	Diameter
16.425	1	3"
16.426	2	3"
16.427	2	4"
16.429	3	3"
16.430	3	4"
16.431	4	3"
16.432	4	4"
16.433	4	6"


4

5 CRIMPED BRASS WIRE BRUSHES
Surface finish yellow metals. Brush produces a softer, satin or matte finish. Strands are .004".

No.	Rows	Diameter
16.440	2	3"
16.441	2	4"
16.442	2	6"
16.443	3	3"
16.444	3	4"
16.445	4	3"
16.446	4	4"
16.447	4	6"


5

6 LIGHTLY CRIMPED STEEL WIRE BRUSHES
Clean, debur and surface finish silver, aluminum and other white metals. Produces pronounced surface effects. Strands are .003".

No.	Rows	Diameter
16.455	1	3"
16.456	2	3"
16.457	2	4"
16.458	2	6"
16.459	3	3"
16.460	3	4"
16.461	4	3"
16.462	4	4"
16.463	4	6"


6



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GROBET USA™ MINIATURE BRISTLE BRUSHES

Excellent quality precision brushes. Clean and polish in hard-to-reach places.

1 MINI BRUSHES on MANDRELS

Available in single section or heavy-duty double section style. Sold by dozen.

Section Type	Brush Diameter	Mandrel Diameter	Extra Soft	Soft	Stiff
Single	9/16"	3/32"	16.601	16.603	16.602
Single	3/4"	3/32"	16.608	16.607	16.609
Double	3/4"	3/32"	16.612	16.611	16.613
Single	3/4"	1/8"	16.614	16.616	16.615
Double	3/4"	1/8"	—	16.618	16.617
Single	1"	3/32"	16.619	16.620	16.621
Double	1"	3/32"	16.622	16.624	16.623

2 END BRUSHES on MANDRELS

Sold by dozen.

Diameter	Brush Length	Mandrel Diameter	Soft	Stiff
3/16"	1/4"	3/32"	16.700	16.701
3/16"	1/4"	1/8"	16.703	16.704
3/16"	3/8"	3/32"	16.707	16.708
3/16"	1/2"	3/32"	16.710	16.711
3/16"	5/8"	3/32"	—	16.713
1/4"	3/8"	3/32"	16.718	16.719
5/16"	5/8"	1/8"	—	16.717

3 CUP BRUSHES on MANDRELS

Sold by dozen.

Diameter at Flared End	Mandrel Diameter	Soft	Stiff
1/2"	3/32"	16.750	16.751
9/16"	3/32"	16.753	16.755
9/16"	1/8"	—	16.756

4 UNMOUNTED 1/8" ARBOR HOLE BRUSHES

30% additional fill gives more body for the right feel and longer brush life. Metal hubs with thinner profiles are assembled on specially designed production equipment. The result is a perfect brush. Bristles won't split and washers won't spin. Available in 4 grades to perfectly match every production requirement. Sold by dozen or by bulk pack of 144.

Brush Diameter	X-Soft Bulk	Extra Soft	Soft Bulk	Soft	Medium Bulk	Medium	Stiff Bulk	Stiff
5/8"	—	—	—	16.647	—	16.648	—	16.649
3/4"	16.680	16.662	16.690	16.650	16.681	16.663	16.682	16.664
1"	16.683	16.671	16.691	16.651	16.684	16.672	16.685	16.673
1 1/4"	16.677	—	—	16.652	—	16.678	—	16.679

For use on tapered spindles of polishing motors, use mandrels 47.258 or 47.259.
For use on flexible shafts, use mandrels 43.160 or 43.162.

5 UNMOUNTED 3/32" ARBOR HOLE BRUSHES

Use stiff bristles for cleaning and soft bristles for polishing. Mount on mandrels.
Sold by dozen.

Brush Diameter	Soft	Stiff
9/16"	16.657	16.658
3/4"	16.660	16.661
1"	16.669	16.670

GROBET USA™ MINIATURE WIRE BRUSHES

Clean, polish and produce special finishes. Use brass on yellow metals such as: copper and brass; use steel on white metals such as: white gold, silver, and platinum. Use straight or lightly crimped wire to produce a more pronounced finish and is used for cleaning, deburring, and surface finishing. Use crimped wire to achieve a softer or matte finish. Precision made, excellent quality.

1 BRASS BRUSHES on MANDRELS

Double section type is for heavy-duty use. Sold by dozen.

Section Type	Diameter	Mandrel Diameter	Straight Dia. .0035"	Crimped .005"
Single	¾"	3/32"	**16.805**	**16.806**
Double	¾"	3/32"	—	**16.807**
Single	¾"	⅛"	—	**16.810**
Double	¾"	⅛"	—	**16.811**
Single	1"	3/32"	**16.813**	**16.814**
Double	1"	3/32"	—	**16.815**
Double	1"	⅛"	—	**16.819**



2 STEEL BRUSHES on MANDRELS

Double section type is for heavy duty use. Sold by dozen.

Section Type	Diameter	Mandrel Diameter	Straight Dia. .0035"	Crimped .005"
Single	¾"	3/32"	**16.840**	**16.841**
Double	¾"	3/32"	—	**16.842**
Single	¾"	⅛"	**16.844**	**16.845**
Double	¾"	⅛"	—	**16.846**
Single	1"	3/32"	**16.848**	**16.849**
Double	1"	3/32"	—	**16.850**
Single	1"	⅛"	**16.852**	**16.853**
Double	1"	⅛"	—	**16.854**



3 UNMOUNTED 3/32" ARBOR HOLE WIRE BRUSHES

Available in single section only. Bristles are set in metal hubs for use on mandrels. Sold by dozen.

Metal	Diameter	Straight .0035"	Light Crimped .003"	Crimped .005"
Brass	¾"	**16.880**	—	**16.881**
Brass	1"	**16.883**	—	**16.884**
Steel	¾"	—	**16.886**	**16.887**
Steel	1"	—	**16.889**	**16.890**



4 CUP-SHAPE WIRE BRUSHES on MANDRELS

Sold by dozen.

Metal	Diameter at Flare	Mandrel Diameter	Straight .0035"	Light Crimped .003"	Crimped .005"
Brass	½"	3/32"	**16.960**	—	—
Brass	9/16"	3/32"	—	—	**16.962**
Steel	½"	3/32"	—	**16.965**	—
Steel	9/16"	3/32"	—	—	**16.967**
Steel	9/16"	⅛"	—	—	**16.968**



5 END-TYPE WIRE BRUSHES on MANDRELS

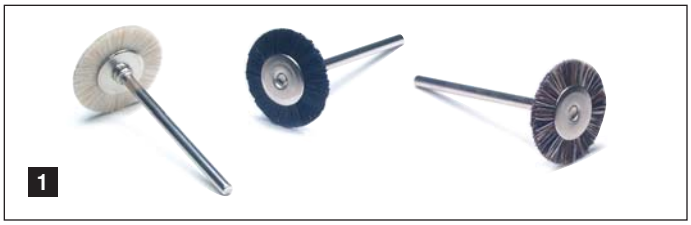
Sold by dozen.

Metal	Diameter	Brush Length	Mandrel Diameter	Straight .0035"	Light Crimped .003"	Crimped .005"
Brass	3/16"	¼"	3/32"	**16.926**	—	**16.927**
Brass	3/16"	¼"	⅛"	—	—	**16.930**
Steel	3/16"	¼"	3/32"	—	**16.940**	**16.941**
Steel	3/16"	¼	⅛"	—	**16.943**	**16.944**



ECONOMY MINIATURE BRUSHES

Fine quality mounted and unmounted brushes in a variety of sizes, textures and materials for any polishing or finishing job. Mounted brushes have 3/32" diameter shanks. **Soft bristle** for fine polishing. **Stiff bristle** for cleaning. **Brass wire** for gold, copper, brass. **Steel wire** for white metals such as silver, white gold, platinum and aluminum. **Straight wire** for a stronger cleaning, deburring, and surface finishing. **Crimped wire** for a softer or matte finish. Sold by dozen



1 BRISTLE BRUSHES on MANDRELS

Sold by dozen.

No.	Diameter	Texture
16.0695	¾"	Stiff
16.0696	¾"	Medium
16.0697	¾"	Soft



2 STEEL BRUSHES on MANDRELS

Sold by dozen.

No.	Diameter	Texture
16.0687	¾"	Straight
16.0698	1"	Straight



3 BRASS BRUSH on MANDRELS

Sold by dozen.

No.	Diameter	Texture
16.0689	¾"	Crimped



4 BRASS END BRUSH on 3/32" MANDREL

Sold by dozen.

No.	Diameter	Texture
16.0927	¼"	Crimped



5 STEEL END BRUSH on 3/32" MANDRELS

Sold by dozen.

No.	Diameter	Texture
16.0926	¼"	Straight



6 BRISTLE END BRUSHES on 3/32" MANDRELS

Sold by dozen.

Trim Length	Texture	3/16" Ferrule	1/4" Ferrule
¼"	Stiff	**16.06842**	**16.06830**
¼"	Soft	**16.06843**	—
⅜"	Stiff	**16.06844**	—
⅜"	Soft	**16.06845**	—
½"	Stiff	**16.06846**	—



7 BRISTLE BRUSHES UNMOUNTED

Sold by dozen.

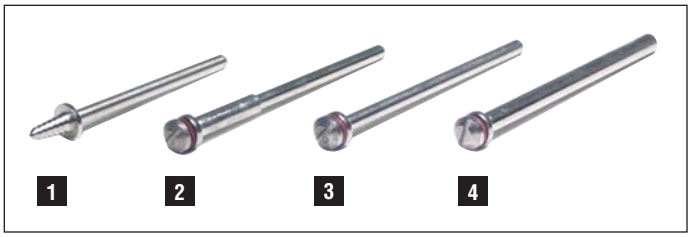
No.	Brush Diameter	Hole Diameter	Texture
16.0808	¾"	⅛"	Stiff
16.0810	¾"	⅛"	Medium
16.0813	¾"	⅛"	Soft
16.0801	1"	⅛"	Stiff
16.0811	1"	⅛"	Medium
16.0814	1"	⅛"	Soft

MANDRELS

Sold by dozen.

This is just a partial listing. See page 209-212 for our complete line of mandrels.

No.	Description	Shank Diameter
1 **43.120**	Tapered screw 3⁄16" screw length	3⁄32"
2 **43.128**	Reinforced shoulder	3⁄32"
3 **43.132**	Use with wheels 1⁄16" arbor holes	3⁄32"
4 **43.156**	Reinforced screw	1⁄8"



5 MANDREL FOR 1" WHEELS

Use with wheel sizes up to 1" diameter and up to 1/4" thickness with 1/16" arbor holes. Shank diameter 1/8".

No. **43.158**



6 MANDREL FOR GRINDING WHEELS

Use with grinding wheel with 1/8" arbor holes. Shank diameter 1/8". Sold by dozen.

No. **43.160**

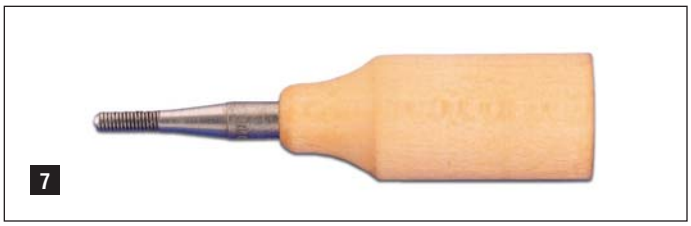


7 WOOD MANDRELS with METAL THREADED ENDS

Fit on tapered spindles of polishing motors. Convenient way to mount and change smaller brushes.

No. **47.258** Right

No. **47.259** Left



8 FLUX BRUSHES with QUILL HANDLES

Inexpensive, disposable brushes made of camel hair, mounted in hollow quill handles. For applying fluxes and other liquids. Select by item number. Sold by dozen.

No.	Brush #	Length
16.219	9	1½"
16.218	8	1⅝"
16.217	7	1¾"
16.216	6	2"
16.215	5	2¼"
16.214	4	2½"
16.213	3	3"
16.212	2	3½"
16.211	1	3¾"

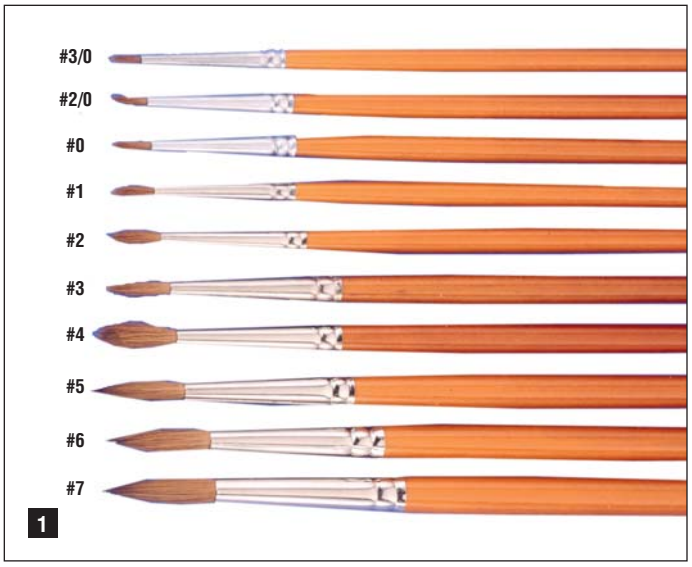


9 FLUX BRUSHES with WOOD HANDLES

Well-constructed camel hair brushes are noted for durability. Select by item number. Sold by dozen.

No.	Brush #	Length
16.231	1	7"
16.232	2	7"
16.233	3	7"
16.234	4	7¼"
16.235	5	7½"
16.236	6	7½"

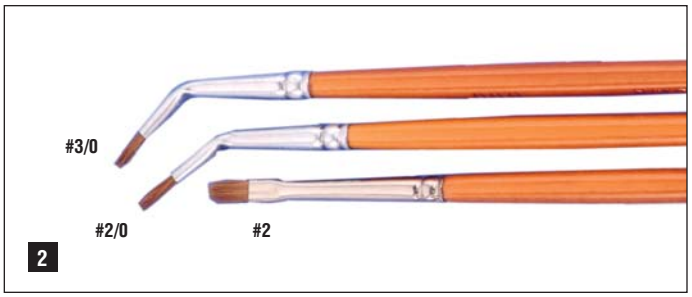




1 RED SABLE BRUSHES

Pure red sable tips are hand cupped to shape and have needle sharp points. Securely mounted in aluminum seamless ferrules and attached to wood handles. Select by item number noted next to brush. Sold individually.

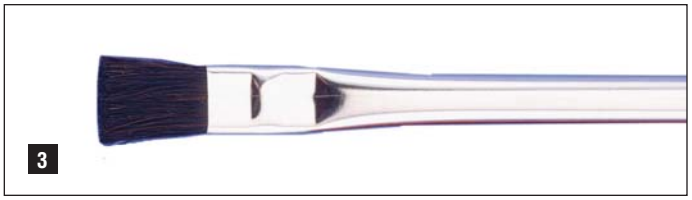
No.	Brush #
16.258	3/0
16.259	2/0
16.260	0
16.261	1
16.262	2
16.263	3
16.264	4
16.265	5
16.266	6
16.267	7



2 ANGLED and FLAT RED SABLE BRUSHES

Reduce hand fatigue. Rest your hand on your bench while working with these sable brushes with 45° angled tips. Also good for reaching otherwise inaccessible areas. Sold individually.

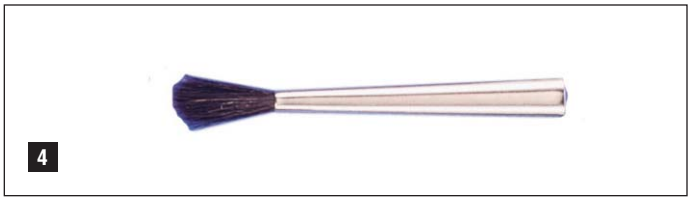
No.	Brush #
16.280	Angled #3/0
16.281	Angled #2/0
16.282	Flat #2
16.284	Flat #4
16.286	Flat #6



3 MUCILAGE and ACID BRUSHES

Stock up on these versatile extra stiff black horsehair brushes. Tin handle fosters use with solder and acid. Sold by dozen.

No.	Measurements
16.250	3¼" long x ¼" diameter
16.251	5¾" long x ⅜" diameter
16.252	5¾" long x ½" diameter



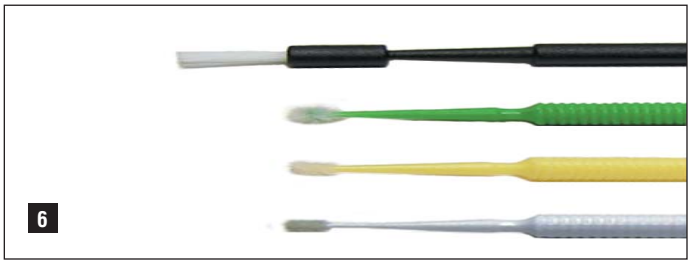
4 FLUX BRUSH with TIN FERRULE

Economical, disposable brush for applying fluxes and other liquids. Sold by dozen.
No. **16.225**



5 CAMEL HAIR BRUSH

For all-purpose use. 7½" long with wood handle. Sold individually.
No. **16.200**



6 GROBET USA™ MICRO BRUSHES

Flexible applicators bend to any angle. Unique synthetic fibers hold material in suspension until applied. Ultra brush non absorbent bristle fibers are great for solvents, adhesives and enamels.
Sold in box of 100.

16.100 White – Super Fine
16.101 Yellow – Fine
16.102 Green – Regular
16.103 Black – Ultra

GROBET USA™ FELT BUFFS

With a reputation established as the finest made, these buffs continue to be produced to exacting specifications. Selection of Grobet USA™ assures you of uniformity in thickness, balance, concentricity, and outstanding performance. They remain the standard of quality for professional polishers of metal.

RING BUFFS

1 FELT INSIDE RING BUFFS

Made of the highest grade wool felt, mounted to tapered wood mandrel for use on tapered spindle. Select smallest size for children's rings. See price list for bulk pricing.

Extra Hard	Regular	Regular Bulk	Diameter	Length
17.316	**17.315**	**FEJB**	5/16"-9/16"	3"
17.321	**17.320**	**FER3B**	9/16"-3/4"	3"
17.324	**17.323**	**FER4B**	5/8"-7/8"	4"
17.327	**17.326**	**FER5B**	1 1/16"-1"	5"
—	**17.329**	**FER6B**	3/4"-1 1/16"	6"



2 FELT COMBINATION BUFFS

Polish outside and inside rings without changing buff. Wheel buff and inside ring buff are mounted on wood mandrel, drilled to fit tapered spindle. Sold individually.

No.	Wheel	Wheel Edge	Ring
17.340	2" x 1/2"	Square	3" x 9/16"-3/4"
17.341	2" x 9/16"	Square	4" x 5/8"-7/8"
17.342	2" x 7/8"	Knife	3" x 9/16"-3/4"
17.343	2"	Knife	4" x 5/8"-7/8"





3 SOLID FELT RING BUFFS

Unmounted solid felt is used directly on tapered spindle.
Sold by box of 24 or 100.

Box 24	Box 100	Diameter	Length
17.333	**17.332**	9/16"	3"
17.336	**17.335**	5/8"	4"

4 LARGE ROUND FELT CONES

Perfect for polishing objects with rounded surfaces. Solid felt with pinhole center. Use with tapered mandrel. Sold individually.

No.	Diameter	Length
17.280	1/2"	1"
17.281	3/4"	1 1/2"
17.282	1"	2"





5 MINIATURE POINTED FELT CONES

Ideal for polishing concave surfaces on small objects. Made of solid felt with hard density. Use with tapered mandrel. Sold by box of 24 or 100.

Box 24	Box 100	Diameter	Length
17.266	**17.267**	1/4"	3/8"
17.271	**17.272**	1/4"	1/2"

6 LARGE POINTED FELT CONES

For polishing objects that have concave surfaces. Made of solid felt with pin hole center. Use with tapered mandrels listed below.*
Sold individually.

No.	Diameter	Length
17.276	1/2"	1"
17.277	3/4"	1 1/2"
17.278	1"	2"

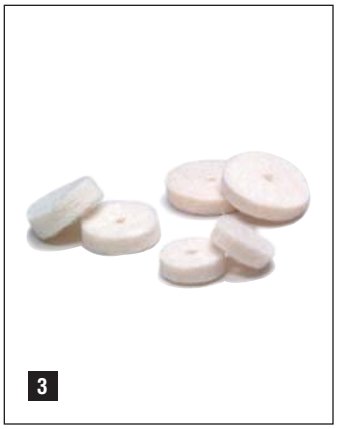
**** Tapered mandrels***
3/32" shank *- No. 43.120 3/16" screw length & No. 43.122 3/8" screw length.*
1/8" shank *- No. 43.150 3/16" screw length & No. 43.152 3/8" screw length.*

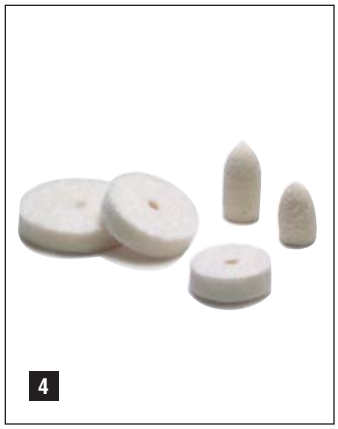


Safety Tip: Always wear proper eye protection when polishing.


1


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1 MINIATURE KNIFE EDGE SOLID FELT BUFFS

Hard solid felt, with tapered edges for polishing joints and crevices. Use with mandrels listed below.** Sold by box of 24 or 100.

Box 24	Box 100	Diameter
17.478	17.479	½"
17.483	17.484	⅝"
17.476	17.477	¾"

2 MINIATURE SQUARE EDGE FELT WHEELS

Solid felt for use with mandrels listed below.** 1/8" thick except Nos. 17.380 and 17.381 are 1/4" thick. Sold by box of 24 or 100.

Hard Box 24	Hard Box 100	Soft Box 24	Soft Box 100	Diameter
17.351	17.352	17.355	17.356	½"
17.359	17.360	17.363	17.364	⅝"
17.365	17.366	17.367	17.368	¾"
17.371	17.372	17.376	17.377	1"
—	—	17.380	17.381	1"

3 MINIATURE FELT WHEEL ASSORTMENT

Solid felt for use with mandrel. Includes 1/2", 5/8", and 3/4" diameter wheels in the soft grade. Sold by box of 24 or 100.
No. **17.345** Box of 24
No. **17.346** Box of 100

4 FELT WHEEL and CONE ASSORTMENT

Includes 6 each Nos. 17.266 and 17.271 cones; plus 4 each Nos. 17.351, 17.359, and 17.365 wheels. Box of 24.
No. **17.347**

**** Wheel mandrels***

3/32"shank
No. 43.130 Steel wheels with 1/16" arbor holes.
No. 43.132 NP steel wheels with 1/16" arbor holes.
No. 43.134 SS steel wheels with 1/16" arbor holes.
No. 43.128 Mandrel with reinforced screw.

1/8"shank
No. 43.158 NP steel wheels with 1/16" arbor holes.
No. 43.162 NP steel wheels with 1/8" arbor holes.
No. 43.156 Mandrel with reinforced screw.

FELT BOBS

100% wool, ideal for precision deburring, polishing and finishing. Can be charged with compounds. Specifically designed for use with flex-shafts and similar tools. The unmounted versions have a pinhole for mandrel mounting. See tapered mandrels listed below.

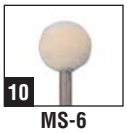

5 MP/P


6 MS-1


7 MS-3


8 MS-4


9 MS-5


10 MS-6

5 CYLINDER SHAPE

Hard	Medium	Type	Diameter	Face	Mandrel
17.220	17.221	MP-1	¼"	¼"	⅛"
17.222	17.223	MP-2	¼"	⅜"	⅛"
17.224	17.225	MP-3	⅜"	⅜"	⅛"
17.226	17.227	MP-4	⅜"	½"	⅛"
17.228	17.229	MP-5	½"	½"	⅛"
—	17.238	P-5	½"	½"	none*
—	17.230	MP-6	½"	¾"	⅛"
—	17.231	MP-7	½"	1"	⅛"
17.232	17.233	MP-8	¾"	¾"	⅛"
—	17.239	P-8	¾"	¾"	none*
—	17.234	MP-9	¾"	1"	⅛"
—	17.235	MP-11	1"	1"	¼"

**** Tapered mandrels***
3/32" shank *- No. 43.120 3/16" screw length & No. 43.122 3/8" screw length.*
1/8" shank *- No. 43.150 3/16" screw length & No. 43.152 3/8" screw length.*

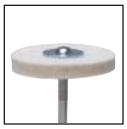
MISCELLANEOUS SHAPES

Use with 1/8" mandrel.

	Hard	Medium	Type	Diameter	Face
6	—	17.245	MS-1	⅜"	½"
	—	17.246	MS-1	½"	1"
7	—	17.250	MS-3	⅜"	½"
	17.251	17.252	MS-3	½"	1"
8	17.253	17.254	MS-4	½"	¾"
9	—	17.255	MS-5	⅜"	½"
	—	17.256	MS-5	½"	¾"
10	—	17.257	MS-6	½"	½"

MOUNTED MIDGET FELT BUFFS

All have 3/32" shanks. Sold by dozen.


17.115 Solid Felt 1" Dia

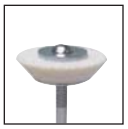

17.120 Cone


17.121 Cylinder


17.122 Round


17.123 Bud


17.124 Pointed

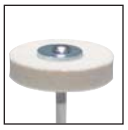

17.12401 Inverted 11/15" Dia


17.12402 Inverted 13/15" Dia


17.12403 Knife 11/16" Dia


17.12404 Knife 13/15" Dia


17.12405 Square 11/16" Dia


17.12406 Square 13/16" Dia

FULL-SIZE FELT BUFFS

1 DIAMOND HARD FELT LAPS

Exceptionally dense, chemically treated felt. Suitable for forming smooth, flat surfaces with sharp corners.

No.	Diameter	Thickness	Hole
17.291	6"	¼"	¼"
17.292	6"	¼"	½"

2 SPANISH FELT WHEEL BUFFS

Suitable for all-purpose polishing and buffing. Pin hole centers.

Ex. Hard	Price	Medium	Diameter	Thickness
17.450		**17.452**	3"	½"
17.455		**17.457**	4"	½"
17.460		**17.462**	5"	½"
17.465		**17.467**	6"	½"

Hard	Soft	Diameter	Thickness
17.451	**17.453**	3"	½"
17.456	**17.458**	4"	½"
17.461	**17.463**	5"	½"
17.466	**17.468**	6"	½"
17.470	—	6"	1"

3 SOLID FELT WHEEL BUFFS

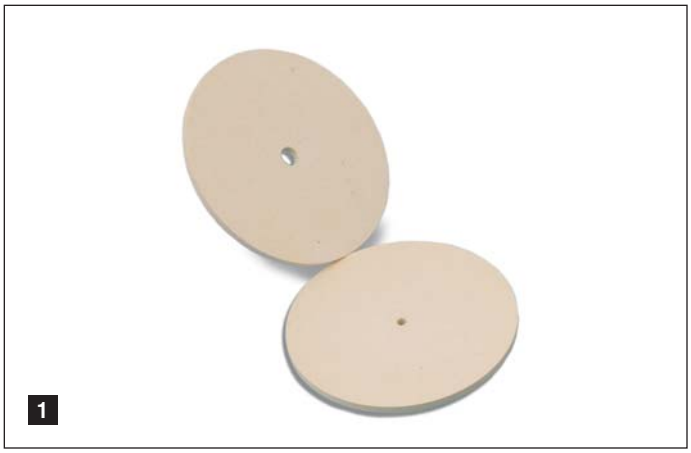
Tightly compressed wool felt creates a medium wheel for all-purpose polishing and buffing. Pin hole centers.

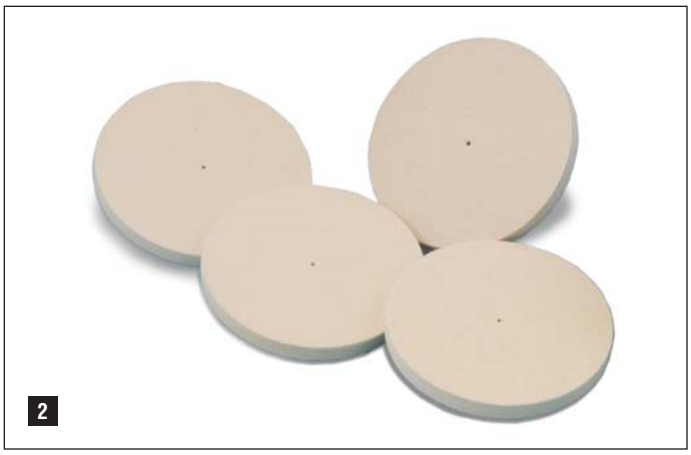
No.	Diameter	Thickness
17.410	1"	¼"
17.412	1¼"	¼"
17.415	1½"	¼"
17.416	1½"	⅜"
17.417	1½"	½"
17.419	2"	¼"
17.420	2"	⅜"
17.421	2"	½"
17.425	2½"	½"
17.429	3"	½"
17.430	3"	¾"
17.431	3"	1"
17.435	4"	½"
17.436	4"	¾"
17.437	4"	1"
17.438	5"	2"
17.439	6"	1"

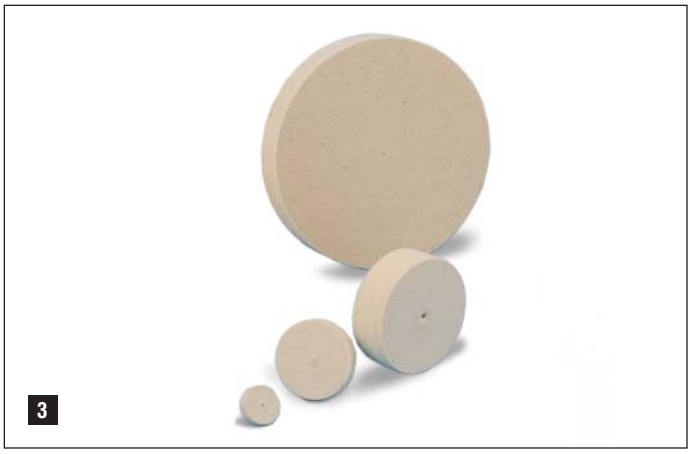
4 KNIFE EDGE FELT WHEELS

Use with mandrel in handpiece or on tapered spindle of bench motor for polishing joints and crevices. Pin hole centers.

Rock Hard	Hard	Diameter
17.491	**17.490**	1"
17.493	**17.492**	1½"
17.495	**17.494**	2"
17.497	**17.496**	2½"
17.499	**17.498**	3"
17.500	—	4"









Safety Tip: Always wear proper eye protection when polishing.



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FINEX MUSLIN BUFFS

Superior quality soft-textured buffs perfect for use with rouge to produce a high finish.

1 LOOSE TYPE with LEATHER CENTERS

One row of stitching. Sold individually.

No.	Diameter	Ply
17.771	3"	35
17.773	4"	30
17.778	4"	36
17.774	4"	40
17.779	4"	50
17.780	4"	54
17.781	4"	60
17.775	5"	45
17.782	5"	50
17.783	5"	54
17.776	6"	50
17.784	6"	54
17.777	8"	55

2 STITCH TYPE with LEATHER CENTERS

Available in 3 or 4 rows of stitching. Sold individually.

No.	Diameter	Ply	Stitching
17.753	4"	30	3 rows
17.754	4"	40	3 rows
17.757	4"	50	3 rows
17.758	4"	60	3 rows
17.755	5"	45	3 rows
17.759	5"	50	3 rows
17.760	6"	40	4 rows
17.756	6"	50	4 rows
17.761	6"	60	4 rows
17.762	7"	50	4 rows
17.763	7"	60	4 rows
17.751	3"	35	3 rows
17.75203	3"	30	3 rows
17.75204	3"	40	3 rows
17.75205	3"	50	3 rows
17.75206	3"	60	3 rows
17.75802	5"	20	3 rows
17.75803	5"	30	3 rows
17.75804	5"	40	3 rows
17.75901	5"	60	3 rows
17.75902	6"	30	4 rows

3 KNIFE EDGE with LEATHER CENTERS

Use for buffing in crevices. Sold individually.

No.	Diameter	Ply	Stitching
17.643	3"	9	3 rows
17.644	4"	12	5 rows
17.645	5"	12	7 rows
17.646	6"	12	9 rows

Safety Tip: Always wear proper eye protection when polishing.

1 FINEX MUSLIN BUFFS with SHELLAC CENTERS

With combed edges for use with rouge. Sold individually.

No.	Diameter	Ply	Stitching
17.621	2½"	30	2 rows
17.622	3"	35	3 rows
17.623	4"	30	4 rows
17.629	4"	40	3 rows
17.624	4"	50	4 rows
17.630	4"	60	3 rows
17.631	5"	45	3 rows
17.632	5"	50	3 rows
17.625	5"	55	5 rows
17.633	6"	50	4 rows
17.626	6"	60	6 rows
17.627	6"	70	6 rows
17.628	8"	70	7 rows


1

2 FINEX MUSLIN BUFFS with PLASTIC CENTERS

Unstitched and used with rouge to produce a high finish.
Sold individually.

No.	Diameter	Ply
17.716	3"	36
17.717	3"	54
17.718	4"	28
17.719	4"	36
17.720	4"	54
17.721	5"	54
17.722	6"	54
17.723	6"	63
17.724	8"	54


2

3 MINIATURE FINEX MUSLIN BUFFS

Designed for polishing small and difficult to reach areas. Use with mandrels listed below.** Sold by dozen.

No.	Diameter	Ply	Stitching
17.615	⅞"	16	1 rows
17.616	1"	16	1 rows
17.61601	1"	16	2 rows
17.617	1¼"	16	3 rows
17.618	1½"	16	3 rows
17.619	2"	16	4 rows

***** Wheel mandrels***

3/32"shank

No. 43.130 Steel wheels with 1/16" arbor holes.
No. 43.132 NP steel wheels with 1/16" arbor holes.
No. 43.134 SS steel wheels with 1/16" arbor holes.
No. 43.128 Mandrel with reinforced screw.

1/8"shank

No. 43.158 NP steel wheels with 1/16" arbor holes.
No. 43.162 NP steel wheels with 1/8" arbor holes.
No. 43.156 Mandrel with reinforced screw.


3

Safety Tip: Always wear proper eye protection when polishing.

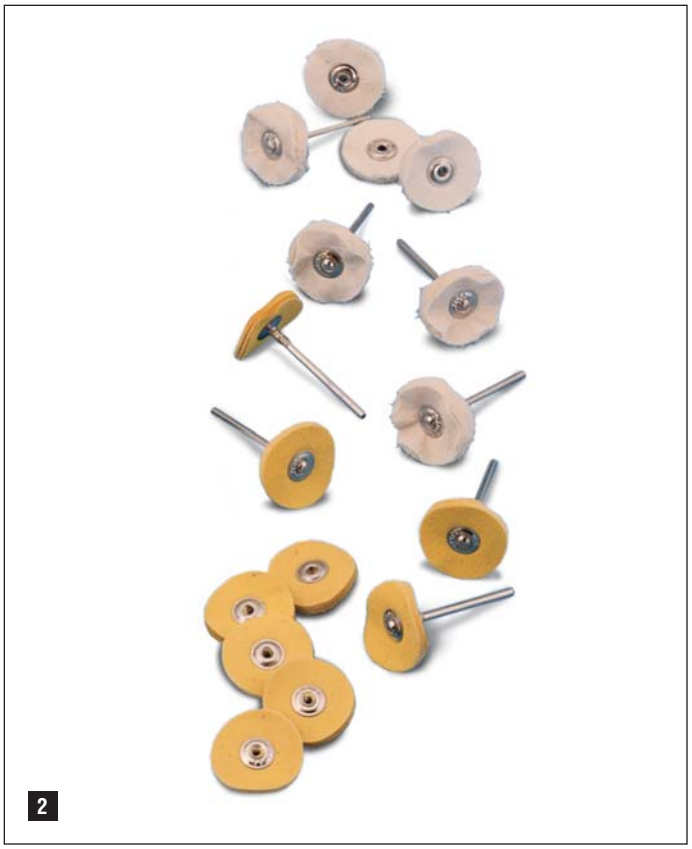


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1 MUSLIN BUFFS with SHELLAC CENTERS

Use with abrasive compounds such as tripoli to remove scatches. Sold individually.

No.	Diameter	Ply	Stitching
17.571	2"	30	2 rows
17.573	2½"	30	2 rows
17.575	3"	24	3 rows
17.576	3"	30	3 rows
17.577	3"	35	3 rows
17.579	4"	24	3 rows
17.580	4"	30	3 rows
17.581	4"	42	3 rows
17.583	5"	30	3 rows
17.584	5"	45	3 rows
17.586	6"	30	4 rows
17.589	8"	55	4 rows



2

2 MINI-MUSLIN BUFFS

All have 1" diameter. Mounted buffs have a 3/32" shank. For unmounted buffs use mandrels listed below.** Sold by dozen.

No.	Style	Hole Diameter	Ply
17.910	Unmounted Chemkote	3/32"	8
17.911	Unmounted Muslin	3/32"	12
17.912	Mounted Chemkote	—	8
17.913	Mounted Muslin	—	12
17.914	Unmounted Chemkote	1/8"	8
17.915	Unmounted Muslin	1/8"	12

**** Wheel mandrels***

3/32"shank

No. 43.130 Steel wheels with 1/16" arbor holes.
No. 43.132 NP steel wheels with 1/16" arbor holes.
No. 43.134 SS steel wheels with 1/16" arbor holes.
No. 43.128 Mandrel with reinforced screw.

1/8"shank

No. 43.158 NP steel wheels with 1/16" arbor holes.
No. 43.162 NP steel wheels with 1/8" arbor holes.
No. 43.156 Mandrel with reinforced screw.



3

3 SPECIAL SHAPE MUSLIN BUFFS

Well suited for polishing interior and broad surfaces. Sold individually.

No.	Shape	Diameter	Length
17.610	Cylinder	2"	1¾"
17.831	Goblet	2"	1¾"
17.832	Goblet	2½"	1¾"
17.833	Goblet	3"	1¾"
17.834	Goblet	4"	2"
17.852	Tapered	¾"-2"	1¾"
17.853	Tapered	1"-2½"	2¼"

Safety Tip: Always wear proper eye protection when polishing.

CHEMKOTE BUFFS

More aggressive, treated muslin helps remove surface scratches from work. Excellent for use with tripoli and abrasive compounds. Sold individually.

1 CHEMKOTE YELLOW BUFFS

No.	Diameter	Ply	Stitching
17.550	1"	16	1 row
17.551	3"	30	3 rows
17.55101	3"	40	3 rows
17.552	4"	30	3 rows
17.553	4"	40	3 rows
17.540	4"	50	3 rows
17.54001	4"	60	3 rows
17.54002	5"	20	3 rows
17.54003	5"	30	3 rows
17.54004	5"	40	3 rows
17.554	5"	45	3 rows
17.541	5"	50	3 rows
17.542	5"	60	3 rows
17.543	6"	30	4 rows
17.544	6"	40	4 rows
17.555	6"	50	4 rows
17.545	6"	60	4 rows
	Chemkote buffs with leather centers		
17.55102	4"	20	1 rows
17.55103	4"	20	3 rows
17.55201	4"	30	3 rows
17.55301	4"	40	3 rows
17.55401	4"	50	3 rows
17.55402	4"	60	3 rows
17.554021	5"	20	1 row
17.55403	5"	20	3 rows
17.55404	5"	30	3 rows
17.55405	5"	40	3 rows
17.556	5"	50	4 rows
17.55601	5"	60	4 rows
17.55602	6"	30	4 rows
17.55603	6"	40	4 rows
17.557	6"	50	4 rows
17.558	6"	60	4 rows

2 ECONOMY CHEMKOTE BUFFS with SHELLAC CENTERS

No.	Diameter	Ply	Stitching
17.601	4"	40	3 rows
17.602	4"	50	3 rows
17.603	4"	60	3 rows
17.60303	5"	30	3 rows
17.604	5"	40	3 rows
17.605	5"	50	3 rows
17.606	5"	60	3 rows
17.60601	6"	20	3 rows
17.607	6"	30	4 rows
17.608	6"	40	4 rows
17.609	6"	50	4 rows
17.60901	6"	60	4 rows

3 CHEMKOTE KNIFE EDGE BUFFS

No.	Diameter	Ply	Stitching
17.562	3"	9	2 rows
17.560	4"	12	5 rows
17.563	5"	12	7 rows
17.561	6"	12	8 rows

Safety Tip: Always wear proper eye protection when polishing.









1

1 ORANGE BUFFS

Durable, treated muslin. Ideal for use with aggressive compounds to remove scratches from gold. Excellent compound retention. Provides robust polishing for a high lustre on all hard metals. Sold individually.

No.	Diameter	Ply	Stitching
17.524	3"	50	3 rows
17.525	4"	40	3 rows
17.526	4"	50	3 rows
17.52601	5"	50	4 rows
17.527	5"	40	3 rows
17.528	5"	60	5 rows
17.529	6"	50	5 rows
17.52901	6"	60	5 rows
17.564	4" Knife Edge	12	7 rows
17.565	6" Knife Edge	12	10 rows



2

2 BERRY BUFFS

Use the best buff available for final polishing of platinum. Stiff, chemically treated muslin with good cutting action and high compound retention. Provides high lustre. Reduce polishing time. Durable and long lasting. Sold individually.

Hint: *Use our uniquely colored Berry Buffs exclusively for your platinum work to avoid cross contamination from other metals.*

No.	Diameter	Ply	Stitching
17.530	6"	30	4 rows
17.531	4"	40	3 rows
17.53101	5"	40	3 rows
17.53102	6"	50	4 rows
17.566	4" Knife Edge	12	7 rows
17.567	6" Knife Edge	12	10 rows



3

3 DIXCEL® COTTON FLANNEL BUFFS

Use with rouge for final polishing. Made of soft cotton flannel, stitched with shellac centers. Sold individually.

No.	Diameter	Ply	Stitching
17.200	2"	25	2 rows
17.201	2½"	25	2 rows
17.202	3"	20	3 rows
17.203	3"	30	3 rows
17.204	4"	20	2 rows
17.205	4"	30	3 rows
17.206	5"	30	3 rows
17.207	6"	30	4 rows
17.208	8"	30	4 rows



4

4 SUPER BUFFS

Made of 100% cotton. Patented process removes impurities and makes the cloth finer and nearly lint-free. With ordinary abrasive elements removed, Super Buffs last up to 50% longer with minimal fraying and better compound retention. Achieve a smooth, uniform finish with superior coloring quality every time.

Shellac Center - Sold individually.

No.	Diameter	Ply	Stitching
17.704	4"	50	4 rows
17.705	5"	55	4 rows
17.706	6"	60	4 rows

Plastic Center - Sold individually.

No.	Diameter	Ply
17.707	4"	36
17.708	5"	54
17.709	6"	54

Midget - Sold by the dozen.

No.	Diameter	Ply	Stitching
17.700	⅞"	16	1 row
17.701	1¼"	16	2 rows
17.702	1½"	16	3 rows
17.703	2"	16	4 rows

Safety Tip: Always wear proper eye protection when polishing.

MISCELLANEOUS BUFFS

1 CHAMOIS BUFFS

Use with rouge to produce the highest finish on gold. Stitched with leather patch on center for firm grip on tapered spindle. Sold individually.

No.	Diameter	Ply	Stitching
17.135	1"	5	1 row
17.136	2"	12	2 rows
17.137	2½"	12	2 rows
17.138	3"	12	3 rows
17.139	4"	18	3 rows
17.140	5"	18	3 rows
17.141	6"	18	4 rows

2 DIXCEL® MINIATURE CHAMOIS BUFFS

Get the best possible finish on hard-to-reach places. Three-ply wheels. Use with No. 43.128 mandrel.
No. **17.132** ⅝" diameter. Sold by dozen
No. **17.134** ¾" diameter. Sold by dozen
No. **17.129** Assorted buffs. Box of 25

3 SECTION MUSLIN BUFFS

These buffs have a 6" diameter and are 1/4" thick, with spiral sewing 3/8" apart. They may be grouped to obtain the thickness desired. Pin hole center. Sold individually.
No. **17.841**

4 SHEEPSKIN BUFF

Use for coloring and finishing gold and other soft metals. Leather center fits tapered spindles. 6" diameter. 16 ply. 3 rows of stitching. Sold individually.
No. **17.900**

5 BUFFS for VIGOR MULTI-GRINDER (No. 47.0217)

Sold individually.
No. **17.01220** 3" Extra fine muslin
No. **17.01221** 3" Cotton flannel
No. **17.01222** 3" x ½" x ⅜" Felt

6 MINIATURE BUFF ASSORTMENT

Contains two 3/32" mandrels (which can be used on flexshafts) and six of our most popular polishing items: 1 chamois buff, 1 muslin wheel, 1 felt cone and 3 felt wheels. Packaged in a handy plastic box. Sold individually.
No. **17.126**

7 MINIATURE SATIN FINISH BUFFS

Mounted buffs on 3/32" (2.4 mm) mandrels. Great for texturing small pieces. Sold by the dozen.

No.	Grade	Diameter
17.901	Fine	¾"
17.902	Medium	¾"
17.908	Fine	1"
17.909	Medium	1"

Maximum 30,000 RPM recommended.

Safety Tip: Always wear proper eye protection when polishing.





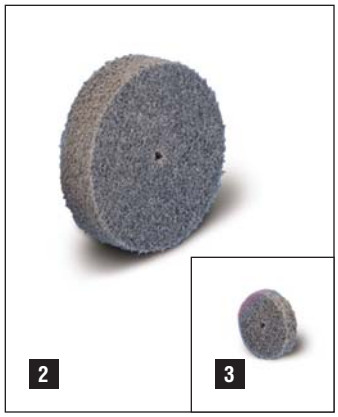




















MISCELLANEOUS BUFFS

1 ALUMINUM OXIDE FLAP WHEELS

Use these versatile wheels for watch bands or for light de-burring and polishing of non-ferrous metals. They replace hand pads and reduce the need for a finishing operation. Great for satin finishing of steel, and ideal for surface contaminant removal. Sold individually.

No. **17.861** Fine
No. **17.862** Coarse
No. **17.863** Extra Fine
No. **17.864** Medium

2 MATTE FINISH WHEELS

Use to obtain matte finishes on metal, wood and plastic. Nylon fibers impregnated with abrasive granules. 3" diameter, 3/4" thick, 1/4" arbor hole. Sold individually.

No. **17.870** Fine
No. **17.871** Medium

3 MINIATURE MATTE WHEELS

1" diameter, 1/4" thick, 1/8" arbor hole. Use with No. 43.162 mandrel. Sold individually.

No. **17.875** Fine
No. **17.876** Medium

4 SATIN FINISH BUFFS

Use dry to produce a satin finish on gold, silver and other metals. Synthetic fiber buffs are 2 or 3 ply. Leather patches in center to provide firm grip on tapered spindle. Sold individually.

No.	Diameter	Ply	Grade
17.899	3"	3	Fine
17.897	3"	3	Medium
17.898	3"	3	Coarse
17.893	4"	2	Fine
17.891	4"	2	Medium
17.892	4"	2	Coarse
17.896	4"	3	Fine
17.894	4"	3	Medium
17.895	4"	3	Coarse

5 GROBET USA™ HEAVY-DUTY SPLIT LAP MACHINE

Built for professional use in a variety of tough applications. 3450 RPM, 1/2 HP ball-bearing motor. Features rugged steel base, on/off switch, 3" inlet for connection to dust collector, heavy-duty steel hood, adjustable light socket, and tapered spindle. One-year warranty. Shipping weight 46 lbs.

No. **17.945** 110V model
No. **17.945X** 220V model
No. **17.94501** Spindle for split lap machine

6 PARAMOUNT™ FELT SPLIT LAPS

The standard of excellence in split lap performance. Each wheel is balanced, with holes in the precise center to ensure smooth operation. Perfectly concentric slits provide outstanding visibility of the item being polished. 1/2" thick with beveled edges. Each lap is packaged inside plastic to eliminate discoloration and provide resistance to breakage during shipping. Sold individually.

Medium	Hard	Rock Hard	Flint Hard	Size
17.950	**17.951**	**17.952**	—	4"
17.956	**17.957**	**17.958**	**17.959**	6"
17.962	**17.963**	**17.964**	**17.965**	7"
17.968	**17.969**	**17.970**	**17.971**	8"

7 MX SPLIT LAP

Multi-laminated, flexible, cotton split-laps are impregnated with aluminum oxide abrasive grains. The smooth, controlled, cool grinding action produces a consistent finish on most metals. Maximum rating is 6050 RPM. Measures 6" x 1/4", with 3/8" arbor hole. Sold individually.

No. **17.975**

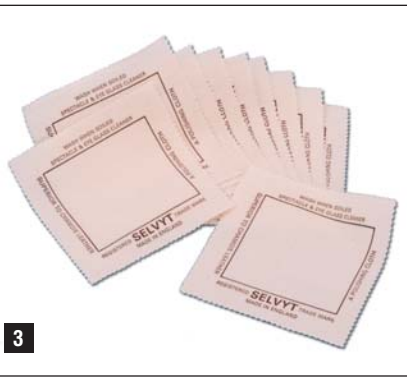
Safety Tip: Always wear proper eye protection when polishing.



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3

POLISHING CLOTHS

1 FABULUSTRE® POLISHING CLOTHS

Keep hands clean when polishing with rouge! Double cloth–one side impregnated with jeweler's rouge and the other side is a final polish cloth. Measures 9" x 11". Individually packed in plastic pouches. Sold by box of 12.
No. **17.076**

2 SHINO CLOTHS

Double cloth, impregnated with jeweler's rouge. Measures 12" x 14". Packed individually in plastic pouch.
No. **17.090**

3 SELVYT™ CLOTHS

High-quality polishing cloth. Soft, velvety, no-lint texture polishes surfaces without scratching. Use on jewelry, silverware, eyeglasses, records, etc. It will retain its softness and suppleness even after repeated washings. Sold individually.

No.	Dimensions	Letter	Price
17.080R	5" x 5"	O	
17.081R	10" x 10"	A	
17.082R	14" x 14"	B	
17.083R	17" x 14"	C	
17.084R	21" x 17"	D	



4

4 ULTRA-SOFT CONNOISSEURS® POLISHING CLOTH

A rougeless, dual-cloth buffing system. Ultra-Soft for Jewelry cleans and buffs gold and silver jewelry. Ultra-Soft for silver lifts tarnish from sterling silver, silver plate, flatware and holloware, while leaving a protective, anti-tarnish coating. Measures 11" x 14". Sold individually.
No. **17.0270** For Jewelry
No. **17.0271** For Silver


5

5 SILVER and GOLD POLISHING MITTS

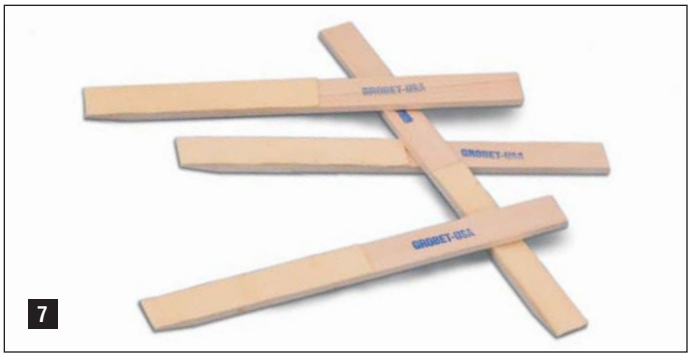
Specially formulated 100% cotton flannel polishing mitts for use when cleaning silver and gold jewelry. Wear mitts and gently rub away the tarnish. Nothing could be easier, and your hands stay clean. Sold by pair.
No. **17.075**

HAND BUFFS


6

6 FELT HAND BUFFS

Use for cleaning, polishing and finishing metals and stones. Made of hard felt, mounted on wood handle 11" L x 7/8" W. Sold by dozen.
No. **17.100**


7

7 CHAMOIS HAND BUFFS

Use for cleaning, polishing and finishing metals and stones. Strips of chamois glued to wood sticks 11" L x 7/8" W. Sold by dozen.
No. **17.094**

Safety Tip: Always wear proper eye protection when polishing.

JEWELERS' BURS

Made of tungsten vanadium steel. 3/32" (2.4 mm) diameter shanks. 1 3/4" (44 mm) long. Can be used with flex shaft machines or micromotors.



GROBET USA™ Brand
Made in Germany, with quality and workmanship in every bur. The burs are ground on modern equipment and are held to close manufacturing specifications. Available in a wide variety of sizes and shapes.



Busch® Brand
Made in Germany with a reputation for consistent and exacting quality. For many years, Busch burs have been the standard for jewelers everywhere.

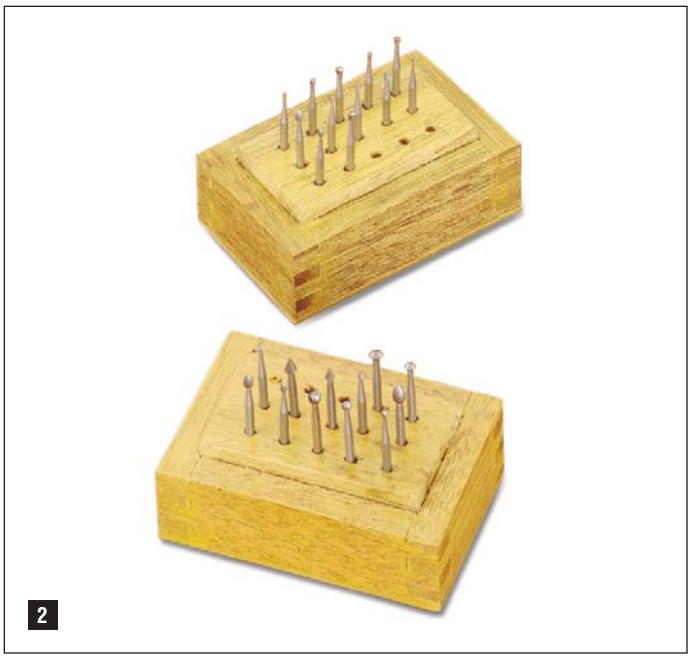


1

1 SINGLE SHAPE BUR ASSORTMENTS

Sets of single shape burs in assorted sizes packaged in a handy, hardwood box.

Grobet USA	Busch	Shape	Qty.
18.150G	**18.150**	Ball	15
18.151G	**18.151**	Bud	15
18.152G	—	Cone	15
18.153G	**18.153**	Cup	13
18.154G	**18.154**	Hart	15



2

2 MULTIPLE SHAPE BUR ASSORTMENTS

Small Sizes

Set of various shaped burs in wood box. Contains 12 burs; three each: ball, bud, cone and inverted cone, in sizes 1, 5, and 8.
No. **18.157G** Grobet USA™ brand
No. **18.157** Busch® brand

Large Sizes

Set of various shapes in wood stand. Contains 12 burs; three each: ball, bud, cone and hart in sizes 6, 10, and 14.
No. **18.158G** Grobet USA™ brand
No. **18.158** Busch® brand

BALL BURS



ISO	Diameters (mm)	GROBET Fig. #1	BUSCH Fig. #1
0025	0.25	—	**18.172**
003	0.30	**18.173G**	**18.173**
0035	0.35	**18.174G**	**18.174**
004	0.40	—	**18.175**
005	0.50	**18.176G**	**18.176**
006	0.60	**18.177G**	**18.177**
007	0.70	**18.178G**	**18.178**
008	0.80	**18.179G**	**18.179**
009	0.90	**18.180G**	**18.180**
010	1.00	**18.182G**	**18.182**
011	1.10	**18.183G**	**18.183**
012	1.20	**18.184G**	**18.184**
013	1.30	**18.185G**	**18.185**
014	1.40	**18.186G**	**18.186**
015	1.50	**18.188G**	**18.188**
016	1.60	**18.190G**	**18.190**
017	1.70	**18.191G**	**18.191**
018	1.80	**18.192G**	**18.192**
019	1.95	**18.193G**	**18.193**
020	2.00	**18.171G**	**18.171**
021	2.10	**18.194G**	**18.194**
022	2.20	**18.195G**	**18.195**
023	2.30	**18.196G**	**18.196**

ISO	Diameters (mm)	GROBET Fig. #1	BUSCH Fig. #1
024	2.40	**18.197G**	**18.197**
025	2.50	**18.198G**	**18.198**
026	2.60	**18.199G**	**18.199**
027	2.70	**18.200G**	**18.200**
028	2.80	**18.20001G**	—
029	2.90	**18.201G**	**18.201**
030	3.00	**18.20101G**	—
031	3.10	**18.202G**	**18.202**
033	3.30	**18.203G**	**18.203**
035	3.50	**18.204G**	**18.204**
037	3.70	**18.205G**	**18.205**
040	4.00	**18.206G**	**18.206**
042	4.20	**18.207G**	**18.207**
045	4.50	**18.208G**	**18.208**
047	4.70	**18.209G**	**18.209**
050	5.00	**18.210G**	**18.210**
055	5.50	**18.212G**	**18.212**
060	6.00	**18.214G**	**18.214**
065	6.50	**18.216G**	**18.216**
070	7.00	**18.218G**	**18.218**
075	7.50	**18.220G**	**18.220**
080	8.00	**18.222G**	**18.222**
085	8.50	**18.224G**	**18.224**

WHEEL BURS



ISO	Diameters (mm)	GROBET Fig. #2	BUSCH Fig. #2
006	0.60	**18.211G**	**18.211**
007	0.70	**18.213G**	**18.213**
008	0.80	**18.215G**	**18.215**
009	0.90	**18.217G**	**18.217**
010	1.00	**18.219G**	**18.219**
012	1.20	**18.221G**	**18.221**
014	1.40	**18.223G**	**18.223**
016	1.60	**18.225G**	**18.225**
018	1.80	**18.226G**	**18.226**

ISO	Diameters (mm)	GROBET Fig. #2	BUSCH Fig. #2
021	2.10	**18.227G**	**18.227**
023	2.30	**18.228G**	**18.228**
025	2.50	**18.229G**	**18.229**
027	2.70	**18.230G**	**18.230**
029	2.90	**18.231G**	**18.231**
035	3.50	—	**18.233**
040	4.00	—	**18.234**
045	4.50	—	**18.235**
050	5.00	—	**18.236**

CONE BURS



ISO	Diameters (mm)	GROBET Fig. #5	BUSCH Fig. #5
009	0.90	**18.290G**	**18.290**
010	1.00	**18.291G**	**18.291**
012	1.20	**18.292G**	**18.292**
014	1.40	**18.293G**	**18.293**
016	1.60	**18.295G**	**18.295**
018	1.80	**18.296G**	**18.296**
020	2.00	**18.29602G**	—
021	2.10	**18.297G**	**18.297**
023	2.30	**18.298G**	**18.298**
025	2.50	**18.299G**	**18.299**
027	2.70	**18.300G**	**18.300**

ISO	Diameters (mm)	GROBET Fig. #5	BUSCH Fig. #5
029	2.90	—	**18.301**
030	3.00	**18.30101G**	—
031	3.10	**18.302G**	**18.302**
033	3.30	**18.303G**	**18.303**
035	3.50	**18.304G**	**18.304**
037	3.70	**18.305G**	**18.305**
040	4.00	**18.306G**	**18.306**
042	4.20	**18.307G**	—
045	4.50	**18.308G**	**18.308**
047	4.70	**18.309G**	—
050	5.00	**18.310G**	**18.310**
055	5.50	—	**18.311**
060	6.00	—	**18.312**

CONE SQUARE CROSS CUT BURS



ISO	Diameters (mm)	GROBET Fig. #23	BUSCH Fig. #23
007	0.70	**18.338G**	**18.338**
008	0.80	**18.339G**	**18.339**
009	0.90	**18.340G**	**18.340**
010	1.00	**18.341G**	**18.341**
012	1.20	**18.342G**	**18.342**
014	1.40	**18.343G**	**18.343**
016	1.60	**18.346G**	**18.346**

ISO	Diameters (mm)	GROBET Fig. #23	BUSCH Fig. #23
018	1.80	**18.348G**	**18.348**
021	2.10	**18.350G**	**18.350**
025	2.50	**18.352G**	**18.354**
027	2.70	—	**18.356**
029	2.90	—	**13.357**
031	3.10	—	**18.358**

CONE SQUARE PLAIN BURS



ISO	Diameters (mm)	GROBET Fig. #17	BUSCH Fig. #17
007	0.70	**18.368G**	**18.368**
008	0.80	—	**18.369**
009	0.90	**18.370G**	**18.370**
010	1.00	**18.371G**	**18.371**
012	1.20	**18.372G**	**18.372**
014	1.40	**18.373G**	**18.373**

ISO	Diameters (mm)	BUSCH Fig. #17
016	1.60	**18.374**
018	1.80	**18.375**
021	2.10	**18.376**
027	2.70	**18.378**

CYLINDER SQUARE PLAIN BURS



ISO	Diameters (mm)	GROBET Fig. #15	BUSCH Fig. #15
007	0.70	**18.468G**	**18.468**
008	0.80	**18.469G**	**18.469**
009	0.90	**18.470G**	**18.470**
010	1.00	**18.472G**	**18.472**
012	1.20	**18.474G**	**18.474**
014	1.40	**18.476G**	**18.476**

ISO	Diameters (mm)	GROBET Fig. #15	BUSCH Fig. #15
016	1.60	**18.480G**	**18.480**
018	1.80	**18.482G**	**18.482**
021	2.10	**18.484G**	**18.484**
027	2.70	**18.490G**	—
031	3.10	—	**18.492**

CYLINDER SQUARE CROSS CUT BURS



ISO	Diameters (mm)	GROBET Fig.#21	BUSCH Fig.#21
006	0.60	**18.427G**	**18.427**
007	0.70	**18.428G**	**18.428**
008	0.80	**18.429G**	**18.429**
009	0.90	**18.430G**	**18.430**
010	1.00	**18.431G**	**18.431**
012	1.20	**18.432G**	**18.432**
014	1.40	**18.433G**	**18.433**

ISO	Diameters (mm)	GROBET Fig.#21	BUSCH Fig.#21
016	1.60	**18.437G**	**18.437**
018	1.80	**18.439G**	**18.439**
021	2.10	**18.441G**	**18.441**
023	2.30	**18.443G**	**18.443**
025	2.50	**18.445G**	—
027	2.70	**18.447G**	—
031	3.10	—	**18.449**

HART 90º BURS (Bearing Cutters)



ISO	Diameters (mm)	GROBET Fig. #156C	BUSCH Fig. #156C
009	0.90	**18.500G**	**18.500**
0095	0.95	—	**18.521**
010	1.00	**18.501G**	**18.501**
011	1.10	**18.522G**	**18.522**
012	1.20	**18.502G**	**18.502**
013	1.30	**18.523G**	**18.523**
014	1.40	**18.503G**	**18.503**
0145	1.45	—	**18.524**
015	1.50	**18.504G**	**18.504**
0155	1.55	—	**18.525**
016	1.60	**18.505G**	**18.505**
017	1.70	**18.526G**	**18.526**
018	1.80	**18.506G**	**18.506**
019	1.95	**18.527G**	**18.527**
020	2.00	**18.533G**	**18.533**
021	2.10	**18.507G**	**18.507**
022	2.20	**18.528G**	**18.528**

ISO	Diameters (mm)	GROBET Fig. #156C	BUSCH Fig. #156C
023	2.30	**18.508G**	**18.508**
024	2.40	**18.529G**	**18.529**
025	2.50	**18.509G**	**18.509**
026	2.60	—	**18.530**
027	2.70	**18.510G**	**18.510**
028	2.80	—	**18.531**
029	2.90	**18.511G**	**18.511**
030	3.00	**18.51101G**	—
031	3.10	**18.512G**	**18.512**
033	3.30	**18.513G**	**18.513**
035	3.50	**18.514G**	**18.514**
037	3.70	**18.515G**	**18.515**
040	4.00	**18.516G**	**18.516**
042	4.20	**18.517G**	**18.517**
045	4.50	**18.518G**	**18.518**
047	4.70	**18.519G**	**18.519**
050	5.00	**18.520G**	**18.520**

HART 70º BURS (Shallow Bearing Cutters)



ISO	Diameters (mm)	GROBET Fig #446	BUSCH Fig #446
009	0.90	**18.599G**	—
010	1.00	**18.600G**	**18.600**
012	1.20	**18.601G**	**18.601**
013	1.30	**18.60101G**	—
014	1.40	**18.602G**	**18.602**
015	1.50	**18.60201G**	—
016	1.60	**18.603G**	**18.603**
018	1.80	**18.604G**	**18.604**
021	2.10	**18.605G**	**18.605**

ISO	Diameters (mm)	GROBET Fig #446	BUSCH Fig #446
023	2.30	**18.606G**	**18.606**
025	2.50	**18.607G**	**18.607**
027	2.70	**18.608G**	**18.608**
029	2.90	**18.609G**	**18.609**
031	3.10	**18.610G**	—
033	3.30	**18.611G**	—
035	3.50	**18.612G**	—
037	3.70	**18.613G**	—

BUD BURS



ISO	Diameters (mm)	GROBET Fig. #6	BUSCH Fig. #6
006	0.60	**18.237G**	**18.237**
007	0.70	**18.238G**	**18.238**
008	0.80	**18.239G**	**18.239**
009	0.90	**18.240G**	**18.240**
010	1.00	**18.241G**	**18.241**
012	1.20	**18.242G**	**18.242G**
014	1.40	**18.243G**	**18.243**
015	1.50	**18.244G**	**18.244**
016	1.60	**18.245G**	**18.245**
018	1.80	**18.246G**	**18.246**
021	2.10	**18.247G**	**18.247**
023	2.30	**18.248G**	**18.248**
025	2.50	**18.249G**	**18.249**
027	2.70	**18.250G**	**18.250**
029	2.90	**18.251G**	**18.251**
031	3.10	**18.252G**	**18.252**
033	3.30	**18.253G**	**18.253**
035	3.50	**18.254G**	**18.254**
037	3.70	**18.255G**	**18.255**
040	4.00	**18.256G**	**18.256**
042	4.20	**18.257G**	—
045	4.50	**18.258G**	**18.258**
050	5.00	**18.260G**	**18.260**
075	7.50	—	—
080	8.00	—	**18.266**

INVERTED CONE BURS



ISO	Diameters (mm)	GROBET Fig. #3	BUSCH Fig. #3
006	0.60	**18.537G**	**18.537**
007	0.70	**18.538G**	**18.538**
008	0.80	**18.539G**	**18.539**
009	0.90	**18.540G**	**18.540**
010	1.00	**18.541G**	**18.541**
012	1.20	**18.542G**	**18.542**
014	1.40	**18.543G**	**18.543**
015	1.50	—	**18.544**
016	1.60	**18.545G**	**18.545**
018	1.80	**18.546G**	**18.546**
021	2.10	**18.547G**	**18.547**
023	2.30	**18.548G**	**18.548**
025	2.50	**18.549G**	**18.549**
027	2.70	**18.534G**	**18.534**
029	2.90	**18.535G**	**18.535**
031	3.10	—	**18.536**

CUP BURS



ISO	Diameters (mm)	GROBET Fig. #77B	BUSCH Fig. #77B
008	0.80	**18.399G**	—
009	0.90	**18.400G**	**18.400**
010	1.00	**18.401G**	**18.401**
012	1.20	**18.402G**	**18.402**
014	1.40	**18.403G**	**18.403**
015	1.50	**18.404G**	**18.404**
016	1.60	**18.405G**	**18.405**
018	1.80	**18.406G**	**18.406**
020	2.00	**18.40602G**	—
021	2.10	**18.407G**	**18.407**
023	2.30	**18.408G**	**18.408**
025	2.50	**18.409G**	**18.409**
027	2.70	**18.410G**	**18.410**
029	2.90	**18.411G**	**18.411**
030	3.00	**18.41101G**	—
031	3.10	—	**18.412**
035	3.50	**18.41201G**	—
040	4.00	**18.41202G**	—
045	4.50	**18.41203G**	—
050	5.00	**18.41204G**	—

FAST-CUT CUP BURS



ISO	Diameters (mm)	BUSCH Fig. #411C
010	1.00	**18.413**
012	1.20	**18.414**
014	1.40	**18.415**
015	1.50	**18.416**
016	1.60	**18.417**
018	1.80	**18.418**
021	2.10	**18.419**
023	2.30	**18.420**

CLEAN-CUT CUP BURS



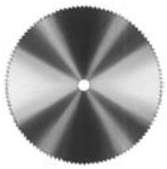
ISO	Diameters (mm)	BUSCH Fig. #411CCC
011	1.1	**18.620**
012	1.2	**18.621**
013	1.3	**18.622**
014	1.4	**18.623**
015	1.5	**18.624**
016	1.6	**18.625**
018	1.8	**18.626**
021	2.1	**18.627**
023	2.3	**18.628**

ROUND FINISHING BURS



ISO	Diameters (mm)	BUSCH Fig. #145
008	0.80	**18.550**
009	0.90	**18.551**
010	1.00	**18.552**
012	1.20	**18.553**
014	1.40	**18.554**
016	1.60	**18.555**
018	1.80	**18.556**
021	2.10	**18.557**
023	2.30	**18.558**
027	2.70	**18.559**
031	3.10	**18.560**
035	3.50	**18.561**
040	4.00	**18.562**
045	4.50	**18.563**
050	5.00	**18.564**

UNMOUNTED CIRCULAR SAWS



Diameters (mm)	GROBET Fig. #232
125	**18.681G**
160	**18.682G**
190	**18.683G**
220	**18.684G**

POINTED BUR



ISO	Diameters (mm)	GROBET Fig. #219
023	2.3	**18.830G**

BUD SHORT



ISO	Diameters (mm)	GROBET Fig. #75
040	4.0	**18.840G**
050	5.0	**18.841G**
060	6.0	**18.842G**
070	7.0	**18.843G**
080	8.0	**18.845G**

BUD LONG



ISO	Diameters (mm)	GROBET Fig. #79
040	4.0	**18.850G**
050	5.0	**18.851G**

STONE SETTING BURS



All burs have 3/32" shank (2.4 mm).

ISO	Grobet USA	Busch
009	**18.700G**	–
010	**18.701G**	**18.701**
012	**18.702G**	–
0125	–	**18.70101**
013	**18.703G**	–
014	**18.704G**	–
015	**18.705G**	**18.705**
016	**18.706G**	–
017	**18.707G**	–
0175	–	**18.70701**
018	**18.708G**	–
019	**18.709G**	–
020	**18.710G**	**18.710**
021	**18.711G**	–
022	**18.712G**	–
0225	–	**18.71201**
023	**18.713G**	–
025	**18.715G**	**18.715**
0225	–	**18.71601**

ISO	Grobet USA	Busch
029	**18.717G**	–
030	**18.718G**	**18.718**
031	**18.719G**	–
033	**18.720G**	–
035	**18.721G**	–
037	**18.722G**	–
0375	–	**18.72201**
040	**18.723G**	**18.723**
042	**18.724G**	–
0425	–	**18.72401**
045	**18.725G**	**18.725**
047	**18.726G**	–
0475	–	**18.72601**
050	**18.727G**	**18.727**
055	–	**18.72701**
060	**18.728G**	**18.728**
070	**18.729G**	**18.729**
080	**18.730G**	**18.730**

KNIFE EDGE CUTTER



ISO	Diameters (mm)	GROBET Fig. #249
009	0.9	**18.800G**
010	1.0	**18.801G**
011	1.1	**18.802G**
012	1.2	**18.803G**
013	1.3	**18.804G**
014	1.4	**18.805G**
015	1.5	**18.806G**
016	1.6	**18.807G**
017	1.7	**18.808G**
018	1.8	**18.809G**
019	1.9	**18.810G**
020	2.0	**18.811G**
022	2.2	**18.812G**
023	2.3	**18.813G**

ISO	Diameters (mm)	GROBET Fig. #249
025	2.5	**18.814G**
027	2.7	**18.815G**
030	3.0	**18.816G**
031	3.1	**18.817G**
033	3.3	**18.818G**
035	3.5	**18.819G**
037	3.7	**18.820G**
040	4.0	**18.821G**
045	4.5	**18.822G**
050	5.0	**18.823G**
070	7.0	**18.824G**
080	8.0	**18.825G**
090	9.0	**18.826G**
100	10.0	**18.827G**



DIAMOND TWIST DRILLS

ISO	Diameters (mm)	GROBET Fig. #203D
008	0.8	**28.587D**
009	0.9	**28.588D**
010	1.0	**28.589D**
012	1.2	**28.590D**
014	1.4	**28.591D**



TWIST DRILLS

ISO	Diameters (mm)	GROBET Fig. #77	BUSCH Fig. #77
005	0.50	**28.584G**	**28.584**
006	0.60	**28.585G**	**25.585**
007	0.70	**28.586G**	**28.586**
008	0.80	**28.587G**	**28.587**
009	0.90	**28.588G**	**28.588**
010	1.00	**28.589G**	**28.589**
011	1.10	**28.58901G**	—
012	1.20	**28.590G**	**28.590**
013	1.30	**28.59001G**	—

ISO	Diameters (mm)	GROBET Fig. #77	BUSCH Fig. #77
014	1.40	**28.591G**	**28.591**
015	1.50	**28.592G**	**28.592**
016	1.60	**28.593G**	**28.593**
017	1.70	**28.59301G**	—
018	1.80	**28.594G**	**28.594**
020	2.00	**28.59402G**	—
021	2.10	**28.595G**	**28.595**
022	2.20	**28.59501G**	—
023	2.30	**28.596G**	**28.596**



1

1 KRAUSE BURS

Sold individually.

Grobet USA Brand #256	Head Diameter (mm)
18.571G	1.00
18.572G	1.20

Busch Brand #256	Head Diameter (mm)
18.571	1.00
18.572	1.20

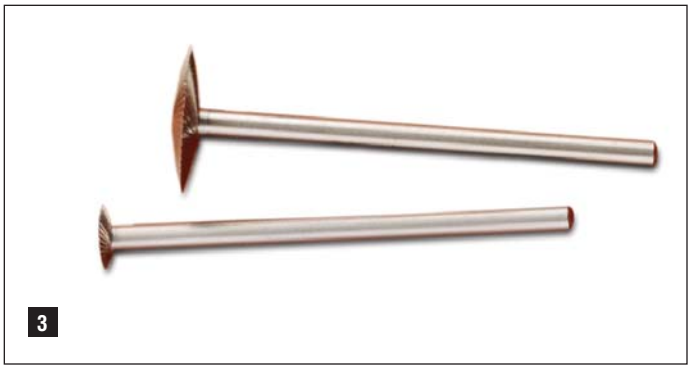


2

2 SOLID CARBIDE FLORENTINE BURS

1/8" (3.2 mm) diameter shank, with head sizes as noted. Sold individually.

No.	Shape	Head Dia. (mm)	Head Lgth (mm)	Head Lgth (in)
18.950	Barrel	4.0	4.0	.1575
18.951	Cylinder	3.2	12.7	.5000
18.952	Pointed	3.2	12.7	.1575



3

3 WHEEL BURS with KNIFE EDGE

Sold individually.

Busch Brand #161KE	Head Diameter (mm)
18.646	6
18.647	7
18.648	8
18.650	10
18.652	12
18.654	14



1

1 WHEEL BURS with SAW EDGE

Sold individually.

Busch Brand #231S	Head Diameter (mm)
18.676	2.3
18.675	5.0
18.680	10.0

Grobet USA Brand #45	ISO	Head Diameter (mm)
18.676G	023	2.3
18.677G	029	2.9
18.678G	035	3.5
18.679G	040	4.0



2

2 WAX CARVING BURS

Sold individually.

Busch Brand #260A	Head Diameter (mm)
18.576	1.80
18.578	2.30
18.582	3.10
18.590	5.00

Grobet USA Brand #171C	Head Diameter (mm)
18.585G	1.80
18.586G	2.30
18.587G	3.10
18.588G	5.00

SIX PIECE WAX CARVING BUR SET

Set includes Nos. 18.592G, 18.593G, 18.585G, 18.586G, 18.587G, and 18.588G.
No. **18.589G**

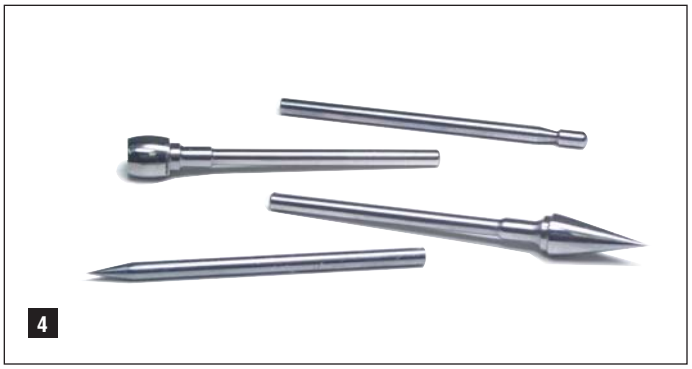


3

3 FLORENTINE BURS

Tungsten vanadium steel. Sold individually.

No.	Shape	Head Dia. (mm)	Head Dia. (in)	Head Lgth (mm)	Head Lgth (in)
18.961	Barrel	4.0	.1575	4.9	.1929
18.962	Cylinder	3.1	.1220	7.0	.2756
18.963	Flame	5.0	.1969	11	.4331



4

4 CARBIDE POLISHERS

Especially brilliant polished finish for gold and platinum. Sold individually.

Busch Brand No.	#	Head Diameter (mm)	Head Diameter (in)
18.940	552	2.30	.0906
18.941	550	6.00	.2358
18.942	554	6.00	.2358
18.943	553	2.30	.0906

FOUR PIECE CARBIDE POLISHER SET

Set includes Nos. 18.940, 18.941, 18.942, and 18.943.
No. **18.944** 4 piece set

HIGH SPEED STEEL BURS

Made in the USA, these hand-cut, high speed steel burs last longer than standard jeweler's burs. They offer exceptional cutting efficiency and are available in a wide variety of shapes and sizes for cutting most metals. All have 3/32" (2.4 mm) shanks and will fit most flexible shaft handpieces.

BUR ASSORTMENTS & SETS

BUR ASSORTMENT

Contains 24 various shapes and sizes of the most popular burs for practically every requirement. Wood case included.
No. **19.310**

BUR SETS

Contain the most popular sizes in specific shapes.

No.	Shape	Bur Nos.	Qty.
19.311	Ball	1 to 15	15
19.312	Ball	1 to 30	29
19.313	Ball	1 to 34	33
19.315	45° Bearing	*2 to 28	14
19.316	45° Bearing	*2 to 34	25
19.318	90° Bearing	*2 to 28	14
19.319	90° Bearing	1 to 34	33
19.321	Bud	*2 to 18	15
19.322	Bud	*2 to 34	23
19.325	Cone	*2 to 34	23
19.333	Stone Setting	1 to 30	29
19.334	Stone Setting	1 to 34	33
19.336	Stone Setting	**1 to 26	25

** Assorted* *** Excluding #21*



EXTRA-FINE BUR SETS

Now available in extra-fine sets.

No.	Shape	Bur Nos.	Qty.
19.314	Ball-XFine	3 to 16	14
19.317	45° Bearing-XFine	3 to 16	14
19.320	90° Bearing-XFine	3 to 16	14
19.323	Bud-XFine	3 to 16	13
19.328	70° Bearing-XFine	1 to 34	33
19.329	70° Bearing-XFine	3 to 16	14

BALL BUR



Size	Diameters (mm)	Regular	Extra Fine
1	.90	**19.341**	—
2	1.10	**19.342**	—
3	1.30	**19.343**	**19.343F**
4	1.50	**19.344**	**19.344F**
5	1.70	**19.345**	**19.345F**
6	1.90	**19.346**	**19.346F**
7	2.10	**19.347**	**19.347F**
8	2.30	**19.348**	**19.348F**
9	2.50	**19.349**	**19.349F**
10	2.70	**19.350**	**19.350F**
11	2.90	**19.351**	**19.351F**
12	3.10	**19.352**	**19.352F**
13	3.30	**19.353**	**19.353F**
14	3.50	**19.354**	**19.354F**
15	3.80	**19.355**	**19.355F**
16	4.00	**19.356**	**19.356F**
17	4.30	**19.357**	—
18	4.50	**19.358**	—
19	4.70	**19.359**	—
20	5.00	**19.360**	—
22	5.20	**19.362**	—
23	5.40	**19.363**	—
24	5.60	**19.364**	
25	5.90	**19.365**	
26	6.30	**19.366**	
27	6.70	**19.367**	
28	7.20	**19.368**	
29	7.60	**19.369**	
30	8.00	**19.370**	
31	8.90	**19.371**	
32	9.60	**19.372**	
33	10.40	**19.373**	
34	11.10	**19.374**	

BEARING 45° BUR



Size	Diameters (mm)	Regular	Extra Fine
2	1.10	**19.382**	—
3	1.30	**19.383**	**19.383F**
4	1.50	**19.384**	**19.384F**
5	1.70	**19.385**	**19.385F**
6	1.90	**19.386**	**19.386F**
7	2.10	**19.387**	**19.387F**
8	2.30	**19.388**	**19.388F**
9	2.50	**19.389**	**19.389F**
10	2.70	**19.390**	**19.390F**
11	2.90	**19.391**	**19.391F**
12	3.10	**19.392**	**19.392F**
13	3.30	**19.393**	**19.393F**
14	3.50	**19.394**	**19.394F**
15	3.80	**19.395**	**19.395F**
16	4.00	**19.396**	**19.396F**
17	4.30	**19.397**	—
18	4.50	**19.398**	—
19	4.70	**19.399**	
20	5.00	**19.400**	
22	5.20	**19.402**	
24	5.60	**19.404**	
26	6.30	**19.406**	
28	7.20	**19.408**	
30	8.00	**19.410**	
34	11.10	**19.414**	

BEARING 70° BUR



Size	Diameters (mm)	Regular	Extra Fine
1	.90	**19.201**	—
2	1.10	**19.202**	—
3	1.30	**19.203**	**19.203F**
4	1.50	**19.204**	**19.204F**
5	1.70	**19.205**	**19.205F**
6	1.90	**19.206**	**19.206F**
7	2.10	**19.207**	**19.207F**
8	2.30	**19.208**	**19.208F**
9	2.50	**19.209**	**19.209F**
10	2.70	**19.210**	**19.210F**
11	2.90	**19.211**	**19.211F**
12	3.10	**19.212**	**19.212F**
13	3.30	**19.213**	**19.213F**
14	3.50	**19.214**	**19.214F**
15	3.80	**19.215**	**19.215F**
16	4.00	**19.216**	**19.216F**
17	4.30	**19.217**	—
18	4.50	**19.218**	—
19	4.70	**19.219**	—
20	5.00	**19.220**	—
22	5.20	**19.222**	—
23	5.40	**19.223**	—
24	5.60	**19.224**	
25	5.90	**19.225**	
26	6.30	**19.226**	
27	6.70	**19.227**	
28	7.20	**19.228**	
29	7.60	**19.229**	
30	8.00	**19.230**	
31	8.90	**19.231**	
32	9.60	**19.232**	
33	10.40	**19.233**	
34	11.10	**19.234**	

BEARING 90° BUR



Size	Diameters (mm)	Bearing 90° Regular	Bearing 90° Extra Fine
1	.90	**19.421**	—
2	1.10	**19.422**	—
3	1.30	**19.423**	**19.423F**
4	1.50	**19.424**	**19.424F**
5	1.70	**19.425**	**19.425F**
6	1.90	**19.426**	**19.426F**
7	2.10	**19.427**	**19.427F**
8	2.30	**19.428**	**19.428F**
9	2.50	**19.429**	**19.429F**
10	2.70	**19.430**	**19.430F**
11	2.90	**19.431**	**19.431F**
12	3.10	**19.432**	**19.432F**
13	3.30	**19.433**	**19.433F**
14	3.50	**19.434**	**19.434F**
15	3.80	**19.435**	**19.435F**
16	4.00	**19.436**	**19.436F**
17	4.30	**19.437**	—
18	4.50	**19.438**	—
19	4.70	**19.439**	—
20	5.00	**19.440**	—
22	5.20	**19.442**	—
23	5.40	**19.443**	—
24	5.60	**19.444**	
25	5.90	**19.445**	
26	6.30	**19.446**	
27	6.70	**19.447**	
28	7.20	**19.448**	
29	7.60	**19.449**	
30	8.00	**19.450**	
31	8.90	**19.451**	
32	9.60	**19.452**	
33	10.40	**19.453**	
34	11.10	**19.454**	

BUD BUR



Size	Diameters (mm)	Bud Regular	Bud Extra Fine
2	1.10	**19.462**	—
3	1.30	**19.463**	**19.463F**
4	1.50	**19.464**	**19.464F**
5	1.70	**19.465**	**19.465F**
6	1.90	**19.466**	**19.466F**
7	2.10	**19.467**	**19.467F**
8	2.30	**19.468**	**19.468F**
9	2.50	**19.469**	**19.469F**
10	2.70	**19.470**	**19.470F**
11	2.90	**19.471**	**19.471F**
12	3.10	**19.472**	**19.472F**
13	3.30	**19.473**	**19.473F**
14	3.50	**19.474**	**19.474F**
16	4.00	**19.476**	**19.476F**
18	4.50	**19.478**	
20	5.00	**19.480**	
22	5.20	**19.482**	
24	5.60	**19.484**	
26	6.30	**19.486**	
28	7.20	**19.488**	
30	8.00	**19.490**	
32	9.60	**19.492**	
34	11.10	**19.494**	

CONE BUR



Size	Diameters (mm)	Cone
2	1.10	**19.522**
3	1.30	**19.523**
4	1.50	**19.524**
5	1.70	**19.525**
6	1.90	**19.526**
7	2.10	**19.527**
8	2.30	**19.528**
9	2.50	**19.529**
10	2.70	**19.530**
11	2.90	**19.531**
12	3.10	**19.532**
13	3.30	**19.533**
14	3.50	**19.534**
16	4.00	**19.536**
18	4.50	**19.538**
20	5.00	**19.540**
22	5.20	**19.542**
24	5.60	**19.544**
26	6.30	**19.546**
28	7.20	**19.548**
30	8.00	**19.550**
32	9.60	**19.552**
34	11.10	**19.554**

FLAME BUR



Size	Diameters (mm)	Flame
2	1.10	**19.802**
4	1.50	**19.804**
6	1.90	**19.806**
8	2.30	**19.808**
10	2.70	**19.810**
12	3.10	**19.812**
14	3.50	**19.814**
16	4.00	**19.816**
18	4.50	**19.818**
20	5.00	**19.720**
22	5.20	**19.722**
24	5.60	**19.724**
26	6.30	**19.726**
30	8.00	**19.730**

CYLINDER BUR



Size	Diameters (mm)	Cylinder
5	1.70	**19.565**
8	2.30	**19.568**
13	3.30	**19.573**
16	4.00	**19.576**
19	4.70	**19.579**
26	6.30	**19.586**
30	8.00	**19.590**
34	11.10	**19.594**

WHEEL BUR



Size	Diameters (mm)	Wheel
5	1.70	**19.745**
8	2.30	**19.748**
13	3.30	**19.753**
16	4.00	**19.756**
19	4.70	**19.759**
26	6.30	**19.766**
30	8.00	**19.770**
34	11.10	**19.774**

INVERTED CONE BUR



Size	Diameters (mm)	Inverted Cone
5	1.70	**19.635**
8	2.30	**19.638**
13	3.30	**19.643**
19	4.70	**19.649**
26	6.30	**19.656**
30	8.00	**19.660**

SLIM REAMER BUR



Size	Diameters (mm)	Slim Reamer
13	3.30	**19.713**
19	4.70	**19.719**

SETTING BUR



Size	Diameters (mm)	Setting
1	.90	**19.671**
2	1.10	**19.672**
3	1.30	**19.673**
4	1.50	**19.674**
5	1.70	**19.675**
6	1.90	**19.676**
7	2.10	**19.677**
8	2.30	**19.678**
9	2.50	**19.679**

Size	Diameters (mm)	Setting
10	2.70	**19.680**
11	2.90	**19.681**
12	3.10	**19.682**
13	3.30	**19.683**
14	3.50	**19.684**
15	3.80	**19.685**
16	4.00	**19.686**
17	4.30	**19.687**
18	4.50	**19.688**

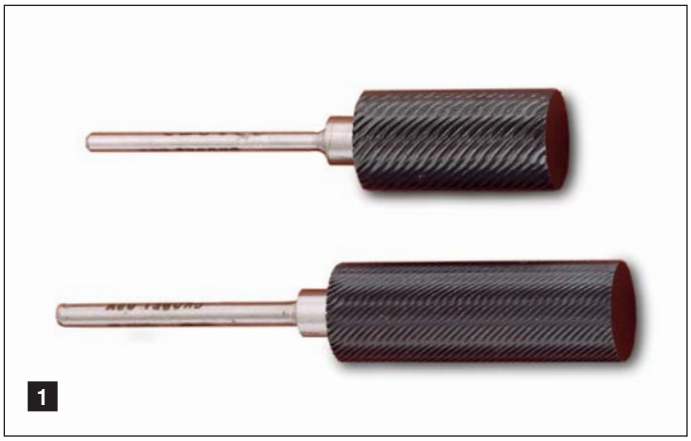
Size	Diameters (mm)	Setting
19	4.70	**19.689**
20	5.00	**19.690**
22	5.20	**19.692**
23	5.40	**19.693**
24	5.60	**19.694**
25	5.90	**19.695**
26	6.30	**19.696**
27	6.70	**19.697**
28	7.20	**19.698**

Size	Diameters (mm)	Setting
29	7.60	**19.699**
30	8.00	**19.700**
31	8.90	**19.701**
32	9.60	**19.702**
33	10.40	**19.703**
34	11.10	**19.704**

1 GROBET USA™ INSIDE RING BURS

Made of high speed steel. Cylinder shape for multi-purpose applications, especially for inside of rings. Sold individually.

No.	Head Dia. (in)	Head Dia. (mm)	Length of Cut (in)	Length of Cut (mm)	Cut	Shank Dia. (in)	Shank Dia. (mm)
33.629	½"	13	1"	25	Standard	3⁄32"	2.4
33.630	½"	13	1"	25	Fine	3⁄32"	2.4
33.631	½"	13	1½"	38	Standard	3⁄32"	2.4
33.632	½"	13	1½"	38	Fine	3⁄32"	2.4
33.635	½"	13	1"	25	Standard	⅛"	3.2
33.636	½"	13	1"	25	Fine	⅛"	3.2
33.637	½"	13	1½"	38	Standard	⅛"	3.2
33.638	½"	13	1½"	38	Fine	⅛"	3.2



1

JEWELERS' SETTING BURS

2 BUSER-STYLE STONE SETTING BURS

Set of 22 sizes for cutting stone seats. Only tops are cut with side lip regulating the depth of cut. For stones 1/16 to 2 carats. All have 1/8" (3.2 mm) shanks. Comes in plastic stand with cover.
No. **19.820**



2

3 PERFECTION STONE SETTING BURS

Set of 30 sizes for cutting stone seats. All have 1/8" (3.2 mm) shanks. Comes in plastic stand with cover.
No. **19.850**

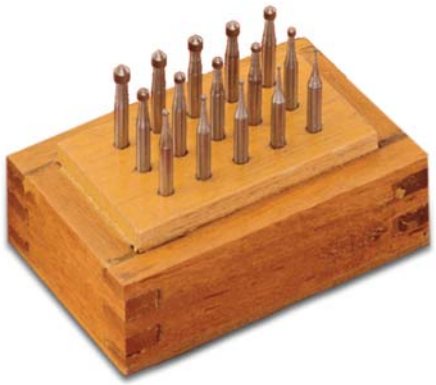


3

Individual Burs

No.	Bur No.	(mm)
19.851	1	1.0
19.852	2	1.4
19.853	3	1.6
19.854	4	1.8
19.855	5	2.0
19.856	6	2.3
19.857	7	2.5
19.858	8	2.8
19.859	9	3.0
19.860	10	3.4
19.861	11	3.6
19.862	12	3.8
19.863	13	4.0
19.864	14	4.3
19.865	15	4.5

No.	Bur No.	(mm)
19.866	16	4.8
19.867	17	5.0
19.868	18	5.3
19.869	19	5.5
19.870	20	5.7
19.871	21	6.0
19.872	22	6.4
19.873	23	6.7
19.874	24	7.0
19.875	25	7.5
19.876	26	8.0
19.877	27	8.5
19.878	28	9.0
19.879	29	9.5
19.880	30	10.0



4

4 VANADIUM STEEL STONE SETTING BURS

All have 1/8" (3.2 mm) shanks.

Individual Burs

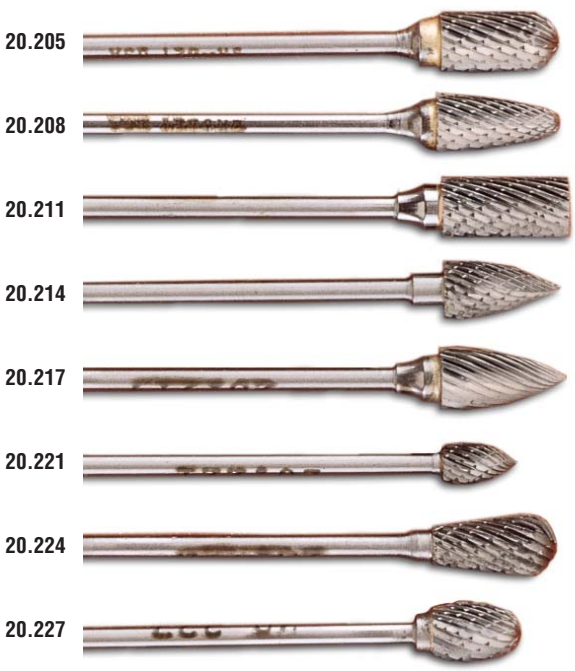
No.	Bur No.	(mm)	No.	Bur No.	(mm)
19.891	1	0.81	**19.904**	14	3.26
19.892	2	0.90	**19.905**	15	3.46
19.893	3	1.19	**19.906**	16	3.60
19.895	5	1.60	**19.907**	17	3.70
19.896	6	1.82	**19.908**	18	3.96
19.897	7	2.05	**19.910**	20	4.46
19.898	8	2.29	**19.911**	21	4.70
19.899	9	2.42	**19.912**	22	4.96
19.900	10	2.54	**19.914**	24	5.40
19.901	11	2.64	**19.916**	26	5.96
19.902	12	3.00	**19.918**	28	7.38
19.903	13	3.14	**19.919**	29	8.94

VANADIUM STEEL STONE SETTING BUR SETS

Sets of either 15 or 30 sizes for cutting stone seats.
All have 1/8" (3.2 mm) shanks.
No. **19.885** Set of 15 smallest sizes in wood box
No. **19.886** Set of all 30 burs in styrofoam box

JEWELRY CARBIDE BURS

Once you try these you'll never use old fashioned steel burs again! Long-lasting carbide combined with a new technique of alternate diamond cutting on most burs provides benefits never before possible. With 3/32" (2.4 mm) shanks. See illustrations for stock numbers.





Benefits:
- Fast material removal
- Smooth cutting action
- Reduced vibration
- Minimum heat build-up
- Long tool life
- Minimal clogging
- Maximum tool control



1

1 GROBET USA™ INSIDE RING BURS

Size, shape and cut are designed for fast deburring, smoothing and finishing of inside ring surfaces. Made of carbide steel for extra long life.

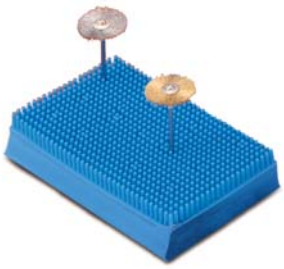
	Head Dia.		Head Length		Shank Dia.		
No.	(in)	(mm)	(in)	(mm)	(in)	(mm)	Finish
20.290	1/2"	13	1"	25	1/4"	6	Extra fine
20.291	1/2"	13	1"	25	1/4"	6	Fine
20.292	3/8"	10	3/4"	19	1/8"	3.2	Fine
20.293	1/4"	6	5/8"	16	1/8"	3.2	Fine
20.01401	1/4"	6	1/2"	13	3/32"	2.4	Fine
20.01402	1/4"	6	1/2"	13	3/32"	2.4	Extra Fine
20.01403	1/4"	6	1/2"	13	3/32"	2.4	Extra Coarse
20.01404	3/8"	10	3/4"	19	1/8"	3.2	Fine
20.01405	3/8"	10	3/4"	19	1/8"	3.2	Extra Fine
20.01406	3/8"	10	3/4"	19	1/8"	3.2	Extra Coarse

BUR ACCESSORIES

2 WOOD BOX BUR HOLDER
Wood box holds 36 burs with hinged lid and clasped closure.
No. **15.0375**


2

3 FLAT BUR STAND
Handy 5" W x 3" D x 1" H (127 x 76 x 25 mm) plastic bur holder helps keep 3/32" (2.4 mm) shank burs in place, safe from loss or damage.
No. **19.925**


3

4 BUR ORGANIZER
Keeps your work area clean, while protecting your tools. Handy 156, 3/32" (2.4 mm) hole carousel holds burs as well as brushes, drills, etc. Rotates 360°.
No. **19.927** Standard model
No. **19.926** Bottom tier has 1/8" holes


4

5 WOODEN BUR BOX
Makes finding the right size bur easy. This box slips into your center bench drawer. Made of hardwood with removable dividers. 8" x 5 7/8" x 1 1/2".
No. **18.100**


5

6 GROBET USA™ BUR GAUGE
Precision gauge is made of lightweight metal and measures bur diameters in ISO sizes from 005 to 045. On the reverse side is a handy ruler for measuring up to 50 mm in 1 mm increments.
No. **35.465**

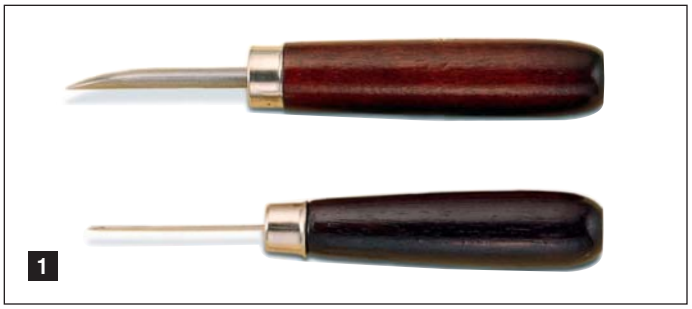


6

7 BUR and BLADE LUBRICANT
Keeps burs, drills, sawblades, gravers plus many other cutting and abrading tools working smoother and longer. Reduces heat build-up and friction to speed the cut. Easy and convenient to use. Leave it right on the bench and just dip or run the tool through the lubricant at regular intervals while working. Comes in handy 2 oz. (56.7 g) push-up container.
No. **19.928**



7


1

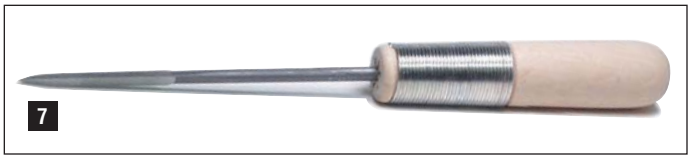

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3

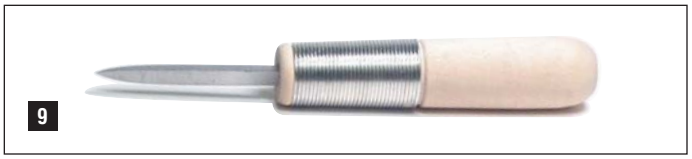

4


5


6


7


8


9

BURNISHERS

1 STEEL BURNISHERS

Oval-shaped tool steel burnishers for smoothing of bezels around stones and smoothing other parts of soft metals. Highly polished blades are firmly set in wood handles.

Curved Blade	Straight Blade	Blade Length
18.050	**18.060**	1½"
18.052	**18.062**	2"
18.053	**18.063**	2½"
18.054	**18.064**	3"

2 SLIM BLADE BURNISHERS

Especially useful for jewel settings. Blade 1¾" long.
No. **18.058** Curved blade
No. **18.059** Straight blade

3 MARGIN ROLLER/BURNISHER

For burnishing scratches from gold, making it possible to salvage many pieces without gold loss. Tightens cast margins on cast dental abutments. The 3/16" head consists of five steel rollers that act as rotating mallets. 3/32" shank for use with handpiece.
No. **18.080**

SCRAPERS

Scrapers are ideal for cleaning, smoothing and deburring metals and plastics. Used to prepare surfaces for soldering, remove excess solders, open bezels, etc. Sharp from handle to tip and can be resharpened on a bench stone. All are securely mounted in hardwood handles.

4 HOLLOW THREE-SQUARE SCRAPERS

High quality, chrome alloy steel.
No. **52.100** 2" long
No. **52.103** 3" long

5 ECONOMY SCRAPER

With 2½" hollow straight blade.
No. **52.101**

6 HOLLOW CURVED SCRAPER

2½" blade. Shipping weight 3 oz.
No. **52.140**

7 THREE-SQUARE MACHINIST'S SCRAPER

With sharpened point 1¼" long. Overall length is 6½" with the blade 4" long.
No. **52.180**

8 SOLID SCRAPER

With 3" blade.
No. **52.200**

9 THREE-SQUARE MACHINIST'S SCRAPERS

No.	Overall Length	Blade Length	Thickness
52.170	5½"	2"	3/16"
52.171	6½"	3"	3/16"
52.172	6½"	3¼"	¼"
52.173	8"	4"	5/16"

WAX TOOLS

1 WAX TOOL No. 1
Overall length is 6 1/4".
No. **21.250**

2 WAX TOOL No. 6
Overall length is 5 1/2".
No. **21.251**

3 WAX TOOL No. 17
Overall length is 5 5/8".
No. **21.252**

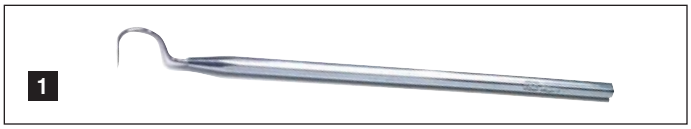
4 WAX TOOLS SET
Set of all 3 wax tools/probes listed above.
Consists of Nos. 21.250, 21.251 and 21.252.
No. **21.254**

5 DISPATULAS
Disposable spatulas. Made of flexible plastic with the feel of metal, yet are less expensive. Box of 100.
No. **21.185**

6 SET of SIX POPULAR CARVERS, SPATULA, and PROBES
Consists of Nos. 21.114, 21.115, 21.116, 21.141, 21.251 and 21.252.
No. **21.100**

7 SET of DOUBLE-ENDED WAX CARVERS/SPATULAS
Seven pieces in a handy wood stand, with built-in sharpening stone. Organizes and protects tools.
No. **21.0828**

8 WAX CARVER SETS
New designs. Loop ends are sharpened for smooth wax removal. 4 shapes with different sizes on each end. Can be used at room temperature or heated. 7" long.
No. **21.101** With rubber handles
No. **21.105** Without rubber handles





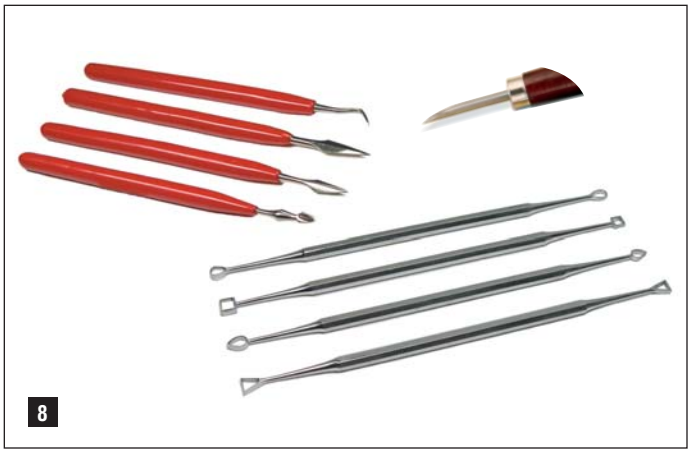












STAINLESS STEEL DOUBLE-ENDED CARVERS & SPATULAS



WAX CARVER/SPATULA

No.	Overall Legth
21.0825/4	6¾"



WAX CARVER/SPATULA

No.	Overall Legth
21.0825/7	6¾"



WAX CARVER/SPATULA

No.	Overall Legth
21.0825/16	6½"



WAX CARVER/SPATULA

No.	Overall Legth
21.0825/18	6½"



WARD No. 1

No.	Overall Legth
21.110	6½"



WARD No. 2

No.	Overall Legth
21.111	6½"



HOLLENBACK No. 1/2

No.	Overall Legth
21.113	6½"



HOLLENBACK No. 3

No.	Overall Legth
21.114	6½"



LeCRON No. 5

No.	Overall Legth
21.115	6½"

STAINLESS STEEL DOUBLE-ENDED CARVERS & SPATULAS



ROACH No. 6

No.	Overall Legth
21.116	6½"



NORUSTAIN CEMENT VEHE No. 50

No.	Overall Legth
21.117	6½"



NORUSTAIN WAX No. 7

No.	Overall Legth
21.141	6¾"



NORUSTAIN WAX No. 10

No.	Overall Legth
21.142	6¾"



NORUSTAIN WAX No. 45

No.	Overall Legth
21.143	6¾"

STAINLESS STEEL SPATULAS



NORUSTAIN CEMENT No. 1

No.	Overall Legth
21.150	6½"



NORUSTAIN CEMENT No. 2

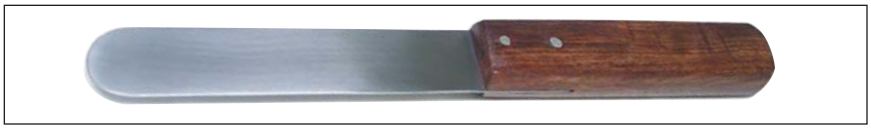
No.	Overall Legth
21.151	6½"



NORUSTAIN CEMENT No. 3

No.	Overall Legth
21.152	6½"

STAINLESS STEEL WOOD-HANDLE SPATULAS



WAX SPATULA

No.	Overall Legth
21.0827/1	7¾"



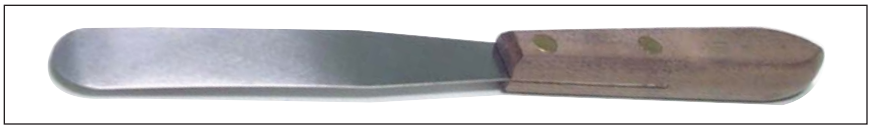
LONG WAX SPATULA

No.	Overall Legth
21.0827/2	8¾"



SPATULA No. 11R

No.	Overall Legth
21.175	7⅝"



SPATULA with 4" BLADE

No.	Overall Legth
21.176	8"

ASSORTED SPATULAS



NORUSTAIN WAX No. 31

No.	Overall Legth
21.160	7¼"



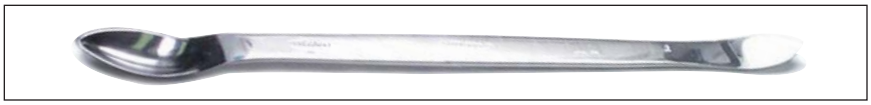
SPATULA No. 35

No.	Overall Legth
21.161	7¼"



SPATULA No. 4

No.	Overall Legth
21.162	7"



NORUSTAIN WAX No. 5

No.	Overall Legth
21.163	8"

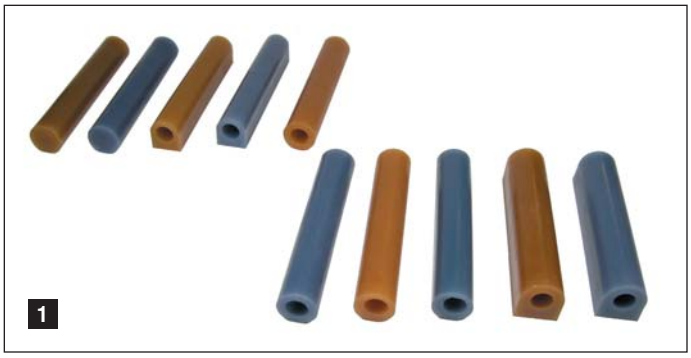
WOLF™ WAX by FERRIS®

Inspired by renowned master modelmaker and educator, Kate Wolf, fills a void in wax products. This wax is slightly flexible with medium hardness and can be carved or machined with the finest details. It can also be fully polished and will withstand considerable handling.

1 WOLF™ WAX RING TUBES & RODS

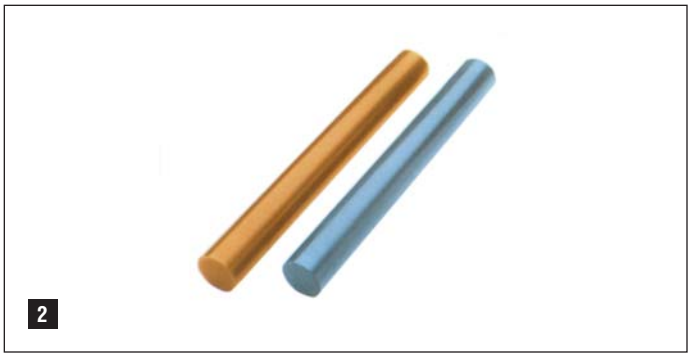
New carving wax melts at approximately 240° F and is available in many sizes. The gold and silver toned wax can carved into fine detail and polished.

No.	Description	Color	Shape
21.0410	Solid Ring Tube	Gold	A
21.0411	Solid Ring Tube	Silver	A
21.0412	T-100 Flat Side Tube	Gold	B
21.0413	T-100 Flat Side Tube	Silver	B
21.0414	Ring Tube w/Ctr Hole	Gold	C
21.0415	Ring Tube w/Ctr Hole	Silver	C
21.0416	Ring Tube w/Off Ctr Hole	Gold	D
21.0417	Ring Tube w/Off Ctr Hole	Silver	D
21.0418	T-200 Flat Side Tube	Gold	E
21.0419	T-200 Flat Side Tube	Silver	E



2 WOLF™ WAX ROUND BARS

Two round bars measuring 1 5/16" x 11 1/4". 1lb. round bar.
21.0402 Gold
21.0403 Silver



3 WOLF™ WAX SLICE ASSORTMENT

Wolf wax slice assortment contains five slices per box and is assorted from 1/8" to 1" in thickness.
21.0406 Gold
21.0407 Silver



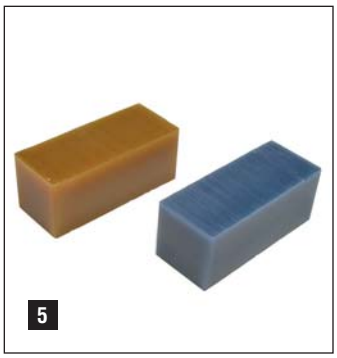
4 WOLF™ WAX SPACE BLOCKS

Wolf space blocks measure 3 9/16" x 3 9/16" x 2 3/8". 1lb. block.
21.0404 Gold
21.0405 Silver



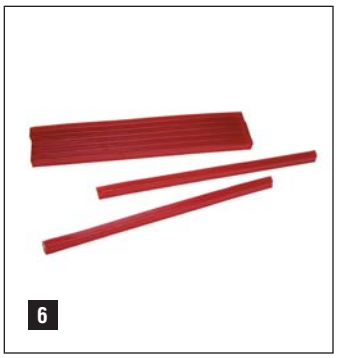
5 WOLF™ WAX BUILD-UP and REPAIR WAX

This durable repair wax makes it easy to blend built-up and repaired sections. To ensure thorough bond, melt model where repair wax is to be added. 1 3/16" x 3 9/16".
21.0400 Gold
21.0401 Silver



6 WOLF™ WICKED STICKY WAX

Ideal for securing stones. Flows at 173° F. 3/16" square x 5" long. Sold in 3 ounce box.
21.0408 Red



7 WOLF™ TOUCH-UP WAX

Ideal for final touch-up of wax imperfections. Can be easily scraped off for a smooth finish. Flows at 163° F.
21.0420



8 WOLF™ RELIEF WAX

Ideal for creating raised detail on carving waxes. Apply molten relief wax on the surface of the wax model. Sold in 2 ounce tines.
21.0409



THE MATT LINE

This complete collection of unique, high quality waxes and wax-working tools has become a necessity for designers, model makers and manufacturers. Matt products mean consistent quality, continuous innovation, use of the finest materials and advanced technology. The Matt advantages have made the Matt name synonymous with excellence. Made in the USA.



1

1 MATT MINI-LATHE with GAUGE

A versatile hand-held lathe, powered by a flexible shaft motor, designed to turn rods of carving wax. Includes precision gauge for measuring exact dimensions and thickness of work. Easily produce bands, bezels, settings, coin holders, chess pieces, etc. Set includes a cutting tool, 2 extra cutting tool blanks, 3 collets to hold wax, sample wax instruction book, and a 3-pc. stainless steel double-ended blade set. The six different ends give you a cut-off tool, a channel cutter, a half-round band hollower, a frame shaper, and a cup former. Blades are .025" thick, 1/4" wide, and 4" long, and can be beveled to increase the number of designs possible.

No. **21.02803** Complete Lathe Set
No. **21.02804** Gauge only (to retrofit older lathes)
No. **21.02801** Replacement 3-pc. Blade Set

Replacement Accessories for Matt Mini-Lathe:

No. **21.02830** Wax-holding collet
No. **21.02835** Milling table
No. **21.02840** Tool holder and wrench
No. **21.02845** Cutting tool square end
No. **21.02850** Cutting tool blank
No. **21.02885** Rotary file
No. **21.0305** Handpiece with European connection

Wax Rods for Matt Mini-Lathe

Four pieces of a single diameter and color per box, all 1 1/2" long.

Diameter	Blue	Green	Purple
1 5/16"	**21.02810**	**21.02811**	**21.02812**
1 3/32"	**21.02815**	**21.02816**	**21.02817**
7/8"	**21.02820**	**21.02821**	**21.02822**



2

2 MATT WAX ROD CENTERING TOOL

Allows exact alignment of the Mini-Lathe's wax holding collet in the wax rod. Accommodates and precisely centers all three rod diameters listed in the chart.
No. **21.02802**



3

3 MATT TRIMMER

Enables you to precisely file shapes and flat or curved surfaces, at different angles. Powered by a flexible shaft and designed to simplify this procedure while improving uniformity. Ideal for creating channels. Comes with rotary file (No. 21.02885), ring template, 3 different color waxes and instructions. Handpiece and cable not included.
No. **21.02880**

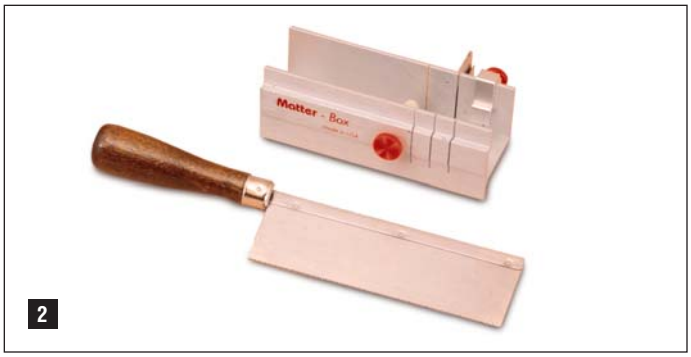
1 MATT RING TUBE SIZER

Enlarge the finger size of your wax models quickly and accurately. Hardwood mandrel is specially machined to incorporate a cutting steel blade that extends from the handle to the tip on the tapered section. Slide this tool through the hole of wax ring or ring tube and gently rotate clockwise. As the blade turns it scrapes inner wall, enlarging the ring to the size that is marked along the mandrel, leaving a smooth and even finish on the ring.
No. **21.02890**



2 MATT MITER BOX

Slice bars, rods and wax ring tubes into tablets with perfectly straight and parallel walls or tapered sides. The ring tube is held firmly in position inside the box so there is no strain on your hand. With stop/lock feature for cutting several tablets of the same thickness. The fine steel sawblade allows you to cut through the tube with no effort, leaving a smooth finish that does not require any filing. Set includes extruded aluminum 6" x 2" miter box, steel hand saw and stop/lock.
No. **21.02920** Miter box
No. **21.0750** Replacement saw



3 MATT GUN KIT

Provides you with a versatile extrusion technique for creating jewelry models. The gun enables you to control the temperature and pressure of the extrusion process, thus creating wire shapes of various characteristics. Three methods of design are possible: on objects, free-form and on water for abstract effects. Kit contains Matt Gun with 2 brass tips, 3 styles of wax and an illustrated 113 page book "Wax Modeling for Jewelry and Sculpture" by Adolfo Mattiello, with complete instructions.
No. **21.0955** 110 volt kit
No. **21.0955/220** 220 volt kit
No. **21.01249** Book
No. **21.0951/3** Small replacement tip
No. **21.0951/4** Large replacement tip





4 REPLACEMENT WAX PELLETS for MATT GUN

Description	Pk of 20 Pellets	Pk of 130 Pellets
Blue-for mandrel work	**21.0951/1**	**21.0951/6**
Green-for use on water	**21.0951/2**	**21.0951/7**
Red-for weaving	**21.0951/5**	**21.0951/8**

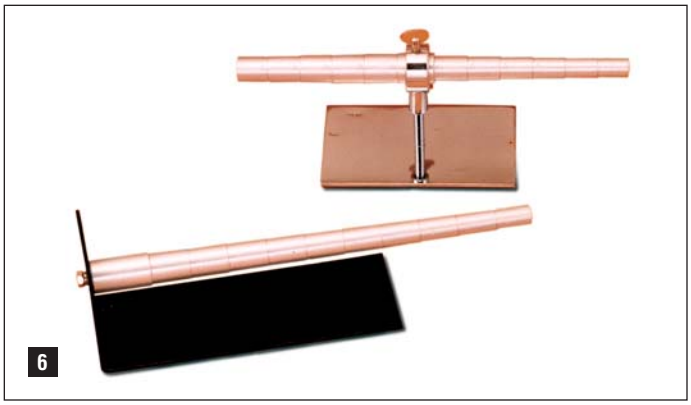
5 MATT SUPPLY BOX

An important complement to the Matt Gun Kit. Contains 40 each: red, blue, and green wax pellets; a 4 oz. alcohol lamp; wire strips; and a tapered, sanded and polished, rotating hardwood mandrel on a sturdy steel base. (Excellent for designing wax models, especially with the Matt gun kit)
No. **21.0956** Complete supply box
No. **21.0897** Replacement wood mandrel only



6 STEPPED MOUNTED RING MANDRELS

These stepped mandrels allow precise sizing of a ring as it is being created. The mounted mandrel can be rotated or removed from its stand and held by hand.
No. **21.0900** Deluxe mandrel, sizes 4-14, center mount
No. **21.0890** Regular mandrel, sizes 4-13, end mount





1

1 MATT SHAPER

Designed for precision filing of large pieces. Made of cast aluminum with a steel support bracket, powered by a flexible shaft. The table provides ideal support when cutting large pieces such as bracelets and adjusts to allow cutting at different angles. The removable fence regulates the depth of cut ensuring precise and safe operation. Includes bracelet template, rotary file, 2 bracelet wax blanks and instructions. Handpiece and cable not included.

No. **21.02895** Shaper set
No. **21.02885** Replacement rotary file only



2

2 MATT CREATIVE SETTINGS KIT

Includes "How To Create Settings In Metal Wire And Wax" by world famous designer Adolfo Mattiello, along with two templates. Shows step-by-step how to make many different settings with drawn metal wire. It also shows how to join settings. The wax working section shows how to make settings with carving wax, prong settings and settings turned on your Matt Mini-Lathe.

No. **21.02852** Complete kit
No. **21.02851** Replacement book
No. **21.02853** Replacement template for round settings
No. **21.02854** Replacement template for oval, pear and marquise settings



3

3 MATT "TECHNIQUES of JEWELRY ILLUSTRATION and COLOR RENDERING" KIT

Features full instruction on jewelry illustration, with step-by-step guidelines and clear photographs. Hard cover with 152 pages and hundreds of full color photographs and illustrations. Also included in the kit are five 8¼" x 5" design templates.

No. **62.495** Complete kit
No. **62.49501** Book only
No. **62.49502** Set of five different templates only

4 SET of JEWELRY DESIGN TEMPLATES

Set of seven heavy gauge plastic templates for custom jewelry design. Includes round, oval, baguette, emerald, marquise and pear stone shapes, as well as templates for ring and setting designs. Stone templates show metric sizes and carat weights.

No. **35.570**



4



5

5 "WAX MODELING the MATT WAY"

Professionally prepared video tape showing the versatility and simplicity of wax-working with Matt tools. Running time 16 minutes.

No. **63.1422** VHS
No. **63.1422/PAL** European

1 MATT RING TEMPLATE
Eliminates drawing ring outlines with rulers and dividers. Avoids the irregular contour of a shank made free-hand. Has 18 different cut-out ring shapes. Made of durable plastic with precision milled shapes. Includes instructions and two samples of carving wax tablets.
No. **21.02855**

2 MATT BRACELET TEMPLATE
Made of durable plastic with precisely milled shapes for tracing round, oval and square bracelets from very small to large sizes. Includes instructions.
No. **21.02896**

3 MATT GOLD COLLECTOR
Convenient method of precious metal collection. Traps gold and other precious metals for easy retrieval. Protects eyes, skin and clothes from dust, flying particles and wire from brushes while providing a healthier work environment and less clean-up time. Optically clear plexiglass shield to see workpiece without glare and easily removes for cleaning and scrap collection. Side openings provide comfortable hand support for reduced fatigue. Can be attached easily to bench or table. Completely portable. Lightweight, yet strong, made of high impact extruded plastic for long life. Measures 7" x 7" x 9".
No. **21.03200**

MATT WAXES
Sold individually. Matt waxes are available in three grades of hardness:

Green - Hard with very little flexibility. Ideal for filing and delicate engraving. Softening temperature 230°F (110°C).

Purple - Medium hard with medium flexibility. All-purpose wax is ideal for models with extensive piercing, baguettes and air line openings. Softening temperature 225°F (107°C).

Blue - Softer and highly flexible, this wax will take a 90° bend without breaking. Ideal for models with extensive piercing or thin exposed sections. Softening temperature 220°F (104°C).

A. Flat side with hole

B. Round with Off-center hole

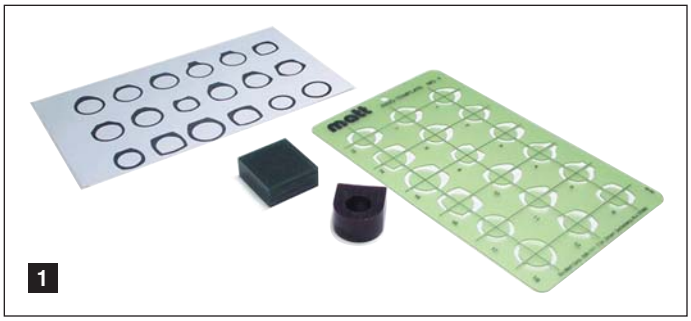
C. Solid round bar

D. Round bar with centered hole
Styles A, B, and D have a hole size of ⅝".

4 MATT WAX RING TUBES

Diameter	Width	Height Size	Blue	Purple	Green
A. Flat Side with Hole					
—	1"	1⅛"	**21.02690**	**21.02691**	**21.02692**
—	1⅛"	1⅛"	**21.02693**	**21.02694**	**21.02695**
—	1¼"	1¼"	**21.02696**	**21.02697**	**21.02698**
B. Round with Off-Center Hole					
1 1/16"	—	—	**21.02699**	**21.02700**	**21.02701**
C. Solid Round Bar					
⅞"	—	—	**21.02702**	**21.02703**	**21.02704**
1 1/16"	—	—	**21.02705**	**21.02706**	**21.02707**
1 5/16"	—	—	**21.02708**	**21.02709**	**21.02710**
D. Round Bar with Centered Hole					
⅞"	—	—	**21.02711**	**21.02712**	**21.02713**
1 1/16"	—	—	**21.02714**	**21.02715**	**21.02716**
1 5/16"	—	—	**21.02717**	**21.02718**	**21.02719**

No. **21.02720** For practice or experimenting. Includes 1" piece of the following: Nos. 21.02691, 21.02696, 21.02697, 21.02699, 21.02714 and 21.02717

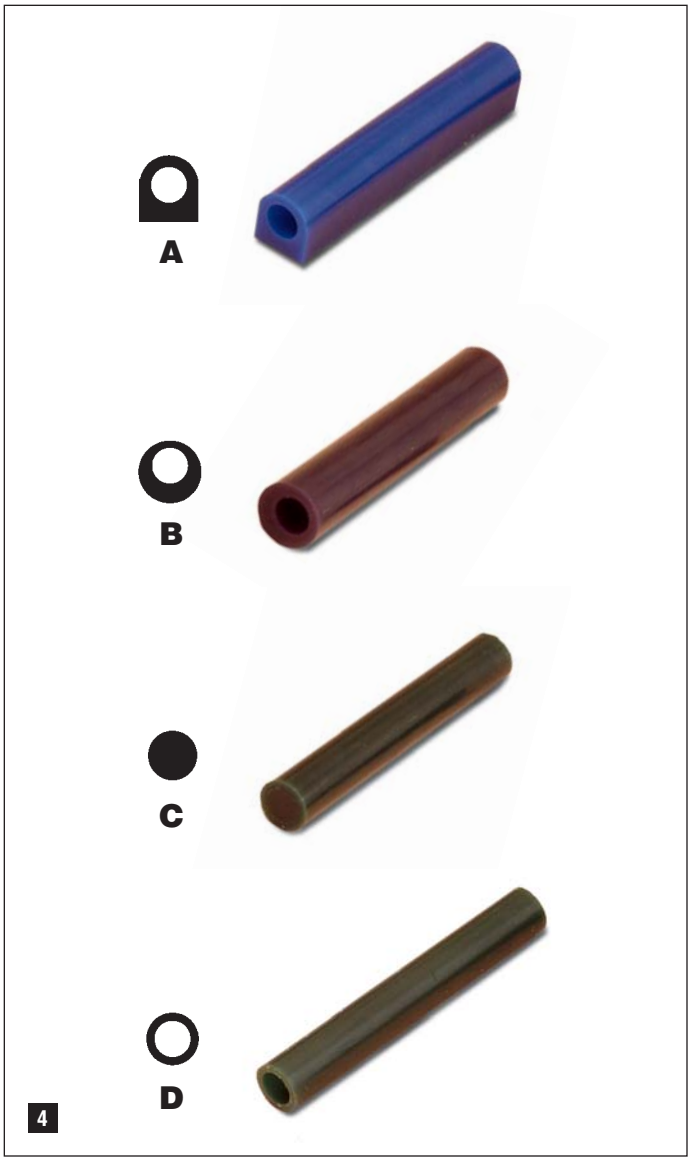


1

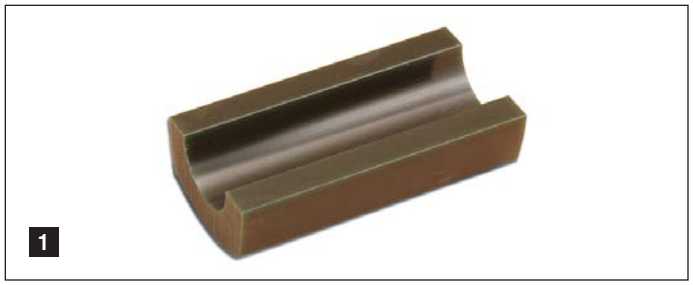


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3



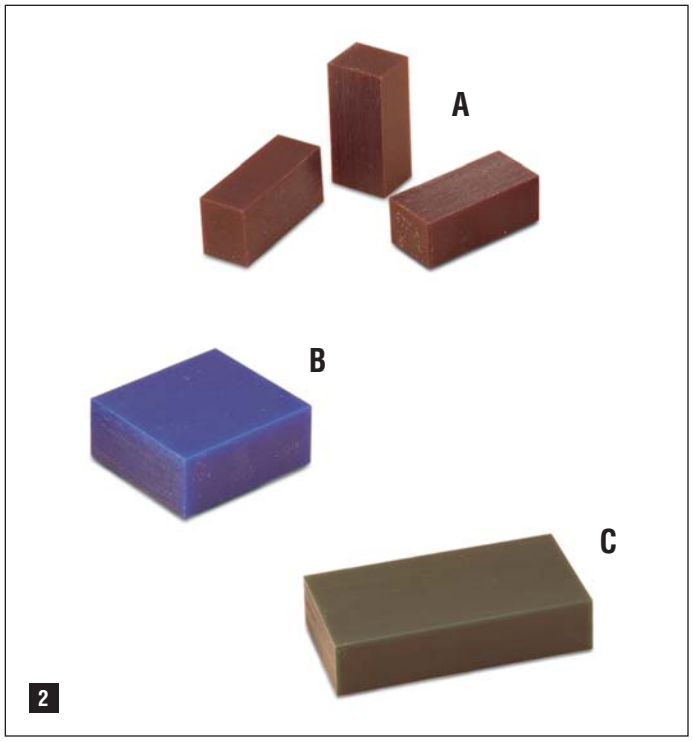
4



1 MATT BRACELET WAX BLANKS

6" long arch-shaped block of carving wax is designed to simplify the construction of bracelets. From one blank style you can create round, oval or square bracelets in a variety of sizes. Simply cut two slices of the desired thickness to form the bracelet, then trim using the Matt Shaper (No. 21.02895 shown on page 90).

No. **21.02897** Green
No. **21.02898** Purple
No. **21.02899** Blue



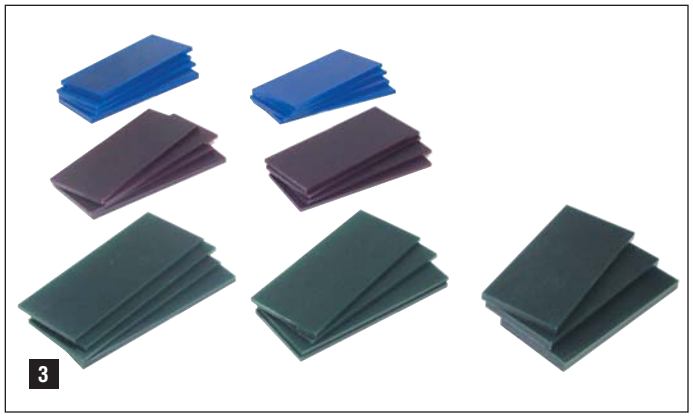
2 MATT CARVING WAX BARS

A special wax used in making models to be cast in metal. Can be carved, sawed, filed, machined or turned on a lathe, or melted to build up shapes through layering.

A. 1 7/16" x 1 1/8" x 3 1/8", 1/8 lb. bars.
21.02750 Starter kit of 3 colors
21.02751 Green, box of 3 bars
21.02752 Purple, box of 3 bars
21.02753 Blue, box of 3 bars

B. 1 7/16" x 3 3/8" x 3 1/8", ½ lb. bars.
21.02755 Green
21.02756 Purple
21.02757 Blue

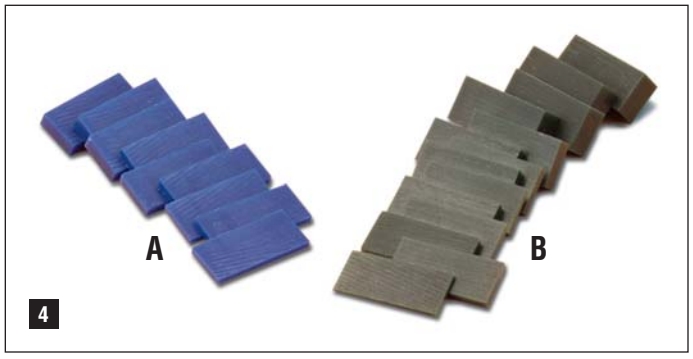
C. 1 7/16" x 3 1/8" x 6½", 1 lb. bars.
21.02760 Green
21.02761 Purple
21.02762 Blue



3 NEW MATT CARVING WAXES

These tablets provide jewelry designers and model makers with a large, 6" x 2 5/8", flat, very smooth surface for designing jewelry directly onto carving wax. Available in four thicknesses, 4.5 mm, 6 mm, 8 mm and 10.5 mm. Set A contains 3 pcs, 4.5 mm, 1pc, 6 mm, 1 pc, 8 mm and 1 pc, 10.5 mm. Set B contains 4 pcs, 4.5 mm and 3 pcs 6 mm. Set C contains 2 pcs, 8 mm and 2 pcs 10.5 mm.

Set A	Set B	Set C
Blue **21.02773**	Blue **21.02776**	—
Purple **21.02774**	Purple **21.02777**	—
Green **21.02775**	Green **21.02778**	Green **21.02781**



4 SLICES

A. 3 1/8" L x 1 7/16" W and assorted thickness from 1/8" to 1". Box of 9.

No.	Color	Weight
21.02765	Green	½ lb.
21.02766	Purple	½ lb.
21.02767	Blue	½ lb.

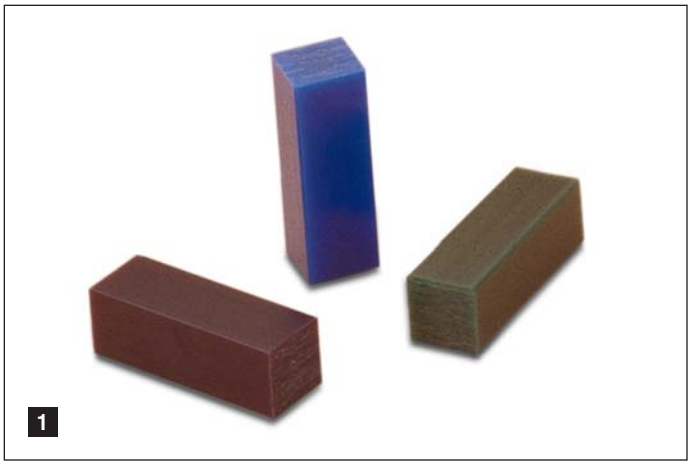
B. 3 1/8" L x 1 7/16" W and assorted thickness from 1/8" to 1". Box of 12.

No.	Color	Weight
21.02770	Green	1 lb.
21.02771	Purple	1 lb.
21.02772	Blue	1 lb.

FERRIS™ FILE-A-WAX CARVING WAXES

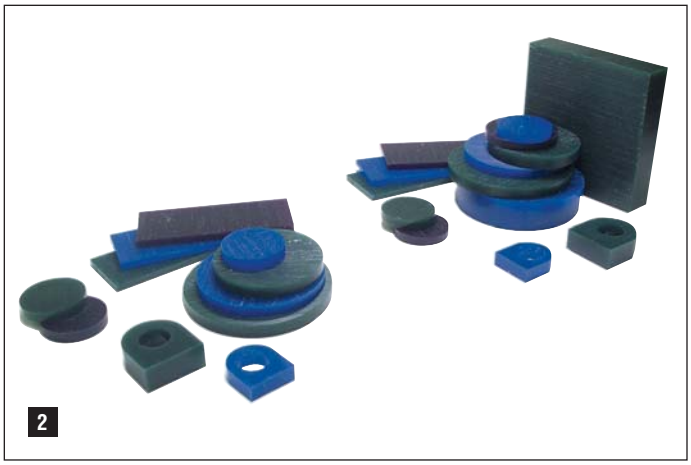
Used for making models to be reproduced by the lost wax casting process. They can be sawed, filed or carved. Will stand rough handling and will not soften in your hands. Available in three degrees of hardness, designated by color, and in a variety of shapes.

Color	Characteristics	Approx. Melting Point
Green	Cannot be flexed	240°F (116°C)
Purple	Some flexibility	240°F (116°C)
Blue	Will bend 90° in ⅛" thickness	240°F (116°C)


1

1 FILE-A-WAX ASSORTMENT BARS

Introductory kit contains three bars, one of each color/hardness. Bars are 3½" x 1½" x 1¼" and weigh approximately ⅙ lb. each.
No. **21.290**


2

2 FILE-A-WAX ASSORTMENTS

Various shapes and colors for trial use. Also handy for having around in case an odd piece is needed.
No. **21.291** Junior 11 pcs assorted
No. **21.292** Professional approx 1lb

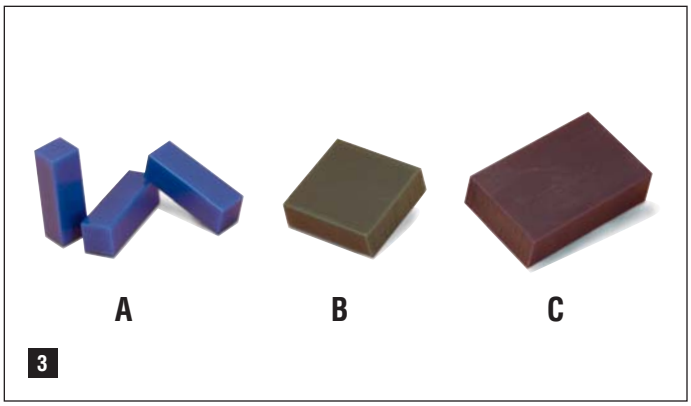
3 FILE-A-WAX BARS

All three types in three different size bars.

A. 3¾" x 1⅛" x 1⅛", ⅛ lb. bars. Sold in packs of 3.
21.300 Blue
21.301 Green
21.302 Purple

B. 3½" x 3½" x 1⅜", ½ lb. bars. Sold individually.
21.305 Blue
21.306 Green
21.307 Purple

C. 5¾" x 3½" x 1⅜", 1 lb. bars. Sold individually.
21.310 Blue
21.311 Green
21.312 Purple

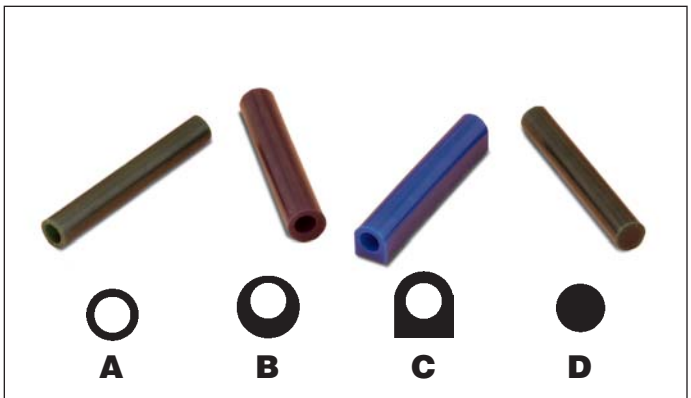


3

4 FILE-A-WAX RING TUBES

Easy-to-cut ring tubes for designing your own rings. Many rings can be made from each 6" long tube. Pre-drilled holes are ⅝" in diameter.

Shape	MFR Style #	Measurements	Green	Purple	Blue
A	T-875	⅞" OD	**21.362**	**21.358**	**21.360**
A	T-1062	1 1/16" OD	**21.363**	**21.359**	**21.361**
B	E-1062	1 1/16" OD	**21.366**	**21.364**	**21.365**
C	T-100	1⅛" H x 1⅝" W	**21.372**	**21.374**	**21.370**
C	T-150	1" H x 1" W	**21.371**	**21.392**	**21.391**
C	T-200	1 5/16" H x 1 3/16" W	**21.369**	**21.367**	**21.368**
C	T-250	1⅛" H x 1⅛" W	**21.373**	**21.394**	**21.393**
D	B-875	⅞" OD	**21.377**	**21.379**	**21.375**
D	B-1062	1 1/16" OD	**21.378**	**21.399**	**21.376**



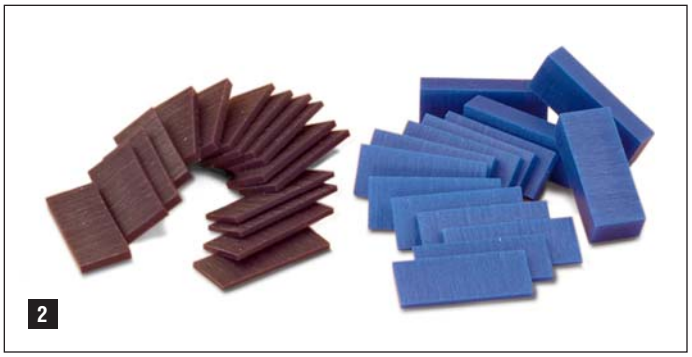
4



1 FILE-A-WAX SLABS

Assortments of five 3 5/8" square slabs in the following thickness; 1 7/8", 1 11/16", 1 3/8" and two 3/16". Sold individually.

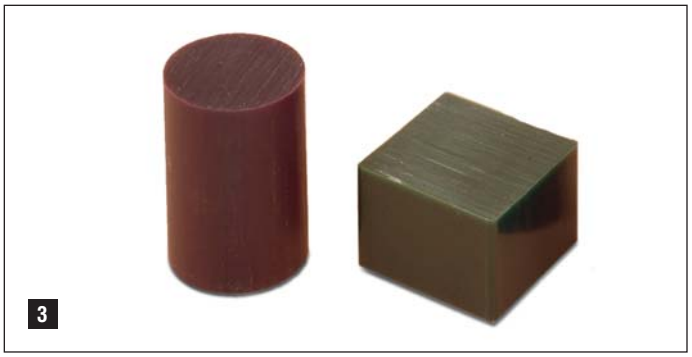
21.380 Blue
21.381 Green
21.382 Purple



2 FILE-A-WAX SLICES

Assortment of slices measuring 3 5/8" x 1 1/2" in varying thicknesses. Half-pound assortment thickness from 3/32" to 1/4"; 1 pound assortment from 3/16" to 1".

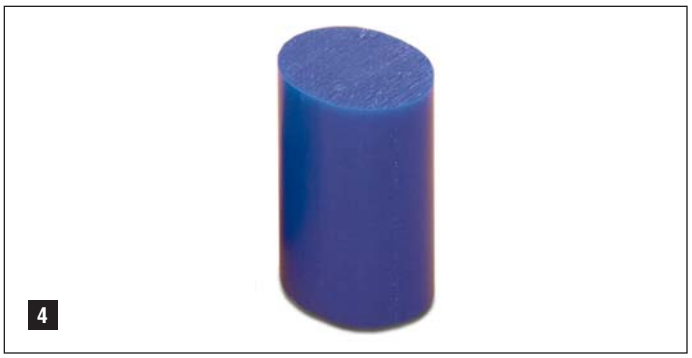
Color	1/2 lb. Box	1 lb. Box
Blue	**21.384**	**21.388**
Green	**21.385**	**21.389**
Purple	**21.386**	**21.390**



3 FILE-A-WAX BARS in ASSORTED SIZES

Saw off a slice to carve coin holders, pendants, earrings, medallions, buckles, bangles and bracelets. Ideal for lathe turning to make carved napkin rings, chessmen, salt and pepper shakers, etc.

Shape	Measurements	Green	Purple	Blue
Square	3 9/16" x 2 3/8"	**21.0706**	**21.0707**	**21.0708**
Round	3 1/16" x 4 1/16"	**21.0710**	**21.0711**	**21.0712**
Round	2 5/8" x 5 1/2"	**21.0715**	**21.0716**	**21.0717**
Round	2 1/4" x 7 1/2"	**21.0720**	**21.0721**	**21.0722**
Round	1 3/4" x 12 1/8"	**21.0725**	**21.0726**	**21.0727**
Round	1 5/16" x 11 1/4"	**21.0730**	**21.0731**	**21.0732**



4 FILE-A-WAX BRACELET BLANKS

Designed to simplify the construction of bracelets.
No. **21.320** Small size measures 3 1/8" x 2 5/8" x 4 5/8"
No. **21.321** Large size measures 3 5/8" x 2 3/4" x 3 5/8"



5 SKIP-A-TOOTH SAW BLADES

Designed for wax cutting. Every other tooth is eliminated to provide smooth cutting and non-loading action. One dozen size #1 blades to a package. Sold by dozen.
No. **49.320**

MODELING WAXES

A selection of waxes used for making models for the lost wax casting process. The waxes can be manipulated easily and worked with a heated spatula. Different wax types can be joined together to build a model. Measurements are by B & S gauge.

1 GROBET USA™ COOL SETTING WAX

Very pliable when heated. Shapes easily, unusually tough, and will withstand bending without cracking. When cool, it will hold its shape and is easily carved. Sheets measure 6" x 3" x 1/20".
No. **21.450**

2 GROBET USA™ INLAY WAX

A special wax for building up wax patterns. It can be carved without chipping or flaking and can be softened over a flame, in hot water or with a heated tool. Comes in two grades of hardness, in boxes of approximately 24 sticks 4" x 1/4".
No. **21.458** Hard
No. **21.459** Regular

3 MOLD-A-WAX

While red is soft at room temperature of 70°F (21°C), the black version can be made more pliable by immersing in warm water. May be used as adhesive for other waxes. Blocks are 3 1/2" x 2 3/8". Especially good for mini sculptures, leaves, figures, etc. Can be rolled, twisted, or injected.
No. **21.462** Red-soft at room temperature
No. **21.463** Black-brittle at room temperature

4 GROBET USA™ SHEET WAX

Wax sheets in varying thickness, either firm or soft. Designs can be traced directly on sheet and cut with scissors or carving tool.

4" Square Sheets

Firm (Green)	Soft (Pink)	Gauge
21.470	**21.471**	Assorted
21.0625/14	**21.0627/14**	14
21.480	**21.489**	16
21.481	**21.491**	18
21.482	**21.493**	20
21.483	**21.495**	22
21.484	**21.497**	24
21.0625/26	**21.0627/26**	26

3" x 6" Sheets

Firm (Green)	Soft (Pink)	Gauge
21.0615/16	**21.0617/16**	16
21.0615/18	**21.0617/18**	18
21.0615/20	**21.0617/20**	20
21.0615/22	**21.0617/22**	22
21.0615/24	**21.0617/24**	24
21.0615/26	**21.0617/26**	26

5 GROBET USA™ EXTRUDED SPRUE WAX

Supplied in the most popular diameters for jewelry work. Wax burns out cleanly and rapidly, eliminating pressure in the pattern. Red sticks, 24" long. Sold in pound boxes.

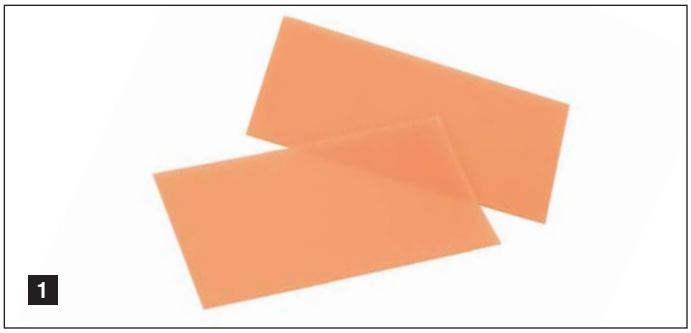
No.	Diameter	Weight
21.525	1/2"	1 lb.
21.526	1/4"	2 lbs.
21.527	3/8"	2 lbs.

6 GROBET USA™ SPRUE WAX

Ample flexibility and sufficient rigidity make this wax particularly suited for making sprues. Melts at lower temperatures, permitting pattern waxes to be more easily eliminated during burn-out. Comes in boxes of 6" sticks.
No. **21.510** Gauge 8
No. **21.511** Gauge 10

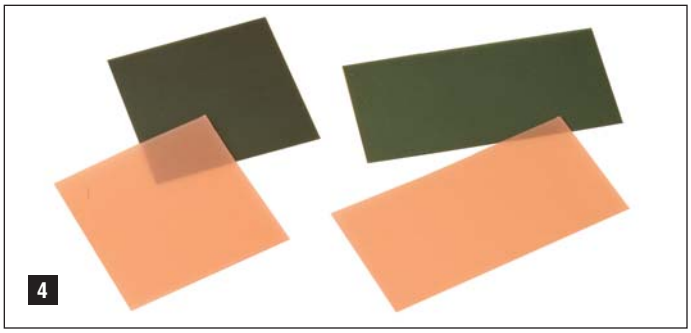
7 GROBET USA™ UTILITY WAX

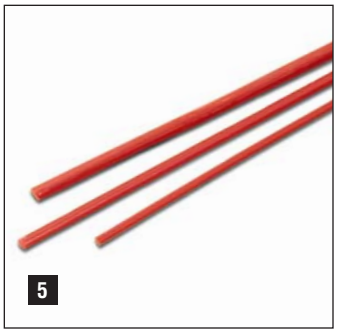
Soft, easily shaped red wax adheres to practically any surface. Used for building in and filling in marred surfaces. Often used to fill sprue bases. Available in sticks 5" x 3/16" or sheets 3" x 6" x 1/8".
No. **21.517** Box of sticks
No. **21.518** Box of sheets

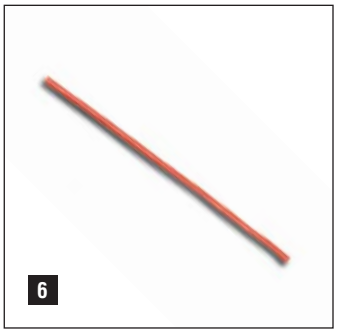


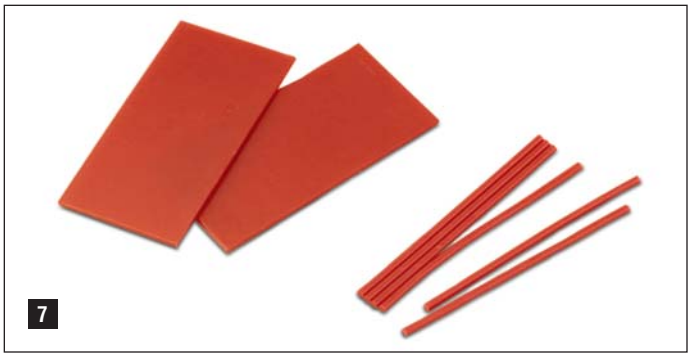














1 GROBET WAX WIRE ASSORTMENT

Pliable blue wax wires can be twisted or bent to desired patterns. The assortment contains gauges 6, 8, 12, and 14 half-round; gauges 10, 14, and 18 round; and gauge 6 half-pear shapes. All pieces are approximately 4" long.
No. **21.530**



2 GROBET ROUND WAX WIRE ASSORTMENT

Contains pliable, round, blue wax wire. Assortment consists of gauges 6, 8, 10, 12, 14, 16, 18, and 20.
No. **21.532**

3 GROBET WAX "STARTER" ASSORTMENT

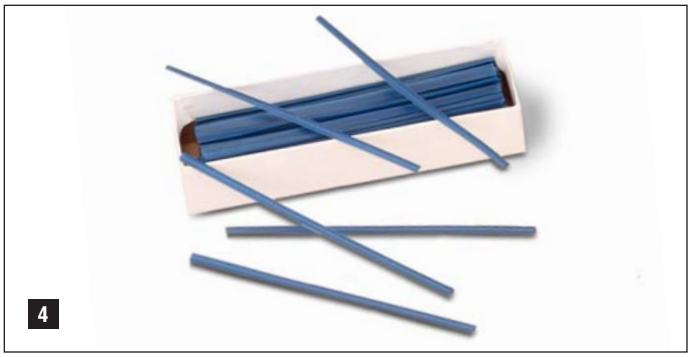
Contains a variety of green waxes in 12 of the most commonly used shapes and sizes: round, half-round, square, triangle, half-pear. An excellent set for those just starting.
No. **21.0705**



4 GROBET WAX WIRES in BOXES

Contains pliable, blue wax wire approximately 4" long.

Gauge	Half-Round	Round	Square	Triangle
6	**21.540**	**21.560**	**21.0658/6**	—
8	**21.542**	**21.562**	**21.0658/8**	**21.0656/8**
10	**21.544**	**21.564**	**21.0658/10**	—
12	**21.546**	**21.566**	**21.616**	**21.0656/12**
14	**21.548**	**21.568**	**21.618**	**21.0656/14**
16	—	**21.570**	**21.620**	—
18	—	**21.572**	—	—
20	—	**21.574**	—	—



5 GROBET WAX WIRE on SPOOLS

Pliable, blue wax wire wound on spools. Spools have center hole that can be placed on a round dowel and wax is unwound as needed. Round 1/2 lb.

Gauge	No.	Gauge	No.
6	**21.590**	14	**21.594**
8	**21.591**	16	**21.595**
10	**21.592**	18	**21.596**
12	**21.593**	20	**21.597**



WAX WIRE GAUGE CHART

Gauge	(in)	(mm)	Gauge	(in)	(mm)
6	.162"	4.1	20	.032"	0.8
8	.129"	3.3	22	.025"	0.6
10	.102"	2.6	24	.020"	0.5
12	.081"	2.1	26	.016"	0.4
14	.064"	1.6	28	.013"	0.3
16	.051"	1.3	30	.010"	0.3
18	.040"	1.0			

1 CASTING KITS

Starter sets for the individual or shop. Complete set contains:
• Pro-Cast vacuum caster with accessories* • Deluxe burnout oven*
• Centrifugal casting unit • Pyrometer* • Mixing bowl* • Timer*
• Graduated cylinder* • Investment scale* • Dwt. scale*
• Non-asbestos gloves* • 25 lbs. investment • Four 2½" x 3" flasks
• Two 3½" x 4" flasks • Sprue bases • Borax flux* • Vac-U-Cast*
• Casting book* • Jewelry cleaner*

No. **38.552** Complete set -
Shipping weight 222 lbs.
No. **38.553** Set with starred (*) items only -
Shipping weight 197 lbs.

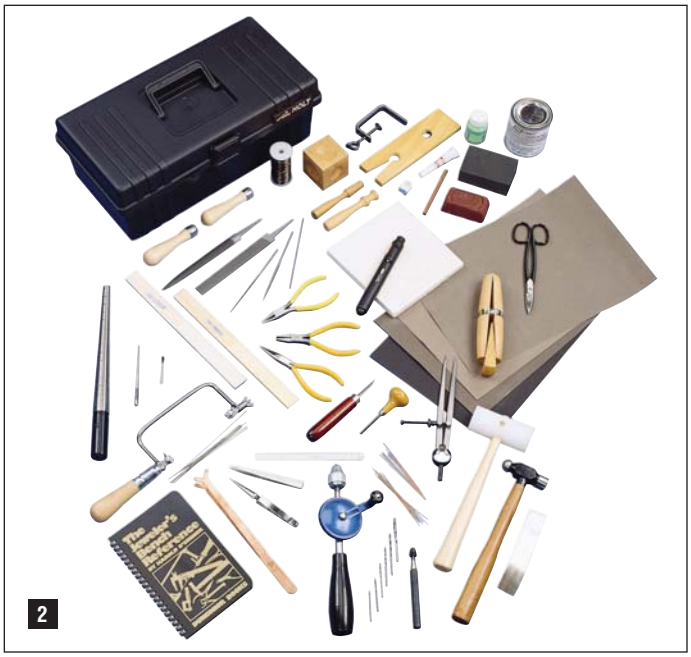

1

2 JEWELRY MAKING SET

Practically everything needed for your jewelry-making projects. All first-quality tools for sawing, drilling, twisting, hammering, filing, polishing, etc. Set contains:
• V-slot board and bench clamp • Sawframe • Sawblades • Dividers
• Rule-combination mm & inch • Center punch & scriber combination
• Chinese white • Hand drill • Twist drills-6 assorted • Pin vise
• 3 pliers: round nose, flat nose, chain nose • Snips • Ball peen hammer
• Mallet • Wood dapping block & punches • Steel ring mandrel
• Ring clamp • Setting burnisher • Prong pusher • 6" flat file w/handle
• 6" half-round file w/handle • 3 assorted needle files • India stone
• Emery paper-4 assorted • Felt hand buff for tripoli • Tripoli compound
• Chamois hand buff for rouge • Red rouge • Quick-setting adhesive
• Soldering torch • Asbestos-free pad • Charcoal soldering block
• Binding wire • Hard soldering flux • Flux brush • Silver solder
• Pickling compound • Plain tweezers • Soldering clamp tweezers
• Copper tongs for pickle • "The Jeweler's Bench Reference" Manual

All of the above items come in a plastic tool box.

No. **38.550** Set
No. **38.551** Replacement tool box


2

3 GROBET USA™ VULCANIZER

Heavy-duty cast-iron and aluminum construction. Stainless steel heating platens. Large handle and sturdy 1" diameter pressure screw. Two large diameter guide rods keep platens (No. 22.551, 8" x 5" and No. 22.552, 8¼" x 6) in alignment. Thermostat with dial for accurate temperature control up to 500°F/260°C. Equipped with power and thermostat pilot lights and on/off switch. Predrilled holes in base for easy mounting. Made in USA.

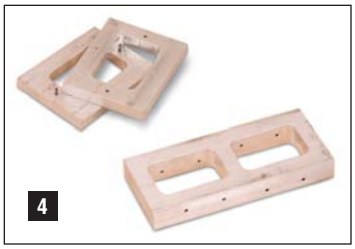
No.	Dimension (W X D X H)	Electrical	Max. Opening	Shipping Weight
22.551	13" x 7" x 18"	110v, 6a	3"	37 lbs.
22.551X	13" x 7" x 18"	220v, 3a	3"	37 lbs.
22.552	15½" x 9.5" x 21"	110v, 6a	4"	53 lbs.
22.552X	15½" x 9.5" x 21"	220v, 3a	4"	53 lbs.


3

4 MOLD FRAMES

Used to hold uncured rubber and model when vulcanizing. Made of aluminum alloy for best heat conduction.

No.	Thickness	Opening	Style
22.556	¾"	1⅞" x 2⅞"	Single
22.557	1"	1⅞" x 2⅞"	Single
22.559	1"	2½" x 3¾"	Single
22.560	1¼"	3½" x 4¾"	Single
22.564	¾"	1⅞" x 2⅞"	Double
22.565	1"	1⅞" x 2⅞"	Double


4

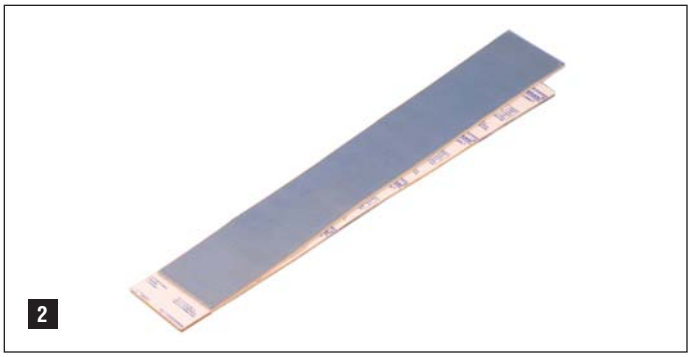
5 MOLD FRAME PLATES

Rigid, metal plates for placing over mold frame openings when vulcanizing uncured rubber. Provides a more uniformly shaped and solidly packed mold. Set of two pieces.

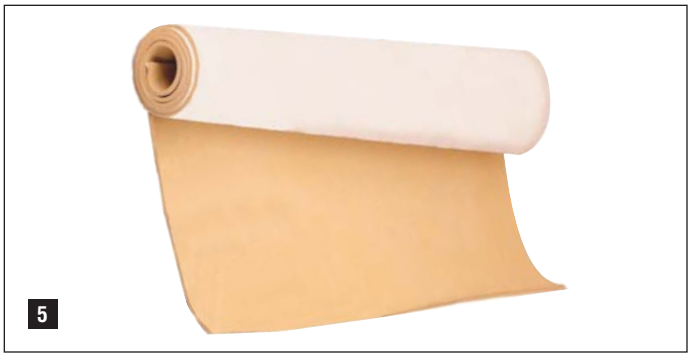
No.	Size
22.570	5" x 7⅛" x ⅛"
22.0886	4" x 6" x ⅛"
22.571	3½" x 5" x ⅛"
22.0887	2½" x 3½" x ⅛"

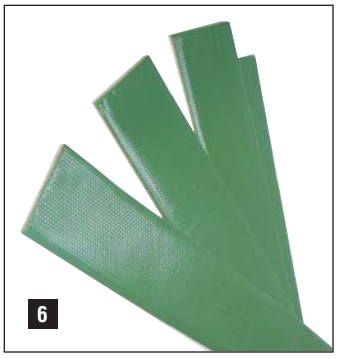

5













CASTALDO® MOLD RUBBER

1 CASTALDO® MOLD RUBBER in ROLLS

Economical way to buy mold rubber. Rolls measure 18" wide x 1/8" thick. The 5 lb. roll is 3 1/2' long and the 50 lb. roll is 35' long.

No. **22.595** 5 lbs. White Label®
No. **22.596** 5 lbs. Gold Label®

2 CASTALDO® MOLD RUBBER in STRIPS

Strips measure 2 7/8" x 18" x 1/8".

No. **22.583** 5 lbs. White Label®
No. **22.592** 50 lbs. White Label®
No. **22.584** 5 lbs. Gold Label®
No. **22.594** 5 lbs. No Shrink Pink®
No. **22.591** 5 lbs. High strength silicone ¼" thick
No. **22.599** 5 lbs. Econosil® silicone ⅜" thick

3 CASTALDO® MOLD RUBBER in PRE-CUT SIZES

Just open the box and these handy pre-cut sizes are ready to use. Pieces measure 1 7/8" x 2 7/8" x 1/8" and will fit most commonly available mold making frames.

No. **22.585** 5 lbs. White Label®
No. **22.586** 5 lbs. Gold Label®
No. **22.587** 5 lbs. No Shrink Pink®

FERRIS-JECT™ MOLD RUBBER

Premium grade, high performance rubber that offers exceptional flexibility, workability, and memory. Will reproduce the most exacting details. Finished molds will never tear ahead of the knife when cutting. Available in both "Firm" (white film cover) and "Soft" (green film cover) formulations. "Soft" is recommended for extremely thin sections or filigree work.

5 FERRIS-JECT™ MOLD RUBBER in ROLLS

Rolls measure 18" wide x 1/8" thick. Packed in a convenient dispenser box. Economical 50 lb. box.

No. **22.58802** Firm
No. **22.58902** Soft

6 FERRIS-JECT™ MOLD RUBBER in STRIPS

Strips measure 2 7/8" x 18" x 1/8". 5 lb. box.

No. **22.58302** Firm
No. **22.58402** Soft

7 FERRIS-JECT™ MOLD RUBBER in PRE-FORM™ PIECES

Handy pre-cut pieces of size 1 7/8" x 2 7/8" x 1/8" fit most standard mold making frames. 5 lb. box.

No. **22.58502** Firm
No. **22.58602** Soft

Safety Tip: Always wear proper eye protection when melting.

1 UNCURED RUBBER MOLD STRIPS

For making long-lasting vulcanized molds that have a minimum of shrinkage. Brown rubber comes in strips 2 7/8" x 18" x 1/8", ready to be packed in mold frames. Curing time is 1/2 hour per 1" of thickness.
No. **22.590**



2 MOLD FRAMES for SEE-THROUGH COMPOUND

Mold frame sets consist of U-shaped frame, two pieces of sheet glass and two clamps.

No.	Thickness	Width	Height
22.625	5/8"	2"	3"
22.626	3/4"	2"	3"
22.627	1"	2"	3"
22.628	1 1/4"	2"	3"
22.629	1 1/2"	2"	3 1/2"
22.630	2"	2"	3 1/2"

No. **22.635** Replacement sheet of glass



3 FERRIS™ SEE-THROUGH MOLD COMPOUND

Excellent for making a mold of an original article. Mold compound forms a transparent rubbery substance when baked at 350°F (177°C), making it very easy to see the model when cutting apart the mold. Wax is then injected into the cavity, reproducing the original model in every detail. Mold may be used many times. One quart makes 10 to 14 molds.

No.	Quantity	Shipping Weight
22.605	1 qt.	3 lbs.
22.606	1 gal.	10 lbs. 4 oz.



4 MOLD CUTTING KNIFE HANDLES and BLADES

Surgically sharp, stainless steel blades fit into comfortable plastic or metal handles. Widely used for cutting rubber molds.
No. **39.256** Stainless steel handle only
No. **39.257** Plastic handle only
No. **39.261** 100/pk straight blades
No. **39.262** 100/pk curved blades



5 SPRUE BURNING MANDREL

Heat over torch or burner to burn sprue opening into rubber mold. Eliminates the use of a sprue former in packing the mold.
No. **21.0836**

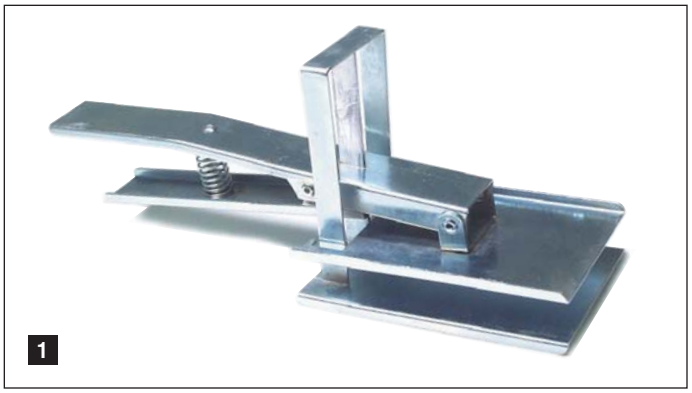


6 SPRUE FORMER

Attaches to the model in the mold frame to form the opening in the mold through which the wax is injected. Assures a proper fit on the nozzle of the wax injector.
No. **22.580**



Safety Tip: Always wear proper eye protection when melting.



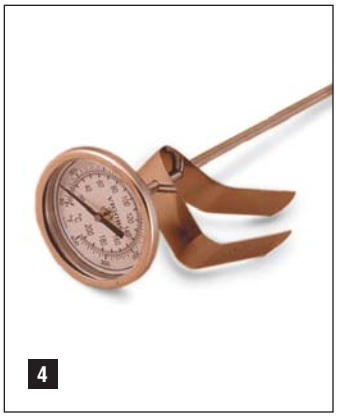
1 MOLD FRAME CLAMP
Sturdy clamp is designed to hold rubber molds safely and securely while wax injecting. Very useful when producing multiple wax models from the same mold, when fast filling and quick release are important.
No. **22.726**



2 GRIFFITH MOLD RELEASE
Allows easy removal of wax patterns from rubber, plastic or metal molds.
No. **22.641** 4 oz
No. **22.642** 8 oz
No. **22.643** 16 oz



3 CASTALDO® JEWELRY MOLD RELEASE SPRAY
Safe for all rubber molds. Saves time, eliminates broken patterns and improves the model. Before injecting wax, spray a small amount onto the mold. Material is non-explosive and non-flammable, with no CFC's or VOC's.
No. **22.640**



4 THERMOMETER
For testing wax temperature during the melting process. All metal with an 8" long stem and 2" diameter dial. Readings in both Centigrade and Fahrenheit. Capacity 50° to 400°F and 10° to 200°C.
No. **22.01455**



WAX WORKING TOOLS & SUPPLIES

5 3-WELL WAX TRAY with LID
This easy-to-clean, 3-well wax tray is digitally controlled, with an attached swing-back lid. The larger well measures 3" L x 2" W and is 3/4" deep. The two smaller wells measure 1 3/4" L x 1 3/8" W x 3/4" D. The entire unit is 6 3/8" L x 4 7/8" W x 2" H
No. **21.273**



6 GROBET WAX INJECTORS
Rugged construction and precision engineering make this wax injector practically maintenance free. Both hands are free for holding mold while injecting wax. Requires 5 to 8 lbs. of pressure which can be supplied by compressor. Made in USA

Features:
- Capacity 2¾ qt. or 5 lbs. max of wax (No. 22.747)
- Capacity 4 qt. or 8 lbs. max of wax (No. 22.748)
- Heated nozzle to eliminate wax freezing
- Nozzle has positive seal and drip guard
- Accurate thermostat
- Sensitive air pressure regulator and gauge
- Large wing nuts for easy cover removal and wax loading
- On-off pilot light
- Safety valve for air release-20 lbs.
- Measures 9" diameter x 16" high (No. 22.747)
- Measures 10½" diameter x 21" high (No. 22.748)

No. **22.747** 2¾ qt. capacity
No. **22.748** 4 qt. capacity (not shown)

1 PRO-CRAFT® WAX POT

US made, thermostatically controlled electric pot keeps wax at proper temperature for patching and model making. May also be used as wax and resin dip pot for refractory models. Has 1 pint capacity.
No. **21.288**



1

2 WAX INJECTOR

Thermostatically controlled, with one pint capacity. Keeps wax at proper temperature. Hand-operated pump injects wax into mold. Made in USA.
No. **22.715** 115 volt model
No. **22.716** Replacement pump

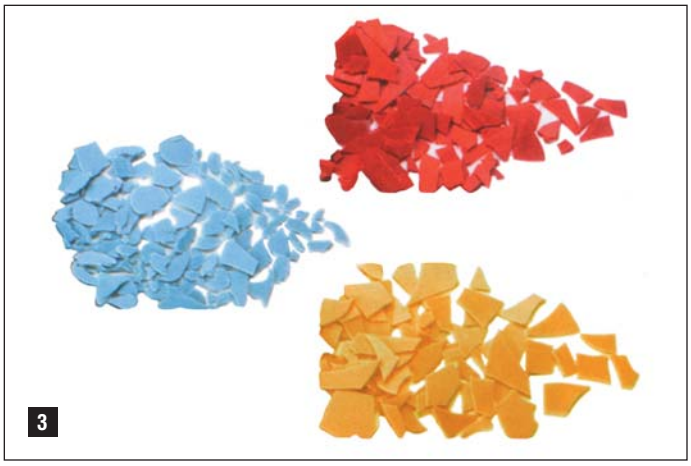


2

3 GROBET USA™ INJECTION WAXES

Highly fluid when melted, for easy injection and release even with the most intricate molds. Melt at 150˚ F (66˚ C). 1 lb. Sold in bags.

Type	Beads
Aqua Hi-Production For medium to large parts. Lowest shrinking of all injection waxes.	**21.453**
Aqua Super-Ject One of our most popular and the standard in the industry. All purpose and very tough.	**21.454**
Red Super-Ject Second in hardness. Low viscosity makes it perfect for details.	**21.455**
Purple Quick Set Our hardest and fastest-setting version. Low shrinkage for large parts and high production.	**21.456**
Gold Super-Ject Designed for difficult draws and intricate casts. Very tough and durable.	**21.457**


3

4 GROBET USA™ WATER-SOLUBLE WAXES

Dissolves and washes away in water, making it perfect for use as cores for beads and other hollow items. Other insoluble waxes are worked over these waxes and when immersed in water, a shell remains. Supplied in irregular chunks of 1 lb.
No. **21.520** Softer white for melting and pouring


4

5 MICROWAX WAX WELDER

Electronic waxer and sprue sealer. Precision temperature control has a working heat range up to 428˚F (220˚C). Special features include an insulated, comfort grip handle, and a built-in handpiece holder to reduce burns. Also includes three specially shaped tips that are perfect for joining, carving and sculpting wax. Illuminated on/off switch.
No. **21.275**
No. **21.275X** 220 volt



5



1

1 VACUUM PICK-UP TWEEZERS

Handles delicate miniature objects without scratching, breaking or pinching. Avoids contamination of parts and performs tweezer functions such as sorting, picking up, holding, carrying, etc. This system has received high praise from users in the semi-conductor, micro-electronic, ball bearing, optical and precision instruments industries. A lightweight, portable unit, completely assembled and ready for immediate operation as soon as the proper size tip is selected and installed. The vacuum generator is small, 4½" high x 2¾" in diameter, has an adjustable vacuum pressure control from 1" HG to 15" HG and an air flow of 125 cubic inches per minute. Unit has an on-off switch and is completely noiseless during operation. Set contains vacuum generator, anodized aluminum cylindrical probe, in-line filter to protect the generator, 4' length of tubing and five stainless steel probe tips.

No. **57.650** 115 volt model
No. **57.650X** 220 volt model
No. **57.651** Filter replacements
No. **57.652** Probe only

Replacement probe tips:

No.	Gauge	OD	ID
57.654	15	.071"	.052"
57.655	16	.065"	.045"
57.656	21	.032"	.020"
57.657	22	.028"	.016"
57.658	23	.025"	.013"



2

2 ACCESSORY CUP SET

Contains eight neoprene vacuum cups which fit onto probe tips to facilitate picking up larger objects. Cup diameters from 3/16" to 5/8" by 16ths.

No. **57.660**

Replacement cups:

No. **57.661** Replacement cup 3/16"
No. **57.662** Replacement cup 1/4"
No. **57.663** Replacement cup 5/16"
No. **57.664** Replacement cup 3/8"
No. **57.665** Replacement cup 7/16"
No. **57.666** Replacement cup 1/2"
No. **57.667** Replacement cup 9/16"
No. **57.668** Replacement cup 5/8"



3

3 SIMPLICITY BURNERS

Flame can be adjusted by raising or lowering split sleeve. Faceted bowl measures 3 3/16" in diameter and holds 4 oz. of fuel.
(Uses Griffith Alcohols, page 241.)

No. **14.285** With ½" diameter wick
No. **14.286** With ¼" diameter wick



4

4 GROBET USA™ FLUID DISPENSER PUMP

Compact, convenient 4 oz. capacity polyethylene bottle with stainless steel pump-action lid. Dispenses just the right amount of flux or other liquid. Just pump the lid with a brush and the fluid is dispensed in the well of the lid. The one-way pump holds the fluid in the well, preventing contamination of the unused fluid in the bottle. For best results and to avoid clogging, the well should be emptied and the cap cleaned between uses.

No. **54.415**

1 ELECTRIC WAX PEN

A versatile tool with wax control for pattern making, repairing and spruing. Variable temperature settings suitable for different wax types. Tool tip is interchangable. Ideal for carving, shaping and quick touch ups.
No. **21.264**
No. **21.265**
No. **21.267**



2 ELECTRIC WAX PEN

Has five tips, variable heat control and on-off indicator light.
No. **21.269** 110 volt model
No. **21.269X** 220 volt model
No. **21.271** Set of 5 replacement tips
No. **21.268** Replacement pen w/cord
No. **21.270** Replacement cord and handle



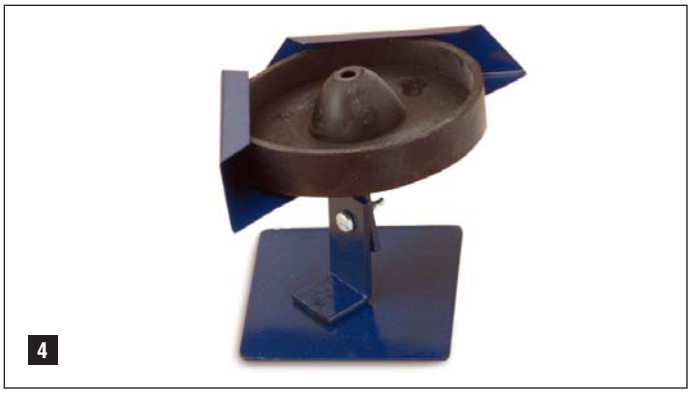
3 SPEEDY WAX PEN

Battery-operated, all-purpose wax pen. Instant heat with fingertip pressure control. Design or repair wax models with specially shaped interchangeable micro-tips. Cover protects tip and power switch. Includes AA-1.5V alkaline battery and one micro-tip.
No. **21.260** Wax pen
No. **21.261** Set of 3 differently shaped micro-tips



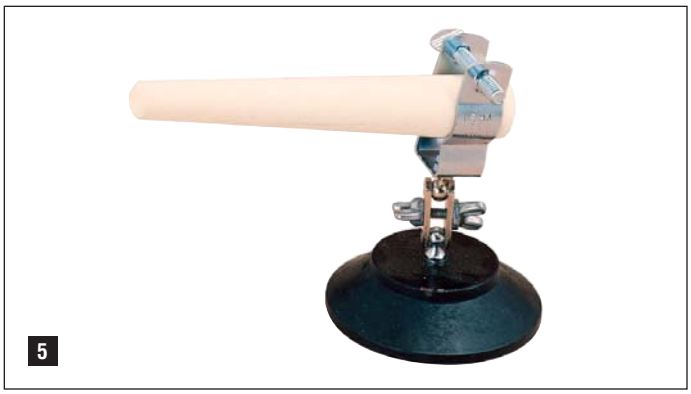
4 SPRUE BASE HOLDER

Holds sprue bases from 3" to 5". Heavy base for stability and adjustable top for varied working angles.
No. **21.890**



5 CERAMIC RING STAND

Holds rings, leaving both hands free for wax modeling. Mounted on base with swivel to provide the exact position or angle desired. The 6" ceramic rod is easily released for replacement. Base accommodates either ceramic or carbon soldering rod (No. 54.130 shown in soldering section).
No. **54.131** Ring stand
No. **54.132** Replacement ceramic rod





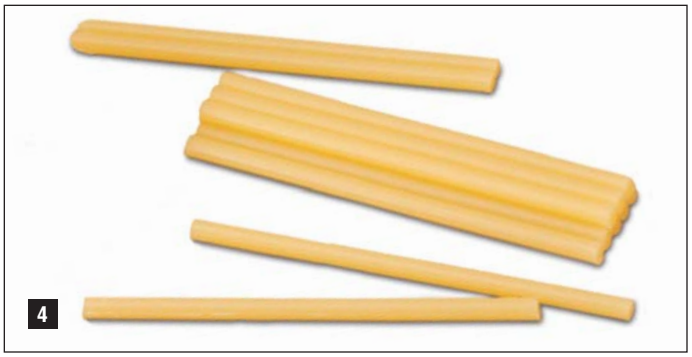
1 PRO-CRAFT® WAX LUBRICANT
Used to keep wax from sticking to mandrels, work plates or other wax. 8 oz. bottle.
No. **21.280** Wax lubricant with spray pump.
No. **21.281** Replacement bottle of lubricant



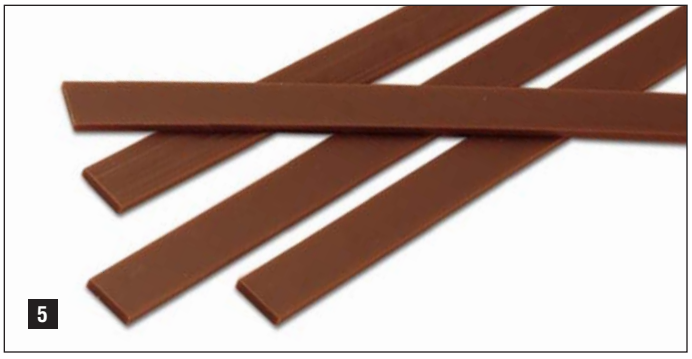
2 WAX KLEEN™
A preparation that removes scratches, smooths and cleans wax patterns prior to casting. Produces cleaner castings requiring less finishing work. Acid-free, water-soluble and 100% organic. Fast working. Rub on with cloth and let air dry. Ideal for keeping wax injectors clean.
No. **21.0806** 4 oz.
No. **21.0807** 8 oz.



3 GRIFFITH WAXOLVENT
A quality solvent and polish for wax and plastic models.
No. **21.792** 4 oz.



4 GROBET USA™ STICKY WAX and MODEL ADHESIVE
Used like an adhesive to weld waxes together. Box contains approximately 24 sticks, 3 1/2" in length.
No. **21.515**



5 GROBET USA™ SCULPTURE WAX STRIPS
Soft, very pliable wax that is easily formed and shaped by hand without the use of heat. Perfect for forming large models. Each strip measures 1/4" x 1 1/4" x 24". Supplied in 2 lb. boxes.
No. **21.655**


1


2


3


4

1 PERFORATED FLASKS for VACUUM CASTING

Stainless steel heavy-duty flasks, with machined perforations, help assure a perfect cast since metal is being forced into cavities evenly from all directions.

Flask	Diameter	Height
21.705	3⅜"	4"
21.706	4"	5¾"
21.707	4"	7"

2 RUBBER SLEEVES for PERFORATED FLASKS

No more messy masking tape! These latex rubber sleeves are placed over the flask to contain the investment while pouring and also form a collar so that no spilling occurs. Dimensions listed are for the flask that each sleeve will fit. Sleeve must be removed prior to burnout.

Warning: *DO NOT USE if you are NRL latex sensitive.*

Flask	Diameter	Height
21.708	3⅜"	4"
21.709	4"	5¾"
21.711	4"	7"

3 SPRUE BASE for PERFORATED FLASK

Used with perforated flasks listed above.
No. **21.882** For No. 21.705
No. **21.829** For Nos. 21.703, 21.706, & 21.707

4 UNIVERSAL SPRUE BASES

One size fits all 2½", 3", and 3½" flasks.
No. **21.780**

CASTING FLASKS & SPRUE BASES

Check chart below to help you match the sprue base type you need with the proper casting flask.
All casting flasks are stainless steel and very durable. The matching sprue bases assure a leak-proof seal.

CASTING FLASKS



Flask	Diameter	Height
A. 21.685	1¼"	1½"
B. 21.686	1⅜"	1⅜"
C. 21.687	1¾"	1¾"
D. 21.68701	2"	2½"
E. 21.688	2½"	2"
F. 21.689	2½"	2½"
G. 21.690	2½"	3"
H. 21.691	2½"	4"
I. 21.693	3"	2½"
J. 21.694	3"	3"
K. 21.695	3"	4"
L. 21.696	3½"	2½"
N. 21.69701	3½"	3"
O. 21.698	3½"	4"
P. 21.699	3½"	5"
Q. 21.69901	4"	4"
R. 21.701	4"	5"
S. 21.702	4"	6"

RECOMMENDED SPRUE BASES





Button	Tree
21.776	—
21.777	—
21.778	**21.825**
21.779	**21.824**
21.781	**21.826**
21.781	**21.826**
21.781	**21.826**
21.781	**21.826**
21.782	**21.827**
21.782	**21.827**
21.782	**21.827**
21.783	**21.828**
21.783	**21.828**
21.783	**21.828**
21.783	**21.828**
21.783	**21.828**
21.784	**21.829**
21.784	**21.829**
21.784	**21.829**

Button Sprue Base - Fill the cup in the center with wax or clay to form the base for the sprue.
Tree Sprue Base - Perfect for high production operations.



1

1 GROBET USA™ STANDARD VACUUM-ASSIST MACHINE for INVESTING and CASTING

When casting, the machine creates a vacuum at one end of the flask, which pulls the air and gases from the mold so that the molten metal flows quickly to every opening. Larger flasks can be cast with vacuum casting than with the centrifugal machine (although it is not possible to specify exact sizes, as the amount of metal to be cast, the shape of the cavity, etc., will all affect the size). This machine is capable of creating a negative mercury pressure equal to 27"-29" at sea level. The vacuum table measures 10½" x 10½" and rests on jiggle springs. Unit comes complete as shown. Shipping weight 50 lbs. Table without pump 18 lbs. Pump (and oil) 29lbs.

No. **21.805G** 110 volt model
No. **21.805GX** 220 volt model
No. **21.806G** Table only without pump
No. **21.819** Pump and oil only



2

2 GROBET USA™ PRO-CAST VACUUM MACHINE for INVESTING and CASTING

Three-in-one unit invests under vacuum, casts perforated flasks under vacuum and casts regular flasks under vacuum. The Pro-Cast Vacuum machine measures 23" W x 11" D x 13½" H. Investing is performed on a 10½" square platform which can be vibrated to eliminate air and bubbles. Unit accommodates perforated flasks up to 5" in diameter and 7" high. Pressure created by the powerful vacuum unit pulls molten metal into the most intricate patterns. Vacuum assist casting can also be done on this unit with regular solid wall flasks. Unit comes complete as shown. Shipping weight 69 lbs.

No. **21.800G** 110 volt model
No. **21.800GX** 220 volt model

Replacement Accessories:

No. **21.705** Perforated flask 3⅜" x 4"
No. **21.706** Perforated flask 4" x 6"
No. **21.707** Perforated flask 4" x 7"
No. **21.801** Adapter plate for vacuum assist casting
No. **21.802** Adapter plate for 3⅜" flask
No. **21.803** Adapter plate for 4" flask
No. **21.806** Oil vacuum pump oil-pint
No. **21.808** Vacuum pump oil-quart
No. **21.811** Vacuum pump oil-gallon
No. **21.809** Red silicon pad for 21.805 5½"
No. **21.810** Black rubber pad for investing
No. **21.812** Red silicon pad for 21.800G 7"
No. **21.813** Flask seal for 3⅜" flask
No. **21.814** Flask seal for 4" flask
No. **21.817** Flask seal for 5" flask and adapter plates
No. **21.818** Bell jar 9" diameter x 8" high
No. **22.791** Melting dish with handle
No. **22.793** Melting dish only
No. **57.068** Flask tongs
No. **57.069** Perforated flask tongs with pins



3

3 PLATINUM FLASK LINER SHEET

A handy item to have when doing any type of work with a flame. Asbestos-free and specifically made for lining flasks for firing. Measures 8" x 31" x 1/16".

No. **21.0860**



4

4 CASTING FLASK EXTENDERS

Slip the rubber extender over the flask prior to filling, to enable you to fill casting flasks to the top with investment. Prevents spilling of investment during vacuuming.

No.	Flask Diameter
21.797	2½"
21.798	3"
21.799	3½"

1 PRO-CRAFT® INVESTMENT SCALE with 10 lb. CAPACITY

Accurate, yet economical, scale weighs in 2 oz. increments. Easy to read red and black numerals on 4" dial indicate weight, as well as water/investment ratios. Includes scoop.
No. **21.773** Scale
No. **21.772** Replacement scoop


1

2 PLASTIC MEASURING CYLINDERS

For measuring the correct amount of water to mix with investment and determining the amount of metal to be cast by the displacement method.

No.	Capacity
21.740	250 ml
21.74010	1000 ml
21.74011	3000 ml


2

3 INVESTMENT

Formulation contains a de-foamer blended right into the material. Gives you low rise when vacuuming, a wider water usage range for greater yield and flexibility, easier removal of air bubbles on wax pattern surfaces and a more free-flowing mix. Molds will have extra strength. Exacting details can be reproduced and break-out accomplished more easily. Complete technical information and specifications are included.
No. **21.0843/10** 10 lb. box
No. **21.0843/25** 25 lb. box
No. **21.0843/100** 100 lb. box


3


4

4 INVESTMENT SCALE with 20 lb. CAPACITY

Dial shows proper water/investment ratios. Includes scoop. Shipping weight 5 lbs.
No. **21.775** Scale
No. **21.77501** Replacement pan

5

5 INVESTMENT SCOOP

Plastic scoop for handling dry investment. 4 3/4" x 8 1/2" x 3".
No. **21.731**


6

6 ONE-HOUR TIMER

Graduated by minutes.
No. **21.791**


7

7 DISPATULA

Disposable, flexible plastic spatula has the feel of metal but is much more economical. 7 1/4" length. Supplied in boxes of 100.
No. **21.185**



1 RUBBER MIXING BOWLS

No.	Diameter x Height	Capacity
21.760	2" x 2¾"	¼ pt
21.761	2¾" x 4¼"	¾ pt
21.762	3" x 5"	1 pt
21.763	5¾" x 6¼"	1½ qt
21.764	6½" x 8½"	1 gal



2 PLASTIC MIXING BOWLS

No.	Diameter	Height	Capacity
21.756	4"	2¼"	¾ pt
21.757	3"	2¼"	⅓ pt



3 PRO-CRAFT® VIBRATOR

Three-speed vibrator with greater weight and lower center of gravity prevents unit from dancing at higher speeds. Quieter operation, with greater surface area on platform. Has extra long cord and three-prong grounded plug. 120 volt, 40W, 60 Hz.
No. **21.815**





4 PRO-CRAFT® VAC-U-COAT

Reduces surface tension on model so that investment will adhere. Eliminates bubbles. Flask may be vacuumed. 8 oz. bottle with spray pump.
No. **21.795** Vac-U-Coat
No. **21.796** Refill bottle of Vac-U-Coat only (no pump)

5 PRO-CRAFT® NO-BUBBLE SOLUTION

Reduces surface tension on model so that investment will adhere. **Do not use when flask will be vacuumed.** Pint bottle.
No. **21.770**



6 GIFFITH WAXOLVENT

A quality solvent and polish for wax and plastic models.
No. **21.792**

FIBER BURNOUT FURNACES

Insulated with space-age ceramic fiber for fast heating and cooling at low electrical cost. The firing chamber is 13" W x 13" D x 9" H (33 x 33 x 23 cm), large enough for volume jewelry making. These kilns fire to 1700° F (967° C), so you can also use them for low-fire ceramics, enameling on metal, china painting or glass fusing. A heavy steel case protects the firing chamber for long life and the chamber is supported by a double-layer steel bottom. The base lifts the furnace off the work surface. The door peephole and top vent-hole are sealed with metal covers when not in use. The door remains tightly sealed, even at high temperature, with the spring-loaded latch. Reaches 1000° F (538° C) in 30 minutes.


1

1 DIGITAL CONTROL FURNACES

The digital control models use the DTC-800 controller, eliminating the need for a pyrometer. With this feature-packed temperature controller, you can program up to eight ramps (raising or lowering the temperature at the rate you specify) and eight dwells (holding the temperature constant for the length of time you specify). The digital models use a type-K thermocouple, long proven for it's reliability. The controller will shut off automatically should the thermocouple fail and the controller stores up to six programs even if the power shuts off. The furnace has a one year warranty. The controller has a two year warranty. Can be shipped UPS. Shipping weight 108 lbs.

No. **22.110** 120 volt furnace and digital controller (requires 20 Amp dedicated line)
No. **22.112** 240 volt furnace and digital controller (requires 10 Amp dedicated line)
No. **22.113** Replacement heating element for 120 or 240 volt


2

2 MANUAL CONTROL FURNACES

The manual control models use an infinite control switch with pilot light. A pyrometer hole is drilled in the back of the firing chamber. (Pyrometer not included, sold below). The furnace comes with a one-year warranty. A digital controller may be purchased separately and is recommended for burnout in place of the pyrometer. Can be shipped UPS. Shipping weight 108 lbs.

No. **22.114** 120 volt manual control furnace (requires 20 Amp dedicated line)
No. **22.116** 240 volt manual control furnace (requires 10 Amp dedicated line)
No. **22.113** Replacement heating element for 120 or 240 volt

PYROMETERS

Used to measure temperature in burnout ovens. Measure within 98% accuracy, from 0° to 2500° F (0 to 1371° C). Have 5" lead and sheathed 1/8" thermocouple. Can be wall mounted.



3 ANALOG (NEEDLE) PYROMETERS

No. **22.160**

4 DIGITAL PYROMETERS

No. **22.161**

5 DIGITAL CONTROLLERS

For use with above manual burnout furnaces, as well as most other 120 or 240 volt furnaces. Will give you the same programming features as described in digital control furnace above.

No. **22.117** 120 volt digital controller (requires 20 amp dedicated line)
No. **22.118** 240 volt digital controller (requires 10 amp dedicated line)



1

1 GROBET BRICK BURNOUT FURNACES

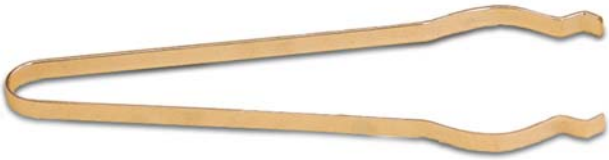
Features an infinite control switch and maximum operating temperature of 2000° F (1093° C). Includes a pre-drilled hole in the back of the chamber for insertion of a thermocouple. Use with a digital or analog pyrometer or digital controller. Elements are exposed in recessed grooves and the swing-style door opens wide for easy flask handling. Base keeps firing chamber off the work surface, so no stand is needed. A peep hole in the door and vent hole on top have metal covers.

Standard Size

Firing chamber dimensions 8 1/2" W x 8 3/4" H x 9" D.
Outside dimensions 17 1/4" W x 17 3/4" H x 18" D. Shipping weight 83lbs.
No. **22.07600** 120 volt model
(requires 20 amp dedicated line)
No. **22.07601** Heating element for 120 volt furnace
No. **22.07602** Heating element for 220 volt furnace

Large Size

Firing chamber dimensions 13" W x 8 3/4" H x 13 1/2" D.
Outside dimensions 21 1/2" W x 18 1/2" H x 23" D. Shipping weight 134lbs.
No. **22.07605** 120 volt model
(requires 20 amp dedicated line)
No. **22.07606** Heating element for 120 volt furnace
No. **22.07607** Heating element for 240 volt furnace



2

2 FLASK TONGS

For lifting flasks to and from the burnout furnace. Has two openings for handling small and large flasks. Overall length 15".
More tongs on pages 113 & 338.
No. **57.068**



3

3 WAX DRIP TRAYS

Trays protect the floor of your burnout oven, while providing proper support for your flasks. They increase the life of your heating element, and are a must when using plasticized wax. Stainless steel.
No. **22.119** 12" x 12" x 3/4"
No. **22.11901** 7" x 7" x 3/4"



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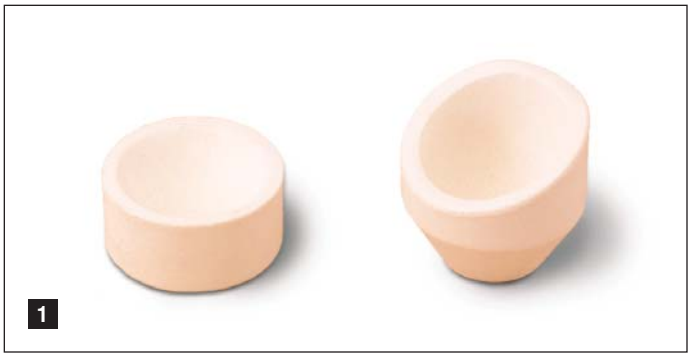
4 ASBESTOS-FREE SAFETY GLOVES and MITTENS

A must for working with burnout ovens and vulcanizers, and whenever melting gold. Do not use tongs to lift flasks and crucibles into or out of the furnace without protecting your hands. Durable, yet comfortable, these full length gloves cover your wrists. One size fits all. Always use on both hands. Sold by the pair.
No. **22.753** Gloves-pair
No. **22.754** Mittens-pair

1 MELTING DISH

Particular style of these crucibles makes it easier to melt metals with a torch. Made of fused silica with clay bond and suited to high melting temperatures. Handle No. 22.798 can be added to make pouring easier.

		Capacity	
No.	Type	(oz)	(g)
22.793	Straight side	7½	213
22.795	High back	20	567



2 MORGAN MELTING DISH (WESGO)

Designed for high temperature melting, including metals such as platinum.

		Capacity	
No.	Type	(oz)	(g)
22.815	Straight side	8	227
22.816	High back	10	283
22.817	High back	20	567

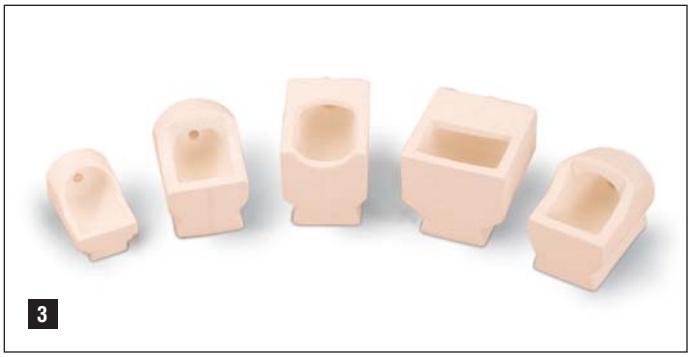


3

Crucibles for use with the centrifugal casting machines. Made of fused silica with a clay bond, which will last through many meltings. Best choice for metal melting up to 2500°F (1371°C) .

	Tray	Capacity	
No.	(oz)	(g)	(dwt)
22.450	2½	77	50
22.451	9	279	180
22.452	12	373	240
22.453	20	622	400
22.454*	9	279	180

**With slot to fit Pro-craft® casting machines on page 115.*



4 MORGAN BRAND CRUCIBLES (WESGO)

Suitable for high temperature melting of platinum, chromium, gold alloys, etc.

		Capacity in Platinum	
No.	Type	(oz)	(g)
22.470	Small A	1	28
22.471	Large A	3	85
22.472	Slotted A for large machines	3	85
22.473	Large D with key*	10	283
22.474	Large D with large orifice	11	312

**Key or slant side bottom for holding in machine for large melts on non-gold alloys.*



5 FUSED SILICA CRUCIBLES

Made of clay bonded fused silica for melting temperatures up to 2800°F (1538°C). Excellent for melting gold and silver. Available in a variety of sizes or as a set of four.

			Capacity	
No.	Diameter	Depth	(dwt)	(g)
22.780	1¾"	⅝"	16	48
22.781	2¼"	¾"	19	96
22.782	3"	1"	25	155
22.783	4"	1⅜"	35	420



SET of FUSED SILICA CRUCIBLES

Contains all four sizes listed above.
No. **22.784**

Safety Tip: Always wear proper eye protection when melting.


1


2

1 MELTING CRUCIBLES

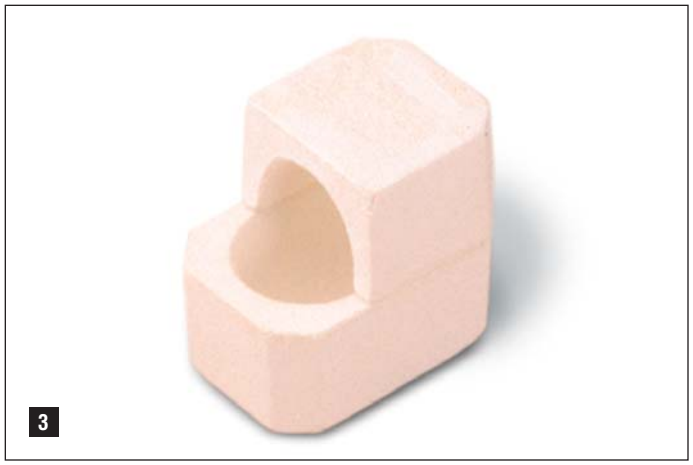
Made of fused silica with clay bond, for melting temperatures up to 2500°F (1371°C). Best choice for gold, silver, bronze, etc. Outside dimensions below do not include 3/8" pouring spout.

No.	Diameter	Height
22.760	2 3/8"	2 7/8"
22.761	3 1/2"	3 1/2"
22.762	4"	4 1/2"

2 GRAPHITE CRUCIBLES

These heat resistant crucibles, often called black lead, withstand temperatures up to 3000°F (1649°C) and will tolerate thermal shock.

No.	Size	Height	Top O.D.	Bottom O.D.
22.766	4/0	3 1/8"	2 3/8"	1 3/4"
22.767	1	3 5/8"	3 1/2"	2 1/4"
22.768	2	4 9/16"	3 7/8"	2 3/4"
22.769	3	5 1/4"	4 1/4"	3"
22.770	4	5 1/2"	4 3/4"	3 1/8"
22.771	6	6 5/8"	5 3/8"	4"
22.772	8	7"	5 7/8"	4 3/8"
22.773	10	8 1/16"	6 1/16"	4 15/16"


3

3 BURNO STYLE CRUCIBLES

Their protective heat-holding covers make them efficient for melting with a torch. Handy pouring openings. Made of fused silica with clay bond, for melting temperatures up to 2500° F (1371° C). Best choice for gold, silver, bronze, etc. Use with tong No. 57.060 on next page.

No.	Capacity
22.755	25 dwt.
22.756	50 dwt.
22.757	100 dwt.


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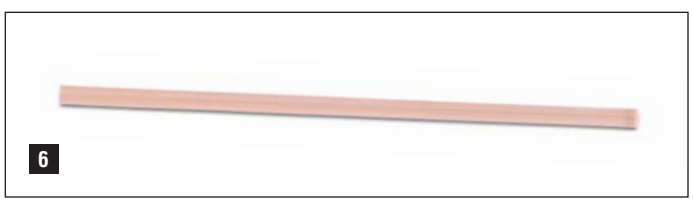
4 GRAPHITE MELTING CRUCIBLES

For use with the metal melt furnaces 22.211 & 22.213.
Made of quality graphite.
No. **22.216** 1 kilo
No. **22.217** 2 kilo


5

5 CARBON STIRRING RODS

For stirring gold in crucible while melting.
No. **22.901** 9" length with 1/4" diameter
No. **22.902** 12" length with 1/2" diameter


6

6 QUARTZ STIRRING RODS

Superior quality clear quartz rods are annealed and fire polished to eliminate flaking. Ideal for stirring molten metal. Overall length 12" x 3/8" diameter. Melting point 3183° F (1750° C).
No. **21.905**

Safety Tip: Always wear proper eye protection when melting.

1 MELTING DISH with HANDLE
Melting dish with removable handle makes it easy to melt and pour metals. Wooden handle resists heat and fused silica dish with clay bond is suitable for melting metals with high melting points, including platinum. Overall length is 14".
No. **22.791** Dish with handle
No. **22.793** Dish only
No. **22.798** Handle only

2 MELTING LADLE
Made of steel and designed for left or right pouring. Bowl diameter is 3" and handle length is 11½".
No. **22.890**

3 MELTING LADLE with WOOD HANDLE
Cast iron bowl, dipped in nickel and fitted with wood handle. Bowl diameter is 2" and handle length is 6".
No. **22.895**

4 BENT CRUCIBLE TONGS
For holding crucibles as well as picking up hot objects. 19" (483 mm) length.
No. **57.066**

5 CRUCIBLE and FLASK TONGS
For picking up crucibles and 1½" (38 mm) diameter flasks. 19" (483 mm) length.
No. **57.080**

6 FLASK TONGS
For lifting small and large flasks to and from oven. 15" (381 mm) length.
No. **57.068**

7 BURNO CRUCIBLE TONGS
10½" (267 mm) length.
No. **57.060**

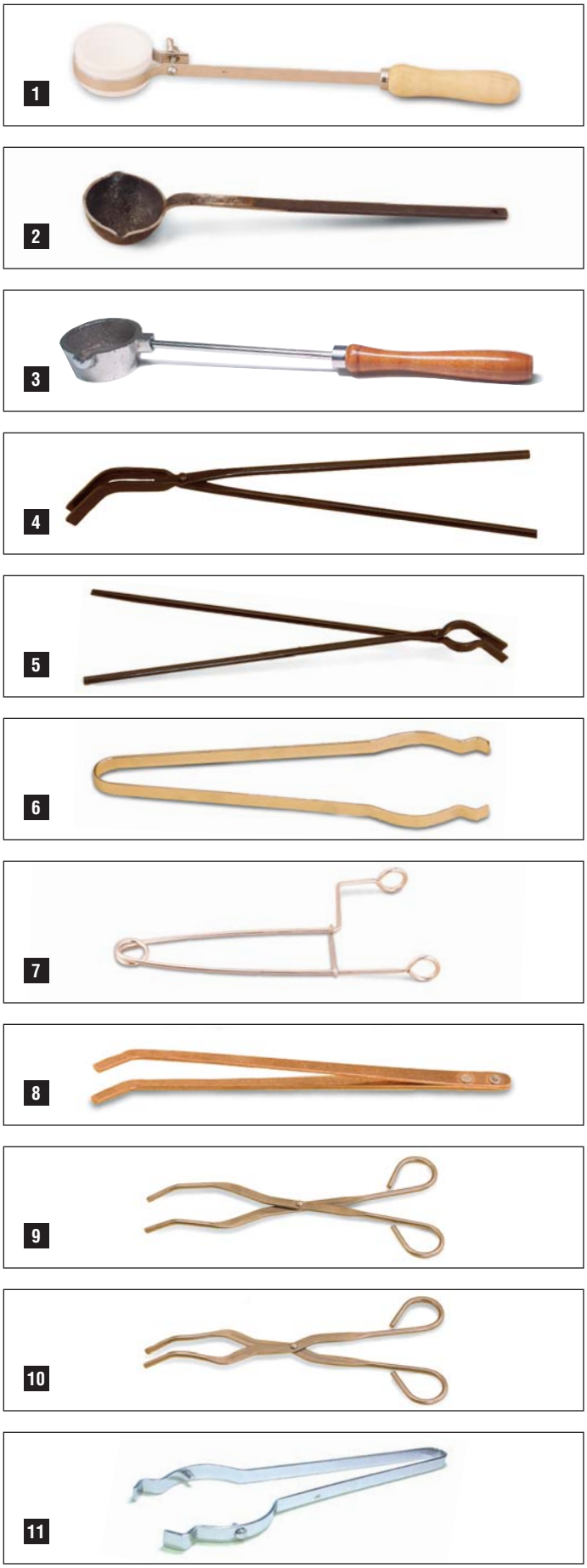
8 COPPER TONGS with CURVED TIPS
Suitable for pickling and acid solutions. 9" (229 mm) length.
No. **57.052**

GROBET USA™ CRUCIBLE and FLASK TONGS
All-purpose laboratory and industrial tongs for holding, manipulating and pouring, as well as for picking up hot objects. With serrated tips. 9" (229 mm) length.

9 TONG with LONG NECK
Zinc-plated steel with long neck.
No. **57.085**

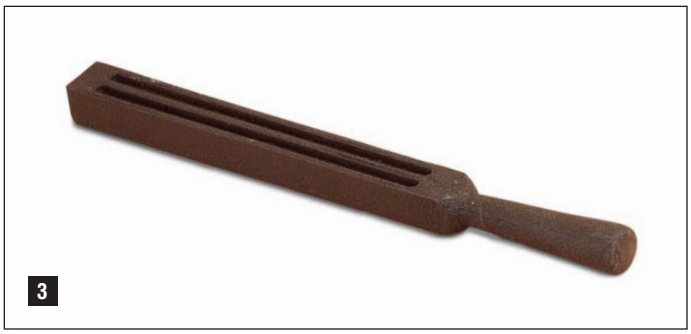
10 TONG with SHORT NECK
Stainless steel with short neck.
No. **57.098**

11 PERFORATED FLASK TONGS with PINS
Stainless steel, specifically designed with pins to engage the holes in perforated casting flasks for safe, secure handling. Not for use with non-perforated flasks. Length of 14⅞" (378 mm)
No. **57.069**




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INGOT MOLDS

Used to convert scrap into suitable shape for rolling. The metal is melted in a crucible and poured into the mold.

1 ADJUSTABLE INGOT MOLDS

Each mold can be made smaller by adjusting the sides in a horizontal direction. The C-clamp holds and releases the plates. The table below shows the maximum capacity.

	Depth		Length		Width		Capacity	
No.	(in)	(mm)	(in)	(mm)	(in)	(mm)	(dwt)	(g)
22.851	2 5/8"	66	1 5/8"	41	1/8"	3.2	115	178
22.0505	2 3/4"	70	1 3/4"	45	3/16"	5	150	233
22.854	3 15/16"	100	1 3/4"	45	3/16"	5	200	310
22.0507	5 5/16"	135	2 3/4"	70	7/32"	6	500	775

2 REVERSIBLE INGOT MOLD

Gives you two ingot molds in one. Make wire sizes 3, 4, 5, and 6 mm in diameter or 130 dwt. (221 g) capacity flat plates. C-clamp holds and releases the plates.
No. **22.877**

3 INGOT MOLDS for WIRE

Each mold can make three sizes of wire.

Regular Sizes:
3/4" x 5/16" x 6 11/16", 3/8" x 3/8" x 6 11/16", 9/32" x 5/16" x 6 11/16"
No. **22.0510**

Extra Long Sizes:
5/16" x 1/4" x 9 5/8", 1/4" x 1/4" x 9 5/8", 7/32" x 1/4" x 9 5/8"
No. **22.0501**

4 OPEN INGOT MOLDS

Forms ingots or bullion of various sizes as shown below.

	Depth	Length	Width	Capacity	
No.	(mm)	(mm)	(mm)	(dwt)	(g)
22.870	35	90	35	50	78
22.871	30	120	45	80	124
22.872	40	155	65	200	310

5 PRO-CRAFT® BORAX FLUX

Controls oxidation during the melting process.
No. **22.820** 8 oz.

6 GRIFFITH BORAX POWDER

Used for making soldering and casting fluxes.
No. **22.821** 7 oz.
No. **22.822** 16 oz.

7 GRIFFITH BORIC ACID GRANULES

Used as an anti-oxidizer during soldering or in making flux.
No. **54.520** 7 oz.
No. **54.521** 16 oz.

8 GRIFFITH BORIC ACID POWDER

Use as an anti-oxidizer during soldering or in making flux.
No. **54.522** 7 oz.
No. **54.523** 16 oz.

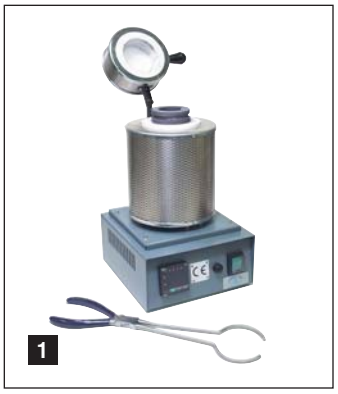
9 GRIFFITH CASTING FLUX

Increases the fluidity of molten metal and decreases metal oxidation during casting.
No. **21.788** 7 oz.

1 "METAL-MELT" FURNACES from GROBET USA™

Specially designed and constructed for melting metals for casting and alloying. Featuring 2,050° F/1120° C operating range, heavy duty graphite crucible, precise temperature control, LED on/off indicator light, 1kg and 2kg capacity, easy-to-read digital display, 110V - 50/60 cycle power.

No. **22.211** 1 kilo digital furnace
No. **22.213** 2 kilo digital furnace
No. **22.214** Replacement heating element for 1 kilo furnace
No. **22.215** Replacement heating element for 2 kilo furnace
No. **22.216** Replacement crucible for 1 kilo furnace
No. **22.217** Replacement crucible for 2 kilo furnace


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2 GRAPHITE MELTING CRUCIBLES

For use with the metal melt furnaces 22.211 & 22.213. Made of quality graphite.

No. **22.216** 1 kilo
No. **22.217** 2 kilo

PRO-CRAFT® CENTRIFUGAL CASTING MACHINES

The heavy-duty spring in the base swings the arm so that the molten metal is forced into the flask. The broken arm construction assures that the metal will flow in a straight line, producing dense castings.
NOTE: *For safety reasons, casting machine springs must be replaced at the factory.*


3

3 LONG ARM CENTRIFUGAL MACHINE

Takes flasks up to 3 1/2" in diameter and 5" high. The long 22 3/8" arm provides the extra force needed for heavier casts. Comes with balance weights and cradle for 2 1/2" diameter flasks. The recommended crucible is the 9 oz. size, No. 22.454. Shipping weight 20 lbs.

No. **22.365G**

LONG ARM CENTRIFUGAL MACHINE with ACCESSORIES

Set contains No. 22.365G described above, along with the following additional items: 9 oz. crucible, universal sprue base, rubber mixing bowl, spatula, 3 1/2" diameter x 5" long flask (no cradle needed), flask tongs and a 10 lb. box of investment. Shipping weight 29 lbs.

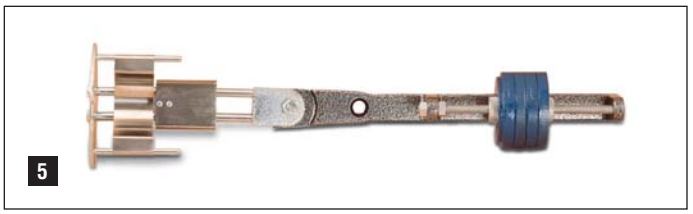
No. **22.366G**


4

4 SHORT ARM CASTING MACHINE SET

Accommodates flasks from 1 1/4" diameter up to 3 1/2" diameter and 2 3/4" high. The set includes balance weights, crucible No. 22.454, three steel flasks, three flask cradles, three sprue bases, and flask tongs. Shipping weight 27 lbs.

No. **22.361G**


5

5 LONG ARM ACCESSORY

Can be used on the short arm machine to convert it to the long arm type. Comes complete with balance weights and cradle for flask.

No. **22.367G**

6 DRUM for CENTRIFUGAL MACHINES

Helps protect the operator against accidental metal spilling from the whirling crucible. For use with either short or long arm machines. Made of steel with baked enamel finish. Base is drilled for attachment to bench. Base measures 24" x 24", with the drum 23 3/4"W x 11 1/2"H. Comes with instructions for assembly. Optional cover provides extra protection. (Machine not included.) Shipping weights as follows: drum 16 lb. 6 oz., cover 6 lbs. 8 oz. and drum and cover 23 lbs.

No. **22.390** Drum only
No. **22.391** Cover only
No. **22.392** Complete unit


6

CASTING METALS

These non-precious alloys resemble gold and silver, and are used as inexpensive casting metals. They can be oxidized or antiqued, as well as plated. The metals are tarnish resistant and will not discolor when heated. They will come out of investment bright and shiny, reducing the need for stripping or pickling. Can be electroplated and soldered with gold or silver solder.


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1 MANGANESE BRONZE
Resembles gold and has a melting point of 1700°-1800° F (927°- 982° C.)
No. **43.300** 8 oz. package (227 g)

2 NICKEL SILVER
Resembles silver and has a melting point of 2300°-2400° F (1260°- 1316° C).
No. **43.310** 8 oz. package (227 g)

3 RICH GOLD
Lighter than gold, this copper-based alloy melts at about 1900°F (1038°C) and is an excellent medium for beginners. Ideal for large pendants. Used by many jewelers for display because of its gold appearance and resistance to tarnish. Come in 1 lb. (454 g) package.
No. **43.01301/1**

4 COLUMBIAN GOLD
Yellow bronze metal is a bit softer in color than rich gold. Melts and flows just like real gold at about 1800° F (982° C). Comes in 1 lb. (454 g) package.
No. **43.01303/1**

5 ENGLISH GOLD
A light rose color shaded toward brown. Extremely hard and retains a high polish. Melting temperature is 2000° F (1093° C). Comes in 1 lb. (454 g) package.
No. **43.01305/1**

6 SILVER MINE
White copper-based alloy is very close to the color of sterling, but has the advantage of being considerably harder. Retains a high polish and melts at about 1550°F (843°C).
No. **43.01307** 2 oz. (57 g)
No. **43.01307/1** 1 lb. (454 g)

7 PEWTER
Lead-free and melts at about 450° F (232° C). An excellent metal for small sculptures. Comes in 1 lb. (454 g) package.
No. **43.01317**

8 RE-CAST-IT
Add Re-Cast-It when casting old or scrap gold to achieve a bright yellow, porosity-free casting. Increases the fluidity of old metal, while eliminating reddish surface discoloration. One jar is enough for casting approximately 800 dwt. of gold.
No. **22.607**

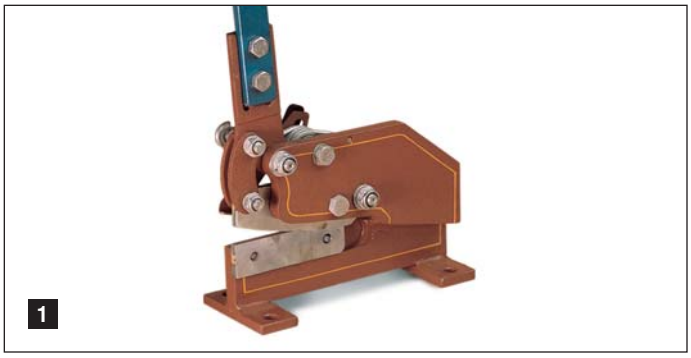
9 POROSITY KILLER
Use with Flexshaft to burnish and fill minor porosity holes in gold, silver, platinum, etc. Eliminates the need for extra filing and filling of holes with solder. With 3/32" shank.
No. **21.05600**

1 BENCH SHEARS

Lightweight yet powerful shears for cutting sheets, rods or flat bars. The handle provides leverage to cut with ease. Replaceable blades are made of hardened tool steel and are held in the open position by a strong spring to help prevent accidental closing. Available in three sizes, which cut iron stock up to sizes shown in table. Shipped in 2 boxes.

	Blade Length		Sheets		Rods		Shipping Weight	
No.	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lbs)	(kg)
53.930	5"	127	1/8"	3.2	3/8"	10	17	7.7
53.931	6 1/2"	165	5/32"	4	7/16"	11	25	11
53.932	7 3/4"	197	3/16"	5	1/2"	13	51	23

Replacement Blades:
No. **53.9301**
No. **53.9311**
No. **53.9321**

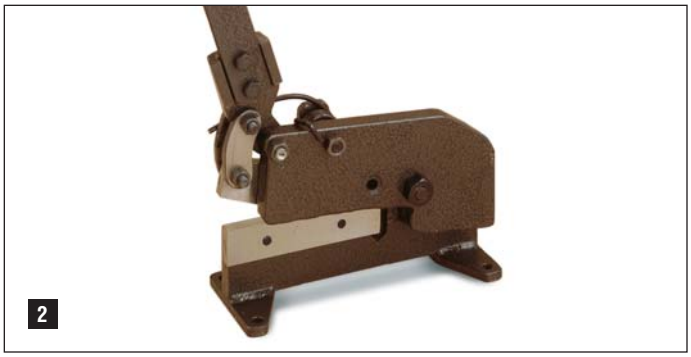

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2 ECONOMY BENCH SHEARS

Powerful shears for cutting rods or plates. The handle provides leverage to cut with ease.

	Blade Length		Sheets		Rods		Shipping Weight	
No.	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lbs)	(kg)
53.923	4 3/4"	121	3/8"	10	1/8"	3.2	16	7.3
53.924	6"	152	3/8"	10	3/16"	5	18	8.2
53.925	8"	203	7/16"	11	1/4"	6	48	22

Replacement Blades:
No. **53.92301**
No. **53.92401**
No. **53.92501**


2

3 HEAVY-DUTY SPRUE CUTTING PLIERS

The unique linkage design multiplies the pressure exerted to enable you to make a clean cut every time. With hardened steel cutting jaws. Locking system holds pliers closed when not in use to protect cutting edges. Cutting edge is 7/8" long, with jaws opening from 5/32" to 9/32". Overall length is 10".
No. **64.6496** End cutter
No. **64.6599** Side cutter


3

4 END CUTTER/SPRUE CUTTERS

Multi-leverage with return spring in handles. Cuts up to 3/16" rods. End type cuts close to work. Overall length is 7", cutting edge 1 3/16".
No. **46.574**


4

5 SIDE CUTTERS/SPRUE CUTTERS

Multi-leverage with return springs in handles. Heavy-duty type cuts up to 1/4" rods. Overall length is 8", cutting edge 3/4".
No. **46.582**


5



1 ALUMINUM HOT PLATE
Heavy steel aluminum, 4 1/2" wide x 5" long.
No. **22.960**



2 FUSIBLE METAL
Melts in boiling water. Supplied in 2 oz. ingots.
No. **54.812**



3 PRO-CRAFT® SAND CASTING SET
For casting simple metal articles such as jewelry and small sculpture in sand. Preparation of the sand mold is simple and quick and the original pattern or article can be used over and over. The set contains all necessary items (except a melting torch); parting powder, 5 lb. can of sand, crucible, crucible tongs, borax, asbestos-free pad, casting flask (horizontal or vertical fill) measuring 4 3/4" H x 3" W x 2" D and manganese bronze casting metal. Shipping weight 10 lbs.
No. **22.949** Sand casting set
No. **22.952** Replacement casting flask
No. **22.957** Sand only - 5 lb.



4 PRO-CRAFT® MOLD PARTING POWDER
Provides clean mold separation. 1 lb. can.
No. **22.645**



5 PLASTELINA MODELING CLAY
Pliable, gray-green in color. Used to fill cups in sprue bases. 1 lb. blocks.
No. **21.774**



6 CUTTLEFISH BONE
For casting small objects. Press model directly between two pieces of cuttlefish. The soft shell makes a smooth walled mold. Sprues, gates and vents are cut into the wall with a sharp knife. The two halves are held together with binding wire and the molten metal is poured into the cavity. Package contains six pieces.
No. **22.930**

STEAM CLEANERS



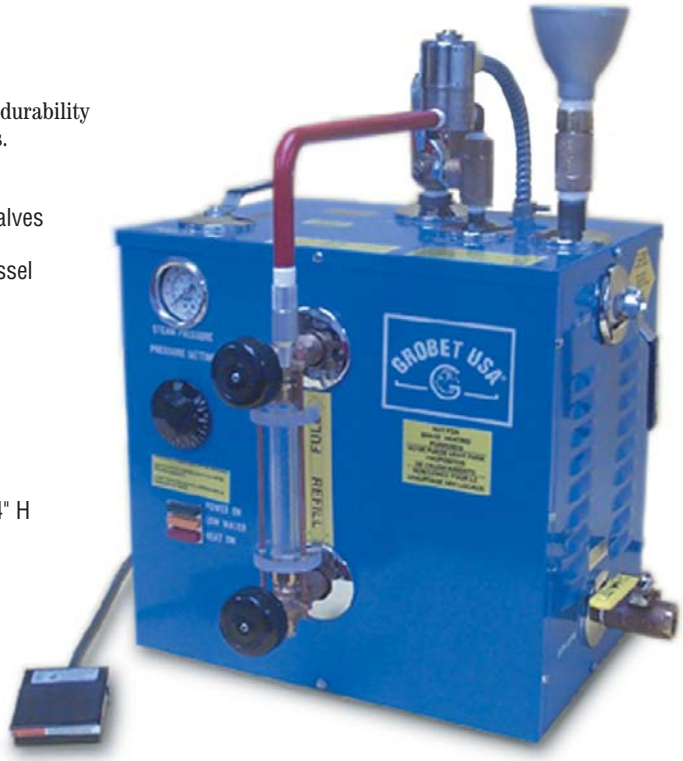
Features:
- All stainless steel (non-ferrous) fittings
- External sight glass and protective cover, with ball check valves
- Stainless steel heating element for reduced sediment in vessel
- Water intake valve with back-up flow protection
- Insulated nozzle assembly
- Quick recovery
- Low water cutoff
- Convenient foot pedal control for steam release
- Easy to plumb to meet local standards
- Easy to clean
- Warranty - 1 year parts and labor (under normal use)

Specifications:
- Capacity 2.54 gal
- Compact design - cabinet measures 10½" D x 14½" W x 14" H
- Variable steam pressure up to 70-75 PSI
- 1500 watts
- Shipping weight 75 lbs.

GROBET USA™ STAINLESS STEEL STEAM CLEANER

The only ASME-certified steam cleaner with a stainless steel tank. Stainless steel cabinet, tank and fittings for superior performance and long, rust-free life.

No. **24.850P** 110 volt model
No. **24.850PX** 220 volt model



A new generation of steam cleaning performance, quality and durability offered only by Grobet USA™. Built to full ASME specifications.

Features:
- External sight glass and protective cover, with ball check valves
- Water intake valve with back up flow prevention
- Stainless steel heating element for reduced sediment in vessel
- Adjustable thermostat
- Insulated nozzle assembly
- Low water cutoff
- Quick recovery
- Easy to plumb to meet local standards

Specifications:
- Capacity 2.3 gallon
- Compact design - cabinet measures 10½" D x 14½" W x 14" H
- Steam pressure @ 70-80 PSI
- 1500 watts
- Warranty - 1 year parts and labor (under normal use)
- Shipping weight 75 lbs.

GROBET USA™ STEAM CLEANER

No. **24.900P** 110 volt model
No. **24.900PX** 220 volt model

Note: All steam cleaners operate best using distilled water.

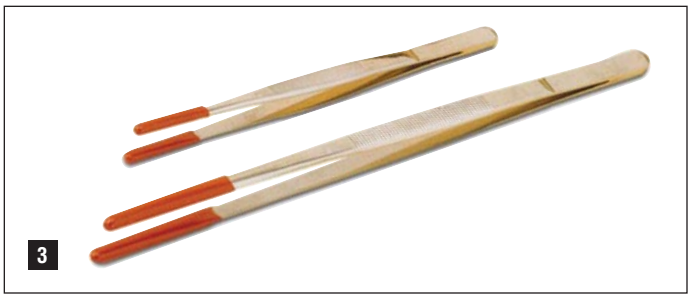


1 STEAM CLEANER DETERGENT
Keeps your steam cleaner operating at peak efficiency. Goes directly into water while filling and cleans while you work to save time.
No. **23.0877**



2 GROBET USA™ COATED STEAM TWEEZERS
Used to hold item while steam cleaning. Superior tension and grip. Made in the USA.
No. **57.921** 8" long
No. **57.922** 10" long

3 GROBET USA™ ECONOMICAL STEAM TWEEZERS
Used to hold item while steam cleaning.
No. **57.0956** 8" long
No. **57.0957** 12" long



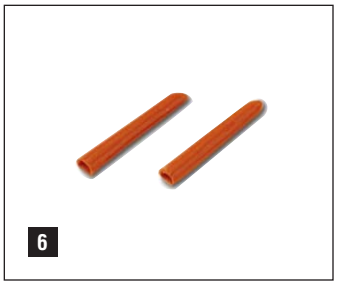
4 GROBET USA™ SPRING GRIP STEAM TWEEZERS
Used to hold item while steam cleaning.
No. **57.01400** 9½" long
No. **57.01401** 6" long





5 GROBET USA™ HEMOSTATS
Used to hold item while steam cleaning.
No. **46.454** Straight tips
No. **46.456** Curved tips

6 PLASTIC-COATED TIPS
Pair of plastic-coated tips.
No. **46.0139/1**





7 PARTS CLEANING BASKET
Holds small parts during cleaning. Reverse spring action handles prevent accidental loss of contents. Measures 6" x 2" x 2".
No. **23.620** Small
No. **23.621** Large



8 NO-LINT WATCH and JEWELERS' TISSUE
Lint-free, anti-tarnish tissues for wrapping and cleaning watch parts, jewelry, etc. Boxes contain 1000 sheets.
No. **23.555** Grobet brand 4¼" square
No. **61.0144** Vigor® brand 4" square

ULTRASONIC CLEANERS

Ultrasonic cleaning occurs when ultra-high frequency sound waves (Hz) are passed through a cleaning solution creating cavitation, microscopic bubbles collapsing into themselves. This creates a high energy, vacuum effect which safely pulls debris, foreign particles and other contaminants from the surfaces being cleaned. With ultrasonic cleaning, both the exterior and the interior surfaces, including crevices, are thoroughly cleaned. Ultrasonic cleaning has been proven to be sixteen times more effective than manual methods.



No.	Capacity	Volts	Shipping Weight	Tank Dimensions Length	Width	Depth
23.565 *	1 pt.	120V	2 lbs.	4 13/16"	3½"	2 5/8"
23.566	2 qt.	120V	3.3 lbs.	6"	5½"	4"
23.567	3 qt.	120V	4.5 lbs.	9½"	5½"	4"

** Does not include a heater or detachable cord.*

FABULUSTRE™ ULTRASONIC CLEANERS from GROBET USA™

These ultrasonics heat up rapidly, operate quietly and provide the high power you need (between 44 - 48 KHz) to get the job done effectively. The 60 minute countdown timer on the 2 & 3 quart units allows you to select a pre-set cleaning cycle, or you may choose a continuous cleaning cycle. All units have stainless steel tanks and covers and are equipped with an illuminated heater on/off switch and detachable power cords. All units have a two year warranty.

No.	Capacity	Volts	Shipping Weight	Tank Dimensions Length	Width	Depth
23.585	1 pt.	117V	5 lbs.	5¾"	3¼"	2"
23.585X	1 pt.	240V	5 lbs.	5¾"	3¼"	2"
23.586	2 qt.	117V	8 lbs.	6"	5⅜"	4"
23.586X	2 qt.	240V	8 lbs.	6"	5⅜"	4"
23.587	3½ qt.	117V	10 lbs.	9¼"	5¼"	4"
23.587X	3½ qt.	240V	10 lbs.	9¼"	5¼"	4"

ACCESSORIES for GROBET USA™ CLEANERS

Basket	Cover	For Use With
23.592	—	23.586 (2 qt)
23.593	—	23.587 (3½ qt)
—	**23.586PC** *	23.586 (2 qt)
—	**23.587PC** *	23.587 (3½ qt)

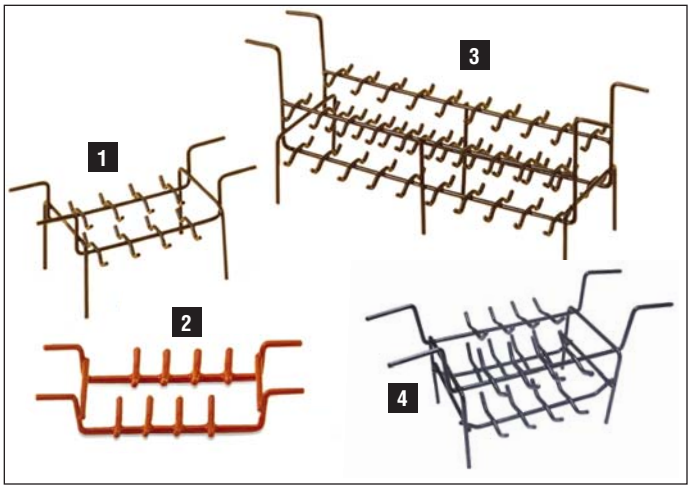
** POSITIONING COVERS - These stainless steel covers suspend beakers in solution to create a mini-cleaning tank for specialized ultrasonic cleaning procedures.*



GROBET USA™ ULTRASONIC CLEANERS

Standard features include a stainless steel tank and cover, automatic tuning and a pilot light. A 30 minute/hold timer enables you to pre-set the cleaning cylce duration or select continuous cleaning. Cleaning power on all units is 35 KHz. The 3 1/2 quart (3.3l) models have a stainless steel, multi-position drain for convenient solution disposal. Each unit is warranted for defects in materials and workmanship for 2 1/2 years. The housing is warranted for 5 years and the tank-to-transducer bonding is covered for 10 years.

All units have earned world-wide approvals-CSA, LA, FTZ, GS Mark and conform to CE requirements and meet FCC requirements.



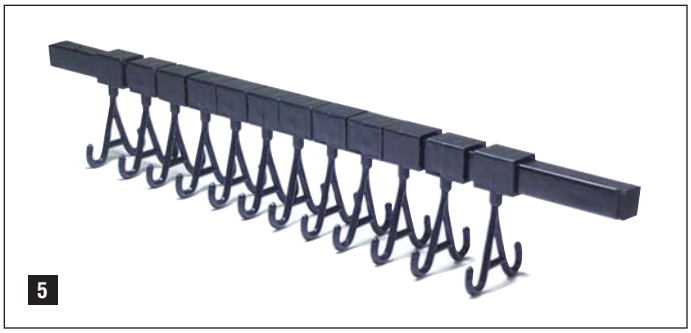
CLEANING RACKS
Plastic coated racks will fit 1, 2, & 3 quart ultrasonic cleaners.

1 No. **23.624** Holds 16 rings
Overall length: 4" H x 7" L x 4½" W
Basket floor measures: 4" L x 4½" W

2 No. **23.625** Holds 16 rings
Overall length: 1" H x 8¼" L x 5⅛" W
Basket floor measures: 5½" L x 3½" W

3 No. **23.626** Holds 80 rings - 2 tiers
Overall length: 5½" H x 13" L x 4½" W
Height to the 1st tier: 1¼" H x 10" L x 4½" W
Height from 1st to 2nd: 1¼" H x 10" L x 4½" W

4 No. **23.627** Holds 32 rings - 2 tiers
Overall length: 4" H x 8" L x 4½" W
Basket floor measures: 4" L x 4½" W

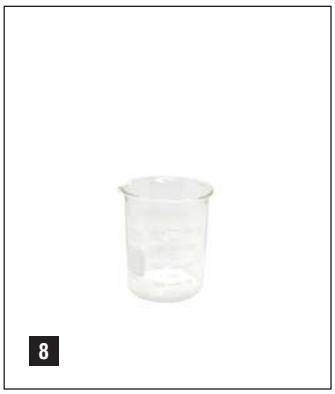




5 ULTRASONIC HOOK and BAR RACKS
Plastic coated, rust-resistant hook and bar racks increase ultrasonic cleaning efficiency and will not mar objects.
No. **23.630** 14¾" long. Capacity - 24 hooks
No. **23.631** 12" long. Capacity - 16 hooks
No. **23.632** Extra hooks. Package of 5

6 CLEANING MACHINE BASKET
Holds small parts in a cleaning machine. Screw-type basket is 5/8" (16 mm) in diameter and is made of fine mesh to prevent loss of parts while in solution.
No. **23.0500**





7 PYREX BEAKERS
No. **45.640** 600 ml
No. **45.641** 1000 ml

8 GLASS BEAKERS
No. **45.646** 250 ml



9 BEAKER COVERS
Protect against spills or contamination of beaker contents. Easy on and off, snug-fit. Covers fit the two popular sized beakers.
No. **45.644** Small for 600 ml beakers
No. **45.645** Large for 1000 ml beakers

1 GRIFFITH ULTRASONIC CLEANER
A liquid concentrate for general ultrasonic cleaning.
No. **23.036** 8 oz.

2 ULTRASONIC CLEANING SOLUTION CONCENTRATE
Formulated to meet OSHA requirements. Non-ionic, multi-purpose solution is safe for all ultrasonic cleaning needs. Contains no acids. When mixed with water, makes up to 10.25 gallons of solution.
No. **23.2050** One quart of concentrate

3 MAGIC LUSTER ULTRASONIC CLEANING SOLUTION CONCENTRATE
One gallon super concentrate makes 40 gallons of cleaning solution. Ideal for heavy, continuous ultrasonic use.
No. **22.668**

4 MAGIC GREEN ULTRASONIC CLEANING CONCENTRATE
One ounce of concentrated granules is mixed with one gallon of water to form a fast-acting solution. Biodegradable, with no ammonia. Ideal for gold and silver because it attacks and removes rouge and tripoli instantly. Long-lasting, with no evaporation. Saves on shipping costs.
No. **22.616** 16 oz. jar of makes 16 gallons of solution
No. **22.655** 32 oz. jar makes 32 gallons of solution
No. **22.656** 10 lb. tub makes 160 gallons of solution

5 GRIFFITH INSTA-CLEAN
A non-toxic dip or wipe-on tarnish remover and cleaner for gold, silver, copper, and brass.
No. **23.030** 4 oz
No. **23.031** 8 oz
No. **23.032** 16 oz
No. **23.034** 64 oz

6 "DIP ONCE" DEGREASER and CLEANER
Cleans rapidly, effectively, and safely. Protects as it cleans. Can be used to remove grease, oil, lubricants, wax, adhesives, ink, flux and many other contaminants from a wide variety of products, including watches and watch parts. Cleaning action is thorough and gentle. "DIP ONCE" can be used as a dip or a spray (see 23.0505 below), wiped or brushed on, in an ultrasonic cleaner, or as a soak. Sold by dozen.
No. **42.0501** ½ pint
No. **42.0508** 1 pint per dozen

7 "DIP ONCE" AEROSOL SPRAY
Comes complete with applicator to instantly clean hard to reach spots. Large 7 oz. can with special cap, which can be filled for dipping when necessary.
No. **23.0505**

















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CONNOISSEURS® PROFESSIONAL JEWELRY CARE at HOME

1 LA SONIC III

Twin tank design has three separate cycles: **regular** for gold, diamonds and other precious stones and stubborn soil, **delicate** for pearls and other semi-precious stones and light soil and **finish/rinse** for like-new sparkle. 110 volt unit includes convenient jewelry tray, touch-up brush, dust cover, jewelry care guide and 4 oz. bottles of both regular and delicate formula cleaning concentrate, enough for one quart of each solution. Two year warranty.
No. **23.01854**

2 CONNOISSEURS SONIC JEWELRY BATH

Cordless, battery operated sonic cleaner for quick cleaning of small pieces (up to 4 rings). This state-of-the-art cleaner combines sonic technology with a contemporary look. It has a clear tank for viewing the cleaning action. Use the carousel for rings and the "S" shaped hook for a larger piece. Batteries (AA) not included.
No. **23.01849**

3 JEWELRY CLEANERS

Includes handy dipping tray and touch-up brush. 8 oz. jars. Case of 24.
No. **23.01885** Regular formula - for gold, diamonds and other precious stones and stubborn soil
No. **23.01868** Delicate formula - for pearls and others semi-precious stones and light soil

4 JEWELRY CLEANER CONCENTRATES

Delicate formula - for pearls and other semi-precious stones and light soil.
Regular formula - for gold, diamonds and other precious stones and stubborn soil.

Item	Formula	Size	Case Qty
23.01856	Delicate	8 oz.*	12/case
23.01857	Regular	8 oz.*	12/case
23.01910	Regular	1 gal.	4/case

**8 oz. concentrate makes ½ gallon*

5 SILVER JEWELRY CLEANERS

Removes tarnish and dirt instantly. Silver tone, pleasantly scented for easy application. Dipping tray included with 8 oz. liquid jars.
No. **23.01880** Case of 12. 8 oz. bottles
No. **23.01881** Case of 4. One gallon containers

6 CONNOISSEURS ULTRA-SOFT POLISHING CLOTHS

Ultra-Soft for Jewelry cleans and buffs gold and silver jewelry. Ultra-Soft for Silver lifts tarnish from sterling silver, silver plate, flatware and hollowware, while leaving a protective, anti-tarnish coating.
Measures 11" x 14".
No. **17.0270** For jewelry
No. **17.0271** For silver

7 CONNOISSEURS JEWELRY WIPES

Easy to use disposable jewelry wipes are safe for fine jewelry.
Each dispenser holds 25 pop-up wipes.
No. **23.01850**

8 CONNOISSEURS CLEANING GEL and BRUSH

The specially formulated gel, combined with a unique brush creates a foaming action that gently, yet thoroughly, cleans diamonds, precious and semi-precious stones, gold and platinum jewelry.
No. **23.01851**

9 CONNOISSEURS JEWELRY SOAP

This jewelry soap comes in a convenient pump dispenser. The gel is non-messy and safe for jewelry and gentle to the skin. A special jewelry cleaning brush snaps into place on the back of the dispenser.
No. **23.01852**

ZENITH WATCH SOLUTIONS

Long time favorite of watchmakers, clockmakers and jewelers.



ULTRASONIC CLEANING FLUID
Ammoniated 202

Ammoniated waterless cleaning fluid No. 202 is designed for watchmakers. It can be used in an ultrasonic cleaner or in a mechanical cleaning machine.
No. **23.0202** 1 gallon

FORMULA 67 WATERLESS CLEANING FLUID
Non-ammoniated 206

Non-ammoniated waterless cleaning fluid No. 206 is designed for watchmakers and clockmakers. It can be used in an ultrasonic cleaner or in a mechanical cleaning machine.
No. **23.0206** 1 gallon

SUPERSONIC WATCH CLEANER
Ammoniated 210

Ammoniated waterless cleaning fluid No. 210 is designed for watchmakers and clockmakers. It can be used in an ultrasonic cleaner or in a mechanical cleaning machine.
No. **23.0210** 1 gallon

FOAMLESS WATCH CLEANER
Ammoniated 214

Ammoniated waterless cleaning fluid No. 214 is designed for watchmakers and clockmakers. It can be used in an ultrasonic cleaner or in a mechanical cleaning machine.
No. **23.0214** 1 gallon

CLOCK and INSTRUMENT CLEANING FLUID
Ammoniated 220

Ammoniated waterless cleaning fluid No. 220 is designed for clockmakers. It can be used in an ultrasonic cleaner or in a mechanical cleaning machine.
No. **23.0220** 1 gallon

ULTRASONIC RINSING FLUID
Waterless 224

Ultrasonic rinsing fluid No. 224 is designed for watchmakers. It can be used in an ultrasonic cleaner or in a mechanical cleaning machine.
No. **23.0224** 1 gallon

NO. 3 RINSING SOLUTION
Waterless 231

No. 3 rinsing solution is designed for clockmakers. It will not dissolve shellac, varnish or lacquer. It can be used in an ultrasonic cleaner or in a mechanical cleaning machine.
No. **23.0231** 1 gallon

CLOCK and INSTRUMENT RINSING SOLUTION
Waterless 235

Clock and instrument rinsing solutions No. 235 is designed for clockmakers. It can be used in an ultrasonic cleaner or in a mechanical cleaning machine.
No. **23.0235** 1 gallon

JEWELRY CLEANER CONCENTRATE
Ammoniated 249

Can be used in an ultrasonic cleaner or for cleaning by hand.
No. **23.0249** 1 pint
No. **23.0249G** 1 gallon

Z-88 CONCENTRATE
Non-Ammoniated 253

Can be used in an ultrasonic or to clean by hand. Works well on buffing compounds, waxes, oils, finger prints and any water soluble soil.
No. **23.0253** 1 pint
No. **23.0253G** 1 gallon

DIP-IT
Silver and Coin Cleaner 292

To remove tarnish, apply Dip-It with a soft brush or cloth. Rinse immediately and dry. Do not use on antique finishes or stainless steel.
No. **23.0292** 8 oz.
No. **23.0292G** 1 gallon



1 GLASS BEAD BLASTER

Produces a stream of micro-sized glass beads for removing stubborn investment particles, oxidation and heat scale from metal. Leaves article with smooth finish. Made in USA.

Features:

- Large viewing window with hinged door for easy clean-out
- Illuminated interior (40 watt bulb maximum)
- Neoprene glove sealed to opening for holding article
- Easily controlled instant action gun
- Gun is attached to 3½' air line hose with fittings
- Connects to compressor (sold separately), capable of producing 30 to 60 PSI pressure with at least a 5 gallon tank
- Portable-weighs only 10 lbs. when filled with 5 lbs. of glass beads.
- Supplied with 5 lbs. waterproof micro-sized glass beads
- Compact, measuring only 9" x 9" x 9"

No. **23.050** 110 volt model
No. **23.050X** 220 volt model
No. **23.051** Replacement beads 5 lb.



2 GLASS BEAD BLASTER

Features:

- Uses fine glass abrasive beads (23.0180/1)
- Tapered hopper for bead recycling
- Interior lighting with maximum 25 watt tube lamp (not included)
- Thick wall plastic construction with plexiglass lid with mylar shield
- Ceramic tip, .060", with approximate ⅛" spray pattern
- Two attached rubber gloves and built-in parts shelf
- Connects to air source of 1½ CFM at 80-90 PSI (not included)
- Overall dimensions 18" H x 16" W x 12" D
- Inside working height 9"
- Lid opening 12" x 8"

No. **23.04000** 110 volt model
No. **23.01801/1** 5 lb. bag of beads



3 AIR ERASER KIT/PORTABLE SAND BLASTER

The AEX Air Eraser works like magic to erase defects in jewelry castings, clean fine instrument parts, remove dust, tarnish and other corroded accumulations on a wide variety of delicate objects. Kit comes complete with AEC Air Eraser; 4' air hose with moisture trap, dust respirator, 6 oz. jar of aluminum oxide compound and A-34 hanger.

No. **23.060** Kit
No. **23.062** 5 lb. bottle of aluminum oxide compound



4 DUST CHASER PLUS™

High pressure spray reaches the most inaccessible areas to remove dust instantly without residue. Ideal for watchmakers, jewelers, craftsmen and technicians. Non-corrosive and safe with all materials.

No. **23.0970B***8 oz. spray can w/nozzle
No. **23.0971B***8 oz. refill can used w/trigger
No. **23.0972A** Chrome techni-valve trigger used w/refill can

**Subject to DOT Federal Regulations. Cannot be shipped by air.*



5 SAWDUST

Fine quality, guaranteed free from foreign substances. 1 lb. box.
No. **23.0530**



6 IMPORTED ORANGEWOOD

Orangewood may be used for cleaning pivot holes and making port polisher points. Approximately 24 sticks per bundle.

No.	Diameter	Stick Length
23.300	.08"	5¾"
23.301	.10"	5¾"
23.302	.12"	5¾"
23.303	.16"	5¾"

ALCOHOL CUPS

For alcohol, benzene or other solutions. Edges of covers and cups are ground to form a tight seal, keeping dust from entering and protecting solutions from evaporation.

1 PLAIN CUPS

Crystal clear. No. 23.163 has knob.

No.	Diameter	Height	Capacity
23.159	2¾"	2"	3 oz.
23.161	4"	2¾"	8 oz.
23.163	4¼"	2¾"	12 oz.

2 CLEAR GLASS with KNOB

Outside diameter 3¼", height 2⅜", capacity 3½ oz.
No. **23.157**

3 CUT GLASS

Outside diameter 2⅞", height 1⅞", capacity 1½ oz.
No. **23.155**

4 PORCELAIN PICKLE PAN

Made of laboratory quality porcelain. Wood handle 4 oz. capacity.
No. **45.200**

5 RUBBER FINGER COTS

Made of soft molded red rubber to provide comfortable protection from oil, dirt and grime. Sold by dozen.
No. **23.225** Small
No. **23.226** Medium
No. **23.227** Large
No. **23.228** Extra large

6 DENIM APRON

Blue denim apron, 28" x 36" with breast and waist pocket.
No. **47.306**

7 PURE WHITE COTTON GLOVES

Protects jewelry and silverware from fingerprints, spotting, and tarnishing. Used extensively in jewelry stores and manufacturing facilities. Sold by dozen.
No. **17.101** Small Heavyweight style
No. **17.102** Large Heavyweight style
No. **17.103** Lightweight style

8 DISPOSABLE LATEX GLOVES

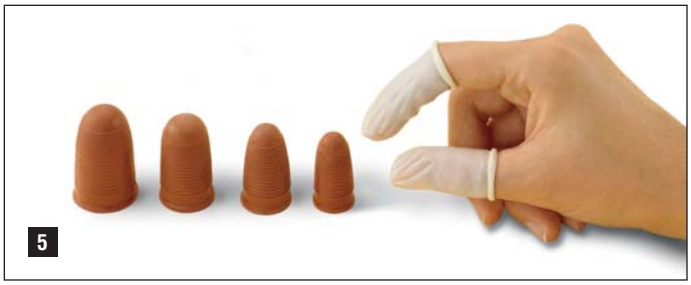
Protect your fingers and hands when polishing, finishing, or using solutions. Will fit either hand. Sold by box of 100.
WARNING: *DO NOT USE if you are NRL-latex sensitive.*
No. **17.106** Medium size
No. **17.107** Large size



















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SPEED BRITE IONIC CLEANERS

The Speed Brite systems quickly and thoroughly clean gold and silver, as well as soft stones such as emerald, opal, turquoise and pearl, without the vibration of ultrasonic waves or the harshness of ammonia.

1 ROUND COUNTER MODEL KIT (200SB)

7" diameter tank with 12 oz. (355 ml) capacity, lid, stainless ring bar, screen, and 16 oz. of Gem Sparkle concentrate solution.
No. **23.650** 110 volt model
No. **23.650X** 220 volt model

2 RECTANGULAR SHOP MODEL KIT (309SB)

9" x 5" tank with 36 oz. capacity, lid, stainless ring bar, screen and 32 oz. of Gem Sparkle concentrate solution.
No. **23.653** 110 volt model
No. **23.653X** 220 volt model

3 GEM SPARKLE® SOLUTION CONCENTRATE

Concentrated, odorless and environmentally safe, this cleaning solution is an effective, fast-acting degreaser that also removes oxidation and brightens metal to a like-new finish.
No. **23.660** 16 oz. solution
No. **23.661** 32 oz. solution
No. **23.662** 1 gallon solution
No. **23.663** 5 gallon solution

4 IONIC CLEANER ADAPTER

Attaches to any standard ultrasonic cleaner. Combines all the features of ultrasonic cleaning with the special cleaning properties of an ionic cleaner. (Ultrasonic cleaner sold seperately. See page 121.)
No. **23.656** 110 volt
No. **23.656X** 220 volt

DEMAGNETIZER

5 LARGE DEMAGNETIZER

Demagnetizes or magnetizes parts, tools and meters. To demagnetize, simply hold object in the center of the opening with button depressed for 3 or 4 seconds. Slowly withdraw object in a straight line and release button. To magnetize, hold the part or tool against the inside of the opening and press the button for 4 or 5 seconds and release. Opening is even large enough to accommodate cassette tapes for quick erasure. Opening measures 3" x 1½".
No. **26.0415A**

6 COMPASS

Extremely sensitive, 13 mm diameter, compass used for detecting the presence of magnetic fields in watches, instruments, and other components. Sold by dozen.
No. **26.720**

7 DEMAGNETIZER with DEMAGNETIZING TUNNEL

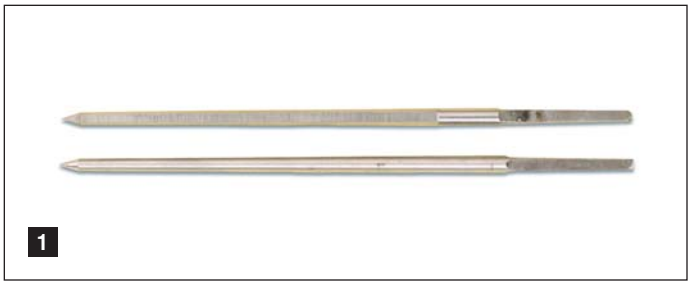
Demagnetizing tools such as tweezers, screwdrivers and steel rulers can be instantaneously and completely. Stronger than conventional demagnetizers. Current can be left on continuously with no damaging effects. Has no moving parts to wear out and will not overheat or burn out.
No. **26.704**

ENGLISH PATTERN BROACHES

Cutting, cleaning and finishing broaches made of high quality steel and uniformly tempered for long life. The lengths vary from approximately 1 3/4" to over 7", with diameters gauged slightly below largest portion of the cutting edges.

1 FIVE-SIDED CUTTING BROACHES

No.	Stubs	Diameter	No.	Stubs	Diameter
15.301	1	.227"	**15.352**	52	.063"
15.305	5	.204"	**15.354**	54	.055"
15.310	10	.194"	**15.355**	55	.050"
15.315	15	.180"	**15.358**	58	.042"
15.320	20	.161"	**15.360**	60	.039"
15.325	25	.148"	**15.362**	62	.038"
15.330	30	.127"	**15.365**	65	.033"
15.335	35	.108"	**15.368**	68	.031"
15.340	40	.097"	**15.370**	70	.027"
15.345	45	.081"	**15.372**	72	.024"
15.348	48	.075"	**15.375**	75	.020"
15.350	50	.069"	**15.380**	80	.013"
15.351	51	.067"			



2 ASSORTMENTS of CUTTING BROACHES

For general purpose work. Each contains 12 of the most used sizes within the stub range indicated. Packed in convenient tubes.

No.	Style	Stub Range
15.500	Cutting	15-70
15.501	Cutting	30-70



3 ASSORTMENTS of CUTTING BROACHES with BROACH HOLDER

For general purpose work. Each contains 12 of the most used sizes within the stub range indicated. Packed in tubes with broach holder .

No.	Style	Stub Range
15.505	Cutting	15-70
15.506	Cutting	30-70



4 ASSORTMENTS of ROUND BROACHES

For general purpose work. Each contains 12 of the most used sizes within the stub range indicated. Packed in convenient tubes.

No.	Style	Stub Range
15.513	Round	15-70
15.514	Round	30-70
15.0506*	Round	55-80

** Contains a broach holder.*



5 SET of CUTTING BROACHES with KNURLED HANDLES

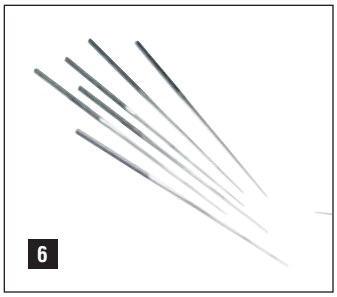
Contains six assorted sizes between stubs 43 to 72.
No. **15.510**

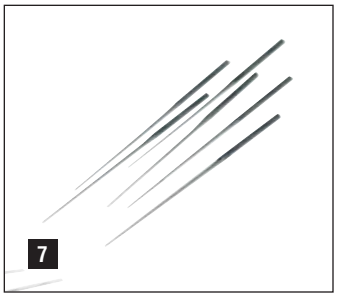


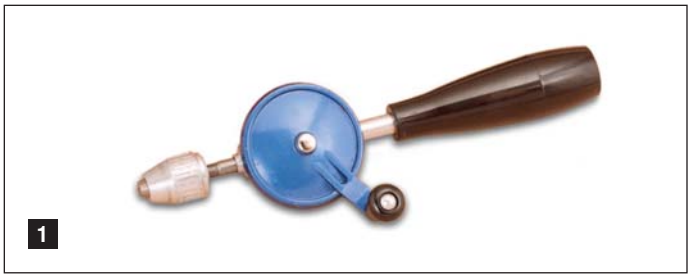
MASCOT PIVOT BROACHES

Superior quality, perfectly tapered and true to size for precision work. All have round handles and are 1 3/4" long. 1 dozen per package.

	No.	Style	Diameters
6	**15.520**	Cutting	.003" to .013"
	15.521	Cutting	.005" to .015"
	15.522	Cutting	.008" to .018"
7	**15.525**	Round	.003" to .013"
	15.526	Round	.005" to .015"



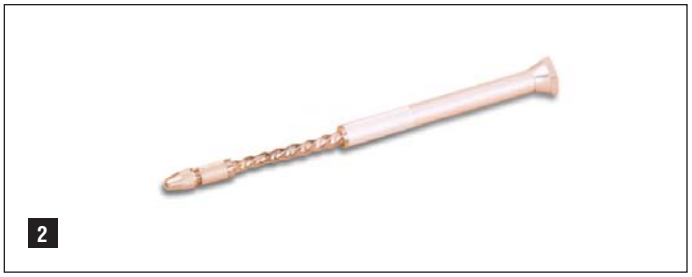




1 HAND DRILLS

Smooth operating drill with adjustable chuck. Sturdy tool for all-around use.

No.	Length	Capacity
28.233	11"	3/16"



2 SPIRAL DRILL

Pushing down on handle rotates drill. Capacity 1/16". Length 7 3/4".
No. **28.231**

3 SPIRAL DRILL

Push center chuck to rotate drill. Capacity 0 to 1/32". Length 4".
No. **28.230**



4 ADAPTOR CHUCKS

Handy for holding small drills in larger chucks or flexshaft handpieces. With 3/32" shanks.

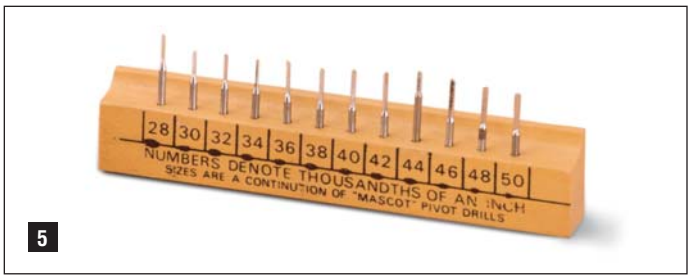
No.	Capacity	Collets
28.215	0"-.045"	1
28.216	0"-.097"	2



5 MASCOT® FLAT PIVOT DRILLS

Carbon steel for drilling brass, mild steel, aluminum, etc. Right hand with rake angle of zero degrees. Shank diameter for sizes .004" to .026" is 1 mm, and for sizes .028" to .050" shank is 1.5 mm. Individual sizes, sold by the dozen.

No.	Size	No.	Size
28.364	.004"	**28.388**	.028"
28.366	.006"	**28.390**	.030"
28.368	.008"	**28.392**	.032"
28.370	.010"	**28.394**	.034"
28.372	.012"	**28.396**	.036"
28.374	.014"	**28.398**	.038"
28.376	.016"	**28.400**	.040"
28.378	.018"	**28.402**	.042"
28.380	.020"	**28.404**	.044"
28.382	.022"	**28.406**	.046"
28.384	.024"	**28.408**	.048"
28.386	.026"	**28.410**	.050"



MASCOT® FLAT PIVOT DRILL ASSORTMENTS

Contains one dozen carbon steel drills in even numbers only. Comes in wood block, marked with sizes, with clear plastic protective cover.
No. **28.350** Sizes .004" to .010" (three of each)
No. **28.351** Sizes .004" to .026" (one of each)
No. **28.352** Sizes .028" to .050" (one of each)



6 PEARL DRILLS

For drilling holes for the setting of seed pearls and other round or half-round stones.

INDIVIDUAL PEARL DRILLS

No.	Size (mm)	No.	Size (mm)
53.121	1.05	**53.128**	2.26
53.122	1.20	**53.129**	2.40
53.124	1.45	**53.130**	2.65
53.125	1.65	**53.131**	2.83
53.126	1.85	**53.132**	3.00
53.127	2.05		

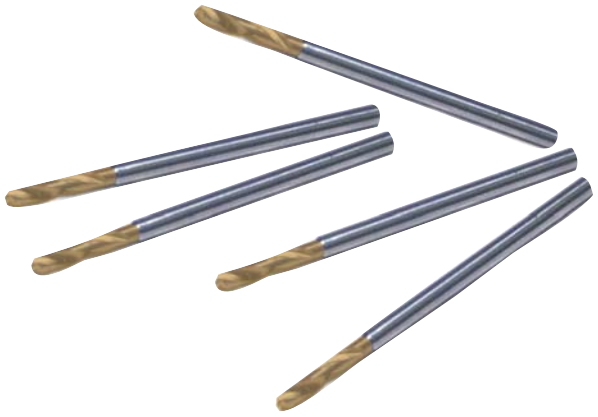
SET of PEARL DRILLS

Contains 12 sizes from 1.05 mm to 3.00 mm. Comes in wood stand with cover.
No. **53.120**

PREMIUM GOLD COBALT TWIST DRILLS

Grobet is proud to present this line of cobalt steel twist drills. Ideal for platinum, stainless, silicon-chrome and chrome-nickel. These drills will last 30 times longer than standard drills. Sold by pack of 10.

It is highly recommended that you use water or coolant when working with these drills. Also, try our Pro-Cut lubricant - item No. 19.928.



No.	Drill Size	Size
28.950	50	.0700"
28.951	51	.0670"
28.952	52	.0635"
28.953	53	.0595"
28.954	54	.0550"
28.955	55	.0520"
28.956	56	.0465"
28.957	57	.0430"
28.958	58	.0420"
28.959	59	.0410"
28.960	60	.0400"
28.961	61	.0390"
28.962	62	.0380"
28.963	63	.0370"
28.964	64	.0360"
28.965	65	.0350"
28.966	66	.0330"
28.967	67	.0320"
28.968	68	.0310"
28.969	69	.0292"
28.970	70	.0280"

CARBIDE & VANADIUM STEEL TWIST DRILLS

Sold individually with a minimum order of six pieces per size. Shank size 3/32".



GROBET USA™ CARBIDE TWIST DRILLS

No.	ISO No.	Size
28.600G	005	.0197"
28.601G	006	.0236"
28.602G	007	.0276"
28.603G	008	.0315"
28.604G	009	.0354"
28.605G	010	.0393"
28.606G	011	.0441"
28.607G	012	.0472"
28.608G	013	.0500"
28.609G	014	.0512"
28.610G	015	.0591"
28.611G	016	.0630"
28.612G	017	.0689"
28.613G	018	.0709"
28.614G	019	.0748"
28.61401G	020	.0787"
28.61402G	021	.0827"
28.61403G	022	.0866"
28.61404G	023	.0906"



TUNGSTEN VANADIUM STEEL TWIST DRILLS

ISO No.	Size	Grobet USA	Busch
005	.0197"	**28.584G**	**28.584**
006	.0236"	**28.585G**	**28.585**
007	.0276"	**28.586G**	**28.586**
008	.0315"	**28.587G**	**28.587**
009	.0354"	**28.588G**	**28.588**
010	.0393"	**28.589G**	**28.589**
011	.0441"	**28.58901G**	—
012	.0472"	**28.590G**	**28.590**
013	.0500"	**28.59001G**	—
014	.0512"	**28.591G**	**28.591**
015	.0591"	**28.592G**	**28.592**
016	.0630"	**28.593G**	**28.593**
017	.0689"	**28.59301G**	—
018	.0709"	**28.594G**	**28.594**
020	.0787"	**28.59402G**	—
021	.0827"	**28.595G**	**28.595**
022	.0866"	**28.59501G**	—
023	.0906"	**28.596G**	**28.596**

Safety Tip: Always wear proper eye protection when drilling.



HIGH SPEED STEEL TWIST DRILLS

Individual sizes, sold by pack of 10.

No .	Drill Size	Size
28.468	50	.0700"
28.469	51	.0670"
28.470	52	.0635"
28.471	53	.0595"
28.472	54	.0550"
28.473	55	.0520"
28.474	56	.0465"
28.475	57	.0430"
28.476	58	.0420"
28.477	59	.0410"
28.478	60	.0400"
28.479	61	.0390"
28.480	62	.0380"
28.481	63	.0370"
28.482	64	.0360"
28.483	65	.0350"

No .	Drill Size	Size
28.484	66	.0330"
28.485	67	.0320"
28.486	68	.0310"
28.487	69	.0293"
28.488	70	.0280"
28.489	71	.0260"
28.490	72	.0250"
28.491	73	.0240"
28.492	74	.0225"
28.493	75	.0210"
28.494	76	.0200"
28.495	77	.0180"
28.496	78	.0160"
28.497	79	.0145"
28.498	80	.0135"



MASCOT® HIGH SPEED STEEL TWIST DRILLS

Individual sizes, sold by pack of 10.

No.	Drill Size	Size
28.530/10	30	.1285"
28.533/10	33	.1130"
28.534/10	34	.1110"
28.536/10	36	.1065"
28.538/10	38	.1015"
28.540/10	40	.0980"
28.541/10	41	.0960"
28.542/10	42	.0935"
28.543/10	43	.0890"
28.544/10	44	.0860"
28.545/10	45	.0820"
28.546/10	46	.0810"
28.547/10	47	.0785"
28.548/10	48	.0760"
28.550/10	50	.0700"
28.551/10	51	.0670"
28.552/10	52	.0635"
28.553/10	53	.0595"
28.554/10	54	.0550"
28.555/10	55	.0520"
28.556/10	56	.0465"
28.557/10	57	.0430"
28.558/10	58	.0420"

No.	Drill Size	Size
28.559/10	59	.0410"
28.560/10	60	.0400"
28.561/10	61	.0390"
28.562/10	62	.0380"
28.563/10	63	.0370"
28.564/10	64	.0360"
28.565/10	65	.0350"
28.566/10	66	.0330"
28.567/10	67	.0320"
28.568/10	68	.0310"
28.569/10	69	.0292"
28.570/10	70	.0280"
28.571/10	71	.0260"
28.572/10	72	.0250"
28.573/10	73	.0240"
28.574/10	74	.0225"
28.575/10	75	.0210"
28.576/10	76	.0200"
28.577/10	77	.0180"
28.578/10	78	.0160"
28.579/10	79	.0145"
28.580/10	80	.0135"

Safety Tip: Always wear proper eye protection when drilling.

1 DORMER HIGH SPEED TWIST DRILLS

Made of the highest quality steel, carefully tempered and accurately ground to size. All drills have straight shanks and are perfectly finished to assure quick, smooth and clean drilling. Individual sizes, sold 10 drills to a package.

No.	Size	No.	Size
28.0536/50	.0700"	**28.0536/67**	.0320"
28.0536/51	.0670"	**28.0536/68**	.0310"
28.0536/52	.0635"	**28.0536/69**	.0293"
28.0536/54	.0550"	**28.0536/70**	.0280"
28.0536/55	.0520"	**28.0536/71**	.0260"
28.0536/57	.0430"	**28.0536/72**	.0250"
28.0536/58	.0420"	**28.0536/73**	.0240"
28.0536/59	.0410"	**28.0536/74**	.0225"
28.0536/60	.0400"	**28.0536/75**	.0210"
28.0536/61	.0390"	**28.0536/76**	.0200"
28.0536/62	.0380"	**28.0536/77**	.0180"
28.0536/63	.0370"	**28.0536/78**	.0160"
28.0536/64	.0360"	**28.0536/79**	.0145"
28.0536/65	.0350"	**28.0536/80**	.0135"
28.0536/66	.0330"		

SET of 20

Contains sizes 61 to 80. Comes in a selector case with slide cover, to select only the size you need. Sizes are noted right on the case. Drills can be easily replaced so the set is always in order and protected.
No. **28.0540**



1

2 DORMER HIGH SPEED TWIST DRILL ASSORTMENTS

Set of 6 contains sizes 55, 56, 59, 60, 64, and 67 in a handy plastic tube. Excellent for sample jewelry making and general workshop use.
No. **28.0545**


2

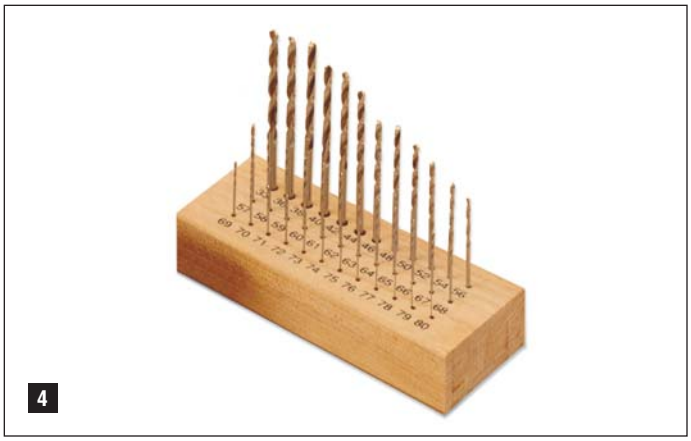

3

3 MASCOT® HIGH SPEED STEEL TWIST DRILL ASSORTMENTS

Set of 6 assorted sizes between 30 to 52 in a plastic tube.
No. **28.500**

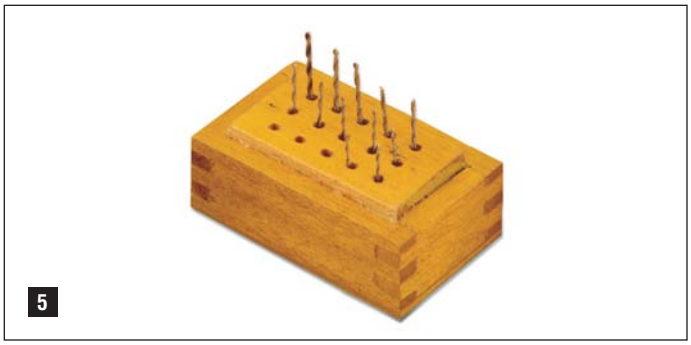
4 SET of 36 HIGH SPEED TWIST DRILLS

Contains sizes 33 to 80 in wood stand with cardboard cover.
No. **28.504**


4

5 SET of 12 HIGH SPEED TWIST DRILLS

Contains sizes 50 to 61 in rectangular wood block.
No. **28.503**


5



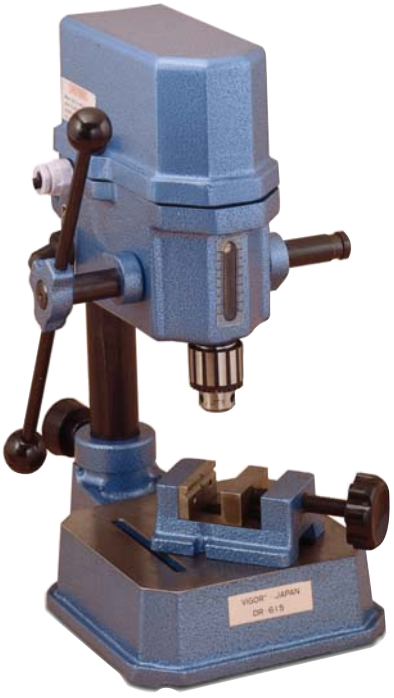
1 SET of 20 HIGH SPEED TWIST DRILLS in METAL CASE
Contains sizes 61 to 80.
No. **28.501**
No. **28.510** metal case only



2 SET of 20 HIGH SPEED TWIST DRILLS in PLASTIC STAND
Contains sizes 61 to 80 in plastic stand.
No. **28.502**



3 LUBRICANT for DRILLS
Keep your drills working smoother and longer, while reducing heat buildup and friction to speed the cut. Easy and convenient to use. Leave it on the bench and just dip the drill in the lubricant at regular intervals while working. Comes in handy push-up 2 oz. container.
No. **19.928** Pro-Cut Lubricant



4 PRECISION DRILL PRESS
A precision machine with a high power motor, yet compact in size. Includes 6.5 mm drill chuck and wrenches B-5 and B-2. Measures 7 1/4" W x 9" L x 12 3/4" H

Specifications:
- Spindle tolerance to .02 mm
- 6.0 mm-steel, 6.5 mm non-ferrous metal drilling capacity
- 260 mm swing
- 35 mm maximum vertical spindle stroke
- 170 mm maximum distance from table to spindle
- Handle lever can be fixed on right or left side at any angle
- Work table measures 5.5 mm square
- Jacobs #1 main spindle taper
- Motor is 115 volt AC, 50/60 Hz
- Four spindle speeds of 2800 rpm, 4500 rpm, 7100 rpm and 11400 rpm

No. **28.615**



Complete with Mini-Vise as shown.



Depth gauge indicates the exact depth of the spindle in the timber. Required depth can be fixed by the stopper on the handle spindle.



Four spindle speeds are available by belting on different pulleys.



Height of main spindle head can be adjusted.

Safety Tip: Always wear proper eye protection when drilling.

1 VICTOR ENGRAVING BLOCK by GROBET USA™

Recognized as the finest block among engravers throughout the world. Turntable revolves on precision bearing, eliminating side shake, yet is responsive to the slightest touch. Deep-throated jaws close and open on smooth operating center screw. Block is 5" (127 mm) diameter and is supplied with a plastic base.

No. **26.202** Engraving block w/base
No. **26.200** Engraving block w/base and attachments
No. **26.20201** Replacement key
No. **26.20202** Replacement jaws
No. **26.20203** Plastic base pad
No. **26.20204** Worm gear



2 SET OF ATTACHMENTS

Complete set of accessories for Victor engraving block, mounted on wood base.

Set contains:

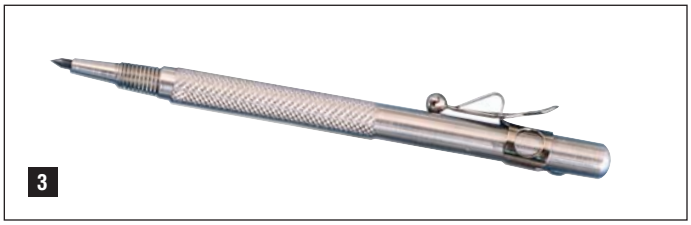
No. **26.250** 4 rubber covered pins - large
No. **26.253** 4 tapered pins
No. **26.254** 4 triangular pins
No. **26.257** 4 bent pins
No. **26.258** Locket holders
No. **26.215** Complete set



3 WALLER SCRIBER

Carbide tipped scriber with reversible ends. Covered point may be covered while being carried.

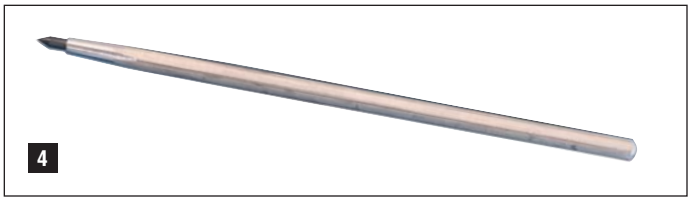
No. **52.950**



4 CARBIDE TIPPED SCRIBER

Can be used on hard metals, glass, jewels, etc. Slim line design is comfortable to use. Hexagonal aluminum handle prevents rolling on bench. Length 5 1/4" (133 mm).

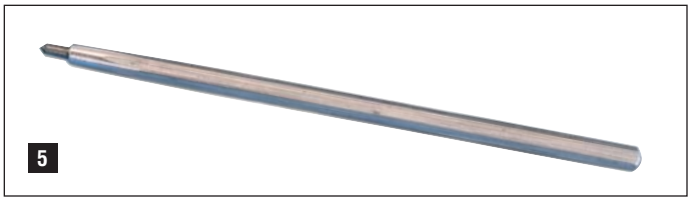
No. **52.952**



5 DIAMOND TIPPED SCRIBER

Can be used on hard jewels, metals, etc. Hexagonal aluminum handle prevents rolling on bench. Length 5 1/4" (133 mm).

No. **52.954**

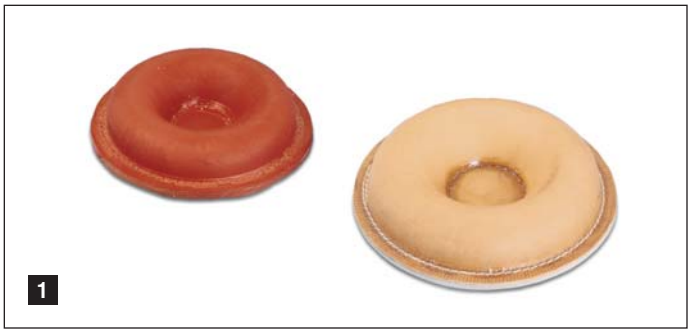


6 AIR SCRIBE

This lightweight, air driven tool is used for marking and writing on various materials, such as glass, plastic, wood, and metals up to 64Rc hardness. Operates economically on less than 1 cfm. Requires an air compressor (not included). Comes with stylus and an 8' reinforced hose.

No. **26.400**
No. **26.402** Replacement holder (includes stylus)





1 RING PADS
Leather covered pad used as a base for engraving bowls or as a base for an engraving block.
No. **26.366** Diameter 5" (127 mm)
No. **26.367** Diameter 6" (152 mm)



2 FELT RING PAD
Used as a rest for engraving block or for large bowls when being engraved. Diameter 5" (127 mm).
No. **26.360**



3 LIGHT ENGRAVING CEMENT
Items not easily placed in engraving blocks can be attached to boxwood slips with this cement. Ideal for holding semi-precious stones while polishing or cutting. Melts easily. Pack contains two 1/2 lb. (227 g) bars.
No. **12.203**



4 CHINESE WHITE
Dabbed or brushed onto surface when melted so that a pencil mark may leave an impression.
No. **26.160** Small cake



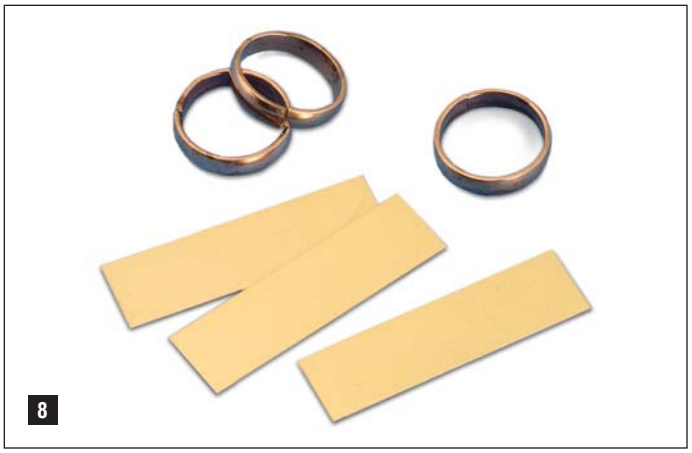
5 ASPHALTUM VARNISH
Slow drying varnish for etching resistance on large surfaces.
1 pint (473 ml) can.
No. **26.600**



6 SYNTHETIC BEESWAX
Leaves a surface film on which design can be marked. Can also be used as a lubricant for sawblades, burs, and drills.
No. **26.100** 1 oz. (28 g) tube
No. **26.103** 1 lb. cake



7 PEG CLAMP
Holds small odd-shaped articles for engraving and other delicate work. Round jaws, 2" (51 mm) diameter, open and close on twin guides by turning the threaded screw. The eight pegs supplied can be positioned in any of the holes in the jaws to secure many different shapes of work. Detachable handle to allow the jaw section to be mounted in vise. Overall length 5 3/8" (137 mm).
No. **26.500** Peg clamp w/wood handle
No. **26.501** Package of 4 extra pins



8 PRACTICE MATERIAL for ENGRAVING

Copper Rings
Pack of 25.
No. **26.540**

Brass Sheets
Pack of 12.
No. **36.01556** Measures 2 7/8" x 9/16" (73 x 14 mm)

NEW HERMES ENGRAVING MACHINES

These tabletop engraving machines are designed for businesses with limited space. Ideal for jewelry, nameplates, badges, machine parts, etc. Copy holding slide and jewelry and nameplate holding jig are included. Slide converter and type must be ordered separately.



1

1 HERMES IM4 COMPUTERIZED ENGRAVING MACHINE

The latest in engraving technology from the leader in jewelry engraving equipment. Out of the box simplicity combined with precision and versatility, make this the premier flatbed engraver on the market. Includes 1 cutters head wrench, 2 fuses, 1 power cable, 1 serial cable, 1 QuiclCick software CD, 1 instruction manual on CD, Brush and cutter. The IM4 New Hermes engraver features a 2 year replacement warranty. The IM4 works in conjunction with a PC.
Windows 2000 or XP is required.
No. **26.395**



2

2 HERMES INSIDE RING ENGRAVING MACHINE

100% profit making machine
True "plug and play" software with no training required. Designed especially for inside ring engraving. This machine offers a wide selection of fonts and the unique ability to engrave characters inside rings as small as .028" high. Features a 1-year replacement warranty and works in conjunction with a PC.
Windows 2000 or XP is required.
No. **26.396**



3

3 HERMES COMBONATION INSIDE and FLAT ENGRAVERS

Save $300 when you purchase a combined system!
For all jewelry, gift, and ring engraving needs. Includes both item Nos. 26.395 and 26.396 and all the enhancements mentioned above.
No. **26.397**



1

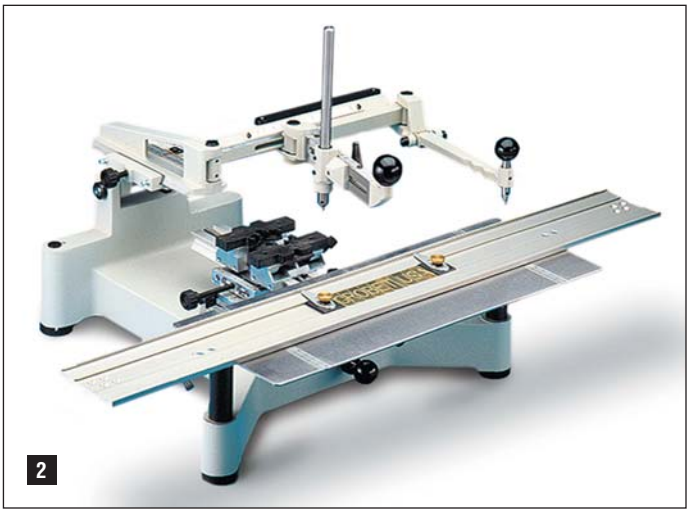
1 BASIC ENGRAVOGRAPH

Will engrave on flat-work up to 3½" (89 mm) high. Supplied with a fixed vise with a 3" (76 mm) opening and an 18" (457 mm) double-grooved copy holding slide.

Specifications:

- 25 engraving ratios from 2:1 to 7:1
- Pivoting pantograph arm
- Approximate dimensions 16" x 22" x 15" (406 x 559 x 381 mm)
- Shipping weight 25 lbs. (11 kg)

No. **26.368** Basic Engravograph
No. **26.371** Motor and rotating spindle attachment



2

2 DELUXE ENGRAVOGRAPH

Engrave plates up to 5½" (140 mm) high or odd shaped objects up to 1¾" (44 mm) thick. Complete with a 360° rotating work vise with a maximum vise opening 5¾" (146 mm) and a 26" (660 mm) double grooved copy slide holder.
No. **26.370** Deluxe Engravograph
No. **26.371** Motor and rotating spindle attachment



3

3 INSIDE RING ENGRAVER

Automatically centers ring in clamping jigs. Engraving and spacing is synchronized and easy. The diamond insert produces a hand engraved effect. Comes with extended gothic and tilted block copy dial. Shipping weight 15 lbs. (6.8 kg).
No. **26.390** Inside ring engraver
No. **26.391** Connecting script dial
No. **26.389** Diamond insert for No. 26.390

Accessories for engravographs:
No. **26.378** Slide converter 26" (660 mm) long
No. **26.379** Double grooved copy slide 26" (660 mm) long
No. **26.380** Replacement jewelry and nameplate jig
No. **26.381** Watch and lighter jig
No. **26.382** Signet ring jig
No. **26.383** Pen jig
No. **26.384** Plaque jig for No. 26.373
No. **26.385** ⅛" (3.2 mm) diamond insert
No. **26.386** ⅛" (3.2 mm) diamond insert for wide engraving
No. **26.387** Insert for wide pen engraving
No. **26.388** Insert for narrow pen engraving

PRESIDIUM ENGRAVING MACHINES

1 PRESIDIUM FLAT ENGRAVER

Increase your sales and profits with the Presidium flat engraver. The machine is easy to use and includes diamond tip, a set of 6 male pins, 2 end stops and 10 aluminium. test plates.
No. **26.820**

Features:
- Pantograph ratio from 2 1/2: 1 to 6: 1
- 360 rotating vise with 8 indexing positions
- Easy type insertion
- Adjustable type holder accommodates both small and large blanks.

Additional Fonts Available:
No. **26.821** Miniature single line block
No. **26.822** Single line block
No. **26.823** Double line block
No. **26.824** Single line script
No. **26.825** Double line script



1

2 PRESIDIUM INSIDE RING ENGRAVER

The Inside Ring Engraving Machine is manufactured to the highest standard, is compact and user-friendly. Includes a type dial, a diamond tip and 5 brass sample rings.
No. **26.840**

Features:
- Easy type installation
- One single dial produces letters with heights of I mm and 2mm
- Wide ring-holding capacity of ring sizes from 19 to 30mm
- Adjustable letter spacing

Additional Dials Available:
No. **26.841** Standard english block type
No. **26.842** Small english block type
No. **26.843** Standard english script type
No. **26.845** Greek font



2

BRASS TYPE

A free type box is included with each font. Changing type from any part of the composition is quick and easy. Individual letters are available separately.



SINGLE LINE BLOCK 5/8" (16 mm) on 1¼" (32 mm) blanks. 97 capitals. 20 Numerals. Special characters and spacers. Total 160 pieces.

MASTERCOPY

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789

No. **26.1001**

SINGLE LINE SCRIPT 1" (25 mm) letters on 1¼" (32 mm) blanks. 46 capitals, 51 lowers, 20 numerals, special characters and spacers. Total 157 pieces.

Mastercopy

ABCDEFGHIJKLMNOPQRSTU
VWXYZ
abcdefghijklmnopqrstuvwxyz 0123456789

No. **26.1002**

DOUBLE LINE SCRIPT ¾" (19 mm) letters on 1¼" (32 mm) blanks. 46 capitals, 51 lowers, 20 numerals, special characters and spacers. Total 157 pieces.

Mastercopy

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 0123456789

No. **26.1003**

DOUBLE LINE CENTURY 5/8" (16 mm) letters on 1¼" (32 mm) blanks. 97 capitals, 20 numerals, special characters and spacers. Total 160 pieces.

MASTERCOPY

ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789

No. **26.1004**

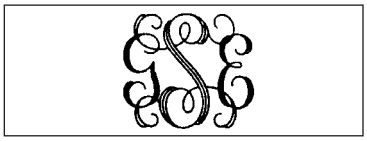
OLD ENGLISH ¾" (19 mm) letters on 1¼" (32 mm) blanks. 26 capitals, 47 lowers, 10 numerals and special characters. Total 99 pieces.





No. **26.1005**

INTERLOCK MONOGRAM 1½" letters on 2¾" (70 mm) blanks. 26 left, 26 center, 26 right and 2 center periods.

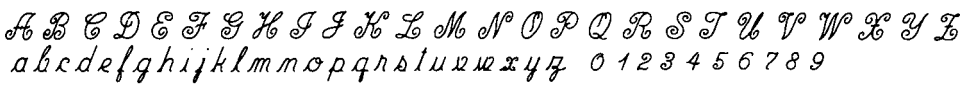




No. **26.1006**

MINI SINGLE LINE SCRIPT ⅜" (10 mm) letters on 1¼" (32 mm) blanks. 46 capitals, 51 lowers, 20 numerals and special characters and spacers. Total 157 pieces.





No. **26.1007**

DOUBLE LINE BLOCK ¾" (19 mm) letters on 1¼" (32 mm) blanks. 97 capitals, 20 numerals, special characters and spacers. Total 160 pieces.

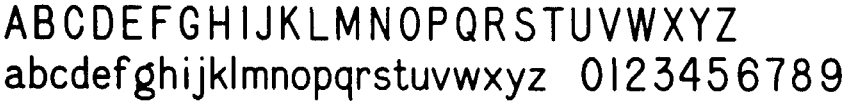




No. **26.1008**

SINGLE LINE BLOCK CONDENSED ⅝" (16 mm) letters on 1¼" (32 mm) blanks. 46 capitals, 51 lowers, 20 numerals, special characters and spacers. Total 157 pieces.





No. **26.1009**

INTERLOCKING MONOGRAM 2½" (64 mm) letters on 2¾" (70 mm) blanks. 26 left, 26 center, 26 right and 2 center periods.





No. **26.2010**

AURIFORM FILE A die sinkers' file having a cross section that combines 1/2 of a pippin file with 1/2 of a crossing file.

BACK In a half round, barrette, cant or files of similar cross section this is the convex side.

BARRETTE FILE Cut on wide flat face and safe on sides and back. Tapered in width and thickness.

BLANK A steel forging from which a file is made. The basic shape of a file before teeth are cut or etched.

CANT FILE Triangular in cross section with one side wider than the other two. Cut on three sides and tapered.

CHECKERING FILE Rectangular in cross section and parallel in width and thickness. Teeth cut at 90° angle with edge. Safe on edges.

CHISEL CUT A method of cutting teeth into the surface of an annealed file blank by striking it with a series of repeated blows as the blank is moved beneath a chisel at a uniform speed. In the cutting operation, the chisel is placed obliquely to the length and is inclined to the surface of the file. This is done either by hand or machine. Generally used to produce files of No. 2 cut and coarser.

CROCHET FILE Rectangular in cross section with rounded edges. Cut on both faces and edges. Tapered in length and slightly tapered in thickness.

CROSSING FILE Oval cross section with same radium as half round files on one side and other side curved to a larger radius. Cut on both sides. Tapered in width and thickness.

CUT The number of teeth per inch, the degree of coarseness of a file's teeth, from No. 00 to No. 8 in Swiss precision files. Also used to describe the type of file such as single cut or double cut, etc.

DIE MAKERS' RIFFLERS Various cross sectional shapes. Teeth cut on a small area of each end leaving a long middle portion as a handle. The cut ends are of various designs. Length is overall. Originally designed and hand forged by die makers for their specific purposes now a generic term for this particular group of rifflers.

DIE SINKERS' FILES A group of files of various cross sections designed for use by die sinkers and tool makers. Tapered in width.

DIE SINKERS' RIFFLERS See Die Makers' Rifflers. This group of rifflers has smaller cross sectional shapes.

DOUBLE CUT The arrangement of file teeth formed by two series of cuts. The first is the overcut which is followed by the upcut at an angle to the overcut.

EDGE The narrow cross section or side of a file.

EQUALLING FILE Thin rectangular cross section, parallel in width and thickness and cut on both faces and edges.

ESCAPEMENT FILE Also called Square Handled Files. A group of files of various cross sectioned shapes with a length of cut varying from 3/4 to 2 1/2" and long square handles. Widely used by jewelers, watch makers, die makers, and fine mechanics.

ETCHED CUT A method of cutting teeth into the surface of a file blank by drawing an etching tool, under sustained pressure, obliquely across an annealed file blank in a series of cuts. This may be done either by hand or machine. This method of cutting is used where it is necessary to retain the true cross section of a file. Generally used to manufacture files finer than a No. 2 cut.

FACE The working surface of a file upon which teeth are cut.

FILING BLOCK A block of wood, soft metal or other material used to protect the material being filed from damage from the jaws of a vise or other holding device. It may contain a series of grooves to hold work securely.

FLAT FILE Also called a Warding File. A form of escapement or square handled needle file. Parallel in thickness. Cut on four sides, tapered in width.

HANDLE A wood for plastic piece that is placed over that tang of a file to protect the hand of the user.

HALF ROUND FILE A cross section that is flat on one side and has a radius not half circle on the other side. Cut on both sides. Width and thickness taper.

HALF ROUND SLIM FILE Also called Ring Files. Same as half round except thinner in width.

HEEL The end of the file at a location where the body ends and the taper leading into the tang begins. Also called the shoulder.

JOINT FILE, ROUND EDGE Rectangular cross section with rounded edges. Cut on edges only. Parallel in width and thickness.

JOINT FILE, SQUARE EDGE Rectangular cross section. Cut on edges only. Parallel in thickness and width.

KNIFE FILE Knife shaped, cross section that is tapered in width and thickness. Edge has same thickness from point to shoulder.

LENGTH OF CUT The length of a file measured between the shoulder or heel and the point.

LOZENGE FILE Diamond shaped cross section parallel in width and thickness.

NEEDLE FILE, SQUARE HANDLED Also called an Escapement File. A group of files of various cross sectional shapes with a length of cut varying between 3/4 and 2 1/2" and long square handle.

NEEDLE FILE, ROUND HANDLED A group of files of various cross sections with a knurled round handle. Knurling gives the file a positive, non-slip grip for precision filing.

OVAL FILE An oval cross section tapering in width and thickness.

OVERCUT The first of a series of cuts in a double cut file. Its function is to act as a chip breaker. The second or upcut is made over this cut.

PARALLEL ROUND FILE A round cross section parallel in width.

PILLAR FILE A rectangular cross section with thickness greater relative to width, than in other types. Cut on face or flat sides only. Parallel in width, tapered in thickness. Also demi-narrow, narrow and extra narrow widths.

PIN OR PINNING The tendency of small particles of materials to file or clog the gullets between the teeth of a file. When the teeth become clogged the file causes scratches on the work. When this occurs, the file is pinned.

PIPPIN FILE A section that combines the cross section of a round file with that of an equalling file. Tapered in thickness and width.

POINT The front end of a file as contrasted with the tang end.

POINTED BACK BARRETTE FILE A triangular cross section with one side wider than the other two sides but on wide or face side only tapered in width and length.

RASP CUT A cut used on wood rifflers that is made by a punch raising a series of individual cutting teeth.

RIFFLERS From the German riefeln, to channel, chaufer, flute or groove. Originally used and hand forged by die sinkers, die makers, silversmiths and other skilled artisans in shapes and cross sections appropriate to their work. Teeth are cut on small areas on each end that can be shaped like everything from trowels to button hooks. A long middle portion serves as a handle.

RING FILE Also called a Half Round Slim File.

ROUND FILE Round in cross section tapered in width.

ROUNDING-OFF FILE An escapement or square handle needle file half round in cross section. Cut on flat side. Parallel in width.

SAFE The side or edge of a file that has no teeth cut in it so as not to mar a work surface that does not require filing.

SCREW HEAD FILE A narrow diamond shaped section with short bevels to form sharp edges. Cut on beveled edges, safe on flat sides. Parallel in width and thickness.

SECTION The cross section or end view of a file if it were cut squarely at the place of greatest width and thickness from the tang.

SILVERSMITH'S RIFFLERS A group of various cross sectioned shapes originally designed for use by silversmiths. Teeth are cut on small areas of each and leaving a long middle portion as a handle. The cut ends are of varied designs.

SINGLE CUT The tooth formed on a file by a single series of cuts.

SLITTING FILE A flat diamond shaped cross section. Cut on all sides. Parallel in width and thickness.

SQUARE FILE Square in cross section. Cut on all sides. Tapered.

SWISS PATTERN FILES Files made to the same shape and cut as the files originated by F. L. Grobet in Switzerland over 150 years ago. Made in cuts from No. 00 to No. 6.

SWISS PRECISION FILES The original Grobet-Swiss files made in hundreds of sizes and shapes and in cuts from No. 00 to No. 8. Made to more exacting measurements and much finer cuts than American pattern files.

TANG The part of the file that tapers from the shoulder that is intended to be fitted with a handle.

THREE SQUARE FILES Equilaterally triangular in cross section. Cut on all sides with sharp corners. Tapered.

TOOL MAKERS' RIFFLERS Various cross sectional shapes with teeth cut on a small area at each end leaving a long middle portion as a handle. The cut ends are of various designs to meet the needs of tool makers.

UPCUT The second series of teeth cut in double cut files made over the first series of cuts called the overcut. This cut is made of an angle to the overcut.

WARDING FILE A rectangular cross section with teeth cut on all sides up to 4" in length and on 3 sides with one safe edge on files 6" and longer. Tapered width, parallel in thickness.

Grobet Swiss Precision Files

The World's Standard for Quality and Performance!

Grobet Swiss Precision Files are manufactured to precise production standards, using a combination of machine cutting and hand craftsmanship to produce the most accurate, best cutting and longest-lasting files in the world. They are made of the finest heat-tempered, chrome alloy steel and have the "right" feel, action and balance desired by all true craftsmen. **Grobet Swiss Precision Files** deliver superior performance on all metals. Simply the best you can buy. Grobet Swiss Precision Files are measured in length from the point where the teeth begin to the end of the file. The handle section (tang) is not considered in the file length.

Guide to Selecting Swiss Precision Files

As shown in the File Finder chart, each configuration calls for a different type of file. There is more to file selection than shape alone. The cut selected is equally important. Determination of cut depends on the type and form of material to be worked, amount of material to be removed and the finish desired. For example, rapid removal of stock often indicates a No. 00 cut, while working on narrow surfaces would suggest a No. 2 cut and final finishing operations might take a fine cut such as No. 4. In the final analysis, file selection cannot be reduced to a formula or table but will be based to a great degree on experience and common sense. Whatever type, shape, size or cut may be required, one thing is certain: there is a Grobet-Swiss precision file that meets the specifications. And the accuracy and finish delivered by these files will clearly show why craftsmen have made Grobet Swiss the leader in precision files for so many years.

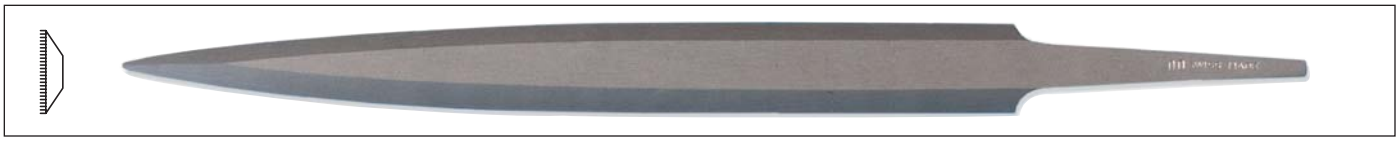
File Finder

Basic Application	Type of File Recommended
Flat surfaces	Hand
Flat surfaces-slots	Pillar
Curved surfaces-corners-holes	Half-Round
Curved surfaces-junctures of curved and flat surfaces-corners-holes	Crossing
Corners-holes-edges	Three-Square
Slots-wedge-shaped openings	Knife
Corners-slots	Slitting
Slots	Warding
Corners-slots	Equalling
Edges, joints	Joint
Flat surfaces-corners-keyways dovetail ways-gear teeth-deburring	Barrette
Rounded inside corners-holes	Round
Corners-holes	Square
Rounded corners-slots-flat surfaces-junctures between curved and flat surfaces	Crochet
Rounded corners-holes-"V" slots	Pippin
Roughening surfaces for hand grips	Checkering
Slots	Screwhead

Scale of Cuts

The scale of cuts for Swiss precision files as well as the basic shapes were developed by Grobet, dating back to the founding of Grobet Freres in 1812. Additions and refinements have been made to meet the changing requirements of modern technologies. Here is the scale of cuts for Grobet Swiss precision files.

Teeth per inch (upcut)	30	41	51	64	79	97	117	142	173	213	295
Files 10" and over in length	00	0	1	2	3	4		6			
Files 4" to 8" in length		00	0	1	2	3	4		6		
Files 3" in length			00	0	1	2	3	4		6	8
Escapement Files			00	0	1	2	3	4		6	
Needle Files 4" to 7 3/4"			0	0	2	3	4		6		
Regular Rifflers				0		3	4		6		

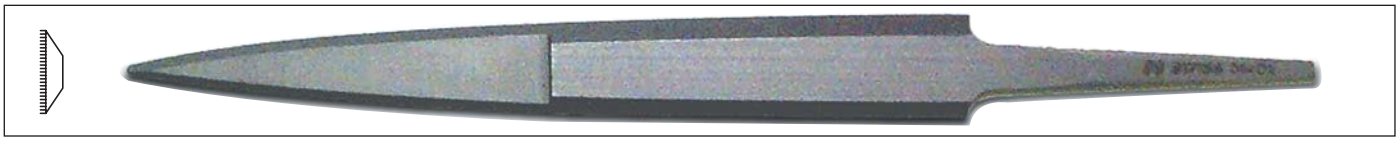


BARRETTE

Tapered in width and thickness, coming to a point. Only flat side is cut, providing safe edge and top. Double cut.

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 4
3"	75	23/64"	9.1	3/32"	2.4	—	**31.021**	—	—	—
4"	100	1/2"	12.7	1/8"	3.2	**31.022**	**31.023**	**31.024**	**31.025**	**31.026**
6"	150	23/32"	18.3	5/32"	4.0	**31.027**	**31.028**	**31.029**	**31.030**	**31.031**
8"	200	7/8"	22.2	13/64"	5.2	—	**31.032**	—	**31.033**	—

Use plastic file handles: size 3 for 3" & 4" files; size 4 for 6" file; and size 5 for 8" file.



BARRETTE-HOT DIE

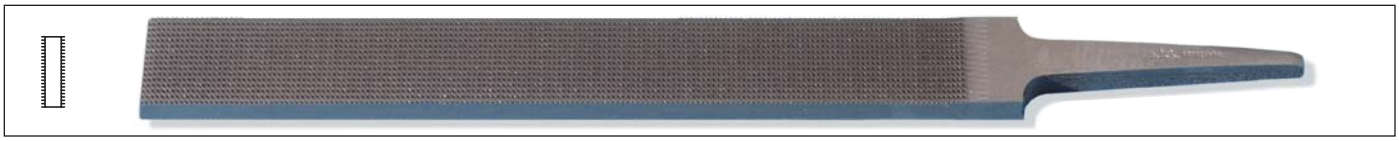
Same as regular Barrette files except with ground backs, widely used in making and repairing extrusion dies. **Double cut.**

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00
3"	75	3/8"	9.5	3/32"	2.4	**31.017**
4"	100	1/2"	12.7	1/8"	3.2	**31.018**

Use plastic file handles: size 3 for 3" & 4" files.

CHECKERING

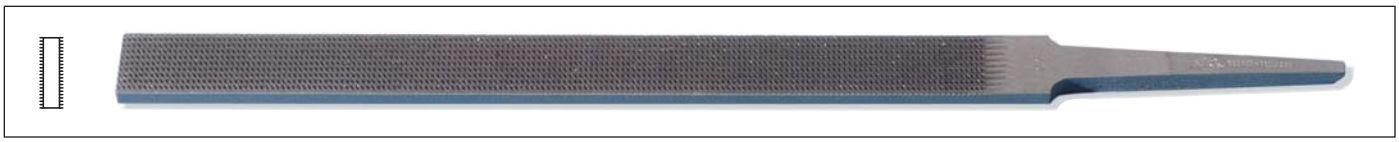
Parallel in width and gently tapered in thickness. Overcut is parallel to file edges and upcut is 90° to overcut. Useful for putting serrations on knife edges and to obtain a checkered design similar to a gun hand grip. Double cut top and bottom – Both edges are safe.



HAND CHECKERING

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2
6"	150	3/4"	19.1	5/32"	4.0	**31.035**	**31.036**	**31.037**	**31.038**
Lines per inch/cm						20/8	30/12	40/16	50/20

Use plastic file handles: size 4.



PILLAR CHECKERING

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 4
6"	150	1/2"	12.7	11/64"	4.4	**31.040**	**31.041**	**31.042**	**31.043**	**31.045**
Lines per inch/cm						20/8	30/12	40/16	50/20	75/30

Use plastic file handles: size 4.

Note: See pages 166 & 167 for our complete file handle line, including charts on plastic file handles.

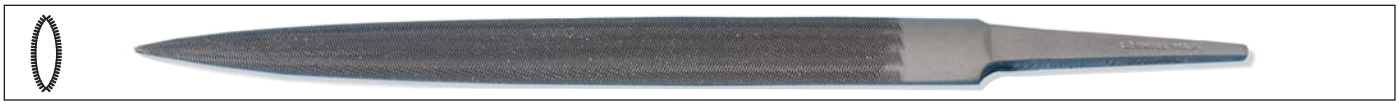


CROCHET

Tapered in width and gradually tapered in thickness. Used in filing junctions between a flat and curved surface. Useful in developing slots with rounded edges. Double cut top and bottom – both edges are single cut.

Length		Width		Thickness				
(in)	(mm)	(in)	(mm)	(in)	(mm)	Cut 00	Cut 0	Cut 2
4"	100	5/16"	7.9	3/32"	2.4	—	**31.047**	**31.048**
6"	150	13/32"	10.3	9/64"	3.6	**31.049**	**31.050**	**31.051**
8"	200	15/32"	11.9	11/64"	4.4	**31.052**	**31.053**	**31.054**

Use plastic file handles: size 3 for 4" file; size 4 for 6" file; and size 5 for 8" file.



CROSSING

Half-round on two sides, with one side having a larger radius than the other. Tapered in width and thickness. Cut and usable to the point. Used primarily for filing interior curved surfaces. The double radius makes possible the filing at the junction of two curved surfaces or a straight and a curved surface. Double cut on both sides.

Length		Width		Thickness				
(in)	(mm)	(in)	(mm)	(in)	(mm)	Cut 0	Cut 2	Cut 4
4"	100	15/32"	11.9	9/64"	3.6	**31.056**	**31.057**	**31.058**
6"	150	19/32"	15.1	3/16"	4.5	**31.059**	**31.060**	**31.061**
8"	200	13/16"	20.6	15/64"	6.0	**31.062**	**31.063**	—

Use plastic file handles: size 2 for 4" file; size 4 for 6" file; and size 5 for 8" file.



EQUALLING

Parallel in width and thickness. Used primarily for filing slots and corners. Double cut top and bottom – both edges are single cut.

Length		Width		Thickness					
(in)	(mm)	(in)	(mm)	(in)	(mm)	Cut 00	Cut 0	Cut 2	Cut 4
4"	100	13/32"	10.3	5/64"	2.0	—	**31.065**	**31.066**	**31.067**
6"	150	1/2"	12.7	7/64"	2.8	**31.068**	**31.069**	**31.070**	**31.071**
8"	200	21/32"	16.7	1/8"	3.2	**31.072**	**31.073**	**31.074**	—

Use plastic file handles: size 2 for 4" file; size 3 for 6" file; and size 4 for 8" file.

Equalling-Special Thickness

Length		Width		Approx. Thickness		Stubs Iron			
(in)	(mm)	(in)	(mm)	(in)	(mm)	Wire Gauge No.	Cut 0	Cut 2	Cut 4
4"	100	13/32"	10.3	.047	1.25"	18	**31.076**	**31.077**	—
4"	100	13/32"	10.3	.035	0.91"	20	—	**31.080**	**31.081**
4"	100	13/32"	10.3	.031	0.81"	21	**31.082**	**31.083**	—
4"	100	13/32"	10.3	.028	0.71"	22	—	**31.084**	**31.085**
4"	100	13/32"	10.3	.022	0.56"	24	—	**31.086**	**31.087**
4"	100	13/32"	10.3	.018	0.46"	26	—	**31.088**	—
4"	100	13/32"	10.3	.014	0.38"	28	—	**31.090**	**31.091**
6"	150	1/2"	12.7	.083	2.05"	14	**31.092**	**31.093**	—
6"	150	1/2"	12.7	.065	1.65"	16	**31.094**	**31.095**	—
6"	150	1/2"	12.7	.047	1.25"	18	**31.096**	**31.097**	—



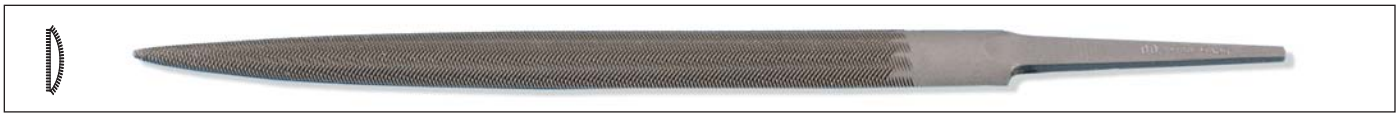
HALF-ROUND

Tapered in width and thickness, coming to a point. Double cut on both sides.

Length		Width		Thickness								
(in)	(mm)	(in)	(mm)	(in)	mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 3	Cut 4	Cut 6
3"	75	5/16"	7.9	3/32"	2.5	—	—		**31.100**	—	—	—
4"	100	15/32"	11.9	9/64"	3.6	**31.102**	**31.103**	—	**31.104**	**31.106**	**31.107**	—
5"	125	33/64"	13.1	5/32"	4.0	—	—	—	**31.108**	—	—	—
6"	150	19/32"	15.1	3/16"	4.8	**31.111**	**31.112**	**31.113**	**31.114**	**31.115**	**31.116**	**31.117**
8"	200	13/16"	20.6	15/64"	6.0	**31.118**	**31.119**	**31.120**	**31.121**	—	**31.122**	—
10"	250	1"	25.4	19/64"	7.5	**31.123**	**31.124**	—	**31.125**	—	—	—

Use plastic file handles: size 3 for 3" & 4" files; size 4 for 5" & 6" files; size 5 for 8" file; and size 6 for 10" file.

Note: See pages 166 & 167 for our complete file handle line, including charts on plastic file handles.



HALF-ROUND RING

Tapered in width and thickness, coming to a point. Narrower than regular half-round and, therefore, useful for filing inside of rings.
Double cut on both sides.

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 3	Cut 4
6"	150	15⁄32"	11.9	9⁄64"	3.6	**31.127**	**31.128**	**31.129**	**31.130**	**31.131**	**31.132**

Use plastic file handles: size 4.



ECONOMY HALF-ROUND RING

Made in Switzerland with a built in handle.

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 0
6"	150	7⁄16"	11.1	1⁄8"	3.2	**33.814**



HAND

Parallel in width and tapered in thickness. **Double cut top and bottom – One edge single cut – One edge is safe.**

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 3	Cut 4	Cut 6
4"	100	17⁄32"	13.5	1⁄8"	3.2	—	**31.140**	—	**31.141**	—	**31.142**	—
6"	150	3⁄4"	19.1	5⁄32"	4.0	**31.143**	**31.144**	**31.145**	**31.146**	**31.147**	**31.148**	**31.149**
8"	200	29⁄32"	22.0	3⁄16"	4.8	**31.150**	**31.151**	**31.152**	**31.153**	—	**31.154**	—
10"	250	1"	25.4	1⁄4"	6.4	**31.155**	**31.156**	—	**31.157**	—	—	—
12"	300	1 3⁄16"	30.0	5⁄16"	7.9	**31.158**	**31.159**	—	—	—	—	—

Use plastic file handles: size 3 for 4" file; size 4 for 6" file; size 5 for 8" file; size 6 for 10" file and size 7 for 12" file.



JOINT ROUND EDGE

Parallel in width and thickness, with rounded edges, these files are cut on the edges only. Length is 4" (100 mm). **Cut is number 2 – Single Cut.**

No.	31.161	31.162	31.163	31.164	31.165	31.166	31.167	31.168	31.169
Approx. thickness-inch	.059"	.047"	.039"	035"	.032"	.028"	.024"	.020"	.016"
Approx. thickness-mm	1.5	1.2	1.0	.9	.8	.7	.6	.5	.4
Stubs iron wire gauge	17	18	19	20	21	22	23	25	27

(This file is too thin to use with plastic handles.)



KNIFE

Tapered in width and thickness, with the knife edge having the same thickness from point to shoulder. The included angle of the sharp edge is approximately 10°. Generally used to file in a slot or wedge shaped opening. Curved knife edge allows for easily filing in restricted areas.
Double cut on both sides – Top edge is safe – Knife edge is single cut.

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 4
4"	100	15⁄32"	11.9	1⁄8"	3.2	**31.174**	**31.175**	**31.176**	**31.177**	**31.178**
6"	150	23⁄32"	18.3	5⁄32"	4.0	**31.179**	**31.180**	**31.181**	**31.182**	**31.183**
8"	200	7⁄8"	22.2	13⁄64"	5.2	**31.184**	**31.185**	**31.186**	**31.187**	—

Use plastic file handles: size 3 for 4" file; size 4 for 6" file; and size 5 for 8" file.

Note: See pages 166 & 167 for our complete file handle line, including charts on plastic file handles.

PILLAR FILES

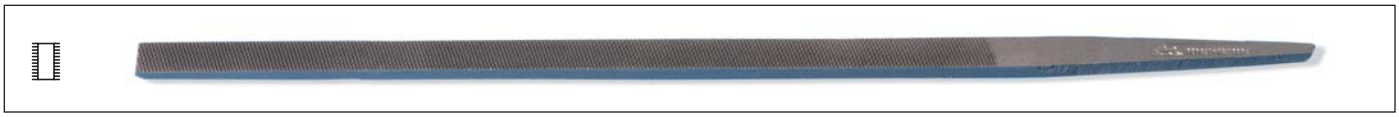
These files are parallel in width and tapered in thickness to create perfectly flat filing. Double cut top and bottom – both edges are safe.



EXTRA NARROW PILLAR

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 4	Cut 6
3"	75	1/8"	3.2	5/64"	2.0	—	—	—	**31.200**	—	—
4"	100	5/32"	4.0	5/64"	2.0	**31.201**	**31.202**	—	**31.204**	**31.205**	—
6"	150	13/64"	5.2	1/8"	3.2	**31.206**	**31.207**	**31.208**	**31.209**	**31.210**	**31.211**
8"	200	9/32"	7.1	9/64"	3.6	**31.212**	**31.213**	**31.214**	**31.215**	**31.216**	—
10"	250	11/32"	8.7	11/64"	4.4	**31.217**	—	—	—	—	—

Use plastic file handles: size 3 for 3" & 4" files; size 4 for 6" & 8" files; and size 6 for 10" file.



NARROW PILLAR

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 4	Cut 6
4"	100	3/16"	4.8	3/32"	2.5	**31.219**	**31.220**	**31.221**	**31.222**	**31.223**	—
6"	150	1/4"	6.4	9/64"	3.6	**31.224**	**31.225**	**31.226**	**31.227**	**31.228**	**31.229**
8"	200	11/32"	8.7	11/64"	4.4	**31.230**	**31.231**	**31.232**	**31.233**	—	—
10"	250	25/64"	9.9	3/16"	4.8	**31.234**	**31.235**	—	—	—	—

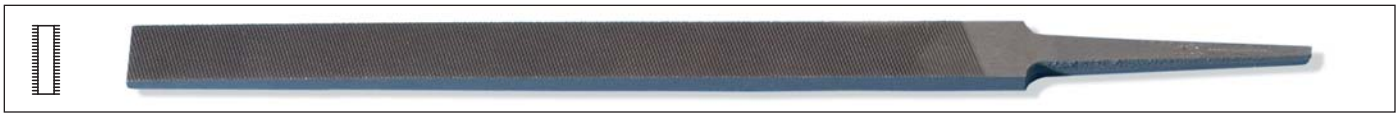
Use plastic file handles: size 3 for 4" file; size 4 for 6" & 8" files; and size 6 for 10" file.



DEMI-NARROW PILLAR

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2
6"	150	3/8"	9.5	5/32"	4.0	**31.191**	**31.192**	**31.193**	**31.194**

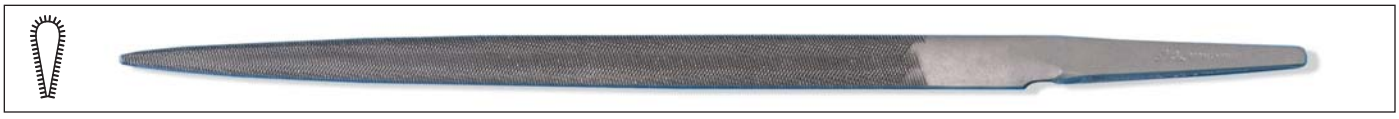
Use plastic file handles: size 4.



REGULAR PILLAR

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 3	Cut 4	Cut 6
4"	100	3/8"	9.5	1/8"	3.2	**31.237**	**31.238**	**31.239**	**31.240**	—	**31.241**	—
6"	150	1/2"	12.7	11/64"	4.4	**31.243**	**31.244**	**31.245**	**31.246**	**31.247**	**31.248**	**31.249**
8"	200	19/32"	15.1	13/64"	5.2	**31.251**	**31.252**	**31.253**	**31.254**	**31.255**	**31.256**	—
10"	250	23/32"	18.3	15/64"	6.0	**31.257**	**31.258**	—	**31.259**	—	—	—
12"	300	25/32"	19.8	9/32"	7.1	**31.260**	**31.261**	—	—	—	—	—

Use plastic file handles: size 3 for 4" file; size 4 for 6" & 8" files; size 6 for 10" f& 12" files.



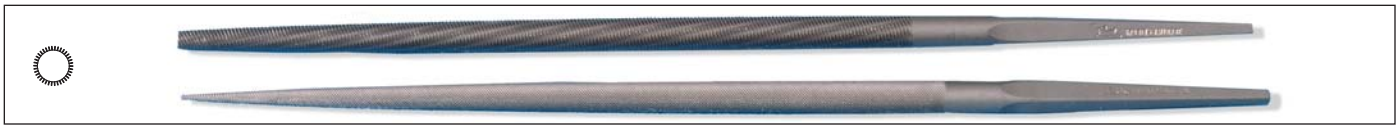
PIPPIN

Tapered in width and thickness. Combines the cross-sections of the round file, with the crossing file, along with the edge of a knife file. For finishing the junction of two different curved surfaces and for opening slots when a "V" shape is required. Double cut on both sides – top and bottom edges are single cut.

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 0	Cut 2	Cut 4
6"	150	25/64"	9.9	9/64"	3.6	**31.267**	**31.268**	**31.269**
8"	200	15/32"	11.9	11/64"	4.4	**31.271**	**31.272**	—

Use plastic file handles: size 4 for 6" file; and size 5 for 8" file.

Note: See pages 166 & 167 for our complete file handle line, including charts on plastic file handles.



ROUND

Gradually tapered and cut and workable to the point. Used where it is necessary to enlarge a hole or round off a radius. Double cut.

Length (in)	Length (mm)	Diameter (in)	Diameter (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 3	Cut 4	Cut 6
3"	75	3/32"	2.4	—	*31.275	31.276	31.277	—	—	—
4"	100	5/32"	4.0	*31.279	*31.280	31.281	31.282	—	31.283	—
5"	125	13/64"	5.2	—	—	—	31.286	—	—	—
6"	150	1/4"	6.4	*31.287	*31.288	31.289	31.290	31.291	31.292	31.293
8"	200	5/16"	7.9	*31.294	*31.295	31.296	31.297	—	31.298	—
10"	250	13/32"	10.3	*31.299	*31.300	—	31.302	—	—	—

*Indicates blunt end

Use plastic file handles: size 1 for 3" & 4" files; size 3 for 5" & 6" files; size 4 for 8" file; and size 5 for 10" file.



ROUND PARALLEL

Cut over the entire surface (does not taper to point). Double cut.

Length (in)	Length (mm)	Diameter (in)	Diameter (mm)	Cut 00	Cut 0	Cut 2
4"	100	1/16"	1.6	—	31.304	31.305
4"	100	1/8"	3.2	—	31.307	—
6"	150	3/32"	2.4	—	31.311	31.312
6"	150	1/8"	3.2	—	31.315	31.316
6"	150	5/32"	4.0	31.318	31.319	31.320
6"	150	3/16"	4.8	31.321	31.322	31.323
6"	150	1/4"	6.4	—	—	31.326

Use plastic file handles: size 1 for 4" file. Also use size 1 for 6" file with diameter of 5/32" or smaller.

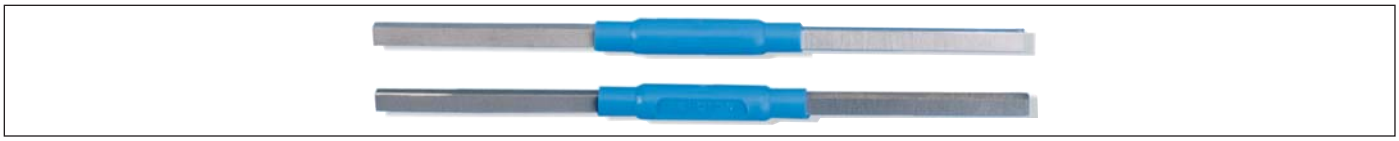


SCREWHEAD with TANG

Used for filing slots in small screws. Available in thicknesses ranging from No. 1 (thickest) to No. 8 (thinnest). **Single cut on both edges – Both sides are safe.**

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness 1 (.032") (.80 mm)	Thickness 2 (.028") (.70 mm)	Thickness 3 (.024") (.60 mm)	Thickness 4 (.022") (.55 mm)	Thickness 6 (.018") (.45 mm)	Thickness 8 (.014") (.35mm)
3"	75	25/64"	9.9	—	31.332	31.333	31.334	31.335	31.336
4"	100	15/32"	11.9	31.337	31.338	—	31.339	—	—

(This file is too thin to use with plastic handles.)



UNIVERSAL PIVOT FILE/BURNISHER

Swiss-made. These regular burnishers are polished and have slightly rounded corners. 7 1/8" (18 cm) length.

No. **31.01710** Right

No. **31.01720** Left



SLITTING

Parallel in width with identical contour on top and bottom. Thinner than knife files and used for filing slots. **Double cut top and bottom – Both edges are single cut.**

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 0	Cut 2
6"	150	19/32"	15.1	1/8"	3.2	31.342	31.343

Use plastic file handles: size 4.



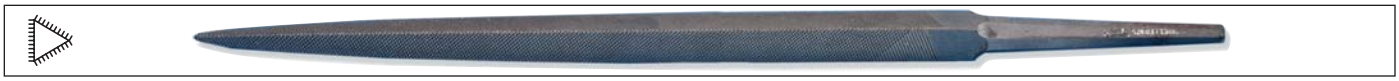
SQUARE

A general purpose file, cut and usable to the point. Gradually tapered. Double cut on all four sides.

Length (in)	Length (mm)	Diameter (in)	Diameter (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 4
4"	100	5/32"	4.0	*31.345	*31.346	—	31.348	—
6"	150	15/64"	6.0	*31.349	*31.350	31.351	31.352	*31.353
8"	200	5/16"	7.9	*31.354	*31.355	—	31.356	—
10"	250	13/32"	10.3	*31.357	—	—	—	—

*Indicates blunt end

Use plastic file handles: size 2 for 4" file; size 3 for 6" file; size 4 for 8" file; and size 5 for 10" file.



THREE-SQUARE

Gradually tapered, cut and workable to the point. Double cut on all three sides.

Length (in)	Length (mm)	Diameter (in)	Diameter (mm)	Cut 00	Cut 0	Cut 1	Cut 2	Cut 4
4"	100	9/32"	7.1	31.366	31.367	31.368	31.369	31.370
6"	150	3/8"	9.5	31.371	31.372	31.373	31.374	31.375
8"	200	1/2"	12.7	31.376	31.377	31.378	31.379	—

Use plastic file handles: size 2 for 4" file and size 4 for 6" & 8" files.



THREE-SQUARE SLIM

Same as three-square, except thinner, for working in smaller areas. Double cut on all three sides.

Length (in)	Length (mm)	Width (in)	Width (mm)	Cut 0	Cut 2
6"	150	5/16"	7.9	31.381	31.382

Use plastic file handles: size 4.



VUL-CRYLIC

Double-end vulcanite file with open, coarse teeth for filing plastics, waxes and soft materials. One end is coarser than the other. Double cut on both sides.

Length (in)	Length (mm)	Width (in)	Width (mm)	No.
7"	175	1/2"	12.7	31.385
8"	200	35/64"	14	31.384



WARDING

Parallel in thickness and tapered in width. Useful for removal of burs. Double cut top and bottom – both edges are single cut.

Length (in)	Length (mm)	Width (in)	Width (mm)	Thickness (in)	Thickness (mm)	Cut 00	Cut 0	Cut 2	Cut 4
3"	75	23/64"	9.1	1/32"	0.8	—	31.387	31.388	—
4"	100	1/2"	12.7	3/64"	1.2	31.389	31.390	31.391	31.392
6"	150	5/8"	15.9	5/64"	2.0	31.393	31.394	31.395	31.396
8"	200	7/8"	22.2	7/64"	2.8	31.397	31.398	31.399	—

Use plastic file handles: size 2 for 3" & 4" files; size 4 for 6" file; and size 5 for 8" file.

Warding-Special Thickness

No.	Length (in)	Length (mm)	Width (in)	Width (mm)	Approx. Thickness (in)	Approx. Thickness (mm)	Stubs Iron Wire Gauge	Cut No.
31.401	3"	75	23/64"	9.1	.025"	0.61	23	0
31.402	4"	100	1/2"	12.7	.032"	0.81	21	0
31.403	6"	150	5/8"	15.9	.065"	1.65	16	0
31.405	6"	150	5/8"	15.9	.049"	1.25	18	2
31.406	6"	150	5/8"	15.9	.042"	1.02	19	0
31.407	6"	150	5/8"	15.9	.042"	1.02	19	2

(This file is too thin to use with plastic handles.)

Note: See pages 166 & 167 for our complete file handle line, including charts on plastic file handles.

DIE SINKERS' FILES

Overall length: 5¼" (133 mm). Length of cut: 3½" (89 mm).

AURIFORM

Cut 0	Cut 2
31.420	31.421

CROCHET

Cut 0	Cut 2
31.422	31.423

FLAT

Cut 0	Cut 2
31.424	31.425

HALF-ROUND

Cut 0	Cut 2
31.426	31.427

KNIFE

Cut 0	Cut 2
31.428	31.429

LOZENGE

Cut 0	Cut 2
31.430	31.431

OVAL

Cut 0	Cut 2
31.432	31.433

PIPPIN

Cut 0	Cut 2
31.434	31.435

ROUND

Cut 0	Cut 2
31.436	31.437

SQUARE

Cut 0	Cut 2
31.438	31.439

THREE-SQUARE

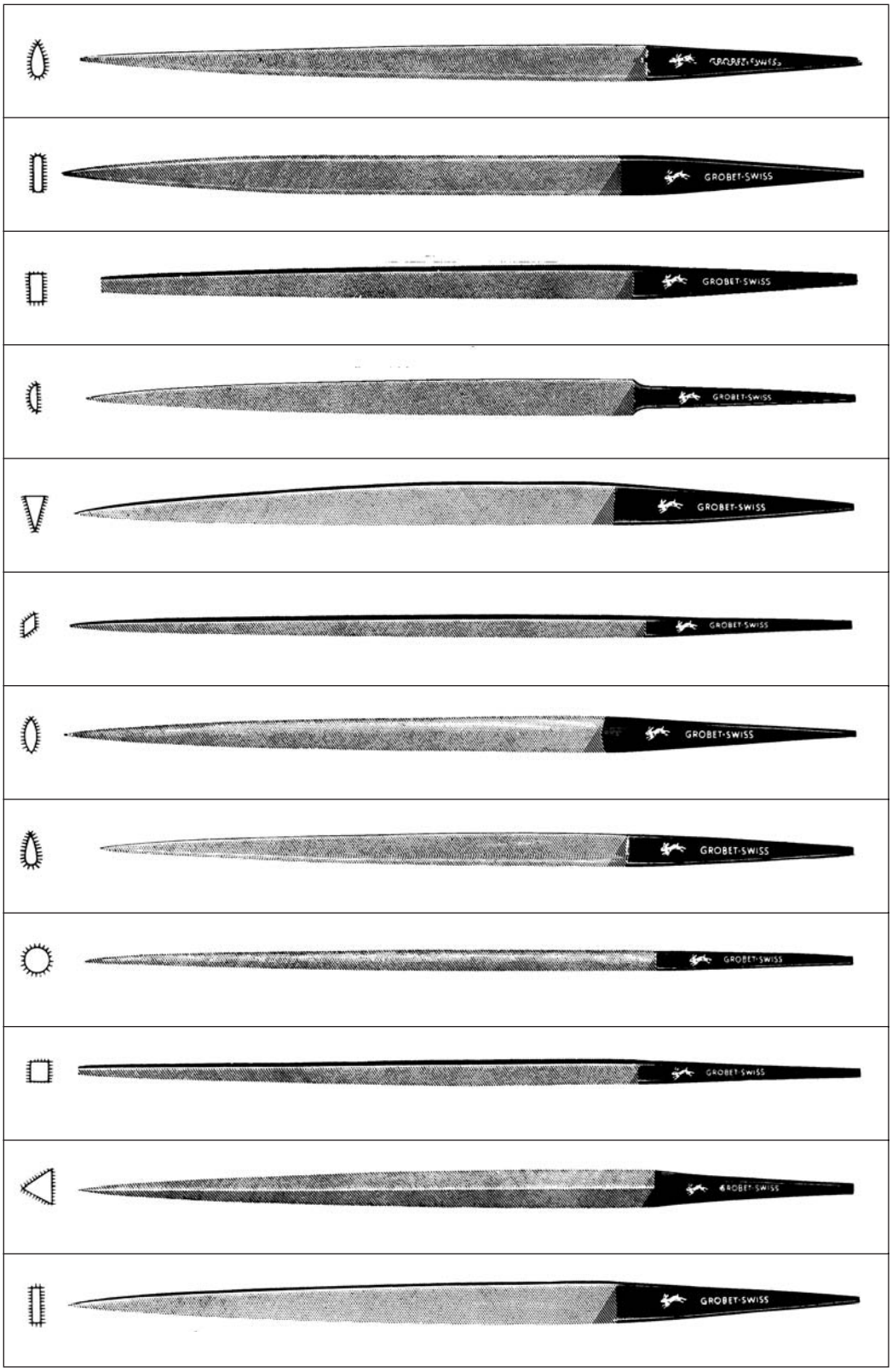
Cut 0	Cut 2
31.440	31.441

WARDING

Cut 0	Cut 2
31.442	31.443

ASSORTED SET OF 12

Cut 0	Cut 2
31.445	31.446



GROBET SWISS NEEDLE FILES

Precision files, for exacting work, especially under magnification. Made of the highest quality steel, machined and finished for precision shape, accuracy and balance. With round, knurled handles or plastic handles as noted.

- Length 4" (10 cm) has cut portion of 1¾" (44 mm)
- Length 5½" (14 cm) has cut portion of 2½" (64 mm)
- Length 6¼" (16 cm) has cut portion of 3" (6 mm)
- Length 7¾" (20 cm) has cut portion of 4⅛" (105 mm)



Knurled Handle



Plastic Handle



BARRETTE

Overall Length (in)	(cm)	KNURLED HANDLES Cut 00	Cut 0	Cut 2	Cut 4	Cut 6
4"	10	—	**31.450**	**31.451**	**31.452**	—
5½"	14	—	**31.453**	**31.454**	**31.456**	—
6¼"	16	**31.458**	**31.459**	**31.461**	**31.463**	**31.464**
7¾"	20	—	**31.466**	**31.468**	**31.470**	**31.471**



BARRETTE, GROUND BACK

Widely used in making and repairing extrusion dies.

Overall Length (in)	(mm)	Cut 0
5½"	140	**31.693**
6¼"	159	**31.694**



CROCHET

Overall Length (in)	(cm)	KNURLED HANDLES Cut 0	Cut 2	Cut 4
4"	10	**31.474**	**31.475**	**31.476**
5½"	14	**31.477**	**31.478**	**31.479**
6¼"	16	**31.480**	**31.481**	**31.482**



CROSSING

Overall Length (in)	(cm)	KNURLED HANDLES Cut 0	Cut 2	Cut 4	Cut 6
4"	10	**31.484**	**31.485**	—	—
5½"	14	**31.487**	**31.488**	**31.489**	—
6¼"	16	**31.490**	**31.491**	**31.492**	**31.493**
7¾"	20	**31.494**	**31.495**	**31.496**	—



EQUALLING

Overall Length (in)	(cm)	KNURLED HANDLES Cut 00	Cut 0	Cut 2	Cut 4	Cut 6
4"	10	—	**31.498**	**31.499**	**31.500**	—
5½"	14	—	**31.501**	**31.502**	**31.503**	—
6¼"	16	**31.505**	**31.506**	**31.508**	**31.510**	**31.511**
7¾"	20	—	**31.512**	**31.513**	**31.514**	—



HALF-ROUND

Overall Length (in)	(cm)	Cut 00	Cut 0	Cut 2	KNURLED HANDLES Cut 4	Cut 6
4"	10	—	**31.516**	**31.517**	—	—
5½"	14	—	**31.519**	**31.520**	**31.522**	—
6¼"	16	**31.524**	**31.525**	**31.527**	**31.529**	**31.530**
7¾"	20	—	**31.531**	**31.533**	**31.535**	—



JOINT ROUND EDGE

Overall Length (in)	(cm)	Cut 0	Cut 2	KNURLED HANDLES Cut 4	Cut 6
4"	10	**31.537**	**31.538**	**31.539**	—
5½"	14	**31.540**	**31.541**	**31.542**	—
6¼"	16	**31.543**	**31.544**	**31.545**	—



PILLAR ROUND EDGE

Overall Length (in)	(cm)	Cut 0	Cut 2	KNURLED HANDLES Cut 4
6¼"	16	**31.547**	**31.548**	**31.549**



KNIFE

Overall Length (in)	(cm)	Cut 0	Cut 2	Cut 4	KNURLED HANDLES Cut 6
4"	10	**31.551**	**31.552**	—	—
5½"	14	**31.554**	**31.555**	**31.556**	—
6¼"	16	**31.558**	**31.559**	**31.561**	**31.562**
7¾"	20	**31.563**	**31.564**	**31.565**	—



MARKING

Overall Length (in)	(cm)	Cut 0	Cut 2	Cut 4	KNURLED HANDLES Cut 6
4"	10	**31.567**	**31.568**	**31.569**	—
5½"	14	**31.570**	**31.571**	**31.572**	—
6¼"	16	**31.573**	**31.574**	**31.575**	—



OVAL

Overall Length (in)	(cm)	Cut 0	Cut 2	KNURLED HANDLES Cut 4
6¼"	16	**31.578**	**31.579**	**31.580**



ROUND

Overall Length (in)	(cm)	Cut 00	Cut 0	Cut 2	KNURLED HANDLES Cut 4	Cut 6
4"	10	—	**31.582**	**31.583**	**31.584**	—
5½"	14	—	**31.585**	**31.586**	**31.588**	—
6¼"	16	**31.590**	**31.591**	**31.593**	**31.595**	**31.596**
7¾"	20	—	**31.597**	**31.598**	**31.599**	—



SLITTING

Overall Length (in)	(cm)	KNURLED HANDLES Cut 0	Cut 2	Cut 4	Cut 6
4"	10	**31.601**	**31.602**	—	—
5½"	14	**31.604**	**31.605**	**31.606**	—
6¼"	16	**31.607**	**31.608**	**31.609**	**31.610**



SQUARE

Overall Length (in)	(cm)	Cut 00	KNURLED HANDLES Cut 0	Cut 2	Cut 4	Cut 6
4"	10	—	**31.612**	**31.613**	—	—
5½"	14	—	**31.615**	**31.616**	**31.617**	—
6¼"	16	**31.619**	**31.620**	**31.622**	**31.624**	**31.625**
7¾"	20	—	**31.626**	**31.627**	**31.628**	—



THREE SQUARE

Overall Length (in)	(cm)	Cut 00	KNURLED HANDLES Cut 0	Cut 2	Cut 4	Cut 6
4"	10	—	**31.630**	**31.631**	—	—
5½"	14	—	**31.633**	**31.634**	**31.636**	—
6¼"	16	**31.637**	**31.638**	**31.640**	**31.642**	**31.643**
7¾"	20	—	**31.645**	**31.647**	**31.649**	**31.650**

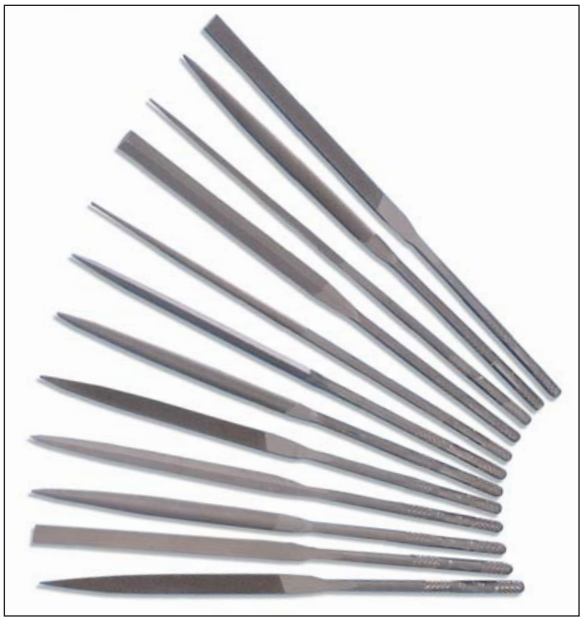


WARDING

Overall Length (in)	(cm)	KNURLED HANDLES Cut 0	Cut 2	Cut 4	Cut 6
4"	10	**31.656**	**31.657**	**31.658**	—
5½"	14	**31.659**	**31.660**	**31.661**	—
6¼"	16	**31.663**	**31.664**	**31.666**	**31.667**
7¾"	20	**31.668**	**31.669**	**31.670**	—

SETS of 12 ASSORTED GROBET NEEDLE FILES

The 4" (10 cm), 5½" (14 cm) and 6¼"(16 cm) sets consist of one each barrette, crossing, equalling, half-round, joint round edge, knife, marking, round, slitting, square, three-square, and warding. The 7¾" (20 cm) sets consists of two each half-round, round and three-square and one each barrette, crossing, equalling, knife, square and warding.



KNURLED HANDLES

Overall Length (in)	(cm)	Cut 0	Cut 2	Cut 4	Cut 6
4"	10	**31.672**	**31.673**	—	—
5½"	14	**31.675**	**31.676**	**31.677**	—
6¼"	16	**31.679**	**31.680**	**31.681**	**31.682**
7¾"	20	**31.683**	**31.684**	—	—

SET of 6 IN POUCH

Overall Length (in)	(cm)	Cut 0	Cut 2	Cut 4
5½"	14	**31.671**	**31.67101**	—
6¼"	16	—	—	**31.678**

VALTITAN NEEDLE & HAND FILES

"The File with the Yellow Tang"

For platinum, stainless steel, exotic plastics, and other hard to file materials. The hardest surface known – Rockwell hardness 72HRc. Better performance on hard-to-file surfaces. Little or no clogging; a simple knock is enough to remove the chips. Highly resistant to corrosion. Longer life than standard files. Made in Switzerland.

VALTITAN NEEDLE FILES



	Cut 00	Cut 0	Cut 2
BARRETTE	30.100V	30.101V	30.102V



	Cut 00	Cut 0	Cut 2
EQUALLING	30.103V	30.104V	30.105V



	Cut 00	Cut 0	Cut 2
HALF-ROUND	30.106V	30.107V	30.108V



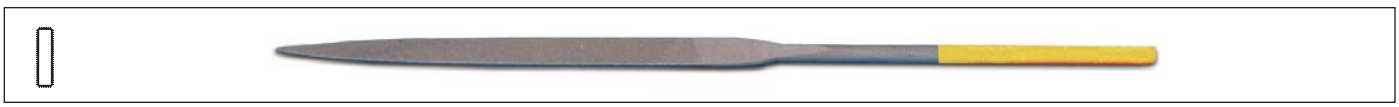
	Cut 00	Cut 0	Cut 2
ROUND	30.118V	30.119V	30.120V



	Cut 00	Cut 0	Cut 2
SQUARE	30.115V	30.116V	30.117V



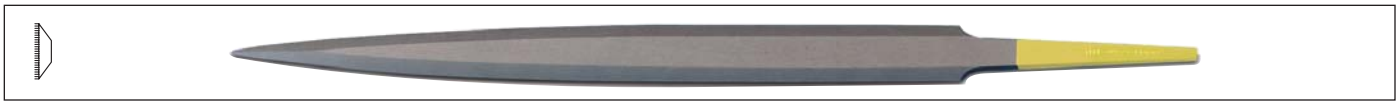
	Cut 00	Cut 0	Cut 2
THREE-SQUARE	30.112V	30.113V	30.114V



	Cut 00	Cut 0	Cut 2
WARDING	30.109V	30.110V	30.111V

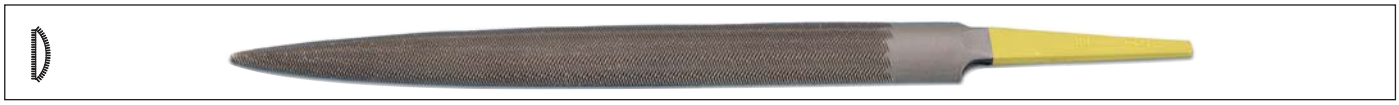
SET of SIX "YELLOW TANG" FILES (ALL BUT WARDING)	Cut 00	Cut 0	Cut 2
	30.121V	30.122V	30.123V

VALTITAN PRECISION FILES



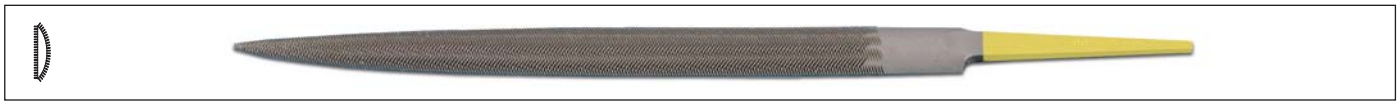
BARRETTE

Length	Cut 00	Cut 0	Cut 2
6"	—	30.201V	30.202V



HALF ROUND

Length	Cut 00	Cut 0	Cut 2
6"	—	30.231V	30.232V
8"	—	—	30.235V



HALF ROUND SLIM

Length	Cut 00	Cut 0	Cut 2
6"	—	30.241V	30.242V



HAND

Length	Cut 00	Cut 0	Cut 2
6"	30.210V	30.211V	30.212V
8"	30.213V	30.214V	30.215V



PILLAR

Length	Cut 00	Cut 0	Cut 2
6"	—	30.221V	30.222V



ROUND

Length	Cut 00	Cut 0	Cut 2
6"	—	*30.251V	30.252V
8"	—	*30.254V	30.235V

**Indicates blunt cut*



SQUARE

Length	Cut 00	Cut 0	Cut 2
6"	—	*30.271V	30.272V

**Indicates blunt cut*



THREE-SQUARE

Length	Cut 00	Cut 0	Cut 2
6"	—	30.261V	30.262V
8"	—	30.264V	30.265V

GROBET ESCAPEMENT FILES

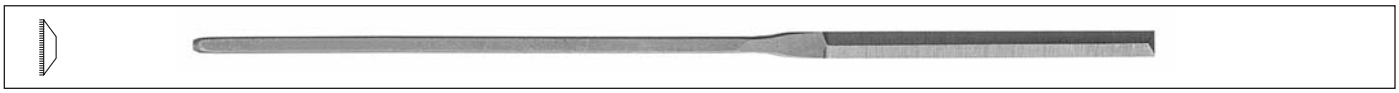
Also known as square handled needle files, these precision files are available in most of the needle file shapes. Overall length is 5½" (14 cm), length of cut is 1⁹⁄₁₆" to 2⁹⁄₁₆" (39.7 to 65.1 mm) depending upon shape.



BARRETTE	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	31.700	31.701	31.703	31.704	31.705



CROSSING	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	—	31.714	31.715	31.716	—



BARRETTE, PARALLEL	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	—	31.708	31.709	31.710	—



EQUALLING	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	—	31.720	31.721	31.722	—



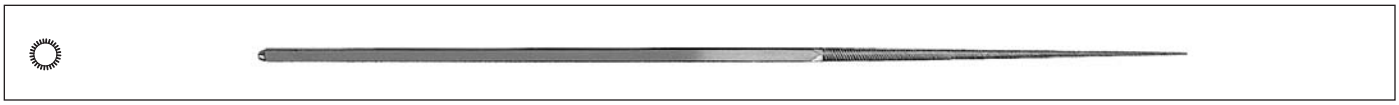
HALF-ROUND	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	31.724	31.725	31.727	31.728	31.729



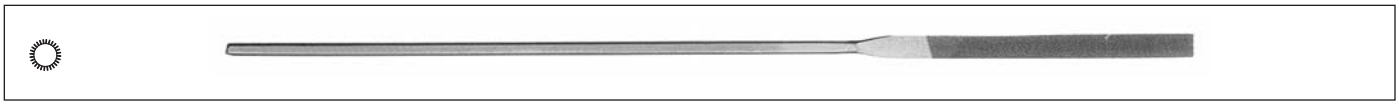
KNIFE	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	—	31.731	31.732	31.733	—



PILLAR	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	—	31.737	31.738	31.739	—



ROUND	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	31.742	31.743	31.745	31.746	31.747



ROUNDING OFF	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	—	31.750	31.751	31.752	—



SQUARE	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	31.754	31.755	31.756	31.757	31.758



THREE-SQUARE	Cut 0	Cut 2	Cut 4	Cut 6	Cut 8
	31.760	31.761	31.762	31.763	31.764



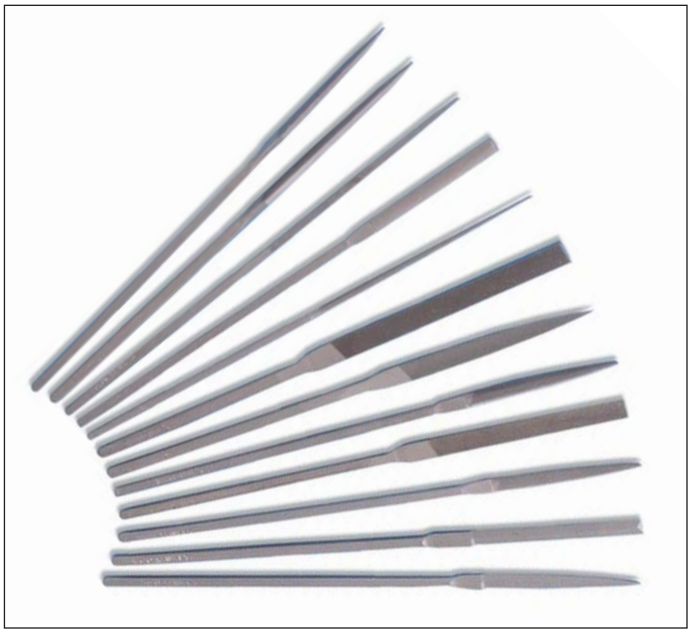
THREE-SQUARE SLIM AND SHORT	Cut 0	Price	Cut 2	Cut 4	Cut 6	Cut 8
	—	—	31.766	31.767	31.768	—

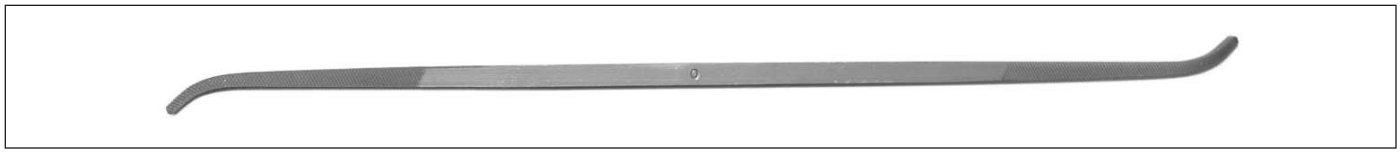
SETS of 12 ASSORTED GROBET ESCAPEMENT FILES

Contains 12 assorted files .
Pillar shape not included in sets.

Cut	No.
2	31.770
4	31.771
6	31.772



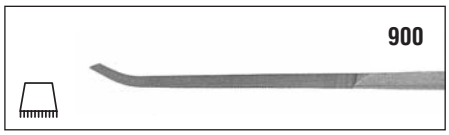


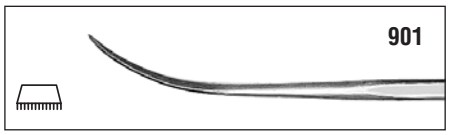


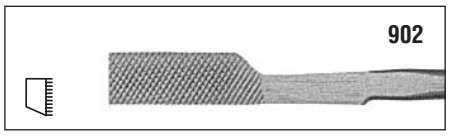
GROBET DIE SINKERS' RIFFLERS

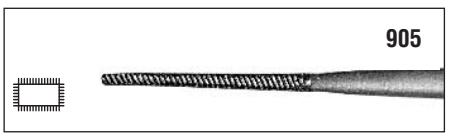
A comprehensive selection of precision rifflers. All are double-ended and 6" (152 mm) long.

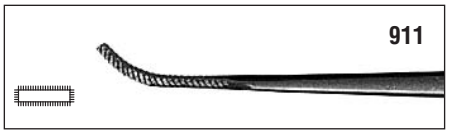
Style No.	Cut 0	Cut 2	Cut 4
900	**31.835**	**31.836**	**31.837**
901	**31.838**	**31.839**	**31.840**
902	**31.842**	**31.843**	—
905	**31.846**	**31.847**	**31.848**
911	**31.850**	**31.851**	**31.852**
912	**31.854**	**31.855**	**31.856**
913	**31.858**	**31.859**	**31.860**
914	**31.862**	**31.863**	**31.864**
915	**31.865**	**31.866**	**31.867**
916	**32.017**	**32.018**	—
917	**31.869**	**31.870**	—
918	**31.872**	**31.873**	**31.874**
919	**31.876**	**31.877**	**31.878**
920	**31.879**	**31.880**	—
930	**31.882**	**31.883**	—
931	**31.885**	**31.886**	**31.887**
940	**31.888**	**31.889**	—
941	**31.892**	**31.893**	**31.894**
942	**31.896**	**31.897**	**31.898**
943	**32.033**	**32.034**	**32.03402**
950	**31.900**	**31.901**	—
951	**31.903**	**31.904**	—
952	**31.906**	**31.907**	**31.908**
953	**31.910**	**31.911**	—
954	**31.914**	**31.915**	**31.916**
955	**31.917**	**31.918**	**31.919**

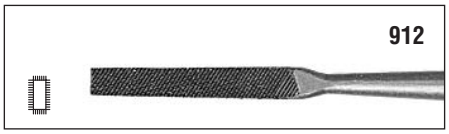


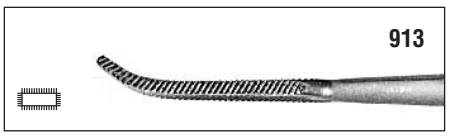


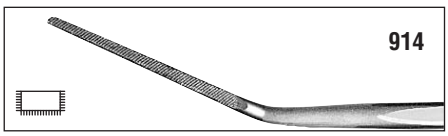


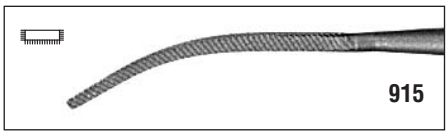


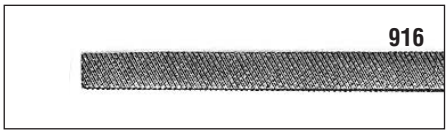


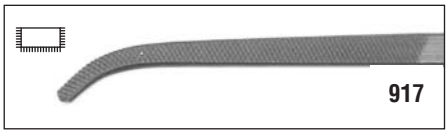


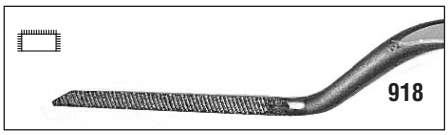


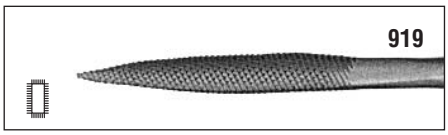


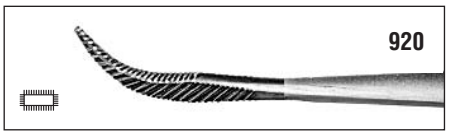


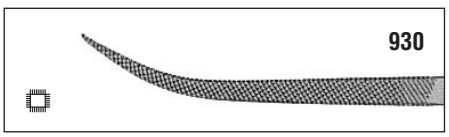


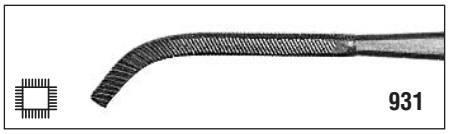


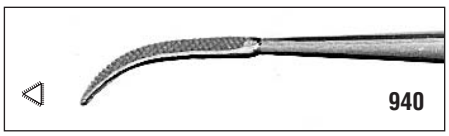


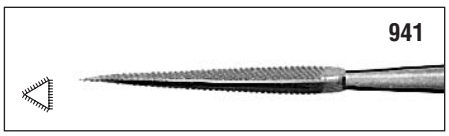


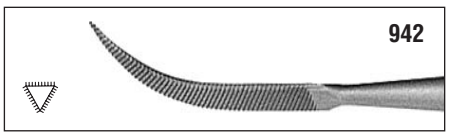


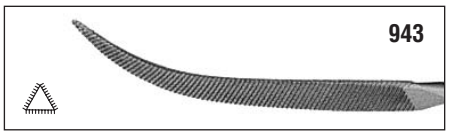


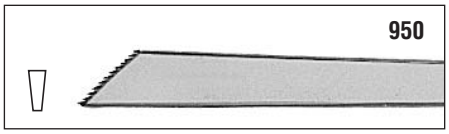


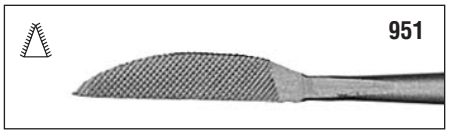


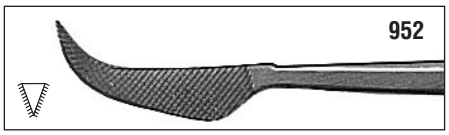


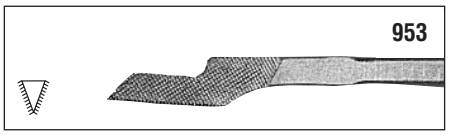


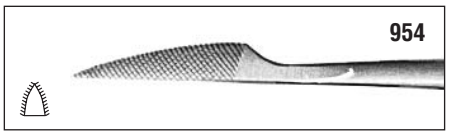


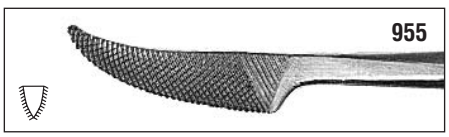




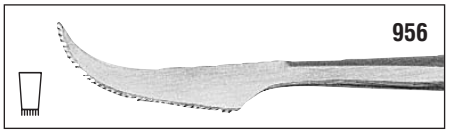


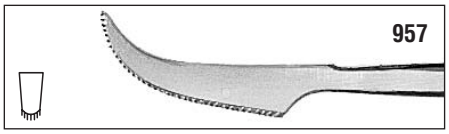


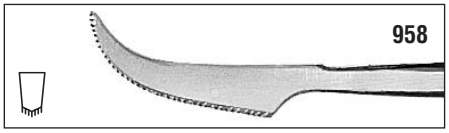


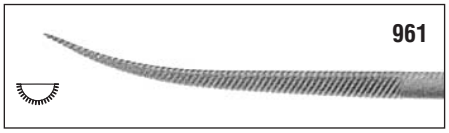


Style No.	Cut 0	Cut 2	Cut 4
956	31.921	31.922	31.923
957	31.925	31.926	31.927
958	31.929	31.930	31.931
961	31.932	31.933	31.934
962	31.936	31.937	31.938
963	31.939	31.940	31.941
964	31.943	31.944	31.945
965	31.946	31.947	31.948
970	31.950	31.951	31.952
971	31.954	31.955	31.956
972	31.957	31.958	31.959
973	31.961	31.962	31.963
974	31.965	31.966	31.967
975	31.969	31.970	31.971
980	32.019	32.027	32.02702
981	31.972	31.973	31.974
982	31.976	31.977	31.978
983	31.979	31.980	31.981
984	31.983	31.984	31.985
985	31.986	31.987	31.988
986	31.990	31.991	31.992
987	31.994	31.995	31.996
988	31.997	31.998	31.999
990	32.001	32.002	32.003
995	32.007	32.008	32.009
996	32.010	32.011	32.012
997	32.014	32.015	—

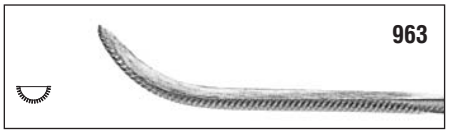


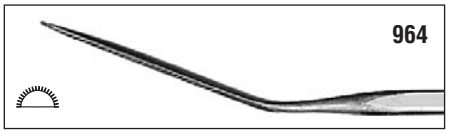


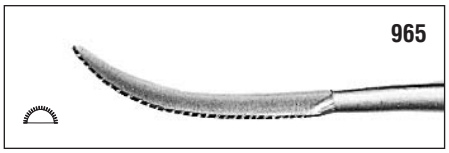


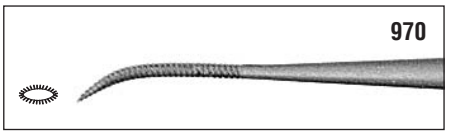


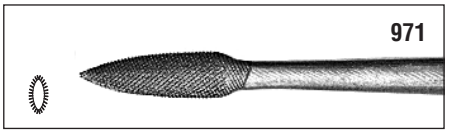


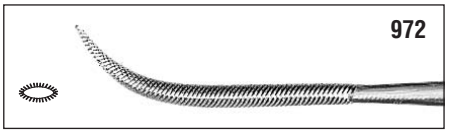


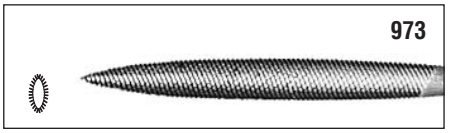


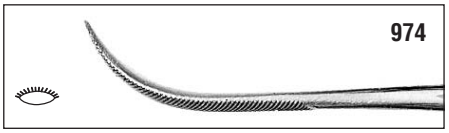


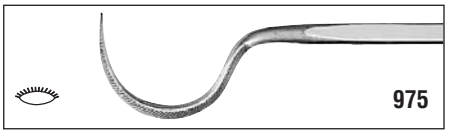


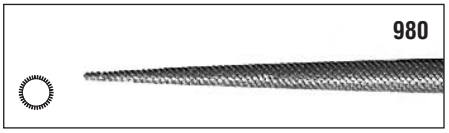


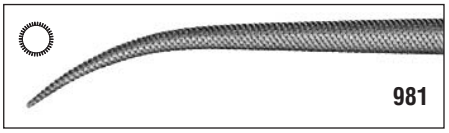


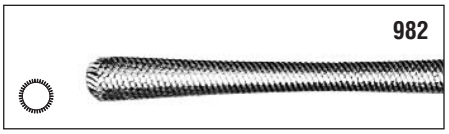


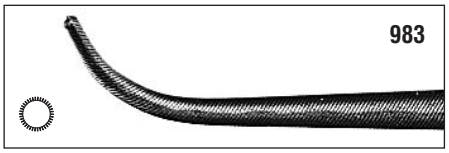


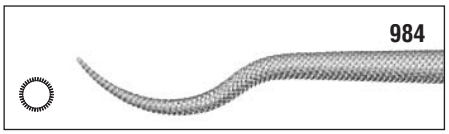


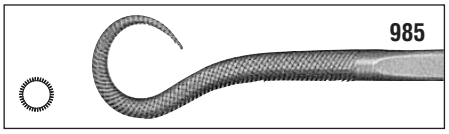


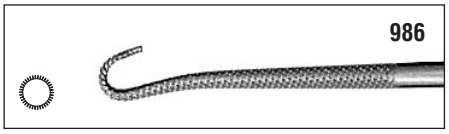


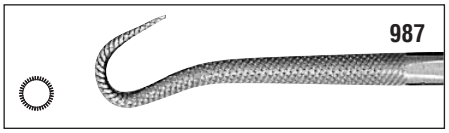


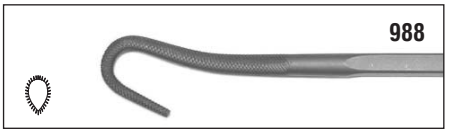


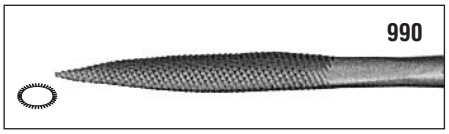


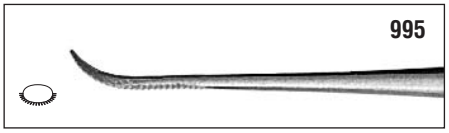


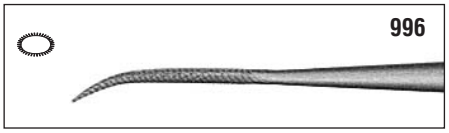


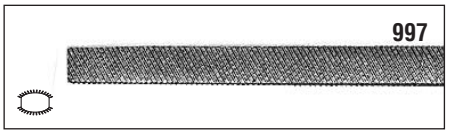








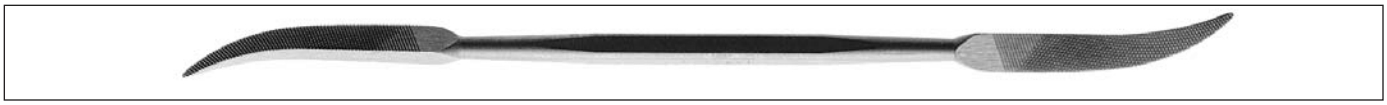




SETS OF DIE SINKERS' RIFFLERS

Contain the most widely used shapes from above.

Peices In Set	Cut 0	Cut 2	Cut 4
3	32.062-0	32.062-2	32.062-4
6	32.063-0	32.063-2	32.063-4
12	32.020	32.021	32.022
18	32.024	32.025	32.026
24	32.028	32.029	32.030



GROBET SILVERSMITHS' RIFFLERS

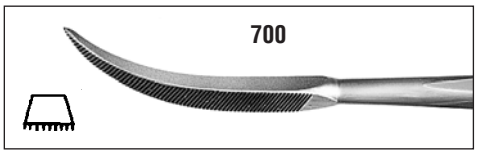
For removing metal and smoothing in tight places. All are double-ended and 7" (17.8 cm) overall.

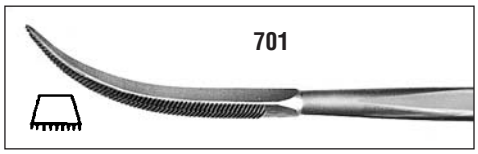
Style Nos.	Cut 0	Cut 2
700	**31.790**	**31.791**
701	**31.792**	**31.793**
710	**31.830**	**31.834**
711	**31.794**	**31.795**
712	**31.796**	**31.797**
713	**31.798**	**31.799**
731	**31.800**	**31.801**
732	**31.802**	**31.803**
741	**31.804**	**31.805**
750	**31.806**	**31.807**
761	**31.808**	**31.809**
762	**31.810**	**31.811**
763	**31.812**	**31.813**
764	**31.814**	**31.815**
771	**31.816**	**31.817**
781	**31.818**	**31.819**
782	**31.820**	**31.821**
783	**31.822**	**31.823**
790	**31.824**	**31.825**
795	**31.826**	**31.827**
796	**31.828**	**31.829**

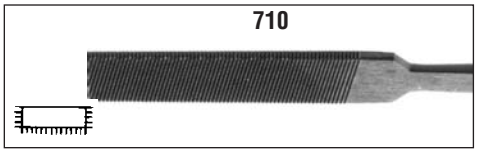
SETS of 12 ASSORTED SILVERSMITHS' RIFFLERS

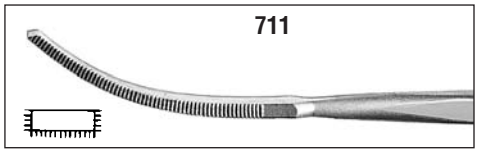
Contain 12 popular riffler shapes from above, in the cut indicated.

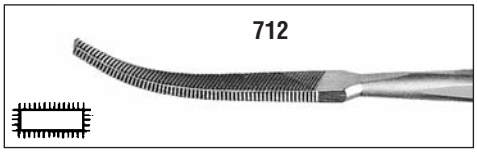
No. **31.831** Cut 0
No. **31.832** Cut 2



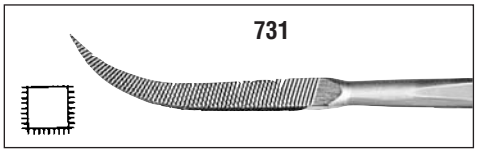


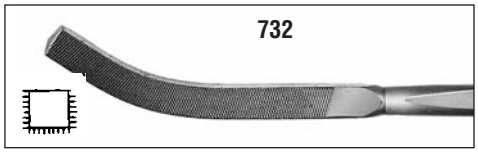


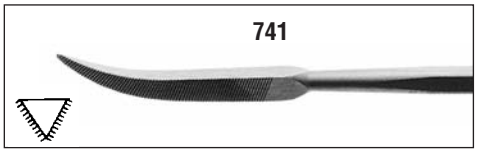


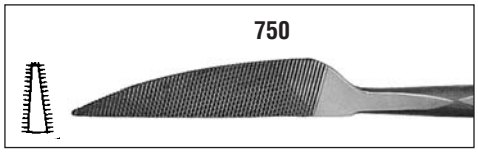


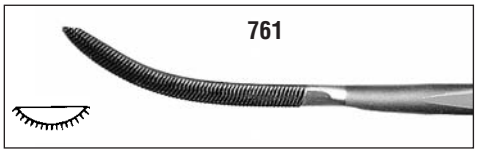


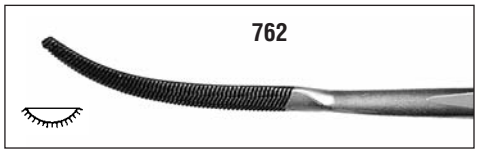


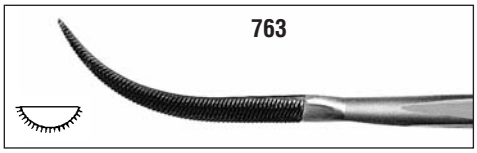


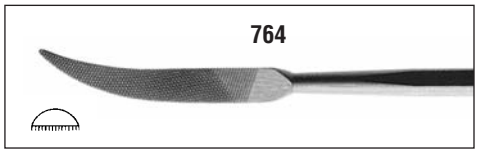


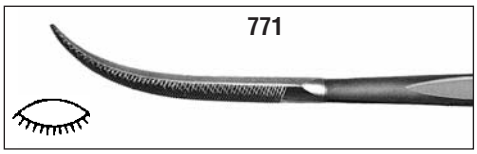


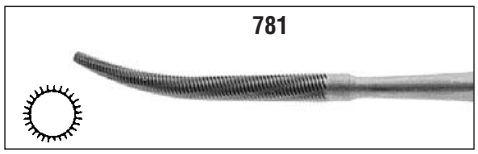


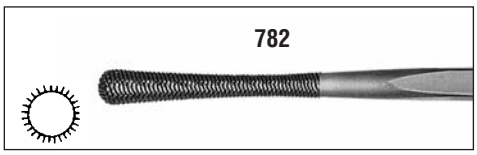


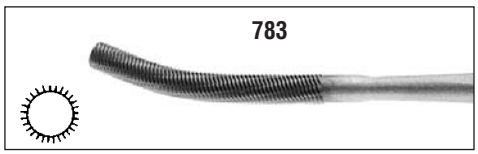


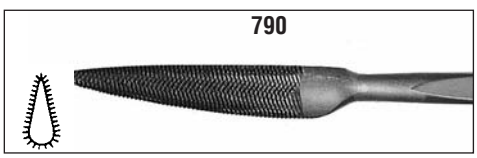


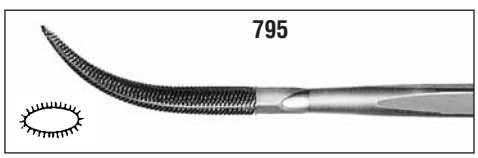














GROBET TOOL MAKERS' RIFFLERS

This group of 12" (305 mm) tool makers' rifflers rounds out the most complete line of Swiss precision rifflers available to industry anywhere. They are made of chrome-alloy steel for long, efficient life and corrosion resistance. They are contoured to make difficult-to-reach areas readily accessible and are well balanced to facilitate delicate finishing work. All supplied in cut 0. Sold individually.



32.075

32.077

32.079

32.081

32.083

32.085

32.087

32.089

32.091

32.093

ASSORTED SET of 10 RIFFLERS
32.097



1 MASCOT® NEEDLE FILES

Swiss-made, single-cut files do not clog as easily as double-cut. Overall length 5½" (14 cm). Smooth cut only. Sold individually.

No.	Shape
33.860	Equalling
33.861	Flat
33.862	Half-Round
33.863	Round
33.864	Square
33.865	Three-Square

SET of MASCOT NEEDLE FILES

Set of six contains equalling, flat, half-round, round, square, and three-square styles in a plastic pouch.
No. **33.867**



2 SWISS NEEDLE FILES

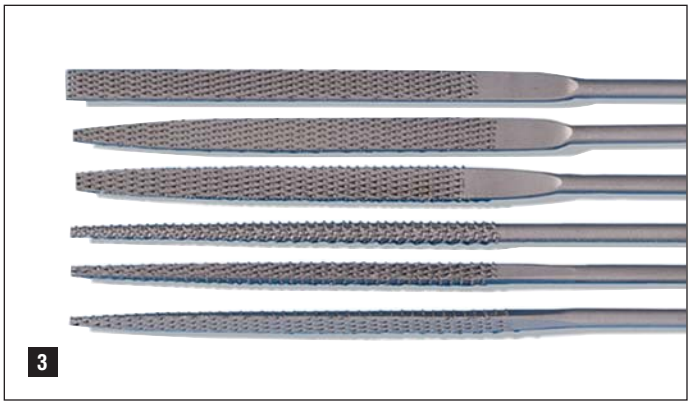
Well-made, yet economical, Swiss needle files are made of chrome alloy steel. Overall length is 5½" (14 cm), with the cut portion 3" (7.6 cm). Sold by the dozen.

Shape	Medium	Fine
Barrette	**33.880**	**33.881**
Crossing	**33.882**	**33.883**
Equalling	**33.884**	**33.885**
Half-Round	**33.886**	**33.887**
Knife	**33.890**	**33.891**
Square	**33.898**	—
Round	**33.894**	**33.895**
Three-Square	**33.900**	**33.901**
Warding	**33.902**	**33.903**

SETS of SWISS NEEDLE FILES

Assorted shapes in a plastic pouch.

Cut	Set of 6	Set of 12
Medium	**33.906**	**33.908**
Fine	**33.907**	**33.909**



3 SWISS WAX FILES

Excellent for shaping waxes and other materials, such as wood and plastic. Wide-tooth style does not clog as easily as conventional file. Overall length 5½" (14 cm).

No.	Shape
33.915	Equalling
33.916	Flat
33.917	Half-Round
33.918	Round
33.919	Square
33.920	Three-Square

SET of SWISS WAX FILES

All six shapes listed above in a plastic pouch.
No. **33.922**



4 MASCOT® 6 PC UTILITY FILE SET

This handy utility set consists of six American Pattern file shapes: square, half-round, three-square, round, flat, and warding. File cut lengths are approximately 4" (10 cm) with an overall length of 7" (17 cm). Each file has a smooth wooden handle and the set comes in a hanging pouch.
No. **32.510**

1 HABILIS™ FILES

Habilis files offer the craftsman something different; precision files designed for those "in-between" jobs, too big for needle files and requiring finer control than a larger, heavier file can deliver. The distinctive design includes a built-in handle, so there's no separate handle to buy and they're shaped for easy handling and balanced for efficient cutting. These strong, durable files are ideal for a variety of uses. Length of cut is 4" (10 cm) and the overall length is 8½" (22 cm). Sold individually or in sets as listed.

SET of HABILIS™ FILES

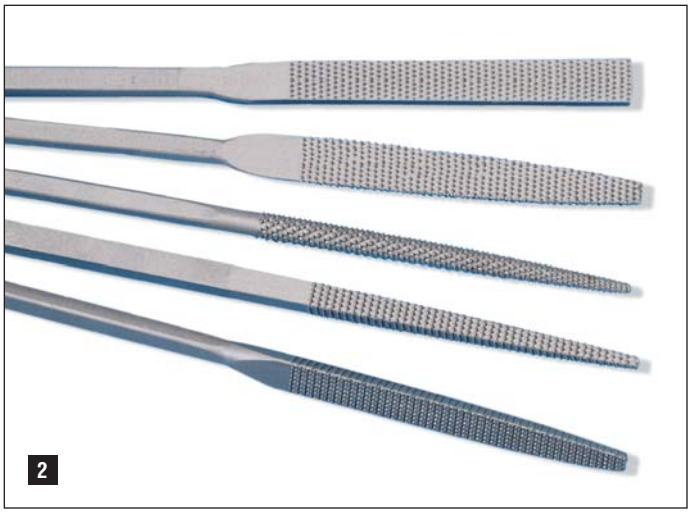
Five files, one of each shape, in sturdy vinyl pouch.
No. **33.831** Cut 00
No. **33.832** Cut 1

	Width		Thickness			
Shape	(in)	(mm)	(in)	(mm)	Cut 00	Cut 1
Hand	⅜"	9.5	⅛"	3.2	**33.820**	**33.821**
Half-Round	15/32"	11.9	9/64"	3.6	**33.822**	**33.823**
Round	¼"	6.4	—	—	**33.824**	**33.825**
Square	¼"	6.4	—	—	**33.826**	**33.827**
Three-Square	⅜"	9.5	—	—	**33.828**	**33.829**


1

2 HABILIS™ RASPS

For cutting wood, fiberglass, plastics or soft metals. The comfortable-to-use, conveniently-sized Habilis style is now available in five shapes. The built-in handle and balanced feel will help you work faster, with better control. Offered individually in the most popular shapes or as a set of all five.
No. **33.834** Hand
No. **33.835** Half-Round
No. **33.836** Round
No. **33.837** Square
No. **33.838** Three-Square


2

SET of FIVE HABILIS™ RASPS

No. **33.840**

3 HABILIS™ RIFFLERS

Ideal for filing unusually-shaped or hard-to-reach areas. The built-in handles can be used as is, or the specially designed plastic handle (No. 33.848) can be used when a heavier grip is required. Supplied in six individual shapes, five curved and one straight, or as a set of all six plus the plastic handle.
No. **33.842** Hand
No. **33.843** Half-Round
No. **33.844** Round
No. **33.845** Square
No. **33.846** Three-Square
No. **33.847** Knife


3

SET of SIX with HANDLE

No. **33.850**

4 HANDLE for HABILIS RIFFLERS

No. **33.848**


4



1 DIAMOND NEEDLE FILES

Engineered to deliver performance unequaled by any other file, for use on ultra-hard materials. Carbide, hardened steel, exotic metals, ceramics, and glass are no match for these precision files. Excellent material removal is the result of a unique process which bonds the 2 1/2" (64 mm) long diamond surface. Available in fine grit (220) Mascot® Brand or coarse grit (126) Grobet USA™ Brand. Sets of 5 contain one each of equalling, half-round, round, square and three-square. Overall length is 5 1/2" (14 cm). Sold individually or in sets as listed.

	Fine Grit (220)	Coarse Grit (126)
Barrette	**33.958**	**33.980**
Crossing	**33.959**	**33.984**
Equalling	**33.961**	**33.971**
Half-Round	**33.962**	**33.972**
Round	**33.963**	**33.973**
Square	**33.964**	**33.974**
Three-Square	**33.965**	**33.975**
Crochet	**33.966**	**33.976**
Warding	**33.967**	**33.977**
Knife	**33.968**	**33.978**
Pippin	**33.969**	—

SET of FIVE in VINYL POUCH

Contains 5 assorted files listed above.
No. **33.960** Fine grit
No. **33.970** Coarse grit



2 DIAMOND ESCAPEMENT FILES

These square handle files have an overall length of 5 1/2" (14 cm). Their diamond surface is 1 9/16" to 2 9/16" (40 to 65 mm), according to shape. Used in fine watchmaking, in finishing fine castings, and other delicate work. 126 grit. Sold individually.
No. **33.951** Half-Round
No. **33.952** Crossing
No. **33.953** Three-Square
No. **33.954** Equalling
No. **33.955** Square
No. **33.956** Round

SET of SIX in VINYL POUCH

Contains one of each 6 files listed above.
No. **33.957**

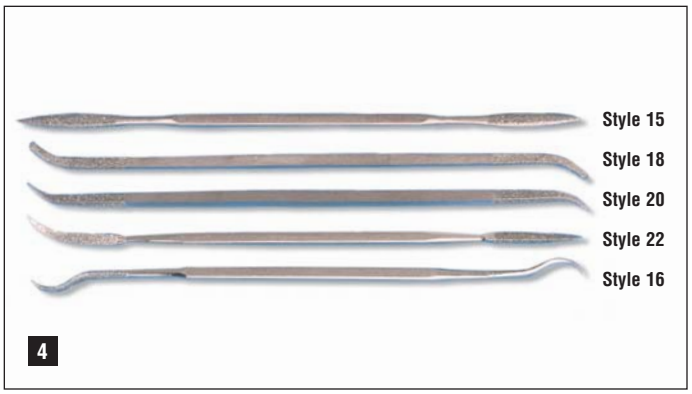


3 HABILIS™ DIAMOND FILES

Excellent for filing large areas of different materials as well as hard plastics, fiberglass, graphite, and epoxy. Can also be used for marble shaping applications. In spite of the heavy-duty applications, these diamond files have a very high resistance to wear. Overall length is 8 1/2" (22 cm), and diamond surface is 4" (10 cm). 126 grit.
Sold individually.
No. **33.873** Three-Square
No. **33.874** Square
No. **33.875** Round
No. **33.876** Half-Round
No. **33.877** Hand

SET of FIVE in VINYL POUCH

Contains one of each 5 files listed above.
No. **33.852**



4 DIAMOND RIFFLERS

For easy access to hard to reach places. Double-ended with diamond coating on both ends. Overall length is 6" (15 cm). 126 grit. Sold individually.
No. **33.991** Style 15
No. **33.992** Style 18
No. **33.993** Style 20
No. **33.994** Style 22
No. **33.995** Style 16

SET of FIVE in VINYL POUCH

Contains one of each 5 files listed above.
No. **33.996**

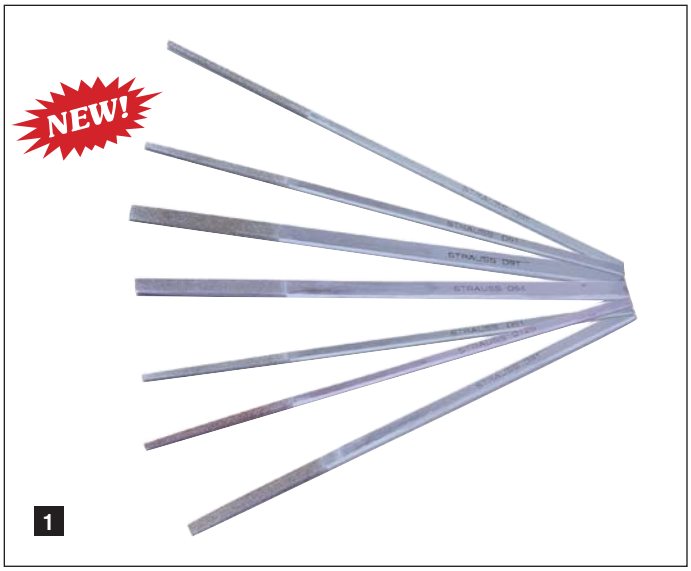
1 GROBET USA™ TAPERED DIAMOND FILES

These tapered files are used in filing inside slots and grooves, where access with straight files is impossible. They were specially designed for use in the aluminum extruders industry and in the plastic mold industry. Overall length 6 5/8" (170 mm). Sold individually.

		Width		Taper	
No.	Grit	(in)	(mm)	(in)	(mm)
33.940	126	5/32"	4.0	5/64"	2.0
33.941	91	5/32"	4.0	5/64"	2.0
33.942	91	5/32"	4.0	5/64"	2.0
33.943	91	5/32"	4.0	5/64"	2.0
33.944	91	1/4"	6.4	3/32"	2.4
33.945	91	5/16"	7.9	5/64"	2.0
33.946	54	5/16"	7.9	5/64"	2.0

SET of TEN

Contains pairs of Nos. 33.940, 33.941, & 33.944 and one each of Nos. 33.942, 33.943, 33.945, & 33.946.
No. **33.947**



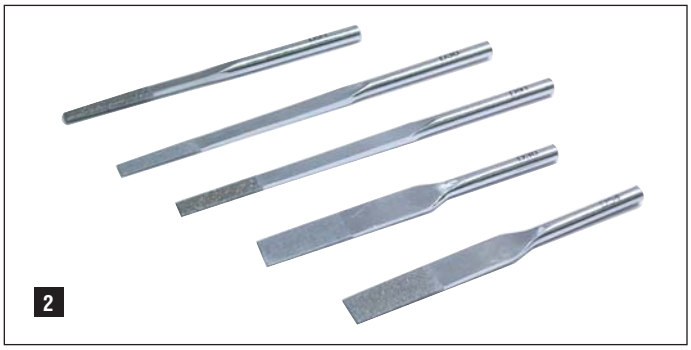
2 GROBET USA™ DIAMOND HAND/MACHINE FILES

These tapered files are used in filing inside slots and grooves, where access with parallel files is impossible. They can be used by hand or in any reciprocating machine, and were specially designed for the aluminum extruders industry as well as the plastic mold industry. The diamond coating is 5/8" (15.9 mm).

		Width		Taper	
No.	Grit	(in)	(mm)	(in)	(mm)
33.929	D54	1/8"	3.2	1/16"	1.6
33.930	D91	1/8"	3.2	1/16"	1.6
33.931	D30	1/8"	3.2	1/16"	1.6
33.932	D54	1/8"	3.2	1/16"	1.6
33.933	D91	1/8"	3.2	1/16"	1.6
33.934	D30	1/8"	3.2	3/64"	1.2
33.935	D54	1/8"	3.2	3/64"	1.2
33.936	D30	1/8"	3.2	3/64"	1.2
33.937	D54	1/8"	3.2	3/64"	1.2
33.938	D91	1/8"	3.2	3/64"	1.2

SET of TEN

Contains one of each 10 files listed above.
No. **33.939**



3 GROBET USA™ "WIDE-BODY" DIAMOND FILE KITS with HANDLE

These very wide, extra thin files were manufactured to make full contact between the file surface and the workpiece. These unique files are widely used in the plastic molds and in the aluminum extruders industries. The two different file sizes are available in four grits, and thicknesses range between 1/64" (0.4 mm) with grit D30, to 3/64" (1.2 mm) with grit D126. Files are available individually and in three separate kits, as shown below. All files fit into the specially designed handle, No. 33.1005.

	Grit Area			
No.	(in)	(mm)	Grit	Thickness
33.985	5/8" x 5/8"	16 x 16	D30	0.4 mm
33.986	5/8" x 5/8"	16 x 16	D54	0.5 mm
33.987	5/8" x 5/8"	16 x 16	D91	1.0 mm
33.988	5/8" x 5/8"	16 x 16	D126	1.2 mm
33.989	1" x 1"	25 x 25	D30	0.4 mm
33.990	1" x 1"	25 x 25	D54	0.5 mm
33.1000	1" x 1"	25 x 25	D91	1.0 mm
33.1001	1" x 1"	25 x 25	D126	1.2 mm



No. **33.1005** Handle
No. **33.1006** Wrench (included in all kits below)

Kits:

No. **33.1002** Includes one each handle No. 33.1005, wrench 33.1006 and file Nos. 33.985, 33.986, 33.989 and 33.990

No. **33.1003** Includes one each handle No. 33.1005, wrench 33.1006 and file Nos. 33.987, 33.988, 33.1000 and 33.1001

No. **33.1004** Includes one each handle No. 33.1005, wrench 33.1006 and file Nos. 33.989, 33.990, 33.1000 and 33.1001

FILE HANDLES



1

1 BLUE PLASTIC FILE HANDLES

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 below for Swiss Precision and American Pattern files.

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



2

2 PLASTIC FILE HANDLES for GROBET SWISS AMERICAN PATTERN FILES

Unbreakable plastic, bright handles with textured surface for a non-slip grip. Ergonomically designed to fit the hand for comfort.

	Length		Length	
No.	(in)	(mm)	(in)	(mm)
37.810S	3 19/32"	90	4"	100
37.811S	3 19/32"	90	4"-6"	100-150
37.812S	4 5/16"	110	6"-12"	150-300
37.813S	4 5/16"	110	12"-14"	300-350

SWISS PRECISION FILES

File Length	4"	6"	8"	10"	12"	14"
Type/Shape	**File Handle Size Recommended**					
Barrette	3	4	5	–	–	–
Checkering	–	4	–	–	–	–
Crochet	3	4	5	–	–	–
Crossing	2	4	5	–	–	–
Equalling	2	3	4	–	–	–
Half-Round	3	4	5	6	–	–
Hand	3	4	5	6	7	–
Knife	3	4	5	6	7	7
Pillar	3	4	4	6	6	–
Pippin	3	4	5	–	–	–
Round	1	3	4	5	–	–
Round Parallel: 3/16" (4.8 mm)	–	2	3	–	–	–
Round Parallel: 1/4" (6.4 mm)	–	2	3	–	–	–
Round Parallel: 1/8" (3.2 mm)	1	1	–	–	–	–
Round Parallel: 5/32" (4.0 mm)	1	1	–	–	–	–
Round Parallel: 3/8" (9.5 mm)	–	–	4	–	–	–
Slitting	2	4	–	–	–	–
Square	2	3	4	5	6	–
Three-Square	2	4	4	5	6	–
Warding	2	4	5	6	7	–

AMERICAN PATTERN FILES

File Length	4"	5"	6"	7"	8"	10"	12"	14"	16"
Type/Shape	**File Handle Size Recommended**								
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 Round 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	–	–	–
Milled Curved Tooth, Half Round Solid	–	–	–	–	5	6	7	–	–

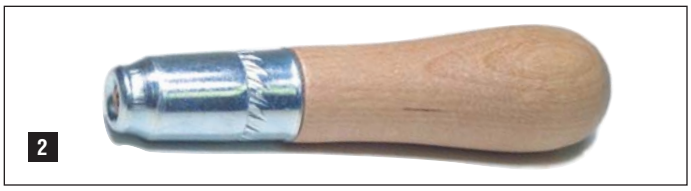
1 WOOD FILE HANDLES

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" (10-15 cm)
No. **37.802** 6"-8" (15-25 cm)
No. **37.803** 8"-12" (25-35 cm)
No. **37.804** 14"-16" (35-40 cm)



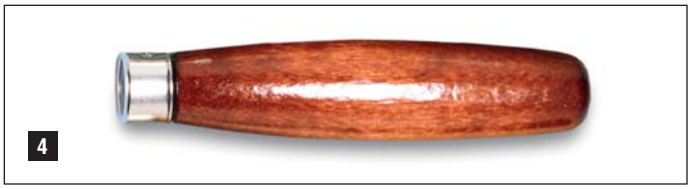
3 SKROO-ZON WOOD FILE HANDLES

Steel die inside wood handle cuts its own thread on file tang. For 6" (152 mm) files only.
No. **37.820**



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 WOOD FILE HANDLES

Hardwood handles with metal ferrules suitable for small files, gravers, etc. Sold individually

	Length		Diameter	
No.	(in)	(mm)	(in)	(mm)
37.832	3"	76	7/16"	11
37.833	4"	102	3/8"	10
37.834	4"	102	1/2"	13
37.836	4"	102	5/8"	16
37.837	4"	102	3/4"	19



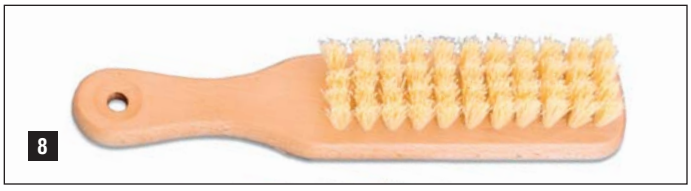
7 NEEDLE FILE STAND

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**



8 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**



9 FILE CLEANER

Steel wire bristles mounted on wood handle, for removing particles clogging teeth of file. Overall length 10" (25 cm).
No. **33.981**



GROBET USA™ FLEXIBLE SHAFTS



1

1 SERIES 595 1/10 HP SLEEVE-BEARING AC MOTOR

Economical workhorse unit that's ideal for precision work. Operating range of 0 to 16,000 RPM. Available in both 110V and 220V models. Full 1-year warranty.
Precision built in the USA!

Complete Kit

Includes a 34.236 handpiece, a 39" flexible shaft/sheath (34.352 and 34.350), an electronic, variable-speed foot control (34.334) and a maintenance kit, (34.344).

No. **34.595KIT**	110 volt complete kit ETL & CSA approved
No. **34.595XKIT**	220 volt complete kit
No. **34.595XKITA***	220 volt complete kit

**Same as above but with 34.230 handpiece and 34.334X foot pedal*

Motor Only

Includes flexible shaft/sheath (34.352 and 34.350).

No. **34.595**	110 volt ETL & CSA approved
No. **34.595X**	220 volt

Motor and Foot Pedal

Includes motor, shaft/sheath, and foot pedal.

No. **34.595/334**	
No. **34.595**	Motor only (110 volt)
No. **34.334**	Foot pedal only



2

2 SERIES 695 1/8 HP BALL-BEARING AC MOTOR

Our most popular model. Ball-bearing motor runs smoothly, requires no lubrication. Operating range of 0 to 18,000 RPM. Available in both 110V and 220V models. Full 1-year warranty.
Precision built in the USA!

Complete Kit

Includes a 34.236 handpiece, a 39" flexible shaft/sheath (34.352 & 34.350), an electronic, variable-speed foot control (34.334), and a maintenance kit (34.344).

No. **34.695KIT**	110 volt ETL & CSA approved
No. **34.695XKITCE**	220 volt CE* model
No. **34.695XKIT**	220 volt non-CE model

**This unit meets all CE electrical and safety requirements only when used with the 34.332X foot control supplied with the complete kit.*

Motor Only

Includes flexible shaft/sheath (34.352 & 34.350).

No. **34.695**	110 volt ETL & CSA approved
No. **34.695XCE**	220 volt CE model
No. **34.695X**	220 volt non-CE model

Motor and Foot Pedal

Includes motor, shaft, sheath, foot pedal

No. **34.695/334**	
No. **34.695**	Motor only (110 volt)
No. **34.334**	Foot pedal only

1 SERIES 795 GROBET USA™ 1/10 HP BALL-BEARING AC MOTOR with 3:1 REDUCTION GEAR

One motor that does double duty. Use the direct drive for all standard high-speed operations or switch your connection to the gear reduction drive to work at slower speeds with greater power. Excellent for tough jobs like slow speed grinding on dies or molds. Ball-bearing motor runs smoothly, requires no lubrication. Operating range of 0 to 18,000 RPM on direct drive; 0 to 6,000 RPM on gear reduction drive. Available in both 110V and 220V models. Full 1-year warranty.
Precision built in the USA!

Complete Kit

Includes a 34.236 handpiece, a 39" flexible shaft/sheath (47.112 & 34.350), an electronic, variable-speed foot control (34.334), and a maintenance kit (34.344).
No. **34.795KIT** 110 volt
No. **34.795XKIT** 220 volt

Motor Only

Includes flexible shaft/sheath (34.352 & 34.350).
No. **34.795** 110 volt
No. **34.795X** 220 volt

Motor and Foot Pedal

Includes motor, flexible shaft/sheath, and foot pedal.
No. **34.795/334**
No. **34.795** Motor only (110 volt)
No. **34.334** Pedal only



1

2 SERIES 995 GROBET USA™ 1/3 HP PM FLEXIBLE SHAFT MACHINE

Permanent magnet DC motor delivers more torque and horsepower at ALL speeds. Our Grobet USA™ high torque motor delivers the most powerful, responsive and precisely controlled performance in this size motor frame. You simply have to try it to appreciate the difference! Beautiful chrome finish. Operating range of 0 to 16,000 RPM. Full 2-year warranty.
Precision built in the USA!

Superior performance - combination of high power & torque with smooth, predictable operation provides the greatest control for cutting tools, drills, polishing wheels and burs under load.

Complete Kit

Includes a jeweler's handpiece (34.236), a 39" flexible shaft/sheath (34.352 & 34.350), an electronic, variable-speed foot control (34.334),
and a maintenance kit (34.344).
No. **34.995KIT** 110 volt

Motor Only

Includes flexible shaft/sheath (34.352 & 34.350).
No. **34.995** 110 volt

Motor and Foot Pedal

Includes motor, flexible shaft/sheath, and foot pedal.
No. **34.995/334**
No. **34.995** Motor only (110 volt)
No. **34.334** Foot pedal only



2



1

1 SERIES 295 GROBET USA™ FACTORY LC FLEX SHAFT MOTOR

Grobet USA™ is proud to introduce the latest in flex shaft technology. We have reengineered the flex shaft to offer uncompromised performance. Our new design combines power, speed, and durability, at a remarkable new price point. This machine is designed for constant, high production factory use, but is versatile enough for all flex shaft applications.

This highly dependable system includes:

- 1/10 hp motor with excellent torque to ratio.
- Smooth and reliable ball bearing design 16,000 RPM
- Grobet Control – Max Electronic Foot Control. Consistent, precise control. Our solid state foot controls are slip-resistant and provide full control from low to full speed
- Includes maintenance kit.
- Full 1-year warranty.

Complete Kit
Includes a 34.236 handpiece, a 39" flexible shaft/sheath, an electronic, variable-speed foot pedal, and a maintenance kit.
No. **34.295KIT** 110 volt
No. **34.295XKIT** 220 volt

Motor Only
Includes flexible shaft/sheath.
No. **34.295** 110 volt
No. **34.295X** 220 volt

Motor and Foot Pedal
Includes motor, flexible shaft/sheath, and foot pedal.
No. **34.295/334**
No. **34.295** Motor only (110 volt)
No. **34.334** Foot pedal only



2

2 SERIES 395 GROBET USA™ WOOD CARVERS KIT

Grobet USA™ Wood Carvers Kit has a powerful durable motor with reversible speed. Which allows the carver the ability to uniformly create details over the entire work piece. Create even texturing, fine detailing as well as aggressively removing large amounts of wood without great effort. Electronic Variable speed foot control provides smooth acceleration/deceleration throughout the entire range of voltage. Non-restrictive flex shaft and sheath gives the carver ample movement around the work and thereby providing more comfort. The motor can also be hung above the work for additional free movement.

Motor Specifications:
• 1/8 hp • 188VAC • Sealed ball bearings
• Hanging yoke • On/off reverse switch.

Complete Kit
Includes collet hand piece with 1/4, 1/8, 3/32 interchangeable collets, 1/8 hp motor with shaft and sheath, an electronic, variable-speed foot control, and 6 rotary accessories
No. **34.395KIT** 110 volt
No. **34.395XKIT** 220 volt

Motor Only
Includes flexible shaft/sheath.
No. **34.395** 110 volt
No. **34.395X** 220 volt

Motor and Foot Pedal
Includes motor, flexible shaft/sheath, and foot pedal.
No. **34.395/334**
No. **34.395** Motor only (110 volt)
No. **34.334** Pedal only

1 SERIES 195 GROBET USA™ VARIABLE SPEED BENCH LATHE

Compact in size but not in power, this new variable speed bench lathe has the best power to physical size ratio in the industry. Speed and torque characteristics make this lathe a good choice for all buffing, polishing, deburring, cleaning and grinding needs. Use tapered spindles; Brass 47.236 right, 47.237 left, Steel 47.238 right, 47.239 left.

Product Features:
• Variable speed permanent magnet motor from 600 rpm to 5000 rpm • 4,000 rpm no load speed • Reliable torque at all speeds • Solid State motor control provides smooth speed throughout the entire range of the motor • Die cast base with suction feet keeps unit securely locked in place • Operating voltage 110-130 volts AC • Sealed dust proof motor frame • Motor has tapered shafts (1/4" per ft) • Compact size for crowded work areas • Permanently lubricated ball bearings • Illuminated power ON indicating lamp • Convenient knock off device for easy accessory removal • Full 1-year warranty.

Motor Only
No. **34.195** 110 volt
No. **34.195X** 220 volt



(brushes or buffs not included)

1

JEWELERS HANDPIECES

Our most popular handpiece for all-around use. Adjustable chuck accommodates shank sizes from 0 to 5/32" (4 mm). Includes chuck key. ***Genuine Grobet USA™ brand!***



2 No. **34.236**



3 No. **34.230** With black & silver "international" finish

4 SLIM HANDPIECE

Thin body with a protective guard sleeve that slides back for changing tools easily. Supplied with 3/32" (2.4 mm) collet and collet wrench.
No. **34.233**
No. **34.234** With duplex spring connection



4

5 COLLET HANDPIECE

Collet version of our general purpose handpiece. Supplied with 3/32" (2.4 mm) collet. Collet wrench included.
No. **34.243**
No. **34.24307** 1/4" collet handpiece for industrial use. 4 1/8" collet is included (not shown)



5

6 QUICK CHANGE HANDPIECE

Ergonomic design provides improved control and extra comfort. Quick change collet-release lever for use with 3/32" (2.4 mm) shanks.
No. **34.260**
No. **34.261** With duplex spring connection



6



1 FARO QUICK RELEASE HANDPIECE

Quick release lever allows rapid changing of all burs & accessories with 3/32" (2.4 mm) shanks. Slim body for precise control. FARO brand – highest quality Italian construction.
No. **34.0252**
No. **34.0251** With duplex spring connection



2 HAMMER HANDPIECE

Specially designed to hit hard, under control, without excessive heat build-up. Adjustable striking force. Hammer tip (1.5 mm round) included. Other hammer tips also available.
No. **34.241**
No. **34.245** With duplex spring connection



3 J10 EZ CHANGE HANDPIECE

Unique EZ-change mechanism allows you to insert & remove tools with a twist of the wrist. Thinner body for precise control. For 3/32" (2.4 mm) shanks.
No. **34.333**



4 DUPLEX SPRING ADAPTER

The duplex spring connection provides extra flexibility in the handpiece which allows you very precise control for performing delicate work.
No. **34.240**



5 AIR SCRIBE

This is a lightweight, air driven tool for marking and writing on various materials, such as glass, plastic, wood, and metals up to 64Rc hardness. Operates economically on less than 1 cfm. Requires an air compressor (not included). Comes with stylus and an 8´ reinforced hose.
No. **26.400**
No. **26.402** Replacement holder (includes stylus)



6 PNEUMATIC HAMMER HANDPIECE with DIAMOND TIPS

Creates a hammered, textured finish on gold and silver. Unit is lightweight and easy-to-handle. Adjustable stroke control conveniently located on the handpiece. Use handpiece at 90° angle to your work for best results and longest tip life. Top quality construction with knurled handle. Made in Italy.
No. **34.250** Hammer handpiece w/2 tips

Additional Diamond Tips:
No. **34.251** 2.4 mm
No. **34.252** 1.8/2.0 mm
No. **34.253** 1.3 mm
No. **34.254** Flat

GROBET USA™ SPEED CONTROLS

For use on all Grobet USA™ and other standard flexible shaft motors.

1 STANDARD FOOT PEDAL
Carbon resistance foot operated rheostat for infinitely variable motor speeds.
No. **34.322** 110 volt model
No. **34.322X** 220 volt model

2 ELECTRONIC FOOT PEDAL
Solid state control. Plastic housing.
No. **34.331** 110 volt model

3 ELECTRONIC FOOT PEDAL
Solid state control. Plastic housing.
No. **34.334** Dual volt I

4 ELECTRONIC FOOT/BENCH SPEED CONTROL
Solid state control. Use as a foot pedal or use the flip-up lever for manual bench control. Unit can be set for maximum speed. Plastic housing.
No. **34.330** 110 volt model
No. **34.330X** 220 volt model


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ACCESSORIES

5 GROBET USA™ JIFFY JIG
A convenient way to hold jewelers handpieces in place while performing cutting, grinding or polishing operations. The holder is placed in a vise and the handpiece is pulled through. The vise is then tightened and you're ready to go, leaving both hands free. Tools on the handpiece can be changed easily. Holds jewelers handpieces similar to No. 34.236.
No. **34.290**

DOUBLE HOOK HANGER
No. **34.613** (not shown)

6 ADJUSTABLE FLEX SHAFT HOLDER
Attaches to bench and adjusts from 26" to 41" (63 to 104 cm). Swivels for easy flex shaft use.
No. **34.611**

7 CHUCK KEY IN HANDLE
The bright red plastic handle is easy to spot and won't roll around the bench. You get a better grip, so changing tools is quicker and easier. The capped hollow handle provides a handy storage space for drills, burs, etc.
No. **28.212**
No. **28.211** Replacement key

FLEX SHAFT ACCESSORY KITS
Mounted accessories are on 3/32" (2.4 mm) arbors.

8 No. **34.590** 13 piece starter set

9 No. **34.602** 26 piece assortment

10 No. **34.603** 44 piece assortment


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1 HANDPIECE OIL
Recommended for all our flexible shaft hand pieces.
No. **34.345**



2 MAINTENANCE KIT
Includes tube of flexible shaft lubricant (grease) and a set of replacement motor brushes.
No. **34.344**



3 REPLACEMENT INNER SHAFT
For all Grobet flexshaft motors including series 595, 695, 795, and 995.
No. **34.352**



4 REPLACEMENT OUTER SHEATH
For all Grobet flexshaft motors including series 595, 695, 795, and 995.
No. **34.356**



MICROMOTORS

5 GROBET USA™ MICROMOTOR DUAL VOLT 110/220
With on/off foot pedal. Speed controlled by dial on control box. Control box actual size: 5" L x 3" H x 4" W (127 x 76 x 102 mm).
No. **34.555**



6 GROBET USA™ MICROMOTOR DUAL VOLT 110/220 with VARIABLE PEDAL
With on/off switch and a heavy-duty, variable speed foot pedal. Speed controlled by either dial on control box or foot pedal. Control box actual size: 6" L x 3½" H x 4½" W (152 x 89 x 114 mm).
No. **34.556**

Replacement Parts:
No. **34.5561** Replacement control box
No. **34.5552** Replacement handpiece

1 DEGREE GAUGES

Lightweight, sensitive gauges made of polished steel, with easy-to-read brass indexes. Non-adjustable.

No.	Graduations	Capacity
35.010	1/5 mm	150 mm
35.012	1/10 mm	150 mm

2 COMBINATION DEGREE GAUGE

With adjustable point for close tolerance work. 3/4" (19 mm) jaw. Graduations in 1/12 linges and 1/10 mm. Capacity 72 linges and 120 mm.
No. **35.014**

3 DEGREE GAUGE

With adjustable point for close tolerance work. Graduation in 1/10 mm. Capacity 150 mm.
No. **35.018**

4 DIVIDERS

For measuring distances between points and scribing circles or arcs. Spring action.

	Max. Opening		Legs	
No.	(in)	(mm)	(in)	(mm)
35.080	3 1/4"	83	3"	76
35.086	3 3/8"	86	4"	102
35.092	6 3/4"	171	6"	152

5 DIVIDERS

For measuring distances between points and scribing circles and arcs.
No. **35.0525** 4" (102 mm) long
No. **35.0526** 6" (152 mm) long

6 DIVIDER with ROUND LEGS

For measuring and scribing. Special, high quality construction and finishing. With solid nut. 3" (76 mm) legs.
No. **35.084**

7 MIDGET MICROMETER

Capacity 10 mm, by 0.01 mm. Only 2" (51 mm) long with small measuring faces.
No. **35.120**

8 STANDARD MICROMETER

Available with either inch or mm graduations, with friction stops. 4 3/8" (111 mm) long.

No.	Capacity	Graduations
35.124	25 mm	0.01 mm
35.126	1"	0.001"

9 MARK-A-SIZE

Enables you to accurately scribe cutting lines when reducing ring sizes. The 12 sizes are graduated in quarter ring sizes from 1/4 to 3. Mark and cut the correct size every time. Hardened steel with sharp edges. Fan folds when not in use to protect edges.
No. **35.0705**


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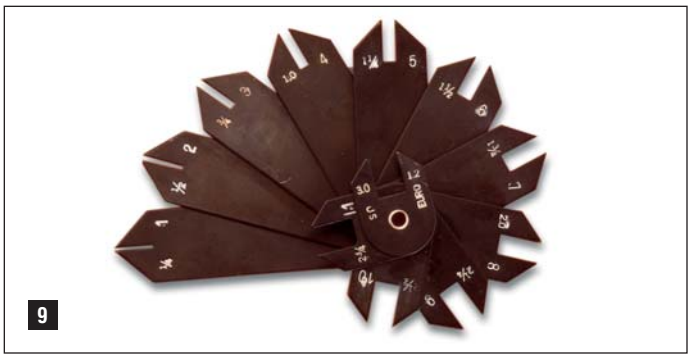

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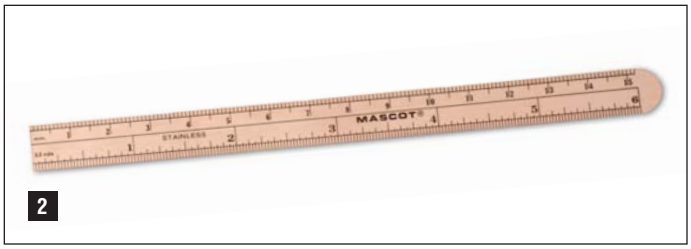

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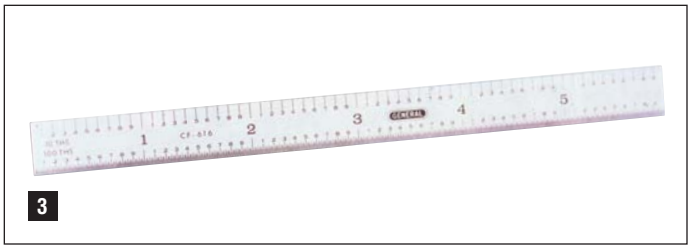

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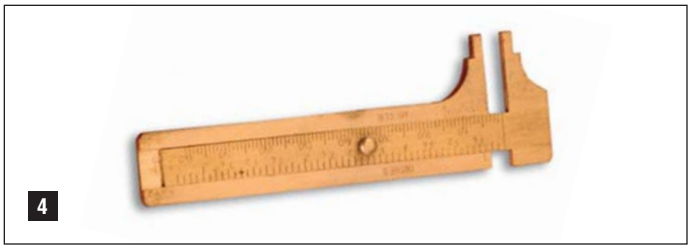
1 OPAQUE WHITE PLASTIC RULE
Graduated in millimeters across the top and 1/16" increments across the lower half.
No. **35.500** Length 6" (150 mm), width ½" (12.7 mm)
No. **35.502** Length 7" (180 mm), width 9/16" (14.3 mm)



2 STAINLESS STEEL FLEXIBLE RULE
Graduated in millimeters across the top and 1/32" increments across the lower half. All graduations are deeply etched. Overall length 6" (150 mm), width 1/2" (12.7 mm).
No. **35.510** Rule

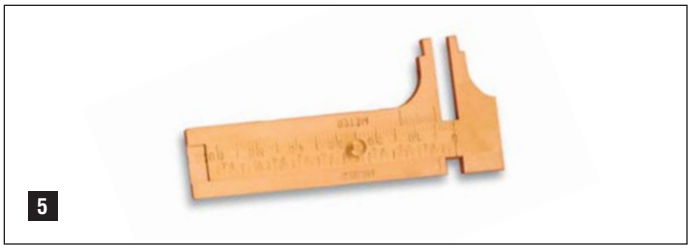


3 FLEXIBLE STAINLESS INCH RULE
Chromed, non-glare finish. Capacity 6", graduated by 1/10ths and 1/100ths on one side and 1/32nds and 1/64ths on the other side.
No. **35.512**

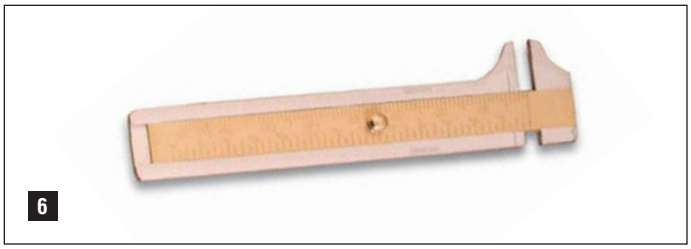


4 BRASS SLIDING GAUGE
Measures in inches and millimeters. Capacity 4" (100 mm).
No. **35.0204A**

5 BRASS POCKET SLIDING GAUGE
Combination inch and millimeter gauge. Capacity 2 1/4" (60 mm). Graduations by 1/4ths and 1.0 mm.
No. **35.152**



6 POCKET SLIDING GAUGES
Combination inch and millimeter gauges. Capacity 3" (80 mm). Graduations by 1/16ths and 1.0 mm.
No. **35.154** Brass and aluminum
No. **35.156** Brass



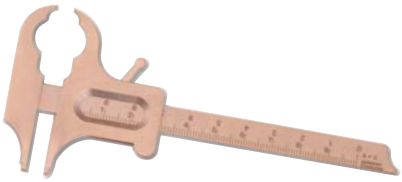
7 PRESIDIUM DIGITAL GEMSTONE GAUGE
Electronic digital gemstone gauge. Uses EBAT357. Range 000.00 mm to 025.00 mm zero reset button auto shut off when placed in case slipper measuring platform wedge-shaped points fixed rod.
No. **56.726**





8 PRESIDIUM DIAL GAUGE
The Presidium dial gauge incorporates the latest technology. Measurements are precise from 0.0 to 23.0 mm with 0.1 mm accuracy. Direct carat-weight reading on dial. Accuracy maintained with wear-resistant, hardened anvils. Reduces hand fatigue. Comes with polishing cloth, weight estimation table, instructions and accessory booklet.
No. **56.727**

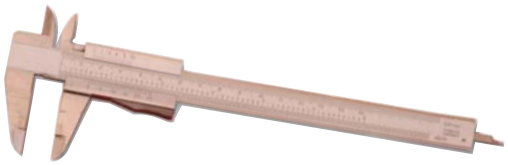
1 BOLEY STYLE SLIDING GAUGES with LOCKING LEVER
Millimeter gauges with capacity of 100 mm and vernier reading to 0.1 mm. Cut out jaws for measuring different shapes.
No. **35.170** Stainless steel
No. **35.171** Nickel silver


1

2 COLUMBUS STYLE VERNIER CALIPER
Economical quality gauge measures in metric and inch. Capacity 5" (125 mm). Vernier reads to 1/128" and 1/10 mm. Has thumb roller and locking screw. Jaws measure inside and outside and there is a depth gauge in the end.
No. **35.174**


2

3 STAINLESS VERNIER CALIPER
Well-made, precision gauge measures in metric and inch. Capacity 6 1/4" (155 mm). Vernier reads to 1/128" (1/20 mm). Thumb release locks in measurement. Glass-hard inside and outside jaws, with depth gauge in the end. Handy pouch included.
No. **35.178**


3

4 INSTANT READOUT PRECISION DIGITAL CALIPER
Made of stainless steel. Measures inside and outside in inches and millimeters. Capacity 0-6 inches with .001" resolution, or 0-150 mm with 0.01 mm resolution. Includes zero set button and depth measuring rod. Protective carrying case and battery included.
No. **35.180**


4

5 DIAL CALIPER
Made of stainless steel. Measures 0-6.5 inches.
Dial adds .001" to accuracy.
No. **35.181**


5

6 HIGH-IMPACT PLASTIC DIAL CALIPERS
Large 1 1/2" (38 mm) diameter dial makes it easy to read graduations. Jaws measure inside and outside and there is a depth gauge in the end. Available in either metric or inch models. Economical and lightweight.
No. **35.182** 6" capacity x 0.010"
No. **35.184** 152 mm capacity x 0.1 mm


6


1


2

FINGER GAUGES
Graduated in half sizes by US standards. Bright nickel-plated with easy-to-read numerals.

1 No. **35.260** Regular width, flat, economy model w/matte finish, sizes 1-15 **(use with ringstick 35.0193)**


3


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2 No. **35.0187** Wide width, flat, sizes 1-15.

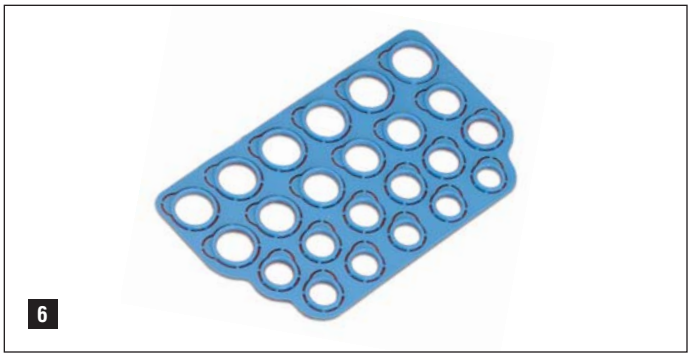
3 No. **35.263** Wedding band sizer, sizes 1 to 15.

4 No. **35.264** Wide band sizer, 6 mm, sizes 1 to 15.



5

5 PLASTIC FINGER GAUGE
An ideal "give-away" for potential customers to take home, to determine the correct finger size of recipient who cannot be present to be measured. A sure way to clinch the sale. Sold by the dozen.
No. **35.255**


6

6 PLASTIC FINGER GAUGE FORM
An inexpensive way for the jeweler to get correct ring sizes. Remove "size" from the form for an exact template to send to the manufacturer. Eliminates re-sizing problems caused by inaccurate ring sticks. Contains 23 sizes, from 2½ to 14, graduated in half sizes by US standards. Sold by the dozen.
No. **35.0895**

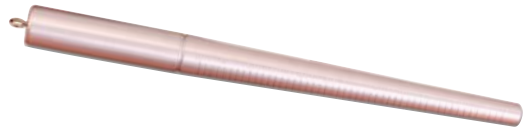

7

7 DELUXE RING SIZING SET
Creates an enjoyable ring sizing experience for your customers. Includes 25 individual finger gauges and a metal ring stick in an impressive gold finish. Finger gauges and ring stick are perfectly matched in graduated full and half sizes (U.S. standard sizes 1-13) to ensure an accurate and comfortable fit every time. Each ring has the finger size clearly marked on it and the ring stick features a knurled handle for an easy and comfortable grip. Presentation case included.
No. **35.301**

1 **HOLLOW METAL STICKS**
For measuring rings 1 to 15 in quarter sizes by US standards.
Has gauge to show length of material needed to make specific sizes of rings. Nickel-plated with wood handles. These lightweight, well-made sticks are available plain or with grooves for stone set rings.
No. **35.284** Grooved style
No. **35.286** Plain style



2 **ALUMINUM RING STICKS**
Made of solid aluminum, graduated in quarter sizes from 0 to 13.
No. **35.0192** With groove
No. **35.0193** Without groove



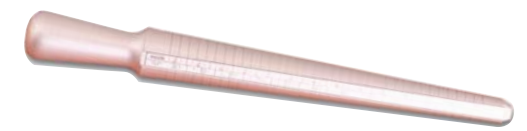
3 **RING STICK**
An economy ring stick for measuring rings in sizes 2½" to 14 in half sizes by US standards. Deep brass color.
No. **35.0194**



4 **WOODEN RING STICK**
Hardwood with easy-to-read sizes. Sizes 3 to 15 in half sizes.
No. **35.291**



5 **UNIVERSAL ALUMINUM RING STICK**
Measures by US and European ring sizes and shows diameter and circumference in millimeters. US sizes 2 to 15, graduated in quarter sizes. 10" (254 mm) long, without groove.
No. **35.0174**



6 **DELUXE PLASTIC RING STICK**
For measuring rings 1 to 15 in quarter sizes by US standards. Has gauge to show length of material needed to make specific sizes of rings. High quality and grooved to accept stone set rings.
No. **35.290**



7 **PLASTIC RING STICK**
Graduated in quarter sizes from 0 to 15. Economical, rigid plastic with groove for stone set rings.
No. **35.0194A**





1 JO-DI DIAMOND WEIGHT GAUGE
Computes weight of diamond without removing stone from mounting. Width and depth are measured with caliper and compared with measurements in table. For round and fancy shapes.
No. **35.551**
No. **62.01248** Book only



2 STONE and MOUNTING GAUGE
The holes in the gauge are used to measure stones, while the extensions are used to measure mountings. One side shows millimeters, the other side shows the corresponding carat measurements.
No. **35.558**

3 ACCURATE DIAMOND GAUGE
Folds to the size of a half-dollar. Measures round and baguette stones from 1/100 to 2 carats. Made of aluminum for long, durable service.
No. **35.560**



4 UNIVERSAL DIAMOND GAUGE
Contains 7 blades for measuring the most popular diamond shapes: round, baguette, square, pear and marquise stones. Stainless steel, high quality finished blades fold together within protective stainless steel case.
No **35.561**



5 K & B DIAMOND and STONE GAUGE
Aluminum pocket gauge for measuring loose stones and settings ranging from .03 to 4 carats. A birthstone chart is embossed on the reverse side.
No. **35.562**

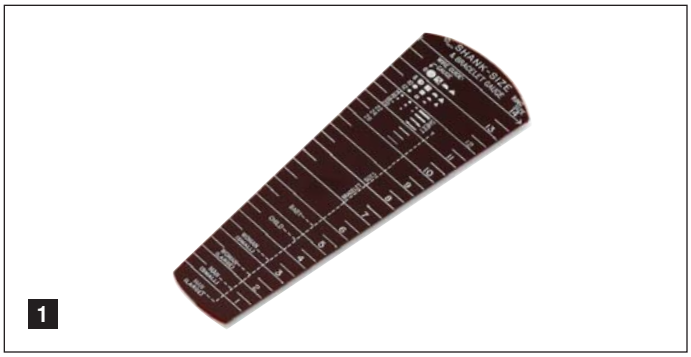


6 ANALOG STONE/PEARL GAUGE
This rugged gauge measures from 0-23mm with 0.1 accuracy. Made of stainless steel with large, easy-to-read numbers. Provides three different measuring methods and handles both inside & outside dimensions. Case included.
No. **35.564** Pearl gauge / Dial type



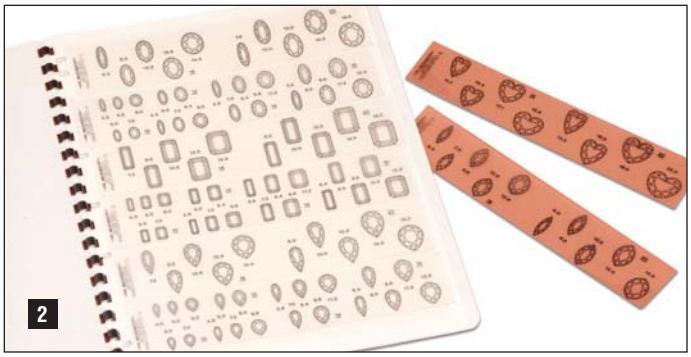
7 DIGITAL STONE/PEARL GAUGE
This easy-to-use three-button gauge is highly accurate, measuring in both millimeters (down to 2 decimal places) and inches (down to an amazing 3 decimal places). Range is 0-21mm (0-0.83"). Allows you to "zero" at any position. Features three different measuring methods and accommodates both inside & outside dimensions. Made of stainless steel with an impact-resistant, non-glare, gray plastic face. Replacement battery and case included.
No. **35.565** Stone gauge / Digital

1 **SHANK SIZE and BRACELET GAUGE**
All-purpose gauge for measuring flat stock for proper size ring and bracelet shanks. Ring sizes from 1 to 14; bracelets from baby's to large men's sizes. Wire gauge from size 6 to 26 in all shapes.
No. **35.0425**



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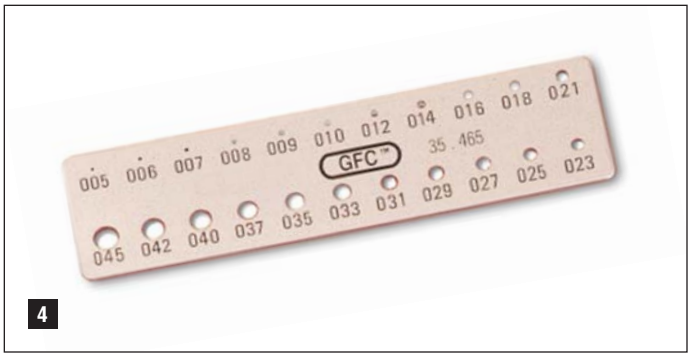
2 **MELEEMEETER™ LARGE STONE PROFILER**
Unsurpassed in helping the designer determine the most pleasing stone shape and size ratio, as well as for adjusting wax models before casting or ordering stones. Contains 168 shapes, sizes and length-to-width ratios for all the popular cuts: oval, pear, marquise, emerald, round, square and heart-shaped. Features bold outlines and gemologically correct facets for maximum visualization. The set consists of 12 rules in protective, easy access, white sleeves within a sturdy, vinyl binder.
No. **35.0455**


2

3 **MELEEMEETER™ MICROGAUGE SYSTEM**
Essential for gauging inaccessible mounted diamond melee. Eliminates measuring and computing of melee weights. Consists of 10 business card sized gauges, for use with magnification, with over 590 melee shapes and sizes placed around the edges for maximum accessibility. Contains gauge for Trillion diamonds, including weight formula. Comes in handsome solid brass card case.
No. **35.0450**

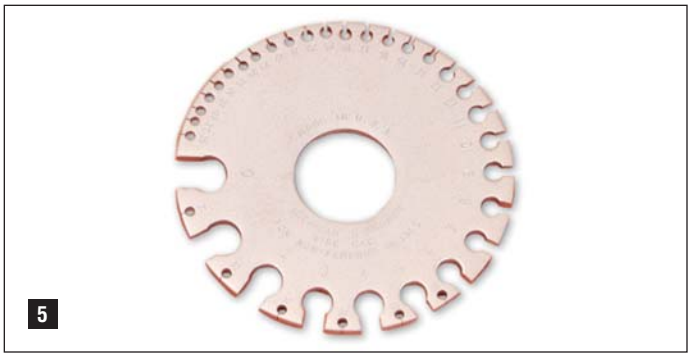

3

4 **BUR GAUGE**
A Swiss-made precision gauge of lightweight metal measures bur diameters in ISO sizes 005 to 045. Ruler on reverse for measuring up to 50 mm, in 1 mm increments.
No. **35.465**



4

5 **B & S GAUGE WIRE and DRILL GAUGE**
American standard for ordering wire and sheet sizes from 0 to 36. Decimal equivalents on the back. Imported, economical quality.
No. **35.568**


5

GROBET HIGH SPEED YELLOW TANG & CARBON STEEL GRAVERS

Suitable for use with all types of metals, wood, bone, ivory, onyx. Used by engravers, stone setters, die sinkers, jewelers, and watchmakers. Many of the gravers are stamped with both the graver # and the Swiss #. In those cases, both numbers are noted in the charts below.

Note: High-speed steel gravers have yellow tangs.





ONGLETTE





GRAVER #	5/0	4/0	3/0	2/0	0	1	2	3	4	5	6	7	8
CARBON STEEL	**36.113**	**36.114**	**36.115**	**36.116**	**36.117**	**36.118**	**36.119**	**36.120**	**36.121**	**36.122**	**36.123**	**36.124**	**36.126**
HIGH-SPEED STEEL	**36.259**	**36.261**	**36.263**	**36.265**	**36.267**	**36.269**	**36.270**	**36.271**	**36.272**	**36.273**	**36.274**	**36.275**	**36.276**
THICKNESS MM	1.16	1.24	1.35	1.45	1.58	1.78	1.94	2.16	2.54	2.74	2.94	3.14	3.36

LOZENGE





GRAVER #	3	4	6
CARBON STEEL	**36.163**	**36.164**	**36.166**
THICKNESS MM	1.75	2.00	2.50

FLAT





GRAVER #	36	37	38	39	40	41	42	43	45
SWISS #	2	4	6	10	12	14	18	20	24
CARBON STEEL	**36.136**	**36.137**	**36.138**	**36.139**	**36.140**	**36.141**	**36.142**	**36.143**	**36.145**
HIGH-SPEED STEEL	**36.277**	**36.278**	**36.279**	**36.280**	**36.281**	**36.282**	**36.283**	**36.284**	**36.285**
THICKNESS MM	.2	.4	.6	1.0	1.2	1.4	1.8	2.0	2.4

KNIFE





GRAVER #			1		2	3		
SWISS #			22		26	28		
CARBON STEEL			**36.151**		**36.152**	**36.153**		
HIGH-SPEED STEEL	**36.300**	**36.301**	**36.302**	**36.303**	**36.304**	**36.305**	**36.306**	**36.307**
THICKNESS MM	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2

SQUARE





GRAVER #	4	6	8	10
CARBON STEEL	**36.194**	**36.196**	**36.198**	**36.200**
THICKNESS MM	2.00	2.50	2.75	3.25

OVAL





GRAVER #	62	63	64	65
SWISS #	17	19	21	23
CARBON STEEL	**36.172**	**36.173**	**36.174**	**36.175**
THICKNESS MM	1.7	1.9	2.1	2.3

ROUND





GRAVER #	50	51	52	53	54	55		56	
SWISS #	2	4	6	10	12	14	16	18	20
CARBON STEEL	**36.180**	**36.181**	**36.182**	**36.183**	**36.184**	**36.185**	–	**36.186**	–
HIGH-SPEED STEEL	**36.289**	**36.290**	**36.291**	**36.292**	**36.293**	–	**36.294**	–	**36.295**
THICKNESS MM	.2	.4	.6	1.0	1.2	1.4	1.6	1.8	2.0

PRE-SHAPED GRAVERS

Genuine Grobet Swiss yellow tang Pre-Shaped GRAVERS!
The World's Standard:



FLAT EDGE

GRAVER #	36	37	38	–	39	40	41	–	42	43	45
SWISS #	2	4	6	8	10	12	14	16	18	20	24
GROBET #	**36.308**	**36.309**	**36.310**	**36.311**	**36.312**	**36.313**	**36.314**	**36.315**	**36.316**	**36.317**	**36.318**
THICKNESS MM	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00	2.40



ROUND EDGE

GRAVER #	50	51	52	–	53	54	–	20
SWISS #	2	4	6	8	10	12	16	20
GROBET #	**36.319**	**36.320**	**36.321**	**36.322**	**36.323**	**36.324**	**36.325**	**36.326**
THICKNESS MM	0.20	0.40	0.60	0.80	1.00	1.20	1.60	2.00



ONGLETTE

GRAVER #	5/0	4/0	3/0	2/0	0	1	2	3	4	5	6	7	8
SWISS #	–	–	–	–	–	–	–	–	–	–	–	–	–
GROBET #	**36.327**	**36.328**	**36.329**	**36.330**	**36.331**	**36.332**	**36.333**	**36.334**	**36.335**	**36.336**	**36.337**	**36.338**	**36.339**
THICKNESS MM	1.16	1.24	1.35	1.45	1.58	1.78	1.94	2.16	2.54	2.74	2.94	3.14	3.36



KNIFE

GRAVER #	–	–	1	–	2	3		
SWISS #	18	20	22	24	26	28	30	32
GROBET #	**36.340**	**36.341**	**36.342**	**36.343**	**36.34301**	**36.34302**	**36.34303**	**36.34304**
THICKNESS MM	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20



2 GROBET SWISS STEEL STRAIGHT LINING GRAVERS

Used for making parallel lines in backgrounds or for florentine finish. Defined by width of cutting edges and number of lines graver will cut at one stroke. The "width ref. #" is the factory reference corresponding to the size of the lines and space between them. To determine the size of the liner, find the size of the distance between the lines and multiply by the number of lines. Made in Switzerland. Sold individually.

No.	Width Ref. #	Number of Lines	Rows per cm	Distance Between Lines
36.240	10	6	80	.125 mm
36.242	10	8	80	.125 mm
36.245	12	6	67	.149 mm
36.246	12	8	67	.150 mm
36.248	12	10	67	.150 mm
36.249	14	6	57	.175 mm
36.24901	14	8	57	.175 mm
36.24902	14	10	57	.175 mm
36.250	14	14	67	.149 mm
36.251	16	6	50	.200 mm

No.	Width Ref. #	Number of Lines	Rows per cm	Distance Between Lines
36.252	16	8	50	.200 mm
36.254	16	10	50	.200 mm
36.25401	16	14	57	.175 mm
36.25402	18	6	44	.227 mm
36.255	18	8	44	.227 mm
36.256	18	10	44	.227 mm
36.257	20	6	40	.250 mm
36.258	20	8	40	.250 mm
36.260	20	10	40	.250 mm



1

SET of E.F.B. GRAVERS

Set of six shapes, with handles, in hardwood case. Made of the best tool steel, sharpened and ready for use. Famous for their pattern and special shape, designed to fit into E.F.B. handles. Overall lengths are 3⅞" (98mm). Made in USA.
No. **36.100**

INDIVIDUAL E.F.B. GRAVERS

No.	E.F.B. Number
36.101	1
36.102	3
36.103*	38
36.104	40
36.105	41
36.106	121
36.107	154

**Not included in set.*



2

2 SET of TURNING GRAVERS

For turning or pivoting items on small lathes. Available in set of ten or set of six different shapes, fitted with wood handles. Made of tool steel with finished ground points.
No. **36.800** Set of 10
No. **36.804** Set of 6



3

3 WALLER CARBIDE GRAVER SET

Designed to place all the requirements for efficient, low-priced, high speed engraving at your fingertips. The sharp carbide tool responds instantly to the slightest pressure. Light strokes have a polishing or honing action. The tap is charged as you use it. The set is mounted on a polished hardwood block and consists of 4 graver bits (2 with handle), lapping wheel and arbor, diamond compound container, Dyna-Lube compound stick and impregnator.
No. **36.808** Waller carbide graver set
No. **11.152** Replacement diamond compound only
No. **11.153** Replacement Dyna-Lube compound only
No. **11.154** Replacement lap and arbor only
No. **11.155** Replacement lap only
No. **36.820** Replacement handle and graver bit
No. **36.824** Replacement graver bit



4

4 BURGESS VIBRO-GRAVER

This rugged industrial quality engraving tool makes permanent markings on the hardest steel, glass, plastic, stone, wood, or almost any surface. Used extensively by jewelers to make background effects on jewelry. Features a durable, tungsten carbide engraving tip, positive on-off switch, and spark-free motor that vibrates at 7200 strokes per minute. The calibrated adjustment dial changes length of stroke and depth of mark. A diamond tip is available as an accessory.
No. **36.860** 110 volt model
No. **36.860X** 220 volt model
No. **36.862** Replacement tungsten carbide tip
No. **36.863** Replacement diamond tip

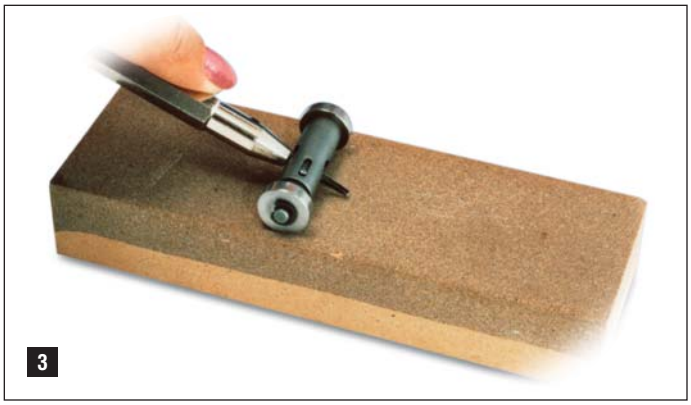
1 **GRAVER SHARPENER**
Graver is placed in either of two angled openings and rolled over flat oilstone to sharpen (oilstone not supplied). Measures 2 1/8" x 1 3/8" (54 x 35 mm).
No. **36.884**


1

2 **CROCKER PATTERN GRAVER SHARPENER**
Graver can be set to any angle and sharpened by setting index. Holds graver edge in position while honing on oilstone (not supplied).
No. **36.880**


2

3 **GRAVER SHARPENER**
The elongated shield holds the graver in an immovable position during the sharpening action. Gravers can be sharpened at any angle. Screw on top locks graver and also serves as finger rest.
No. **64.2462**


3

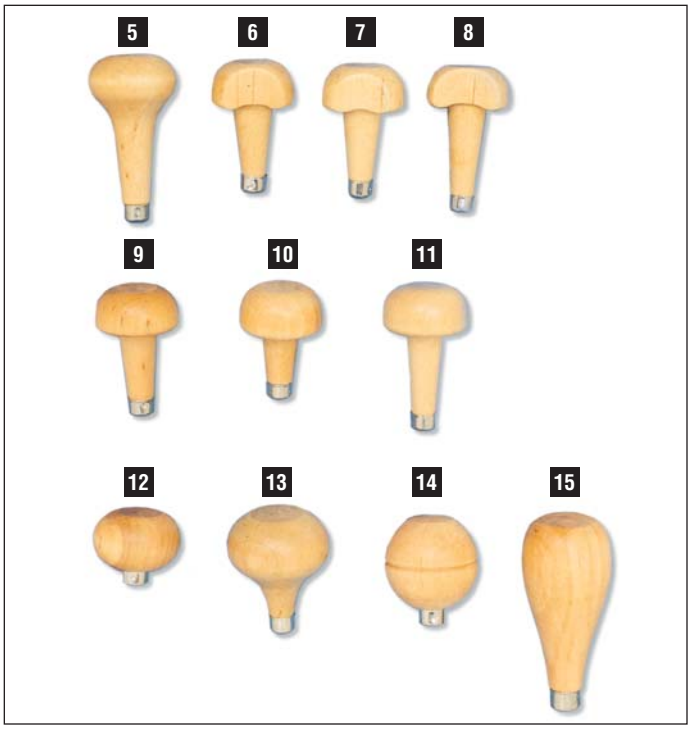
4 **E.F.B. GRAVER HANDLES**
Made of finely finished hardwood. Graver slips into groove of handle and is held securely by metal sleeve. Especially for E.F.B. style gravers.
No. **37.850** For double end gravers
No. **37.851** For single end gravers


4

GRAVER HANDLES

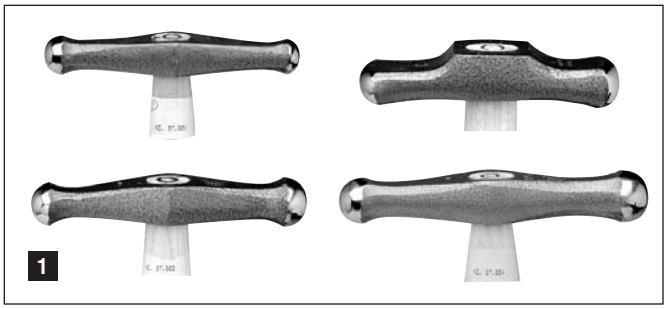
	No.	Style	Diameter x Length (in)	(mm)
5	**37.856**	Gourd	1 5/16" x 2 1/2"	33.3 x 63.5
6	**37.857**	Half Head	1 3/8" x 2"	34.9 x 50.8
	37.858*	Half Head	1 3/8" x 1 3/8"	34.9 x 34.9
7	**37.859**	Half Head	1 3/8" x 1 3/4"	34.9 x 44.5
8	**37.860**	Half Head	1 1/4" x 2 1/4"	31.8 x 57.2
9	**37.865**	Mushroom	1 1/4" x 2"	31.8 x 50.8
10	**37.867**	Mushroom	1 1/4" x 1 3/4"	31.8 x 44.5
11	**37.868**	Mushroom	1 1/4" x 2 1/4"	31.8 x 57.2
12	**37.870**	Oval	1 5/16" x 1"	33.3 x 25.4
13	**37.872**	Pear	1 5/8" x 1 7/8"	41.3 x 47.6
14	**37.874**	Round	1 3/8" x 1 5/8"	34.9 x 41.3
15	**37.877**	Vase	1 3/8" x 3"	34.9 x 76.2

** Not shown.*



SILVERSMITHS, PLANISHING, EMBOSSING & RAISING HAMMERS

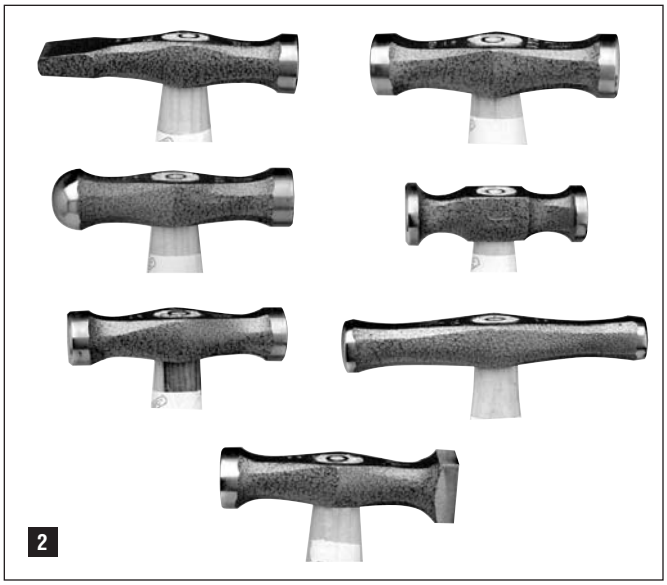
Precision ground and hardened, each hand-forged steel head has highly polished tips and is mounted on a hickory handle. Each hammer is well balanced and offers efficiency and precision. The finest hammers available!



1 SILVERSMITHS' HAMMERS

Premium quality hammers are ideal for all types of metal work. Suitable for a wide range of applications.

No.	Weight (oz)	Weight (g)	Length (in)	Length (mm)	Small End (in)	Small End (mm)	Large End (in)	Large End (mm)
37.301	7	199	4½"	114	9/16"	14	1 1/16"	17
37.302	10	284	5"	127	13/16"	21	7/8"	22
37.303	14	397	4 5/8"	117	1¼" x 5/8"	32 x 16	1¼" x 7/8"	32 x 22
37.304	17	482	5¾"	146	13/16"	21	1"	25

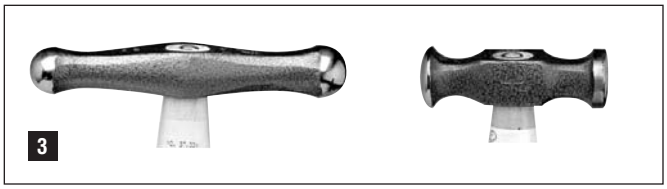


2 PLANISHING HAMMERS

Ideal for flattening, shaping, smoothing or finishing surfaces. Can also be used for forming faceted and glittered effects on metal.

No.	Weight (oz)	Weight (g)	Length (in)	Length (mm)	Small End (in)	Small End (mm)	Large End (in)	Large End (mm)
37.329	13	369	4¾"	121	1⅛"	27	1¼" x 5/16"	32 x 8
37.330	14	397	4	111	1"	25	1⅛"	29
37.331	14	397	3¾"	95	7/8"	22	15/16"	24
37.332	12	341	4⅛"	105	1"	25	1 1/16"	27
37.333	7	199	3"	76	15/16"	24	1"	25
37.334	13	369	5½"	140	7/8" x ¾"	22 x 19	1" x 7/8"	25 x 22

No.	Weight (oz)	Weight (g)	Length (in)	Length (mm)	Square (in)	Square (mm)	Round (in)	Round (mm)
37.335	13	369	4⅛"	105	1" x 1"	25 x 25	1" Dia	25



3 EMBOSSING HAMMERS

Elevates position of the surfaces when driven against the inner walls of raised work. Can also be used for planishing.

No.	Weight (oz)	Weight (g)	Length (in)	Length (mm)	Small End (in)	Small End (mm)	Large End (in)	Large End (mm)
37.336	14	397	5¾"	146	13/16"	21	1"	25
37.350	7	199	3"	76	15/16"	24	1"	25



4 RAISING HAMMERS

Used for forming the basic shapes of items in the early stages.

No.	Weight (oz)	Weight (g)	Length (in)	Length (mm)	Small End (in)	Small End (mm)	Large End (in)	Large End (mm)
37.417	8	227	4¾"	121	¾" x 3/16"	19 x 5	7/8" x ¼"	22 x 6

No.	Weight (oz)	Weight (g)	Length (in)	Length (mm)	Both Ends (in)	Both Ends (mm)
37.418	18	511	4¾"	121	1 1/16" x ¼"	27 x 6

No.	Weight (oz)	Weight (g)	Length (in)	Length (mm)	Small End (in)	Small End (mm)	Large End (in)	Large End (mm)
37.419	8	227	4⅜"	111	13/16" x 3/8"	21 x 10	7/8" x 3/8"	22 x 10
37.420	8	227	4⅜"	111	1⅛" x ¼"	29 x 6	1¼" x 3/8"	32 x 10
37.421	8	227	4½"	114	1 3/16" x 3/16"	30 x 5	1¼" x ¼"	32 x 6
37.422	7	199	3⅝"	92	¾" x ¾"	19 x 19	7/8" x 7/8"	22 x 22
37.423	9	255	5⅜"	137	9/16" x 3/16"	14 x 5	7/8" x 9/16"	22 x 14

All hammers have handles.
Head measurements are approximate.
Weights indicated are for heads only.

1 ECONOMICAL QUALITY BALL PEEN HAMMERS

Hammers with one flat end and one round end are used for flattening, shaping or removing dents. Hardwood handles are comfortable for extended use. Overall length 10".

No.	Head Length (in)	Head Length (mm)	Head Weight (oz)	Head Weight (g)
37.110	1⅞"	48	1	28
37.112	2"	51	2	57
37.114	2⅝"	67	4	113
37.118	3¼"	83	8	227



2 MASTER QUALITY BALL PEEN HAMMERS

High quality carbon steel, ball peen hammer provides extra strength for driving chisels and punches. Overall length 10".

No.	Head Length (in)	Head Length (mm)	Head Weight (oz)	Head Weight (g)
37.122	2"	51	2	57
37.124	2¾"	70	4	113



3 MASTER QUALITY CHASER'S HAMMERS

Master quality hammers have one large smooth face for striking chasing tools or planishing metal, and one round end for riveting or peening. Forged steel heads are mounted on round or pistol-type hardwood handles.

Face Diameter (in)	Face Diameter (mm)	Round Handles	Pistol Handles
¾"	19	**37.170**	—
1"	25	**37.174**	**37.184**
1⅛"	29	**37.176**	**37.186**
1¼"	32	**37.178**	**37.188**



4 HANDLES FOR MASTER QUALITY CHASER'S HAMMERS

Hardwood handles are lightweight and comfortable.

No. **37.891** Pistol for 1"-1¼" face diameter
No. **37.892** Round for 1"-1¼" face diameter
No. **37.893** Round for ¾"-⅞" face diameter





1 CHASER'S HAMMERS

Economical quality hammers designed for silversmiths and ideal for craftsmen. Flat head is used to flatten, shape and form objects, or strike chasing tools. Round end is for forming decorative patterns and designs. Complete with hardwood handles.

No. **37.0365** 1" (25 mm)
No. **37.0366** 1⅛" (29 mm)
No. **37.0367** 1¼" (32 mm)



2 HANDLES for CHASER'S HAMMERS

Choose from a variety of handles that fits your comfort level.

No. **37.0410** Pistol
No. **37.0411** Round
No. **37.0412** Oval

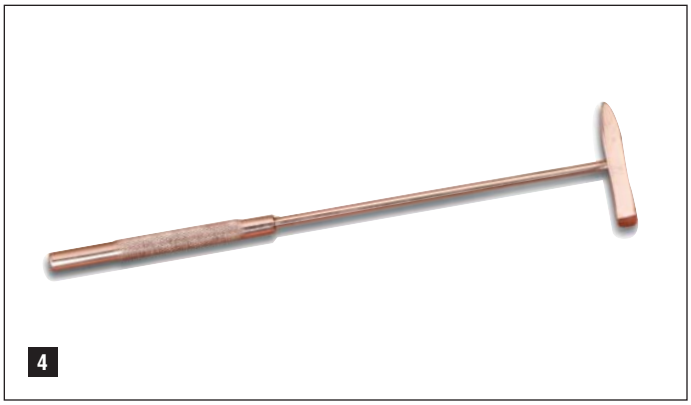


3 RIVETING HAMMER

Riveting hammer, with a flat end and chisel end for forming and riveting. Drop forged, polished head is mounted on select hardwood handle.

No.	Face Diameter (in)	Face Diameter (mm)	Head Stamped	Head Length (in)	Head Length (mm)	Head Weight (oz)	Head Weight (g)
37.212*	5⁄16"	8	-	3"	76	2	57
37.216	½"	13	0	3⅝"	92	4	113
37.218	½"	13	1	4"	102	5	142
37.220	⅝"	16	2	4¼"	108	7	199

**Economical quality*



4 RIVETING HAMMER

General utility hammer with chisel formed end for spreading rivet heads. Supplied with a metal handle. Overall length 9", head length 2 13⁄16".

No. **37.0362**

1 GOLDSMITHS' HAMMER

Sturdy hardwood-handle hammers feature a round flat end and chisel-shaped end. Perfect for riveting and shaping.

No.	Face Diameter (in)	Face Diameter (mm)	Head Length (in)	Head Length (mm)	Head Weight (oz)	Head Weight (g)
37.0409	5/8"	16	3½"	89	4	113



2 WATCH-MAKING HAMMERS

Hardwood hammers with steel heads have a chisel shaped end for riveting and a flat end for light duty work.

No.	Head Length (in)	Head Length (mm)
37.240	2¼"	57
37.242	2½"	64
37.244	2¾"	70
37.246	3"	76



3 BRASS HEAD MALLET

Well balanced handle is lightweight for just the right amount of spring.

No.	Face Diameter (in)	Face Diameter (mm)	Head Length (in)	Head Length (mm)	Head Weight (oz)	Head Weight (g)
37.530	½"	13	2"	51	2	57



4 BRASS and FIBER MALLET

Mallet is supplied with one flat brass head and one fiber head.

No.	Head Length (in)	Head Length (mm)
37.0181	2"	51
37.534J	2½"	64





1 MALLETS with DETACHABLE FACES

Versatile hammer with interchangeable faces to provide any combination desired. Supplied with two different faces and wrench to tighten or remove collars.

No.	Faces	Face Diameter (in)	Face Diameter (mm)	Head Length (in)	Head Length (mm)	Head Weight (oz)	Head Weight (g)
37.534	Brass/Fiber	9/16"	14	2"	51	2½	71
37.536	Brass/Nylon	9/16"	14	2"	51	2½	71
37.582	Brass/Fiber	5/8"	16	2⅝"	67	5	142
37.584	Brass/Nylon	5/8"	16	2⅝"	67	5	142

Replacement Faces

Type	For 2½ oz. (71 g) Head	For 5 oz. (142 g) Head
Brass	**37.550**	**37.590**
Fiber	**37.551**	**37.591**
Nylon	**37.552**	**37.592**



2 PLASTIC MALLET

These durable non-porous mallets are great for those delicate jobs - will not scratch or mar and reduces shock on impact. The plastic head can be refaced by filing and sanding.

No.	Face Diameter (in)	Face Diameter (mm)	Head Length (in)	Head Length (mm)	Head Weight (oz)	Head Weight (g)
37.646	1⅜"	35	3½"	89	—	—
37.707	1¼"	32	3"	76	4	113
37.708	1½"	38	3½"	89	6	170



3 BOXWOOD MALLET

Made of the finest quality boxwood, one of the hardest woods available. These mallets are excellent for removing dents and straightening and flattening metals. Mounted on seasoned wood handle.

No.	Face Diameter (in)	Face Diameter (mm)	Head Length (in)	Head Length (mm)	Head Weight (oz)	Head Weight (g)
37.0183	1"	25	2⅝"	70	—	—



4 RAWHIDE MALLETS

Heads are made of the finest quality rawhide embedded in shellac for added durability. Mounted on hardwood handle. Will not mar or scratch.

No.	Style No.	Face Diameter (in)	Face Diameter (mm)	Length (in)	Length (mm)	Head Weight (oz)	Head Weight (g)
37.700	0	1"	25	2⅛"	54	2	57
37.701	1	1¼"	32	2¾"	70	4	113
37.702	2	1½"	38	3"	76	6	170
37.703	3	1¾"	44	3⅛"	79	9	255
37.704	4	2"	51	3¼"	83	11	312

LAMPS

Suitable for workshop or desktop use. Fluorescent lighting provides ample "daylight" illumination. The "floating arm" design requires only a slight touch to raise, lower or tilt, directing the light source quickly and efficiently onto your work. The lamps are all metal construction and have a universal base for horizontal or vertical mounting.

1 DAZOR BENCH LIGHT

Illumination and fume extraction. Whisper quiet integrated powerful motor extracts smoke and fumes from soldering work station. Charcoal filter absorbs fumes efficiently while 22 watt fluorescent circline lamp provides cool energy saving bright white light. Separate switches activate lamp and fume extractor - together or independently. Adjustable articulated arm system. Replaceable filters - 1 extra supplied.

Standard Features:

- 45" long reach
- VC-6 - adjustable clamp
- 22 watt Circline lamp
- Motor removes 110 CFM
- GE's XJB scratch/static resistant shade

No. **13.122**



1

2 DAZOR BENCH LAMPS

Classic bench lamps clamp easily to any bench or desk. The floating arm is easily moved and positioned to facilitate maximum efficiency, convenience, and comfort. Available as either a 2 or 3 bulb lamp. Color: Dove Gray. Supplied with 15 watt daylight bulbs.

No. **13.132** Two bulb lamp
No. **13.133** Three bulb lamp
No. **13.144** Replacement 15 watt bulb



2

3 DAZOR INSPECTION LAMPS

Illuminated magnifier provides hands-free viewing and allows you to see greater detail while reducing eye strain. This clamp-on lamp provides a 13" focal length, and the 3 diopter lens magnifies an object by 75%. The floating arm requires only a slight touch to raise, lower, or tilt. Color: Dove Gray. Supplied with a 22 watt circline fluorescent bulb.

No. **13.102**
No. **13.140** Replacement 22 watt circline bulb



3



1 OTT-LITE® TRUECOLOR™ SWIVEL LAMP
A TrueColor™ lamp delivers the natural color of daylight to your bench. Just raise the flip up arm and turn it on! This lightweight, compact lamp swivels 360 and comes with a carry handle and 13-watt fluorescent TrueColor™ bulb. Great for stone grading and color matching.
No. **13.501**
No. **13.510** 13 watt replacement tube



2 OTT-LITE® TRUECOLOR™ MAGNIFIER LAMP
2x built in magnifier is ideal for close detail work! Features 360 swivel and provides natural daylight to your bench or work area.
No. **13.502**
No. **13.510** 13 watt replacement tube



3 18 WATT OTT-LITE® TRUECOLOR™ FLEXARM PLUS FLOOR LAMP
This new floor lamp features TrueColor™ natural daylight color. Flexible goose neck swivels a full 360° and is easy to direct light right onto your work. Adjustable arm adjusts up to 48" tall and has a 21" reach.
No. **13.503**
No. **13.511** 18 watt replacement tube



4 ECONOMY BENCH LAMP
Two 15-watt fluorescent bulbs. Clamps easily onto a bench or desk. The arm has a 45" (114 cm). Convenience outlet in base.
No. **13.170** White
No. **13.144** 15 watt replacement tube

HOW TO SELECT MAGNIFIERS

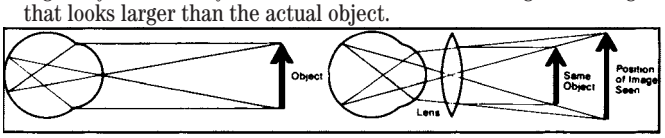
Precision work routinely requires magnification to increase the visual size of objects. As the eye comes closer to an object, the apparent size and detail is increased. However, the ability of the eye to focus correctly diminishes at distances closer than 10" (254 mm). Use of a magnifier provides increased focusing power, resulting in the visual effect of a clearer, larger image of the object.

FOUR CHARACTERISTICS of MAGNIFIERS:

1. Power of Magnification

The ability of the lens to increase the visual size of an object. The symbol X (times) is used to identify this factor. For example, a 3X magnifier triples the size of an image.

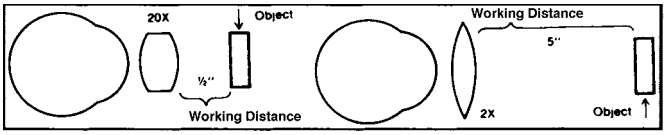
- Light rays are bent by the curved lens surface resulting in an image that looks larger than the actual object.



2. Working Distance (Focal Length)

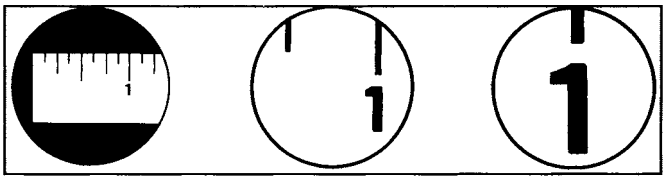
In addition to power, a magnifier will also be classified for working distance. For example, 2X at a working distance of 5" (127mm), means that the magnifier will provide double magnification and be in clear focus when held at a distance of 5" (127mm) from the object.

- The amount of space between the object and the magnifier; the shorter the working distance, the higher the power.



3. Field of View

The size of the area that is seen through the magnifier; the field of view decreases as the power increases.



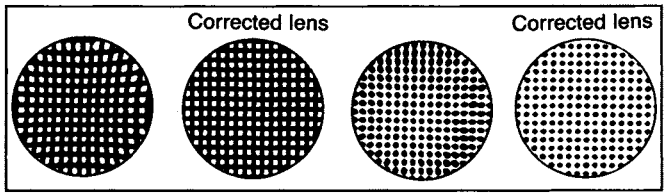
4. Depth of Field

The distance that a magnifier can be moved from an object and still have the object in focus; the higher the power, the shorter the depth of field.

CORRECTIVE MAGNIFIERS

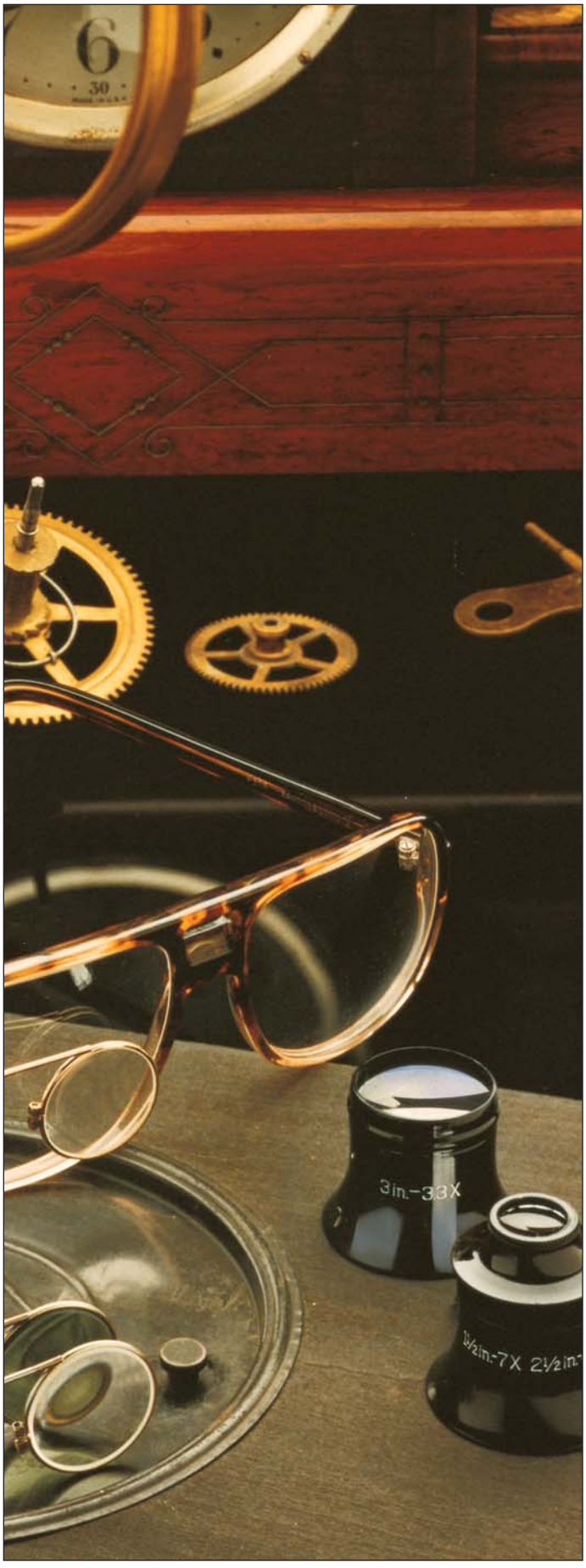
Certain magnifiers have lens systems which correct optical distortion or aberration that might otherwise be present as follows:

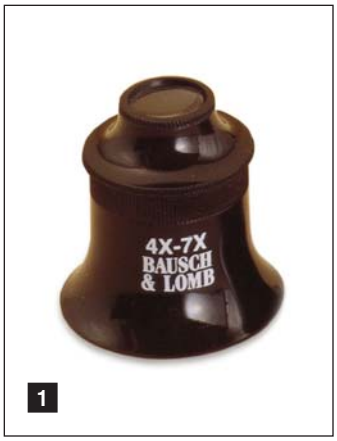
- Distortion Uncorrected lens-"straight lines" curve toward center
- Chromatic and Spherical Aberration Uncorrected lens-size and shape differences occur in a pattern consisting of one size dot.



COMMON TERMS

Achromatic	Lens that eliminates chromatic aberration.
Aplanatic	Lens that corrects for spherical aberration and coma.
Chromatic Aberration	Inability of a lens to focus light of different colors at a point.
Coma	Blurry appearance around an object viewed through uncorrected lens.
Corrected	Lens system that corrects for distortions and aberrations to produce a sharp image.
Spherical Aberration	Lens defect that produces an image that lacks contrast.

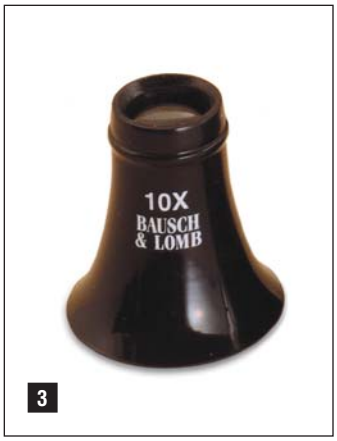




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BAUSCH & LOMB LOUPES

Long recognized for excellence and quality in optics.

1 B & L DOUBLE LENS LOUPES

Provides two magnifications in a single loupe. Front end screws off when not needed.

No.	Working Distance	Power
29.080	2½" & 1¼"	4X, 8X
29.081	1¼" & ½"	8X, 18X

2 B & L SINGLE LENS LOUPES

Feather-light frames with soft black interior surfaces. Lenses are carefully ground and polished from the best optical glass.

No.	Working Distance	Power
29.130	1"	10X
29.131	1½"	7X
29.132	2"	5X
29.133	2½"	4X

3 B & L TRIPLE APLANATIC

Lens has received the best possible optical correction to make viewing free of distortion and color blurring. Recommended for critical inspection. Working distance 1", power 10X.
No. **29.075**

4 B & L ENGRAVERS' MAGNIFIER

With a distortion-free, flat field view necessary for tool and die making, engraving, biological work, etc. Semi-achromatic lens is mounted in plastic frame. Lens diameter 1⅝", working distance 3", power 3½X.
No. **29.205**

5 LOUPE HOLDER

Spring metal clip attaches to eye loupe so that it can be worn on spectacle frame.
No. **29.193**

6 B & L HEADBAND

Elastic band with velcro adjustment. Fits all watchmakers' loupes.
No. **29.162**

7 B & L CLASSIC METAL SPECTACLE LOUPES

Made with precision optical glass. Available in single or double lens configurations. Side shield adapter kit provided for use with safety eyewear and shields. Improved mounting system for more secure attachment. High quality case provided to protect your investment.

No.	Working Distance	Power
29.164	1½"	7X
29.165	2"	5X
29.166	2½"	4X
29.167	3½"	3X
29.168	2½" & 1½"	3X, 5X
29.169	3½" & 2"	4X, 7X

BAUSCH & LOMB MAGNIFIERS

1 B & L POCKET HASTINGS

A triplet lens system for correcting spherical and chromatic aberrations. Eliminates color degradation and puts every part of the wide field of view in sharp focus. One of the most highly corrected magnifiers available.

No.	Working Distance	Power
29.260	1½"	7X
29.261	1"	10X
29.262	¾"	14X
29.263	½"	20X

B & L POCKET CODDINGTONS

Though only a single lens magnifier, it's special construction, with a grooved diaphragm around its circumference, gives a good, distortion-free definition of the object being viewed.

No.	Working Distance	Power
29.242	1"	10X
29.243	¾"	14X
29.244	½"	20X

2 B & L ILLUMINATED POCKET CODDINGTON

A standard Coddington mounted on a handle which houses two penlite batteries (not included). Light shines through lens to illuminate object being viewed. 1" working distance, 10X magnification.
No. **29.268**

3 B & L MEASURING MAGNIFIER

A must for technical craftsmen who require precise measurements. Has 7X Hastings lens that can be adjusted for exact focusing. Maximum available light is admitted through the clear plastic body. Magnifier is supplied with durable storage case. Use with scale Nos. 29.209 through 29.212 below. Scale sold separately.
No. **29.208**

4 B & L LENSCOPE

A hand-held tool for virtually any type of precise measurement or examination, featuring a choice of two interchangeable Hastings triplet lenses, 7X or 10X, distortion-free image, two illumination lamps, 45° or 90° from the viewing angle (batteries not included) and hinged-top storage case.

No.	Description	Power
29.203	Magnifier	7X
29.204	Magnifier	10X
29.206	Lens Only	7X
29.207	Lens Only	10X

5 SCALES for B & L MEASURING MAGNIFIER and 7X LENSCOPE

Four interchangeable, photo-metallic, glass measuring scales are available for use with the 7X lenscope (No. 29.203) and measuring magnifier (No. 29.208). They enable you to measure fractional inches, centimeters, angles and radii. Actual size of the scales is 1" (25 mm) in diameter.

No. **29.209** General purpose scale for measuring radii from 1/16" to 3/8"; angles in single degrees to 90°; 0.005", and 0.1 mm scales; line widths of 0.001", 0.002", and 0.003"
No. **29.210** Metric scale to 20 mm in .1 mm increments

6 B & L ILLUMINATED STAND MAGNIFIER

The 2X lens measures 4" x 2" (102 x 51 mm) and incorporates a 6X bifocal inset. It can be tilted for working on or inspecting small objects. The 7-watt bulb operates on 110 volt.
No. **29.306**

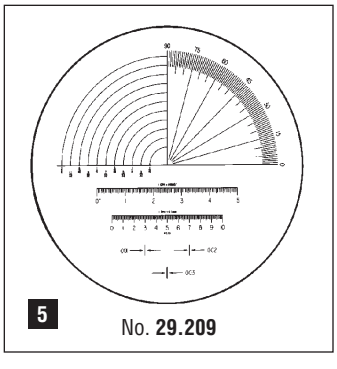

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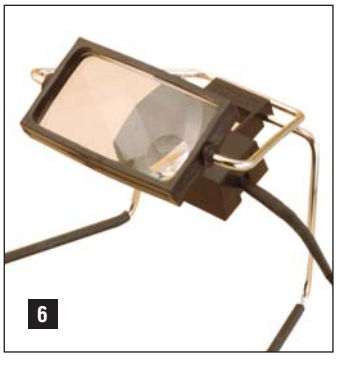

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5 No. **29.209**


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BAUSCH & LOMB MAGNIFIERS

1 B & L POCKET MAGNIFIER with ATTACHED LEATHER CASE

Lens is 2" diameter, 2X power, with working distance of 5" for reading and inspecting.
No. **29.282**

2 B & L POCKET MAGNIFIERS in PLASTIC CASE

Two or three lenses can be used singly or in combination. Lenses are mounted in durable lightweight black plastic frames which fold into attached case. Working distances from 1/2" to 3 1/2", depending on magnification.

No.	Lenses	Power
29.280	2	3X, 4X (7X)
29.281	3	5X, 7X, 9X (20X)
29.283	2	5X, 7X (12X)
29.284	1	4X
29.286	2	4X, 5X (9X)

3 B & L RECTANGULAR READER

Scientifically designed, lightweight, 2X aspheric lens assures edge-to edge clarity. The 2" x 4" lens is mounted in the ergonomically designed handle which conforms to the shape of the hand. Acrylic lens.
No. **29.300**

4 B & L MINI-LITE MAGNIFIER

Handy 3 1/2X magnifier with thumb-switch illumination for low-light subjects. Viewing area is 1 1/4" x 1 1/4". Durable black case measures 4 3/4" x 1 1/2". Acrylic lens.
No. **29.307**

5 B &L FOLDING ILLUMINATED MAGNIFIER

With built-in light powered by two AAA batteries (included). Unique handle swings open for use. 2" x 4", 2X power aspheric lens for clarity.
No. **29.301**

6 B & L PACKETTE MAGNIFIER

The hard plastic cover snaps open, clicks shut and acts as the handle. Just slightly larger than a pack of matches. 2", 5X power asperic lens for clarity.
No. **29.360**

7 B & L COMPACT LIGHTED MAGNIFIER

Illuminated 2X power magnification in a convenient size, perfect for pocket, briefcase, purse. Take it anywhere. Stores in its own protective case. Push the button once to release the large 2" lens, then push it again to turn on the lamp. Includes two AAA batteries.
No. **29.362**

LOUPES

1 PRECISION LOUPES

These are high-quality chrome with rubber grips, Hastings 10X, Triplet Loupes. A Hastings Triplet consists of a high-quality, corrected magnifier composed of three lens elements cemented together to form a single lens. The unmatched clarity of our triplet loupes is further enhanced by black, outer lens edges which eliminates color distortion. All loupes come in a hard leather case. Loupes are available in a variety of colors and with a nonslip, rubber grip. Sold individually.

18 mm Oval Triplet (10X) with Rubber Grips
29.601 White Pearl
29.602 Blue Lapis
29.603 Black Marble

21 mm Hexagon Triplet (10X) with Rubber Grips
29.604 White Pearl
29.605 Blue Lapis
29.606 Black Marble



1

2 DOUBLE LENS SPECTACLE LOUPES

Metal clamp slips on and off without removing glasses. Fits all wire and plastic eyeglass frames. The two lenses can be used individually or in combination.

No.	Working Distance	Power
29.751G	1½" & 1"	7X, 10X
29.310G	2" & 1"	5X, 10X
29.739G	2½" & 1"	4X, 10X
29.311G	2½" & 1½"	4X, 7X
29.749G	2½" & 2"	4X, 5X
29.312G	3" & 2"	3⅓ X, 5X
29.313G	3½" & 2"	3X, 5X


2

3 SINGLE LENS SPECTACLE LOUPES

Single lens with clamp fits all wire and plastic eyeglass frames and swings up when not in use.

No.	Working Distance	Power
29.738G	1"	10X
29.320G	1½"	7X
29.321G	2"	5X
29.322G	2½"	4X
29.323G	3"	3⅓X
29.324G	3½"	3X
29.325G	4"	2½X
29.326G	5"	2X


3



1

1 PEER® 10X TRIPLET MAGNIFIERS

A triplet lens system for correcting spherical and chromatic aberrations. Eliminates color degradation and puts every part of the wide field of view in sharp focus. One of the most highly corrected magnifiers available.
No. **29.670** Black satin
No. **29.672** Gold
No. **29.674** Chrome

2 B & L LINEN TESTER

Fixed focus 5X pocket glass is an all purpose magnifier. Derives its name from its use by textile experts to count threads in fabric.
No. **29.571**



2



3

3 PEER® LINEN TESTER

Although deriving its name from the textile industry, it can be used anywhere. 10X magnification, 1" (25 mm) working distance, 9/16" (14 mm) lens diameter and 1/2" (13 mm) square field. Folds flat when not in use.
No. **29.570**



4



5

4 PEER® DOUBLE LENS LOUPE

Provides two magnifications. Front lens screws off when not needed. Power 5X and 12X.
No. **29.580**

5 PEER® SINGLE LENS LOUPES

Economical, imported loupes with ground and polished lenses set in lightweight black plastic frames.

No.	Working Distance	Power
29.620	1½"	7X
29.621	2"	5X
29.622	2½"	4X
29.623	3"	3⅓X
29.624	3½"	3X
29.625	4"	2½X



6

6 PEER® MEASURING MAGNIFIER with FLASH LIGHT

Spaced doublet lens gives good definition of object being viewed. Removable inch and millimeter scales are viewed through lens for making accurate measurements. Light shines through lens to illuminate object. Operates on standard C-cell batteries (not included). Lens diameter 1 1/4", working distance 1 1/2" and power 7X. Overall length 6 3/4".
No. **29.650**

1 GROBET USA™ 10X LOUPES

Though only a single lens magnifier, the special construction with a grooved diaphragm around its circumference, gives a good, distortion-free definition of the object being viewed.
No. **29.665** Chrome
No. **29.666** Black Satin
No. **29.667** Gold



1

2 PEER® 20.5MM-10X TRIPLET LOUPE

With extra large field of view. Optically corrected for distortion-free viewing from edge to edge. Lens is color corrected. Black frame reduces glare. Supplied with leather carrying case.
No. **29.677**



2

3 VIGOR® EXTRA LARGE DIAMOND LOUPE

10X triplet with 20.5 mm lenses provides sharp, clear images with greatly expanded viewing field. Color corrected, aplanatic and achromatic. Chrome with edges of lens and housing blackened to eliminate glare.
No. **29.0960**



3

4 PEER® DOUBLE LENS LOUPE

Economical spaced doublet lenses that provide distortion-free viewing. One lens has a 1" working distance and 10X power, while other has a 3/4" working distance and 15X power.
No. **29.662**



4

5 PEER® DOUBLET LOUPE

Economical spaced doublet lenses that provide distortion-free viewing. Comes in leather case. Working distance 1", power 10X.
No. **29.660**



5



1 PENLIGHT
Rugged, clear-coat, aluminum-shelled flashlight is designed for years of dependable service. Comes with two AAA batteries and a storage tube.
No. **13.166**



2 STAINLESS STEEL INSPECTION MIRRORS with PLASTIC HANDLE
For visual inspection in tight areas. Available with either plain or magnifying mirrors. The 8" long plastic handle can be shortened if necessary. 1" diameter mirrors.
No. **29.380** Plain
No. **29.381** Magnifying



3 STAINLESS STEEL INSPECTION MIRRORS with CHROME-PLATED HANDLE
High quality, well-finished magnifying mirrors with 7" long chrome-plated handles.
No. **29.385** Diameter ¾"
No. **29.386** Diameter ½"



4 MAGNIFYING GLASS on STAND
Heavy base prevents movement and multi-position swivel clamp permits adjustment for best viewing, leaving both hands free for more effective working.
No. **29.71010** Magnifying glass on stand



5 FLEX-A-MAG
Handy and flexible; ideal for workbench, desktop, or table. With a 5X power magnifying lens on a flexible-neck sturdy plastic base for hands-free viewing of work. Great for inspection, assembly or repairs.
No. **29.712**

1 **PEER® FOLDING POCKET MAGNIFIER**
1" single lens in plastic frame and case. Provides 5X magnification.
No. **29.683**



2 **PEER® DOUBLE LENS FOLDING POCKET MAGNIFIERS**
Two lenses are mounted in plastic frames which fold into attached case. Lenses can be used individually or in combination to obtain different magnifications. Working distances from 1½" to 3", depending on magnification.
No. **29.680** 3½X, 3½X (7X)
No. **29.681** 3X, 3X (6X)



3 **PEER® POCKET MAGNIFIER with ATTACHED LEATHER CASE**
Economically priced magnifier. 3X power, diameter 1¾", working distance 3½".
No. **29.684**



4 **ASPHERIC MAGNIFIER**
Made of lightweight ABS plastic. 5x, aspheric lens is distortion-free with a working distance of 2". Magnifier is designed so that when it is placed on a surface, the surface is perfectly in focus. The body of the magnifier has special light gathering qualities for easier viewing. Can also be hand held.
No. **29.573**





1

1 HALF FRAME TELESIGHT MAGNIFIERS

For those who do not wear glasses. High quality prismatic lenses in lightweight frames attached to half-eyeglass frames. Front lenses flip up when not in use.

No.	Style	Working Distance	Power
29.760	43	14"	1¾X
29.761	44	11"	2X
29.762	45	9"	2¼X
29.763	46	7"	2½X
29.764	48	5"	3X



2

2 CLIP-ON TELESIGHT MAGNIFIERS

High quality prismatic lenses in lightweight frames that attach to most eyeglasses. Flip up when not in use.

No.	Style	Working Distance	Power
29.740	23	14"	1¾X
29.741	24	11"	2X
29.742	25	9"	2¼X
29.743	26	7"	2½X
29.744	28	5"	3X



3

3 FULL FRAME TELESIGHT MAGNIFIERS

Optically ground prismatic lenses designed for normal convergence to prevent eye strain. Front lenses flip up when not in use. Your own prescription lenses can be used in full frame.

No.	Style	Working Distance	Power
29.752	33	14"	1¾X
29.753	34	11"	2X
29.754	35	9"	2¼X
29.75401	36	7"	2½X
29.75402	38	5"	3X

1 PEER® MAGNIFIERS for EYEGLASS WEARERS

Clip-on lens attaches to metal or plastic frames. Scratch-proof lens folds up or down easily.

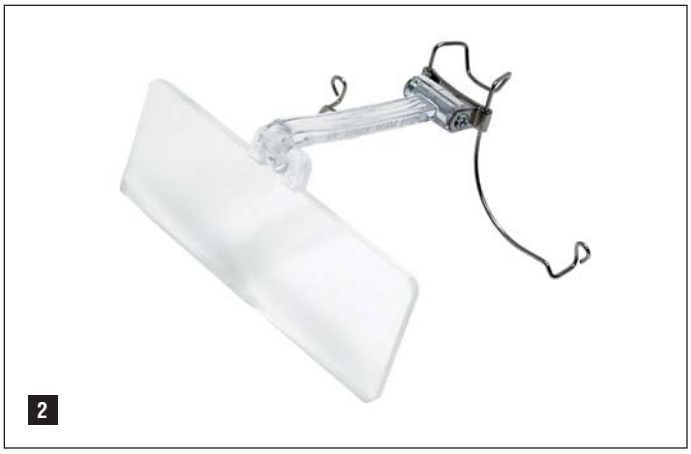
No.	Working Distance	Power
29.730	10"	2X
29.731	7"	2½X
29.732	6"	3X



2 CLIP-ON OPTICAID MAGNIFIERS

Clips on to most eyeglass frame to leave hands free. Optically designed plastic lenses enable you to see tiny details, without distortion, using both eyes. Lightweight, comfortable and adjustable. Comes with carrying pouch.

No.	Working Distance	Power
29.774	20"	1½X
29.770	14"	1¾X
29.77001	10"	2X
29.771	8"	2¼X
29.772	6"	2¾X
29.773	4"	3½X



3 SPRING CLIP OPTICAID

New clip-on design will fit most metal and plastic eyeglass frames. Ophthalmic quality, hard-coated magnifying loupe.
Comes with carrying pouch.

No.	Working Distance	Power
29.790	20"	1½X
29.791	14"	1¾X
29.792	8"	2¼X
29.793	6"	3¾X
29.794	4"	3½X



4 MAGNI-SPECS

For those who do not wear glasses. Same high quality lenses as the Opticaid, but mounted on a comfortable, lightweight frame. Supplied with a durable hard carrying case.

No.	Working Distance	Power
29.795	20"	1½X
29.796	14"	1¾X
29.797	8"	2¼X
29.798	6"	3¾X
29.799	4"	3½X





MULTIPLE MAGNIFICATION HEADBAND MAGNIFIERS

Four magnifications built in. No additional lenses to buy. Glare proof design. With the use of a flip down inner lens and the auxiliary loupe, a range of magnifications from 1¾X to 4¾X is possible, 10" to 3" working distance.

1 No. **29.561** With lights on both sides. Each side light requires 2 AAA batteries (not included)

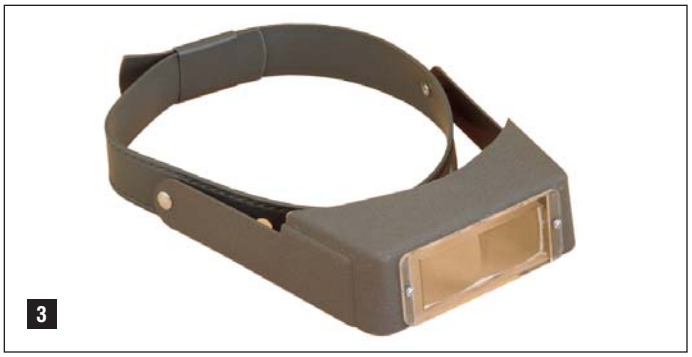
2 No. **29.560** Standard model



3 PEER® BINOCULAR MAGNIFIERS

Its lighter-than-air construction makes this comfortable magnifier perfect for lengthy wear. Band adjusts to fit most head sizes. Wide, clear lens plates permit a large amount of light to reach the eyes. Tilts out of the way when not in use, and can be worn over eyeglasses.

Magnifier	Lens Plate Only	Working Distance	Power
29.541	**29.556**	14"	1¾X
29.542	**29.557**	8"	2½X
29.543	**29.558**	6"	2¾X



AUXILIARY LENS for PEER® BINOCULAR MAGNIFIERS

Additional 2½X magnification, Swings up out of the way when not needed.
No. **29.735**



4 OPTIVISORS

Features a dial adjustment headband to fit any head size. Well-made magnifier is lightweight and durable, and fits over eyeglasses. Adjustable pivot assembly on visor can be set to desired tension, so it will stay in place when tilted.

Optivisor Complete	Lens Plate Only	Style	Working Distance	Power
29.470	**29.485**	DA2	20"	1½X
29.471	**29.486**	DA3	14"	1¾X
29.472	**29.487**	DA4	10"	2X
29.473	**29.488**	DA5	8"	2½X
29.474	**29.489**	DA7	6"	2¾X
29.475	**29.490**	DA10	4"	3½X

No. **29.491** Without lens plate



5 OPTILOUPE for OPTIVISORS

Adds 2½X to the magnification. Easily attaches to either eye of optivisor. Swings away when not in use.
No. **29.480**



6 ADD-ON LIGHT for OPTIVISORS

Uses two AA Batteries (not included).
No. **29.495** 4" cord
No. **29.496** 6" cord (not shown)
No. **29.497** Replacement bulb

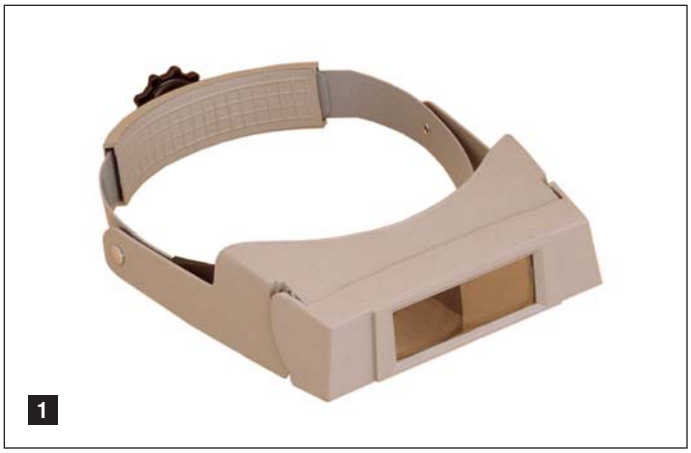
1 MAGNI-FOCUSER®

High quality magnifier has single lens design without annoying center post. Interchangeable lens plates snap in and out for quick change of magnification. With optical quality acrylic lenses, and adjustable headband with self-locking dial. Lightweight, washable, and fits over regular or safety glasses.

Magnifier	Lens Plate Only	Working Distance	Power
29.400	**29.435**	14"	1¾X
29.401	**29.436**	8"	2¼X
29.402	**29.437**	6"	2¾X
29.755	**29.756**	4"	3½X

MAGNI-FOCUSER® with AUXILIARY LENS

Magnifier	Lens Plate Only	Working Distance	Power
29.766	**29.757**	4" & 14"	4¼X & 1¾X
29.767	**29.758**	3" & 8"	4¾X, 2½X
29.768	**29.759**	2" & 6"	5¼X, 2¾X



2 MAGNI-FOCUSER® with LIGHT

Supplied with an 8,000 candle power xenon light. Burns 6-7 hours using 2 AA batteries (included).

No.	Working Distance	Power
29.781	14"	1¾X
29.783	8"	2¼X
29.784	6"	2¾X
29.785	4"	3½X



3 AUXILIARY LENS for MAGNI-FOCUSER®

Fits on either side and adds 3½X to the magnification. Swings away when not in use.

No. **29.430**

4 EDROY BINOCULAR LOUPE

Deluxe quality loupe with individual lenses provides the ultimate in comfortable magnified viewing. Can be worn over eyeglasses, and each lens can be adjusted individually. Contoured headband with foam padding is lightweight and easily adjusted. Magnification is 2½X at a working distance of 14", and the field of view is 2".

No. **29.390**



5 BAUSCH & LOMB MAGNA VISOR

Now supplied with 3 different focal length lenses – 12" (305 mm), 8" (203 mm) and 6" (152 mm). The lenses are precision made and easy to change. Great for hands-free viewing. Soft, padded band allows for comfortable fit. Excellent for precision detail work, crafts and hobbies.

No. **29.523** Visor with 3 lenses
No. **29.525** Replacement lens 12" (305 mm), 1.9X
No. **29.526** Replacement lens 8" (203 mm), 2.5X
No. **29.527** Replacement lens and 6" (152 mm), 2.75X



SAFETY GLASSES & PRODUCTS



1 MAG-SAFE™ BIFOCAL and FULL LENS GLASSES

Avoid the high cost of prescription safety glasses.
Save money over prescription safety glasses. Safety glasses and corrective lenses combined into one, for close-up work. Both Bifocal and Full Lens are available in diopters 1.00 through 3.00 in .25 increments. These glasses compare to drug store "readers" while conforming to ANSI Z87.1 2003 specifications for high impact protection. Check with your Eye Doctor for the best diopter model for you.

Bifocal		Full Lens	
Part Number	Diopter	Part Number	Diopter
29.801	1.00	**29.810**	1.00
29.802	1.25	**29.811**	1.25
29.803	1.50	**29.812**	1.50
29.804	1.75	**29.813**	1.75
29.805	2.00	**29.814**	2.00
29.806	2.25	**29.815**	2.25
29.807	2.50	**29.816**	2.50
29.808	2.75	**29.817**	2.75
29.809	3.00	**29.818**	3.00



2 MAG-SAFE™ CLIP-ON/FLIP-UP MAGNIFIERS

Fit over virtually any pair of glasses. May be used with tinted safety glasses for soldering. Available in diopters .75 through 4.00 in .25 increments. Protective vinyl case included.

Part No.	Diopter	Part No.	Diopter
29.819	.75	**29.826**	2.50
29.820	1.00	**29.827**	2.75
29.821	1.25	**29.828**	3.00
29.822	1.50	**29.829**	3.25
29.823	1.75	**29.830**	3.50
29.824	2.00	**29.831**	3.75
29.825	2.25	**29.832**	4.00



3 CLEAR ULTRASPEC 2000 SAFETY GLASSES

Made with 100% polycarbonate 4-C coating on both sides of lenses, providing anti-fog, anti-static, anti-scratch properties and anti-UV up to 385 mm. Clear lenses. OSHA approved and meets CSA Z 94.3 standards.
No. **29.367**



4 INFRA-DURA 9162 WELDING GLASSES

Made of propionate material. Fits over virtually all prescription and plano safety glasses. Adjustable fit through inclination mechanism on temple. Shade is 5.0 green.
No. **29.369**

1 CRICKET 9180 WELDING GLASSES
Adjustable ratchet hinge frame with green lenses. Frame uses Infra-Dura 3.0 lenses with universal nose bridge. Meets ANSI Z 87.1 and CSA Z 94.3 standards.
No. **29.368**



2 SAFETY GLASSES
Help protect eyes while buffing, grinding or doing other jobs with potential eye hazards. There are two versions of these glasses; one with ventilated frame and the other, a solid frame with four specialized ventilation "ports" to protect against the intrusion of liquids from splashes.
No. **29.371**
No. **29.372** With ports



3 WELDING and IMPACT GOGGLES
With green polycarbonate lens and adjustable perforated venting holes. Shade is 3.0. Meets ANSI Z 87.1 and CSA Z 94.3 standards.
No. **29.373**



4 ASPEN-STYLE
With clear glass. Will fit over most standard frames.
No. **29.009**





1 CLEAR SAFETY GLASSES

Lightweight nylon black frame with soft PVC nosepiece. Molded-in side protection offers increased coverage for side impart. Adjustable temples lock into place. Impact resistant polycarbonate lenses provide 99.9% UV protection. Meets ANSI Z97.1 specifications.
No. **29.011**



2 SAFETY WELDING GOGGLES

Helps protect eyes when melting, soldering or brazing. With 50 mm green filter lenses and clear cover lenses. Sturdy nylon lens adapter holds lenses and permits simple lens replacement. Has soft opaqu frame and plastic ventilators to keep out harmful light. Fits over eyeglasses. Shade 5.0.
No. **29.375**



3 WIDE VISION SAFETY WELDING GOGGLES

Available with stationary front or flip-up lenses. Comes with soft vinyl frame, complete with 2" x 4 1/4" shade # 5 lens. Optional shade #10 lens for platinum is available. Six ventilation ports provide maximum ventilation. Standard with elastic adjustable headband. Meets ANSI Z87.1 specifications.
No. **29.387** Stationary front
No. **29.388** Flip-up front
No. **29.389** Optional shade #10 lens (Required For Platinum)



4 FACE SHIELD

Lightweight plastic provides full face coverage. Pin and hole adjustment bands with cushioned vinyl sweat band.
No. **29.376** Face shield complete
No. **29.377** Replacement clear visor

MINIATURE MANDRELS

Designed for use with flexible shaft units. Small felt cones, felt cylinders, rubberized abrasives and grinding wheels are but a few of the many types of accessories that can be mounted on these mandrels. All are nickel-plated steel unless noted. Mandrels and mounted accessories used improperly are dangerous. Comply with American National Standards Institute Safety Code B7.1 and Occupational Safety and Health Act covering: speed, safety guards, flanges, mounting procedures, general operating rules, handling, storage and inspection. The correct usage speed depends on the accessory being used.

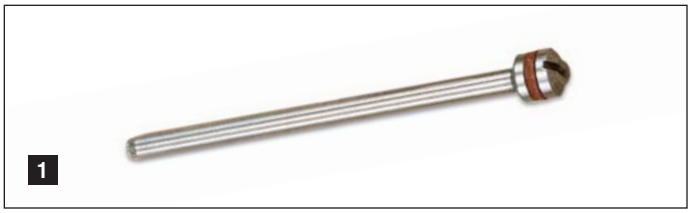
MANDRELS with 3/32" SHANKS

Sold by the dozen.

1 MANDRELS for WHEELS

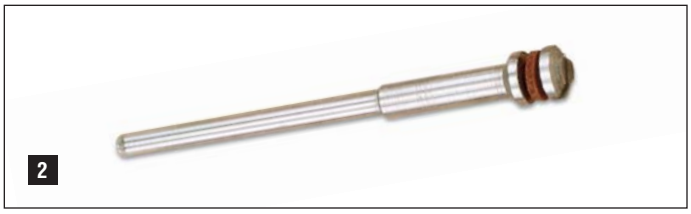
Use with wheels having 1/16" arbor holes.

No.	Washer	Material
43.130	No	Steel
43.132	Yes	Nickel-plated steel
43.134	Yes	Stainless steel



2 MANDREL with REINFORCED SCREW

No. **43.128**



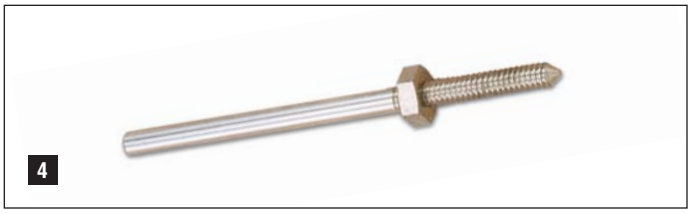
3 STAINLESS STEEL THREADED MANDREL

With brass collar, Used with rubber points.
No. **43.126**



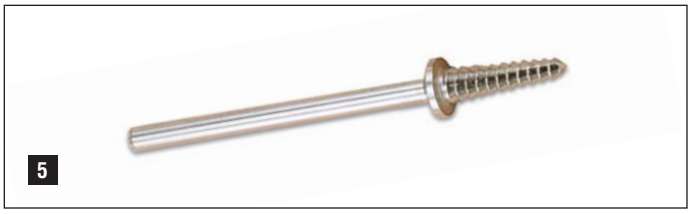
4 THREADED MANDREL

Popular for use with rubberized abrasives.
No. **43.124**



5 TAPERED THREAD MANDREL

No. **43.120** 3/16" screw length
No. **43.122** 3/8" screw length

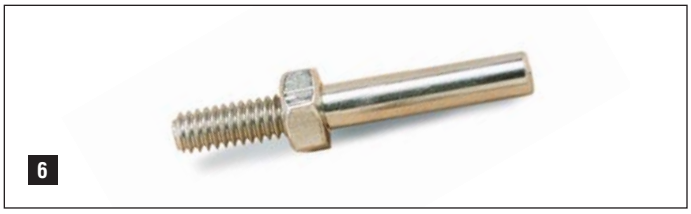


MANDRELS with 1/4" SHANKS

Sold individually.

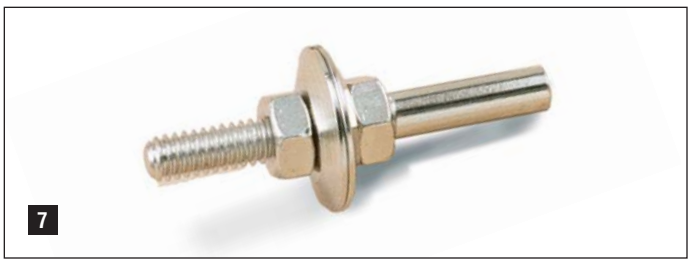
6 THREADED MANDREL

Popular for use with rubberized abrasive cones.
No. **43.166**



7 MANDREL for GRINDING WHEELS

Will fit wheels with 1/4" hole size, up to 3" in diameter and 1/2" thick.
Popular for use with rubberized abrasives.
No. **43.168**



MANDRELS with ⅛" SHANKS

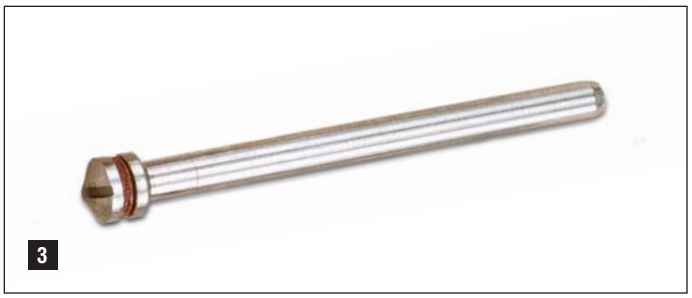

1

1 MANDRELS for GRINDING WHEELS
1/8" shank with washers. Sold by dozen.
No. **43.160** For 1/8" arbor holes, ideal for use with rubberized abrasives
No. **43.164** For 1/4" arbor holes


2

2 MANDRELS for WHEELS
Will fit wheel sizes up to those listed. No. 43.158 is ideal for use with rubberized abrasives. Sold by dozen.

No.	Wheel Diameter	Wheel Thickness	Hole Size
43.158	1"	¼"	1/16"
43.162	1"	¼"	⅛"


3

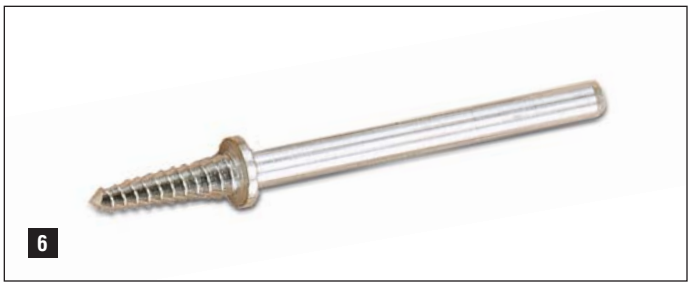
3 MANDREL with REINFORCED SCREW
Fits 1/16" hole. Sold by dozen.
No. **43.156**


4

4 SANDING DISK MANDREL
For use with brass center abrasive disks. Sold individually.
No. **10.740** 19/64" screw length


5

5 THREADED MANDREL
Popular for use with Cratex rubberized abrasives. Sold by dozen.
No. **43.154**


6

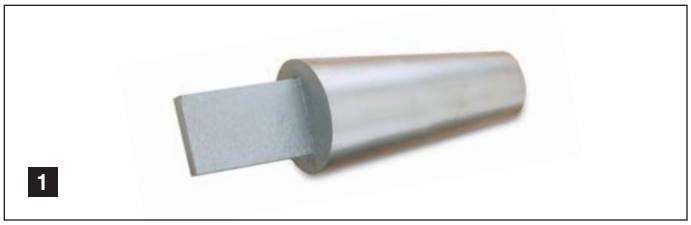
6 TAPERED THREAD MANDRELS
Sold by dozen.
No. **43.152** 3/8" screw length

MANDRELS

1 OVAL BRACELET MANDREL with TANG

For shaping, stretching and forming bracelets and other oval items. Tang fits into anvil Nos. 13.325 and 12.0130. Made of cast steel, polished to a smooth finish. Measures 6" long plus 3" tang.

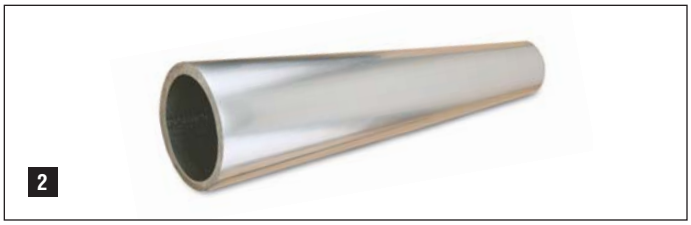
No.	Shape	Small End	Large End
43.052	Oval	1½" x 1¼"	2⅜" x 2¾"

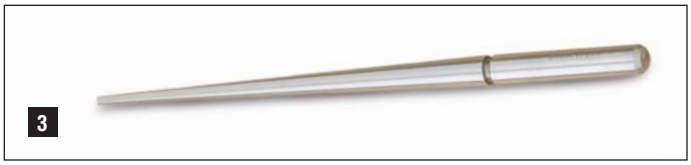


2 TAPERED BRACELET MANDRELS

For shaping, stretching and forming bracelets and other items. Case hardened and measures 12". Shipping weight 6 lbs. each.

No.	Shape	Small End	Large End
43.050	Oval	1⅜" x 1⅞"	3" x 3½"
43.054	Round	1¾"	3½"





3 BEZEL MANDRELS

Although primarily used to form bezels, these mandrels are also used to shape decorative ornaments, make chain links, etc. Made of hardened and tempered steel. Both are 11" overall length with the mandrel portion 8" long.

No.	Shape	Small End	Large End
43.034	Oval	5/32" x ⅛"	⅝" x ½"
43.036	Round	⅛"	⅜"

4 NECKLACE BUST

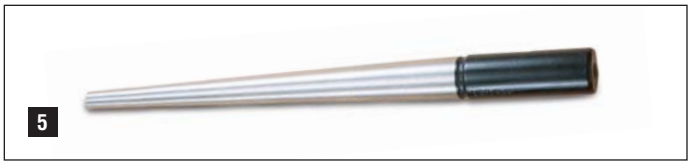
Our necklace bust is an essential tool for shaping necklaces easily and accurately. Beautifully constructed of polished cast iron. Use to work metals or to form wax. Guarantees that your necklaces will be of the proper length and fit every time. Rotating bust is bolted to bench for support and can be angled and rotated. Both measure 8½" x 7¾" x 7".
No. **43.055** Standard bust
No. **43.053** Rotating bust



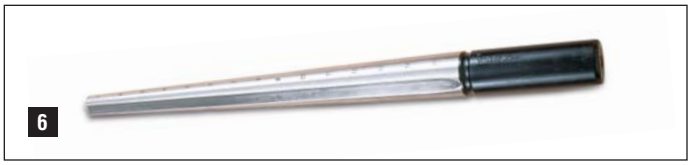
RING MANDRELS

Used for shaping, straightening and enlarging rings. Also for gauging and holding rings while stone setting. Made of hardened tool steel.

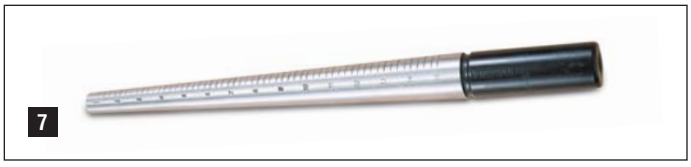
5 No. **43.080** Plain



6 No. **43.077** Grooved for stone set rings and graduated w/ring sizes from 1 to 15



7 No. **43.076** Graduated with ring sizes from 1 to 15





1

1 MANDREL REST

Holding a ring mandrel while working can present a problem. This rest provides the solution by giving support at both ends. Made of cast iron. Also used to hold bracelet mandrels that do not have tangs. Can be secured to bench top. Shipping weight 6 lbs.
No. **43.070**



2

2 MANDREL and ANVIL SET

Set contains anvil with bench clamp (No. 12.0130), oval bracelet mandrel (No. 43.052), bench pin (No. 13.300), grooved ring mandrel with sizes 1 to 7 (No. 43.0252) and grooved ring mandrel with sizes 7 to 15 (No. 43.0254). Shipping weight 13 lbs.

No. **43.0250** Mandrel and anvil set complete
No. **12.0130** Replacement anvil w/bench clamp
No. **13.300** Replacement small bench pin
No. **43.0252** Replacement grooved ring mandrel sizes 1 to 7
No. **43.0254** Replacement grooved ring mandrel sizes 7 to 15
No. **43.052** Replacement oval bracelet mandrel w/tang



3

DAPPING BLOCKS, DIES, PUNCHES & CUTTERS

Dapping tools are used to shape soft metals and waxes. The punches and blocks are matched so that perfect hemispheres and domes can be formed in specified sizes.

3 DAPPING BLOCK

27 depressions on one side. Go up as follows: 5/64", 3/32", 7/64", 1/8", 9/64", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", 11/32", 3/8", 13/32", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16" and 1". The block measures 5 1/8" L x 2 1/2" W x 3/4" D.
No. **25.055**



4

4 LEAD DAPPING BLOCK

Used as base when chasing, cutting, and stamping.
Measures 3 1/4" x 3 1/4" x 1".
No. **25.061**

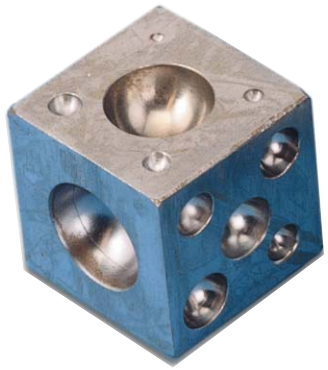


5

5 DAPPING DIE and DESIGN BLOCK

Has 14 hemispherical depressions from 1/8" to 7/8" by 1/8", plus 1". Depressions match punches and have a satin smooth finish. The edges of this high grade steel hardened block have various sized semi-circles for shaping rings, stone settings, bezels, etc. Measures 3 3/4" x 2 1/2" x 1/8".
No. **25.064**

1 DAPPING DIE
Has 17 hemispherical depressions from 1/8" to 7/8" by 1/16", plus 1", 1 1/8", 1 1/4" and 1 3/8". Depressions match punches and have a satin smooth finish. Die is made of high-grade, properly hardened steel and measures 2" square.
No. **25.067**


1

2 DAPPING DIE
Hardened steel, 2 1/2" square. Six working surfaces with 17 various sized depressions up to 1 3/4" for shaping and working metal.
No. **25.072**


2

3 DAPPING DIE
Used with punches to make hemispheres. Six working surfaces with 21 various sized depressions up to 1 3/4". Made of hardened steel and measures 2 1/2" square.
No. **25.073**


3

4 FLAT DAPPING BLOCK SET
Set includes high-grade, hardened steel block with 14 hemi-spherical depressions in two rows, graded by 1/16", from 1/8" to 7/8", plus 1" and 11 matching punches. Block measures 5 1/8" x 2 1/2" x 3/4".
No. **25.106** Set
No. **25.050** Replacement dapping block
No. **25.089** Replacement set of all 11 punches


4



1 FORMING BLOCK

Versatile block with a variety of curved and "V" shaped grooves for forming, creasing, grooving and shaping. Case hardened steel. Size 2 1/2" x 2 1/2" x 2". Weight 3 lbs. Made in Italy.
No. **25.074**



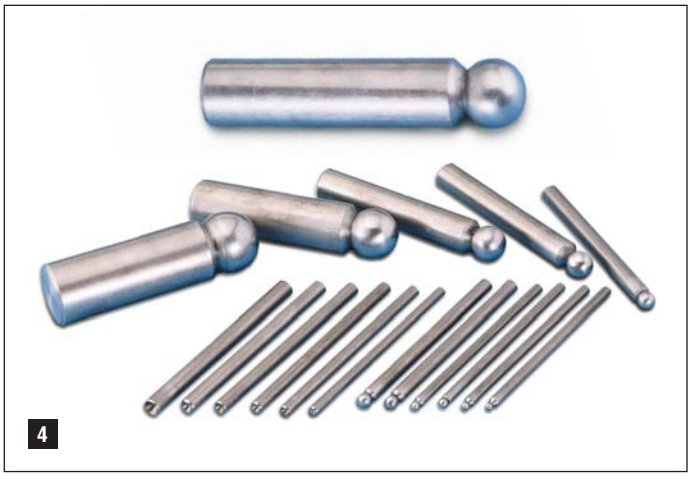
2 WOODEN DESIGN CUBE

Unique hardwood block for shaping metals and removing dents. Channel shapes include five different diameter semicircles, two different "V's", and two different boxes. Measures 2 3/4" on all sides.
No. **25.080**



3 WOOD DAPPING BLOCK and PUNCHES

Hardwood block and two punches for shaping lockets, cases, and removing dents. Block measures 2 1/4" on all sides, with shallow depressions of different sizes on each face.
No. **25.135**



4 DAPPING PUNCHES and CUTTERS

A variety of sets for general use. The cutters are used to make circles in wax and other soft materials. The punches are very finely finished for forming shells, balls, etc.

No.	Description
25.113	12 punches and 12 cutters
25.115	18 punches and 18 cutters

DISC CUTTING SETS

1 SET of SEVEN

This economical set cuts perfect circles from metal up to 14 gauge. Contains 7 sizes 4 to 10. Size 4 is 1/4", and each additional size is 1/16" larger.
No. **25.0450**



2 SET of FOURTEEN-LARGE and SMALL SIZES

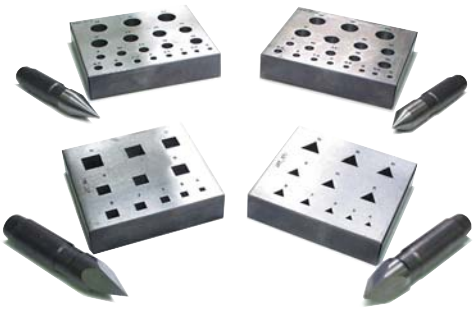
Contains sizes 3, 4.5, 5, 6, 7, 7.5, 8, 8.5, 10, 11, 12, 13, 14 and 16 mm.
No. **25.143**



3 BEZEL BLOCKS and PUNCHES

Polished, hardened steel punch is used to punch and form bezels from flat stock. A single punch fits all depressions. The block is case hardened and has highly polished, tapered holes.

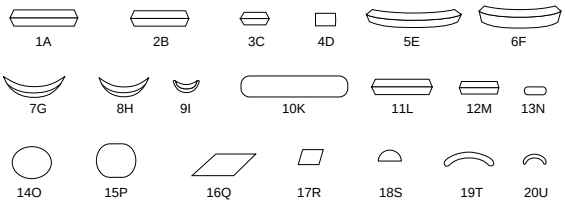
No.	Shape	Description
25.151	Round, 17 ●	20 Holes, 5-20mm
25.152	Round, 28 ●	20 Holes, 5-20mm
25.153	Square ■	11 Holes, 4-14mm
25.154	Triangular ▲	11 Holes, 4-14mm



4 INDIVIDUAL PUNCHES

For set 25.261.

No. **25.0261/1A**	$9.00	No. **25.0261/11L**
No. **25.0261/2B**	9.00	No. **25.0261/12M**
No. **25.0261/3C**	9.00	No. **25.0261/13N**
No. **25.0261/4D**	9.00	No. **25.0261/14O**
No. **25.0261/5E**	10.20	No. **25.0261/15P**
No. **25.0261/6F**	10.20	No. **25.0261/16Q**
No. **25.0261/7G**	9.10	No. **25.0261/17R**
No. **25.0261/8H**	9.00	No. **25.0261/18S**
No. **25.0261/9I**	9.00	No. **25.0261/19T**
No. **25.0261/10K**	7.75	No. **25.0261/20U**



5 SET of 20 CHASING TOOLS

(See illustration and list of individual punches.)
No. **25.261**



6 JEWELERS' CHASING SET

Set of 12 small chasing tools selected for fine jewelry work.
No. **25.180**





1 **SET of BACKGROUND STAMPING TOOLS**
Makes decorative impressions on soft metals. Repeating the same design in an area is an effective technique. Contains 15 different designs as shown in photo.
No. **25.500**



2 **BLACK PITCH**
Softens readily when heated. Embedded objects are held firmly when the pitch cools. Useful for chasing and engraving.
No. **25.390** 8 oz.
No. **25.392** 32 oz.



3 **SHALLOW PITCH BOWL SET**
Suitable for most work. Can be tipped at an angle. Complete set consists of pitch, bowl and rubber pads.
No. **25.470** Set
No. **25.400** Replacement pitch bowl
No. **25.455** Replacement rubber pad



4 **DEEP PITCH BOWL SET 5" DIAMETER**
Can be tipped to an extreme angle. Complete set consists of pitch, bowl and rubber pads. Shipping weight 5 lbs.
No. **25.471** Set
No. **25.401** Replacement pitch bowl
No. **25.456** Replacement rubber pad



5 **DEEP PITCH BOWL SET 8" DIAMETER**
For all-purpose work. Can be tipped to an extreme angle. Complete set consists of pitch, bowl and rubber pads. Shipping weight 5 lbs. 1 oz.
No. **25.473** Set
No. **25.403** Replacement pitch bowl
No. **25.457** Replacement rubber pad

1 SAND BAG

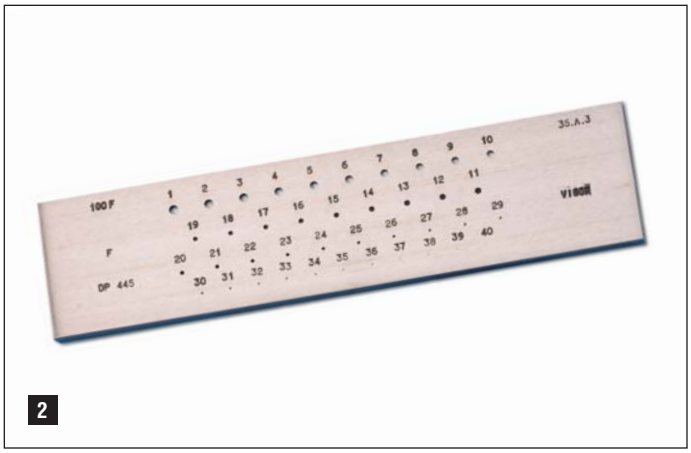
Sturdy canvas bag, loosely filled with sand so that it will conform to the contour or shape of article being engraved, formed or stamped. Measures 10½" L x 6½" W x 2½" D. Shipping weight 6 lbs. 8 oz.
No. **25.480**


1

2 TOOL STEEL DRAW PLATES

Reduce and shape thickness of brass, copper, gold, silver, platinum or soft steel wire. Made of thick, high-grade tool steel, carefully stamped with style identifying letter and hole sizes. The holes are progressively smaller, in proper increments, so that wire drawn from a preceding hole will go through the next hole easily. Occasional annealing will keep wire soft, and bees wax can be used as a lubricant.

No.	Plate Letter	No. of Holes	Largest Hole (in)	Largest Hole (mm)	Smallest Hole (in)	Smallest Hole (mm)
			Round			
28.0426	A	20	.040"	1.0	Filigree	
28.0427	AA	20	.055"	1.4	.021"	.53
28.0430	B	20	.076"	1.9	.018"	.46
28.0440	D	30	.116"	2.9	.022"	.56
28.0445	F	40	.136"	3.5	.018"	.46
28.0447	G	40	.177"	4.5	.029"	.74
28.0450	J	60	.250"	6	.022"	.56
			Half-Round			
28.0460	K	30	3/16" x 3/32"		3/64" x 1/64"	
			4.8 x 2.4 mm		1.2 x .40 mm	
28.0463	M	40	¼" x ⅛"		1/16" x 1/32"	
			6 x 3.2 mm		1.6 x .80 mm	
			Square			
28.0469	OX	20	⅛"	3.2	1/64"	.40
28.0472	QQ	20	5/32"	4.0	Filigree	
28.0473	R	30	3/16"	4.8	3/32"	2.4
28.0478	U-Rd	20	.140"	3.6	.038"	1.0
			Oval			
28.0488	5mm	30	.197"	5.0	.032"	.81



2

3 DRAW TONGS

For pulling wire through draw plates. Jaws are serrated for strong grip on wire. One handle is formed to aid in pulling. Made of forged steel.

No.	Overall Length	Jaws
57.056	8"	1" x ¾"
57.058	10"	1¼" x ⅞"


3

4 LUBRICANT for DRAWING

Apply a small amount of lubricant to the wire and the opening. The reduced friction makes drawing much easier and faster. Push-up 2 oz. container.
No. **19.928** Pro-Cut Lubricant



4


1

1 COMBINATION CENTERING and RIVETING PUNCH

Delivers quick automatic stroke. Adjustable for light, medium or heavy impression. Includes centering cup and flat points for riveting, burnishing, etc.

No.	Description
47.802	Centering/riveting punch
47.803	Replacement clutch
47.804	Replacement spring
47.805	Replacement shaft
47.806	Replacement light spring
47.809	Replacement centering point
47.810	Replacement cup point
47.811	Replacement pointed point
47.812	Replacement flat point
47.814	Replacement knockout point
47.818	Replacement hammer


2

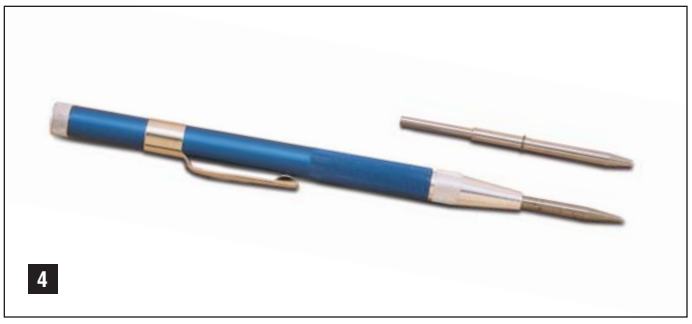
2 AUTOMATIC CENTER PUNCH

Knurled screw cap can be adjusted for either light or heavy strokes. Pushing down on body releases striking mechanism. The punch is pointed.
No. **47.850**


3

3 SET of 20 PIN PUNCHES

Set contains two each of 10 different size hardened steel punches. Flat tips range from .020" to .050" in diameter and are easily ground to make other sizes. Punches are $1\frac{5}{8}$" long, with a $\frac{3}{32}$" shank. Used to drive out pins, broken screws, riveting, etc. Adjustable brass holder $3\frac{1}{4}$" long, prevents damage from hammer.
No. **47.890**


4

4 AUTOMATIC CENTER PUNCH

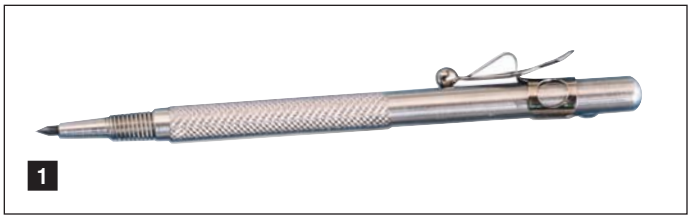
Slim design for better visibility. Pushing down on body releases striking mechanism, which can be adjusted for light or heavy strokes. Removable centering point can be interchanged with cup-shaped riveting point. Pocket clip included.
No. **47.864** Tool with centering point and riveting point
No. **47.860** Tool with centering point only
No. **47.866** Replacement centering point
No. **47.868** Replacement riveting point


5

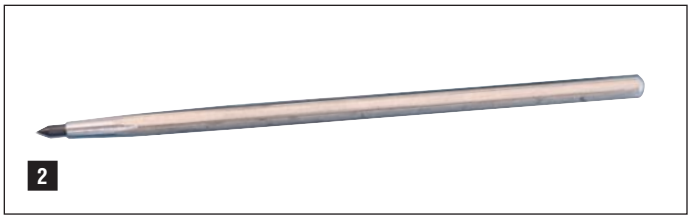
5 CENTER PUNCH

Used to make small dent as starting point for drill. Punch is tapped with small hammer. Made of steel with knurled handle for firm gripping surface. Slim design, can also be used as a scriber.
No. **47.900**

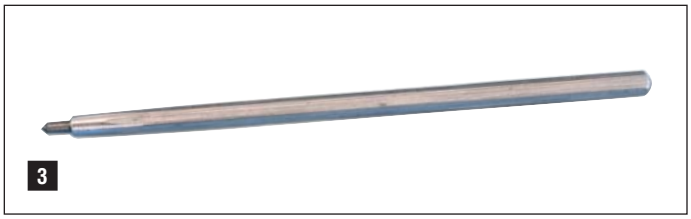
1 WALLER SCRIBER
With carbide tip. End is reversible so that point is protected while carrying.
No. **52.950** Waller scriber
No. **52.951** Replacement tip



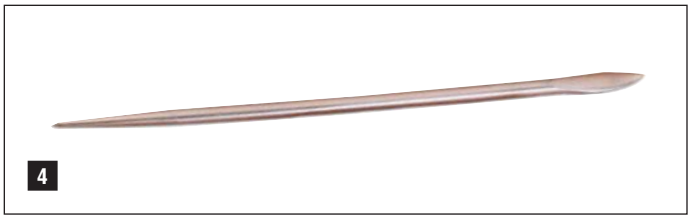
2 CARBIDE TIPPED SCRIBER
Can be used on hardest metals, glass, jewels, etc. Slim-line design and comfortable to use. Hexagonal aluminum handle prevents rolling on bench. Length 5 1/4".
No. **52.952**



3 DIAMOND TIPPED SCRIBER
Can be used on hardest jewels, metals, etc. Hexagonal aluminum handle prevents rolling on bench. Length 5 1/4".
No. **52.954**

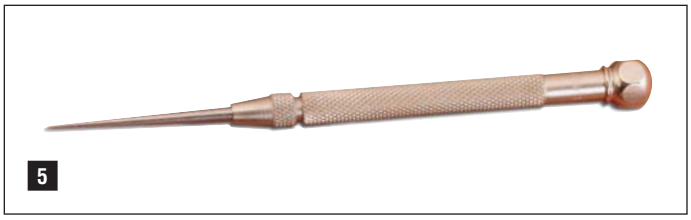


4 COMBINATION SCRIBER and BURNISHER
Made of steel with one sharp point for scribing and a curved, rounded end for burnishing. Length 7".
No. **52.956**



5 SCRIBER with KNURLED CHUCK
Knurled chuck holds the point in either the scribing position or reversed within the steel body so that it can be carried safely in a pocket. Hexagonal head prevents rolling on bench and knurled body provides secure gripping. Nickel-plated. No. 52.958 is an economy version of No. 52.959.

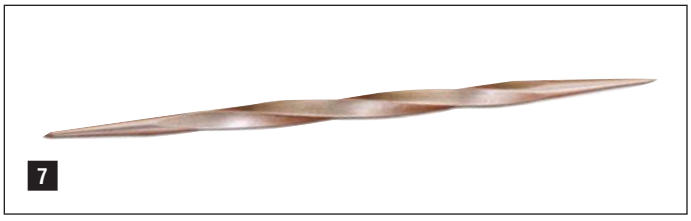
No.	Handle Diameter	Blade Length
52.958	1/4"	2 3/8"
52.959	1/4"	2 3/8"
52.960	3/8"	2 7/8"



6 DOUBLE-ENDED STEEL TRACER
With knurled center. Length 4 1/2".
No. **52.964**



7 DOUBLE-ENDED STEEL TRACER
With twisted center. Length 6 1/2".
No. **52.966**



8 ETCHING and SCRIBING NEEDLE
High grade steel, double-ended needle is inserted through a sturdy cork handle. Overall length 7".
No. **52.970**





1

1 JEWELRY MARKING MACHINE

For perfect impressions and identification markings on all rings, charms, discs or any flat pieces. Set consists of spring-action lever machine (automatically returns to upright position), six punches (three bent and three straight in 10K, 14K and 18K) and three nylon anvils to prevent scratch marks. Anvils can be shaped to support specific pieces. Wood base provides storage space for parts.
No. **55.0280**

Replacement Parts:
No. **55.0281/1** Nylon anvil
No. **55.0281/5** 10K straight punch
No. **55.0281/6** 14K straight punch
No. **55.0281/7** 18K straight punch
No. **55.0281/10** 10K bent punch
No. **55.0281/11** 14K bent punch
No. **55.0281/12** 18K bent punch
No. **55.0281/15** Sterling straight punch
No. **55.0281/17** Sterling bent punch
No. **55.0281/18** Blank bent punch



2

2 STAINLESS STEEL JEWELRY MARKING PLIERS

Can be used on curved or flat surfaces to stamp inside rings as small as size 4. Requires no set-up or hammering. Little pressure is needed to stamp precious metals including white gold. Made of durable stainless steel with adjustable screw to lock stamp in place. Overall length 5 1/2". Punches not included, see below.
No. **46.02405**

Punches for No. 46.02405
No. **55.02401/1** 10K
No. **55.02401/2** 14K
No. **55.02401/3** 18K
No. **55.02401/7** Ster. (Sterling Silver)



3

3 RING STAMPING DEVICE

Accommodates standard stamps with approximately 5/16" square bodies. Eliminates the need to hold ring and stamp in one hand. Simply position ring over mar-proof plastic anvil (55.201) and tap stamp with mallet. Easy and accurate time-saver. Eliminates slipping of ring and it's also ideal for flat stamping. The sleeve can be reversed or the stamp body can be touched up with a file if stamp is not 5/16" square. Stamps must be ordered separately (see hand stamps on next page).
No. **55.200**
No. **55.201** Plastic Anvil

HAND STAMPS

Made of hand-cut steel to stamp impressions on metal surfaces.
The sizes noted are for the height of the impression.

1 PRECIOUS METAL STAMPS

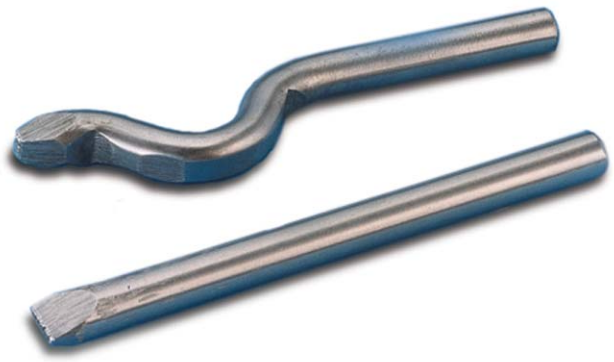
	BENT			STRAIGHT		
MARK	Size #1 1/24"	Size #2 1/32"	Size #3 1/45"	Size #1 1/24"	Size #2 1/32"	Size #3 1/45"
10K	**55.251**	**55.252**	**55.253**	**55.282**	—	—
14K	**55.261**	**55.262**	**55.263**	—	**55.292**	**55.293**
18K	**55.271**	**55.272**	**55.273**	—	—	—
STER	**55.301**	**55.302**	**55.303**	**55.311**	**55.312**	**55.313**
PLAT	—	—	**55.323**	—	—	—
©Stamp	**55.326**	**55.327**	**55.328**	**55.329**	**55.330**	**55.331**



1

2 ECONOMY STRAIGHT and BENT PUNCHES

Impressions for stamping inside of rings as well as other surfaces.
Impressions are 1/32" high. Made of hardened tool steel.
No. **55.0300** Sterling - straight
No. **55.0304** Platinum - bent
No. **55.0305** Sterling - bent
No. **55.0310** 10K - bent
No. **55.0320** 14K - bent
No. **55.0325** 18K - bent
No. **55.0330** 24K - bent



2

3 SET of STEEL STAMPS

Packed in hardwood case with cover.

Letter Stamps

Set of 27 contains each letter of the alphabet and a period.
No. **55.404** 1/16" high. Made in USA
No. **55.405** 1/16" high. Import quality
No. **55.408** 1/8" high. Made in USA
No. **55.409** 1/8" high. Import quality

Numeral Stamps

Set of nine numeral stamps 0 through 8, with the 6 being used upside down to make the 9. Makes impressions 1/16" high. Packed in hardwood case with cover.
No. **55.400** Made in USA
No. **55.401** Import quality

Customized stamps are available. 4 to 6 weeks delivery.
To ensure accuracy all orders must be faxed or mailed, call for price.



3

CASTING METALS

These non-precious alloys resemble gold and silver, and are used as inexpensive casting metals. They can be oxidized or antiqued, as well as plated. The metals are tarnish resistant and will not discolor when heated. They will come out of investment bright and shiny, reducing the need for stripping or pickling. Can be electroplated and soldered with gold or silver solder.


1


2

1 MANGANESE BRONZE

Resembles gold and has a melting point of 1700°-1800° F (927°- 982° C.)
No. **43.300** - 8 oz. package

2 NICKEL SILVER

Resembles silver and has a melting point of 2300°-2400° F (1260°- 1316° C).
No. **43.310** - 8 oz. package


3


4

3 RICH GOLD

Lighter than gold, this copper-based alloy melts at about 1900°F (1038°C) and is an excellent medium for beginners. Ideal for large pendants. Used by many jewelers for display because of its gold appearance and resistance to tarnish. Come in 1 lb. package.
No. **43.01301/1**


5

4 COLUMBIAN GOLD

Yellow bronze metal is a bit softer in color than rich gold. Melts and flows just like real gold at about 1800° F (982° C). Comes in 1 lb. package.
No. **43.01303/1**


6

5 ENGLISH GOLD

A light rose color shaded toward brown. Extremely hard and retains a high polish. Melting temperature is 2000° F (1093° C). Comes in 1 lb. package.
No. **43.01305/1**

6 SILVER MINE

White copper-based alloy is very close to the color of sterling, but has the advantage of being considerably harder. Retains a high polish and melts at about 1550°F (843°C).
No. **43.01307** 2 oz.
No. **43.01307/1** 1 lb.

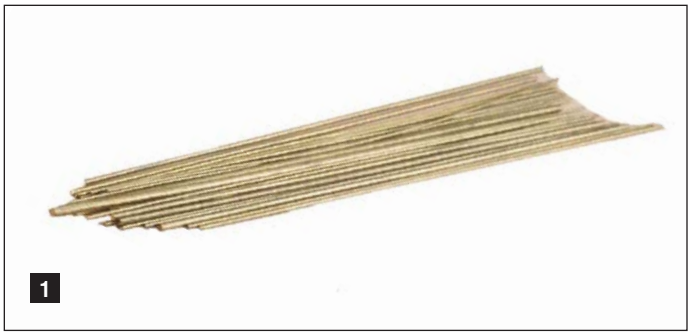

7

7 PEWTER

Lead-free and melts at about 450° F (232° C). An excellent metal for small sculptures. Comes in 1 lb. package.
No. **43.01317**

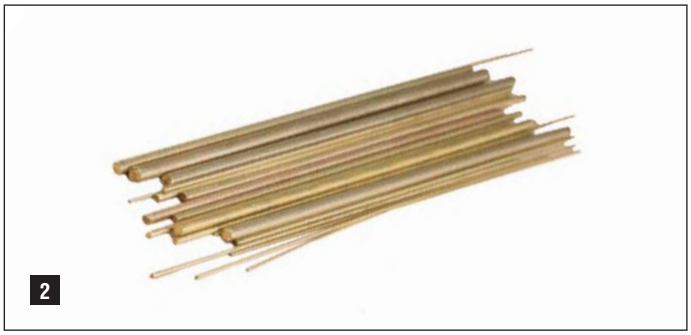
1 ASSORTED BRASS WIRE

6" lengths in assorted sizes from 20 to 70 by drill gauge. Packed in plastic tubes.
No. **43.500**



2 BRASS RIVET WIRE

6" lengths in assorted sizes from 14 to 21 by B & S gauge. Used to make pins, rivets, hinges, etc. Comes in 1 oz. package.
No. **43.501**



3 BRASS BINDING WIRE

Supplied in spools.

No.	B & S Gauge	Amount
43.509	14	4 oz.
43.510	16	4 oz.
43.511	18	4 oz.
43.512	20	4 oz.
43.523	22	1 oz.
43.524	24	1 oz.
43.527	30	1 oz.





4 BRASS SPRING WIRE

Comes in 1 oz. spools.

No.	B & S Gauge
43.543	22
43.544	24
43.545	26

5 SOFT COPPER BINDING WIRE

Comes in 4 oz. spools.

No.	B & S Gauge	Roll Length (approx)
43.559	14	20'
43.560	16	32.5'
43.561	18	51'
43.562	20	80'

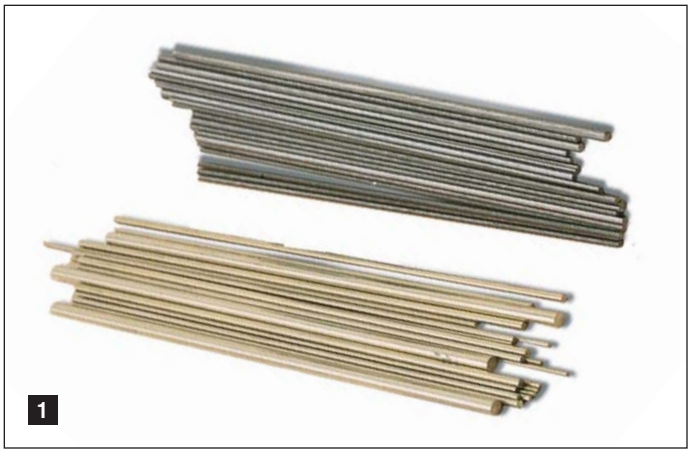


6 IRON BINDING WIRE

Comes in 8 oz. spools.

No.	B & S Gauge
43.638	24
43.639	25
43.640	26
43.641	27
43.643	29





1 ALL-PURPOSE WIRE MIXTURE

6" lengths in assorted sizes from 20 to 70 by drill gauge.
No. **43.0609** Nickel silver
No. **43.0610** Steel



2 ASSORTED STEEL WIRES

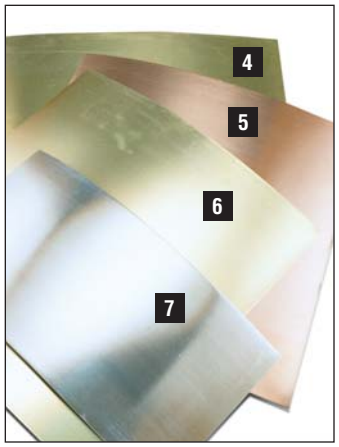
6" lengths in assorted sizes from 20 to 70 by drill gauge. Packed in plastic tubes.
No. **43.700**

3 PEERLESS ROUND SPRING STEEL WIRE

For making watch parts, loupe springs and many other items requiring spring steel. Tempered and ready for use. Comes in 36" coils, in B & S gauge sizes as noted.

No.	B & S Gauge	No.	B & S Gauge
43.715	15	**43.725**	25
43.716	16	**43.726**	26
43.717	17	**43.727**	27
43.718	18	**43.728**	28
43.719	19	**43.729**	29
43.720	20	**43.730**	30
43.721	21	**43.731**	31
43.722	22	**43.732**	32
43.723	23	**43.738**	38
43.724	24		





SOFT METAL in SQUARES

All are 12" x 12" except nickel silver, which is 6" x 12". Dixgold is popular because it resembles gold in color, and copper in workability.

B & S Gauge	16	18	20	22	24	26
4 Brass	**43.400**	**43.401**	**43.402**	**43.403**	—	—
5 Copper	**43.420**	**43.421**	**43.422**	**43.423**	**43.424**	**43.425**
6 Dixgold	—	**43.441**	**43.442**	—	—	—
7 Nickel Silver	**43.460**	**43.461**	**43.462**	—	—	—

Rolls of metal are available by special order.



8 COPPER FOIL

Very popular for craft use. B & S gauge #36. Easily tooled or embossed. Sold by rolls, 12" x 10".
No. **43.320**

1 GLASS FOUNTAIN OILERS

Glass reservoir holds a supply of oil and has non-rolling head. Color coded for quick identification and hollow needles deposit oil on contact. Small sizes are used for watches and large sizes are for clocks.

No.	Color	Hole Diameter
OL 42138	Green	.006"
OL 42140	Black	.007"
OL 42142	Red	.010"
OL 42144	Blue	.013"

Glass Fountain Oiler Sets
No. **OL 42146** Contains black, red and blue oilers
No. **OL 42148** Contains all four oilers



1

2 SWISS-STYLE DIP OILERS

Flat steel tips pick up oil and re-deposit on contact. Metal handles are non-rolling and color coded for quick identification. Dust caps keep tips clean.

No.	Color	Size	Watch Type
OL 42250	Black	Extra fine	Baguette
OL 42252	Gold	Extra fine	Baguette
OL 42254	Blue	Fine	Bracelet
OL 42256	Green	Medium	Bracelet
OL 42258	Red	Large	Pocket

Oiler Sets
No. **OL 42260** Black, blue, green and red oilers
No. **OL 42262** Black, blue, green and red oilers plus inserter



2

3 OIL INSERTERS

Used to force oil into balance jewel assemblies.
No. **OL 42280** Yellow with one tip
No. **OL 42282** Gold with four extra tips in handle
No. **OL 42284** Replacement tip. Pkg/12



3

4 PRECISION APPLICATOR

Economical, hypodermic-type applicator can be used for applying lubricants, adhesives and other liquids. Round needle is not sharp and will not cut into materials. Hole diameter is .023", length 4 1/4", capacity 2 cc.
No. **OL 42110** Precision applicator
No. **OL 42111** Applicator with tube of silicon lubricant



4

MOEBIUS OILS & GREASES

Moebius Watch and Clock Oil has been acknowledged and acclaimed as the finest for generations. All Moebius products are developed, manufactured and tested in Switzerland. The large variety enables you to choose just the right oil or grease for your particular application. Natural Watch Oils, a mixture of neatsfoot and mineral oils, are satisfactory except that, after a period of time in contact with metals, they change chemically and form a gummy substance. Synthetic Oils have the same lubricating properties as natural oils, but will not change over a period of time, so they will not gum up, cause corrosion, become acidic, creep, or spread.



1



2



3



4



5



6



7

NATURAL

1 WATCH OIL - 8000
General purpose for chronometers and watches, all calibers up to 18L. Outstanding lubrication with minimal spreading and a low freezing point. 8 ml bottle.
No. **OL 42364**

2 CLOCK OIL #3 - 8030
For clocks, alarm clocks and meters not directly exposed to low winter temperatures. 20 ml bottle.
No. **OL 42360**

3 CLOCK OIL #3A - 8031
Same as No. OL 42360 but formulated for units exposed to very low temperatures. 20 ml bottle.
No. **OL 420203A**

4 LARGE MOVEMENT CLOCK OIL #4 - 8040
For large clocks, tower clocks and small machines. Has a high viscosity and can be used in low temperatures to minus 68° F (-20° C). 20 ml bottle.
No. **OL 42362**

REGULAR OIL

5 REGULAR OIL
A general purpose mainspring lubricant. Can be used in watches from 9¾ Ligne to 19 Ligne, as well as in alarm clocks, pendulum clocks and wall clocks.
No. **OL 420206A - 8200** 20 ml bottle
No. **OL 420206 - 8200** 50 ml bottle

6 REGULAR OIL for CLOCKS - 8300
A general purpose grease well suited to the winding and setting parts of watches. Also for uncoiled mainsprings, as well as for clocks and clock springs. 20 ml bottle.
No. **OL 42512**

7 QUARTZ OIL - 9000
Especially designed for quartz analog watches, particularly the rotor bearing, click wheel and the gear train. Non-toxic, non-spreading, long-lasting with good viscosity. 2 ml bottle.
No. **OL 42365**

SYNTHETIC

1 SYNT-A-LUBE - 9010
A general purpose synthetic watch oil, unequalled for pallet jewels, escapements and balance staffs. It can be used in place of all regular oils, and for small clocks and instruments exposed to low temperatures to minus 68° F (-20° C).
No. **OL 42500** 2 ml bottle
No. **OL 420215** Economy size 10 ml bottle w/applicator



1

2 SYNTA-VISCO-LUBE - 9020
Specially designed for slower moving units and larger watch movements. Ideal for lubricating the pivots of staffs, oscillating weights and other parts of automatic watches. Excellent to minus 68° F (-20° C). 2 ml bottle.
No. **OL 420219**



2

3 OIL for ESCAPEMENTS - 941
Specially manufactured for use on pallets. Has a higher degree of oiliness than larger watch movements. Ideal for lubricating the pivots of staffs, oscillating weights and other parts of automatic watches. Excellent to minus 68° F (-20° C). 2 ml bottle.
No. **OL 420233**



3

4 ALL-PURPOSE SYNTHETIC GREASE - 9415
For watches and clocks. 2 ml bottle.
No. **OL 420227**



4

NYE OILS & LUBRICANTS



1

1 FULCRUM OILS

Though light enough to flow easily, fulcrum oils stay where applied, giving positive pivot point protection. They won't evaporate, gum, or become stringy. Give effective, long-lasting lubrication.

No.	Type	Size
OL 42300	Clock	¼ oz.
OL 42302	Clock	1 oz.
OL 42304	Clock	4 oz.
OL 42306	Clock	8 oz.
OL 42308	Clock	Pint
OL 42320	Watch	¼ oz.



2

2 CLOCK OILS

No.	Type	Size
OL 42400	Clock	¼ oz.
OL 42402	Clock	1 oz.
OL 42404	Clock	2 oz.
OL 42406	Clock	4 oz.
OL 42408	Clock	8 oz.
OL 42410	Clock	Pint
OL 42412	Clock	Quart



3

3 NYOIL

Used as a cleaner, polisher, lubricant, and rust preventer. General purpose oil for clocks, as well as sewing machines, tools, typewriters and light machinery. Comes in 4 oz. bottle.
No. **OL 42460**

NYE PML OIL and GREASE

Made to exacting standards for clocks.

No.	Type	Size
OL 42470	PML Oil 80 Clock	3½ cc bottle
OL 42530	PML Grease	4.5 gram tube



4

4 WATCH OILS and GREASE

No.	Type	Size
OL 42440	Watch	¼ oz.
OL 42442	Watch	1 oz.
OL 42444	Watch	2 oz.
OL 42446	Watch	4 oz.

1 PIKE GENERAL PURPOSE OIL by NORTON

Recommended for sharpening operations, and lubricating hinged or moving parts. 4½ oz. can.
No. **42.480**

2 LA PERLE OILS

Famous French oils preferred by many for a great number of years. They do not dry up, are unaffected by extreme heat or cold, and stay in place.

No.	Type	Size
OL 42340	Clock	1 oz.
OL 42350	Watch	½ oz.
OL 42342	Clock oil	Pint

3 SILICON 7 WATERPROOF CASE SEALER

High vacuum pressure waterproof watch case sealant prevents leakage of moisture into the case due to worn gaskets. Will not evaporate, vaporize, harden, or break down, and will not affect watch oils. Unaffected by temperatures from minus 280° F to 435° F (138° C to 224° C), or by moisture, salts, acids, fungi, alkali, or sweat. Contains 8 grams.
No. **OL 420340A**

4 SILICONE LUBRICATOR

Ideal for lubricating gaskets and O-rings for easier replacement. Simply place gasket between foam pads and twist.
No. **OL 420348**

5 ZENITH VACU SEAL

Available in 1 oz. bottles.
No. **OL 420262**

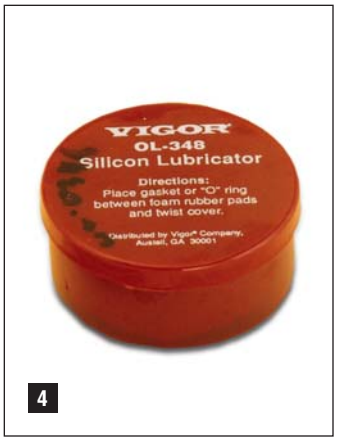
6 ZENITH OILS

Manufactured from the finest ingredients. Available in 1 oz. squeeze bottles.
No. **OL 420258** Watch oil
No. **OL 420259** Clock oil















1

1 ROUND METAL BOXES

Made of tin. Perfect for storing small stones and findings.
Sold by the pack.

No.	Diameter	Height	Pack
15.114	1 5/16"	3/8"	144
15.117	1 1/2"	1/2"	144
15.119	2"	3/4"	72
15.127	2 3/8"	3/16"	144



2

2 SMALL PLASTIC BOXES

Great, inexpensive way to store parts safely.

No.	Dimensions
15.128	1 7/8" x 1 7/8" x 3/4"
15.129	1 1/8" x 1 1/8" x 3/4"
15.130	1" x 1" x 3/4"
15.131	1" x 2" x 3/4"
15.132	2" x 2" x 3/4"



3

3 PLASTIC BOXES with COMPARTMENTS

For storing abrasives, small parts and mandrels.

Dimensions

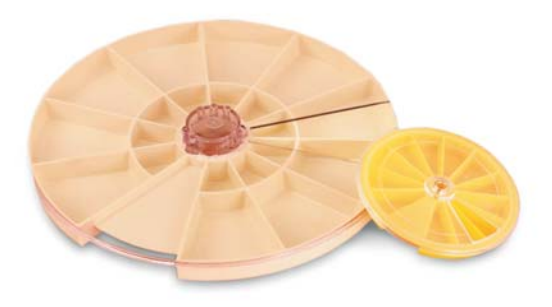
No.	Dimensions	Compartments
15.136	4 3/8" x 2 5/8" x 1"	6
15.137	8 1/4" x 4 1/4" x 1 1/4"	12
15.139	10 3/4" x 6 3/8" x 1 3/4"	18
15.140	8 1/4" x 4 1/8" x 1 1/4"	18



4

4 ALUMINUM SMALL PARTS TRAY

Helps you organize small parts, accessories, stones and findings. Ideal for separating jobs to avoid confusion. Sturdy 3" triangular trays are self-nesting for easy storage. Sold by the dozen.
No. **38.0167**



5

5 SMALL PARTS TRAYS with COMPARTMENTS

Sliding top opens one compartment at a time so parts will not spill or mix.
No. **15.610** 20 compartments w/a 7 1/2" diameter
No. **15.611** 12 compartments w/a 3 1/2" diameter

2 SHOP TRAYS

An easy way to organize your work. Self-nesting for uniform stacking. Includes removable partition. Measures 6" x 9" x 1 1/2".

No. **15.598** Lavender
No. **15.599** Burgundy
No. **15.600** Yellow
No. **15.601** Ivory
No. **15.602** Red
No. **15.603** Green
No. **15.604** Blue
No. **15.607** Gray
No. **15.608** Black

No. **15.609** Tray tags (pk/100) with pen



3 ACID BOTTLE

Clear glass with glass stopper/applicator. Holds 1/2 oz.
No. **15.100**



4 ROUND ACID BOTTLE

Frosted edges of this 1 1/2 oz. bottle match the cover, making it suitable for storage, as well as application.
No. **15.102**



5 GROBET USA™ FLUID DISPENSER PUMP

Compact, convenient 4 oz. capacity polyethylene bottle with stainless steel pump-action lid. Dispenses just the right amount of flux or other liquid. Just pump the lid with a brush and the fluid is dispensed in the well of the lid. The one-way pump holds the fluid in the well, preventing contamination of the unused fluid in the bottle.
No. **54.415**





1 PLASTIC BOTTLES with PLASTIC TOPS
Perfect for storing parts. Sold by the dozen.
No. **15.112** Measures 15/32" x 17/32"
No. **15.113** Measures 5/8" x 1 1/2"



2 PLASTIC VIALS with CAPS
Made of crystal clear plastic which will not cloud. Sold by the dozen.
No. **15.0234** Measures 1 1/4" x 3/8"
No. **15.0241** Measures 4" x 1/2"
No. **15.0254** Measures 3" x 1/2"
No. **15.0255** Measures 2 1/8" x 5/16"



3 GLASS BOTTLES with SCREW TOP
Ideal for storing small parts. Measures 19/32" x 1 13/16".
Sold by the dozen.
No. **15.108**



4 WOOD BOX
Protects burs and keeps them handy at all times.
No. **15.0375**



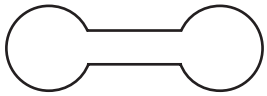
5 TOOL BOX
A lightweight plastic tool box. Measures 10 3/4"L x 4" D x 3" H. Removable top tool tray. Colors vary.
No. **15.142**

SHARK-SKIN™ JEWELRY REPAIR and IDENTIFICATION TAGS

The Original Shark Skin Tag. Accept no substitutes!

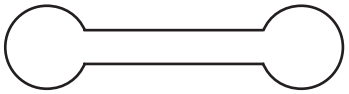
- Self-stick, needs no moistening
- Retains shape and color in ultrasonics, ionic cleaners or under steam pressure
- Adhesive free center bar
- Rings can be tried on without removing tag
- Free marking pen included (No. 60.700)





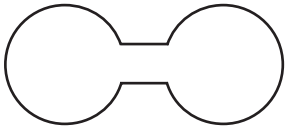
1 Package of 1,000

No.	Color
60.701	White
60.702	Blue
60.703	Yellow
60.704	Silver
60.708	Gold



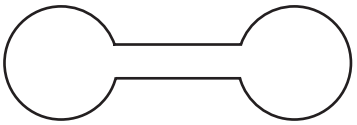
2 Package of 500

No.	Color
60.705	White
60.707	Yellow



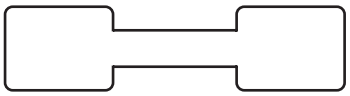
3 Package of 1,000

No.	Color
60.710	White
60.712	Yellow



4 Package of 500

No.	Color
60.715	White
60.716	Blue
60.717	Yellow



5 Package of 500

No.	Color
60.720	White
60.722	Yellow

No. **60.700** Special marking pen

TAGS for COMPUTER USE

6 SHARK-SKIN™ TAGS for DOT MATRIX PRINTERS

Mounted three across on flat, pin-feed, fan-folded sheets. Waterproof and safe for ultrasonics, with adhesive-free center section. Free marking pen (No. 60.700) in each package.

Color	Package of 1,000	Package of 10,000
White	**61.720**	**61.725**
Gold	**61.750**	**61.755**
Silver	**61.760**	**61.765**

No. **60.700** Special marking pen

7 MYLAR TAGS for DOT MATRIX PRINTERS

Stronger and smoother for a clean print. Mounted three across on flat, pin-feed, fan-folded sheets. Waterproof and safe for ultrasonics.

Color	Package of 1,000	Package of 10,000
White	**61.820**	**61.825**
Gold	**61.850**	**61.855**
Silver	**61.860**	**61.865**

No. **60.718** Special marking pen







1 BASIC BLACK TRAYS and CASES

The high contrast and sophistication of black gets results in sales. The vibrant black velvet of the trays and cases in this popular line proves that impressive and effective displays need not be expensive. The eight items in this line include trays and cases for 12, 24, 36, and 72 rings. Cases are wood, covered in textured black vinyl, with simply designed metal latches. Slotted black foam under the velvet inserts holds rings firmly in place. Covers are lined in black satin. Trays have decorative gold tooling around the edges.

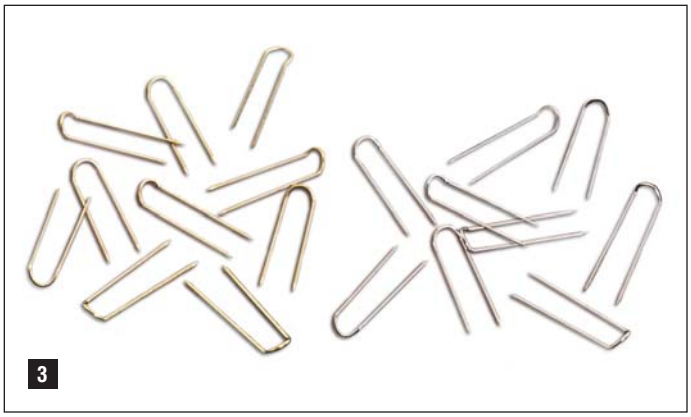
No. **61.502** 12 Ring tray
No. **61.504** 24 Ring tray
No. **61.506** 36 Ring tray
No. **61.508** 72 Ring tray
No. **61.512** 12 Ring case
No. **61.514** 24 Ring case
No. **61.516** 36 Ring case
No. **61.518** 72 Ring case



2 JEWELRY DISPLAY TRAY

Bring out the best in your merchandise. These solid trays are black, and velvet pads are available. Tray measures 14 3/4" x 8 1/4" x 1".

No. **61.537** Tray
No. **61.538** Black velvet pad
No. **61.539** Gray velvet pad



3 JEWELRY PINS

White or yellow jewelry pins have long sharp points for pinning all types of jewelry to pads, trays, easels, etc. Sold by boxes of 100 or 1000.

No. **61.560** Box of 1000 white
No. **61.561** Box of 100 white
No. **61.563** Box of 1000 yellow
No. **61.564** Box of 100 yellow



4 AVERY KUM KLEEN LABELS

Ideal for price marking or labeling. Kum Kleen labels will stick to surfaces like metal, wood, plastic, etc. Easily peel off without damaging merchandise. Square and rectangular labels have rounded corners. Use with pen 60.718 (waterproof) or 60.700 marking pen.

No.	Style	Qty.	Size
61.412	S-508	1000	5/16" x 1/2"
61.414	S-610	1000	3/8" x 5/8"
61.418	S-812	1000	1/2" x 3/4"

JEWELRY TAGS

A staple item of any jewelry business. All of these tags are durable and can be written upon without smearing or smudging. Strung with quality cord. Imprinting is available on some tags.

1 JEWELRY STRING TAGS

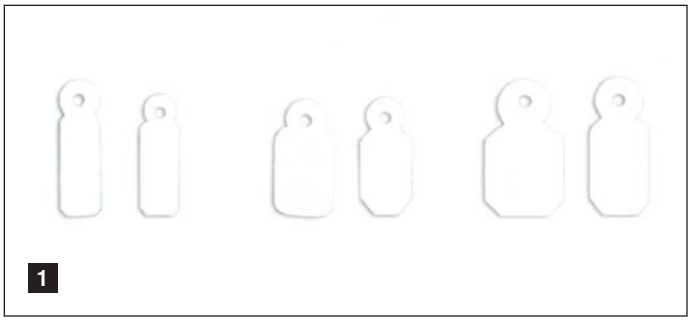
Made of strong white cardboard with red strings, no imprinting available. Sold by box of 1000.

Domestic

No.	Length	Width
60.060D	5/8"	1/4"
60.065D	9/16"	3/8"
60.075D	5/8"	1/2"

Imported

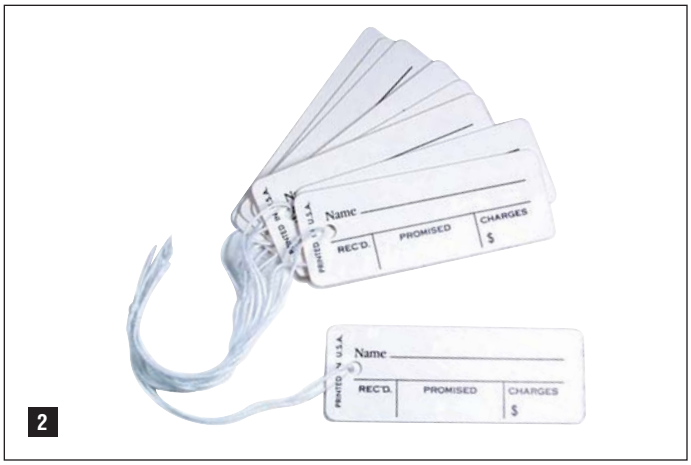
No.	Length	Width
60.060	5/8"	1/4"
60.065	9/16"	5/16"
60.075	3/8"	5/8"



1

2 PRINTED TAGS

Available in white only, no imprinting available. Measures 2 3/4" x 1". Sold by box of 1000.
No. **61.300**

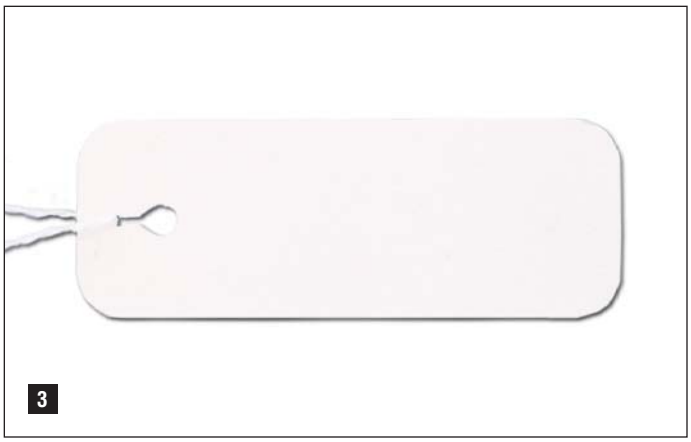


2

PLAIN WHITE TAGS

Available with round or square corners, no imprinting available. Sold by box of 1000.

No.	Size	Corners
3 **61.193**	2 3/4" x 7/8"	Round



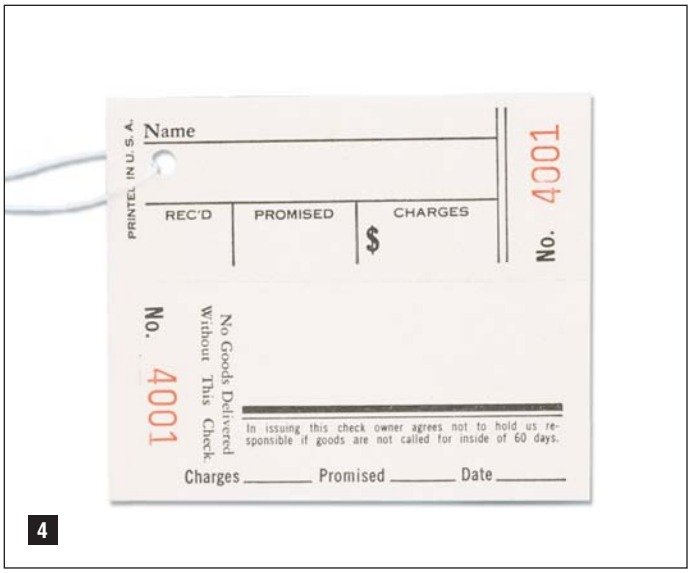
3

PRINTED TAGS with CLAIM CHECKS

Tear-off claim checks, which can be imprinted with your name and address. Both parts are numbered clearly. Sold by box of 1000.
Call for imprinting charges. Minimum imprint quantity is 5000. Allow 4 to 6 weeks for delivery.

4 Size: 2 7/8" x 2 3/8".

No.	Claim No.
61.251	1 to 1000
61.252	1001 to 2000
61.253	2001 to 3000
61.254	3001 to 4000
61.255	4001 to 5000
61.256	5001 to 6000
61.257	6001 to 7000
61.258	7001 to 8000
61.259	8001 to 9000
61.260	9001 to 10000



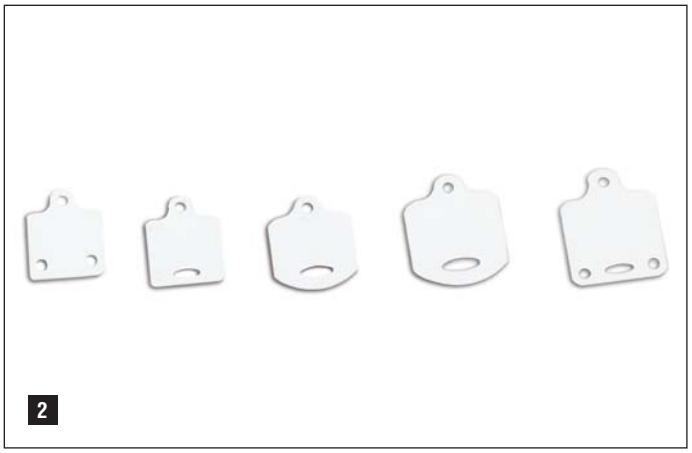
4



1 PVC STRING TAGS

Available in white paper and white, gold and silver PVC. PVC tags are ultrasonic-proof when used with a permanent marker.
Sold by box of 1,000.

Description	Size	White Paper	White PVC	Gold PVC	Silver PVC
String Tag	5/16" x 1/2"	**60.500**	**60.501**	**60.502**	**60.503**
String Tag	5/16" x 5/8"	**60.510**	**60.511**	**60.512**	**60.513**
String Tag	3/8" x 3/4"	**60.520**	**60.521**	**60.522**	**60.523**
String Tag	1/2" x 3/4"	**60.530**	**60.531**	**60.532**	**60.533**
String Tag	5/8" x 7/8"	**60.540**	**60.541**	**60.542**	**60.543**



2 SPECIALTY TAGS

Available in white PVC. Tags are ultrasonic-proof when used with a permanent marker. Sold by box of 1,000.

Description	Size	No.
Tags for Earrings	1/2" x 1/2"	**60.550**
Tags for Bracelets	1/2" x 1/2"	**60.551**
Tags for Medals	9/16" x 9/16"	**60.552**
Tags for Medals	5/8" x 5/8"	**60.553**
Tags for Earrings	13/16" x 13/16"	**60.554**



3 RING TAGS

Available in white, gold and silver PVC. PVC tags are ultrasonic-proof when used with a permanent marker. Tags can be secured by hand.
Sold by box of 1,000.

Description	Size	White PVC	Gold PVC	Silver PVC
Small Round Tag	5/8"	**60.560**	**60.561**	**60.562**
Large Round Tag	5/8"	**60.570**	**60.571**	**60.572**
Single End Round Tag	5/8"	**60.580**	**60.581**	**60.582**
Single End Oval Tag	5/8"	**60.590**	**60.591**	**60.592**
Single End Rectangle Tag	5/8" x 3/8"	**60.594**	**60.595**	**60.596**
Small Long Tag	5/8" x 1/4"	**60.597**	**60.598**	**60.599**



4 ADJUSTABLE TAGS

Ratchet design allows one tag to fit many different items. PVC tags are ultrasonic-proof when used with a permanent marker. Available in white and gold PVC. Sold by box of 1,000.

Description	Size	White PVC	Gold PVC
Adjustable Tag	3/8" x 3/4"	**60.600**	**60.601**
Adjustable Tag	5/16" x 5/8"	**60.602**	**60.603**
Adjustable Tag	3/16" x 3/8"	**60.604**	**60.605**

For all tags on this page, use pen No. 60.718 (sold separately).

RECTIFIERS by GROBET USA™

Precision-built in the USA, continuous-duty, solid-state electronic units with a range of power to handle all plating needs. Works by means of the powerstat control,to produce desired voltage. All units have pilot lights and both DC ampmeter and voltmeter for measuring current under load. All units come with a set of lead wires with alligator clamps and terminal lugs. 25 and 60 amp units can be used for electro-stripping.

3 amp, 10 amp, and 25 amp rectifiers are available with an accessory kit which includes: a pair of 600 ml beakers, copper plating wire, electro-cleaning compound and a stainless steel anode.

1 10 AMP RECTIFIER

Specifications:
- 0 to 10 amps output, continuous duty
- 0 to 10 volts DC output
- Runs plating baths up to 1 gallon except for rhodium which is a 2 quarts maximum.
- Steel cabinet measures 13" W x 8" H x 8 1/2" D.
- Shipping weight of rectifier 17 lbs. (25 lbs. with accessories).

No. **45.504** 110 volt rectifier with accessories
No. **45.506G** 110 volt rectifier only
No. **45.506GX** 220 volt rectifier only



1 *Accessory kit not shown*

2 25 AMP RECTIFIER

Specifications:
- 0 to 25 amps output, continuous duty
- 0 to 12 volts DC output
- Runs plating baths up to 5 gallon except for rhodium which is a 1 gallon maximum.
- Steel cabinet measures 13" W x 8" H x 8 1/2" D.
- Shipping weight of rectifier 20 lbs. (25 lbs. with accessories).

No. **45.508** 110 volt rectifier with accessories
No. **45.508X** 220 volt rectifier, with accessories
No. **45.510G** 110 volt rectifier only
No. **45.510GX** 220 volt rectifier only
No. **45.406** Red Lead
No. **45.407** Black Lead



2 *Accessory kit shown*

3 60 AMP RECTIFIER

Specifications:
- 0 to 60 amps output, continuous duty
- 0 to 12 volts DC output
- Runs plating baths up to 20 gallons, less for rhodium
- Steel cabinet measures 18 1/8" W x 9 1/8" H x 8 1/8" D
- Shipping weight of rectifier 57 lbs.

No. **45.511** 110 volt rectifier only
No. **45.513** Main transformer
No. **45.512** Variable transformer (Dial)



3



1 GROBET RHODIUM PEN PLATING SYSTEM

Precision voltage gives high quality and production. 3 different color-coded cups give plenty of space for all solutions. Cabinet holds 3 cups and 4 pens. Fiber tips may be shaped for different patterns and designs. Machine comes standard in 120 volt. 220 volt UL approved to meet or exceed all safety requirements.

No. **45.404** Deluxe
No. **45.404X** 220



2 GROBET SINGLE PEN PLATING SYSTEM

Precision voltage adjusting gives high quality and production. 1 color-coded cup gives plenty of space for all solutions. Cabinet holds 1 cup and 1 pen. Fiber tips may be shaped for different patterns and designs. Machine comes standard in 120 volt and 220 volt. UL approved to meet or exceed all safety requirements.

No. **45.439** Deluxe
No. **45.439X** 220



3 TIPS for PEN PLATER

No. **45.405**



4 GROBET RHODIUM SOLUTIONS

Specially formulated, state-of-the-art pen plating solutions designed to provide quality results. One oz. (29.6 ml) naligene jar.

No. **45.414** Rhodium, 12.5ml (.42oz)
No. **45.415** Black rhodium, 12.5ml (.42oz)
No. **45.434** 1 GR Non Haz.
No. **45.436** ½ Black Pen



5 3 AMP SWITCH CONTROLLED RECTIFIER

Specifications:

- 0 to 3 amps output continuous duty
- Switch control has settings of 2, 4, 6, 8 and 10 volts DC output
- Steel cabinet measures 6" W x 4" H x 4" D
- Shipping weight of rectifier 3 lbs. (8 lbs. with accessories).

No. **45.500** 110 volt rectifier with accessories
No. **45.502** 110 volt rectifier only

Note: *220 volt rectifier has CE approval.*

VIGOR® PLATING SOLUTIONS

1 VIGOR® RHODIUM
Acid base containing no cyanide. Use with platinum anode or platinized titanium anode. Pint contains one gram of rhodium.
No. **45.0301**

2 VIGOR® COPPER
Acid base containing no cyanide. Use with copper anode as a pre-plating for most gold plate or as a test plating. One quart.
No. **45.0310**

3 VIGOR® NICKEL
Acid base containing no cyanide. Use with nickel anode. One quart.
No. **45.0311**

4 VIGOR® ELECTRO-CLEANER
Removes film and invisible oils from the metal to be plated to improve bond. Use with stainless steel anode. One quart.
No. **45.0312**

5 PRO-CRAFT® CYANIDE-FREE ELECTRO STRIPPING SOLUTION
For removing old plating, except for rhodium and chromium. Article to be stripped is hung on stainless steel strap and connected to positive terminal. Brass or copper anode is connected to negative terminal. Recommended operating temperature is 160° F (71° C) at 6 volts. Comes in 32 oz. plastic bottle.
No. **45.691**

6 RHODIUM PRE-MIX
Ready to use in a bath application. Just mix rhodium concentrate and included steam distilled water. 500 ml bath. (1 gram).
No. **45.434**

7 PEN PLATING SOLUTION
Ready to use. Rapid application. (½ gram)
No. **45.435**

8 BLACK PEN PLATING SOLUTION
Ready to use. Rapid application. For pave and dark stone setting. (½ gram)
No. **45.436**

9 REPLACEMENT PEN PLATING SYSTEM ACCESSORIES for VIGOR SYSTEMS
No. **45.416** Degreaser pen
No. **45.417** Copper plating pen Corrosive UN 1830
No. **45.418** Nickel plating pen
No. **45.419** Chrome-color plating pen
No. **45.422** Rhodium plating pen
No. **45.423** Degreaser pen for stainless steel
No. **45.428** Black nickel plating pen
No. **45.431** Replacement fuses
No. **45.432** Set of black and red power leads (not shown)



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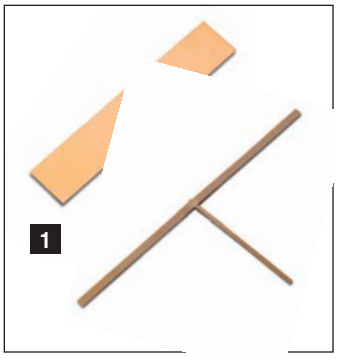
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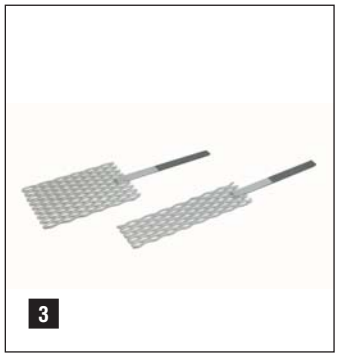


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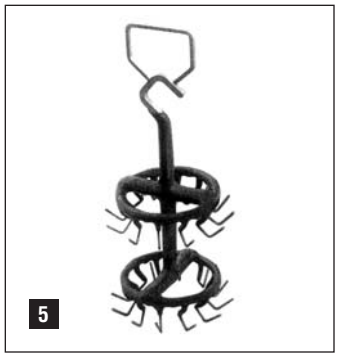


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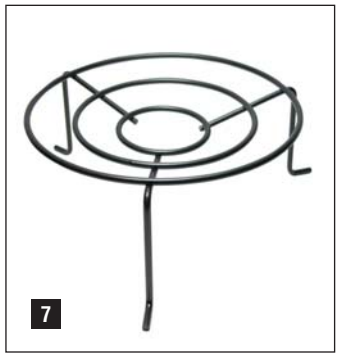
















PLATING ACCESSORIES

1 VIGOR® ANODES

No. **45.0315** Copper 1" x 6"
No. **45.0316** Stainless steel 1" x 6"
No. **45.0318** Nickel 1" x 6"
No. **45.606** Fine silver 999 6" x 1"

2 VIGOR® PLATINIZED TITANIUM

Insoluble for rhodium.
No. **45.0320** 10¼" x ¼"

3 PLATINIZED TITANIUM MESH

No. **45.601** 2" x 3"
No. **45.601A** 1" x 4"

4 PRO-CRAFT® ANODES

The base metal portion of these anodes measures ½" W x 6" L in varying thicknesses.
No. **45.592** Copper
No. **45.597** 24K gold
No. **45.598** Nickel
No. **45.602** Silver
No. **45.604** Stainless steel

5 PLATING RACKS

No. **23.633** Two tier 32 hooks.
No. **23.634** Three tier 48 hooks.

6 HOT PLATE

A compact (6" x 3"), high performance lab appliance. This gas operated hot plate provides an efficient infrared heat source that can be used anywhere, without the need for an electric outlet. The self contained gas chamber is easily refilled with standard butane lighter fuel. the heat output is fully adjustable, up to a maximum of 1100° C (2000° F). Features solid state push button auto ignition, infrared ceramic heating burner , and an optional, available beaker stand.
No. **45.705**

7 BEAKER STANDS

An economical accessory for both the Burner and Hot Plate. Made of high quality chrome on steel components to resist corrosion and discoloration. Easily supports 1000 ml beakers.
No. **45.706**

8 ELECTRIC HOT PLATES

Three ring burners, tubular elements and infinite control switches. With chrome top and white trim. 120 volt AC, 50/60 Hz, with three-prong grounded cord. UL listed.

No.	Burner	Size	Amps	Watts	Ship Weight
45.710	single	8½" x 8½" x 3¼"	6	700	4 lbs.
45.712	double	17" x 8½" x 3¼"	13	1400	6 lbs.

9 NATURAL GAS HOT PLATES

No.	Burner	Size	Ship Weight
45.701	single	11" x 9½" x 6¼"	6 lbs.
45.700	double	11" x 19½" x 6¼"	11 lbs.

1 PYREX BEAKERS
No. **45.640** For 600 ml/pint baths
No. **45.641** For 1000 ml/quart baths

2 STAINLESS STEEL BEAKERS
Can be used as the anode needed for electro-stripping and gold plating. Just attach your lead wire to the lip of the beaker.
No. **45.642** 600 ml
No. **45.643** 1200 ml

3 BEAKER COVERS
Easy-on, easy-off, snug-fit covers protect against spills or contamination of beaker contents.
No. **45.644** Fits 600 ml beakers
No. **45.645** Fits 1000 ml beakers

4 PRO-CRAFT® IMMERSION THERMOMETER
For determining solution temperature. Temperature range 0-230 F.
No. **45.696**

5 "GROBET USA™ PLATING GUIDE"
Newly revised and updated. Covers step-by-step plating procedures in an easy-to-learn technique.
No. **62.01215**

6 GRIFFITH DENATURED ALCOHOL
For use in alcohol lamps, making anti-oxidizers, and as a quick-drying dip to prevent spotting of plated pieces.
Hazardous – Flammable Liquid UN 1987.
No. **23.201** 8 oz
No. **23.202** 16 oz
No. **23.203** 32 oz
No. **23.204** Gallon

7 GRIFFITH ACETONE
A quick drying solvent for dissolving most lacquers and cements.
Hazardous – Flammable Liquid UN 1090.
No. **23.211** 4 oz
No. **23.212** 8 oz

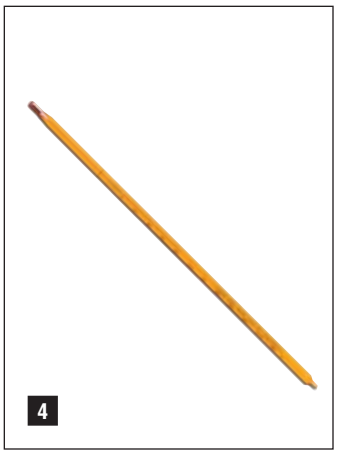
8 PRO-CRAFT® LACQUER
A high-grade lacquer that can be brushed on articles to provide a tough, smooth, even surface to protect them from tarnish and to eliminate metal deposits from plating solutions. One pint bottle.
Hazardous – Flammable Liquid UN 1263.
No. **45.650**

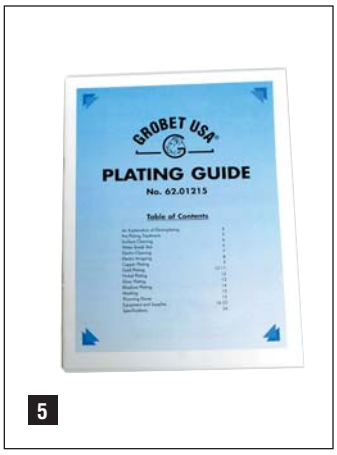
9 PRO-CRAFT® LACQUER STRIPPER
Used for removing and thinning lacquer. One pint (473 ml) bottle.
Hazardous – Flammable Liquid UN 1263.
No. **45.651**



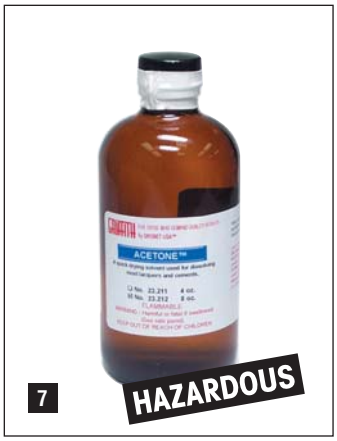
















1

1 JNT BRUSH-PLATING and DIP-COTING KITS

A simple way to plate without expensive equipment for occasional jobs. Just the right amount of current is supplied by the two penlight batteries (not included) to either brush or bath-plate with the specially formulated solutions listed. Brush-plating is especially useful for retouching large objects which cannot be plated easily. **Cyanide-free** kit contains dip-coter heads so that small articles can be dipped right into the wide mouthed jars, as well as brush-plating heads.

No. **45.750** Gold kit
No. **45.752** Silver kit
No. **45.754** Combination gold & silver kit containing all the necessary supplies for use on both metals



2

2 JNT PLATING SOLUTIONS

Contains no cyanide or strong acids, so they can be shipped through the mail. All plate at 70-80° F (21-27° C) room temperature.

Copper

A sulfate-based solution which plates directly on all common metals, except chromium, stainless steel and aluminum. Usually used as an under-plate for other metals. A stainless steel or copper anode can be used with this solution.

No. **45.634**

Gold

A chloride-based solution which plates directly on tin, copper, brass, bronze, nickel and silver. Available in either 24K (fine gold) or 14K to match karat colors. Stainless steel or gold anode can be used.

No. **45.635** 14K gold
No. **45.636** 24K gold

Silver

A sulfate-based solution which plates directly on copper, brass, bronze, nickel, tin, pewter and most white metal alloys. Stainless steel or pure silver anodes can be used.

No. **45.638**



3

3 BACKGROUND ANTIQUE for JEWELRY

For highlighting or subtle dark background effects. Gives a dark, dull antique finish to class rings, or any other jewelry. Adheres to any metal, dries in minutes. The solution is resistant to wear and needs no lacquer. 2 oz. Hazardous shipping.

Solution

No. **45.0130** Black ORM D
No. **45.0131** Green ORM D
No. **45.0132** Brown ORM D

AUL Solvent

Removes background color from high spot surfaces.

No. **45.0135** 2 oz. ORM D

Solution with AUL Solvent

No. **45.0230** Black ORM D
No. **45.0231** Green ORM D
No. **45.0232** Brown ORM D



4

4 GROBET BLACK GROUND

Produces black oxide background in one minute on brass or copper base metals. Can be immersed or painted with brush or swab. 4 oz. bottle. Hazardous shipping.

No. **45.0550** ORM B

1 **VIGOR® OXIDIZER**
Use on both gold and silver to produce all shades from French gray to black. Hazardous Oxidizer.
No. **45.0329** 4 oz.
No. **45.0331** 8 oz.



HAZARDOUS
1

2 **PRO-CRAFT® SILVER OXIDIZER**
Non-corrosive solution can be used to blacken silver or copper when used at full strength. When diluted with water, the action is slowed down so that color can be controlled for all shades of gray. No heating is required, since it works at room temperature. Biodegradable. Corrosive UN 1760.
No. **45.681** 8 oz.
No. **45.682** 16 oz.



HAZARDOUS
2

3 **GRIFFITH SILVER BLACK**
An acid based oxidizer which produces an instantaneous deep black patina on silver, gold, copper or bronze. Corrosive UN 1789.
No. **45.040** 1 oz
No. **45.041** 4 oz
No. **45.042** 8 oz
No. **45.043** 16 oz
No. **45.044** 128 oz


HAZARDOUS
3

4 **GRIFFITH NICKEL/IRON BLACK**
An acid based oxidizer which produces an instantaneous deep black patina on nickel and iron. Corrosive UN 1760.
No. **45.045** 4 oz


HAZARDOUS
4

5 **PRO-CRAFT® LIVER of SULPHUR**
Contains 8 oz. (227 g) in lump form. When dissolved in hot water, can be used to oxidize most metals.
No. **45.690**



5

6 **GRIFFITH LIVER of SULPHUR**
Use dissolved in hot water as an oxidizer for most metals.
No. **45.688** 1 oz. (29.5 ml)
No. **45.689** 4 oz. (118 ml)
No. **45.69001** 8 oz. (237 ml)
No. **45.69101** 32 oz. (917 ml)



6



CLEAN EARTH™ PLATING SOLUTIONS

All Clean Earth™ plating solutions are cyanide free. They are ecologically safer than standard plating solutions yet plate uniformly and produce a hard, durable finish. The solutions are easy to use and produce rich colors.

CLEAN EARTH™ GOLD PLATING SOLUTIONS

Produces a uniform gold color. Use with a stainless steel or pure gold anode. Plate with the solution heated to 140° F (60° C) at 3 to 4 volts for 30 to 45 seconds. Changing the plating time or solution temperature will affect color.

No. **45.212** 1 quart 14K
No. **45.213** 1 gallon 14K
No. **45.214** 1 quart 18K
No. **45.215** 1 gallon 18K
No. **45.216** 1 quart 24K
No. **45.217** 1 gallon 24K

CLEAN EARTH™ SILVER

Produces a uniform silver plate. Use with a stainless steel or pure silver anode. Plate with solution at room temperature at 1.4 to 1.8 volts for 15 to 90 seconds. The finish will reflect the surface of the underplate; shiny silver over shiny metals and matte silver over a dull surface.

No. **45.220** 1 quart
No. **45.221** 1 gallon

CLEAN EARTH™ NICKEL FREE

A nickel free alloy similar in color to nickel. Best if used over Copper Mirror, Nos. 45.208 or 45.209. An excellent base for gold and silver plating. Use with a nickel anode. Plate with solution at 140° F (60° C) at 2 to 4 volts for 30 to 90 seconds.

No. **45.222** 1 quart
No. **45.223** 1 gallon

CLEAN EARTH™ NICKEL MIRROR

Adds a decorative brilliance and a white mirror shine to dull finishes. Best if used over Copper Mirror, Nos. 45.208 or 45.209. An excellent base for rhodium, gold or silver plating. Use with a pure nickel anode. Plate with solution at 140° F (60° C) at 2 to 4 volts for 2 to 10 minutes.

No. **45.210** 1 quart
No. **45.211** 1 gallon

CLEAN EARTH™ COPPER PRIMER

Used as a pre-plate to cover difficult to plate metals such as tin, lead, and zinc die-casted metals. An excellent base for nickel plating. Use with a pure copper anode. Plate with solution at 130° F (54° C) at 1 to 2 volt for 2 to 5 minutes.

No. **45.206** 1 quart
No. **45.207** 1 gallon

CLEAN EARTH™ COPPER MIRROR

Produces a bright copper finish. Air bubble agitation produces superior uniformity and shine. Use with a pure copper anode. Plate with solution at room temperature at 2 to 3 volts for 2 to 10 minutes. Electroform at 1 to 1.3 volts for 30 minutes to 5 hours.

No. **45.208** 1 quart
No. **45.209** 1 gallon

CLEAN EARTH™ WHITE FREE

Deposits a beautiful bright, white finish. Best if used over Nickel Mirror, Nos. 45.210 or 45.211 or Copper Mirror, Nos. 45.208 or 45.209. Use a stainless steel anode. Plate with solution at room temperature at 2 to 4 volts for 30 to 60 seconds.

No. **45.224** 1 quart
No. **45.225** 1 gallon

CLEAN EARTH™ BLACK FREE

Use to achieve an antique finish. After article is plated with Black Free, highlights are relieved by polishing. Use with a stainless steel anode. Plate with solution at 120° F (50° C) at 3 to 6 volts for 30 to 90 seconds.

No. **45.226** 1 quart
No. **45.227** 1 gallon

CLEAN EARTH™ TIN

Adds a conductive coat for high quality electroforming. For better results when using MetalForm® paint or any other copper based conductive coating, dip parts in solution for 60 seconds. Use solution at room temperature. Hazardous, Corrosive.

This solution is not used with a rectifier.

No. **45.228** 1 quart
No. **45.229** 1 gallon

CLEAN EARTH™ ACID ACTIVATOR SS

Activator - SS is a powerful activator that provides excellent oxide removal and etching properties to help metals plate onto stainless steel. Activator - SS offers a low cost, easily maintainable and ecological alternative to hazardous and noxious acids. Activator - SS is designed to activate stainless steel for gold plating with Clean Earth Gold Plating Solution, for complete cyanide free process.

No. **45.244** 1 quart
No. **45.245** 1 gallon



PLATING SOLUTIONS

CLEAN EARTH™ ELECTROCLEANER
A quick and effective method of cleaning objects prior to plating. The cleaning process uses an electrolytic bath, similar to plating operations. The 2 lb. size makes 8 gallons - 5 lb. size makes 20 gallons. Use with a stainless steel anode. Clean with the solution heated from 120° to 160° F (50° to 71° C) at 2 to 6 volts for 15 to 30 seconds.
No. **45.202** 2 lb.
No. **45.203** 5 lb.

CLEAN EARTH™ ULTRASONIC CLEANER
Degreases and cleans. It is biodegradable, non-ammoniated and phosphate free. The 1 quart size makes 3 gallons and the 1 gallon size makes 12 gallons.
No. **45.233** 1 quart
No. **45.234** 1 gallon

CLEAN EARTH™ ACTIVATOR
This powdered acid is mixed with water to produce a mild solution for etching, brightening and cleaning. Use to clean and activate parts to assure strong metallic bonding throughout the subsequent plating process. The 2 lb. size makes 8 gallons - 5 lb. size makes 20 gallons. Use at room temperature for 30 to 60 seconds.
This solution is not used with a rectifier.
No. **45.204** 2 lb.
No. **45.205** 5 lb.

CLEAN EARTH™ STRIP-FREE
Used to strip gold plating. Use with a stainless steel anode. Reverse plate with the solution heated to 120° to 150° F (50° to 65° C) at 3 to 6 volts for 30 to 90 seconds.
No. **45.218** 1 quart
No. **45.219** 1 gallon



1

1 RAINBOW ENAMEL

Low temperature curing, hard enamel. Requires only 250°-300° F for 40 minutes to one hour and the result is a ceramic-like surface. A two-part, liquid system, in which the binder and the color are mixed in a 3-to-1 proportion. Use applicator. Apply in a single coat or can be built up in successive layers. Has a hardness of 60-75 on the Sward scale, as compared to kiln-fired enamel 65-80, which requires 1500° F (816° C) to cure. A number of vibrant colors are available which can be mixed. Adheres to metals, wood, plastics, ceramics, etc. and can be stoned and polished. Complete set includes sufficient catalyst along with the following 16 colors in 1/2 oz. (14.8 ml) bottles:

Opaque colors; red, yellow, green, blue, violet, white and black.
Fluorescent Colors; yellow, green and pink.
Transparent colors; red, yellow, green, blue, violet and clear.

Hazardous – Flammable Liquid

Part #	Description
45.160	Enamel Set- Red & Binder
45.161	Enamel Set- Blue & Binder
45.162	Enamel Set- Black & Binder
45.163	Enamel Set- Yellow & Binder
45.164	Enamel Set- Green & Binder
45.165	Enamel Set- White & Binder
45.166	Enamel Set- Clear Red & Binder
45.167	Enamel Set- Clear Blue & Binder
45.168	Enamel Set- Clear Yellow & Binder
45.169	Enamel Set- Fluorescent Yellow & Binder

Part #	Description
45.170	Enamel Set- Fluorescent Green & Binder
45.171	Enamel Set- Fluorescent Pink & Binder
45.172	Enamel Set- Red, Blue, Black & Binder
45.173	Enamel Set- Yellow, Green, White & Binder
45.174	Enamel Set- Clear Yellow, Blue, Violet & Binder
45.175	Enamel Set- Clear Red, Green, Colorless & Binder
45.176	Enamel Set- Fluorescent Yellow, Green, Pink & Binder
45.177	Enamel Set- Clear Green & Binder
45.178	Enamel Set- Clear & Binder
45.179	Enamel Set- Clear Violet & Binder
45.180	Applicator

CERAMIT™

Low temperature curing, hard enamel. Requires only 200° F (93° C) for one hour and the result is a ceramic-like surface. A two-part, liquid system, in which the catalyst and the color are mixed in a 2-to-1 proportion. Can be brushed on, sprayed on or applied with a spatula or squeeze bottle. Apply in a single coat or can be built up in successive layers. Has a hardness of 60-75 on the Sward scale, as compared to kiln-fired enamel 65-80, which requires 1500° F (816° C) to cure.



2

2 CERAMIT™ CERAMIC ENAMEL SET

Thirty vibrant colors are available which can be mixed. Adheres to metals, wood, plastics, ceramics, etc. and can be stoned and polished. Complete set includes sufficient catalyst along with the following 14 colors in 1/2 oz. bottles: opaque colors; red, orange, yellow, jade green, turquoise, black, super white and transparent colors; red, orange, yellow, green, blue, brown and clear. Hazardous – Flammable Liquid UN 1866.
No. **45.800**

CERAMIT™ CATALYST REFILLS

No. **45.880** 8 oz.
No. **45.881** 1 pt.
No. **45.882** 1 qt.

CERAMIT™ CERAMIC THINNER

Hazardous – Flammable Liquid UN 1307.
No. **45.884** 1 pt. can

3 REPLACEMENT COLORS

Individual 2 oz. bottles can be ordered by product numbers listed with colors

Replacement Colors:

Opaque Colors

Black	Pearl	Super White	Iridescent Pink	Chinese Red	Red
45.801 $4.45	**45.802** $4.45	**45.803** $4.45	**45.805** $4.45	**45.807** $6.05	**45.809** $6.85

Violet	Brown	Cocoa	Orange	Yellow	Butterfly
45.810 $4.45	**45.811** $4.45	**45.812** $4.45	**45.813** $6.85	**45.816** $6.85	**45.817** $4.45

Olive Green	Jade Green	Green	Sky Blue	Turquoise	Israeli Blue	Blue
45.818 $4.45	**45.819** $4.45	**45.821** $4.45	**45.823** $6.85	**45.824** $6.85	**45.825** $4.45	**45.826** $4.45

Fluorescent Colors

Red	Green	Blue
45.861 $4.45	**45.864** $4.45	**45.866** $4.45

Transparent Colors

Red	Violet	Brown	Orange
45.841 $4.45	**45.842** $4.45	**45.843** $4.45	**45.844** $4.45

Yellow	Green	Blue	Clear
45.845 $4.45	**45.846** $4.45	**45.847** $4.45	**45.848** $4.45

JAX® MASTER METAL FINISHING SOLUTIONS

All JAX metal finishing and polishing solutions are easy to use, produce authentic, consistent results, require no heat or electricity, are water based, contain no sulfur, are non-flammable and react within seconds. Larger sizes of any JAX solution are also available. Shipping weight for all JAX solutions: one pint - 1 lb., one quart - 2 lbs. and one gallon - 8 lbs.



JAX® COLORANTS

JAX® GREEN PATINA
Produces a permanent, authentic, antique green finish on copper, brass and bronze.
No. **45.900** Pint
No. **45.920** Quart
No. **45.940** Gallon

JAX® GOLD FINISH
Produces a simulated 24 K Hamilton finish on brass.
No. **45.901** Pint
No. **45.941** Gallon

JAX® ANTIQUE RUST
Produces an antique rust finish on iron and steel.
No. **45.960** Pint
No. **45.961** Quart
No. **45.962** Gallon

JAX® DARKENERS

JAX® BROWN
Produces an antique brown finish on brass, bronze and copper.
No. **45.902** Pint
No. **45.942** Gallon

JAX® BROWN/BLACK
Produces an antique brown/black finish on brass, bronze and copper.
No. **45.903** Pint
No. **45.963** Gallon

JAX® BLACK
Produces an antique black finish on brass, bronze and copper.
No. **45.904** Pint
No. **45.944** Gallon

JAX® FLEMISH GRAY/BLACK
Produces an antique Flemish, gray-black finish on brass, bronze and copper.
No. **45.905** Pint
No. **45.965** Gallon

JAX® BLACKENERS

JAX® SILVER BLACKENER
Produces a dark, black antique finish on silver and gold.
No. **45.906** Pint
No. **45.946** Gallon

JAX® PEWTER BLACKENER
Produces a dark, black antique finish on pewter, lead, brass, bronze, copper, nickel, tin-lead alloys and solders.
No. **45.907** Pint
No. **45.947** Gallon

JAX® IRON, STEEL and NICKEL BLACKENER
Produces an antique, metallic black finish in seconds on iron, steel, cast iron and nickel.
No. **45.908** Pint
No. **45.966** Gallon

JAX® ALUMINUM BLACKENER
Produces an antique black finish on aluminum.
No. **45.967** Pint
No. **45.968** Gallon

JAX® MASTER METAL CLEANING SOLUTIONS

JAX® RUST REMOVER
A rust remover and an effective pre-paint primer for iron and steel.
No. **45.911** Pint
No. **45.970** Gallon

JAX® RUST PREVENTER
Prevents rust on clean iron and steel.
No. **45.912** Pint
No. **45.971** Gallon

JAX® LACQUER REMOVER
Removes lacquer and paint from metal surfaces. Contains no solvents.
No. **45.972** Pint
No. **45.973** Gallon

JAX® TARNISH PREVENTER
Prevents tarnish on clean brass, bronze and copper.
No. **45.913** Pint

JAX® INSTANT SILVER CLEANER
A heavy-duty cleaner that removes tarnish and oxidation from the blackest silver.
No. **45.914** Pint
No. **45.954** Gallon

JAX® INSTANT BRASS and COPPER CLEANER
A heavy-duty cleaner that removes tarnish and oxidation from the blackest copper, brass and bronze.
No. **45.915** Pint
No. **45.955** Gallon

JAX® BRASS, COPPER and GOLD CLEANER
A light-duty cleaner for delicate metals. Removes tarnish and surface contamination from fine gold finishes, bronzes, lamps, lighting fixtures, jewelry and antiques. Contains no abrasives. Leaves no residue.
No. **45.916** Pint
No. **45.974** Gallon

JAX® BRASS, COPPER, GOLD and MARBLE CLEANER
A heavy-duty cleaner that removes tarnish, surface dirt, old lacquer and grease from brass, bronze and copper, yet is safe for use on gold and marble.
No. **45.917** Pint
No. **45.975** Quart
No. **45.976** Gallon

JAX® ALUMINUM CLEANER
Produces a bright clean finish on all aluminum surfaces.
No. **45.977** Pint
No. **45.978** Gallon

JAX® MASTER METAL PLATING SOLUTIONS

JAX® SILVER PLATING SOLUTION
Plates pure silver onto copper, brass, bronze and silver. 4 oz.
No. **45.909**

JAX® COPPER PLATING SOLUTION
Instantly plates copper onto iron, steel, brass and solder.
No. **45.910** Pint
No. **45.969** Gallon

JAX® MASTER METAL POLISHING SOLUTIONS

JAX® SILVER CLEANER and POLISH
Chemically cleans and polishes the blackest silver in one application. Does not strip surface to a raw, dull finish. Incorporates a special polish that will not harm or streak the most delicate surfaces.
No. **45.918** Pint

JAX® METAL CLEANER POLISH
Chemically cleans and polishes tarnished brass, bronze, copper, pewter, nickel and steel. Removes oxidation, surface dirt, oil and fingerprints.
No. **45.919** Pint



1

1 SIMPLICITY GOLD AND PLATINUM REFINING SYSTEM

Sending gold and platinum out to be refined can be a very costly experience. Now you can refine all your scrap gold and platinum (bench sweeps, ingots, polishing sweeps, gold filled, rings etc.) in your own shop. The process is safe to operate and costs about one or two dollars per ounce (31 g) of gold. Stones will even dismount from rings without damage. No acids, cyanides or toxic chemicals are used and the process is odorless. Comes with a lifetime warranty and free technical support is available 7 days a week. The system is compact, only about 1 cubic foot (28,000 cc) in size. Detailed written instructions as well as an instructional VHS tape and interactive computer disks (for Windows 95 only) are included. Comes complete as shown including: catalyst (No. 63.502), precipitant (No. 63.504), GC salt (No. 63.504) and precious metal detection liquid (No. 63.508). DC power source not supplied.

Specifications

Capacity	1000 grams
Purity	999.5+% (999.9% if refined twice)
Speed	Approximately 1 hour for every ounce (31 g) of metal being refined
Minimum karat	No minimum and no maximum, karats can be mixed
DC Power	Requires 25 amp rectifier or a battery charger, 10 amp w/50 amp boost
Shipping weight	20 lbs. (9 kg)

No. **63.500** Complete unit

Replacement Supplies:

No. **63.502** Catalyst, single pack (4 batches)
No. **63.503** Catalyst, 10 pack (40 batches)
No. **63.504** Precipitant, single pack, 1 lb (.5 kg)
No. **63.505** Precipitant, 10 pack, 10 lbs. (4.5 kg)
No. **63.506** GC Salt, 5 lbs. (2.5 kg)
No. **63.507** GC Salt, 50 lbs. (23 kg)
No. **63.508** Precious metal detection liquid
No. **63.509** Clean sweeps (not supplied with system)


2

2 SUBZERO GOLD REFINING KIT

A very inexpensive way to refine your gold. The SubZero method of gold refining is suitable for karat gold, gold filled, refining bench sweeps, polishing sweeps, computer circuit boards, gold nuggets, alluvial gold and about all other forms of gold. Kit includes all the consumable supplies needed, 1 lb. SubZero, 1 lb. urea, 1 lb. Storm Precipant, 1 bottle Precious Metal Detection Liquid and 1 bottle of Ammonium Testing Liquid. Kit does not include muriatic acid, which can be purchased form a paint store or swimming pool supply.

No. **63.550** - Starter Kit
No. **63.551** - Storm Precipitant 1lb.
No. **63.552** - Storm Precipitant 10lb.
No. **63.553** - Ammonia Testing Liquid
No. **63.508** - Precious Metal Detection Liquid
No. **63.554** - Urea 1 lb.
No. **63.555** - Urea 10 lb.
No. **63.556** - SubZero 1 lb.
No. **63.557** - SubZero 10 lb.


3

3 SAFE-D-VEST INVESTMENT REMOVER

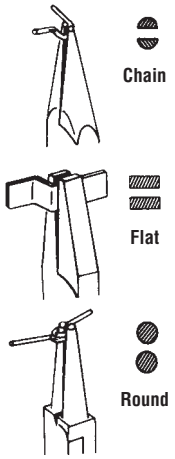
Say goodbye to hydrofluoric acid. Safe-D-Vest is a much safer alternative, requires no license use and is about half the cost of hydrofluoric. Works on both platinum investment and gold investment.

No. **23.080** - 1 lb.
No. **23.081** - 5 lb.
No. **23.085** - 25 lb.

How To Select Pliers & Nippers

SIZES

The overall lengths of the pliers and nippers in this catalog range from 4" to 8". Those over 5" are either for special work with long noses or are intended for heavier work.



STYLES

Chain - Traditional and most popular pliers, used to make bends, loops and similar forming operations. Insides of jaws may be smooth or serrated.

Flat - For gripping and holding flat or square objects securely and for making angular bends. Insides of jaws may be smooth or serrated.

Round - For making bends, loops, circles, coils from wire or sheet metal. Tapered circular jaws are smooth so that they will not scratch or nick soft metals.

Nippers - For cutting a variety of wire. The shape of the edges determines how the ends of the cut wires will appear. Flush and semi-flush edges will not perform properly on hard wires.



Look for the Grobet USA brand when you need pliers — insist on the best!

Features

Plastic and Foam Grip Handles - Provides a comfortable grip and gives some insulating qualities.

Box Joint Construction - Outlasts and outperforms all other types, retains precise alignment, never loosens or wobbles, opens and closes smoothly.

PLIER KITS

Our most popular pliers are sold as a set or individually.



1 SLIMLINE BOX JOINT PLIERS KIT

Contains three pliers, Nos. 46.052, 46.054 and 46.056, plus two nippers, Nos. 46.062 and 46.066, in a deluxe vinyl pouch. The complete line of Slimline pliers and cutters is shown on page 250.

No. **46.068**



2 JEWELERS SERIES BOX JOINT PLIERS KIT

Contains three pliers, Nos. 46.102, 46.104 and 46.106, plus two cutters, Nos. 46.118 and 46.124, in a deluxe vinyl pouch. The complete line of Jewelers Series pliers and cutters is shown on page 251.

No. **46.132**















SLIMLINE BOX JOINT PLIERS & NIPPERS

Made in Germany

The Slimline series is lightweight and sized for small to miniature work. These are precision pliers and nippers with box joints to eliminate side play and maintain alignment of jaws even under stress. The heads are brightly finished and the handles have vinyl cushion grips, and fitted with leaf springs which make them suited for repetitive work.

1 FLAT NOSE PLIERS

Smooth jaws taper to 1/8" at tips. For holding and manipulating flat pieces. Overall length 5", length of jaws 7/8".
No. **46.052**

2 ROUND NOSE PLIERS

Smooth jaws taper to 1/32" at tips. Used for making loops, bends, coils and similar operations. Overall length 5", length of jaws 7/8".
No. **46.054**

3 CHAIN NOSE PLIERS

Smooth jaws taper to 1/32" at tips and jaw edges are beveled to prevent marring of soft wire. Used to make bends and for gripping and manipulating wire. Overall length 4 3/4", length of jaws 7/8".
No. **46.056**

4 END CUTTERS

Flush cutting edges are for precision cutting of soft wire. Jaws are set at right angles for getting close to work. Overall length 4 1/4", length of cut 9/16".
No. **46.058**

5 OBLIQUE CUTTERS

Head is angled with pointed tip for getting into tight places. Semi-flush cutting edges are for precision wire cutting of soft wires. Overall length 4 1/4", length of cut 9/16".
No. **46.062**

6 DIAGONAL CUTTERS with POINTED END

Also known as side cutters, they have semi-flush cutting edges for precision cutting of soft wires. Overall length 4 1/4", length of cut 1/2".
No. **46.059**

7 DIAGONAL CUTTERS with ROUNDED END

Also known as side cutters, they have semi-flush cutting edges for precision wire cutting of soft wires. Overall length 4 1/4", length of cut 1/2".
No. **46.066**

Buy in Kit and Save!

KIT

Contains three pliers (Nos. 46.052, 46.054, and 46.056) plus two nippers (Nos. 46.062 and 46.066) in deluxe vinyl pouch. Priced lower than when tools are purchased separately – and a free pouch is included!
No. **46.068**

JEWELERS' SERIES BOX JOINT PLIERS & CUTTERS

Made in Germany

This series is standard weight and size for medium to small work. These are precision pliers and nippers with box joints to eliminate side play and maintain alignment of jaws even under stress. The heads are brightly polished and the handles have vinyl cushion grips.



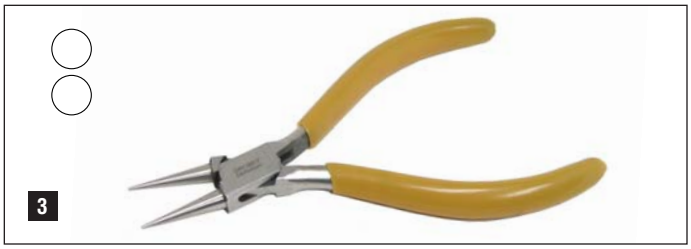
1 LONG CHAIN NOSE PLIERS

Jaws taper to 1/32" at tips and can be used to make bends and for gripping and manipulating wires. Overall length 6", length of jaws 1 1/2".
No. **46.110** Smooth jaws
No. **46.112** Serrated jaws



2 CHAIN NOSE PLIERS

Jaws taper to 1/32" at tips and jaw edges are beveled to prevent marring of soft wire. Used to make bends and for gripping and manipulating wires. Overall length 5 1/4", length of jaws 1".
No. **46.106** Smooth jaws
No. **46.108** Serrated jaws



3 ROUND NOSE PLIERS

Smooth jaws taper to 1/32" at tips. Used for making loops, bends, coils and similar operations. Overall length 5 1/4", length of jaws 1".
No. **46.104**



4 FLAT NOSE PLIERS

Smooth jaws taper to 3/16" at tip for holding and manipulating flat pieces. Overall length 5 1/4", length of jaws 1".
No. **46.102**



5 HALF-ROUND and FLAT NOSE PLIERS

One smooth jaw is half-round and the other is flat. Overall length 5 1/4", width of jaw 1/4".
No. **46.114**



6 END CUTTERS

Regular edges for cutting soft to medium hard wires. Jaws are set at right angles for getting close to work. Length of cut 3/4".
No. **46.118** Overall legth 4 1/2"
No. **46.120** Overall legth 5 1/4"



7 DIAGONAL CUTTERS

Also known as side cutters. Regular edges for cutting soft to medium hard wires. Length of cut 5/8".
No. **46.124** Overall legth 5"
No. **46.126** Overall legth 5 1/4"

Buy in Kit and Save!

KIT

Full kit contains three pliers (Nos. 46.102, 46.104 and 46.106) and two cutters (Nos. 46.118 and 46.124) in deluxe vinyl pouch. Priced lower than when tools are purchased separately — and the pouch is free!
No. **46.132**









PRO-LINE SERIES BOX JOINT PLIERS & CUTTERS

Made in Germany

Standard weight pliers and nippers with box joints, highly polished finish and plastic covered handles. Pliers and nippers in the most popular shapes for precision work.

1 LONG NOSE PLIERS

Available in the three most popular types: flat, round and chain. Provide greater accessibility. Overall length is 5 1/4", smooth jaws 1 5/8".

No.	Description
46.176	Flat nose
46.178	Round nose
46.180	Chain nose

2 ROUND NOSE PLIERS

Smooth jaws taper to 1/32" at tips. Used for making loops, bends, coils and similar operations.

No.	Overall Length	Length of Jaws
46.164	4½"	1"
46.166	5¼"	1⅛"

3 CHAIN NOSE PLIERS

Jaws taper to 1/32" at tips and jaw edges are beveled to prevent marring of soft wire. Used to make bends and for gripping and manipulating wires.

No.	Overall Length	Length of Jaws	Jaws
46.170	4½"	1"	Smooth
46.172	5¼"	1¼"	Smooth
46.174	5¼"	1¼"	Serrated

4 HALF-ROUND and ROUND

One jaw is half-round and the other is round. Overall length is 5 1/2".
No. **46.184**

1 SLIM LINE PRECISION PLIERS

Made in Germany

Small lightweight pliers, designed for delicate work. All have box joints to assure perfect alignment with smooth jaws and cushion grips. Overall length is 4 1/2".

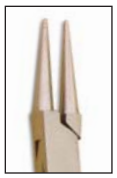
No.	Description	Length of Jaws
46.0281	Flat nose	7/8"
46.0286	Chain nose	7/8"
46.0291	Round nose	3/4"



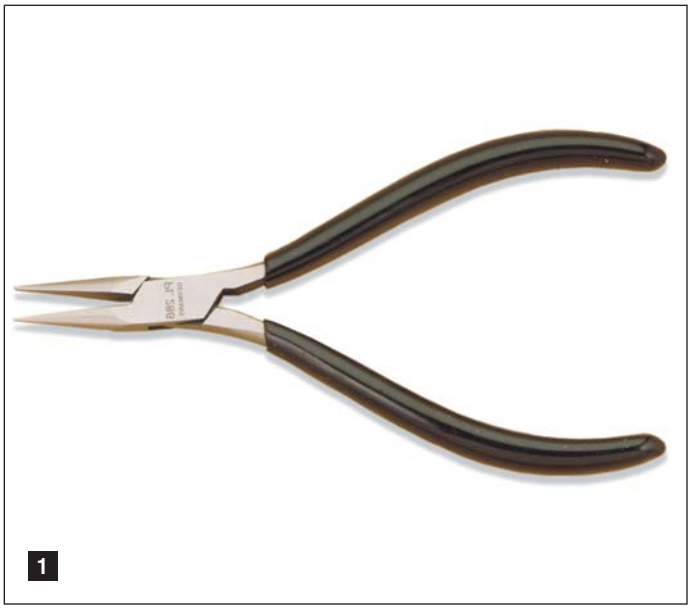
46.0281
Flat nose



46.0286
Chain nose



46.0291
Round nose



1

2 LIGHTWEIGHT PRECISION PLIERS with LEAF SPRINGS

Made in Germany

A fine series for light production and assembly work. All have box joints, radius edges, cushion grips and leaf springs. Overall length is 4 3/4".

No.	Description	Length of Jaws
46.0296	Diagonal cutter	9/16"
46.01005	Flat nose	7/8"
46.01105	Chain nose	15/16"
46.01205	Round nose	15/16"
46.01305	Curved tip chain nose	15/16"



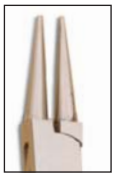
46.0296
Diagonal cutter



46.01005
Flat nose



46.01105
Chain nose



46.01205
Round nose



46.01305
Curved tip chain nose



2

3 FULL SIZE PLIERS

Made in Germany

Sturdy full size pliers have box joint for smooth operation. Have leaf spring and cushion grips for comfort. Overall length is 5 1/4".

No.	Description	Length of Jaws
46.0257	Flat nose	1 3/8"
46.0258	Round nose	1 1/16"
46.0259	Chain nose	1 1/4"
46.0260	Curved chain nose	1"
46.0261	End cutter	29/32"
46.0262	Side cutter	3/4"



46.0257
Flat nose



46.0258
Round nose



46.0259
Chain nose



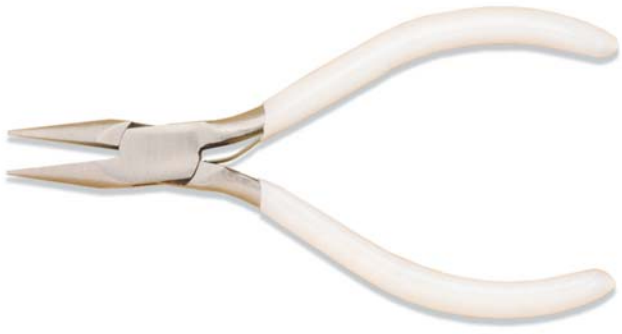
46.0260
Curved chain nose



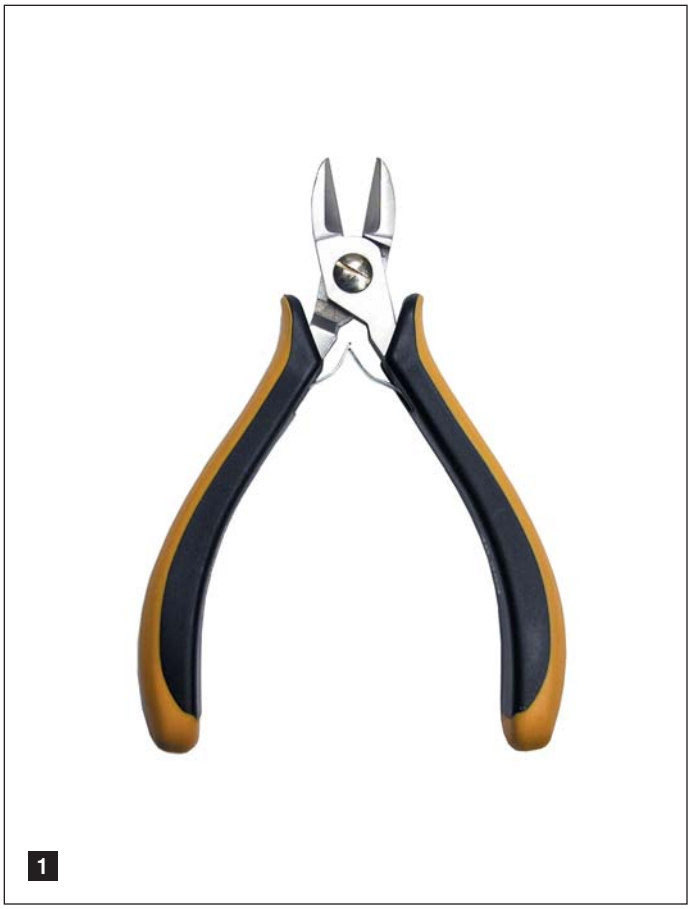
46.0261
End cutter



46.0262
Side cutter



3

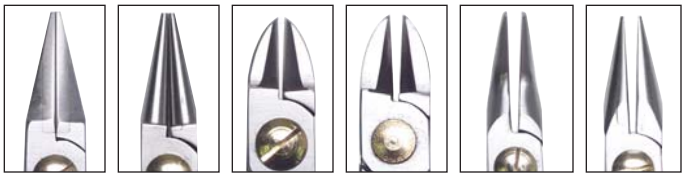


1

1 GROBET USA™ ADJUSTABLE PRECISION SCREW JOINT PLIERS and CUTTERS

These drop forged steel pliers and cutters with tungsten steel cutting edges are 100% rust protected and acid resistant. The pliers are ergonomically developed with an adjustable screw joint, with foam padded handles for fatigue free working conditions. Cutting edges have a Rockwell hardness of 66-68 HRC.

No.	Description	Overall Length
46.250	Flat nose - plain jaw	5⅛"
46.251	Round nose - plain jaw	5⅛"
46.252	Cutter - diagonal/semi-flush	4¾"
46.253	Cutter - diagonal/flush	4⅞"
46.254	Bent chain nose	5⅛"
46.255	Chain nose - plain jaws	5⅛"



46.250 Flat nose - plain jaw

46.251 Round nose - plain jaw

46.252 Cutter - diagonal/ semi-flush

46.253 Cutter - diagonal/ flush

46.254 Bent chain nose

46.255 Chain nose - plain jaws



2

2 PRIDELINE® BOX JOINT PLIERS

Lightweight stainless steel work pliers have smooth jaws and are completely rust proof. Polished heads prevent marking soft metals. Cushion grip handles. Overall length is 5".

No.	Description
46.0160	Flat nose
46.0162	Chain nose
46.0164	Round nose
46.0166	Side cutter
46.0168	Flat nose w/brass lined jaws



46.0160 Flat nose

46.0162 Chain nose

46.0164 Round nose

46.0166 Side cutter

46.0168 Flat nose with brass lined jaws

KIT IN VINYL POUCH

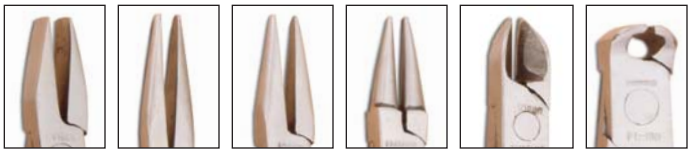
Kit contains three pliers (Nos. 46.0160, 46.0162 and 46.0164) and one cutter (No. 46.0166) in vinyl pouch. Priced lower than when tools are purchased separately.

No. **46.0040**

1 PRIDELINE® LAP JOINT PLIERS

Good quality carbon steel work pliers have smooth jaws. Polished heads to prevent marking on soft metals and cushion grip handles. Overall length is 4½".

No.	Description
46.0170	Flat nose
46.0174	Long chain nose
46.0175	Chain nose
46.0180	Round nose
46.0185	Side cutter
46.0190	End cutter



46.0170 Flat nose | **46.0174** Long chain nose | **46.0175** Chain nose | **46.0180** Round nose | **46.0185** Side cutter | **46.0190** End cutter

KIT in VINYL POUCH

Kit contains three pliers (Nos. 46.0170, 46.0175 and 46.0180) and two cutters (Nos. 46.0185 and 46.0190) in vinyl pouch. Priced lower than when tools are purchased separately.
No. **46.0035**



2 GROBET USA™ FOAM GRIP BOX JOINT PLIERS

Top quality box joint construction - smooth, non-mar jaws. Brushed satin finish and double leaf spring return. Foam grip comfort handles. Overall length is 4¾".

No.	Description
46.080	Chain nose
46.081	Round nose
46.082	Flat nose
46.083	Bent chain nose
46.084	Side cutter



No. **46.080** Chain nose | No. **46.081** Round nose | No. **46.082** Flat nose | No. **46.083** Bent chain nose | No. **46.084** Side cutter

FIVE PLIER KIT

Kit contains four pliers (Nos. 46.080, 46.081, 46.082 and 46.083) and one cutter (No. 46.084) in vinyl pouch. Priced lower than when tools are purchased separately.
No. **46.085**



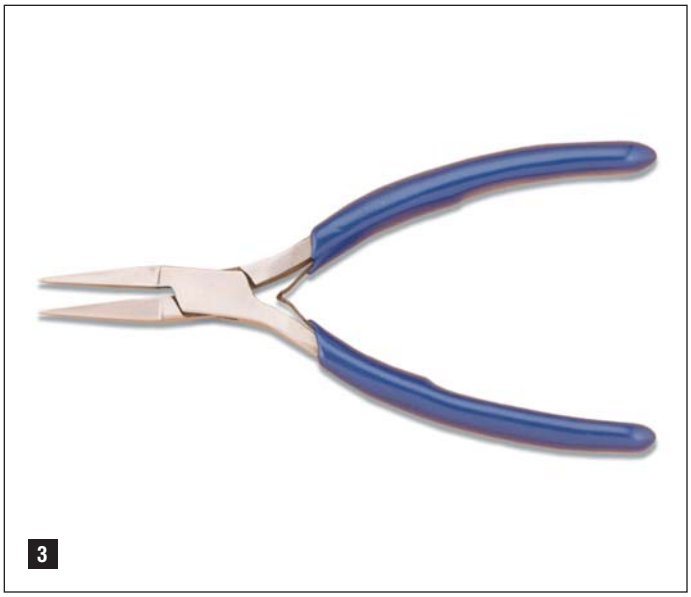
3 GROBET USA™ ECONOMY SLIMLINE PLIERS

Box joint construction. Polished heads with double leaf spring return. Plastic grip handles. Overall length is 4½".

No.	Description
46.421	Chain nose
46.422	Round nose
46.423	Flat nose
46.424	Side cutter
46.425	End cutter



No. **46.421** Chain nose | No. **46.422** Round nose | No. **46.423** Flat nose | No. **46.424** Side cutter | No. **46.425** End cutter



ESCA PLIERS & CUTTERS



1

1 ESCA JEWELERS' PLIERS and CUTTERS

Box joint construction outlasts and out performs other types.
Vinyl cushion grips provide comfort and retains precise alignment.

No.	Description	Overall Length
46.260	Chain nose	5⅛"
46.261	Round nose	5⅛"
46.262	Flat nose	5⅛"
46.263	Round/Flat	5⅛"
46.264	End cutter	4¾"
46.265	Diagonal cutter	5⅛"


46.260 Chain nose


46.261 Round nose


46.262 Flat nose


46.263 Round/Flat nose


46.264 End cutter


46.265 Diagonal cutter

SIX PLIER KIT

Kit contains all six pliers listed above (Nos. 46.260, 46.261, 46.262, 46.263, 46.264 and 46.265).
No. **46.269**



2

2 ESCA SLIMLINE PLIERS and CUTTERS

The slimline series is lightweight and sized for small to miniature work. Box joint construction provides quality and durability that out lasts other types.

No.	Description	Overall Length
46.270	Chain nose	4¾"
46.271	Round nose	4¾"
46.272	Flat nose	4¾"
46.273	Round/Flat	4¾"
46.274	End cutter	4½"
46.275	Diagonal cutter	4¾"


46.270 Chain nose


46.271 Round nose


46.272 Flat nose


46.273 Round/Flat nose


46.274 End cutter


46.275 Diagonal cutter

SIX PLIER KIT

Kit contains all six pliers listed above (Nos. 46.270, 46.271, 46.272, 46.273, 46.274 and 46.275).
No. **46.279**

TEBORG PLIERS

NEW!

A classic look with old world craftsmanship. Roots of Teborg started 150 years ago.
Every part of the plier has been looked over and designed for quality and comfort.

- Rockwell hardness
- Tested and proved
- Harden and treated handles
- Grips will not spin/rotate
- Correctly used will not break

Nowhere else can you find a better plier for a better price!

No.	Description
46.9140	Diagonal cutters Rounded jaws
46.9141	Diagonal cutters Rounded jaws
46.9150	Diagonal cutters Rounded jaws
46.9160	Diagonal cutters Rounded jaws.
46.9190	Diagonal cutters pointed jaws.
46.9291	Oblique end cutters 11° oblique head angle.
46.9490	Flat nose pliers Smooth jaws.
46.9590	Round nose pliers.
46.9890	Snipe nose pliers(long) Smooth jaws
46.9892	Snipe nose pliers Tip bent at 60° Smooth jaws
46.9893	Snipe nose pliers(short) Smooth jaws













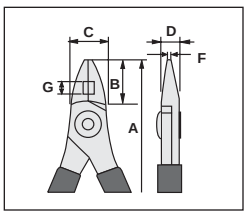




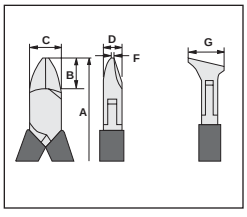




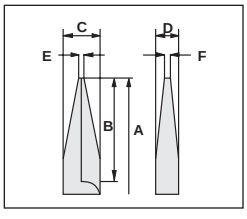




	Size mm						
	A	B	C	D	E	F	G
No.46.9140	110	9,5	8,5	6	-	0.8	-
No.46.9141	110	9,5	8,5	6	-	0.8	-
No.46.9150	110	9,5	8,5	6	-	0.8	-
No.46.9160	125	16	15	8	-	1.6	-

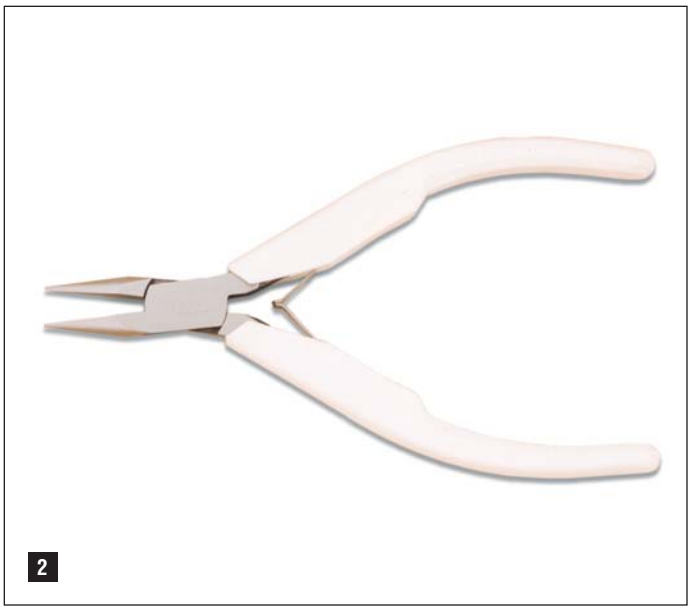


	Size mm						
	A	B	C	D	E	F	G
No.46.9190	107	9.5	9	6.5	-	1	-
No.46.9291	104	8	9	-	-	-	15



	Size mm						
	A	B	C	D	E	F	G
No.46.9490	116	20	9	6.5	1.2	3.2	-
No.46.9590	116	20	9	6.5	1	0.5	-
No.46.9890	128	32	9	6.5	1.2	0.8	-
No.46.9892	125	29	9	6.5	1.2	0.8	-
No.46.9893	116	20	9	6.5	1.2	0.8	-


1


2


3

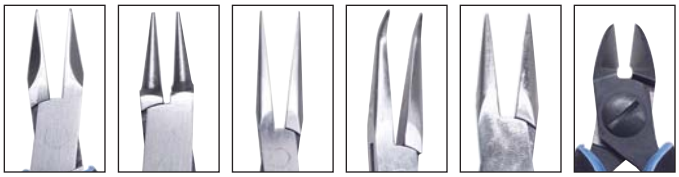
LINDSTROM PLIERS

Made in Sweden.

1 RX SERIES

The cutter edges are precision-ground for exceptional long life. All are finely finished for a high degree of symmetry, even under magnification. The return spring automatically opens the tool, so fingers are always in place. The long, wide handles distribute and minimize pressure points. Unique spring design reduces fatigue over time.

No.	Description	Lindstrom Number	Length of Jaws
46.20201	Smooth, flat nose	RX7490	25/32"
46.20301	Smooth, round nose	RX7590	25/32"
46.20401	Smooth, snipe nose	RX7890	1 1/4"
46.20501	Smooth, snipe nose w/bent tip	RX7892	1 1/8"
46.20601	Smooth, short snipe nose	RX7893	25/32"
46.20701	Micro-bevel cutter	RX8140	7/16"



46.20201 Flat nose | **46.20301** Round nose | **46.20401** Snipe nose | **46.20501** Snipe nose w/bent tip | **46.20601** Short snipe nose | **46.20701** Micro-bevel cutter

2 SUPREME SERIES (White Handles)

High quality, extremely precise and accurate pliers. Specially forged box joint with extra long contact surfaces. Joint moves smoothly for extra precision even at the tip. Box joint allows for smaller overall dimensions, improving accessibility in confined areas. With dual spring-loaded handles and comfortable cushion grips, marked with information on pliers' capacity.

No.	Description	Lindstrom Number	Overall Length	Length of Jaws
46.200	Side cutter	7190	4 5/16"	11/32"
46.201	End cutter flush cut	7291	4 1/4"	19/32"
46.202	Flat nose	7490	4 3/4"	25/32"
46.203	Round nose	7590	4 3/4"	25/32"
46.204	Long chain nose	7890	5 3/16"	1 1/4"
46.205	Curved tip chain nose	7892	5 1/16"	1 1/8"
46.206	Chain nose	7893	4 3/4"	25/32"



46.200 Side cutter | **46.201** End cutter flush cut | **46.202** Flat nose | **46.203** Round nose | **46.204** Long chain nose | **46.205** Curved tip chain nose | **46.206** Chain nose

3 80 SERIES (Yellow Handles)

Advanced diagonal cutting nippers, unsurpassed in cutting capacity. Manufactured with screw-type precision lap joint for optimum strength, exact movement and maximum accessibility. Dual spring-loaded handles and oval jaw design.

No.	Description	Lindstrom Number	Overall Length	Length of Jaws
46.207	Micro-bevel	8140	4 5/16"	3/8"
46.209	Flush cut	8141	4 5/16"	3/8"
46.210	Micro-bevel	8150	4 13/32"	1/2"
46.211	Micro-bevel	8160	4 15/16"	5/8"

1 RING BENDING PLIERS
For straightening and bending rings, wires, rods and strips. With smooth box joint. Overall length is 6 1/4", width of jaws 1 1/4".
No. **46.0062**



2 RING BENDING PLIERS
Similar to No. 46.0062 but concave portion is wider. Nickel-plated. Overall length is 5 3/4".
No. **46.342**



3 RING HOLDING PLIERS
Large, grooved, semi-circular jaws hold rings during filing or polishing. With box joint. Overall length is 5 1/2".
No. **46.038**



4 LOOP CLOSING PLIERS
Jaws are shaped and smoothly finished to close loops, jump rings, bracelet links, bows, etc., without distorting or scratching. With box joint and cushion grip handles. Overall length is 4 1/2".
No. **46.0057**



5 SOLDER CUTTER
Solder sheets can be easily cut in clipped pieces. Sheets are placed on bottom jaw and snipped. Pieces drop out cleanly. These can also be used to cut wire solder by inserting the wire into the side hole. Available in two sizes; 1.5 mm and 3 mm.
No. **53.811** 3 mm
No. **53.812** 1.5 mm



SPECIAL FEATURE PLIERS & CUTTERS



1 CHAIN NOSE SETTING PLIERS
Curved tips taper to 1/16" for setting small stones. Box joint for alignment with built-in spring. Overall length is 4 1/2".
No. **46.329**



2 STONE SETTING PLIERS
For setting or tightening the prongs on stone set rings. Jaws have been shaped so that they fit over the prongs on a setting. Overall length is 5". Economical value.
No. **46.346**



3 STONE SETTING PLIERS
Used to tighten loose prongs or for initial setting of stones. Overall length is 5".
No. **46.348**



4 BOW OPENING PLIERS
Jaws open when handles are compressed. For opening bows, links and rings. Spring in handle keeps pliers closed. These are special-joint, heavy-duty pliers. Overall length 5 3/4".
No. **46.303**



5 PENDANT BOW CLOSING PLIERS
For closing and adjusting pendant bows and bending rings. With box joint. Overall length is 6". Economical value.
No. **46.037J**



6 BOW CLOSING PLIERS
Heavy-duty pliers for closing bows and loops. Rugged enough for bending ring shanks. Overall length is 6 1/2".
No. **46.306**



7 BOW CLOSING PLIERS
For closing small bows, loops, etc. Standard weight pliers with one brass jaw to prevent marring. Overall length is 5 1/4".
No. **46.307**



8 STONE REMOVAL PLIERS
Easily removes stones from settings while preventing damage. Can be used on all prong settings, bead settings, clusters, channels, fishtails and baguettes. Thin, narrow tips fit into tight recessed areas and very small settings. With box joint for perfect alignment of jaws and cushion grip handles for comfort. Overall length is 4 3/4".
No. **46.0059**

NYLON JAW PLIERS

1 BRACELET FORMING PLIER
Reshaping bracelets is easy with these gently arched nylon jaws. The nylon jaws mean this plier will not scratch the bracelet. Overall length 5½".
No. **46.769P**
No. **46.769PJ** Replacement jaws



2 RING FORMING PLIER
For bending rings, sizes 6½" and larger, these pliers save the work from scratches and unsightly marring. Overall length 5½".
No. **46.5720P**



3 BENDING PLIER/WIRE and RING
These flat nose pliers with two nylon jaws will not mar or scratch, and they provide a firm, secure grip on the work. One jaw is grooved for easily gripping rings or wire shanks. Overall length 5½".
No. **46.5710P**



4 FLAT NOSE NYLON PLIERS
Two nylon jaws are excellent for holding wire because they will not scratch. The jaws taper from 9 mm to 5 mm and are great for straightening wire and for wire wrapping. Overall length 5½".
No. **46.5762P**
No. **46.5762PJ** Replacement jaws



5 FLAT, CLAMPING PLIERS
Nylon jaws are 10 mm wide and will not scratch or mar. Great for forming wire or stock and to straighten kinks. Overall length 5½".
No. **46.5767P**
No. **46.5767PJ** Replacement jaws



6 RING BENDING PLIERS
Form wire or flat stock into a smooth, uniform curve without scratching or marring the surface of the work. Overall length 5½".
No. **46.5770P**





1 FLAT/ROUND NOSE PLIERS

The flat jaw is nylon, so you won't scratch or mar the surface. The metal jaw is round, making these ideal for bending ring shanks and shaping earring wires. Use on sheet and wire to form intricate designs. Overall length 5 1/2".

No. **46.5764P**

No. **46.5764PJ** Replacement jaw



2 CONCAVE/FLAT FORMING PLIERS

With one steel jaw and one nylon jaw, these pliers are great for forming metal without scratching the surface of the work. 11 mm nylon flat jaw and 6 mm "V" metal jaw. Overall length 5 1/2".

No. **46.736P**



3 JEWELERS COLD BEND PLIERS

These heavy duty pliers consistently and repeatedly form stock and wire without pinching or binding. The nylon roller makes it quicker and easier to form rings, from size 4 up to bangle bracelets without marring or scratching the surface. Overall length 5 1/2".

No. **46.045P**

No. **46.045PJ**



4 LOOP CLOSING PLIERS

The jaws on these pliers are hollowed and ground allowing the flat parts to be parallel. For easy and quick closing of jump rings, bows and charm links. Overall length 5".

No. **46.5065P**

1 BRASS LINED FLAT NOSE PLIERS

Jaws are brass lined and smooth to prevent marring of finishes and damage to delicate parts. Overall length is 4 1/2", length of jaws 7/8".
No. **46.316**



2 ROSARY PLIERS

Combination round nose/side cutter. Loops and bends can be made and wire cut without changing tools. Overall length is 5 1/4".
No. **46.190**



3 CASE CLOSING PLIERS

Parallel closing jaws with circular, rubber padded, hinged discs provide dependable case closing. Overall length is 7 1/2".
No. **46.805**
No. **46.804** Set of replacement pads



4 STAINLESS STEEL JEWELRY MARKING PLIERS

Little pressure is needed to stamp precious metals, including white gold. Can be used on curved or flat surfaces and stamps inside rings as small as size 4. Easy to use, requires no set-up and no hammering. Made of durable stainless steel with adjustable screw to lock stamp in place. Overall length is 5 1/2". Punches not included, order below.
No. **46.02405**
No. **55.02401/1** 10K punch
No. **55.02401/2** 14K punch
No. **55.02401/3** 18K punch
No. **55.02401/7** STER (sterling silver)
No. **46.02401/4** Replacement nylon anvil





1 LONG NOSE CHAIN PLIERS
Long nose jaws have beveled edges to prevent nicking of wires. Dowel pin keeps jaws in alignment when twisting wires. Lightweight design. Overall length is 5 3/4", length of jaws 1 3/4". Available with smooth or serrated jaws. Return spring in handles and plastic grips.
No. **46.324** Smooth jaws



2 BENT NOSE CHAIN PLIERS
Tips are angled 60° for picking up and manipulating precision wires. Lightweight design. Overall length is 5" , length of jaws 1". Return spring in handles and plastic grips.
No. **46.328**

MINIATURE NIPPERS



3 SLIM-LINE MIDGET NIPPERS
For flush cutting wire less than .025". Nickel-plated with box joint and on-off leaf spring. Will snap cut along cutting edge as well as at tips. Overall length is 4", width of jaws 7/32".
No. **46.0222**



4 FLUSH CUTTING NIPPERS
Handmade from tool steel with long wearing, honed cutting edges that far outlast the ordinary nipper. For special or difficult wire cutting problems. These miniature oblique nippers will cut spring steel wire up to B & S #28, as well as soft wires up to B & S #18. Snap cut right to the tips. Width of jaws is 3/4". Overall length length is 5".
No. **46.563**



5 SHEAR CUTTERS
This economical shear-action cutter is indispensable for anyone involved with bead stringing. It easily cuts regular bead cord and "Tigertail." Comfortable grip handles. Overall length is 4 1/2".
No. **46.573**



6 FLUSH CUTTING NIPPERS
These small, sturdy wire cutters have honed edges that will cut soft wire straight across and flush, leaving no wire peak. For use on soft wires up to B & S #16. Choice of end or oblique cutters. Handles are balanced to fit the hand and are insulated with vinyl plastisol cushion grips. Overall length is 4 1/2", length of jaws 11/16".
No. **46.556** End cutter
No. **46.558** Oblique cutter

PARALLEL ACTION PLIERS & CUTTERS

Jaws open and close parallel along entire length. Handles and jaws are nickel-plated.

1 PARALLEL ACTION PLIERS

Provides a square vise-like grip.

No.	Description	Jaws	Slot	Overall Length
46.506	Heavy, flat nose	Serrated	"V"	5½"
46.510	Light, flat nose	Serrated	"V"	5"
46.512	Light, flat nose	Smooth	"V"	5"
46.514	Flat nose/Cutter	Serrated	"V"	5"
46.516	Flat nose/Cutter	Serrated	"V"	5½"
46.520	Chain nose	Smooth	Cross	5"



46.506 Heavy, flat nose



46.510/512 Light, flat nose



46.514/516 Flat nose/ Cutter



46.520 Chain nose



1

2 PARALLEL ACTION DIAGONAL CUTTERS

Has spring action handle. Cuts soft wire 5/32", half hard wire 1/8", 3/4 hard wire 5/64" and piano wire 1/16". Overall length is 5 1/2" with maximum jaw opening of 1/4".
No. **46.532**



2

HEAVY DUTY CUTTERS

For larger wire, rod, sprues and piano wire.

3 BERGEON HEAVY DUTY DIAGONAL CUTTING PLIERS

Ideal for sprue cutting. Consistently makes clean cuts with one closing action. The unique linkage design multiplies the pressure exerted. With hardened steel cutting jaws for years of perfect cuts. Locking system holds pliers closed when not in use to protect cutting edges. Overall length is 10", cutting edge 7/8", jaws open from 5/32" - 9/32".
No. **64.6599**



3

4 BERGEON MESH BRACELET CUTTER/TRIMMER

Hardened steel cutting jaws make a clean cut with one closing action. The pressure exerted is multiplied many times by the unique linkage design. Little effort is required to complete the job quickly. Overall length is 9 1/2", cutting edge 7/8".
No. **64.6496**



4



1 END CUTTERS/SPRUE CUTTERS
Multi-leverage with return spring in handles. Cuts up to 13/16" rods. End type cuts close to work and cutters are great for close precision cuts. Overall length is 7", cutting edge 13/16".
No. **46.574**



2 SIDE CUTTERS/SPRUE CUTTERS
Multi-leverage with return spring in handles. Heavy-duty type cuts up to 1/4" rods. Overall length is 8", cutting edge 3/4".
No. **46.582**



3 FLUSH SPRUE CUTTERS
Strong action with a thick cutting blade. Lock holds pliers closed when not in use. Overall length is 10", cutting edge 7/8".
No. **46.583**



4 BEAD CRIMPING PLIERS
A revolutionary hand tool which forms a smooth, unobtrusive crimp. It can be hidden in a clam-type bead tip or slipped into a large-hole bead. Works well with round or tube crimps. Comes complete with instructions. Overall length 5 1/8".
No. **46.411**



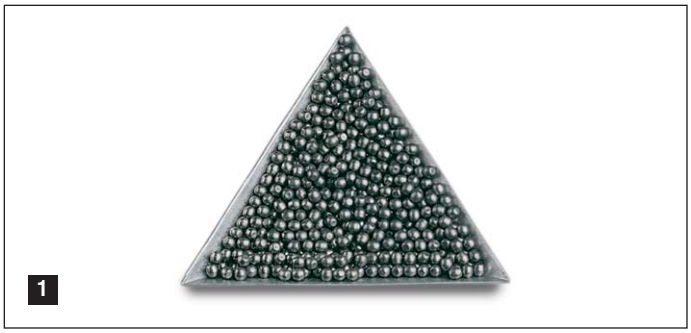
5 WIRE BENDING PLIERS - NO. 139
Stainless steel angle adjusting pliers. Overall length is 5".
No. **46.684**

VIGOR® STAINLESS STEEL SHOT

A fast form of tumbling used to burnish metal to a mirror bright finish. Uniform in size and shape, non-abrasive and carefully tempered to ensure long life. Stainless steel is rust and corrosion-resistant, making it ideal for use in wet, flow-through systems. 10 lbs. (4.5 kg) boxes.

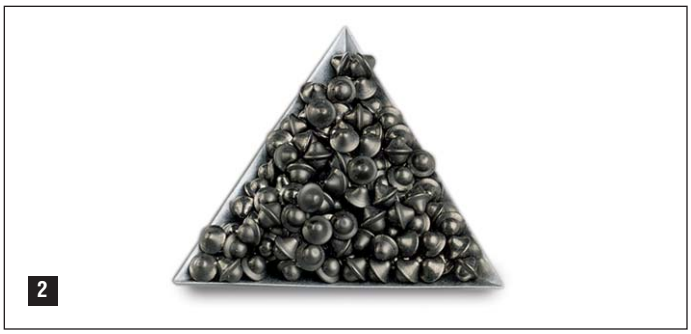
1 BALLS

General purpose media.
No. **47.0136/10** Carbon 1/8"
No. **47.0137/10** Carbon 3/16"
No. **47.0236/10** Stainless 1/8"
No. **47.0237/10** Stainless 3/16"



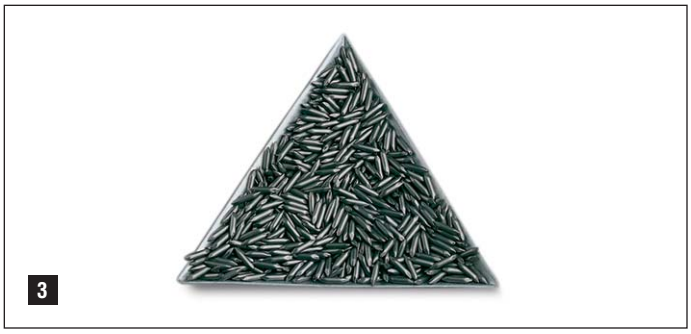
2 BALL CONES

Similar to balls but works into crevices better.
No. **47.0131/10** Carbon 1/8"
No. **47.0132/10** Carbon 3/16"
No. **47.0231/10** Stainless 1/8"
No. **47.0232/10** Stainless 3/16"



3 PINS

Tapered to a point, ideal for getting into deep recesses.
No. **47.0134/10** Carbon 1/16" x 9/32"
No. **47.0135/10** Carbon 1/8" x 3/8"
No. **47.0234/10** Stainless 1/16" x 9/32"
No. **47.0235/10** Stainless 1/8" x 3/8"



4 DIAGONALS

Large surface area with beveled edges, ideal for corner work. 1/8".
No. **47.0133/10** Carbon
No. **47.0233/10** Stainless

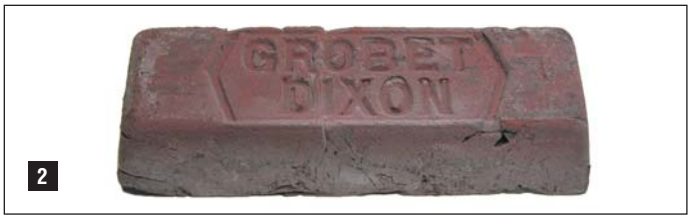


5 MIXED SHOT

A combination of 3/16" balls, 3/16" ball cones, 1/8" x 3/8" pins and 1/8" diagonals for maximum coverage on a wide variety of pieces.
No. **47.0138** Carbon
No. **47.0238** Stainless



















ROUGE STICKS

First quality rouges for various polishing needs. Available in the following compositions:

1 DEEP RED

No.	Type	Approx. Wt. of Bar
47.401	Original Formula	4 oz.
47.462	Grobet Premium	8 oz.
47.462B	Grobet Bulk 12/Pack	–

2 DEEP RED ROUGE (Black Rouge)

Gives a rich dark coloring on white gold, silver and platinum. Especially useful on musical instruments.

No.	Type	Approx. Wt. of Bar
47.464	Grobet Premium	4 oz.
47.464B	Grobet Bulk 12/Pack	–
47.465	Grobet Premium	1 lb. 5 oz.
47.465B	Grobet Bulk 12/Pack	–

3 GOLDEN GLO

For adding high luster and color to gold.

No.	Type	Approx. Wt. of Bar
47.404	Original Formula	6.5 oz.
47.473	Grobet Premium	4 oz.
47.473B	Grobet Bulk 12/Pack	–

4 GREEN

For use on white gold, platinum, chrome and stainless steel.

No.	Type	Approx. Wt. of Bar
47.407	Original Formula	4 oz.
47.467	Grobet Premium	6.5 oz.
47.467B	Grobet Bulk 12/Pack	–

5 WHITE

Use on platinum, chrome and stainless steel.

No.	Type	Approx. Wt. of Bar
47.410	Original Formula	4 oz.
47.470	Grobet Premium	4 oz.
47.470B	Grobet Bulk 12/Pack	–

6 ROYAL VELVET RED - XXG TYPE

no finer composition exists for producing the final, wondrous color and luster on gold and silver.

No.	Type	Approx. Wt. of Bar
47.413	Original Formula	2 oz.
47.416	Original Formula	4 oz.
47.419	Original Formula	6 oz.
47.422	Original Formula	1 lb.
47.461	Grobet Premium	7 oz.
47.461B	Grobet Bulk 12/Pack	–

7 YELLOW

Very dry, low-residue compound imparts a brilliant finish on gold, platinum and other hard metals.

No.	Type	Approx. Wt. of Bar
47.425	Original Formula	4 oz.
47.494	Grobet Premium	5 oz.
47.494B	Grobet Bulk 12/Pack	–
47.0289	Original Formula	10.4 oz.

8 BLUE

Use on platinum.

No.	Type	Approx. Wt. of Bar
47.351	Original Formula	12 oz.

BOBBING, CROCUS & TRIPOLI COMPOUNDS

For cutting or abrasive action. Leaves metal scratch-free, but dull in appearance.

1 BOBBING COMPOUND (Tan)

For brush or lap work, as it will adhere to these surfaces.

No.	Type	Approx. Wt. of Bar
47.431	Original Formula	1 lb.
47.477	Grobet Premium	1 lb.
47.477B	Grobet Bulk 12/Pack	–

2 BROWN TRIPOLI

Standard, fast-cutting tripoli, used when rouge will be used for final finish.

No.	Type	Approx. Wt. of Bar
47.437	Original Formula	4 oz
47.440	Original Formula	1 lb.
47.443	Original Formula	2 lbs.
47.479	Grobet Premium	4 oz
47.480	Grobet Premium	1 lb.
47.481	Grobet Premium	2 lbs.
47.479B	Grobet Bulk 12/Pack	–
47.480B	Grobet Bulk 12/Pack	–
47.481B	Grobet Bulk 12/Pack	–

3 GRAY OR PLATINUM TRIPOLI

Very popular for use with split laps. Great for platinum and hard metals.

No.	Type	Approx. Wt. of Bar
47.446	Original Formula	1 lb.
47.484	Grobet Premium	2 lbs.
47.484B	Grobet Bulk 12/Pack	–

4 GRAY STEEL

No.	Type	Approx. Wt. of Bar
47.493	Grobet Premium	2 lbs. 8 oz
47.493B	Grobet Bulk 12/Pack	–

5 WHITE DIAMOND TRIPOLI - XXXX TYPE

Excellent for gold, silver and platinum.

No.	Type	Approx. Wt. of Bar
47.448	Original Formula	1 lb.
47.489	Grobet Premium	1 lb.
47.489B	Grobet Bulk 12/Pack	–

6 WHITE DIAMOND TRIPOLI - XXX TYPE

For use with brass, copper, aluminum, bronze, nickel, silver and softer metals.

No.	Type	Approx. Wt. of Bar
47.454	Original Formula	2 lbs.

7 WHITE DIAMOND - HARD

For use with brass, copper, aluminum, bronze, nickel, silver and softer metals.

No.	Type	Approx. Wt. of Bar
47.451	Original Formula	2 lbs.

8 GRAYSTAR - 69

Polishing compound for cutting, smoothing rough edges and removing scratches.

No.	Approx. Wt. of Bar
47.0349	1 lb.

9 GREEN PLATE POLISH

Specially formulated to give a high shine to acrylics.

No.	Type	Approx. Wt. of Bar
47.600	Grobet Premium	2 lbs.


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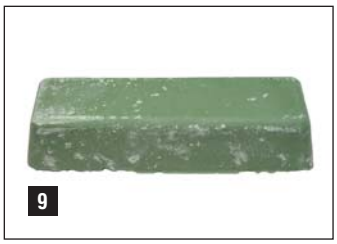

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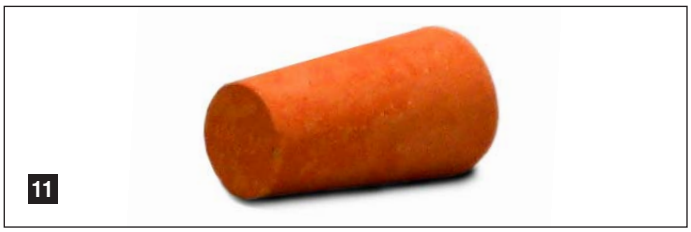

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11

10 BLUE PLATINUM

Removes light scratches and prepares for final polishing of platinum

No.	Type	Approx. Wt. of Bar
47.42001	Grobet Premium	5 oz

11 PUMPKIN PLATINUM ROUGE

Specially formulated for the final polishing of platinum.

No.	Type	Approx. Wt. of Bar
47.420	Grobet Premium	5 oz

1 FABULUSTRE®

Provides a high-luster finish on all types of precious and decorative metals. Special formulation removes light scratches and produces a fast, mirror-bright, final finish without discoloration. Greaseless, dry but not dusty, which means fast and easy cleanup with little or no residue.
No. **47.312** 1/4 lb. tube
No. **47.313** 1 lb. tube



1



2



3



4



5

2 ZAM® BUFFING COMPOUND

Formulated especially for silver and turquoise jewelry. Will not scratch soft stones such as turquoise. Time-saving to use, since stones do not have to be removed before buffing a new piece. Leaves a high luster without residue. Fast clean-up, does not cling to or penetrate surface of stones. Versatile, many goldsmiths prefer ZAM to rouge as a final finish.
No. **47.502** 1/4 lb. tube
No. **47.503** 1 lb. tube

3 "C-CLEAR" PLASTIC RENEWER

Every watch repair can have a crystal that looks brand new. Easy to use; wheel is charged with compound and crystal is then gently buffed.
1/4 lb. bar.
No. **47.310**

4 PRO-CRAFT® ROUGE and TRIPOLI in PEEL-BACK TUBES

Eliminates the mess and does away with broken bars. Peel-back cardboard tube exposes only the amount needed.

Available In The Following Compositions:

- **Black rouge** - For producing a rich, dark luster on white gold, platinum, or silver.
- **Green rouge** - Imparts a high luster on hard metals such as chrome, stainless steel or platinum.
- **Plastic compound** - For polishing hard plastics (not to be used on soft or low melting plastics such as polyethylene).
- **Red rouge** - For producing the final high color and luster on gold, silver and other soft metals.
- **Water soluble red rouge** - Special formulation makes easy clean up.
- **Tripoli** - A fine cutting abrasive for use on all metals where rouge will be used for final finish. Leaves metals scratch-free, but dull in appearance.
- **White rouge** - A quick polishing compound for hard metals such as stainless steel, chrome or platinum.
- **Yellow rouge** - For hard metals such as platinum, chrome and stainless steel. Leaves little residue on work.
- **Emery** - Used on iron, steel and hard metals for coarse buffing and removing scratches, rust, corrosion, burs, etc. Not for gold, silver or plated articles.
- **Wonder bar** - The final touch for finishing metals and plastics. Removes scratches and leaves a high finish. Clean and greaseless with no discoloration.

No.	Type	Approx. Weight	Price
47.320	Black	5 oz.	
47.321	Green	6 oz.	
47.322	Plastic	5 oz.	
47.323	Red	7 oz.	
47.324	Water soluble red	7 oz.	
47.325	Tripoli	4 oz.	
47.326	White	7 oz.	
47.327	Yellow	6 oz.	
47.331	Emery	5 oz.	
47.328	Wonder Bar	5 oz.	
47.333	Crocus	5 oz.	

SET of 5 PEEL-BACK COMPOUNDS

Contains the five most used compounds: red rouge, yellow rouge, brown tripoli, plastic rouge and emery. All in peel-back cardboard tubes.
No. **47.330**

5 FLITZ METAL POLISH

Cleans, polishes and protects. Acid-free, non-toxic, non-abrasive paste rubs on and wipes off. Protects up to 6 months. Concentrated so a little goes a long way. For use on gold, silver, brass, platinum, chrome, copper and marble. Safe for heavy plated work.
No. **47.456** 10 gram tube
No. **47.457** 50 gram tube
No. **47.458** 150 gram tube

GROBET USA™ DELUXE DUST COLLECTORS

More features and more value than any other unit on the market today.

Specifications:

- Newly engineered air intake with greater suction power
- Squirrel-cage suction unit provides strong air current
- Unique rear off-set design allows for air escapement
- Filter is placed ahead of blowers, protecting them from dust and dirt
- On/off switch for motor and lights
- Dual lights placed to highlight work
- Convenience outlet for polishing motor
- Mounted on rubber feet to reduce noise and prevent slipping
- Can hold accessories up to 6" in diameter
- Overall dimensions 33 1/2" W x 11" H x 22" D
- Made in USA



1

1 DUST COLLECTOR ONLY

Shipping weight 50 lbs.
No. **47.031** 110 volt
No. **47.031X** 220 volt

Replacement Accessories:
No. **47.177** Filter - measures 10" x 32" x 2"
No. **47.03001** Shield only



2

2 GROBET USA™ DUST COLLECTOR with 1/2 HP SEALED MOTOR

Capacitor start. 1/2" straight shaft, with a shaft height of 5". Tapered spindles are included. Shipping weight as follows: dust collector with motor is 68 lbs. and polishing motor only is 17 lbs.
No. **47.035** Dust collector with motor
No. **47.058** Polishing motor only

Replacement Spindles:
No. **47.276** 1/2" - Right
No. **47.277** 1/2" - Left



3

3 GROBET USA™ DUST COLLECTOR with 1/2 HP OPEN MOTOR

Our No. 47.031 dust collector with a 1/2 HP, 1/2" shaft open motor. Shipping weight as follows; dust collector with motor is 78 lbs., and polishing motor only is 28 lbs.
No. **47.040** Dust collector with motor
No. **47.057** Polishing motor only 110V
No. **47.057X** Polishing motor only 220V

Replacement Spindles:
No. **47.276** 1/2" - Right
No. **47.277** 1/2" - Left

PRO-CRAFT® OPEN MOTORS

Well known for reliable service and good performance. Mounted on base to fit pan of dust collector. Have 1/2" double-ended shafts. Shipping weight 28 lbs.
No. **47.053** 110 volt with 1/3 HP
No. **47.053X** 220 volt with 1/3 HP
No. **47.057** 110 volt with 1/2 HP
No. **47.057X** 220 volt with 1/2 HP



1

1 GROBET USA™ DUST COLLECTOR with BALDOR 1/4 HP SEALED MOTOR

Shipping weight 92 lbs.

No. **47.142** Dust collector with motor
No. **47.114** Baldor motor only



2

2 DOUBLE SPINDLE POLISHER/DUST COLLECTOR

Compact unit with 110 volt, 6.6 Amp polishing motor produces 1/3 HP and 3450 RPM. With 5/8" tapered spindles, squirrel cage suction motor, double work light and on/off switch. Unit measures 20 1/4" W x 19 1/2" D x 12" H. Replacement filter measures 20" W x 12" H x 2" D. Shipping weights as follows: No. 47.2025 - 45 lbs., No. 47.2020 - 20 lbs. and No. 47.053 - 26 lbs.

No. **47.2025** Dust collector w/motor 110 volt
No. **47.2025X** Dust collector w/motor 220 volt
No. **47.2020** Dust collector only
No. **47.053** Polishing motor only 110 volt
No. **47.053X** Polishing motor only 220 volt
No. **47.268** 5/8" - Left tapered spindle
No. **47.269** 5/8" - Right tapered spindle
No. **47.179** Replacement filter
No. **47.063** Shield



3

3 PRO-CRAFT® DUST COLLECTOR with SINGLE SIDE POLISHING MOTOR

Comes with 1/3 HP, 3450 RPM motor with a 1/2" shaft and tapered spindle. Shaft height is 5" so that large buffs can be used. Dust collector has single axial fan blower, replaceable fiberglass filter and light under hood. Cabinet measures 10 1/4"W x 10" H x 17 1/4" D. Replacement filter measures 10" x 10" x 2". Shipping weights as follows: No. 47.066 - 35 lbs., Nos. 47.064 and 47.064X - 18 lbs. and No. 47.067 - 17 lbs.

No. **47.066** Dust collector with motor
No. **47.064** Dust collector only 110 volt
No. **47.067** Polishing motor only
No. **47.171** Replacement filter

Replacement Spindles:
No. **47.276** 1/2" - Right
No. **47.277** 1/2" - Left



4

4 SINGLE SPINDLE POLISHER/DUST COLLECTOR

Compact unit with 110 volt, 6.3 Amp polishing motor produces 1/3 HP and 3450 RPM. With suction motor, work light and package of supplies including 1/2" tapered spindle, polishing cloth, brown tripoli and 4" muslin buff. Measures 13 1/4" W x 18" D x 10" H. Replacement filter measures 9 3/4" x 12 3/4" x 2". Shipping weights as follows: No. 47.1050A - 40 lbs. and No. 47.067 - 17 lbs.

No. **47.1050A** Dust collector with motor
No. **47.067** Polishing motor with spindle only
No. **47.176** Replacement filter
No. **47.1052/2** Shield

Replacement Spindles:
No. **47.276** 1/2" - Right
No. **47.277** 1/2" - Left

1 JUNIOR POLISHING SET

Designed to meet the needs of the individual craftsman. Motor speed can be varied for use with various grinding, polishing, and buffing wheels. Hood catches polishing debris, keeping area clean.

Features:
- 1/15 HP, 5000 RPM motor
- Electronic variable-speed control
- Operates on 120 volt AC
- Attractive hammertone finish
- Mounted on rubber feet to prevent creeping
- Has four holes for mounting
- Measures 14" W x 6" D x 7" H
- Shipping weight 8 lbs.

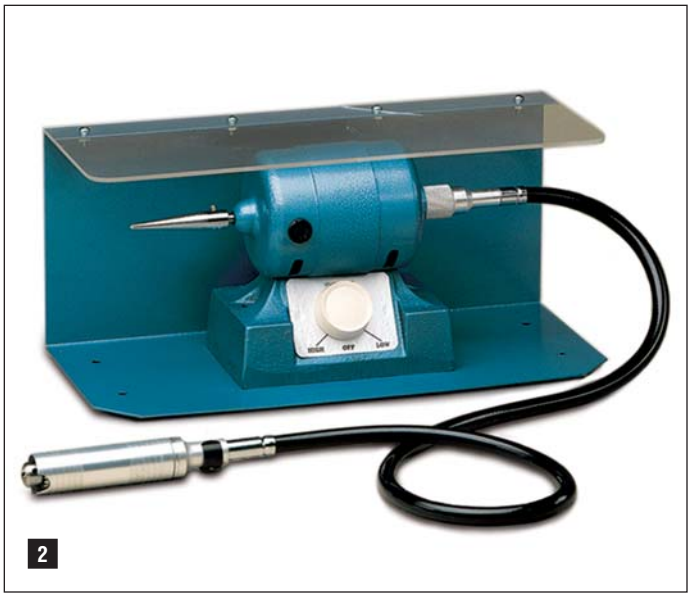
Includes the Following Accessories:
- 2 1/2" diameter muslin buff for tripoli
- 2 1/2" diameter cotton flannel buff for rouge
- Tripoli compound - No. 47.479
- Red rouge
- Two black bristle wheel brushes
- Two felt cones
- One wood mandrel for ring shells
- Two emery ring shells
- Two 1/4" tapered spindles for motor

No. **47.100**
No. **47.101** Motor with spindles
No. **47.102** Speed control for No. 47.100
No. **47.103** Motor only for No. 47.100
No. **47.271** Replacement tapered spindle - Left
No. **47.270** Replacement tapered spindle - Right


1

2 BENCH POLISHER

A powerful, variable-speed bench motor in a compact size. Has a 1/8 HP, 110V motor, a clear dust shield and measures 14" W x 6 1/4" D x 6" H. The solid-state dial speed control has a range of 1,800-14,000 RPM. The 1/4" left and right-hand tapered spindles can accommodate buffs and brushes up to 3" in diameter. A flexible shaft kit, used to power burs, drills and miniature brushes can also be used with this polishing motor. The attachment kit includes an inner shaft, outer sheath and jewelers style handpiece and attaches easily to the right side of the motor. Shipping weight 7 lbs. 8 oz.
No. **47.110** 110 volt unit
No. **47.111** Flexshaft kit
No. **47.112** Replacement 1/4" ID inside shaft
No. **34.350** Replacement sheath
No. **47.270** Replacement 1/4" tapered spindle - Right
No. **47.271** Replacement 1/4" tapered spindle - Left


2

3 VIGOR® MULTI-GRINDER

Multi-purpose 1/8 HP machine, with variable speeds from 1500 to 4000 RPM, can be used as a carver, grinder, sander, smoother, polisher, cutter, buffer, etc. Comes with a compact, powerful, 36" long flexible shaft and handpiece which fits comfortably in your hand. The handpiece accepts a large variety of accessories with 3/32" or 1/8" shafts. It can also be used as a bench grinder/polisher, equipped with two 3/4" x 3" wheels, one grinding and one polishing. Can be bolted to your bench for greater stability. Measures 7" W x 4 3/4" D x 6 1/2" H.
No. **47.0217**

Accessories:
No. **17.01220** Extra fine muslin buff
No. **17.01221** Cotton flannel buff
No. **17.01222** Felt buff
No. **47.0806** Replacement grinding wheel
No. **47.0807** Replacement polishing wheel


3



1

1 LATHE MOTOR

Designed especially for use with watchmaker's lathes. Smooth running and powerful, with wide base pedestal. Rugged for durability and long effective operation. Complete with 34.322 foot pedal and 8' rubber cord with molded plug on junction block. 110 volt AC, 1/20 HP.

No. **47.0100** Motor
No. **47.0100/1** Motor only



2

2 BALDOR SEALED POLISHING LATHE MOTORS

Powerful, totally enclosed, dust proof motors, will not overheat. With special ball-bearings and tapered shafts. All Baldor motors are 14 1/2" L x 7 3/4" W x 8 1/2" H.

No. **47.114** 110 volt with 1/4 HP 2 speed
No. **47.119** 110 volt with 1/2 HP 1 speed

Replacement Spindles (shown on page 279)**:**
No. **47.234** Right
No. **47.235** Left



3

3 BALDOR HEAVY DUTY 3/4 HP MOTOR
(Use with Grobet USA™ Heavy Duty Split Lap Machine)

Features:
- 3450 RPM
- Shafts are tapered and threaded, no set screws needed
- Very strong for buffs up to 8" diameter
- Shaft heights 8"
- Motor Height 11 5/8"
- Available with right hand or left hand shafts
- Spindle size 5/8" tapered

No. **47.120**

1 GROBET USA™ STANDARD FLOOR MODEL DUST COLLECTOR

With a heavy-gauge metal cabinet, powered by a quiet, 1/4 HP, 960 cfm suction motor, this unit is designed to improve both your production and your profits. The 4" thick pleated filter provides more surface area, making it an excellent collecting system for polishing compounds and metal sweeps. The complete unit includes a Baldor 2-speed (1725/3450 rpm), double-spindle, sealed polishing motor; right and left tapered spindles; two splash pans with adjustablesafety shields, topped by a utility shelf. Suitable for wet or dry polishing. Made in USA. Shipping weight 225 lbs.

Dimensions:
- Overall height including top shelf 53"
- Floor to bench top height 38"
- Width of unit 34"
- Depth of unit 20"

No. **47.085** 110 volt dust collector w/polishing motor
No. **47.085X** 220 volt dust collector w/polishing motor
No. **47.190** Replacement pleated filter



1

2 GROBET USA™ DELUXE FLOOR MODEL DUST COLLECTOR

This deluxe dust collector offers a dust-free polishing environment, with the addition of two plexiglass enclosures surrounding the polishing area. The hands and work are placed inside the enclosures, while the 960 cfm, 1/4 HP suction motor collects compounds and debris. Two flexible-neck lamps are affixed to the cabinet for concentrated lighting. Heavy-gauge metal cabinet is supplied with the same Baldor polishing motor and tapered spindles as the standard model above and is suitable for wet or dry polishing. Made in USA. Shipping weight 272 lbs.

Dimensions:
- Overall height (excluding lamps) 53"
- Floor to bench top height 40"
- Width of unit 44"
- Depth of unit 18"

No. **47.087** 110 volt deluxe dust collector w/polishing motor
No. **47.087X** 220 volt deluxe dust collector w/polishing motor
No. **47.190** Replacement pleated filter



2

3 GROBET USA™ REPLACEMENT PLEATED FILTER

Used in both dust collectors described above, this filter measures only 12" x 24" x 4"; yet, because of its pleated construction, you get nearly five times the surface collection area than you would in a regular flat filter of the same size! Shipping weight 4 lbs.
No. **47.190**


3



1

1 COLLECTOR SERIES

- Separate control panel comes with on/off switch and internal fusing for maximum current protection.
- Industrial filter incorporates the latest in filter technology (approved by BIA and received the highest rating – category C; 99.9% for allowing the air from dust collector apparatus to be recirculated back into the workplace).

No.	Ports	Height	Width	Depth	Weight	Airflow (CFM)	Amps
47.153	1	16"	14"	19½"	65 lbs.	200	5.3
47.154	1 to 2	17"	14"	25"	73 lbs.	400	6.1
47.155	1 to 4	23"	18"	25½"	120 lbs.	800	9.2
47.166	1 to 8	23"	18"	34	140 lbs.	2000	18

COLLECTOR SERIES REPLACEMENT FILTERS

No.	Description
47.1531	Replacement Filter for 1-Station DC
47.1532	Pre-Filter for 1-Station DC
47.1533	Odor Filter for 1 & 2 Station DC
47.1541	Replacement Filter for 2-Station DC
47.1542	Pre-Filter for 2-Station DC
47.1551	Replacement Filter for 4-Station DC

No.	Description
47.1552	Pre-Filter for 4-Station DC
47.1553	Odor Filter for 4-Station DC
47.1561	Replacement Filter for DCMini
47.1555	Pre-Filter Accumulator for Dust & Powders
47.1556	Pre-Filter Accumulator for Metals



2

2 SOLDERPURE

Capture SOLDER SMOKE & FUMES at the source, before it migrates throughout the room!

- Solder Iron Fumes
- Waxing Fumes
- Solvent Vapors
- Reflow Oven Exhaust
- Wave Soldering Exhaust
- Dedrossing
- Conformal Coating Vapors
- Laser Cutting & Marking

No.	Height	Width	Depth	Weight	Amps	Watts
47.160	20"	12¾"	15¾"	48 lbs.	2	60

SOLDER PURE REPLACEMENT FILTERS

No.	Description
47.1601	Solder Pure Dust Filters 6/box
47.1602	Odor Container & Filter 1/box
47.1603	Odor Filter Refill 2/Box
47.1604	Solder Pure HEPA Filter

1 SLIMLINE DUST COLLECTOR

Single station unit designed to be placed beneath the work-bench.

- Small, compact design
- Fits under bench
- State-of-the-art "easy-in, easy-out" filters
- Most effective dust & precious metal retention available

No.	Height	Width	Depth	Weight	Amps	Watts
47.156	15"	11"	12⅜"	50 lbs.	6.3	60

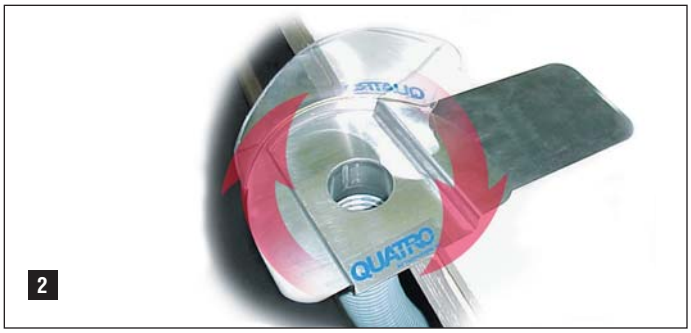


1

ACCESSORIES FOR QUATRO DUST COLLECTORS

2 360 DEGREE SWIVEL

This versatile swivel accessory for the workbench connects with Quatro's 3" diameter vacuum hose and is specially designed for use by right- or left-handers to capture precious metals while operating a micromotor or flexshaft machine.
No. **47.157**



2

3 FISHMOUTH

This handy 5" high, 8" wide heavy-duty steel accessory for the workbench connects with Quatro's 3" diameter vacuum hose and is useful for capturing small particles when grinding or using a micromotor, polishing lathe, or flex shaft.
No. **47.159**



3

4 AIR WEDGE

This effective and efficient accessory for the workbench has a built-in on/off cutoff to reduce air flow which connects to the Quatro vacuum hose from either the back or the bottom of the unit. The Plexi-Glass Safety Shield ensures particles stay within the unit, making this an excellent protection when using a micromotor, polishing lathe, or flexshaft. It also helps keep the area cleaner by containing polishing compounds.
No. **47.158**


4

5 WHITE FLEXARM with PLEXINOZZLE, TABLEBRACKET

This effective accessory connects to tabletop or directly to either Quatro's Dust Collector or Pre SolderPure unit for overhead capture of bothersome smoke fumes or dust odors light grinding and polishing particles. The arm is a 3" diameter, 3" long flexible hose and comes with the 7¾" wide clear oval PlexiNozzle intake.
No. **47.161**


5



1 REPLACEMENT FILTERS

No.	Dimensions
47.171	10" x 10" x 2"
47.176	9¾" x 12¾" x 2"
47.177	10" x 32" x 2"
47.178	10¼" x 23¼" x 1"
47.179	12" x 20" x 2"
47.180	12" x 25" x 2"
47.181	10" x 10" x 1"
47.182	12" x 32" x 2"
47.183	10" x 20" x 1"
47.184	8" x 16" x 1"
47.185	12" x 25" x 1"
47.186	12" x 27" x 1"
47.187	9¾" x 12¾" x 1"
47.188	10" x 20" x 2"
47.189	9¾" x 32" x 1"
47.190	12" x 24" x 4"



2 POLISHING/BUFFING KIT for SMALL MOTORS

Just right for 1/15 HP motors with variable speeds.

Kit contains:

- 2 1/2" diameter muslin buff for tripoli – No. 17.201
- 2 1/2" diameter cotton flannel buff for rouge – No. 17.573
- 2 1/2" diameter black bristle wheel for tripoli – No. 16.372
- 2 1/2" diameter black bristle wheel for rouge – No. 16.372
- 1/4 lb. bar of tripoli – No. 47.479
- 1/8 lb. bar of red rouge – No. 47.461
- Wood mandrel – No. 11.333
- Two emery ring shells – 2/0, No. 11.322 and 3, No. 11.326
- Two felt bobs – No. 17.278

No. **47.026**



3 POLISHING/BUFFING KIT for LARGE MOTORS

Larger buffs and brushes for 1/6 to 1/2 HP motors with 3450 RPM.

- 4" diameter muslin buff for tripoli – No. 17.582
- 4" diameter cotton flannel buff for rouge – No. 17.205
- 2 1/2" diameter black bristle wheel for tripoli – No. 16.372
- 2 1/2" diameter black bristle wheel for rouge – No. 16.372
- Two felt crevice buffs – No. 17.490
- Two felt ring buffs – No. 17.320
- One wood mandrel – No. 11.331
- Six emery ring shells – No. 11.331
- 1/8 lb. bar of red rouge – No. 47.479
- 1/4 lb. bar of tripoli – No. 47.461

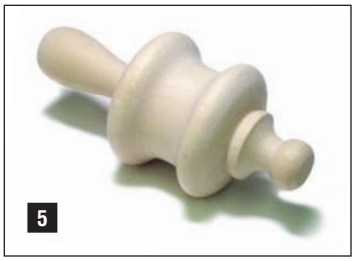
No. **47.027**



4 LATHE SPLASHER

Made of fine grade aluminum, highly polished and rust resistant. Has moveable, leakproof tray. Offers protection to bench and area around it when brushes, buffs or grinding wheels are rotating at high speeds. Measures 12" H x 6 1/2" W x 10 1/4" D.

No. **47.300**



5 POLISH IT!

This unique item makes polishing bracelets and chains fast, easy and safe.

No. **48.075**



6 MSA ADVANTAGE RESPIRATOR

Protection against a variety of respiratory hazards. Maintenance-free operation requires only periodic, easy to change filter replacement. Two adjustable, lightweight, elastic straps and a flexible sealing surface to fit facial contours. With storage/disposable bag. Faceplate and cartridges are incinerable. Includes instructions and technical information. Order respirator and cartridges separately.

No. **47.4000** Faceplate only
No. **47.4110** Pair of filter cartridges (type H-approval #TC-21C-600)
No. **47.4120** Pair of chemical cartridges (type GMC-approval #TC-23C-1278)
No. **47.4130** Pair of chemical/filter cartridges (type GMCH-approval #TC-23C-1283)

1 RUBBER FINGER COTS

Made of soft, molded rubber to provide comfortable protection from oil, dirt and grime. Sold by the dozen.
No. **23.225** Small
No. **23.226** Medium
No. **23.227** Large
No. **23.228** Extra large

2 LATEX FINGER COTS

Prevents contamination by finger oils and grime, and keeps fingers clean when doing messy work. Made of amber latex rubber so sensitive touch is not lost. One size fits all. Sold by the dozen.
WARNING: *DO NOT USE if you are NRL-latex sensitive.*
No. **23.220**

3 LEATHER FINGER GUARDS

Full length-split leather with superior wrap-around style and elastic comfort back. Maximum protection for all jewelry-making operations.
No. **47.526** Open end finger guards. Box of 10
No. **47.527** Open end thumb guards. Box of 10
No. **47.528** Closed end finger guard. Box of 10
No. **47.529** Closed end thumb guard. Box of 10
No. **47.531** Open end, wool-lined finger guard. Box of 12

4 SAFETY TAPE

Lightweight but strong. Will protect your skin from cuts and burns. Open mesh allows skin to breath. Just wrap around twice for full protection. 3/4 x 90 ft. 16 in a pack. Sold by the pack.
No. **47.532**

5 WHITE COTTON GLOVES

Protect jewelry, silverware, etc., from fingerprints, spotting, and tarnishing. One size fits most hands, with the lighter version slightly smaller than the heavier version. Sold by the dozen.
No. **17.102** Heavyweight style
No. **17.103** Lightweight style

6 DISPOSABLE LATEX GLOVES

Protect your fingers and hands when polishing, finishing, or using solutions. Medium size will fit either hand. Sold by box of 100.
WARNING: *DO NOT USE if you are NRL-latex sensitive.*
No. **17.106** Medium size
No. **17.107** Large size

7 DENIM APRON

Blue denim apron, measuring 28" x 36", with breast and waist pockets.
No. **47.306**

8 DISPOSABLE LAB COATS/JACKETS

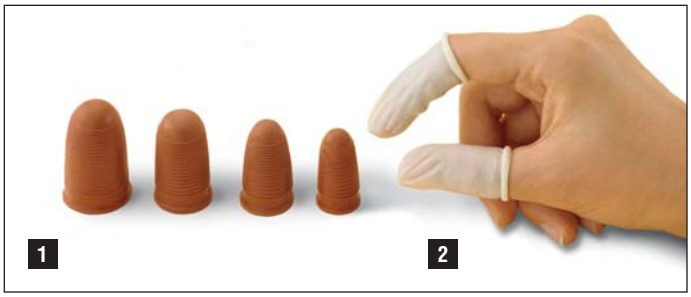
These lightweight, fluid resistant disposable clothing protectors are less expensive to use and dispose of than laundering. They have three convenient pockets and are latex free. Sold by pack of 10.
2 styles and two colors, in small, medium, large and extra large.

Knee Length Lab Coat

	Small	Medium	Large	X-Large
Blue	**47.360**	**47.361**	**47.362**	**47.363**
White	**47.364**	**47.365**	**47.366**	**47.367**

Hip Length Jacket

	Small	Medium	Large	X-Large
Blue	**47.368**	**47.369**	**47.370**	**47.371**





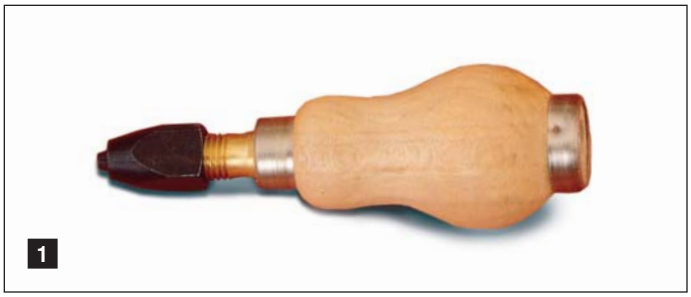




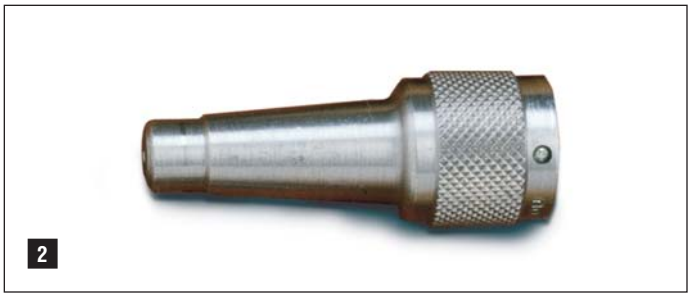




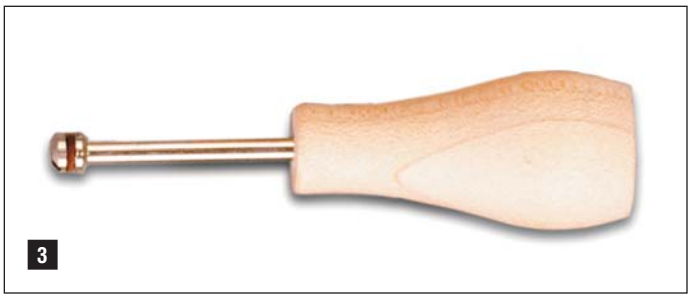




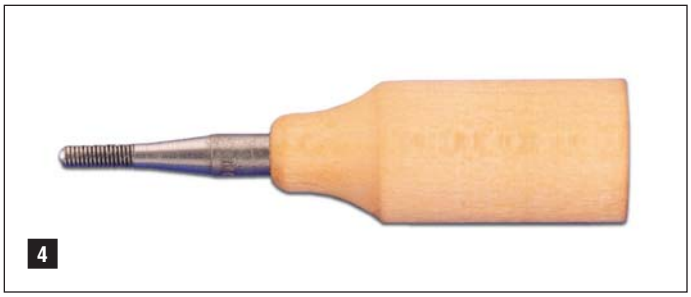
1 HANDLE with CHUCK
End of wood handle is bored and reinforced. Can be threaded onto tapered spindles so that small wheels, burs, etc. can be used on larger polishing motors. The chuck opens from .085" to .128" so that 3/32" and 1/8" mandrels will fit. Overall length 3 1/2".
No. **37.760** Handle with chuck
No. **37.761** Replacement chuck



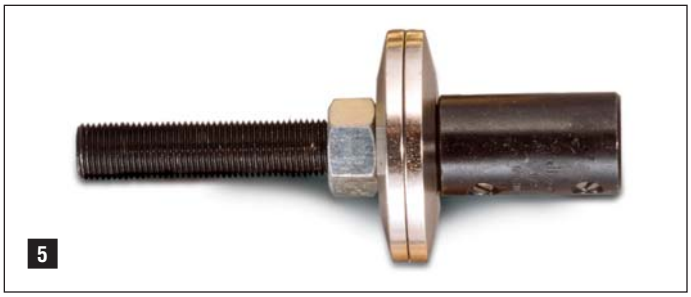
2 METAL HANDLE with CHUCK
End of metal holder has plastic hub for attaching to threaded spindle. Set screw and wrench are used for holding mandrels and burs with 3/32" shaft.
No. **37.763**



3 WOOD HUB MANDREL
Heavy-duty for right side. 1/16" diameter screw.
No. **47.260**



4 TAPERED CHUCK for BRUSHES
Brushes with 1/8" holes can be threaded onto the hardened steel taper, which in turn can be threaded onto a standard tapered spindle. Handy way to use small setting brushes on polishing motors.
No. **47.258** Right
No. **47.259** Left



5 WHEEL ARBOR
Designed to hold grinding wheel on right side of motors with 1/2" straight shaft. For wheels with 1/2" hole. Steel.
No. **47.256**



6 ABRASIVE BAND CHUCKS for TAPERED SHAFT MOTORS
Abrasive bands are held in place when rubber head is expanded. Made in USA. Brass.
No. **47.250** Right
No. **47.251** Left
No. **47.254** Replacement rubber heads

1 TAPERED SPINDLES for STRAIGHT SHAFT MOTORS

Designed to fit any straight shaft motor. Made with either right or left-handed threads (for right or left side of motor) and held to shaft by set screws. Threads are clear and deep, and the end is pointed. Steel. Made in USA.

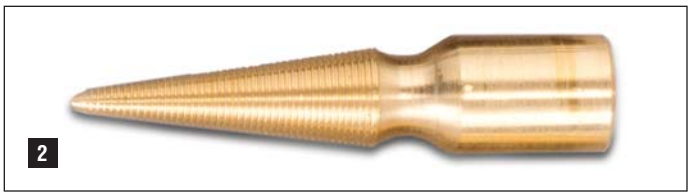
Right	Left	Shaft
47.270	**47.271**	1/4"
47.272	**47.273**	5/16"
47.274	**47.275**	3/8"
47.276	**47.277**	1/2"
47.278	**47.279**	5/8"



2 TAPERED SPINDLES for TAPERED SHAFT MOTORS

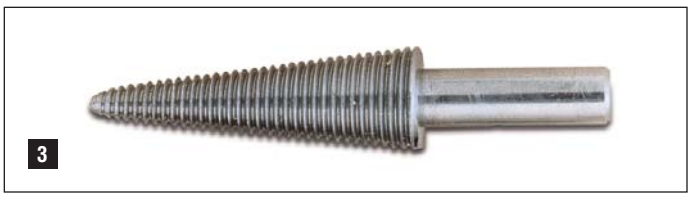
Made in USA.

No.	Side	Metal
47.236	Right	Brass
47.237	Left	Brass
47.238	Right	Steel
47.239	Left	Steel
47.234	Right (Baldor)	Brass
47.235	Left (Baldor)	Brass



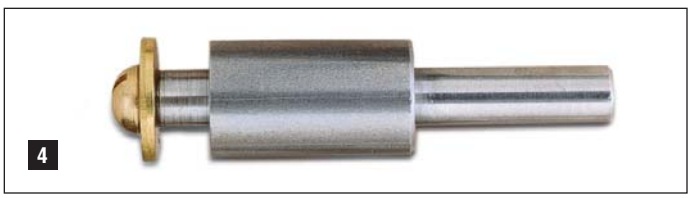
3 TAPER CHUCK

Steel with 1/4" shank.
No. **47.224** Right



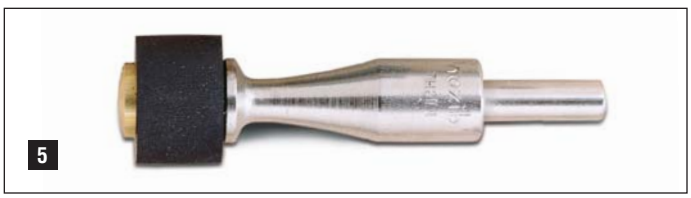
4 STONE CHUCK

Steel with 1/4" shank. For wheels up to 2 1/2" diameter and 1/4" thick, with 1/4" arbor hole.
No. **47.226** Right



5 BAND CHUCK

Brass with 1/4" shank.
No. **47.230** Right



6 BRASS STONE CHUCKS for MOTORS

Taper is 1/4" per foot. For use with wheels up to 3" diameter and 1/4" thick, with 1/4" arbor holes.
No. **47.200** Right
No. **47.201** Left



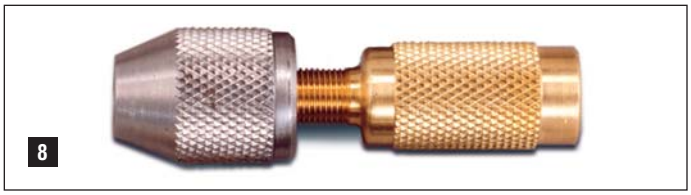
7 BUR CHUCK for MOTORS

1/4" capacity with short shank. Steel; for right shaft.
No. **47.203**



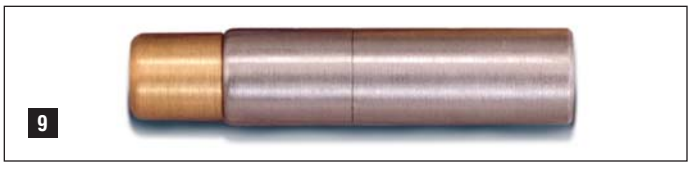
8 BUR CHUCK for TAPERED SHAFT MOTORS

5/32" capacity for right shaft. Brass body with steel knurl.
No. **47.205**



9 AUTOMATIC SPRING CHUCK for TAPERED SHAFT MOTORS

For tools with 3/32" shanks. Steel; for right shaft.
No. **47.207** Chuck
No. **47.208** Set of replacement rollers
No. **47.209** Set of replacement springs





1 BOXWOOD POLISHING STICKS

For holding gems to be cut and polished. Also can be sharpened and used charged with abrasives to polish stones. Sold by the dozen.

No.	Type	Dimensions
47.581	Round	7" x ¼"
47.586	Square	7" x ¼"



2 POWDERED COMPOSITIONS

Intended for use with hand buffs, brushes, felts and wood laps. Can be mixed with water or fine oil to form a paste that will impart a high luster.

- **Red Rouge** For platinum, gold and silver.
- **Tin Oxide** Used for lens polishing and other glassware, as well as fine steel.
- **Linde A** Used with precious gems, gold, silver and other metals.
- **Ruby Powder** Gives a high luster to platinum, gold, steel, precious stones, pearl, ivory, horn shell and porcelain.
- **Pumice Powder** Used for scrubbing, cleaning or polishing.

No .	Type	Approx. Shipping Weight
47.510	Red Rouge	1 lb.
47.516	Tin Oxide	1 lb.
47.520	Linde A	1 oz.
47.524	Ruby	1 oz.
47.525	Ruby	½ lb.
23.400	Pumice-Flour-200 mesh	1 lb.
23.401	Pumice-Fine-150 mesh	1 lb.
23.402	Pumice-Medium-80 mesh	1 lb.





GROBET ROTARY TUMBLERS

Provide outstanding polishing and smoothing. These units offer ease of use, excellent durability, and quiet, water-tight operation.

3 ONE BARREL TUMBLER

3 lbs. capacity tumbler features a heavy gauge steel base, water-tight, molded rubber barrel, and thermally protected motor.
Shipping weight 6 lbs.
No. **47.781** 110 volt model
No. **47.781X** 220 volt model
No. **47.784** Replacement barrel



4 TWO BARREL TUMBLER

Versatile, two barrel 6 lbs. capacity tumbler uses two 3 lbs. long-life, molded rubber barrels. Ideal for small batches of jewelry. Continuous-duty, fan-cooled motor with overload protection. Shipping weight 9 lbs.
No. **47.782** 110 volt model
No. **47.782X** 220 volt model
No. **47.784** Replacement barrel

5 HEAVY-DUTY TUMBLER

Professional quality tumbler features a larger, more powerful, continuous-duty, fan-cooled motor with overload protection. Steel hexagon barrel with removable liner ensures long, efficient and quiet operation. 15 lbs. capacity, with a five year warranty on the barrel and liner. Shipping weight 18 lbs. Replacement barrel shipping weight 8 lbs.
No. **47.780** 110 volt model
No. **47.780X** 220 volt model
No. **47.783** Replacement barrel

ROTARY "SMART" TUMBLERS

Raytech has designed features not found in any competitive Rotary Tumbler on the market today. Both models are smooth, quiet running and can run a myriad of medias for any deburring, burnishing or polish applications. The "Smart" tumblers have programmable features and are constructed of heavy duty components for industry's demanding jobs.

1 MODEL RT-1 TUMBLER

No. **47.772** 115V, 60 Hz
No. **47.772X** 230V, 50 Hz

Selection Chart	RT-1
Variable Speed	Yes
Programmable Timer	Yes
Programmable Forward/Reverse	Yes
Auto Shut Off w/Buzzer	Yes
Easy Load/Unload	Yes
Bowl Dimensions	5½" x 4"
Replacement Belt	47.772002
Capacity	1 Liter
Steel/SS Media*	3.5 lbs.
Porcelain Media*	2 lbs.
Ceramic Media*	1.5 lbs.
Plastic Media*	1 lb.
Dry Media*	0.8 lb.
Replacement Barrel	47.772001

**General rule of thumb is to fill chamber to 50% of capacity (parts and media)*



1

2 MODEL RT-2 TUMBLER

No. **47.774** 115V, 60 Hz
No. **47.774X** 230V, 50 Hz

Selection Chart	RT-2
Variable Speed	Yes
Programmable Timer	Yes
Programmable Forward/Reverse	Yes
Auto Shut Off w/Buzzer	Yes
Easy Load/Unload	Yes
Bowl Dimensions	7½" x 5½"
Replacement Belt	47.77402
Capacity	2 Liters
Steel/SS Media*	7 lbs.
Porcelain Media*	4 lbs.
Ceramic Media*	3 lbs.
Plastic Media*	2 lbs.
Dry Media*	1.6 lbs.
Replacement Barrel	47.77401

**General rule of thumb is to fill chamber to 50% of capacity (parts and media)*



2

MAGNETIC MACHINES

Magnetic Finishing presents itself as the pinnacle of methods to efficiently burnish and polish small non-ferrous metals. With media as small as .010 in diameter and .250 in length, these stainless steel pins are able to work in areas such as undercuts, recesses, slots, etc., where no previous method has been found suitable. Centrifugal Magnetic Finishing is quiet by comparison to many other forms of finishing. Typically, on soft non-ferrous metals, the finishing cycle can be as low as 30 minutes. This alone assures faster turnaround time on parts when compared to any other method. Centrifugal magnetic tumbling as an automated process addresses the most intricate and detailed parts imaginable in finishes where others fail. It should be noted that on large, smooth or flat surfaces the finish will appear frosted and a slight buffing or a run in a dry finisher is recommended.

What is a Centrifugal Magnetic Finisher?
The machine has a direct, fan cooled drive. The magnetic disk is made up of many powerful magnets that are precisely placed in a cast disk. The alternating polarity is constantly changing, thereby allowing the media to move freely in a liquid solution that constantly changes its makeup. This, combined with centrifugal force, allows for super quiet and fast time cycles.



1 CMF-400

Raytech's smallest capacity Magnetic Finisher has a 4" diameter chamber that finishes the equivalent of 8-10 rings. The machine comes complete with an ample amount of pins and compound. Pin capacity is 100 grams. The CMF-400 has a fixed speed complete with mechanical timer and molded bowl and cover. Model CMF-400 has a 1/32 HP motor, 2.0 amps at 115V, 60Hz and 1.0 amps at 230V, 50Hz. Shipping weight is 17 lbs., 1.0 cu. ft.

No. **47.660** CMF-400, 115 V
No. **47.660X** CMF-400, 230 V

2 CMF-610

Raytech's Model CMF-610 is the former Model CMF-600. Designed to integrate programmable functions. Variable speed, forward/reverse. Timer functions are easily programmed to suit your cycle times. The Model CMF-610 has a 6" molded bowl with cover and carries a pin capacity of 200 grams and a parts equivalent to 20-30 rings. Pins and compound are included. Model CMF-610 has a 1/12 HP motor, 2.5 amps at 115V, 60 Hz and 1.25 amps at 230V, 50 Hz. Shipping weight is 25 lbs., 2.13 cu. ft.

No. **47.662** CMF-610, 115 V
No. **47.662X** CMF-610, 230 V

Model	HP	Amps at 115V 60 Hz	Pin Capacity in grams	Ring Capacity	Forward/Rev. Function	Variable Speed	Bowl Diameter (in)	Bowl Diameter (mm)	Timer	Voltage Available 115V 60HZ	Voltage Available 230V 50HZ	Shipping Weight
CMF-400	1/32	2.0	100	8-12	No	No	4	200	Mechanical	Yes	Yes	17 lbs.
CMF-610	1/12	2.5	200	30	Yes	Yes	6	150	Programmable	Yes	Yes	25 lbs.



3 MAGNETIC SEPARATOR

Exclusive design by Raytech which eliminates tedious separation of parts from media. Magnetic Separators can be placed in water to separate the parts. No need to drain water as separator will not rust. Mates wit CMF-400 & CMF-600/620.

No. **47.665** Magnetic Separator 400/600

RAYTECH TUMBLERS

1 TUMBLE-VIBE 5

This popular low-cost unit is a favorite of the hobbyist and is used commercially as well. Holds 25 ring castings with media or will process about 4 lbs. of rock. Bowl diameter is 8 inches with new convenient solid lid system. Shipping weight is 7 lbs.

No. **47.701** TV-5 115V/60 Hz
No. **47.701X** TV-5 230V/50 Hz CE
No. **47.70101** Spare Bowl & lid
No. **47.70102** TV-5 with Stone Finishing Kit (Available in 230V)



1

2 TUMBLE-VIBE 10

Industrial model TV-10 has heavy duty drive and suspension combined with tough, cross-linked polyethylene bowl. Machine comes equipped for use with compound rinsing system 47.706. Capacity of bowl is .10 cu. ft. (.0013cu. m) Bowl is supplied with noise dampening cover and liquid drain. Shipping weight is 12 lbs.

No. **47.702** TV-10 115V/60 Hz
No. **47.702X** TV-10 230V/50 Hz CE
No. **47.70201** Spare Bowl & lid



2

3 AV-18 (formerly TV 18)

Raytech's former TV-18 has been redesigned to a much heavier duty machine. The AV-18 features adjustable amplitude, provides inlet and outlet ports for compound rinsing and has a capacity of .18 cubic feet. Shipping weight is 22 lbs.

No. **47.703** TV-18 with drains 115V/60 Hz
No. **47.703X** TV-18 with drains 230V/50 Hz CE
No. **47.70301** Spare Bowl & lid



3

4 ADJUSTA-VIBE 25SS

The Model 25SS is specifically designed for use when steel/SS media processing is required. A popular size for small production lots and when combined with the 47.706 Compound Rinsing System, accomplishes a myriad of applications. Designed with heavy-duty drive and suspension system, amplitude adjustment, and discharge port for easier unloading. Steel/SS media capacity: 50 lbs. All medias can be used. Shipping weight is 22 lbs.

No. **47.704** AV-25SS 115V/60 Hz
No. **47.704X** AV-25SS 230V/50 Hz CE
No. **47.70401** Spare Bowl & lid



4

5 ADJUSTA-VIBE 40SS

The Model 40SS is specifically designed for use when steel/SS media processing is required. It has a capacity of .35 cubic feet and is equipped with amplitude adjustment, inlet and outlet ports for compound rinsing systems, discharge port for easier unloading, and heavy duty cross linked polyethylene bowl construction. Sound dampening covers are standard. Steel/SS media capacity: 100 lbs. All medias can be used.
Shipping weight is 51 lbs.

No. **47.705** AV-40SS 115V/60 Hz
No. **47.705X** AV-40SS 230V/50 Hz CE
No. **47.70501** Spare Bowl & lid


5

Tumbler	Bowl Model	Working Capacity Cu. Ft.	Working Capacity Liters	Bowl Diameter A	Bowl Diameter B	Bowl Diameter C	Steel (SS)	All Ceramic & Porcelain	Media Caplates Plastic	All Dry Medias
TV-5	B-5	.05	1.5	8	4	3.75	—	5lb.	3lb.	1 lb.
TV-10	B-10	.10	2.5	10	3.5	5	—	9	6	2 lbs.
TV-18 w/drain	B-18	.15	3.5	12	4	4.25	25 lbs.	13	8	4 lbs.
AV-25SS	BS-20	.22	5.0	14	3.5	5.75	50 lbs.	20	13	7 lbs.
AV-40SS	BS-33	.35	9.0	17	4.25	7	100 lbs.	32	20	11 lbs.



1



2

1 FT-20

Incorporates a flow-thru design for compound rinsing. Unit comes with dispensing tank that allows metering of the solution up to 5 hours with a needle valve control. The integral 0-6 hour timer control panel allows tumbler to be directly plugged into base. Use with tumbler models 47.702, 47.703 and 47.704. Shipping weight is 26 lbs., 2.46 cu. ft.

No. **47.706** FT-20 with Timer 115V/60Hz
No. **47.706X** FT-20 with Timer 230V/50 Hz CE

2 FT-75

Incorporates a flow-thru design for compound rinsing. Supplied with a 32 quart tank that allows up to 8 hours of compound dispensing utilizing a needle valve control for metering. The integral 0-6 hours control panel allows tumbler to be directly plugged into the base. Recommended for use with precious metals. The FT-75 is designed to accept model 47.705. Shipping weight is 59 lbs.

No. **47.736** FT-75 with Timer 115V/ 60 Hz
No. **47.736X** FT-75 with Timer 230V/ 50 Hz CE



3

3 DRI-POLISHER

The Dri-Polisher features a 10-inch bowl with a capacity of .12 cubic feet. As a bonus, all Dri-Polishers come supplied with a free charge of Dri-Shine III, a Raytech exclusive universal polishing media. Shipping weight is 8 lbs.

No. **47.710** Dri-Polisher 115V/60 Hz
No. **47.710X** Dri-Polisher 230V/50 Hz CE
No. **47.712** Spare Bowl & lid

POLISHING TUMBLERS

WET/DRY VIBRATORY TUMBLERS

Vibratory tumbling is an economical finishing technique which gives you a more uniform finish on large quantities of parts, in much less time than standard hand finishing, without the mess. It maintains the overall shape of the pieces and allows you to check the progress of the work without stopping the unit. Compact, yet durable, the Vigor® vibratory tumblers are donut shaped for uniform polishing and maximum coverage. The heavy polyethylene lids and bowls remove easily and quickly for emptying and cleaning. Units have two valves and a strainer for optional flow-through operation (except No. 47.785) Ball-bearing motors operate at relatively low noise levels, have thermal overload protection and are 3000 RPM at 60/Hz. One year warranty. Made in USA.



4

4 3 QUART TUMBLER

Features and Specifications:

- Can be used wet or dry
- Capacity approximately 50 rings
- 3 quart capacity
- .10 cu. ft.
- Holds 8 lbs. of plastic shot, 3 lbs. dry shot
- Shipping weight 12 lbs.
- Bowl size 10" x 4" high

No. **47.786** 110 volt unit
No. **47.786X** 220 volt unit
No. **47.78601** Replacement 3 quart bowl

1 6 QUART TUMBLER

Features and Specifications:
- Can be used wet or dry
- Capacity approximately 100 rings
- 6 quart capacity
- .20 cu. ft.
- Holds 15 lbs. of plastic shot, 6 lbs. dry shot
- Shipping weight 19 lbs.
- Bowl size 11 1/2" x 6" high

No. **47.787** 110 volt unit
No. **47.787X** 220 volt unit
No. **47.78701** Replacement 6 quart (5.7 l) bowl



1

2 4 3/4 GALLON TUMBLER

Features and Specifications:
- Can be used wet or dry
- Capacity approximately 300 rings
- 4 3/4 gallon capacity
- .60 cu. ft.
- Holds 50 lbs. of plastic shot, 22 lbs. dry shot
- Shipping weight 26 lbs.
- Bowl size 17" x 7" high

No. **47.788** 110 volt unit
No. **47.788X** 220 volt unit
No. **47.78801** Replacement 4 3/4 gallon bowl


2

3 3 QUART DRY VIBRATORY TUMBLER

Features and Specifications:
- Use dry only-cannot be used with Flow-Through system
- Capacity approximately 50 rings
- 3 quart capacity
- .10 cu. ft.
- Holds 3 lbs. dry shot
- Shipping weight 12 lbs.
- Bowl size 10" x 4" high

No. **47.785** 110 volt unit
No. **47.78501** Replacement 3 quart bowl



3

MEDIA



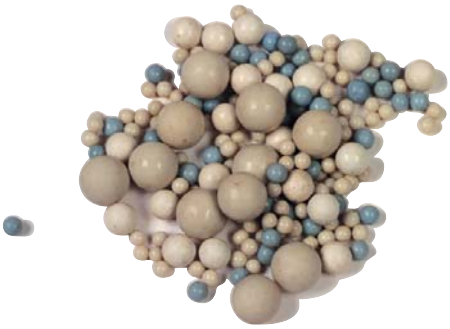
1 CERAMIC
Ceramic media is the heaviest media and is also the fastest finisher. Bonded of the highest quality materials available, selected aluminum oxide abrasives produce constant quality. This durable, long-lasting media is extremely versatile for deburring machined, cast, or fabricated parts. Density - 90 lbs. / Cu. Ft.



2 CERAMILITE
The clean-running light media that is between ceramic and plastic bonds. Metal removal is not quite as fast on bulk or dense materials as ceramic, but measurably faster than plastic. Finishability is finer than ceramic and brighter than the standard opaque finish produced by plastic. Density - 65 lbs. / Cu. Ft.



3 PLASTIC
Formulated for very fine surface conditioning. Low R.M.S. finishes are commonly achieved. Plastic medias are widely used in the precision metal industries. Also due to fine surface finishes achieved, parts are prepared for preplate, pre-anodize, or decorative polishing. Brown, V-Cut, Cone (medium cut), Green (light cut), and White (very fine cut). Density - 55 lbs. / Cu. Ft.



4 MICROBRITE™ PORCELAIN BALLS
The alternative to steel or stainless steel media for final finishing and used with Raytech's Compound D. Please note that there is a break-in period of 4-6 hours required. Mixing in the 1 mm and 2 mm in with larger sizes is recommended for good vibratory action. Sizes available, 1 mm, 2 mm, 3 mm, 4 mm, & 6 mm. Available in 5 lbs., 15 lbs., and 50 lbs. packages.



5 DRI-SHINE I
A nut-shell based media treated with Red Rouge. This irregular particle-sized media, when allowed to run in excess of 5 hours in a vibrating tumbler, provides excellent coloring characteristics. Density - 35 lbs. / Cu. Ft.

1 DRI-SHINE III

A corn-cob based media treated with Raytech's proprietary polishing compound, performs equal to, or better than Dri Shine I. Clean to use; rouge stain is eliminated.
Density - 30 lbs. / Cu. Ft.



2 RAY-CUBES

5mm in size, untreated hardwood cubes for use in rotary tumblers or vibratory machines. Use Polish Paste I for final polish on plastics or Turbo Brite for final polish on metals. Use Raytech's Grinding Paste I for smoothing, grinding and radiusing on plastic parts prior to final polish. Available in packages of 5 lbs., 15 lbs., and 30 lbs.



Media	5lb.	15lb.	20lb.	30lb.	50lb.
1 Ceramic					
Triangles	—	—	**47.80001**	—	**47.80002**
Angle Cut Cylinders	—	—	**47.80010**	—	**47.80012**
⅜" Polyhedron	—	—	**47.80020**	—	**47.80022**
2 Ceramilite					
⅝" V Cut	—	—	**47.80030**	—	**47.80032**
Angle Cut Cylinders	—	—	**47.80040**	—	**47.80042**
3 Plastic					
¼" Brown Pyramids	**47.80103**	—	—	—	**47.80105**
¼" White Pyramids	**47.80106**	—	—	—	**47.80108**
¼" Green Pyramids	**47.80109**	—	—	—	**47.80111**
½" V Cut Cylinder	—	—	**47.80120**	—	**47.80121**
9/16" XF Cones	—	—	**47.80130**	—	**47.80131**
5 Microbrite Porcelain Balls					
1 mm Balls	**47.80160**	**47.80161**	—	—	—
2 mm Balls	**47.80170**	**47.80171**	—	—	—
3 mm Balls	**47.80180**	**47.80181**	—	—	—
4 mm Balls	**47.80190**	**47.80191**	—	—	—
6 mm Balls	**47.80195**	**47.80196**	—	—	—
6 Dri-Shine I	—	**47.801**	—	—	**47.80101**
7 Dri-Shine III	—	—	—	—	**47.80102**
8 Dri-Shine V	**47.8015**	**47.80151**	—	**47.80152**	—
9 Dri-Shine VI	**47.8031**	**47.80315**	—	**47.80330**	—
10 Ray-Cubes	—	**47.80201**	**47.80202**	—	—

NATURAL MEDIA

Used in a dry tumbling process for the final finish. Can be used alone or charged with polishing compounds.



1

1 VIGOR® UNTREATED CORN COB

Used dry, produces a brighter finish when tumbled for 12 to 24 hours. Absorbs moisture.
No. **47.0106/5** 5 lbs. box
No. **47.0106/25** 25 lbs. box



2

2 VIGOR® WALNUT SHELL

Produces excellent final finish especially on stone and metal.
No. **47.0107/5** 5 lbs. box
No. **47.0107/25** 25 lbs. box



3

3 VIGOR® CHARGED WALNUT SHELL

Finely ground and bonded with rouge to produce a gleaming final finish on metal and stone.
No. **47.769** 5 lbs. box

4 FINISHING COMPOUNDS and CLEANER

Use these compounds and cleaners with all tumbling media. They work best used with soft, de-ionized water. Boxes are 5 lbs.



4

Shot Cleaner and Restorer - 750 Compound
Very caustic. Steel shot is clean and bright in 20 minutes. Helps keep parts clean and serves as rust inhibitor for steel shot. Use 3 - 4 oz. per gallon.
No. **47.0120**

Polishing Compound Powder - 920 Compound
Works well on stainless steel, gold, brass, copper, zinc and aluminum. Use 3 - 4 oz. per gallon.
No. **47.0121**

Burnishing Compound Powder - 910 Compound
Burnishing compound works well on gold-filled or Karat gold as well as on nickel and stainless steel. Use 3 - 4 oz. per gallon.
No. **47.0122**



5

5 GRIFFITH OXALIC ACID

Great for cleaning most quartz crystals. 2 Tb. to one gallon of distilled water- heated (not boiling) will leach out iron stains from most quartz crystals. Alternately heating and cooling the solution with the crystal in it may be necessary, but 1/2 hour is generally all it takes.
No. **23.215** 6 oz
No. **23.216** 16 oz

1 RAYTECH POLISH PASTE

A recharging agent for the Ray Cube Media, mix 1 teaspoon per 5 lbs. of Ray Cubes.

No. **47.80052** Raytech polish paste, 1 quart $16.00



1

2 RAYTECH GRINDING PASTE

Use with Ray Cubes to obtain smoothing effects prior to final polish. Simply add 1 teaspoon per 5 lbs. of media. Available in 1 pint and 1 quart size containers.

No. **47.80055** Raytech grinding paste, 1 pint
No. **47.80056** Raytech grinding paste, 1 quart



2

3 LIQUID COMPOUND B

A liquid flo-thru compound concentrate, uniquely formulated for all metals and plastics. As a non-foaming compound, soils that can load the media and darken parts are quickly flushed from the processing channel, resulting in faster cycle times and cleaner parts. Mix 2% dilution for flo-thru.

No. **47.80116** Compound B, 1 quart
No. **47.80116/G** Compound B, 1 gallon



3

4 TUMBLE SOAP

Recommended for fine finishing and burnishing precious metals, brass, bronze and similar materials with plastic, ceramic or metal media. Supplied with Raytech MFA metal finishing kits. Use approximately 1 tsp. per pint of water.

No. **47.80114** Compound A, 1 lb.
No. **47.80115** Compound A, 50 lbs.



4

5 BURNISHING COMPOUND D

Uniquely formulated liquid compound for use with steel shot. Also can be used as storage compound due to rust inhibitors in the formulation. Dilute 2% to water.

No. **47.80117** Compound D, 1 quart
No. **47.80117/G** Compound D, 1 gallon



5



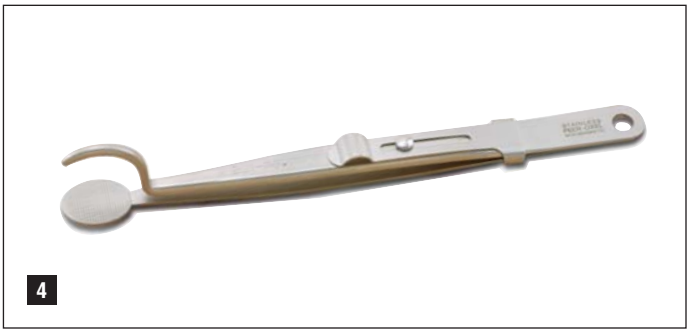
1 JIFFY JUMP RING TOOL
This highly versatile tool will produce round and oval jump rings in seconds, as well as giving a square, clean cut to watch bands, tubing, sizing stock, etc. The handy V-block will hold items up to 1/4" (6 mm) in size. Made of stainless steel and silicone bronze for long life.
No. **43.115**



2 RING SETTERS CLAMP
Smooth hardwood handle for comfortable hand-held operation. Includes nine plastic sleeve inserts, marked clearly in U.S. sizes from 2 to 13. Also in mm sizes from 13 mm to 22 mm. All attractively displayed in a hardwood box.
No. **48.135**



3 RING SOLDERING TWEEZERS
Holds ring from inside for easy soldering.
No. **48.230**



4 HEAD and SHANK TWEEZERS – PREMIUM QUALITY
Slide-locking, stainless steel tweezers securely holds the setting and shank in position for easy soldering of solitaries. One tip is curved to hold shank, the other is serrated to grip setting.
No. **48.235**



5 HEAD and SHANK TWEEZERS
Position the ring shank and setting to solder solitaries quickly and easily. Curved jaw has groove to hold shank securely, while flat jaw is serrated to prevent movement. Stainless steel.
Overall length 5 1/2"(140 mm).
No. **57.0398**

1 WOOD RING CLAMP
Quality wood clamp with leather-lined jaws for holding rings and other pieces. One side is rounded, the other is squared off. Wedge can be driven into either end to close the other jaw tight.
No. **48.125**



2 MAHOGANY RING CLAMP
Handy tool for holding rings to be filed or polished and for general ring work. Made of fine polished mahogany with round and flat leather lined jaws. Includes wooden wedge.
No. **48.126**



3 MASCOT® RING CLAMP
A double-ended clamp with thick leather-lined jaws, for holding rings and other jewelry pieces securely while filing, polishing, stone setting, etc. The tough material used to make this clamp outlasts wood many times over and the molded construction assures perfect alignment of jaws. The wedge supplied is made of the same tough material and can be driven in hard for a tight grip.
No. **48.100**



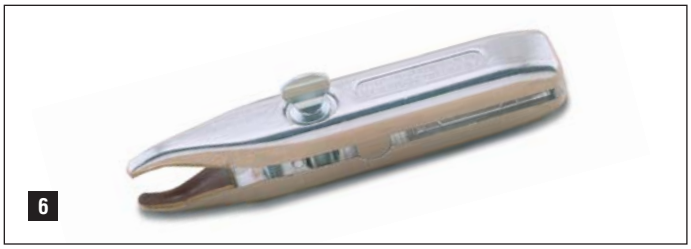
4 RING GRIPPER
Used to hold rings with vise-like grip while polishing. No more burned or blistered fingers from overheated rings. Also helps eliminate buffing wheel “grab”. Adjusts to fit most rings.
No. **48.070**



5 KIRKLAND RING CLAMP/HOLDER
One end clamps from the outside for polishing and stone setting, while the other end holds from the inside for total circumference polishing and buffing. Metal construction conducts heat away from ring. Holds ring sizes 1 through 13.
No. **48.105**



6 KIRKLAND EXTERNAL RING CLAMP
Clamps rings securely for filing, sanding and polishing inside of rings.
No. **48.106**



7 BENCH BLOCK RING CLAMPS
Versatile ring clamp, with lip, fits securely into solid hardwood bench block for optimum stability. Hard plastic clamp tightens easily and has rubber lined jaws for non-marring grip. Can also be used as hand held clamp for increased maneuverability.
No. **48.130** Clamp with lip
No. **48.0700** Clamp with lip and bench pin
No. **13.0202** Bench pin only





1

1 ELECTRIC RING CUTTER

In an emergency, speed, safety and comfort are essential. Cuts the strongest alloys in less than 10 seconds, safely, without heat or discomfort. High quality, powerful cordless motor comes with a handy recharging unit. Since it's cordless, you can take it anywhere, making it ideal in emergencies. Chrome blade assembly can be sterilized. Comes with a 3 year warranty on cutting unit (except blade). US Pat 4864730.

No. **48.0610** Ring cutter
No. **48.0611** Pk of 2 replacement blades
No. **48.06101** Recharger unit
No. **48.0610/4** Cover plate

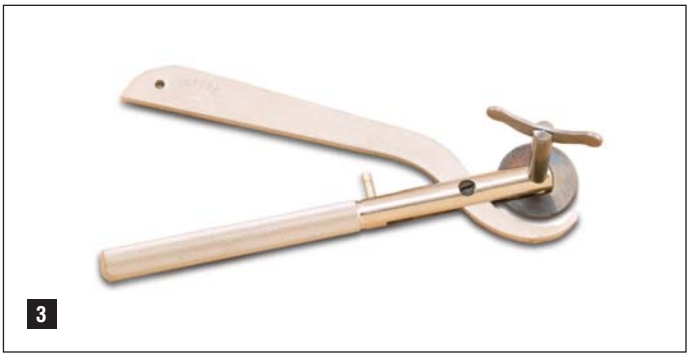


2

2 BEAVER RING CUTTER

Our most popular model. Saws ring while on or off finger. Satin chrome-finished metal parts are set in molded plastic handle with comfort grip design.

No. **48.220** Ring cutter
No. **48.224** Replacement saw
No. **48.225** High speed steel saw for harder alloys only

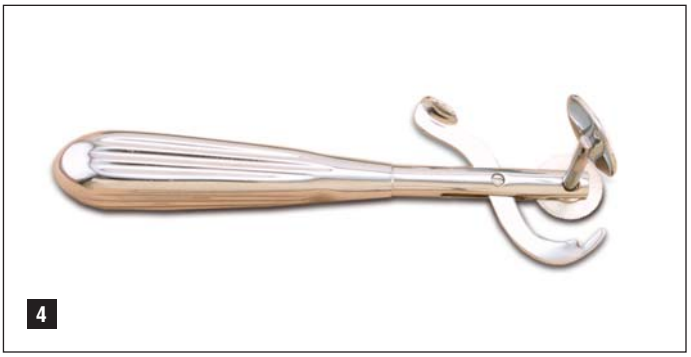


3

3 RING CUTTER

Lightweight model with knurled, non-slip handle. Nickel-plated, except for saw.

No. **48.180** Ring cutter
No. **48.192** Replacement saw



4

4 ECONOMY RING CUTTING PLIERS

This strong, yet lightweight, cutter has box joint construction and is completely enclosed. Chrome-plated brass with comfort-grip handle.

No. **48.02430** Ring cutting pliers
No. **48.02431** Replacement blade



5

5 STAINLESS STEEL RING CUTTER

Pliers type design and large key make this cutter very easy to use. Stainless steel. 6¾" (170 mm) long.

No. **48.193** Ring cutter
No. **48.194** Replacement saw

1 WEDDING RING SIZER

Reduces and enlarges wedding rings without effort. Can be bolted to bench or used as a portable. This well-made sizer has six splines on the enlarging mandrel and takes rings up to size 15. The reducing plate has sixteen openings and is smoothly polished to prevent marring. Shipping weight 20 lbs. (9 kg).
No. **48.350**



1

2 ENLARGER for STONE SET RINGS

Rolls out the shanks of stone set rings to stretch the metal and enlarge the size. Has 17 polished rollers for different sizes and styles of rings. Can also be used on wedding bands. Easy to use, economically priced.
No. **48.300** Enlarger and rollers
No. **48.302** Replacement set of 17 rollers
No. **48.303** Plastic tray


2

3 RATHBURN RING STRETCHER

Ring is placed on stretcher and the gentle tapping with the mandrel causes ring to expand. Economical and easy to use.
No. **48.360**


3

RING GUARDS



1

1 FINGER-HOLD RING GUARDS

Sold in packs of one dozen.

Size	Yellow	White
Ladies	**38.0500A**	**38.0505A**
Gents	**38.0501A**	**38.0506A**
Giants	**38.0502A**	**38.0507A**



2

2 14 KT GOLD-FILLED RING GUARDS

Easy to attach and won't slip off. Keeps ring in proper place. No sharp edges to tear clothing or scratch skin. Sold in packs of one dozen.

Size	Yellow	White
Ladies	**38.501**	**38.507**
Gents	**38.502**	**38.508**
Giants	**38.503**	**38.509**



3

3 SCHOOL RING GUARDS with BRIDGE SUPPORT

Make his ring fit her! Adjusts to any size with no springs or wires to pinch or catch. Will not twist off during active use. Bridge provides strength when reducing from larger boy's size to smaller girl's size.
All sold in packs of one dozen.

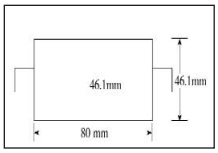
Size	Yellow	White
Regular School	**38.404**	**38.408**
Large School	**38.406**	**38.410**
Family	**38.400**	**38.402**

GROBET USA™ ROLLING MILLS

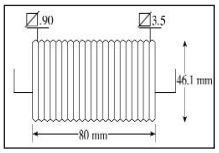
A line of rolling mills custom made for Grobet in Italy. Engineered with modern equipment using old world technology. Years of research and design have gone into making this line of rolling mills the finest rolling mills available anywhere. Top quality components, precision-machined to close tolerances, combined with expert manufacturing practices, assure you of years of productive and reliable service.

1 80 MM BENCH TOP ROLLING MILLS

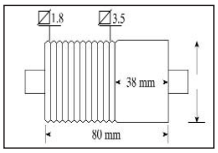
Shipping weight 44 lbs. (20 kg).
No. **28.182** Flat (plate)
No. **28.183** Wire
No. **28.184** Combination flat and wire



No. **28.182**



No. **28.183**

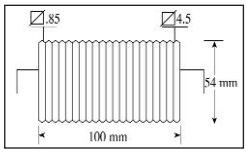


No. **28.184**

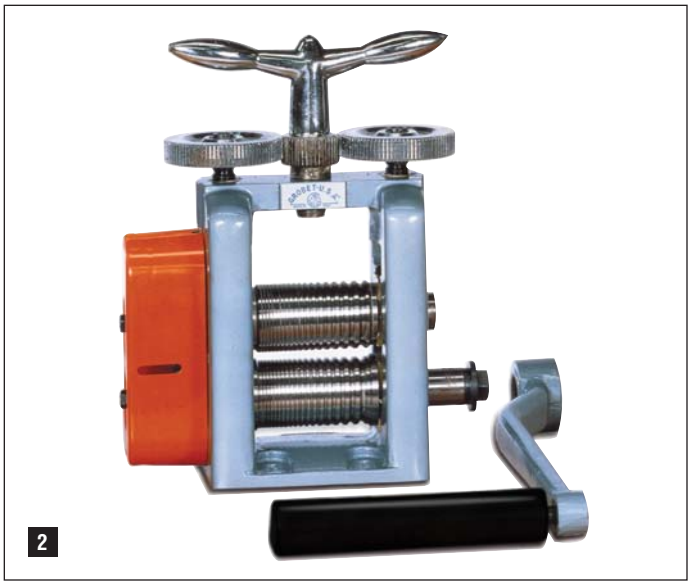


2 100 MM and 120 MM BENCH TOP ROLLING MILLS

Shipping weight 55 lbs. (25 kg).
No. **28.186** 100 mm wire

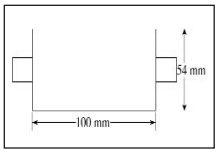


No. **28.186**

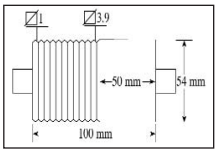


3 100 MM and 120 MM BENCH TOP ROLLING MILLS with REDUCTION

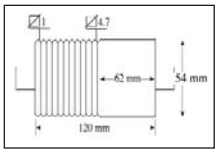
Shipping weight 74 lbs. (34 kg)each.
No. **28.194** 100 mm flat with reduction
No. **28.196** 100 mm combination with reduction
No. **28.199** 120 mm combination with reduction



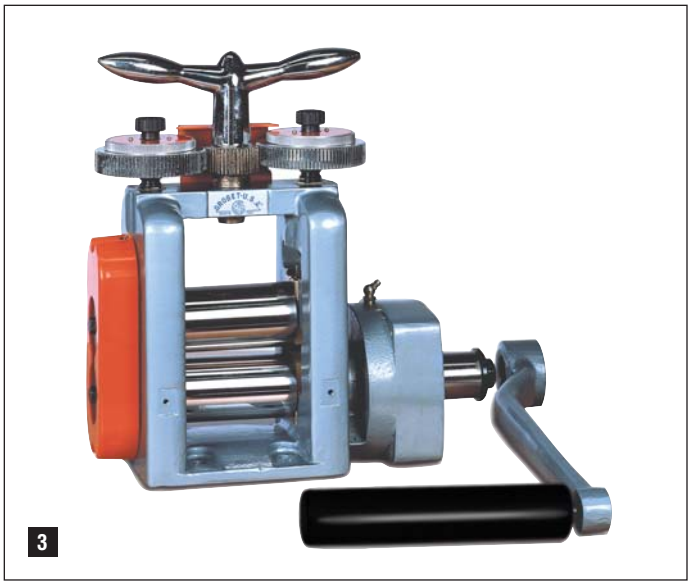
No. **28.194**

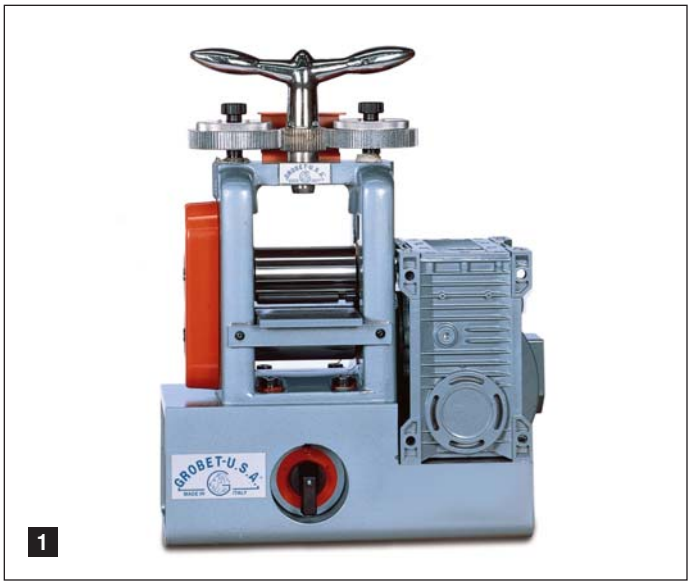


No. **28.196**



No. **28.199**



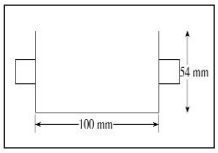


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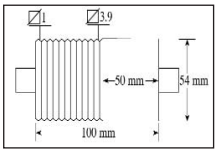
1 ELECTRIC BENCH TOP SINGLE ROLLING MILLS

Specifications:	100 mm Size	120 mm Size
Roll diameter	54 mm	54 mm
Wire thickness	1 to 3.9 mm	1 to 4.7 mm
Maximum plate opening	7 mm	7 mm
Roll speed	3.95 m/min	3.95 m/min
Overall size	16" x 17" x 19" (406 x 432 x 483 mm)	17" x 17" x 20" (432 x 432 x 508 mm)
Motor	1 hp	1 hp
Shipping weight	121 lbs. (55 kg)	132 lbs. (60 kg)

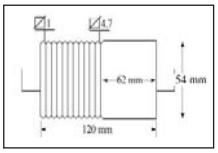
No. **28.205** 100 mm flat (plate)
No. **28.206** 100 mm combination flat and wire
No. **28.207** 120 mm combination flat and wire



No. **28.205**



No. **28.206**



No. **28.207**

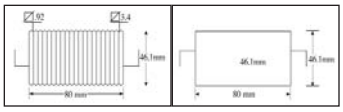


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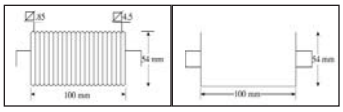
2 ELECTRIC BENCH TOP DOUBLE ROLLING MILLS

Specifications:	80 mm Size	100 mm Size
Roll diameter	46.1 mm	54 mm
Wire thickness	.9 to 3.5 mm	.85 to 4.5 mm
Maximum plate opening	7 mm	7 mm
Roll speed	3.95 m/min	3.95 m/min
Overall size	21" x 17" x 17" (533 x 432 x 432 mm)	23" x 17" x 18" (584 x 432 x 457 mm)
Motor	1 hp	1 hp
Shipping weight	154 lbs. (70 kg)	220 lbs. (100 kg)

No. **28.200** 80 mm flat plate and 80 mm wire
No. **28.201** 100 mm flat plate and 100 mm wire



No. **28.200**



No. **28.201**

Larger Floor Models Available Upon Request.

All units are 110 volt, and are shipped without plugs.
A dedicated 20 amp line is required. 220 volt models are available.



3

3 ROLLING MILL STANDS

No. **28.192** Double
No. **28.193**

JEWELERS' PIERCING SAWBLADES

Made in Switzerland, these are the finest jewelers' sawblades available. Manufactured to exacting tolerances for angle, size and cut of each tooth. For cutting all metals and other hard materials.

Featuring:

- Our unique tempering process which ensures consistent flexibility and long blade life and gives our sawblades their exclusive golden straw color. This golden straw color is your guarantee of receiving the world's finest sawblades
- Rounded back makes cutting curves easier
- Uniformly set teeth to reduce binding and breakage
- Special alloy steel, making our blades last longer and stay sharper

1 SWISS MADE PIKE® PLATINUM JEWELERS SAWBLADES

The only sawblades specifically developed for use on platinum. Sold by the gross.

No.	Size	No.	Size
49.475	4/0	**49.479**	1
49.476	3/0	**49.480**	2
49.477	2/0	**49.481**	3
49.478	1/0	**49.482**	4

2 SWISS MADE SCIES® SAWS JEWELERS' PIERCING SAWBLADES

Premium quality; extremely flexible, yet hardened for long life and smooth cutting. Sold by the gross.

No.	Size	No.	Size
49.400	8/0	**49.410**	2
49.401	7/0	**49.411**	3
49.402	6/0	**49.412**	4
49.403	5/0	**49.413**	5
49.404	4/0	**49.414**	6
49.405	3/0	**49.416**	8
49.406	2/0	**49.418**	10
49.407	1/0	**49.420**	12
49.408	1	**49.422**	14

3 SWISS MADE DAGGER® BRAND YELLOW LABEL SAWBLADES

Provide good performance normally not associated with blades in this price range. Sold by the gross.

No.	Size	No.	Size
49.600	8/0	**49.610**	2
49.601	7/0	**49.611**	3
49.602	6/0	**49.612**	4
49.603	5/0	**49.613**	5
49.604	4/0	**49.614**	6
49.605	3/0	**49.616**	8
49.606	2/0	**49.618**	10
49.607	1/0		
49.608	1		

4 SWISS MADE PIKE® BRAND JEWELERS' SAWBLADES

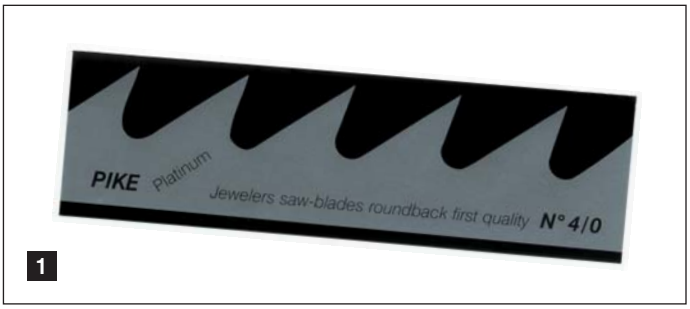
Swiss quality sawblade at a very affordable price. Sold by the gross.

No.	Size	No.	Size
49.440	8/0	**49.450**	2
49.441	7/0	**49.451**	3
49.442	6/0	**49.452**	4
49.443	5/0	**49.453**	5
49.444	4/0	**49.454**	6
49.445	3/0	**49.456**	8
49.446	2/0	**49.458**	10
49.447	1/0	**49.460**	12
49.448	1	**49.462**	14

5 SWISS MADE PRIOR SAWS JEWELERS' PIERCING SAWBLADES

Made in Switzerland, a high quality blade; hardened for long life and smooth cutting. Sold by the gross.

No.	Size	No.	Size
SBP8Z	8/0	**SBP1**	1
SBP7Z	7/0	**SBP2**	2
SBP6Z	6/0	**SBP3**	3
SBP5Z	5/0	**SBP4**	4
SBP4Z	4/0	**SBP5**	5
SBP3Z	3/0	**SBP6**	6
SBP2Z	2/0	**SBP8**	8
SBPZ	1/0		



1



2



3



4



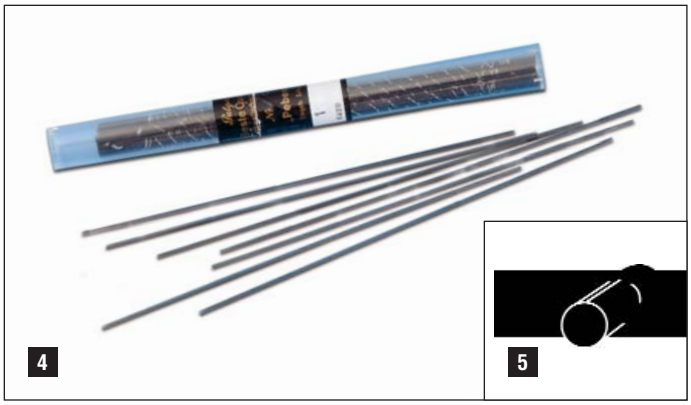
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2


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4

5

JEWELERS' SAWBLADES

1 ANTILOPE® SAWBLADES

German-made, excellent quality piercing blades for hard metals. Length 5¼" (133 mm) with round back. Sold by the gross.

Blue	Yellow	Size	Blue	Yellow	Size
49.900	**49.500**	8/0	**49.911**	**49.511**	3
49.901	**49.501**	7/0	**49.912**	**49.512**	4
49.902	**49.502**	6/0	**49.913**	**49.513**	5
49.903	**49.503**	5/0	**49.914**	**49.514**	6
49.904	**49.504**	4/0	**49.915**	**49.515**	7
49.905	**49.505**	3/0	**49.916**	**49.516**	8
49.906	**49.506**	2/0	**49.918**	**49.518**	10
49.907	**49.507**	1/0	**49.920**	**49.520**	12
49.908	**49.508**	1	**49.922**	**49.522**	14
49.910	**49.510**	2			

2 HERKULES® "WHITE LABEL" SAWBLADES

German-Made for cutting all metals, bone, pearl and other hard materials. Round backs make it easy to turn corners and follow curves, operations that may break other saws. Sold by the gross.

No.	Size	No.	Size
49.100	8/0	**49.110**	2
49.101	7/0	**49.111**	3
49.102	6/0	**49.112**	4
49.103	5/0	**49.113**	5
49.104	4/0	**49.114**	6
49.105	3/0	**49.115**	7
49.106	2/0	**49.116**	8
49.107	1/0	**49.118**	10
49.108	1	**49.120**	12
49.109	1½	**49.122**	14

3 SPIRAL SAWBLADES

Cuts in any direction. Used for cutting rubber, plastics, wax, plaster and similar materials. Sold by the dozen.

		Diameter	
No.	Size	(in)	(mm)
49.299	2/0	.0204"	0.52
49.300	1/0	.0220"	0.56
49.301	1	.0240"	0.61
49.302	2	.0276"	0.70
49.303	3	.0290"	0.74
49.304	4	.0307"	0.78
49.305	5	.0331"	0.84
49.306	6	.0360"	0.91

4 SKIP-A-TOOTH SAWBLADES

These blades are designed for wax cutting. Every other tooth is eliminated which provides smooth cutting and non-loading action. Size #1. Sold by the dozen.
No **49.320**

UTILITY SAWBLADES

5 HIGH CARBON STEEL PINNED SAW BLADES

High carbon steel 5 inch pinned saw blades. These blades are heat-treated and tempered to be flexible but maintains hardness for good life. 18 teeth per inch with a slight set to the teeth. The tooth set provides smooth cutting action with the narrowest kerf possible.Used for cutting bone, pearl, plaster, plastic and similar materials. Sold in Packs of 100
49.875

Chart of sizes

Size	Thickness (in)	Thickness (mm)	Width (in)	Width (mm)	Teeth per (in)	Teeth per (cm)
8/0	.006"	0.15	.013"	0.33	84	33
7/0	.007"	0.18	.014"	0.36	84	33
6/0	.007"	0.18	.014"	0.36	76	30
5/0	.008"	0.20	.016"	0.41	66	26
4/0	.009"	0.23	.017"	0.43	64	25
3/0	.010"	0.25	.019"	0.48	57	22
2/0	.010"	0.25	.021"	0.53	53	21
1/0	.011"	0.28	.023"	0.58	51	20
1	.012"	0.30	.025"	0.64	47	19

Size	Thickness (in)	Width (mm)	Width (in)	Teeth per (mm)	Teeth per (in)	(cm)
2	.013"	0.33	.027"	0.69	44	17
3	.014"	0.36	.029"	0.74	40	16
4	.015"	0.38	.031"	0.79	37	15
5	.016"	0.41	.033"	0.84	35	14
6	.017"	0.43	.037"	0.94	33	13
8	.020"	0.51	.045"	1.14	28	11
10	.024"	0.61	.053"	1.35	24	10
12	.024"	0.61	.065"	1.65	20	8
14	.024"	0.61	.067"	1.70	16	6

GROBET SWISS-MADE SAWFRAMES

Revolutionary design in three lightweight, perfectly balanced sawframes. Ergonomic handles reduce fatigue and provide greater dexterity. Patented blade-lock design eases blade insertion, maintains perfect alignment and eliminates wobble which reduces blade loss during use.* Precision-made at our Swiss factory of the highest quality spring steel with non-glare finish. Set screws can be used on either the left or right side of the frame according to your preference. 2 3/4" (70 mm) deep.
** Blade tightening screw must be opened wide enough to allow sawblades to be inserted all the way.*

1 No. **49.720** Adjustable style

2 No. **49.722** Fixed style

3 No. **49.724** 4" deep

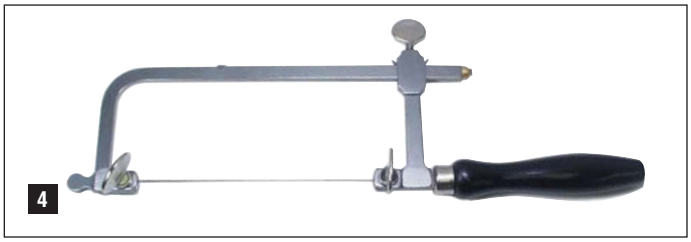


4 STANDARD JEWELERS' SAWFRAMES

For use with piercing, flat and spiral sawblades. Serrated clamps hold blades firmly. Strongly constructed with flat steel frames, hardwood handles and thumb-screw locking devices. Most common depth is 2 1/4" (57 mm), while others are for use when greater cutting depth is required.

	Depth	
No.	**(in)**	**(mm)**
49.700	2¼"	57
49.703	3"	76
49.704	4"	102
49.705	5"	127
49.706	6"	152
49.708	8"	203

Note: *Replacement screws and lugs are available.*

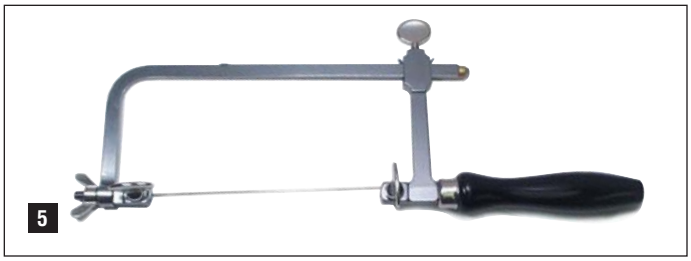


5 SAWFRAMES with END SCREWS

Equipped with tension screw for drawing blades taut. Otherwise, same construction as standard frames.

	Depth	
No.	**(in)**	**(mm)**
49.750	2½"	63
49.753	3"	76
49.754	4"	102

Note: *Replacement screws and lugs are available.*



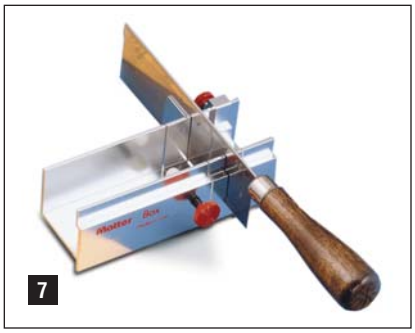
6 SWISS CUT SAW FRAME

Frame for 5 inch pinned blades. Designed with "S" bends to the frame it accommodates unobstructed viewing directly over the area to be cut. The frame is equipped with an ergonomic pistol grip handle fabricated with reinforced fiber filled plastic. Knurled thumbscrew provides easy to use blade tension control.
49.800



7 MATT MITER BOX

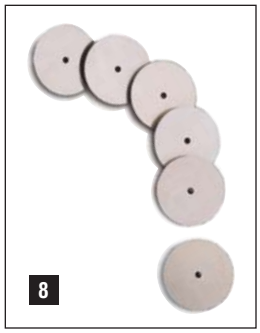
Slice bars, rods and wax ring tubes into tablets with perfectly straight and parallel walls or tapered sides. The ring tube is held firmly in position inside the box so there is no strain on your hand. With stop/lock feature for cutting several tablets of the same thickness. Set includes extruded aluminum 6" x 2" (152 x 51 mm) miter box, steel hand saw and stop/lock.
No. **21.02920** Miter box
No. **21.0750** Replacement saw



8 CIRCULAR SAWS

For miniature work. Made of .004" (.10 mm) thick stainless steel. With 1/16" (1.6 mm) diameter center holes for mandrel mounting. Sold by the dozen.

	Diameter		Teeth per	
No.	**(in)**	**(mm)**	**(in)**	**(cm)**
49.890	¾"	19	42	16
49.891	⅞"	22	45	17



ACCULAB

VIC-SERIES PRECISION BALANCES

The new VICON series are ideal balances for Jewelry, Industrial, Laboratories, Research, Educational, Postal, Speciality and more. Whether weighing multiple samples with totaled results, formulating a color, counting, percent weighing, specific gravity, or under pan weighing.
The new models feature a flip-down protective cover, stainless pan and back-lit display.

Features include:

- 15 models (enhanced by four milligram units)
- Protective flip-down and removable plastic cover for shipping protection and allows stackable storage.
- Unique durable design for all applications
- Applications include; Counting, Percent Weighing, Totaling, Display Hold, Specific Gravity, Mass unit conversion.
- 14 Mass unit conversions (g, oz, lbs, lbs: oz, dwt, ozt, grains, Newton, carats, Taels HK/Taiwan/Singapore/China, user defined)
- Optional RS-232 or USB interface kit (field installable)
- Parts counting with selectable reference sample
- 9 volt Battery operation (or included AC adapter)
- External "one button" calibration with 3 weight options
- Lock down capability
- 4" dia pan models 50.310 through 50.316
- 5" x 5 1/2" pan 50.317 and higher
- Two year manufacturer warranty



No.	Model	Capacity	Readability	Power 100, 120,220, 240 Volt
50.310	VIC-123	120g	.001g	AC adapter only
50.311	VIC-303	300g	.001g	AC adapter only
50.314	VIC-212	210g	.01g	AC adapter, Battery option
50.316	VIC-612	610g	.01g	AC adapter,Battery option
50.317	VIC-511	510g	.1g	AC adapter,Battery option
50.319	VIC-1501	1500g	.1g	AC adapter,Battery option
50.320	VIC-3101	3100g	.1g	AC adapter,Battery option
50.321	VIC-5101	5100g	.1g	AC adapter,Battery option
50.322	VIC-4kg	4100g	1g	AC adapter,Battery option
50.323	VIC-6kg	6100g	1g	AC adapter,Battery option
50.324	VIC-10kg	10100g	1g	AC adapter,Battery option

1 ACCULAB POCKET PRO SERIES

These balances are the ultimate in portability and are the perfect choice for precious stone sample prep, & speciality markets. They feature a back-lit display, simple operation and a unique pan design which protects the scale during transportation and storage.

Features include:

- Calibration weight and tray included with all models
- Blue Back-lit display for easy viewing in all ambient conditions
- Scales weigh in "Grams" and "Ounces" (*PP-62 features grams, ounces, grains and carats)
- Battery operation (one "AA" battery included)
- Auto off (saves battery life)
- Overload/Underload and low battery indicators
- External "one button" calibration with included weight



1

No.	Model	Capacity (g)	Readability (g)	Calibration Weight (g)	Pan Size (in)	Dimensions (WxLxH)
50.300*	PP-62	60	0.01	50	2.76" x 2.95"	2.95" x 4.33" x 0.8"

No.	Model	Capacity (g)	Readability (g)	Calibration Weight (g)	Pan Size (in)	Dimensions (WxLxH)
50.301*	PP-201	200	0.1	100	2.76" x 2.95"	2.95" x 4.33" x 0.8"
50.302*	PP-401	400	0.1	200	2.76" x 2.95"	2.95" x 4.33" x 0.8"

2 ACCULAB GSI-Series

Very low cost, yet packed with features!

The GSI-Series offer performance on a budget. Units weigh in grams or ounces. Handy "hold" key retains reading on the display. Has a removable plastic platform and angled LCD with a built-in lock down bracket that retracts when not in use. Auto calibration with optional weight. 9V battery (included) - AC adapter optional. Two year warranty.

110 Volt Model	Acculab Model	Capacity (g)	Readability (g)	Precision (g)	Platform Size
50.119	GSI-200	200	0.1	0.001	5⅛" square
50.123	GSI-2001	2000	1	0.001	(130 mm)

No. **50.121** 200g calibration weight



2

3 VIGOR ELECTRONIC SCALES

Features:

- Advanced load cell technology for accurate readings
- Full digital calibration
- LCD digital readout
- One-touch zeroing
- Automatic tare capacity
- Low battery and overload indicators for protection
- 9V battery operated for complete portability
- Optional AC plug-in adapter

Scale specifications:

Capacity and Sensitivity



3

No.	Carat	Platform Size	Overall Dimensions
51.01550*	50 x 0.01	1⅛"	3" W x 5⅛" Dx 1½" H

**Protective carrying case is included.*



1 HAMILTON SCALES
For weighing precious metals. The fulcrum action of this precision scale eliminates the need for weights and springs. A leveling screw is provided to adjust for uneven surfaces.
No. **51.050** Pennyweight scale with 35 dwt. capacity
No. **51.052** Gram scale with 100 g capacity



2 PENNYWEIGHT/GRAM SCALE
Similar in design to the Hamilton scales, but economically priced. Pennyweights and grams are combined on one scale strip. 40 dwt (60 g) capacity.
No. **51.0906**
No. **51.0906/1** Replacement scale strip



3 DIAMOND SHOVELS
No. **51.095** Nickel-plated chrome finish



4 GRAM WEIGHT SET
238 g capacity.
No. **51.093**

GROBET USA™ SCISSORS & SHEARS

In keeping with a tradition of excellence in metal forming and finishing, these scissors and shears are made of drop forged steel, expertly tempered and hardened. The edges are hand ground to retain a keen cut after long use. Although the line is limited by number, the uses and application areas are extremely varied. For shop, office, hobby, craft and precision use.

1 SHORT STRAIGHT BLADE SCISSORS

Stainless steel, near razor-sharp blades cut fine wire, filament threads, nickel ribbon, etc. Widely used in electronics and precision applications. Overall length is 3 1/2" (89 mm) and length of cut is 1/2" (13 mm).
No. **53.201**



2 SHORT CURVED BLADE SCISSORS

Stainless steel, near razor-sharp blades cut fine wire, filament threads, nickel ribbon, etc. Widely used in electronics and precision applications. Overall length is 3 1/2" (89 mm) and length of cut is 1/2" (13 mm).
No. **53.205**



3 STRAIGHT MEDIUM BLADE SCISSORS

Stainless steel straight blade is near razor-sharp to cut fine wire, filament threads, nickel ribbon, etc. Widely used in electronics and precision applications. Overall length is 4 1/4" (108 mm) and length of cut is 3/4" (19 mm). Design of points is well suited for providing access to hard-to-reach areas. Made in Germany.
No. **53.220**



4 SCISSORS

For hard wire or sheet up to B & S #27 and soft wire up to B & S #16. With short, stubby blades 9/16" (14 mm) long and 1/4" (6 mm) wide. No. 53.630 with serrated blades is recommended for cutting wires. Overall length is 4 1/8" (105 mm) with large loop handles. Made in Germany.
No. **53.620** Straight blades
No. **53.630** Straight serrated blades
No. **53.640** Curved blades



5 COMPOUND ACTION SHEARS

Suited for straight or shallow arc cutting. Cuts copper up to B & S #16 with half the effort of ordinary shears. Serrated blades prevent slippage. Overall length is 10" (254 mm) with a 1 1/2" (38 mm) length of cut. Made in U.S.A.
No. **53.836**





1 ALL-PURPOSE STANDARD SHEARS
Excellent medium to heavy-duty shears for leather, cardboard, etc., and up to 22 B & S gauge copper. Double-plated chrome over nickel, with black handles, for complete rust protection and long life. Tension can be adjusted easily with screwdriver. Overall length is 8" (203 mm) and length of cut is 2 7/8" (73 mm). Made in Germany.
No. **53.350**

STRAIGHT SHEARS (not shown)
Similar to No. 53.350 except the handles are longer and the blade is shorter for greater leverage. Will cut copper up to B & S #20. 7 1/4" (184 mm) long with a 1 1/2" (38 mm) length of cut. Made in Germany.
No. **53.820**



2 LIGHTWEIGHT METAL SNIPS
For cutting templates and patterns from medium hard metal sheet up to B & S #20 or soft sheet to B & S #16. Available with straight or curved blades (for cutting circular shapes). Regular scissors handles. Overall length is 7" (178 mm) with a 1 1/2" (38 mm) length of cut.
Made in Germany.
No. **53.800** Straight blade
No. **53.802** Curved blade



3 LIGHTWEIGHT METAL SNIPS
For cutting templates and patterns from medium hard metal sheet up to B & S #20 or soft sheet to B & S #16. Plain handles. Overall length is 7" (178 mm) with a 1 1/2" (38 mm) length of cut. Made in Germany.
No. **53.804** Straight blade
No. **53.806*** Straight blade
No. **53.808** Curved blade
No. **53.810*** Curved blade
**Have return springs in handle.*



4 SOLDER CUTTER
Solder sheets can be easily cut in clipped pieces. Sheets are placed on bottom jaw and snipped. Pieces dropout cleanly. These can also be used to cut wire solder by inserting the wire into the side hole. Available in two sizes; 1.5 mm and 3 mm.
No. **53.811** 3 mm size
No. **53.812** 1.5 mm size

1 JEWELERS' SHEARS with LEAF SPRINGS

Long handle permits greater flexibility in cutting. Excellent for clipping chains, solder and thin metal. Jaws are polished. Overall length is 7" (178 mm).
No. **53.0917** Straight blade
No. **53.0927** Curved blade


1

2 MULTI-PURPOSE SCISSORS

Commonly called electrician scissors, but used by anyone who wants extra cutting power from a short scissor. Only 5" (127 mm) long but will cut medium gauge wire. Double plated, chrome over nickel with notches and chrome handles. Length of cut 1¾" (44 mm).
No. **53.286**

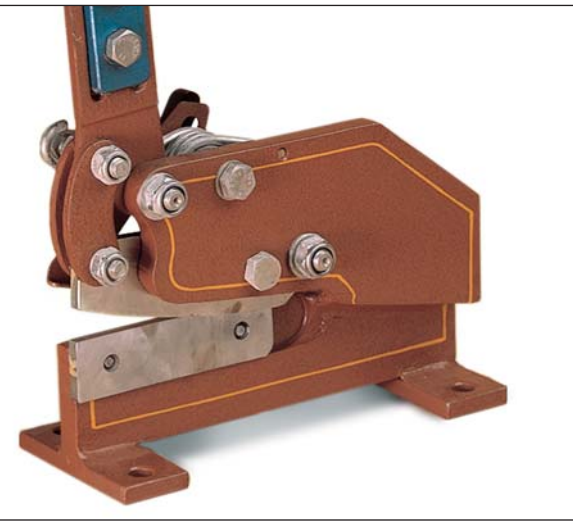

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3 BENCH SHEARS

Lightweight yet powerful shears for cutting sheets, rods or flat bars. The handle provides leverage to cut with ease. Replaceable blades are made of hardened tool steel and are held in the open position by a strong spring to help prevent accidental closing. Available in three sizes, which cut iron stock up to sizes shown in table. Shipped in 2 boxes.

	Blade Length		Sheets		Rods		Shipping Weight	
No.	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lbs)	(kg)
53.930	5"	127	⅛"	3.2	⅜"	10	17	7.7
53.931	6½"	165	5/32"	4	7/16"	11	25	11
53.932	7¾"	197	3/16"	5	½"	13	51	23

Replacement Blades:
No. **53.9301**
No. **53.9311**
No. **53.9321**


3

4 ECONOMY BENCH SHEARS

Powerful shears for cutting rods or plates. The handle provides leverage to cut with ease.

	Blade Length		Sheets		Rods		Shipping Weight	
No.	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lbs)	(kg)
53.923	4¾"	121	⅜"	10	⅛"	3.2	16	7.3
53.924	6"	152	⅜"	10	3/16"	5	18	8.2
53.925	8"	203	7/16"	11	¼"	6	48	22

Replacement Blades:
No. **53.92301**
No. **53.92401**
No. **53.92501**


4



1



2

SET of WATCHMAKERS' SCREWDRIVERS

Precision-made, with set screw to hold blade firmly. Hexagonal swivel heads prevent rolling and each handle is color banded for size identification. Lengths are proportioned to blade size and range from 4 1/8" to 3 1/4" (105 to 83 mm). Contains all nine blade sizes, 3.00 mm to .60 mm (.118" to .023"). Center of stand has compartments for separate blades.

1 No. **52.0905** Set of screwdrivers in wood box

2 No. **52.540** Set of screwdrivers on swivel stand

Individual Watchmakers' Screwdrivers and Blades

Blades sold by dozen.

Blade Diameter (in)	(mm)	Color	Screwdrivers	Blades Pk 12
.118"	3.00	Brown	**52.550**	**52.560**
.089"	2.50	Blue	**52.551**	**52.561**
.078"	2.00	Green	**52.552**	**52.562**
.063"	1.60	Purple	**52.553**	**52.563**
.055"	1.40	Gray	**52.554**	**52.564**
.047"	1.20	Red	**52.555**	**52.565**
.039"	1.00	Black	**52.556**	**52.566**
.031"	0.80	Yellow	**52.557**	**52.567**
.024"	0.60	Lilac	**52.558**	**52.568**



3

3 SCREWDRIVER SETS

Designed especially for watchmakers. Nickel-plated to prevent rust. Reversible, double-ended blades and threaded ferrules for easy replacement. Color identified heads for quick selection.
See chart below for sizes.

No. **52.0762** Set of seven, numbers 3 to 9 for baguette and pocket sizes, in polished hardwood stand with carborundum sharpening stone built into base and a side compartment for spare blades
No. **52.0763** Replacement stand
No. **52.0730** Set of seven, numbers 3 to 9 for baguette and pocket sizes, in box
No. **52.0732** Set of seven replacement blades for Nos. 52.0730 and 52.0762

Individual Blades

Blades sold by dozen.

Blade Diameter (in)	(mm)	No.	Blades
.059"	1.50	3	**52.0735/3**
.050"	1.28	4	**52.0735/4**
.047"	1.20	5	**52.0735/5**
.039"	1.00	6	**52.0735/6**
.031"	.80	7	**52.0735/7**
.027"	.70	8	**52.0735/8**
.024"	.60	9	**52.0735/9**



4

4 SCREW CHUCK SCREWDRIVER SET

Set of six well-constructed, precision screwdrivers with replaceable blades that are held firmly in the handle by means of screw chucks. Blades are made of quality tool steel, which have been heat treated for toughness and long wear. The bodies are plated and have hexagonal swivel heads which will not roll on bench. 3 1/2" (89 mm) overall length. Comes in plastic pouch.
No. **52.480**

Individual Screw Chuck Screwdrivers and Blades

Blades sold by dozen.

Blade Size (in)	(mm)	Screwdrivers Pk of 3	Blades Pk of 3
.100"	2.54	**52.482**	**52.492**
.078"	2.00	**52.483**	**52.493**
.070"	1.80	**52.484**	**52.494**
.055"	1.40	**52.485**	**52.495**
.040"	1.02	**52.486**	**52.496**
.025"	0.64	**52.487**	**52.497**

1 NON-MAGNETIC SCREWDRIVERS

Precision screwdrivers with hexagonal swivel heads to prevent rolling, and knurled handles for firm grip. Color identifier bands allow for easy selection and set screw holds blades securely. Sold individually.

	Blade Size	
Screwdrivers	(in)	(mm)
52.0911/1	.024"	0.60
52.0911/2	.031"	0.80
52.0911/3	.039"	1.00
52.0911/4	.047"	1.20
52.0911/5	.055"	1.40



1

SWISS PATTERN SCREWDRIVERS

Economical screwdrivers, with steel blades set firmly in metal handles. Hexagonal swivel head prevents rolling on bench. Overall lengths are proportional with blade sizes and range from $3^3/4$" to $2^5/8$" (95 to 67 mm).

2 SET in PLASTIC BOX

Set contains seven Swiss pattern screwdrivers, styles 3 through 9.
No. 52.514

Individual Screwdrivers

	Blade Diameter		
No.	(in)	(mm)	Style
52.520	.087"	2.20	1
52.521	.079"	2.00	2
52.522	.071"	1.80	3
52.523	.059"	1.50	4
52.524	.047"	1.20	5
52.525	.039"	1.00	6
52.526	.031"	0.80	7
52.527	.028"	0.70	8
52.528	.024"	0.60	9



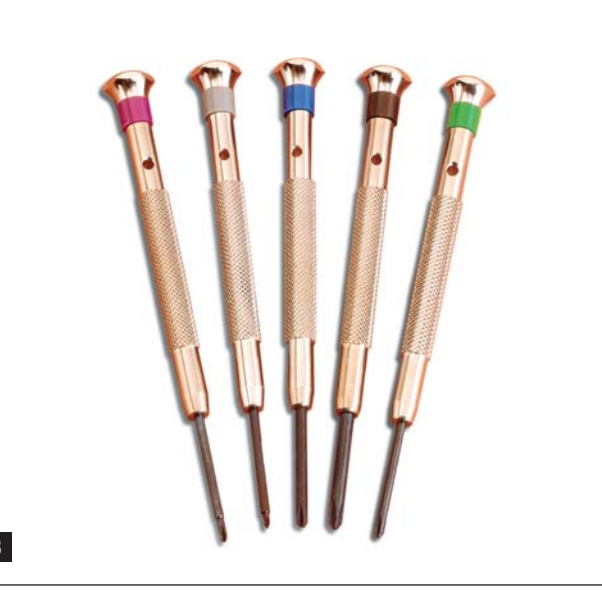
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3 SET of FIVE PHILLIPS SCREWDRIVERS

Knurled nickel-plated brass handle provides a sure grip. Color-coded, hexagonal head makes size identification easy and prevents rolling. With strong, heat treated steel Phillips blades. Comes in handy protective pouch. See chart below for sizes.
No. **52.0720**

Individual Screwdrivers

	Blade Diameter		
Screwdriver	(in)	(mm)	Color
52.571	.047"	1.20	Gray
52.572	.059"	1.50	Violet
52.573	.079"	2.00	Green
52.0724	.098"	2.50	Blue
52.0725	.118"	3.00	Brown



3



1 DOUBLE BLADE SCREWDRIVERS

Perfectly balanced, with a nickel finished knurled body to permit a firm grip and heavy pressure. Overall length 4 1/2" (114 mm) with double-ended 3/32" and 1/16" (2.38 and 1.58 mm) flat blade.

No. **52.450** Complete with double-ended flat blade
No. **52.454** Pk of 3 replacement blades
No. **52.453** Pk of 3 replacement narrow 1/16" (1.6 mm) blades
No. **52.462** Complete with double-ended Phillips blade



2 SCREW-HOLDING SCREWDRIVER

Features self-adjusting jaws. Will hold screw straight and securely while removing or replacing. Eliminates stripped threads and lost screws. Overall length 4 3/4" (121 mm).

No. **52.850** Screwdriver 2.0 flat blade
No. **52.852** Replacement blade
No. **52.853** Replacement blade with clamp



3 SET of THREE REMOVERS/EXTRACTORS

Includes one each of removers/extractors noted in chart below.
No. **52.470**

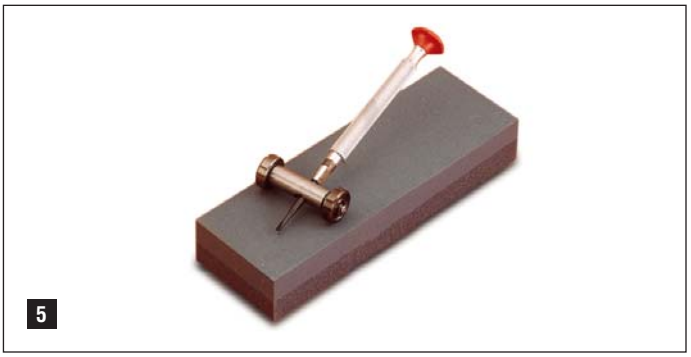
Individual Removers/Extractors and Blades

Size (in)	Size (mm)	Removers/ Extractor	Replacement Blades (pk of 3)
.078"	2.00	**52.473**	**52.476**
.059"	1.50	**52.472**	**52.475**
.049"	1.25	**52.471**	**52.474**



4 10 PIECE NUTDRIVER SET

Same construction as screwdriver set No. 52.890, except set contains 10 color-coded nutdrivers in sizes: 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 9/32", 5/16", 11/32" and 3/8". The torque handle measures 1" x 3 1/8" (25.4 x 79.4 mm).
No. **52.888**



5 SCREWDRIVER SHARPENER

Spring action holds screwdriver firmly in place. Steel wheels are carefully set into body to provide even action when wheeled over stone. Overall width is 1 9/16" (40 mm). Stone and screwdriver shown for illustration purposes only.
No. **52.469**

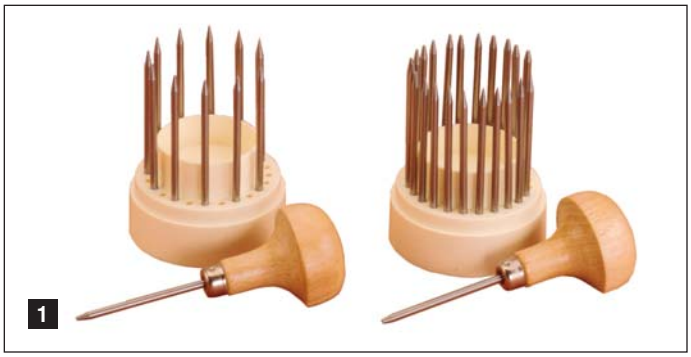
BEADING TOOLS

1 GROBET USA™ BEADING TOOLS

Used to form beads that hold diamonds and other stones in settings. Also used for tightening loose stones. Sets come in protective plastic organizer case. Handle included.
No. **53.160** Set of 23 pieces plus handle
No. **53.16001** Set of 12 pieces plus handle

Individual Tools

No.	Size #	No.	Size #
53.161	0	**53.173**	12
53.162	1	**53.174**	13
53.163	2	**53.175**	14
53.164	3	**53.176**	15
53.165	4	**53.177**	16
53.166	5	**53.178**	17
53.167	6	**53.179**	18
53.168	7	**53.180**	19
53.169	8	**53.181**	20
53.170	9	**53.182**	21
53.171	10	**53.183**	22
53.172	11		


1

2 BEADING TOOL STAND/HOLDER

Small, plastic organizer stand with cover, used to hold up to 24 beading tools.
No. **19.923**


2

3 BEADING BLOCKS

For reshaping ends of beading tool punches. Specially hardened steel blocks, perfectly formed and highly polished.
No. **53.0153** 40 holes
No. **53.013** 12 holes



3

4 PEARL DRILL SET

Set of 12 drills in wood stand with cover. For drilling the holes for setting seed pearls and other round or half-round stones. Sizes 1.05 mm to 3.00 mm (.041" to .12"), with 1/8" (3.2 mm) shank.
No. **53.120**

Individual Drills

No.	Diameter (in)	Diameter (mm)	No.	Diameter (in)	Diameter (mm)
53.121	.041"	1.05	**53.128**	.089"	2.26
53.122	.047"	1.20	**53.129**	.094"	2.40
53.124	.057"	1.45	**53.130**	.104"	2.65
53.125	.065"	1.65	**53.131**	.111"	2.83
53.126	.073"	1.85	**53.132**	.118"	3.00
53.127	.081"	2.05			


4


5

MILLGRAIN TOOL SETS

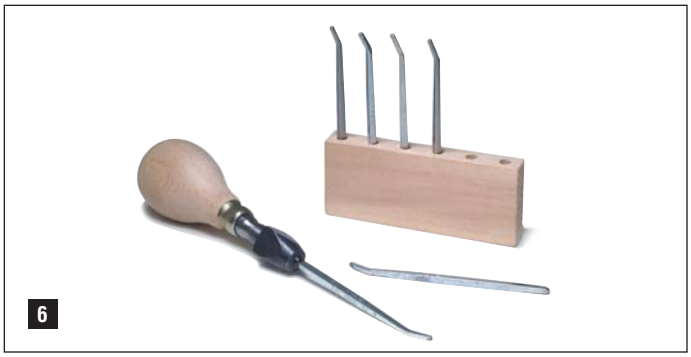
Cup-shaped cutters on wheels used to dress up a setting, ring mounting, or any piece of jewelry, by forming a decorative bead or fine row of cuts along the edge. Sets contain six sizes plus chuck-holding handle. Replacement handles pictured.

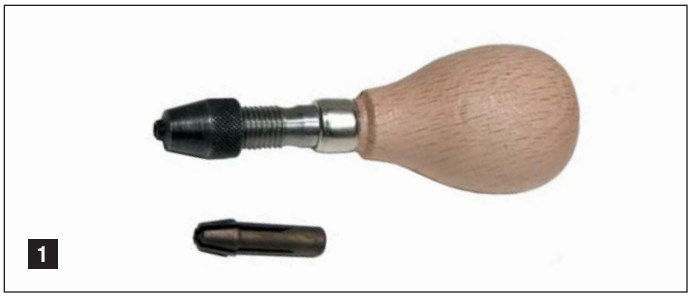
5 No. **53.0210** Comes in plastic case (sizes 2,4,6,8,10,12)

6 No. **53.100** Comes in hardwood stand (sizes 1-6)

Individual Tools

No.	Size #	No.	Size #
53.101	1	**53.107**	7
53.102	2	**53.108**	8
53.103	3	**53.109**	9
53.104	4	**53.110**	10
53.105	5	**53.111**	11
53.106	6	**53.112**	12


6



1 HANDLES with CHUCKS

Rounded wood handle with chucks that open from 0 to .129" (0 to 3.3 mm). Holds a variety of tools. Ideal for beading and millgrain tools. Overall length 3" (76 mm).

No. **37.764** With two chucks



2 STEEL BURNISHERS

Oval-shaped tool steel burnishers for smoothing of bezels around stones and smoothing other parts of soft metals. Highly polished blades are firmly set in wood handles.

Curved Blade	Straight Blade	Blade Length (in)	(mm)
18.050	**18.060**	1½"	38
18.052	**18.062**	2"	51
18.053	**18.063**	2½"	64
18.054	**18.064**	3"	76



3 SLIM BLADE BURNISHERS

Especially useful for jewel settings. Blade 1 3/2" (44 mm) long.

No. **18.058** Curved blade

No. **18.059** Straight blade



4 MARGIN ROLLER/BURNISHER

For burnishing scratches from gold, making it possible to salvage many pieces without gold loss. The 3/16" (5 mm) head consists of five steel rollers that act as rotating mallets. 3/32" (2.4 mm) shank for use with handpiece.

No. **18.080**



5 FACETED GEM SETTING OUTFIT

For setting diamonds and other stones. Both sets consist of six gravers, six wood handles and a step-by-step model plate. Set No. 53.070 has gravers: onglette #0 and #1, flat #38 and #40 and round #50 and #52. Set No. 53.0501 has gravers: onglette #2, flat #38, knife #2, oval #65, square #6 and taper square #3.

No. **53.070**

No. **53.0501**



6 TUBE HOLDERS

Seven collets, ranging in size from 1/32" to 1/4" (0.8 to 6 mm) firmly hold tubes for stone setting without collapsing. Collets fit into wood handle with screw chuck.

No. **53.150**

1 THE NEW FINAL TOUCH
For quick and secure tightening of both snap-in and hand-set round prong settings. Tightens all four or six prongs with one light tap. Includes urethane base and five different size punches. Base holds 12 studs.
No. **53.192**

2 BEZEL PUSHER
Grooved steel tool mounted in wood handle for pushing bezels around stones.
No. **53.140**

3 BEZEL ROLLER
Has a half-round, highly polished, steel head for rolling bezels around stones in rings, pendants, broaches etc.
No. **53.142**

4 PRONG LIFTER
Especially designed to gently and easily pry prongs loose from stones when remounting, resetting or retipping. A real time saver.
No. **53.143**
No. **53.144**

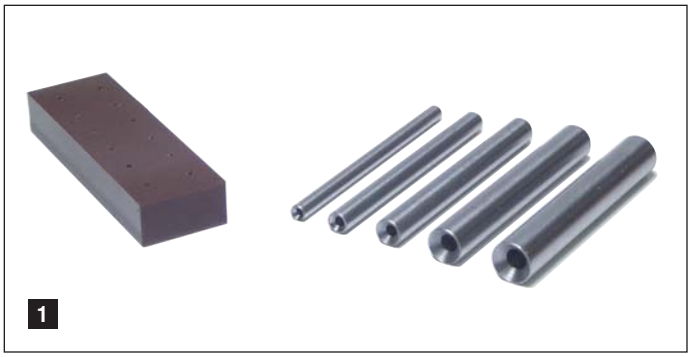
5 PRONG PUSHER
Handy tool for pushing prongs or crown points around stones. Steel tool mounted in wood handle.
No. **53.146**

6 PEARL DRILLING VISE
Holds all popular size pearls securely in position for drilling. Knurled locknuts provide quick clamping and releasing action.
No. **53.0660**

7 BRACELET HOLDER
Saves time when setting stones, while eliminating the need for messy shellac. Suitable for prong, pave or channel settings on bracelets up to 9/32" (7 mm) wide and will not mar or distort. Has space on outer side for clasps. Made of aluminum with diameter of 3 1/2" (89 mm). Hex wrench included.
No. **43.060**

8 DIAMOND SELLER GAUGE
Ideal for closing the sale without using expensive stones. Cubic zirconia, mounted on stainless steel arms, folds within a protective cover when not in use. Each arm has the size of the stone in carats and millimeters. Comes in compact leather case.
No. **35.555** Ten sizes ranging from 0.10 to 2 carats.

9 TEXTURING TOOLS
Produce a sparkling finish. Available with either diamond tip or two styles of carbide tips. Tools fit into all popular style hammer handpieces. The tapping action of the handpiece produces small, bright-cut dents, pave style. The diamond tipped tool and the pointed cut carbide tool produce similar finishes. The chisel cut carbide tool produces a deeper cut and a brighter finish.
No. **53.195** Diamond tip
No. **53.196** Pointed carbide tip
No. **53.197** Chisel cut carbide tip
No. **53.198** Both carbide tips
No. **53.199** Grobet hammer tip pave


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ELECTRIC PICKLING

Pickling is the immersion of metals in an acid solution, for the purpose of removing surface fire scale and oxides caused by heating, annealing, casting, soldering, etc. Sulfuric acid is sometimes used, but substitutes are shown. The pickle solution works better if heated to a temperature of approximately 125° F (52° C).



1

1 FERRIS ELECTRIC PICKLERS

Automatically keeps solution at the right temperature and prevents it from boiling away. Plastic basket is included with each unit for holding articles in solution.

115V	Capacity	Diameter	Height
45.302	1½ qt.	8½"	5"
45.304	1 pint	5½"	7¼"
45.306	12 oz.	5"	5¾"

220V	Capacity	Diameter	Height
45.302X	1½ qt.	8½"	5"
45.304X	1 pint	5½"	7¼"
45.306X	12 oz.	5"	5¾"

Replacement Baskets

No.	Capacity
45.312	1½ quart
45.314	1 pint
45.315	12 oz.



2

2 PORCELAIN PICKLING PAN

Used for boiling pickling solutions containing metal pieces to be cleaned and brightened. 4 oz. capacity.
No. **45.200**



3

PICKLING COMPOUNDS

Dry, granular acid compounds for removing oxides caused by heating precious and non-ferrous metals, such as gold, silver, copper, bronze, brass, German silver, etc. These substitutes for sulfuric acid are non-flammable and non-explosive.

3 PRO-CRAFT® PRE-PO PICKLE

Pre-cleans before soldering; pickles after heating and soldering, to remove oxides. Works well even at room temperature. When solution is exhausted it turns from pink to amber to alert you. Biodegradable and mixes with water to make solution.
No. **45.100** Makes one quart of solution
No. **45.102** Makes one gallon of solution



4

4 PRO-CRAFT® PICKLE

Standard sodium bisulfate compound is mixed with warm water to make economical solution. Works best at 125° F (52° C).
No. **45.122** 10 oz. can makes one quart
No. **45.124** 2½ lb. can makes one gallon
No. **45.126** 40 lb. drum makes 16 gallons



5

5 SPAREX PICKLE

Dry granular acid compound specially made for pickling and the cleaning and removing of surface oxidation and scale from copper and silver. Non-flammable and non-explosive.
No. **45.127** 2½ lb. can makes one gallon
No. **45.128** 10 oz. can makes one quart
No. **45.129** 45 lb. drum makes 18 gallons



6

6 GRIFFITH PICKLE SAFE

A dry, granular acid compound used to pickle gold, silver, and other non-ferrous metal castings.
No. **45.135** 10 oz.
No. **45.136** 2½ lb.
No. **45.137** 40 lb.



7

7 GRIFFITH NICKEL PICKLE

A pickling compound for nickel, German silver, brass, bronze, copper, and imitation gold metals.
No. **45.140** 10 oz.
No. **45.141** 2½ lb.
No. **45.142** 40 lb.

"THIRD HAND" HOLDERS

These handy holding devices are available with either round or horseshoe bases. Each are heavy, non-tipping bases equipped with ball joint attachments which can position work at any angle. Cross-locking tweezers and various types of clamps will fit on these bases. Handy for positioning pieces to be joined by solder or adhesive, freeing both hands.

1 **"THIRD HAND" with TWEEZERS**
Cross-locking, 6½" tweezers closes when released. Mounted on heavy-duty round or horseshoe base.
No. **54.080** Round base
No. **54.090** Horseshoe base

2 **DOUBLE CLAMP-ON STAND**
No. **54.085** Round base
No. **54.095** Horseshoe base

3 **SOLDER/ASSEMBLY STATION**
Large work area 12" x 9½". Fully adjustable and interchangeable holding fixtures. Slotted/grooved jaws to grip unusually shaped items. 3X magnifier for close-up work. Rubber edging to hold the station in place.
No. **54.025** Solder/assembly station
No. **54.026** Replacement 3X magnifier
No. **54.027** Replacement large opening holding fixture
No. **54.029** Replacement swivel arm assembly
No. **54.211** Replacement asbestos free soldering board 6" x 12"
Note: *The surface of the station is not flame or heat resistant. Use No. 54.211 asbestos free soldering board (sold separately) which withstands temperatures up to 3000° F (1649° C) for soldering or torch use.*

4 **RING SOLDERING TWEEZERS**
Holds rings from inside shank for easy soldering.
No. **48.230**

5 **HEAD and SHANK TWEEZERS - PREMIUM QUALITY**
Stainless steel slide-locking tweezer securely holds the setting and shank in position for easy soldering of solitaires. One tip is curved to hold shank, the other serrated to grip setting.
No. **48.235**

6 **HEAD and SHANK TWEEZERS - ECONOMY**
Position the ring shank and setting to solder solitaires quickly and easily. Curved jaw has groove to hold shank securely, while flat jaw is serrated to prevent movement. Locking handles apply even pressure. Stainless steel, anti-magnetic and anti-acid. Overall length 5½".
No. **57.0398**

7 **FIBER-GRIP SELF-LOCKING SOLDERING TWEEZERS**
Heat-resistant fiber grips and permanent tension self-locking jaws are ideal for soldering operations or for holding parts. Stainless steel with long, tapered, non-serrated blunt jaws. 6½" long.
No. **57.0373** Straight tips
No. **57.765** Curved tips

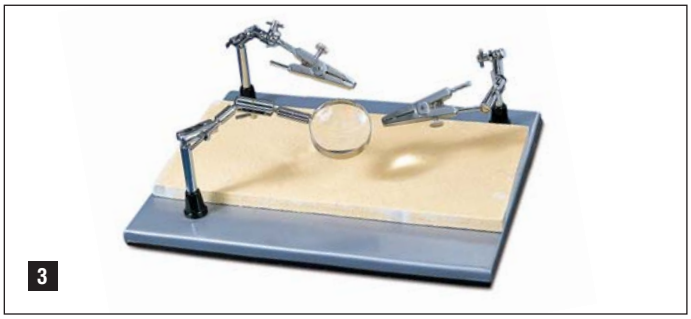
8 **SOLDER PIC**
Wood handle with sharp pointed tip for placing, holding and positioning solder in just the right place.
No. **54.771** Gold & silver soldering with titanium tip
No. **54.772** Platinum soldering with tungsten tip

9 **SOLDER PIC - METAL HANDLE**
Platinum soldering pic with titanium tip and metal handle.
No. **54.774**

10 **COMBINATION BLOWER/SOLDER-OFF BULB**
Rubber body with Teflon tip, makes it suitable as a blower or for suctioning excess molten solder.
No. **54.135**





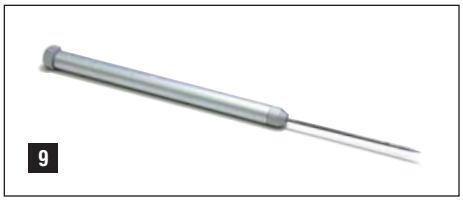


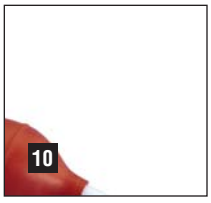














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1 PRO-CRAFT® ELECTRIC SOLDERING MACHINE

- No torch or gas tanks needed.
- Used for hard or soft soldering.
- Up to 2000° F (1093° C).
- Demagnetizes watch movements, small instruments and small tools.
- Low voltage unit is shock resistant – your hands may safely touch any part of the carbon holders or contact clips.

You will find it easy to use this compact, efficient machine for soldering rings, jewelry, spectacle frames or any piece where hard or soft solder is needed. The heat range is acceptable for soldering very light to heavy items. Heat control is easily achieved by turning the selector knob. The heat is produced electrically, without flame, by touching a carbon electrode to the work to be soldered. The current passing through the carbon will heat the object in a matter of seconds. Carbons are copper plated to insure good contact. The large carbon holder can be adjusted to use carbons both horizontally or vertically and is low enough so that both hands can rest comfortably on the bench. Maximum 1000 watts. Soldering machine comes with foot control switch, 54.064 - Complete Carbon Stand, 54.066 - Set of 5 carbon lead wires, and instructions. 90 day warranty. Shipping weight 12 lbs.

No. **54.050** 110 volt model - 15 amps
No. **54.050X** 220 volt model - 7.5 amps

Replacement lead wires are also available separately:
No. **54.061** Black lead wire for clamps
No. **54.062** Red/gray lead wire for clamps


2

2 COMPLETE CARBON STAND

Includes: 54.059 - alligator clips, 54.060 - bulldog clips, and 54.063 - the contact rod.
No. **54.064**

Replacement Parts:
No. **54.059** Clamp, small alligator
No. **54.060** Clamp, large bulldog
No. **54.063** Contact rod


3

3 SET OF 5 CARBONS

Includes carbons: 54.054 - round taper, 54.055 - 2 small pencil, 54.057 - large cylindrical, and 54.058 - large cylindrical/flat.
No. **54.066**

Replacement Carbons:
No. **54.054** Round taper
No. **54.055** Small pencil
No. **54.057** Large cylindrical pencil
No. **54.058** Large cylindrical flat


4

4 LENK SOLDERING PENCIL

Melts solder in 90 seconds. Perfect for fine jewelry work.
No. **54.0960** Pencil
No. **54.0961** Pack of 2 replacement tips

1 GROBET USA™ CHARCOAL SOLDERING BLOCKS

A time proven technique for effective soldering. Under flame, the charcoal glows and reflects heat back in to work, making the flame more efficient. Select, close-grained, knot-free wood is chemically prepared with a special process for soldering. Easily punctured to hold work. (Not heat rated)

Box of 6	Individual	Size
54.151	**54.152**	3½" x 2¼" x 1½"
54.161	**54.162**	4¾" x 3" x 1½"
54.171	**54.172**	7" x 4" x 1½"
54.181	**54.182**	5½" x 2¾" x 1 3/16"



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2 BLOWPIPE CHARCOAL

4½" x ¾" x 1" size is most popular for soldering with blowpipes. Sold by package of 12.
No. **54.180**



2

3 ADJUSTABLE SOLDERING BOWL

Stainless steel bowl holds workpiece when soldering, leaving both hands free. Mounted on solid base, bowl adjusts in any position for use on any job. Bowl is 4" in diameter and 1⅝" deep. Comes filled with Therma-Guard (No. 54.469) and can also be used with pumice stone.
No. **54.0720**



3

4 ROTATING NON-ASBESTOS SOLDERING TABLE

Grooved work surface disk is 4½" in diameter. Rotates on ball bearings, lazy-susan style, providing 360° access. Perfect for soldering small parts.
No. **54.116** Soldering table
No. **54.117** Replacement disk



4

5 ANNEALING PAN

Allows positioning of work while annealing or soldering on a heat reflecting material, such as pumice. Rotates on ball bearings, providing 360° access. Pan is 12" in diameter and comes with 2½ lbs. of lump pumice. Shipping weight 6 lbs.
No. **54.120** Annealing pan
No. **54.122** Replacement pumice, 2½ lbs. (1.1 kg)



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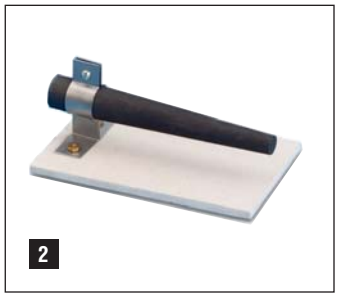
6 ASBESTOS-FREE PAD for PLATINUM

Ideal for bench protection. Steadying pins can be inserted. Withstands temperatures up to 3000° F (1649° C).
No. **54.210** Measures 6" x 6" x ½"
No. **54.211** Measures 6" x 12" x ½"
No. **54.212** Measures 12" x 12" x ½"

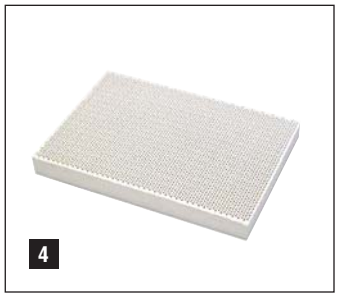


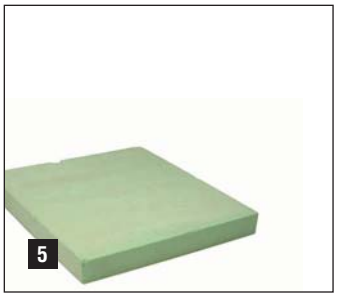
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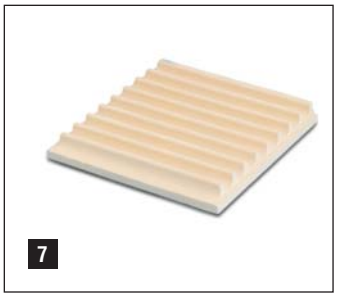

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1 CERAMIC RING STAND
Mounted on base with swivel to provide the exact position or angle desired. 6" ceramic rod is much cleaner than carbon and holds heat better. Clamp releases rod for replacement.
No. **54.131** Ring stand
No. **54.130** Replacement carbon rod
No. **54.132** Replacement ceramic rod

2 CARBON RING STAND
Holds rings, leaving both hands free. Mounted in fixed position on asbestos-free base. Length of rod is 6".
No. **54.128** Ring stand
No. **54.130** Replacement carbon rod
No. **54.132** Replacement ceramic rod

3 CERAMIC SOLDERING BLOCK
Round block has holes, approximately 1/16" in size. Withstands temperatures up to 6000° F (3315° C). Provides a permanent flat surface with very low loss of heat.
No. **54.0965** 4½" (114 mm) diameter

4 HONEYCOMB DESIGN CERAMIC SOLDERING BLOCKS
Contain no asbestos. Lightweight blocks reflect heat and perforations hold pins to keep work in place while heating. Withstands temperatures up to 2000° F (1093° C).
No. **54.215** Measures 3¾" x 5½" x ½"
No. **54.216** Measures 5½" x 7¾" x ½"

5 PRESTO BOARD
No. **54.153** Measures 8½" x 8" x ⅞"

6 CARBON BOARD
No. **54.154** Measures 6" x 12" x ½"

7 CORDIORITE SOLDERING BOARD with GROOVES
Non-asbestos. Flat on one side, with grooves on the other, for holding shanks, chains, etc. Withstands temperatures up to 2000° F (1093° C). Measures 7 1/2" x 7 1/4" x 7/8".
No. **54.219**

8 CORDIORITE SOLDERING BOARD with RUBBER FEET
Non-asbestos. Withstands temperatures up to 2000° F (1093° C). Rubber feet keep board raised above bench.

No.	Size
54.218	6" x 6" x ½"
54.220	6" x 12" x ½"

9 SILICA SOLDERING BOARDS for PLATINUM
Withstands temperatures up to 3000° F (1649° C). Soft material that can be used with stick pins. Two sided. The white side is for gold, silver, etc., the other side is the gray for platinum.
No. **54.225** 6" x 6" x ½"
No. **54.227** 6" x 12" x ½"

10 PERFECTION SOLDERING BLOCK
Made of non-asbestos sheeting, coiled and placed in metal receptacle. Block is comparatively soft, permitting steadying pins to be inserted to hold work while soldering. 5 1/2" in diameter and 3/4" thick. (Not heat rated – not recommended for use with flammable flux)
No. **54.241**

11 MAGNESIA SOLDERING BLOCK
Soft, fire-proof material, into which work or pins can be easily pressed. Measures 6" x 3" x 1 1/2". Withstands temperatures up to 2000° F (1093° C).
No. **54.186**

1 BATTERN'S® SELF PICKLING HARD SOLDERING FLUX

For over 50 years, the proven standard of quality. Makes hard soldering as easy as soft soldering. Use on gold, silver, platinum and other metals with high melting points. Preserves temper and color of metal and the adhesive qualities of this liquid flux hold solder in place.

No. **54.400** 1 oz.
No. **54.402** 3 oz.
No. **54.404** 8 oz.
No. **54.406** 16 oz.
No. **54.408** 32 oz.
No. **54.410** 128 oz., shipping weight 9 lbs.



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2 GRIFFITH SELF PICKLING FLUX

A liquid hard soldering flux for metals which melt under 2000° F (1093° C).

No. **54.510** 1 oz.
No. **54.511** 4 oz.
No. **54.512** 8 oz.
No. **54.513** 16 oz.
No. **54.514** 32 oz.
No. **54.515** 1 gal.



2

3 FLUORON HARD SOLDERING SOLUTION

Can be used when hard soldering on silver, gold, platinum, etc. Preserves temper and color of metal.

No. **54.0456/8** 8 oz. bottle



3

4 DANDIX® PASTE FLUX

For use in low temperature brazing and silver soldering ferrous and non-ferrous metals. Begins to dissolve oxides at 800°F (427°C) and is fluid- active between 1100° and 1600°F (593° and 871°C). Contains no fluoride.

No. **54.440** 1½ oz.
No. **54.442** 8 oz.
No. **54.444** 16 oz.



4

5 GRIFFITH GRIFFLUX #1

A hard soldering paste flux for use on all ferrous and non-ferrous metals and alloys.

No. **54.445** 1.5 oz.
No. **54.446** 8 oz.
No. **54.447** 16 oz.



5

6 OPTI-FLUX®

Best flux for electric hard soldering, without dangerous cyanides, free acids or fluorides. Liquid flux has a powerful solvent and scavenging action on the oxides of most metals and quickly removes dirt, scale and impurities to allow good electrical contact. 2 oz. bottle.

No. **54.432**


6

7 PRO-CRAFT® JEL-FLUX®

For hard soldering with flame. Stays put like a paste, will not run like a liquid and yet is transparent. Eliminates blind joint soldering. Jel-Flux produces less oxides and residues, allowing for faster pickling. With no toxic fumes and it's biodegradable. 2 oz. jar.

No. **54.438**


7



1 GROBET USA™ FLUX DISPENSER PUMP
Compact, convenient, 4 oz. capacity polyethylene bottle, with stainless steel pump-action lid. Dispenses just the right amount of flux or other liquids. Pump the lid lightly and the fluid is dispensed into the well. The one-way pump holds the fluid in the well of the cap, preventing contamination of the unused fluid. For best results and to avoid clogging, the well should be emptied and the cap cleaned between uses. Flux not included.
No. **54.415**

GRIFFITH SOFT SOLDERING FLUX (not shown)
For use with lead-tin and lead-tin bismuth solders which melt under 450° F (232° C).
No. **54.423** 4 oz.



2 BORAX FLUX
Controls oxidation during the melting process. 8 oz. can.
No. **22.820**



3 BORAX
Prepared borax for making flux for soldering jewelry. Dissolves easily when rubbed on borax slate. Comes in 4 oz. cone.
No. **54.252**



4 GRIFFITH BORAX POWDER
Used for making soldering and casting fluxes.
No. **22.822** 16 oz.



5 GRIFFITH BORIC ACID GRANULES
Used as an anti-oxidizer soldering or in making flux.
No. **54.520** 7 oz.
No. **54.521** 16 oz.



6 GRIFFITH BORIC ACID POWDER
Used as an anti-oxidizer soldering or in making flux.
No. **54.522** 7 oz.
No. **54.523** 16 oz.



7 TIX ANTI-FLUX®
Prevents solder from flowing to unwanted areas. Brushes on easily.
1/2 oz. bottle.
No. **54.462**

1 **TIX SOLDER**
Hardest soft solder on earth. Melts at 275°F (135°C) and has a holding power of 4300 PSI. Adheres to all ordinary solderable materials and works with gun, iron, torch or soldering machine. Stays white and does not tarnish. Comes in 3" sticks, with 20 sticks per package.
No. **54.808**


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2 **TIX FLUX®**
A non-corrosive flux, harmless to hands or clothing. Washes off with water even after drying. Works with any soft solder. 1/2 oz. bottle.
No. **54.460**

3 **VIGOR® CREAMY SILVER BRAZING FLUX**
Spreads quickly and wets the surface completely so alloys flow better. Protects from oxidation while heating and retards discoloration of brazed area. Working temperature range is 1100°- 1350°F (593°- 732°C). Excess flux can be removed with hot water. No waste or loss due to drying, simply add water until creamy.
No. **54.0340** 2 oz.
No. **54.0341** 8 oz.



2



3

4 **GRIFFITH PRIP'S FLUX**
A liquid hard soldering flux that prevents the formation of firecoat and firescale during soldering.
No. **54.501** 4 oz.
No. **54.502** 8 oz.
No. **54.503** 16 oz.
No. **54.505** 1 gal.



4

5 **GRIFFITH ANTI-FLUX**
Effectively prohibits the flow of solder to unwanted areas.
No. **54.464** 4 oz.



5
HAZARDOUS

6 **PRO-CRAFT® YELLOW OCHRE**
When this powder is mixed with water or alcohol, it can be used to prevent the flow of solder to unwanted areas, such as a previously soldered joint or the moving parts of a catch. 1/2 lb. box.
No. **54.470**



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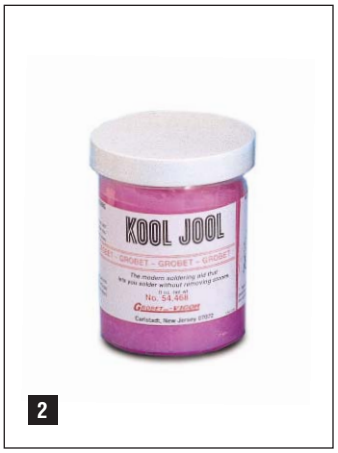
7 **GRIFFITH'S YELLOW OCHRE**
Just add small amounts of Griffith's Yellow Ochre with alcohol to area needed to be soldered.
No. **54.471** 2 oz. powder



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1 STOP FLOW ANTI-FLUX
Prevents solder from flowing to unwanted areas.
No. **54.472** ¼ oz.

2 KOOL-JOOL
Protects jewels from heat while soldering. No need to remove jewels from settings (except opals). If flame is used for soldering, the jewel will stay cool. Rinses off in plain water. 8 oz. jar.
No. **54.468**



3



4

3 VIGOR® HEAT SHIELD PROTECTIVE PASTE
Protects components under direct 5000°F (2760°C) flame. Not necessary to remove stone before soldering. Prevents oxidation and is odorless and non-toxic. Good for dozens of applications. Washes off with water.
No. **54.448** 1 lb. jar
No. **54.449** 2 oz. tube

4 THERMA-GUARD PROTECTIVE BLANKET
Made of Silquar, a unique ceramic material which forms a protective blanket around any stone or jewel while adjacent metal parts are being soldered or heated. Resists temperatures up to 2000°F (1093°C), Odorless, non-toxic and easy to use. Comes in 2 oz. jar, good for hundreds of jobs, because it's reusable.
No. **54.469**



5

5 STAY-BRITE SOLDER
High strength silver-bearing solder melts and flows at 430°F (221°C). Provides strength without distortion caused by high temperature brazing. Kit contains 1/2 oz. of solder and 1/2 oz. of flux.
No. **54.452** Kit
No. **54.456** 1 lb. spool of 3/64" Stay-Brite solder


6



7

6 LEAD FREE SOLDER
Excellent for use in any soft solder applications. Does not contain any lead, antimony or zinc. Free flowing and produces a bright white finish.
No. **54.811**

7 STAY-CLEAN FLUX
No. **54.453** 4 oz.
No. **54.454** 16 oz.
No. **54.455** 32 oz.

Call for current pricing on solder.

1 SOLDER PASTE with FLUX

Ingenious dispenser contains solder with flux. The proper amount of solder and flux can be placed at the exact point required, eliminating waste and improving the appearance of the joint. Solder contains no cadmium.

No.	Type	Quantity	Melting Point °F	Melting Point °C
54.830	Easy - silver	½ oz.	1240	671
54.831	Medium - silver	½ oz.	1275	691
54.832	Hard - silver	½ oz.	1365	741
54.833	Yellow gold, 14K	1 dwt.	1265	685
54.834	White gold, 14K	1 dwt.	1160	627



2 LOW TEMPERATURE SOLDER

Excellent for use at low temperature of 430°F (221°C). Contains no lead or corrosive materials. Easy to use, paste dispenser contains the proper amount of solder and flux. Five times as strong as ordinary solder and will not tarnish.

No. **54.801**



3 SOLDER CUTTER

Solder sheets can be easily cut in clipped pieces. Sheets are placed on bottom jaw and snipped. Pieces drop out cleanly. These can also be used to cut wire solder by inserting the wire into the side hole. Available in two sizes; 1.5 mm and 3 mm.

No. **53.811** 3 mm
No. **53.812** 1.5 mm



4 "N"-BRAND GOLD SOLDERS

Superior color, ductility and strength. All are easy flowing. Match karat to the work being soldered. Packed in envelopes of 1 dwt. each.

For Karat	White	Melt Point °F	Melt Point °C	Yellow	Melt Point °F	Melt Point °C
Low K	**54.606**	1390	754	**54.626**	1325	718
8K	—	—	—	**54.638**	1385	752
10K	**54.610**	1410	766	**54.640**	1320	716
12K	—	—	—	**54.642**	1450	788
14K	**54.614**	1430	777	**54.644**	1315	713
18K	—	1375	747	**54.648**	1450	788





5 CLIPPED SOLDERS

Gold

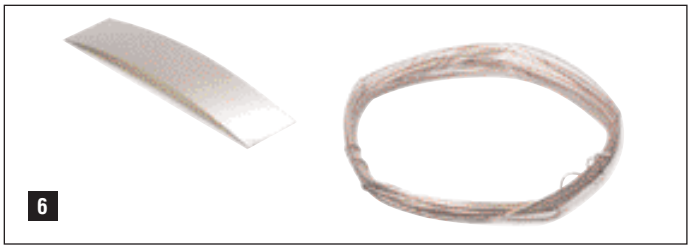
In .04" square flat pieces, ready to use. Matches karat color exactly.

No. **54.652** One dwt. (1.55 g) for 10K yellow
No. **54.653** One dwt. (1.55 g) for 14K yellow
No. **54.654** Two dwt. (3.1 g) for 14K yellow

Silver

.04" square flat pieces, Easy Flo grade. Ready to use. 1/4 oz. in bottle.

No. **54.750**



6 SILVER SOLDERS

Available in sheets or wire coils.

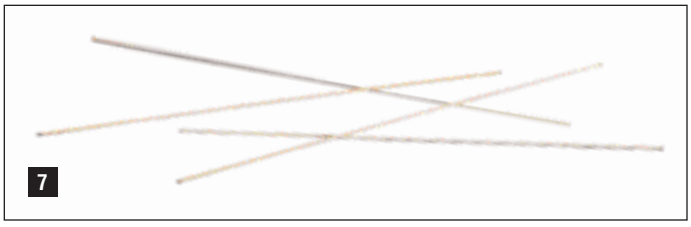
Grade	Melting Point °F	Melting Point °C	Sheet 1/4 oz	Wire .031" 1 oz (28 g)
Easy Flo*	1325	718	**54.700**	**54.720**
Easy	1240	671	**54.701**	**54.722**
Medium	1275	691	**54.702**	**54.732**
Hard	1365	741	**54.703**	**54.742**

**Contains cadmium.*

10K GOLD WIRE SOLDER (not shown)

One dwt. for 10K yellow .02" diameter.

No. **54.660**



7 SILVER ALLOY SOLDERING RODS

Ideal for soldering non-precious and gold filled jewelry. Silver alloy rods have flux core eliminating the need for additional flux or cleaning agents. 6" long x 1/32" diameter solder rods provide a strong, permanent bond with a gold-tone finish. Each rod contains .129 dwt. of silver. Melting temperature 1275° F (691° C).

No. **54.755** Pack of 4 rods
No. **54.756** Pack of 12 rods

GOLD TESTING



1 PROFESSIONAL GOLD TESTER - Model G-KL-18
Six to eight karat range, state-of-the-art electronic gold testing technology from Tri-Electronics. Technological breakthrough that allows for the measurement of low to high karat gold products, assuring the buyer of gold content in the most critical gold alloys. Measures 12" x 10" x 3" (305 x 254 x 76 mm). UL listed. Three year warranty. Also operates using two 9 volt batteries (not included).

No. **56.762** 110 volt model
No. **56.762X** 220 volt model
No. **56.766** Replacement gel tube
No. **56.769** Pro cleaning solution
No. **56.784** Adapter
No. **56.783** Replacement sensor
No. **56.787** Lead wires
No. **56.791** Test plate



2 PROFESSIONAL GOLD TESTER - Model GXL-24 PRO
Six to twenty four karat range, state-of-the-art electronic gold testing technology from Tri-Electronics. Technological breakthrough that allows for the measurement of low to high karat gold products, assuring the buyer of gold content in the most critical gold alloys. Measures 12" x 10" x 3" (305 x 254 x 76 mm). UL listed. Three year warranty. Also operates using two 9 volt batteries (not included).

No. **56.763** 110 volt model
No. **56.763X** 220 volt model
No. **56.767** Replacement gel tube
No. **56.769** Pro cleaning solution
No. **56.790** Replacement sensor
No. **56.787** Lead wires
No. **56.791** Test plate



3 GOLD TESTER - Model GT-3000
The most accurate, low-cost tester available, backed by dependable service and built by Tri-Electronics, the inventor of electronic gold testers. Measures white, yellow, pink and green gold in a full range of values from 6 to 18 karat. No dangerous chemicals or mixing of fluids, so it's ecologically safe. Measures 12" x 9" x 1¾" (305 x 229 x 44 mm). UL listed. Three year warranty. Also operates using two 9 volt batteries (not included).

No. **56.782** 110 volt unit
No. **56.766** Replacement gel tube
No. **56.769** Pro cleaning solution
No. **56.783** Replacement sensor
No. **56.787** Lead wires
No. **56.791** Test plate

1 GOLD TESTER - Model GT-4000

Accurately measures white, yellow, pink and green gold, along with platinum, in a full range to 24 karat. Accurate to the nearest karat in the 6 to 18 karat range, plus 20, 22 and 24 karat readings. Ecologically safe with no dangerous acids or messy, harmful chemicals. Measures 12" x 9" x 1 3/4" (305 x 229 x 44 mm). UL listed. Three year warranty. Also operates using two 9 volt batteries (not included).

No. **56.785** 110 volt unit
No. **56.767** Replacement gel tube
No. **56.769** Pro cleaning solution
No. **56.783** Replacement sensor
No. **56.787** Lead wires



1

2 GOLD STAR-18 GOLD TESTER

GS-18 is a computerized instrument for quick testing and determination of the following gold values: 8, 10, 14 & 18 karats of yellow/red, green and white gold. It tests and determines gold plated & gold filled materials and base metals then defines them as "NOT GOLD". GS-18 also tests and identifies objects made of PLATINUM.

No. **56.770** Gold tester
No. **56.771** Replacement gel tube



2

3 GOLD STAR-24 GOLD TESTER

State-of-the-art computerized instrument utilizes a patented electro-chemical method with an LCD display to quickly determine the gold karat value from 5 to 24 karat for yellow, white, red and green gold. Ideal for distinguishing the difference between gold-plated, gold-filled and solid gold as well as identifying objects made of platinum. Displays in both American and European standards. Comes in a protective carrying case and includes test liquid. One year warranty. Operates on 9 volt battery included, 110/220 adapter optional.

No. **56.0240** Gold tester
No. **56.0241** 30 mg replacement test liquid



3



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4



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6



7

DIAMOND/MOISSANITE TESTING

1 MOISSANITE LOCATOR

Allows quickly and reliably determine if a stone is a Moissanite instead of diamond. Utilizes same Moissanite detection technology as a Diamond Wizard. The built in extra brifgt LED light can be used as apractical tool for Diamond grading. Supplied with three “AAA” batteries.
No. **56.777**

2 DIAMOND BEAM DIRECT

A unique instrument which separates real diamonds from imitation diamonds. Tests diamonds as small as .01 carat. Power supplied by AC/DC adapter or “AAA” batteries. Metal holder for testing loose stones included.
No. **56.779**

3 PRO-CRAFT® DIAMOND BEAM I

The DB-100 diamond tester by Tri-Electronics is our most cost-effective tester. With two-sided display and more than double the operation time under battery power. Three year factory warranty. Guaranteed low cost, timely repairs after warranty. UL Listed.
No. **56.780** 110 volt model
No. **56.780X** 220 volt model
No. **56.788** 220 volt adapter
No. **56.789** 110 volt adapter

4 DIAMOND JET

The DB-200 professional diamond tester by Tri-Electronics has less than a six second warm-up time and less than a two second recovery time. Positive identification of simulants and metal and improved sensitivity on small stones and white sapphire. With automatic shut-off. Full six year factory warranty. Guaranteed low cost, timely repairs after warranty. UL Listed.
No. **56.781** 110 volt model
No. **56.781X** 220 volt model

5 PRESIDIUM GEM TESTER/COLOUR STONE

The design of the Presidium Gem Tester is based upon the use of heat conductivity to distinguish diamond stimulants from diamonds. It incorporates a sophisticated thermoelectric probe and a thermometer which ensures reliable readings. The Presidium Gem Tester can be used on mounted or unmounted stones, which can be as small as 0.02 carat. Includes an AC adapter, a soft vinyl pouch, and a hard plastic case.
No. **56.720**

6 PRESIDIUM DUOTESTER

Portable Diamond Testing with thermal conductivity and reflectivity measuring in the same instrument. Double your confidence in testing for diamonds against all known simulants, includind Synthetic Moissanite. Operates on alkaline (AAA) batteries (not included) or AC adapter.
No. **56.721**

7 PRESIDIUM DIAMONDMATE-A

The Presidium Diamond Mate-A utilizes proven thermal conductivity testing method to instantly verify the authenticity of diamonds. The test results are indicated by visual light and audible beeps. Operates on alkaline (AAA) batteries (not included) or AC adapter 120 volts (not included). One-year factory warranty.

- No waiting between tests
- Pocket size
- Low-battery indicator
- Carrying case
- Metal detector-intermittent beep
- Measured diamond-continuous beep
- Metal detector-intermittent beep
- Low battery consumption

No. **56.722**

1 PRESIDIUM DIAMONDMATE-C

A pocket-size, thermal conductivity method of verifying the authenticity of diamonds. Operates on a rechargeable battery or AC adapter/charger. Complete with metal detector, carrying case and three-piece Nicad battery pack.

No. **56.723**



1

2 PRESIDIUM MOISSANITE TESTER II

Presidium Moissanite Tester II is a second generation moissanite tester developed using the technology of electrical conductivity. Operates on AAA batteries (not included).

Features:

- Pocket size
- Carrying Case
- Low-Battery consumption
- Continuous beep when measuring moissanite

No. **56.724**



2

3 PRESIDIUM MULTI TESTER

The Presidium Multi-Tester utilizes the combined principles of thermal and electrical conductivity from Presidium's patented technology. The measuring probes together with the electronics circuitries are designed to pick up and segrate data collected from the stones via a customized micro-controller. Within a split second, the test result will be displayed.

Features:

- Surface mount technology
- Retractable tip to ensure the accuracy and consistent pressure between the measuring probe and gemstone
- No waiting time between tests
- Clear LED display for diamond, moissanite, stimulants and metal
- Built-in metal detector
- Low battery indicator
- Automatic power down

Options:

- AC Adapter (120v or 230v)
- AAA Batteries

No. **56.725**



3

4 A-SOURCE DIAMOND TESTER

This economic and reliable diamond tester utilzes thermal conductvity to instantly verify diamonds. The results are indicated by visual lights as well as audible beeps. Operatres on AAA batteries (not included) or AC adaptors.

- Pocket size
- No waiting between tests
- Carrying Case
- Low-Battery indicator
- Measured diamond continuous beep
- Great investment

No. **56.728**



4

5 A-SOURCE MULTI-TESTER

The A-Source multi tester uses thermal and electrical conductivity to test stones. The measuring probes together with the electronics are designed to pick up data collected from the stones through a micro-controller. Within a split second, test results will be displayed. Operators on AAA batteries (not included) or AC adapters.

- No waiting between tests
- Surface mount technology
- Clear LED display for Diamond, Moissanite and Simulantes
- Low battery indicator
- Automatic power down

No. **56.729**
No. **56.730** AC adaptor



5



1

1 METAL TEST SET

For appraisal and testing of gold, silver, platinum, brass, nickel and German silver. Wood case contains three acid bottles with ground glass stoppers and applicators, test stone, set of gold testing needles. Acid must be purchased locally.

No. **56.700** Set includes nine gold testing needles
No. **56.0806** Set includes five gold testing needles
No. **56.748** Replacement wood case

Test Needles for Gold

Used to determine karat content of gold. Needles and item to be tested are rubbed on test stone and treated with acid to determine match.

No. **56.705** Set of nine needles for 4, 6, 8, 10, 12, 14, 16, 18 and 20 karat gold
No. **56.707** Set of five needles for 8, 10, 12, 14 and 18 karat gold

Test Needles for Silver and Gold

Needles and item to be tested are rubbed on test stones and treated with acid to determine match.

No. **56.706** Set of four needles for 10, 14 and 18 karat gold plus silver

Test Stones

A dark stone on which needle and item to be tested are rubbed. Use with test acid solutions sold below.

No. **56.710** Measures 1⅞" x 1½" x ¼" (48 x 38 x 6 mm)



2

2 STANDARD METAL TEST KIT

For appraisal and testing gold, silver, platinum, brass, nickel and German silver. Wood case contains three acid bottles with ground glass stoppers/applicators, seven-pronged test plate. Test plate surfaces permit identification of 8, 10, 12, 14, 18 and 22 karat gold and fine silver. Acid required must be purchased locally.

No. **56.740** Test kit
No. **56.742** Replacement test plate
No. **56.744** Replacement stone
No. **56.748** Replacement wood case



3

3 GOLD and SILVER TESTING ACID SOLUTIONS

Testing for gold and silver made simple. Accurate results from these easy-to-use plastic bottles with secure, color-coded caps. Use with test stones sold above.

No. **56.800** For 10 K gold (yellow cap)
No. **56.801** For 14 K gold (green cap)
No. **56.802** For 18 K gold (white cap)
No. **56.803** For 22 K gold (blue cap)
No. **56.804** For silver (red cap)

"THE LITTLE TORCH"

Miniature welding torch maneuvers easily in areas impossible to reach with conventional torches. Produces a perfectly controlled, stable flame hot enough to melt metals, glass and ceramics with thread thin flames up to 6300°F (3482°C). Color-coded oxygen and fuel gas lines and valves help prevent errors. Uses acetylene, propane and propylene based fuels. Welds an unlimited range of materials and brazes and solders the tiniest elements with ease. All torches supplied with 6' (182 cm) hoses.

"Little Torch" Fuel Temperatures:
Acetylene 5900° F - 6300°F (3260°C - 3482°C)
Butane 4995° F (2757°C)
MAPP 5300° F (2926°C)
Hydrogen 4850° F (2676°C)
Natural Gas 4600° F (2537°C)
Propane 4780° F (2637°C)


1

1 FIVE TIP KITS in BOX
Include torch, hoses, curved tips and instructions.
Packaged in display box. Fitting sizes: US - 9/16, British - 3/8
No. **14.002** For acetylene, with tips 2-6
No. **14.00202** For propane or natural gas with tips 3-7
No. **14.00203** For acetylene, with tips 2-6 British fittings
No. **14.00204** For acetylene, with tips 2-6 European fittings
No. **14.00205** For acetylene, with tips 2-6 Australian fittings



2

2 ONE TIP KIT for DISPOSABLE TANKS on CARD
Includes torch, hoses, pre-set oxygen regulator, pre-set propane regulator, size 4 curved tip, tank rest and instructions. Packaged on display card.
No. **14.008**



3

3 PORTABLE OUTFIT
Includes "Little Torch" kit No. 14.008, along with disposable oxygen and propane tanks. Shipping weight 5 lbs. 10 oz.
No. **14.007**

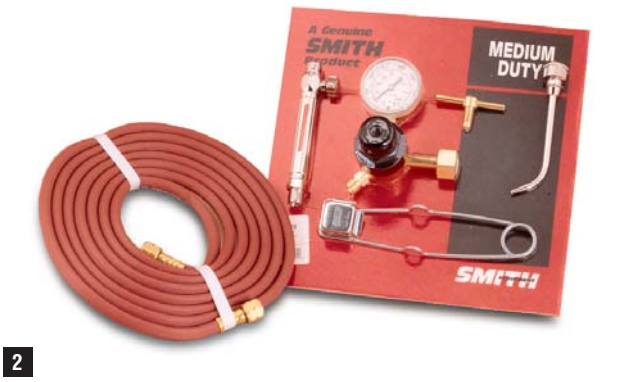


1

1 PREST-O-PAK ACETYLENE TORCH OUTFIT

Permits mixing of acetylene with air at the torch head, so no other source of air is necessary. Four interchangeable tips are supplied, producing a range of flame sizes from small to large, making it suitable for jewelry soldering (except very small work) and melting. The acetylene is stored in tanks as a liquid and only becomes a gas when valve is opened. The four tip outfit (No. 14.235) includes: torch handle, four tips, regulator for "B" tank and a 6' (183 cm) hose with fittings. The silversmith outfit (No. 14.236) includes: torch handle, light flame tip, regulator for "B" tank, torch lighter and a 6' hose with fittings. Uses "B" tank. Shipping weight 5 lb.

No. **14.235** Four tip outfit
No. **14.236** Silversmith outfit
No. **14.238** Replacement tip #1A
No. **14.239** Replacement tip #3
No. **14.240** Replacement tip #4
No. **14.241** Replacement tip #5
No. **14.244** Replacement regulator
No. **14.245** Replacement 6' hose



2

2 ACETYLENE TORCH KIT

Fast, concentrated flame with temperatures of 4800°F (2649°C). No oxygen tank involved. Special tip design gives the right mixture of atmospheric air and fuel gas. Tips feature slip-in design and seat perfectly by hand. Easily rotated to any position while flame is lit. Solid brass torch body has trouble-free needle valve. Pre-set regulator gives correct pressure and volume of fuel gas. With super fine tip (#50 drill size) and 6' hose. Uses "B" tank.

No. **14.0370**

Tips for Acetylene Torch

No. **14.0371** ⅜" Flame Opening
No. **14.0372** ¼" Flame Opening
No. **14.0373** 3⁄16" Flame Opening
No. **14.0374** .147" Flame Opening
No. **14.0375** .095" Flame Opening
No. **14.0376** .066" Flame Opening
No. **14.0379** 12' Replacement hose



3

3 ACETYLENE CADDY OUTFIT

Includes torch, hoses, five tips, empty oxygen tank and regulator, empty fuel gas tank and regulator and handy plastic carrying caddy. Shipping weight 31 lbs.

No. **14.005** Caddy outfit
No. **14.01006** Replacement plastic caddy



4

4 CADDY OUTFIT for DISPOSABLE TANKS

Lightweight portable outfit works with those disposable fuel tanks allowed for use indoors. Works with propane or Mapp® tanks. Kit includes torch, hoses, empty oxygen tank regulators with safety check valves, carrying caddy and 5 tips, sizes 3 - 7. Shipping weight 24 lbs.

No. **14.00901**

HOKE®-JEWEL TORCHES - THE INDUSTRY STANDARD

1 ORIGINAL HOKE®-JEWEL TORCHES

For quality, insist on the HOKE®-JEWEL torch, most widely used by professional jewelers for daily work. Ideal for precision metal melting, soldering, brazing and welding. Fingertip control of valves and selection of tips allow user to select type of flame required, from large brush to pinpoint. Valves work easily and surely, with precise mixing of gas and never any leakage. All parts are machined from solid brass stock and seamless brass tubing and are completely nickel-plated. Overall length is 9" (229 mm). Inlets use standard 1/4" hose.

No.	Gas System	Pilot	Tips
14.120	Oxygen & Acetylene	No	4
14.121	Oxygen & Artificial Gas	Yes	4
14.122	Oxygen & Natural Gas	No	3
14.123	Oxygen & Butane or Propane	No	4

NOTE: *Pilot light on No. 14.121 allows continuous flow of gas for quick ignition. This is intentional and should not be misunderstood as a faulty leak.*

Extra Tips for Standard Model HOKE®-JEWEL Torches

	Flame Size			
Gas System	Pinpoint	Pencil	Small	Large Brush
Oxygen & Artificial Gas	**14.130**	**14.131**	**14.132**	**14.133**
Oxygen & Acetylene	**14.136**	**14.137**	**14.138**	**14.139**
Oxygen & Natural Gas	—	**14.142**	**14.143**	**14.144**

HOKE®-JEWEL TORCH and ADAPTER TIP KIT (not shown)

Saves you money!

We have combined our No. 14.122 HOKE® torch with the No. 14.060 adapter tip kit.
No. **14.124**

2 SET of SIX ADAPTER TIPS and ADAPTER

Expand your HOKE®-JEWEL torch's capabilities with this precision adapter set. Ideal for all soldering, welding and melting jobs. Even fine intricate soldering, from the thinnest chains, rings, pendants and bangles; to large silver hollowware can be done quickly and easily. With these tips you get a non-oxidizing flame, so less pickling is equired and jewelry comes out cleaner. Changing tips takes only a few seconds to speed up your production (HOKE®-JEWEL torch must be purchased separately).
No. **14.060**

Note: *The adapter tips are not recommended for use with acetylene.*

3 ADAPTER

Without tips it can be used to melt small amounts of silver, gold and platinum.
No. **14.061**

4 TIP with BLUE DOT

Can be used for large areas of soldering, including hollowware work in gold and silver.
No. **14.062**

5 TIP with YELLOW DOT

Produces a soft, direct flame, and is used much the same way as the #2 and #3 of a standard torch tip.
No. **14.063**

6 SHORT TIP with RED DOT

Gives the equivalent of a standard #1 torch tip, but is stronger and has a smaller flame.
No. **14.064**

7 LONGER TIP with RED DOT

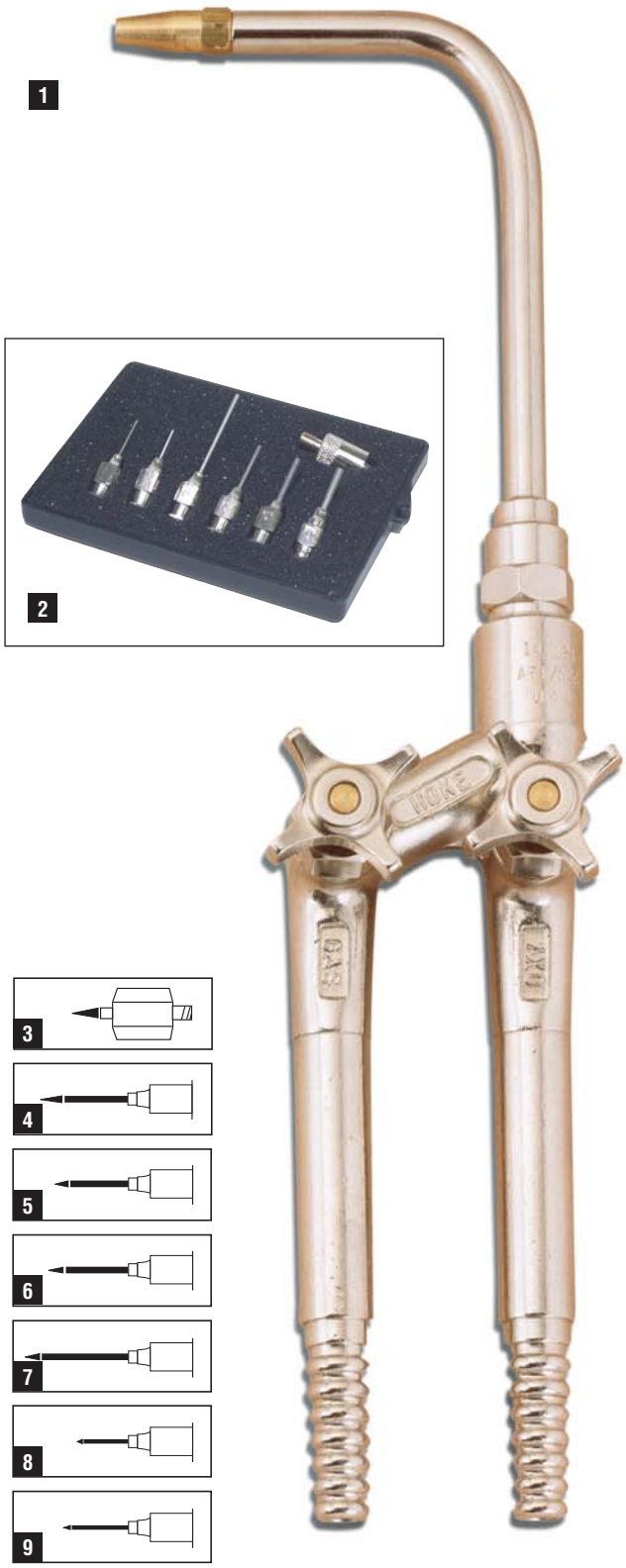
Has a micro point flame and is also used as a projection tip, allowing use in areas not ordinarily accessible with a standard torch.
No. **14.065**

8 SHORT TIP with GREEN DOT

Produces a mini micro flame.
No. **14.066**

9 LARGE TIP with GREEN DOT

Produces a super micro flame, which permits the most complex type of soldering.
No. **14.067**

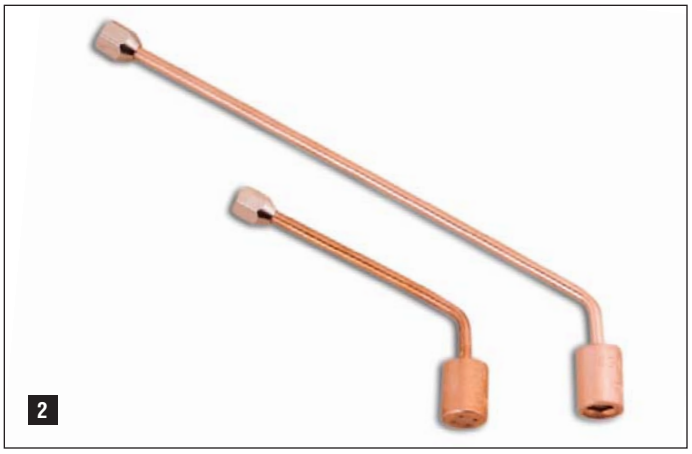




1 "LITTLE TORCH" EXTRA TIPS

Curved Tips No.	Straight Tips No.	Twin Tips No.	Size	Orifice (in)	Orifice (mm)
14.012	**14.0121**	—	2*	.006"	.15
14.013	**14.0131**	**14.023**	3	.011"	.28
14.014	**14.0141**	**14.024**	4	.020"	.51
14.015	**14.0151**	**14.025**	5	.029"	.74
14.016	**14.0161**	**14.026**	6	.037"	.94
14.01602	**14.01603**	—	7	.047"	1.19

**Tip size 2 is for use with oxygen and acetylene or oxygen and hydrogen only.*



2 HEATING/MELTING TIPS

Multiple orifice design gives you maximum melting power and increased versatility for melting platinum, gold, silver or bronze in a crucible.

No. **14.030** Use with oxygen and acetylene. Supplies 3000 BTU's for temperatures up to 6000° F (3315° C). 6" long and melts up to 3 oz. of metal.

No. **14.031** Use with propane or natural gas at temperatures up to 5200° F (2871° C). Propane supplies 5000 BTU's, natural gas 2420 BTU's. 6" long and melts up to 5 oz. of metal.



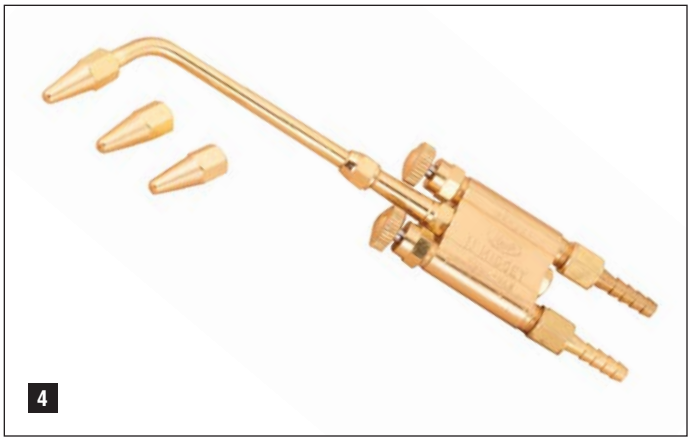
3 HI-HEAT TORCH

The mixing chamber of the Model D blowpipe is designed for use with natural, artificial or bottled gas, but not for acetylene. Produces an intense, perfectly formed flame. Uses 1/4" hose.

No.	Gas System	Tips Large	Tips Small	Tips Oxygen
14.150	Natural, artificial & bottled gas with air	1	-	-
14.151	Natural, artificial & bottled gas with air	1	1	-
14.152	Natural, artificial & bottled gas w/air or oxygen	1	1	1

Extra Tips for Hi-Heat Torch

No. **14.155** Large, for gas and air
No. **14.156** Small, for gas and air
No. **14.157** For oxygen and gas



4 MIDGET TORCH

Small size and light weight make this torch ideal for jewelry welding and brazing, as well as other small jobs. Can be used with oxygen and acetylene, hydrogen, natural gas, propane or butane. Control valves are conveniently positioned and hold flame adjustment precisely. Comes complete with three tips and slip-on hose connectors for 3/16" hose. Overall length 6 3/4".

No. **14.160** Midget torch
No. **14.161** Replacement tip #1/0 (Small)
No. **14.162** Replacement tip #1 (Medium)
No. **14.163** Replacement tip #2 (Large)

1 SMITH EQUIPMENT BRAND REGULATORS and INLET CONNECTIONS

Designed for use with the "Little Torch", but can be used with any torch. Easy to read. UL listed.

Gas	Stage	Fits Cylinder
Oxygen	**14.035**	Fits all industrial
Acetylene	**14.036**	Fits type B and autolite
Acetylene	**14.037**	Fits commercial acetylene
Hydrogen	**14.038**	Fits hydrogen
Acetylene	**14.039**	Fits MC
Propane	**14.040**	Fits POL
Oxygen	**14.041**	Fits disposable oxygen
Propane	**14.042**	Fits disposable propane


1

2 STARTER SETS with REGULATORS

Each contains a "Little Torch" kit No. 14.002, universal oxygen regulator No. 14.035 and one of the following fuel cylinder regulators.

No. **14.00401** Acetylene type B and autolite cylinder regulator No. 14.036
No. **14.00403** LP, propylene, MAPP, NPG and POL cylinder regulator No. 14.040
No. **14.00405** Acetylene type MC cylinder regulator No. 14.039

Order by set number.


2

3 CHECK VALVES

Used to help prevent dangerous reverse gas flow.

No. **14.179** For fuel gas regulator 9/16" LH
No. **14.180** For oxygen regulator 9/16" RH


3

4 CHECK VALVES/FLASHBACK ARRESTORS

Stops flashback fires by preventing reverse gas flow. With automatic reset between flashes. Solid brass case is durable and easy to install. Fits standard 9/16" "B" connections.

No. **14.0769** For fuel gas line


4

5 HOSE CONNECTIONS

Used on regulators so that standard ID hose can be used.

Right Hand Thread for Oxygen	Left Hand Thread for Fuel Gas	Size
14.198	**14.196**	3/8" - 24 for 3/16" ID
14.195	**14.199**	9/16" - 18 for 3/16" ID
14.178	**14.197**	9/16" - 18 for 1/4" ID


5

6 Y CONNECTORS

For use in multiple torch hook-ups. With shut-off valves.

No. **14.184** Fuel gas 9/16" LH to 9/16" - 18 LH
No. **14.185** Oxygen 9/16" RH to 9/16" - 18 RH


6



1

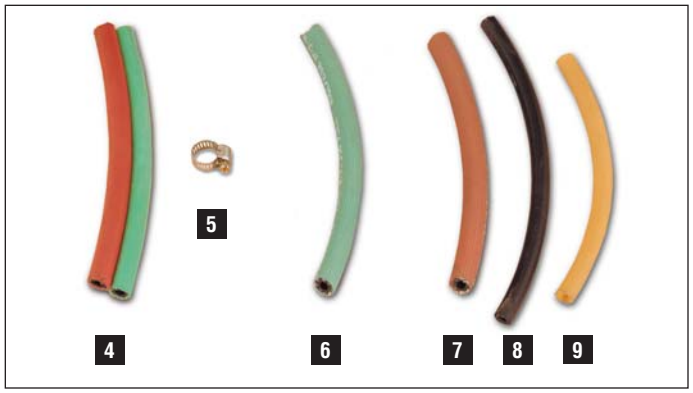

2

1 CYLINDER STAND
Provides a safe, stable base for all 14.1 oz. disposable cylinders. Made of sturdy, high density, lightweight plastic. Cylinder not included.
No. **14.207**

2 WEIGHTED TORCH STAND
A quick and convenient place to rest your torch while working. Stainless steel rod ensures easy placement and removal of the torch without sacrificing safety. Texturized cast-iron base provides strong, balanced support, as well as storage space for your extra tips.
(Torch not included)
No. **14.203**


3

3 MAGNETIC TORCH HOLDER
Versatile, magnetic, "third-hand" holder keeps your torch nearby on your bench. Use it right on the stand when you need both hands free. Heavy metal base keeps the holder safely in place and has seven holes for extra tip storage. (Torch not included)
No. **14.058**


4 5 6 7 8 9

TUBING
For connecting torches, bunsen burners, compressors, etc.
Sold by the foot.

4 No. **14.0736** Reinforced rubber double line (red/green) ¼" ID

5 No. **14.188** Clamp for ¼" ID

6 No. **14.189** Green reinforced oxygen ¼" ID

7 No. **14.190** Red reinforced fuel gas ¼" ID

8 No. **14.186** Black rubber 3⁄16" ID
No. **14.0730** Black rubber ¼" ID

9 No. **14.191** Pure gum 5⁄16" ID


10

10 REINFORCED RUBBER HOSES
3⁄16" diameter x 12½" long twin fuel gas/oxygen hoses.
No. **14.0780** With two 9⁄16" "B" fittings
No. **14.0781** With 3⁄8" "A" and 9⁄16" "B" fittings
No. **14.0379** 12' replacement hose

SET of HOSES for OXYGEN REGULATOR
Pair of 9' hoses with fittings.
No. **14.181**


11

11 HOSES and CONNECTORS
Hose assemblies are supplied with connections. Available in 2 lengths and 2 colors (for fuel gas and oxygen).
No. **14.052** 8' red - fuel gas
No. **14.053** 8' green - oxygen
No. **14.01001** Ferrule Tool
No. **14.01002** Ferrule

1 DISPOSABLE OXYGEN TANK
Shipping weight 2 lbs.
14.224



2 DISPOSABLE PROPANE TANK
Shipping weight 2 lbs.
14.223

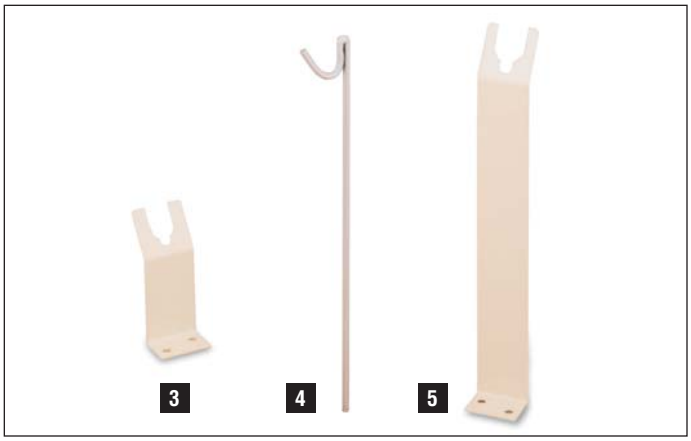


TORCH HOLDERS
Mount anywhere on your bench to accommodate most torches.

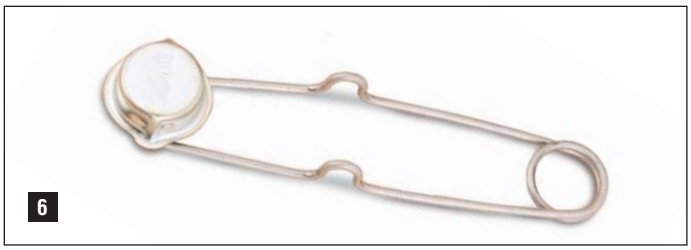
3 No. **14.202** Low bracket-type with wide top

4 No. **14.201** Hook-type

5 No. **14.200** High bracket-type with narrow top



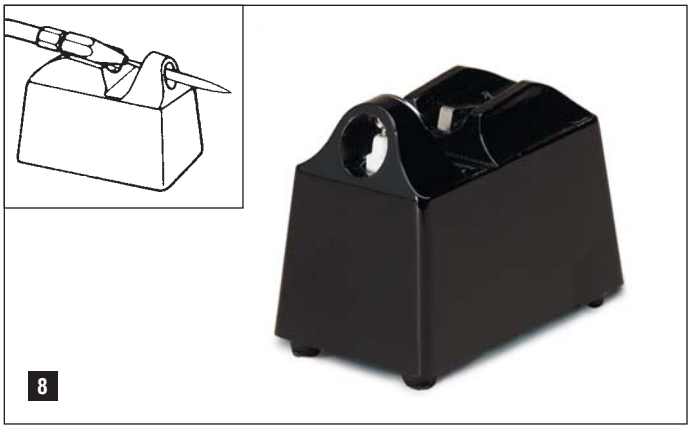
6 TORCH LIGHTER
Makes sparks to light gas without open flame. Comes with one flint.
No. **14.205** Lighter
No. **14.206** Box of 5 flints



7 TORCH WRENCH
Fits all nuts on torches listed in our catalog.
No. **14.164**



8 TORCH-MATE
Electronic torch lighter. Depress activator bar with torch and spark instantly lights torch. Uses 2 AA batteries (not included). Safe and easy to use.
No. **14.204**





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6

1 MICRO TORCH
Electronic, instant ignition torch requires only one hand to ignite and adjust the flame. The easy, thumb-adjustable gas flow lever allows precision flame corrections. Approximate burn time is 90 minutes.
No. **14.212**

2 MICRO TORCH - ECONOMIC
Electronic instant ignition system for push-button start-ups. Both flame and temperature can be adjusted precisely. Provides up to 90 minutes of burn time before refill is required. High temperature flame of 2500° F (1371°C). Uses butane only, not included.
No. **14.214**

3 BUTANE FUEL for MICRO TORCH
Ultra-refined butane fuel specifically geared for use with Micro Torch. Special, non-clogging formula allows extended use. Comes with a single piece, universal tip. 5 1/8 fl. oz. can.
No. **14.220**

BUNSEN BURNERS

4 BUNSEN BURNER
Has needle valve gas control adjustment to provide flame from very hot brush to needle with intense heat. 3" base diameter with 4 1/2" height. Uses 1/4" tubing. For artificial or natural gas.
No. **14.260**

5 BUNSEN BURNER
Nickel-plated with tapered, serrated stems for use with 5/16" (8 mm) ID tubing. 11/16" ignition collar stabilizes flame. With adjustable air intake and 3" base diameter. For use with natural gas.
No. **14.266** 5" high
No. **14.267** 4" high

6 MICRO BUNSEN BURNER
Nickel-plated with tapered, serrated stem for use with 5/16" (8 mm) ID tubing. Lever in base adjusts air intake. 2" base diameter with 2 9/16" height. For use with natural gas.
No. **14.268**

1 BUNSEN BURNER

Has adjustable pilot flame with T-handle valve. An 1 1/16" ignition collar stabilizes flame. Use with 5/16" ID tubing. 3" base diameter with 6" height. For use with natural gas.
No. **14.269**

2 BUNSEN BURNER

Has 2" diameter black enamel base and the height is only 2 5/8". Uses 1/4" tubing. For use with natural gas.
No. **14.271**
No. **14.272** Wax cup

3 HEAVY HEATING FRAME

Used on tripod, charcoal block, or asbestos, so that work can be heated from below while soldering or enameling. Measures 6" x 6".
No. **14.330**

4 GLASS ALCOHOL LAMPS

Nickel-plated brass burner with screw adjustment for wick. Includes 3" wick, 3/16" diameter. (Uses Griffith Alcohols, page 241)

No.	Diameter	Height	Capacity (oz)
14.278	2½"	1"	1½
14.279	2½"	1¾"	3

5 SIMPLICITY BURNERS

Flame can be adjusted by raising or lowering split sleeve. Faceted bowl measures 3 3/16" in diameter and holds 4 oz. of fuel.
(Uses Griffith Alcohols, page 241)
No. **14.285** With ½" diameter wick
No. **14.286** With ¼" diameter wick

6 METAL ALCOHOL LAMPS

Polished chrome-plated brass with screw adjustment for wick. Supplied with 3/16" diameter wick.

No.	Diameter	Height	Capacity (oz)
14.288	3"	1"	3
14.289	3½"	1"	5

Replacement Wicks for Alcohol Lamps

Supplied in packs of one dozen.
No. **14.292** ½" diameter
No. **14.293** 3/16" diameter
No. **14.294** ¼" diameter

7 TRIPODS with MESH SCREEN

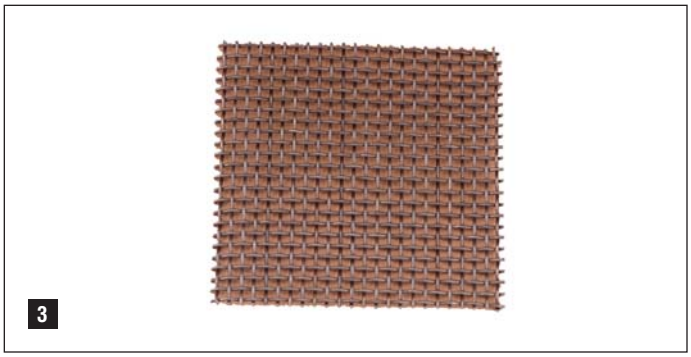
Can be placed over bunsen burner or alcohol lamp, or used with heating frame (No. 14.330) so that work can be heated from below while soldering or enameling. Mesh screen is 6" square.
No. **14.312** Tripod with 6½" legs and mesh screen
No. **14.315** Tripod with 9" legs and mesh screen
No. **14.321** Tripod only, 9" legs
No. **14.325** Replacement mesh screen

8 MICRO-BURNER

This convenient new burner runs up to 2 hours on butane (sold separately). The flame height is adjustable and there is no messy wick to replace. Comes with table stand; so you can use it anywhere.
3 1/2" High x 5" Diameter.
No. **14.280** Micro burner with stand
No. **14.220** Butane (shown on page 333)


1


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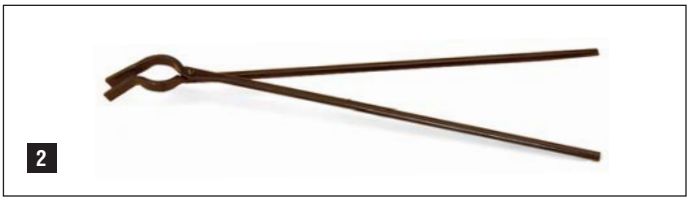

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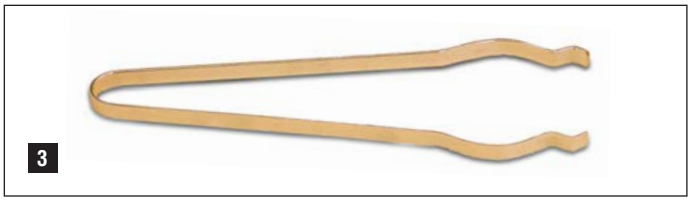

8



1 BENT CRUCIBLE TONGS
For holding crucibles as well as picking up hot objects.
19" (483 mm) length.
No. **57.066**



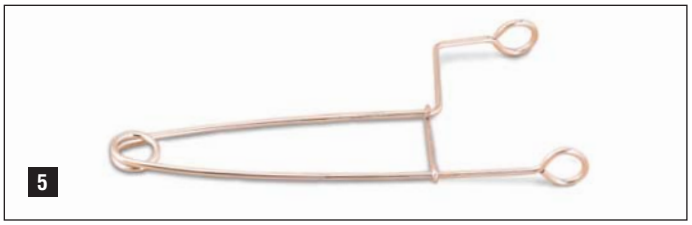
2 CRUCIBLE and FLASK TONGS
For picking up crucibles and 1 1/2" (38 mm) diameter flasks.
19" (483 mm) length.
No. **57.080**



3 FLASK TONGS
For lifting small and large flasks to and from oven.
15" (381 mm) length.
No. **57.068**



4 DRAW TONGS
Serrated jaws for pulling wire. Made of forged steel with ergonomic design.
No. **57.056** 8" (203 mm) length
No. **57.058** 10" (254 mm) length



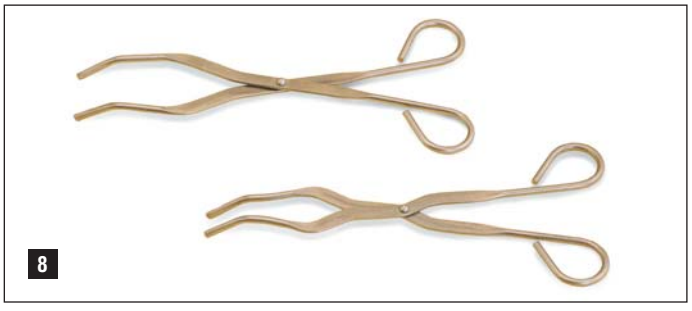
5 BURNO CRUCIBLE TONGS
10 1/2" (267 mm) length.
No. **57.060**



6 COPPER TONGS with OFFSET POINTS
Suitable for pickling and acid solutions. 8 1/2" (216 mm) length.
No. **57.054**

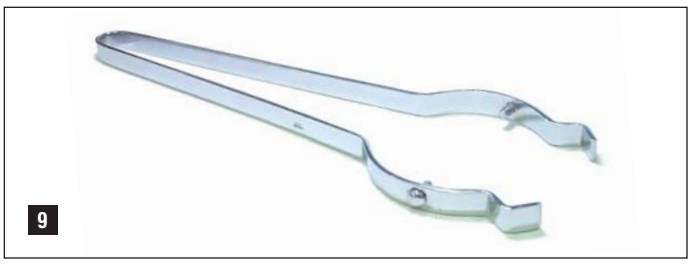


7 COPPER TONGS with CURVED POINTS
Suitable for pickling and acid solutions. 9" (229 mm) length.
No. **57.052**



8 GROBET USA™ CRUCIBLE and FLASK TONGS
All-purpose laboratory and industrial tongs for holding, manipulating and pouring, as well as for picking up hot objects. With serrated points.
9" (229 mm) length.
No. **57.085** Stainless steel with long neck
No. **57.098** Stainless steel with short neck

9 PERFORATED FLASK TONGS with PINS
Stainless steel, specifically designed with pins to engage the holes in perforated casting flasks for safe, secure handling. Not for use with non-perforated flasks. Length of 14 7/8" (378 mm)
No. **57.069**





TWEEZERS

For handling miniature and mirco-miniature parts and assemblies, tweezers are as essential as the fingers on your hand. There are definite differences in their patterns. Point finish and the materials used make some numbers more suitable for a particular job than others.

1 *Peer-Vigor* - Made in Switzerland for Grobet USA™.

2 *Dumont* - Finest Quality - Manufactured at the Dumont factory, in Switzerland.

3 *Dumont II* - Excellent Quality - Manufactured at the Dumont factory, in Switzerland.

4 *Grobet USA™* - Great value - Made Exclusively for Grobet.

How To Select Tweezers

To help in making the proper selection, the information in the charts on this page can be used as a general guide, while additional details will be found along with the illustrations for each stock number.

DUMONT STYLE TWEEZERS

Precision watchmakers' tweezers. These tweezers are forged from the finest grades of metal and machined to a smooth satin finish. The **Titanium** tweezers are 40% lighter than steel. They are 60% stronger, are resistant to high temperatures, maintain their sharp tips without resharpening and, because they are light, cause less hand fatigue. Extensive hand operations are used in shaping, adjusting and finishing the points on the Dumont style tweezers, making them the only ones recommended for work under a microscope. Use the chart below for quick comparisons.

Points		Shanks		Length		
Tips	Finish	Profile	Edges	(in)	(mm)	Patterns
Needle Sharp	Micro-Honed	Indented	Beveled	4½"	114	4, 5, 5A
Very Sharp	Fine-Honed	Tapered	Beveled	4¾"	120	3
Very Sharp	Fine-Honed	Tapered	Beveled	4½"	114	3C
Very Sharp	Fine-Honed	Tapered	Flat	4½"	114	0
Very Sharp	Fine-Honed	Tapered	Flat	3½"	89	OC
Sharp	Honed	Curved	Beveled	4½"	114	7, 7A, 7B
Sharp	Honed	Tapered	Beveled	4¾"	120	1, 11N
Sharp	Honed	Hooked	Flat	4½"	114	6
Blunt	Honed	Indented	Flat	4¾"	120	2
Blunt	Honed	Tapered	Flat	4¾"	120	OO
Rounded	Honed	Tapered	Flat	3½"	89	H
Rounded	Honed	Indented	Flat	4¾"	120	2A
Beveled	Honed	Straight	Flat	4¼"	108	8
Cutting	Honed	End Nipper		4¼"	108	15
Cutting	Honed	Oblique Nipper		4½"	114	15A, 15AP

BOLEY STYLE TWEEZERS

Excellent tweezers, with less extensive hand craftsmanship than is devoted to the Dumont style. The matched points have received finishing at the tips making them suitable for sorting and assembly operations of small parts and components under low power magnification.

DIAMOND TWEEZERS

Tweezers with finely serrated jaws that grip and hold even the most delicate objects securely without damage. Used extensively for handling diamonds.

SPECIAL PURPOSE TWEEZERS

Miscellaneous tweezers such as jewel holders, three-prong holders, pocket tweezers, vacuum pickup, etc.

Metals Used

The chart below shows general property relationships among the various metals used in the manufacturing of tweezers. In addition, note that the points of the harder metals will wear longer and are less subject to bending. The softer metals will not scratch delicate parts and usually have additional desirable properties such as being non-magnetic, etc.

Metal	Hardness	Non-Magnetic	Corrosion or Acid Resistance
Carbon Steel	Very hard	No	Poor
Stainless Steel	Hard	No	Satisfactory
Non-Mag Stainless	Soft	Yes	Good
German Silver	Very soft	Yes	Fair
Brass	Very soft	Yes	Fair
Titanium	Hard	Yes	Good
Carpenter 20	Medium	Yes	Excellent
Nickel-Plated Steel	Very hard	No	Satisfactory
Chrome Plated Steel	Very hard	No	Satisfactory



PATTERNS 1 and 11N

For general use, assembly, inspection, sorting. Tweezers feature tapered shanks with beveled edges, and sharp, plain-finished points. Pattern 11N is made of non-magnetic German silver and is the same length as pattern 1. Overall length 4 3/4" (121 mm).

Metal	Dumont II	Peer-Vigor	Grobet USA	Dumont
Pattern 1				
Carbon Steel	—	**57.400**	—	**57.200**
Stainless Steel	**57.249**	**57.401**	**57.801**	**57.201**
Anti-Acid/Mag SS	**57.516**	**57.402**	**57.0651**	**57.202**
Titanium	—	**57.0801**	—	—
Pattern 11N				
German Silver	**57.0111**	**57.403**	—	—



PATTERN 2

General use tweezers with sturdier points slightly wider and thicker tips than pattern No.1. Indented and have flat edges for gripping object with tip or side. The plain finished points have a fine tip. Overall length 4 3/4" (121 mm).

Metal	Dumont II	Peer-Vigor	Dumont
Carbon Steel	—	**57.408**	**57.208**
Stainless Steel	**57.517**	**57.409**	**57.209**
Anti-Acid/Mag SS	**57.250**	**57.410**	**57.210**
Titanium	—	**57.0802**	—



PATTERN 2A

Similar to pattern 2, except points are .055" (1.4 mm) wide and rounded at the tips. Overall length 4 3/4" (121 mm).

Metal	Dumont II	Peer-Vigor	Grobet USA	Dumont
Carbon Steel	—	**57.412**	—	—
Stainless Steel	**57.01102A**	**57.413**	**57.0752A**	**57.213**
Anti-Acid/Mag SS	**57.01202A**	**57.414**	—	**57.214**
Carpenter 20	—	**57.0902A**	—	—



PATTERN 3

Excellent tweezers for handling all miniature and micro-miniature parts. Shanks are tapered with beveled edges; points have been honed and are very sharp. Overall length 4 3/4" (121 mm).

Metal	Dumont II	Peer-Vigor	Grobet USA	Dumont
Carbon Steel	—	**57.417**	—	**57.217**
Stainless Steel	**57.518**	**57.418**	**57.808**	**57.218**
Anti-Acid/Mag SS	**57.251**	**57.419**	**57.809**	**57.219**
Titanium	—	**57.0803**	—	—



PATTERN 3C

Shorter version of pattern 3. Overall length 4 1/2" (114 mm).

Metal	Dumont II	Peer-Vigor	Grobet USA	Dumont
Carbon Steel	—	**57.425**	—	**57.225**
Stainless Steel	**57.519**	**57.426**	**57.816**	**57.226**
Anti Acid/Mag SS	**57.252**	**57.427**	**57.817**	**57.227**
Titanium	—	**57.0803C**	—	—



PATTERN 4

Ideally suited for handling microscopic parts. Shanks are indented with beveled edges and points that have been extra-honed to a needle-like shape and sharpness. Overall length 4 1/2" (114 mm).

Metal	Peer-Vigor	Grobet USA	Dumont
Stainless Steel	**57.431**	**57.821**	—
Anti-Acid/Mag SS	**57.432**	—	**57.232**
Titanium	**57.0804**	—	—

PATTERN 5

Similar to pattern 4, except have very narrow needle-like points. Overall length 4½" (114 mm).



Metal	Dumont II	Peer-Vigor	Grobet USA	Dumont
Carbon Steel	—	—	—	**57.235**
Stainless Steel	**57.520**	**57.436**	**57.0755**	**57.236**
Anti-Acid/Mag SS	**57.254**	**57.437**	—	**57.237**
Titanium	—	**57.0805**	—	—

PATTERN 5A

Similar to pattern 5, except with oblique points, and slightly more tension, for micro-fine work. Overall length 4½" (114 mm).



Metal	Dumont II
Stainless Steel	**57.01105A**

PATTERN 6

Sharp hooked points for wire wrapping, forming, bending and coiling. The angled points can also be useful for hard-to-get-at spots. Overall length 4½" (114 mm).



Metal	Dumont II	Peer-Vigor	Dumont
Carbon Steel	—	—	**57.240**
Stainless Steel	**57.01106**	**57.441**	**57.241**
Anti-Acid/Mag SS	**57.01206**	**57.442**	—
Titanium	—	**57.0806**	—

PATTERN 7

Excellent tweezers for handling all miniature and micro-miniature parts and components. The shape permits the user to rest his hand on the bench during assembly operations. The curved shanks have beveled edges; points have a plain finish, but are very sharp. Overall length 4½" (114 mm).



Metal	Dumont II	Peer-Vigor	Grobet USA	Dumont
Carbon Steel	—	**57.444**	—	**57.244**
Stainless Steel	**57.01107**	**57.445**	**57.835**	**57.245**
Anti-Acid/Mag SS	**57.01207**	**57.446**	**57.836**	**57.246**
Titanium	—	**57.0807**	—	—

PATTERN 7A

Blunt tip tweezers for handling all miniature and micro-miniature parts and components. The shape permits the user to rest his hand on the bench during assembly operations. The curved shanks have beveled edges; points have a plain finish, but are very sharp. Overall length 4½" (114 mm).



Metal	Peer-Vigor	Grobet USA
Carbon Steel	**57.459**	—
Stainless Steel	**57.461**	**57.837**
Anti-Acid/Mag SS	**57.462**	—

PATTERN 7B

Tweezers with serrated jaws for handle all miniature and micro-miniature parts and components. The shape permits the user to rest his hand on the bench during assembly operations. The curved shanks have beveled edges; points have a plain finish, but are very sharp. Overall length 4½" (114 mm).



Metal	Peer-Vigor	Peer-Vigor	Dumont
Stainless Steel	—	—	**57.253**
Anti-Acid/Mag SS	**57.465**	**57.838**	—



PATTERN 8

Straightens terminal lead wires, needle point indicators, etc. Blades are extra thick with blunt jaws. Overall length 4 1/4" (108 mm).

Metal	Dumont II
Carbon Steel	**57.256**



PATTERN 35A

Large flat points. Overall length 4 5/8" (118 mm).

Metal	Peer-Vigor
Anti-Acid/Mag SS	**57.355**



PATTERN A

A general utility tweezers, for assembly, inspection, sorting, etc. Shanks are thick and have flat edges that enable the user to grip and hold with the edge as well as the tip. Points are plain and tips are blunt and wider than pattern OO. Overall length 4 3/4" (121 mm)

Metal	Peer-Vigor	Dumont
Carbon Steel	—	**57.284**
Anti-Acid/Non-Mag SS	**57.473**	—



PATTERN AC

Similar to pattern OOC, except the points are plain and the tips are slightly wider. Overall length 4 1/2" (114 mm).

Metal	Peer-Vigor	Dumont
Carbon Steel	**57.480**	**57.287**



PATTERN H

Stubby, wide shanks for a strong grip on the object. Generally used in pairs for wire bending, adjusting, etc. Tapered shanks with flat edges; points are honed and have round blunt tips. Overall length 3 1/2" (89 mm).

Metal	Peer-Vigor	Dumont
Carbon Steel	—	**57.259**
Stainless Steel	**57.460**	**57.260**



PATTERN O

For handling miniature and micro-miniature parts. With tapered shanks, not as thick as pattern OO, flat edges and points that have been honed and are very sharp. Overall length 4 1/2" (114 mm).

Metal	Dumont II
Stainless Steel	**57.01136**



PATTERN P

Tips are slightly thicker and sturdier than those on pattern 1. Overall length 4 3/4" (121 mm).

Metal	Dumont
Carbon Steel	**57.296**
Anti-Acid/Non-Mag SS	**57.248**

PATTERN S
Less expensive version of pattern 3; points are not as precision finished. Overall length 4 3/4" (121 mm).



Metal	Dumont II
Carbon Steel	**57.290**
Stainless Steel	**57.522**
Anti-Acid/Non-Mag SS	**57.523**

PATTERN SS
Fine, long and narrow points. Overall length 5 1/4" (133 mm)



Metal	Peer-Vigor	Dumont
Stainless Steel	**57.0728**	—
Anti-Acid/Non-Mag SS	**57.0659**	**57.01244**
Titanium	**57.0808**	—

PATTERN OC
Shorter version of pattern O. Overall length 3 1/2" (89 mm).



Metal	Dumont II	Peer-Vigor	Dumont
Carbon Steel	—	—	**57.268**
Stainless Steel	**57.01130C**	**57.469**	**57.269**
Anti-Acid/Mag SS	—	—	**57.270**

PATTERN OA
Similar to pattern O, except the shanks are notched and the points have been rounded and finished for fine assembly work. Overall length 4 3/4" (121 mm).



Metal	Dumont
Carbon Steel	**57.273**

PATTERN OO
A general utility tweezers for assembly, inspection, sorting, etc. Shanks are thick and have flat edges that enable the user to grip and hold the object with the edge as well as the tip. Points are honed and have blunt tips. Overall length 4 3/4" (121 mm).



Metal	Peer-Vigor	Dumont
Carbon Steel	**57.476**	**57.276**
Stainless Steel	**57.477**	**57.277**
Anti-Acid/Non-Mag SS	**57.478**	**57.278**

PATTERN OOC
Shorter version of pattern OO. Overall length 4 1/8" (105 mm).



Metal	Dumont
Carbon Steel	**57.281**

PATTERN OOD
Pattern OO with serrations on tips and grips. Overall length 4 3/4" (121 mm).



Metal	Peer-Vigor
Carbon Steel	**57.489**
Stainless Steel	**57.490**

DUMONT STYLE CUTTING

For use on very fine wires only.



PATTERN 15

End cutter for very soft wire or for stripping fine magnet wire. Overall length 4 1/4" (108 mm).

Metal	Dumont
Carbon Steel	**57.309**



PATTERN 15A

The most popular wire cutting tweezers. Strong oblique cutting edge gives crisp, clean, close cuts on many types of fine wire. Overall length 4 1/2" (114 mm).

Metal	Peer-Vigor	Dumont
Carbon Steel	**57.512**	**57.312**



PATTERN 15AP

Cuts .010" (.25 mm) and smaller soft wire. Overall length 4 1/2" (114 mm) long with parallel cutting edges.

Metal	Peer-Vigor
Carbon Steel	**57.515**
Stainless Steel	**57.0715AP**



PATTERN 15A GOLD

Cuts soft copper, gold, silver and magnetic wire up to .010" (.25 mm). Very popular, very long-lasting cutter. Overall length 4 1/2" (114 mm).

Metal	Peer-Vigor
Titanium Nitrite	**57.340**



PATTERN D

Transverse end cutter with rounded cutting edge. Overall length 3 3/4" (95mm).

Metal	Peer-Vigor
Carbon Steel	**57.560**

BOLEY STYLE

Boley style tweezers are excellent general utility tweezers. All shanks are tapered and have beveled edges, except the GG pattern.



PATTERN AA

For assembly, inspection, sorting, soldering, etc. of small parts. A non-glare black oxidized finish is available in this pattern and solder will not adhere to this finish. Overall length 4 3/4" (121 mm).

Metal	Dumont II	Peer-Vigor	Grobet USA	Dumont
Nickel-Plated Steel	—	**57.550**	**57.850**	—
Black Oxidized	—	**57.551**	—	—
Stainless Steel	**57.524**	**57.553**	**57.0738**	—
Anti-Acid/Non-Mag SS	**57.525**	**57.554**	**57.854**	**57.306**



PATTERN BB

Hollow light tension points. Overall length 4 1/2" (114 mm).

Metal	Peer-Vigor
Nickel-Plated Steel	**57.558**

PATTERN GG
Pointed, indented shanks Overall length 5 1/8" (130 mm).



Metal	Dumont II	Peer-Vigor
Nickel-Plated Steel	—	**57.562**
Stainless Steel	**57.01139**	—

PATTERN HH
Thick, strong shanks are the main feature of this short tweezers. Overall length 4 1/2" (114 mm).



Metal	Peer-Vigor	Price
Nickel-Plated Steel	**57.564**	$16.20

PATTERN MM
Similar to pattern AA, but heavier. The shanks are slightly longer and the corner of the handle has been rounded. Overall length 5" (127 mm).



Metal	Dumont II	Peer-Vigor	Grobet USA
Nickel-Plated Steel	—	**57.566**	**57.866**
Stainless Steel	**57.526**	**57.567**	—
Anti-Acid/Mag SS	**57.527**	**57.568**	—

PATTERN AM
Non-magnetic brass version of pattern MM. Excellent for handling parts that scratch easily. Overall length 5" (127 mm).



Metal	Peer-Vigor
Non-Mag Brass	**57.556**

PATTERN NN
Shorter version of pattern MM. Overall length 4 1/2" (114 mm).



Metal	Peer-Vigor
Nickel-Plated Steel	**57.570**

PATTERN RR
Hefty, heavy-duty tweezers with wide shanks and points similar to those on pattern AA. The shanks and handle are extra thick.
Overall length 5 1/2"(140 mm).



Metal	Peer-Vigor	Grobet USA
Nickel-Plated Steel	**57.574**	**57.0311**

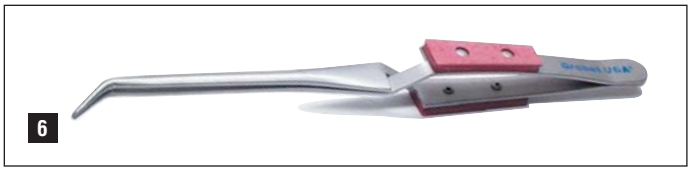




















GROBET USA™ SLIDE-LOCKING

Closing pressure is easily adjusted.

1 BLUNT TIP
Nickel-plated steel. Overall length 6 1/2" (165 mm).
No. **57.774**

2 ROUNDED/SERRATED TIP
Nickel-plated steel. Overall length 6" (152 mm).
No. **57.772**

3 SHARP/SMOOTH TIP
Nickel-plated steel. Overall length 4 3/4" (121 mm).
No. **57.770**

GROBET USA™ CROSS-LOCKING

4 STRAIGHT and CURVED TIP with FIBER GRIPS
Heat-resistant fiber grips and permanent tension, self-locking jaws are ideal for soldering operations, or for holding parts. With long, tapered, non-serrated blunt jaws. Stainless steel. Overall length 6 1/2" (165 mm).
No. **57.0373** Straight
No. **57.765** Curved

5 BLUNT/SERRATED TIP
Nickel-plated steel. Overall length 6 1/2" (165 mm).
No. **57.0385**

6 CURVED TIP with FIBER GRIPS
Heat-resistant fiber grips. Stainless steel. Overall length 6 1/2" (165 mm).
No. **57.761**

7 STRAIGHT TIP with FIBER GRIPS
Heat-resistant fiber grips. Stainless steel. Overall length 6 1/2" (165 mm).
No. **57.760**

8 BLUNT/SERRATED TIP with REVERSE-ACTION
Nickel-plated steel. Overall length 6 1/2" (165 mm).
No. **57.753**

9 SHARP/SERRATED TIP with REVERSE-ACTION
Nickel-plated steel. Overall length 6 1/2" (165 mm).
No. **57.752**

10 SHARP TIP with REVERSE-ACTION
Nickel-plated steel. Overall length 4 3/4" (121 mm).
No. **57.750**

GROBET USA™ SOLDER/UTILITY TWEEZERS

Heavier duty tweezers. Selection of a solder/utility tweezers involves overall length desired, shape and size of points, with or without serrations, etc.

1 SMALL SHARP TIP
Overall length 4 3/4" (121 mm).
No. **57.700** Nickel-Plated Steel
No. **57.701*** Steel
**Satin finish with rust-resistant coating.*



2 SMALL SHARP/BEVELED TIP
Nickel-plated steel. Overall length 4 3/4" (121 mm).
No. **57.703**



3 SMALL SHARP TIP INDENTED
Nickel-plated steel. Overall length 4 3/8" (111 mm).
No. **57.705**



4 SMALL INDENTED SQUARE/SERRATED TIP
Nickel-plated steel. Overall length 5" (127 mm).
No. **57.710**



5 LONG INDENTED
Nickel-plated steel. Overall length 7" (178 mm).
No. **57.713** Wedge/Smooth tip
No. **57.714*** Wedge/Serrated tip
**Also has serrations on handles.*



6 LONG STRAIGHT/SMOOTH TIP
Nickel-plated steel. Overall length 7" (178 mm).
No. **57.0352**



7 LONG STRAIGHT/SERRATED TIP
With serrations on handles. Overall length 7" (178 mm).
No. **57.0350** Nickel-Plated Steel
No. **57.0450** Stainless Steel



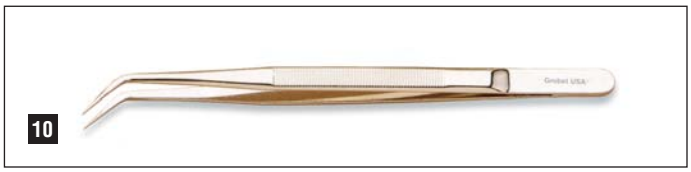
8 LONG WEDGE CURVED TIP
Nickel-plated steel. Overall length 6 3/4" (171 mm).
No. **57.716** Wedge/Smooth tip
No. **57.717*** Wedge/Serrated tip
**Also has serrations on handles.*

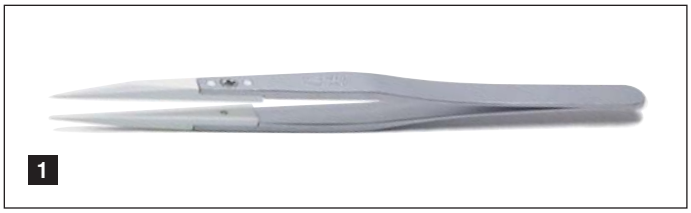


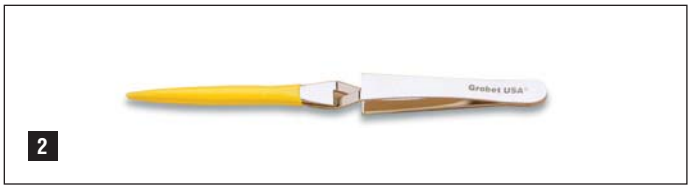
9 LONG ROUND/SMOOTH CURVED TIP
Nickel-plated steel. Overall length 7" (178 mm).
No. **57.0351**

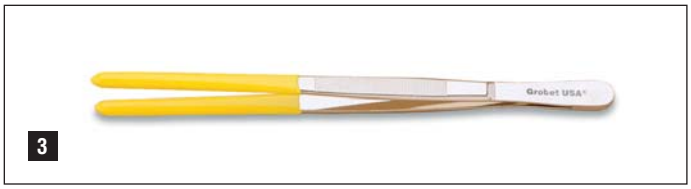


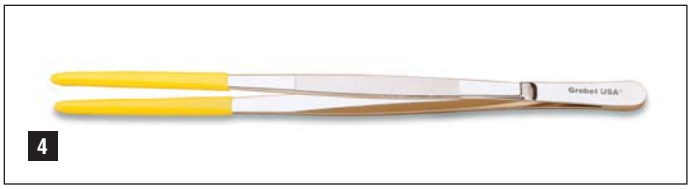
10 LONG SHARP/SERRATED CURVED TIP
Curved, finished points and fine serrations on the handle make this tweezers ideal for even the most delicate objects. Nickel-plated steel. Overall length 6" (152 mm).
No. **57.721**

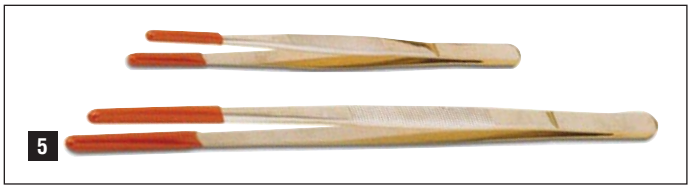



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1 CERAMIC-TIPPED TWEEZERS

These ceramic-tipped, non-rusting tweezers have an aluminum shank. They are extremely smooth and long wearing because they are harder than both stainless steel and carbon steel. They are anti-magnetic and lightweight with a high heat and chemical resistance. Silver and soft solders will not adhere to these tweezers. They will withstand heat up to 1000°C, making them a great choice when soldering platinum.

No. **57.500**
No. **57.501** Replacement points

COATED FORCEPS/STEAM TWEEZERS

Plastic coating on points provides chemical resistance. Use with steam cleaners and ultrasonic cleaners for non scratch retrieving. Made of nickel-plated steel.

2 CROSS LOCK

Overall length 6½" (165 mm).
No. **57.777**

3 STRAIGHT

Overall length 8" (203 mm).
No. **57.921**

4 LONG STRAIGHT

Overall length 10" (254 mm).
No. **57.922**

5 EXTRA-LONG COATED TIP TWEEZERS - ECONOMY

Ideal when using ultrasonic cleaners or steamers. Insulates and provides resistance to heat and chemicals. Extra-long, sturdy, chrome-plated steel tweezers keep you a safe distance from the steam and provides a sure grip and non-scratch retrieving. Chrome-plated steel.

No. **57.0956** Overall length 8" (203 mm)
No. **57.0957** Overall length 12" (305 mm)

SERRATED TIPS

Extra high quality European-made tweezers with finely serrated tips that grip and hold even the most delicate objects securely without damage.

6 STANDARD

Smoothly polished chromium-plated tweezers. Shanks are tapered and have beveled edges.

Medium Points

No. **57.590** Overall length 5½" (140 mm)
No. **57.592** Overall length 6" (152 mm)
No. **57.594** Overall length 6⅜" (162 mm)

Fine Points

No. **57.591** Overall length 5½" (140 mm)
No. **57.593** Overall length 6" (152 mm)
No. **57.595** Overall length 6⅜" (162 mm)

7 SLENDER

Lightweight shape with very fine points for picking up smaller objects and stones. Overall length 5½" (140 mm).

No. **57.597** Chromium-plated steel
No. **57.598** Stainless steel

8 CURVED TIP

Slender pattern with very fine points. Stainless steel. Overall length 5½" (140 mm).

No. **57.601**

9 SLIDE-LOCK

Chromium-plated steel tweezers with serrated points and locking device. Overall length 5½" (140 mm).

No. **57.603** Medium points
No. **57.604** Fine points

1 HEMOSTATS

These versatile, stainless steel pliers can be used as a clamp, heat sink or third hand while soldering. Handles have a two-position locking device and are insulated with vinyl plastisol. Box joint prevents looseness and wobble in the serrated jaws. The serrations are not sharp and will not cut into soft materials. Overall length 5¾" (146 mm).

No. **46.454** Straight
No. **46.456** Curved

2 SPRINGRIP

Made of solid brass with a durable rubber comfort grip. Points are bent to secure work and prevent slippage. Can also be used for inspecting, lacquer and antique application and sandblasting.

No. **57.01400** Overall length 9½" (241 mm)
No. **57.01401** Overall length 6" (152 mm)





GROBET USA™ RETRIEVING FORCEPS

The retrieving forceps have blunt rounded serrated points. Drop-forged for extra durability, and ideal for use when steam cleaning or ultrasonic cleaning.

3 RETRIEVING FORCEPS with BENT POINTS

Metal	No.	Length (in)	Length (mm)	Guide Pin
Nickel-Plated Steel	**57.910**	10"	254	No

RETRIEVING FORCEPS with STRAIGHT POINTS

	Metal	No.	Length (in)	Length (mm)	Guide Pin
4	Nickel-Plated Steel	**57.912**	6"	152	Yes
	Nickel-Plated Steel	**57.917**	6"	152	No
5	Nickel-Plated Steel	**57.913**	8"	203	Yes
	Nickel-Plated Steel	**57.918**	8"	203	No
6	Nickel-Plated Steel	**57.914**	10"	254	Yes
	Nickel-Plated Steel	**57.919**	10"	254	No
7	Nickel-Plated Steel	**57.915**	12"	305	Yes
	Nickel-Plated Steel	**57.920**	12"	305	No

GROBET USA™ HANDLING TWEEZERS

Forged from the best grades of stainless steel, machined to smooth finishes. Extensive hand finishing insures proper shape and alignment of the points, tips and shafts. Curved points are ideal for many operations where small parts need to be precisely placed.

8 HANDLING TWEEZERS with REGULAR LENGTH POINTS

Metal	No.	Length (in)	Length (mm)	Points
Stainless Steel	**57.890**	5"	127	Serrated
Stainless Steel	**57.894**	6"	152	Serrated

9 HANDLING TWEEZERS with ELONGATED POINTS

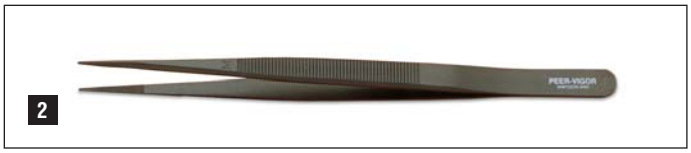
Metal	No.	Length (in)	Length (mm)	Points
Stainless Steel	**57.896**	6"	152	Smooth
Stainless Steel	**57.898**	6"	152	Serrated

10 HANDLING TWEEZERS with DOUBLE-ANGLED ELONGATED POINTS

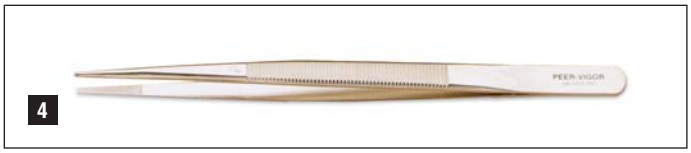
Metal	No.	Length (in)	Length (mm)	Points
Stainless Steel	**57.903**	6"	152	Serrated

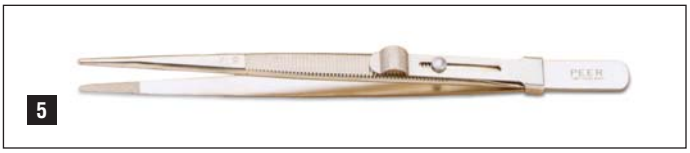


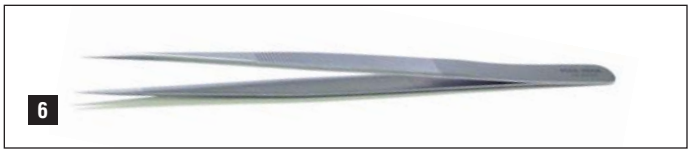


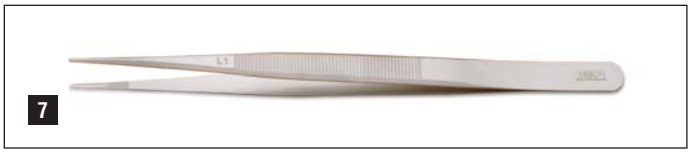




















SWISS DIAMOND TWEEZERS

Superb quality, Swiss-made with serrated points for easy handling of stones.

1 STAINLESS STEEL SLIDE-LOCK with SATIN FINISH

Overall length 6" (152 mm).

Metal	Peer-Vigor	Points	Finish
Stainless Steel	**57.605**	Fine	Satin
Stainless Steel	**57.606**	Medium	Satin

2 CARBON STEEL STANDARD with BLACK FINISH

Slender tweezers with black finish for optimum diamond visibility.
Overall length 6" (152 mm).
No. **57.620**

3 CARBON STEEL SLIDE-LOCK with BLACK FINISH

High quality tweezers with black finish for optimum diamond visibility.
Overall length 6" (152 mm).

Metal	Peer-Vigor	Points	Finish
Carbon Steel	**57.607**	Fine	Black
Carbon Steel	**57.608**	Medium	Black

4 NICKEL-PLATED STEEL STANDARD

With regular width points. Overall length 6" (152 mm).

Metal	Peer-Vigor	Points
Nickel-Plated Steel	**57.612**	Medium
Nickel-Plated Steel	**57.614**	Fine

5 NICKEL-PLATED STEEL SLIDE-LOCK

Overall length 6" (152 mm).

Metal	Peer-Vigor	Points
Nickel-Plated Steel	**57.616**	Medium

6 TITANIUM

Very light and sensitive tweezers. Overall length 6" (152 mm).
No. **57.625** Medium tip
No. **57.626** Fine tip
No. **57.627** Extra-fine tip

7 STAINLESS STEEL STANDARD

Swiss-made tweezers with medium points, serrated tips, and corrugated handles. Overall length 6 3/8" (162 mm).
No. **57.0964**

8 STAINLESS STEEL SLIDE-LOCK

Swiss-made tweezers with medium points, serrated tips, and corrugated handles. Overall length 6 3/8" (162 mm).
No. **57.0967**

9 STAINLESS STEEL SLIDE-LOCK ECONOMY

Strong, corrugated points.

		Length	
Metal	Points	(in)	(mm)
57.0356A	Medium	5½"	140
57.0357A	Fine	5½"	140

10 STAINLESS STEEL ECONOMY with SATIN FINISH

		Length	
Metal	Points	(in)	(mm)
57.0394A	Fine	5¾"	146
57.0395A	Medium	6½"	165

11 CARBON STEEL ECONOMY with BLACK FINISH

		Length	
Metal	Points	(in)	(mm)
57.0348	Fine	6¼"	159

DISSECTING FORCEPS

1 HANDLING FORCEPS with STRAIGHT SHAFT

Overall length 5" (127 mm).

Metal	No.	Points	Guide Pin
Nickel-Plated Steel	**57.935**	Blunt	Yes

2 HANDLING FORCEPS

Well balanced tweezers with serrations on handle. Provides firm gripping action. Overall length 5" (127 mm).

Metal	No.	Points	Overall Length (in)	(mm)	Guide Pin	Serrated
Nickel-Plated Steel	**57.927**	Blunt	4½"	114	Yes	No

3 PATTERN 20

With straight shaft. Overall length 4½" (114 mm).

Metal	No.	Points	Guide Pin
Nickel-Plated Steel	**57.929**	Sharp	Yes

4 STAMP FORCEPS

These tweezers have thin, spade-shaped tips which make it easy to pick up delicate objects, such as stamps. Overall length 4½" (114 mm).
No. **57.926** Straight, round spade tip

DIAMOND TWEEZERS

These select styles of high quality tweezers make handling diamonds easy. Made of quality stainless and blackened stainless steel. Overall length 6¼" (160mm).

5 SHARP

No.	Style	Description	Tip Diameter
57.120	XF	Sharp points, Matt	.0016"
57.122	F	Sharp points, Matt	.0024"
57.124	M	Sharp points, Matt	.0035"
57.126	L	Sharp points, Matt	.0047"
57.128	XL	Sharp points, Matt	.0071"
57.121	XF	Sharp points, Black	.0016"
57.123	F	Sharp points, Black	.0024"
57.125	M	Sharp points, Black	.0035"
57.127	L	Sharp points, Black	.0047"
57.129	XL	Sharp points, Black	.0071"

6 ROUNDED POINTS with INSIDE GROOVE

No.	Style	Description	Tip Diameter
57.130	M1	Inside groove, Matt	.0035"
57.132	L1	Inside groove, Matt	.0047"
57.134	XL1	Inside groove, Matt	.0071"
57.136	XXL1	Inside groove, Matt	.0094"
57.131	M1	Inside groove, Black	.0035"
57.133	L1	Inside groove, Black	.0047"
57.135	XL1	Inside groove, Black	.0071"
57.137	XXL1	Inside groove, Black	.0094"

7 SHARP POINTS with SLIDE-LOCK

No.	Style	Description	Tip Diameter
57.138	FR	Slide-lock, Matt	.0024"
57.140	MR	Slide-lock, Matt	.0035"
57.142	LR	Slide-lock, Matt	.0047"
57.144	XLR	Slide-lock, Matt	.0071"
57.139	FR	Slide-lock, Black	.0024"
57.141	MR	Slide-lock, Black	.0035"
57.143	LR	Slide-lock, Black	.0047"
57.145	XLR	Slide-lock, Black	.0071"

8 ROUNDED POINTS with SLIDE-LOCK and INSIDE GROOVE

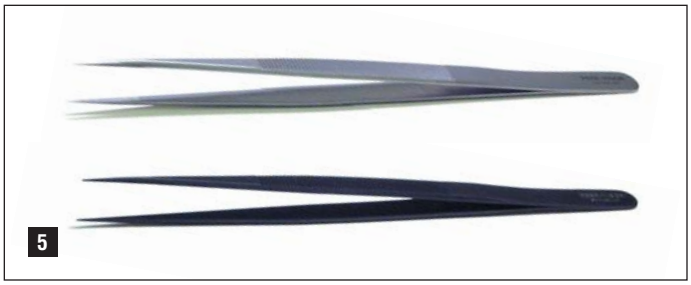
No.	Style	Description	Tip Diameter
57.146	MR1	Slide-lock, inside groove, Matt	.0035"
57.148	LR1	Slide-lock, inside groove, Matt	.0047"
57.150	XLR1	Slide-lock, inside groove, Matt	.0071"
57.147	MR1	Slide-lock, inside groove, Black	.0035"
57.149	LR1	Slide-lock, inside groove, Black	.0047"
57.151	XLR1	Slide-lock, inside groove, Black	.0071"

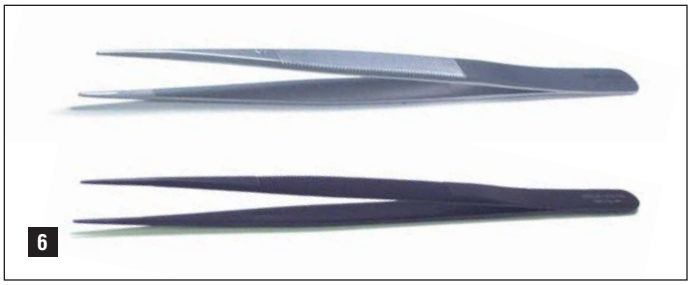


















1 BALANCE WEIGHT FORCEPS

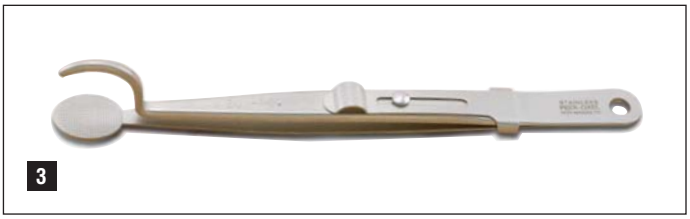
Designed for manipulating balance weights. Plastic tip version eliminates possibility of scratching fractional weights and also provides some acid, alkali and solvent resistance. Overall length 4" (102 mm).

Metal	No.	Points
Stainless Steel	**57.907**	Plain



2 RING SOLDERING TWEEZERS

Holds rings from inside shank for easy soldering.
No. **48.230**



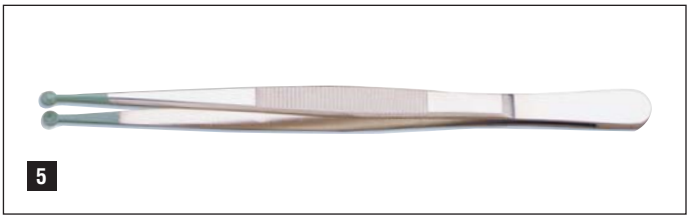
3 HEAD and SHANK TWEEZERS - PREMIUM QUALITY

Stainless steel slide-locking tweezers securely holds the setting and shank in position for easy soldering of solitaires. One tip is curved to hold shank, the other serrated to grip setting.
No. **48.235**



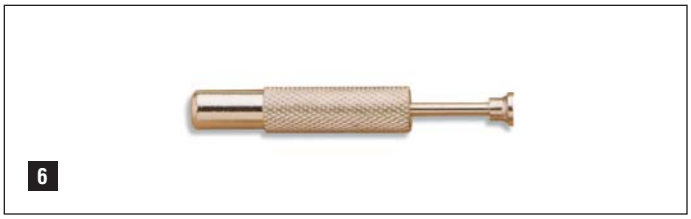
4 HEAD and SHANK TWEEZERS

Position the ring shank and setting to solder solitaires quickly and easily. Curved jaw has groove to hold shank securely, while flat jaw is serrated to prevent movement. Locking handles apply even pressure. Stainless steel, anti-magnetic and anti-acid. Overall length 5 1/2" (140 mm).
No. **57.0398**



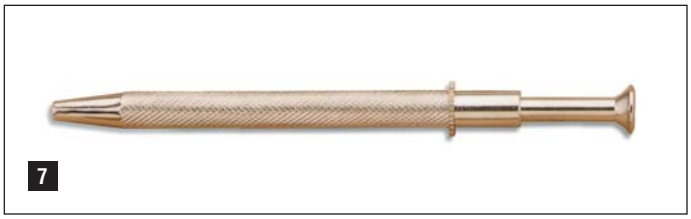
5 PEER® PEARL-HOLDING TWEEZERS

Tips are cup-shaped to hold small round objects. Overall length 4 1/2" (114 mm). Swiss made.
No. **57.641**



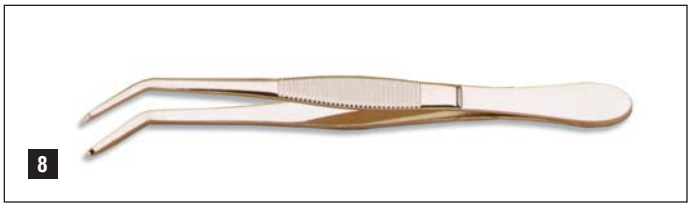
6 POCKET THREE-PRONGED HOLDER for STONES and DIAMONDS

Small holder fits in pocket. Wire jaws contract into body and plunger in end opens the jaws. Overall length 2" (51 mm).
No. **57.636**



7 PRONGED HOLDING TWEEZERS for STONES and DIAMONDS

For gripping and holding small objects. Plunger in handle opens wire jaws that contract back into handle. Overall length 4 3/4" (121 mm).
No. **57.634** Three-pronged holder
No. **57.635** Four-pronged holder



8 SCREW-HOLDING TWEEZERS

A cross-slot cut into the tip of the tweezers allows easy pick up of screws or small pieces for placement or examination. Overall length 4" (102 mm).
No. **57.731**

1 SPECIAL PURPOSE HOLDING TWEEZERS

The offset points are grooved on the inside to hold miniature parts. Stainless steel. Overall length 4 1/4" (108 mm).
No. **57.630**



1

2 GROBET USA™ ALL PURPOSE TWEEZERS

Used in first aid kits for splinter removal.

Metal	No.	Description	Length (in)	Length (mm)
Nickel-Plated Steel	**57.950**	Square tip narrow-non-serrated	3⅛"	80



2

TWEEZERS KITS in POUCH

3 FIVE PIECE ALL-PURPOSE TWEEZERS KIT

A complete, basic tweezers set. An ideal way to sample and select the proper type tweezers for most applications. The tweezers have hundreds of uses and the deluxe vinyl pouch provides handy storage. Kit contains: 4 1/2" (114 mm) pointed tweezers (No. 57.929), 4 3/4" (121 mm) stamp tweezers (No. 57.926), 6" (152 mm) retrieving forceps (No. 57.917), 6" (152 mm) solder/utility tweezers (No. 57.721) and 6 1/2" (165 mm) self closing tweezers (No. 57.753).
No. **57.936**



3

4 FIVE PIECE SOLDER/UTILITY TWEEZERS KIT

Contains two self-closing general purpose tweezers (Nos. 57.750 and 57.753) and three utility/solder types (Nos. 57.705, 57.713 and 57.716) in a deluxe vinyl pouch.
No. **57.937**



4

5 12 PIECE ALL-PURPOSE TWEEZERS KIT

Kit contains:
4 3/4" (159 mm) Dumont style stainless tweezers: #1 (No. 57.0751), #2A (No. 57.0752A), #3 (No. 57.0753), #5 (No. 57.0755) and #7 (No. 57.0757), 6 1/4" (15.9 cm) black non-reflective diamond tweezers (No. 57.0347), 5 1/2" (140 mm) chrome slide-lock fine diamond tweezers (No. 57.0357A), 5 1/2" (140 mm) chrome slide-lock medium diamond tweezers (No. 57.0356A), 5" (127 mm) Boley style tweezers AA (No. 57.0301), 5 1/2" (140 mm) Boley style tweezers RR (No. 57.0311), 6 1/2" (165 mm) soldering tweezers (No. 57.0373) and 4 5/8" (117 mm) plastic tweezers (No. 57.958). Comes in a plastic pouch.
No. **57.01250**


5



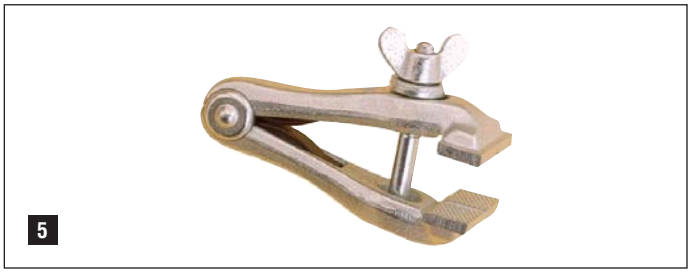
1 SWIVEL BENCH VISE
Swivel base permits vise to be positioned in any direction and locked. With twin guide rods to assure parallel operation and rigidity. Smooth jaws will not mar soft metals. With anvil on top. Jaws are 2 1/2" (64 mm) wide and open to 2 1/2" (64 mm). Fits benches up to 2" (51 mm) thick.
No. **58.104**

2 BENCH VISE
Bench vise with twin guide rods to assure parallel closing and rigidity. Jaws are smooth to prevent marring of soft metals. Body is enameled. Jaws are 2 1/2" (64 mm) wide and open to 2 1/2" (64 mm). Fits benches 2" (51 mm) thick.
No. **58.101**

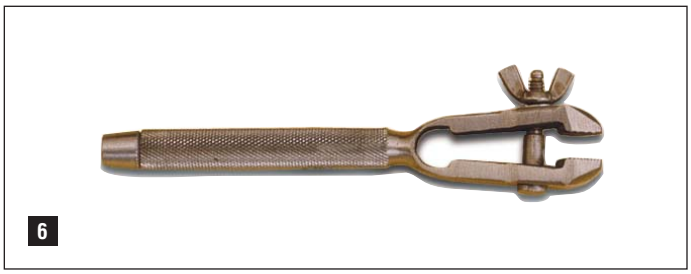
3 BENCH VISE
Well made, strong with rust-proof finish. Fits benches up to 2" (51 mm) thick. Jaws are 1 3/4" (44 mm) wide and open to 1 3/4" (44 mm).
No. **58.0519**



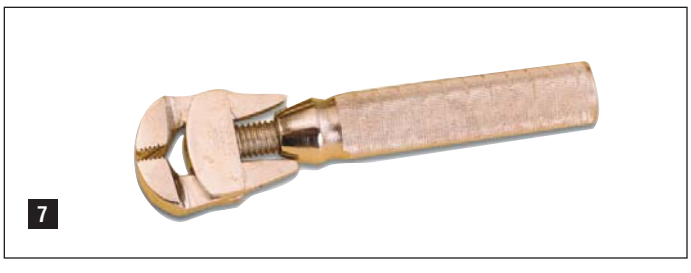
4 WOOD HANDLED HAND VISE
A lightweight vise mounted in a wood handle. Smooth jaws are 1 1/4" (32 mm) wide and open to 1" (25 mm). Overall length is 6 1/4" (159 mm).
No. **58.130**



5 STEEL HAND VISE
Spring action handle keeps the serrated jaws open. Jaws are 1 1/4" (32 mm) wide and open to 7/16" (11 mm). The jaws are closed by turning wing screw. Overall length is 3 3/4" (95 mm).
No. **58.120**



6 WING NUT HAND VISES
Serrated, grooved, spring action jaws open and close with large wing nut. Handles are hollow so that long wire will pass through. Two jaw widths are available. Both open to 1/4" (6 mm). Overall length is 4 1/2" (114 mm).
No. **58.140** Jaw width 1/4" (6 mm)
No. **58.141** Jaw width 5/8" (16 mm)
No. **58.142** Screw & nut



7 LOWELL PATTERN HAND VISE
With hollow handle and grooved corrugated jaws that open and close by turning handle. Design allows you to hold long wire pieces not accessible with regular hand vise. Width of jaws 1/2" (13 mm), overall length 4 3/4" (121 mm).
No. **58.0528**

PIN VISES

Used to hold a wide variety of items such as small drills, taps, wire, rods, and screws.

1 BABY PIN VISE

Midget-sized hollow handle metal pin vise with screw chuck. Capacity 0 to .020" (0 to .51 mm), overall length 1 7/8" (48 mm).
No. **58.200**


1

2 DOUBLE-ENDED PIN VISE

Different size steel collets are mounted in both ends of hollow handle. Capacity 0 to .099" (0 to 2.5 mm), overall length 4 1/4" (108 mm).
No. **58.215**


2

3 SWIVEL HEAD PIN VISE

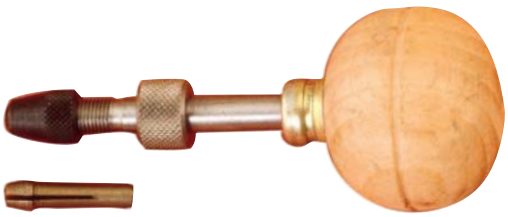
With large free wheeling head, making it suitable for drilling, tapping, or using as a screwdriver. Comes with two double-ended collets, one in screw chuck and the other stored in the handle. Capacity 0 to .125" (0 to 3.2 mm), overall length 3 1/2" (89 mm).
No. **58.221**


3

4 WOOD HANDLE PIN VISES

Economical pin vises with black fluted wood handles and steel chucks.
No. **58.231** Capacity 0 to .047" (0 to 1.19 mm), overall length 4" (102 mm)
No. **58.232** Capacity 0 to .059" (0 to 1.5 mm), overall length 4½" (114 mm)


4


5

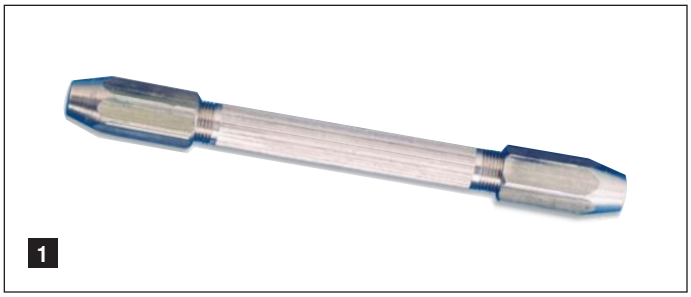
5 SWIVEL TOOL HANDLE

Ball-shaped, wood swivel handle fits in the palm of your hand, making it useful for setting, reaming, tapping, etc. Both tools come with 2 chucks which open respectively from 0 to .089" (0 to 2.3 mm) and .13 to .239" (3.1 to 6 mm).
No. **37.769** Made in the USA
No. **37.771** Import


6

6 UNIVERSAL BALL JOINT SWIVEL VISE with VACU-BASE

Completely portable, attaches instantly to any smooth, non-porous surface. Large 3" (76 mm), V-grooved, iron jaws open to 3" (76 mm) with precision screw action. Universal ball joint rotates vise to any desired working angle. Includes a set of protective rubber jaws.
No. **58.103** Vise with vacu-base
No. **58.10301** Replacement set of rubber jaws



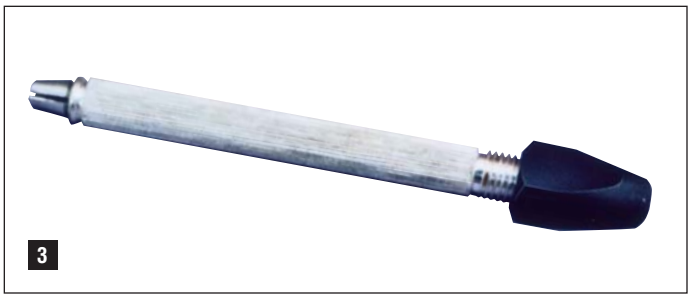
1 DOUBLE-ENDED PIN VISE

With reversible steel collets in each end. Hexagonal heads prevent rolling. Hollow handle and heads made of brass. Capacity is 0 to .125" (0 to 3.2 mm), overall length 4 1/8" (105 mm).
No. **58.240**



2 PIN SLIDE

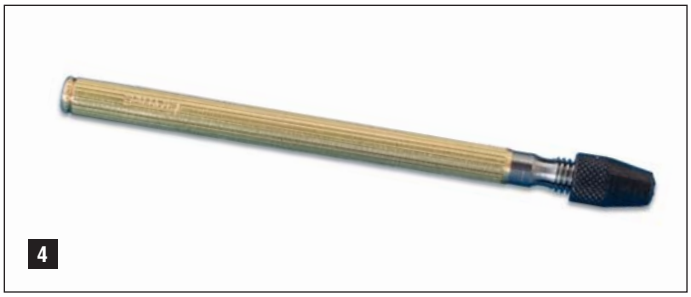
Knurled ring slides forward to close steel jaws, making it easy to operate with one hand. Handle is hollow. Capacity 0 to .051" (0 to 1.3 mm), overall length 4 1/8" (105 mm).
No. **58.300**



3 SQUARE CHUCK PIN VISE

Has two steel chucks with spare chuck held in end of hollow brass handle. Will not roll off bench. Capacity 0 to .079" (0 to 2.0 mm).

	Length	
No.	(in)	(mm)
58.249	3"	76
58.250	3 3/4"	95
58.252	4 1/4"	108
58.253	4 3/4"	121
58.254	5"	127



4 BRASS HANDLE PIN VISE

Steel collet is set into hollow brass handle with screw chuck. Capacity 0 to .028" (0 to .71 mm), overall length 3 1/8" (79 mm).
No. **58.205**



5 PRECISION PIN VISES

Tool steel collets grip firmly when screw chuck is tightened. Chromium-plated handles are hollow to permit holding of long wires. Body is stepped, with the small portion knurled, so that it can be rotated between fingers. The larger portion is smooth so it can be held precisely in lathes and drill presses. Set of 4 precision pin vises. Made in USA.
No. **58.284**

Individual Pin Vises

	Capacity		Length	
No.	(in)	(mm)	(in)	(mm)
58.280	0 to .040"	0 to 1.02	3"	76
58.281	.025" to .062"	0.6 to 1.60	3 1/4"	83
58.282	.050" to .125"	1.3 to 3.20	3 7/8"	98
58.283	.115" to .188"	2.9 to 4.80	4 1/4"	108

PROFESSIONAL EAR PIERCING EQUIPMENT from STUDEX®

The safe and effective way to pierce ears profitably!

EAR PIERCING KITS

Each kit contains a universal ear piercing instrument which pierces three sizes of studs; maxi, mini and regular, plus the additional accessories listed. Studs are 24K goldplate over surgical stainless steel, with surgical stainless steel posts.

1 UNIVERSAL STARTER KIT
Includes 12 pairs of assorted studs in three sizes, non-toxic marking pen, window banner, counter sign, release forms, tube of ear care gel, one pair of training studs and instructions.
No. **65.0997** $56.30

2 UNIVERSAL INSTRUMENT KIT
Includes non-toxic marking pen, tube of ear care gel, one pair of training studs and instructions.
No. **65.0993** $40.70

PIERCED EAR STUDS

Each stock number is sold in packs of one dozen pairs.

3 REGULAR BEZEL BIRTHSTONES
No. **65.0204** Crystal - April $12.95

BEZEL BIRTHSTONE ASSORTMENT (not pictured)
Contains one pair of each month.
No. **65.0213** Regular $13.00
No. **65.0214** Mini 19.05

4 REGULAR TIFFANY BIRTHSTARS
No. **65.0104** Crystal - April $23.60

5 CUBIC ZIRCONIA
No. **65.0460** Maxi $52.00
No. **65.0400** Regular 43.80
No. **65.0450** Mini 49.80

6 REGULAR PEARL BEZEL
No. **65.0301** $12.95

7 TRADITIONAL BALLS
No. **65.0300** Maxi $16.50
No. **65.0200** Regular 12.95
No. **65.0100** Mini 15.75

8 REGULAR STAR SHAPE
No. **65.0501** $12.95

9 REGULAR HEART SHAPE
No. **65.0502** $12.95

EAR PIERCING DISPLAYS

Ideal for increased sales and profits.

10 LARGE EASEL DISPLAY
Complete selection of the best selling pierced ear studs.
No. **65.0981** $44.85

11 SMALL DISPLAY STAND
Selection of 24 styles of pierced ear studs. Compact but effective.
No. **65.0982** $20.60

12 EAR PIERCING ACCESSORIES ALCOHOL PREPS
200 individually wrapped cleaners per box.
No. **65.0900** $6.65

13 EAR PIERCING GEL
Excellent cleaning gel for use immediately after ears are pierced and great for everyday use thereafter. Sold in packs of one dozen.
No. **65.0904** $24.95

14 RELEASE FORMS
A must when working with consumers. Sold in packs of one dozen.
No. **65.0910** $0.65

15 MARKING PEN
Unique pen safely marks the desired area on the ear for placement of the earring stud. Sold individually.
No. **60.719** $2.30





















1 BASIC BLACK TRAYS and CASES

The high contrast and sophistication of black gets results in sales. The vibrant black velvet trays and cases proves that impressive and effective displays need not be expensive. The eight items in this line include trays and cases for 12, 24, 36 and 72 rings. Cases are wood, covered in textured black vinyl, with simply designed metal latches. Slotted black foam under the velvet inserts hold rings firmly in place. Covers are lined in black satin. Trays have decorative gold tooling around the edges.

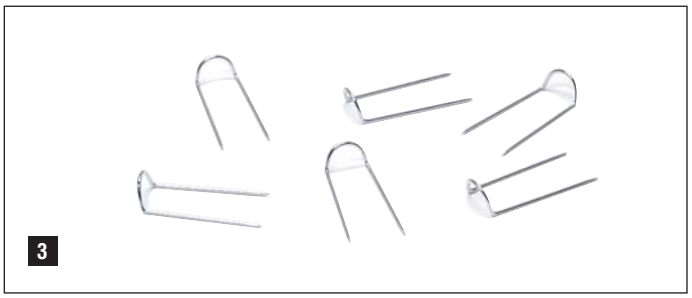
No. **61.502**	12 Ring tray	$7.95
No. **61.504**	24 Ring tray	10.40
No. **61.506**	36 Ring tray	14.05
No. **61.508**	72 Ring tray	22.25
No. **61.512**	12 Ring case	13.35
No. **61.514**	24 Ring case	20.60
No. **61.516**	36 Ring case	24.15
No. **61.518**	72 Ring case	36.05



2 JEWELRY DISPLAY TRAY

Bring out the best in your merchandise. These solid trays are black. Velvet pads are sold seperatrly. Tray measures 14 3/4" x 8 1/4" x 1".

No. **61.537**	Tray	$3.55
No. **61.538**	Black velvet pad	3.95



3 JEWELRY PINS

White or yellow jewelry pins have long, sharp points for pinning all types of jewelry to pads, trays, easels, etc.

No. **61.560**	Box of 1000 white	$15.15
No. **61.561**	Box of 100 white	2.80
No. **61.563**	Box of 1000 yellow	15.15
No. **61.564**	Box of 100 yellow	2.80



4 "MINI-GRIP" ZIPPAK BAGS

Perfect for customer orders, stones, parts, findings, displays, etc. Each 2 mil thick bag has unique locking feature to provide tight seal. Bags are available completely clear or with white label block for marker use. Sold in boxes of 1000.

Size	Clear	Price	With White Label Block	Price
2" x 2"	**61.120**	$13.50	—	—
2" x 3"	**61.121**	16.05	**61.131**	$16.90
3" x 4"	**61.122**	21.20	**61.132**	24.55
3" x 5"	**61.123**	23.25	**61.133**	27.00
4" x 4"	**61.124**	26.20	—	—
4" x 6"	**61.125**	29.95	**61.134**	37.15
5" x 7"	**61.130**	43.70	—	—

ECONOMY BAGS

2 mil thick bags lock to provide tight seal. Bags are available completely clear or with white label block. Sold in boxes of 1000.

Size	Clear	Price	With White Label Block	Price
2" x 2"	**61.12001**	$6.25	—	—
2" x 3"	**61.12101**	8.35	**61.13101**	$10.45
3" x 4"	**61.12201**	12.40	**61.13201**	14.30
3" x 5"	**61.12301**	14.65	**61.13301**	15.95
4" x 4"	**61.12401**	15.95	—	—
4" x 6"	**61.12501**	20.80	**61.13401**	21.45
5" x 7"	**61.13001**	29.45	—	—



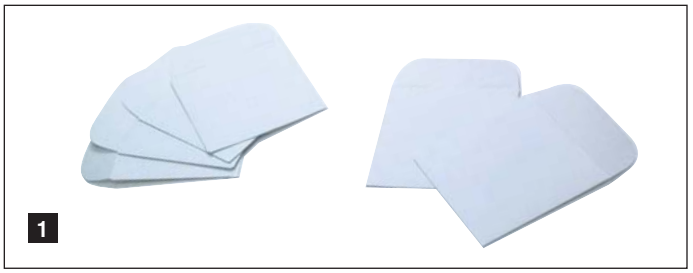
5 WATCH REPAIR ENVELOPES

A neat, printed, colorful green envelope creates a professional appearance and brings in repeat business. Shipping weight for a box of 500 is 7 lbs., box of 5000 is 27 lbs.

No. **61.0103**	Box of 500	$21.20
No. **61.0102**	Box of 5000	198.65

1 COIN ENVELOPES

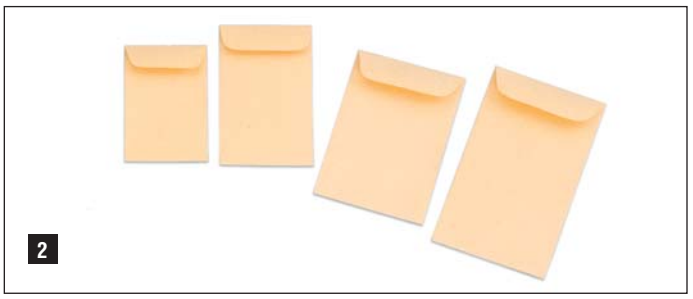
Plain white coin envelope. Envelope measures 1¾" x 1¾".
No. **61.0137** $54.70


1

2 BLANK JOB ENVELOPES

Very handy and can be rubber stamped with your name and address. Identifies your work when you send samples or orders to your supplier and helps prevent misdirected orders. With gummed flaps.

No.	Size	Description	Box	Price
61.110	1½" x 1"	White woven	1000	$88.15
61.111	1½" x 1"	White waxed	1000	92.95
61.112	2¾" x 1¾"	#00 white, coin	1000	37.95
61.0133	3½" x 2¼"	#1 kraft, coin	500	16.80
61.113	4¼" x 2½"	#3 kraft, coin	500	16.50
61.0131	4½" x 3"	#4 kraft, coin	500	18.90
61.114	5½" x 3⅛"	#5½ kraft, coin	500	16.95
61.115	6" x 3½"	#6 kraft, coin	500	19.95


2

3 TRIPLE DUTY KRAFT REPAIR ENVELOPES

Each numbered envelope has two numbered detachable stubs; one for the customer and the other for filing. Available with or without lay-away schedule on back. Envelope measures 5¾" x 3⅛" and is packed 1,000 to a box. Box weight 8 lbs. $43.25

Series Numbers	With Lay-away	Without Lay-away
Series 1 to 1000	**61.151**	**61.15101**
Series 1001 to 2000	**61.152**	**61.15201**
Series 2001 to 3000	**61.153**	**61.15301**
Series 3001 to 4000	**61.154**	**61.15401**
Series 4001 to 5000	**61.155**	**61.15501**
Series 5001 to 6000	**61.156**	**61.15601**
Series 6001 to 7000	**61.157**	**61.15701**
Series 7001 to 8000	**61.158**	**61.15801**
Series 8001 to 9000	**61.159**	**61.15901**
Series 9001 to 10000	**61.160**	**61.16001**

Also available with custom 3-line imprint. Minimum 5,000. Call for details.


3

4 JEWELRY REPAIR ENVELOPES

Attractively designed and printed in rich blue color to help advertise your store and repair services. Box of 5000 is 27 lbs. Envelope measures 5⅝" x 3⅛".
No. **61.172** Box of 500 $20.50
No. **61.170** Box of 5000 199.25
Also available with custom 3-line imprint. Minimum 5,000.


4

5 ACRYLIC JOB ENVELOPE HOLDER

Slim line acrylic job envelope holder is 3½" x 11". Comes with three dividers to keep your job orders separate.
No. **61.500** $22.95


5



1

1 "GIFTS of DISTINCTION" GIFT BAGS

Printed with "Gifts of Distinction" rose design. Available in silver and gold. Sold in packs of 1000.

Silver	Gold	Size	Ship Wght. (lbs)	Price
61.173	**61.174**	4" x 6"	5	$28.35
61.177	**61.178**	5" x 7"	7	34.00
61.179	**61.180**	6" x 9"	11	47.00
61.181	**61.182**	8½" x 11"	18	79.00



2

2 ANTI-TARNISH TISSUE

For wrapping silverware, jewelry and other gifts. Made of the finest quality white bleached tissue, which will not tarnish the merchandise. Comes in rolls or flat reams.

No.	Description	Ship Wght. (lbs)	Price
61.051	7⅜" x 1100" roll	3	$11.75
61.052	20" x 720" roll	7	28.00
61.053	20" x 30" 480 sheets	8	28.00



3

3 ANTI-TARNISH PAPER SQUARES

Fine quality tissue, free of all lint. Sold in boxes of 1000 sheets.

No. **61.0144** Vigor brand 4" square $4.80
No. **23.555** Grobet brand 4¼" square 9.65

4 TISSUE and GIFT WRAP CUTTERS

Has sturdy frame that can be screwed to table.

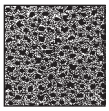
No. **61.091** Metal frame for 24" rolls $56.70
No. **61.092** Wood frame for 7⅜" rolls 11.80



4

FOIL GIFT WRAP

Measures 7½" x 150' $15.50



No. **61.054** Gold Nugget



No. **61.055** Silver Mosaic



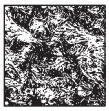
No. **61.058** Bright Gold



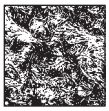
No. **61.059** Matte Silver



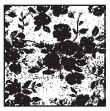
No. **61.063** Green Linen



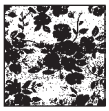
No. **61.067** Blue Gyro



No. **61.068** Silver Gyro



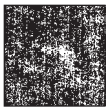
No. **61.069** Floral Gold



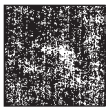
No. **61.070** Floral Silver



No. **61.071** Ribbed Gold



No. **61.072** Blue Taffeta



No. **61.073** Gold Taffeta



No. **61.074** Red Linen



No. **61.075** Silver and White Stripe



No. **61.076** Red and Silver Stripe



No. **61.078** Red Green Gold Swirl



No. **61.079** Bright Silver



No. **61.081** Red



No. **61.082** Dark Green



No. **61.08302** Matte Gold



No. **61.08303**



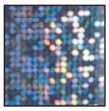
No. **61.08304**



No. **61.08305**



No. **61.095**



No. **61.096**



No. **61.097**

1 DIAMOND SIEVES

Hand-made sieves to sort rough and polished diamonds. Complete set supplied in zippered carrying case. Chart shows plate size of stones per karat; weight and size in millimeters. Each with 21 plates, 0-20.

No. **61.0560** 1⅞" diameter $62.40
No. **61.0565** 2⅝" diameter 102.45



1

2 TRIPLE LAYER FOLDED DIAMOND PAPERS

Both super strong and extra soft. Used to wrap and protect other precious stones. Box of 25 sheets.

No. **61.085** 3" x 1 1/16" $2.80
No. **61.086** 3¾" x 2" 4.35

3 VIGOR PARCEL PAPERS

The brand world renowned for quality. Protects stones, shows them off at their best and keeps stock in order. Three-ply paper measures 7" x 5¾". Sold in boxes of 100.

No.	Use For	Outside Paper	Inside Paper	Price
61.0570	Diamonds	White	Blue	$13.90
61.0575	Diamonds	White	White	9.85
61.0580	Colored Stones	White	Yellow	9.50



2 3

4 SORTING PADS

Fine quality white paper with heavy cardboard backing. Bound on three sides, blotter-style, to prevent curling or lifting. Sold in pads of 50 sheets.

No. **61.0585** 8" x 10" $8.45
No. **61.0586** 10" x 12" 9.25



5

4

5 DIAMOND PAPER WEIGHT

Holds folded diamond paper in open position. Neatly folds up when not in use. Made of stainless steel. Length 6½".

No. **61.080** $5.05



6

6 OFFICIAL JEWELRY APPRAISAL FORMS

Three-part appraisal form, package of 50.

No. **61.171** $16.40

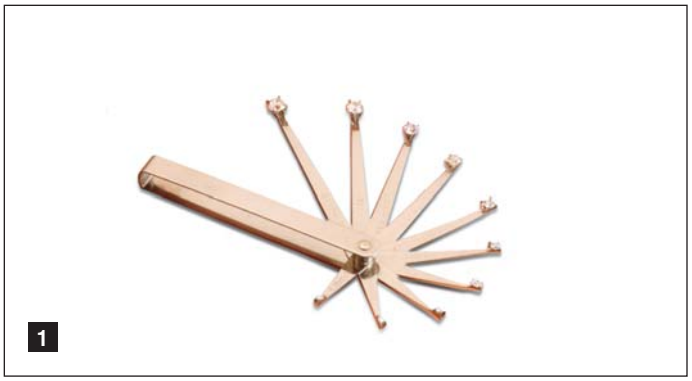


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7 SHOVELS with HANDLES

Excellent for handling diamonds, pearls and other precious gemstones.

No. **61.095** Nickel-plated with chrome finish $2.75
No. **61.0552** Non-reflective black finish 2.75



1 DIAMOND SELLER
Ideal for closing the sale without using expensive stones. Cubic Zirconia mounted on stainless steel arm folds within a protective cover when not in use. With 10 sizes ranging from 0.10 to 2 carats. Each arm has size of the stone in carats and millimeters.
No. **35.555** $36.35



2 GENUINE LEATHER PARCEL PAPER BOX with ZIPPER
Gives maximum protection to stones. Fully felt-lined with elastic band to keep papers in proper order. Measures 7" L x 3 3/4" W x 2" D.
No. **61.0760** $17.50



3 PRONG SETTING DISPLAYS for DIAMONDS
Show off the beauty of a diamond inexpensively in these silver and gold prong setting displays. Your choice of short and long prong settings. Sold in packs of 12.

No. **35.100**	Silver, short prong	$1.75
No. **35.101**	Gold, short prong	1.75
No. **35.102**	Silver, long prong	1.75
No. **35.103**	Gold, long prong	1.75





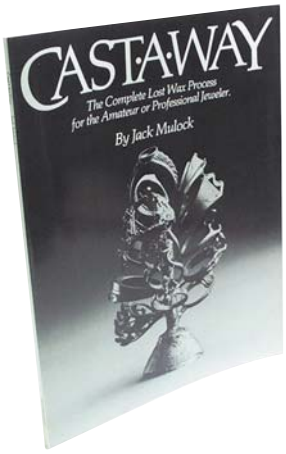




SECURITY WALLETS
Unique, anti-mugger security wallets protect your valuable stones, precious jewelry, money, and important documents. Comfortably worn and completely undetectable. Lightweight 100% cotton fabric with luxury cushion finish. One size fits all.

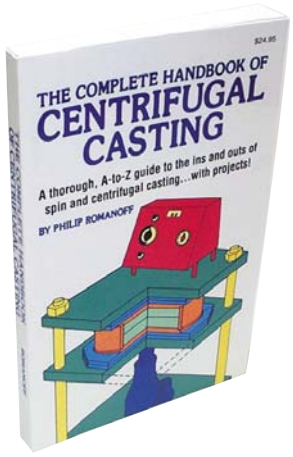
4	**15.203**	Adjustable Shoulder	$8.35
5	**15.204**	Regular Shoulder	9.70
6	**15.205**	Waist Wallet	9.30
7	**15.206**	Arm/Calf wallet	6.75

1 **CAST-A-WAY - The Complete Lost Wax Process for the Amateur or Professional Jeweler**
By Jack Mulock
Begins with a brief description of the tools and supplies necessary, then goes into details of sprueing, investing, burnout, pickling, cleaning and polishing. Soft cover, 61 pages.
No. **62.106**



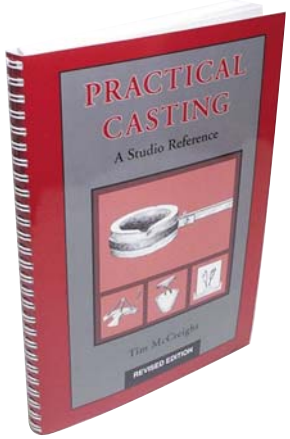
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2 **The COMPLETE HANDBOOK of CENTRIFUGAL CASTING**
By Philip Romanoff
An extremely thorough, A to Z guide to the practical “ins and outs" of casting, including projects. Well-illustrated and well-written by an acknowledged expert in the field. Soft cover, 256 pages.
No. **62.108**



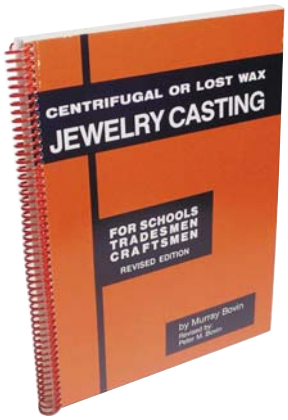
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3 **PRACTICAL CASTING - A Studio Reference**
By Tim McCreight
A studio reference for jewelers, metalsmiths and sculptors. Hundreds of drawings and concise descriptions. A complete appendix includes charts and tables not available elsewhere. Of special note are the thorough safety considerations that make this book a unique addition. Soft cover, 153 pages.
No. **62.107**



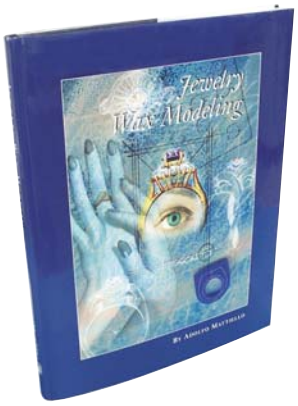
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4 **JEWELRY CASTING - Centrifugal or Lost Wax**
By Murray Bovin
A thorough book covering casting by the centrifugal or lost wax method. Many of the techniques used commercially are explained in detail. While many tips are included for the beginning craftsman, this well-illustrated book is a must for anyone who does professional work. Chapters on mold making, casting waxes, sprueing and investing, burnout, centrifugal casting machines, etc. Soft cover, 144 pages.
No. **62.102**



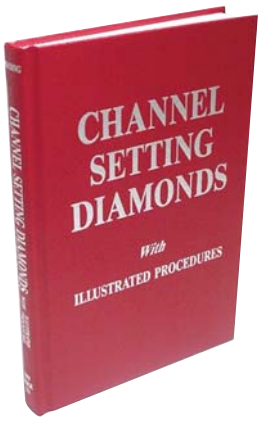
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5 **JEWELRY WAX MODELING**
By Adolofo Mattiello
This book has been written by one of the world’s best known jewelers and model makers. His knowledge of creating jewelry from the wax modeling method will prove invaluable to beginners and professionals alike.
No. **62.493**

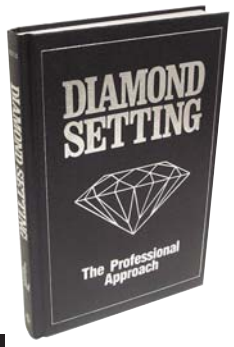


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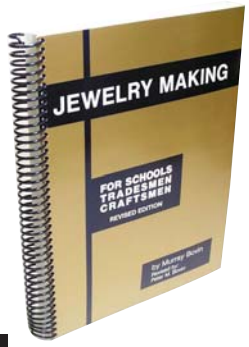
6 **CHANNEL SETTING DIAMONDS with Illustrated Procedures**
By Robert R. Wooding
Written to help clarify misinterpretations about channel setting diamonds. The book explains the fundamentals with the help of illustrations. It also provides an opportunity for diamond setters to learn how to set diamonds by a variety of means, under different situations. Hard cover, 140 pages.
No. **62.446**



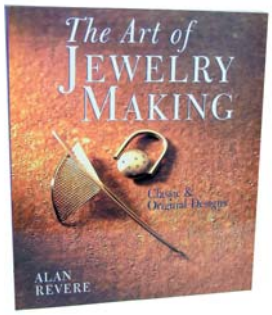
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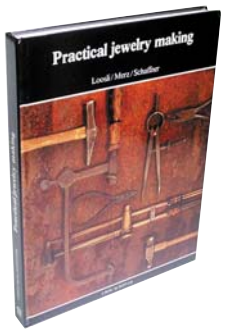
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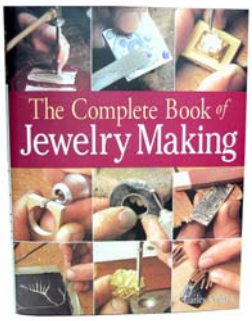
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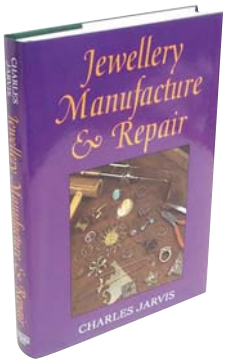
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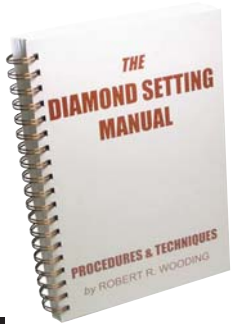
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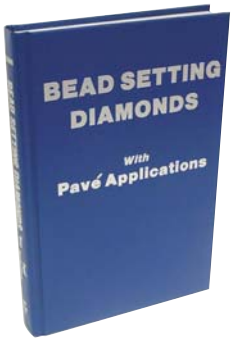
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1 DIAMOND SETTING - The Professional Approach
By Robert R. Wooding
Experienced diamond setters as well as beginners can benefit from reading this book. It begins by describing the tools and supplies necessary and goes on to detail the steps necessary to do pin-point settings, prong settings (both round and fancy cut), bezel settings, channel settings, fishtail settings and bead settings.
Hard cover, 178 pages.
No. **62.450**

2 JEWELRY MAKING for Schools/Tradesmen/Craftsmen
By Murray Bovin
Revised and enlarged edition. Clear text, with useful photographs and diagrams of fundamental processes and techniques such as enameling, plating and etching. Includes sections on the three types of casting, stones used for jewelry and methods of setting stones. Appendix and supplementary tables. Soft cover, 288 pages.
No. **62.451**

3 The ART of JEWELRY MAKING - Classic and Original Designs
by Alan Revere
Explore magnificent treasures from inventive, contemporary artisans that range from bold and modern, cool and elegant to quirky and funky. This comprehensive book includes an introductory section on the importance hand tools. Essential techniques like engraving, forging, soldering and enameling are also described.
No. **62.510**

4 PRACTICAL JEWELRY MAKING
By Loosli/Merz/Schaffner
Details valuable exercises from trainee level to master working procedures. The use of each tool is described as well as a presentation of basic exercises. A special section follows where room is left for the drawing imposed by the master and space is provided for illustrating the apprentices own creation. It can be a handy workshop aid and reference book for the experienced professional. Hard cover, 164 pages.
No. **62.01409**

5 The COMPLETE BOOK of JEWELRY MAKING
By Carles Codina
This complete source book is full of techniques that will open up endless creative possibilities in all aspects of jewelry making. Learn the secrets of cutting and piercing, forging, embossing, enameling, annealing, pickling and more. This beautifully illustrated book is a great addition to any library.
No. **62.517**

6 JEWELRY MANUFACTURE and REPAIR
By Charles Jarvis
With over 280 line drawings, it's a comprehensive reference book which covers the entire field of jewelry manufacture and repair.
Hard cover, 212 pages.
No. **62.459**

7 The DIAMOND SETTING MANUAL - Procedures and Techniques
By Robert R. Wooding
Discussions and illustrations describe how diamonds are set in specific settings. the procedures and techniques detailed in this book will help the diamond setter advance in his skills.
No. **62.447**

8 BEAD SETTING DIAMONDS with Pavé Applications
By Robert R. Wooding
Detailed, well-illustrated instructions will assist the apprentice as well as the expert. Tools, bead setting procedures, applications and pavé setting are the four major sections. Many enriched techniques are included.
Hard cover, 192 pages.
No. **62.449**

1 ART of DIAMOND SETTING
By Ray Schow
You will start by learning the procedures and techniques for bead setting and bright cutting and go to more advanced work. With over 220 detailed photos, complicated operations are made simple. This book is a guide to help you with your setting. It will help you learn to set stones from scratch or to improve the setting you are now doing. Soft cover, 220 pages.
No. **62.440**

2 The DESIGN and CREATION of JEWELRY
Revised edition by Robert Von Newman
This classic covers materials, tools, sources of supply, basic and specialized metalworking, shaping and decorative techniques. It includes detailed information on lost wax casting and emphasizes new soldering and cleaning techniques. Soft cover, 271 pages.
No. **62.455**

3 JEWELRY - Contemporary Design and Technique
By Chuck Evans
Lavishly illustrated and offering all of the information needed to create handmade jewelry. More than 65 metalworking techniques are clearly explained in this invaluable reference tool with over 500 illustrations. Hard cover, 296 pages.
No. **62.464**

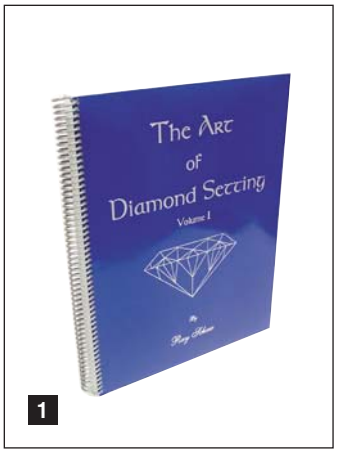
4 JEWELRY - Concepts and Technology
By Oppi Untracht
The definitive guide and handbook for jewelry makers of all levels of ability. Ten years in preparation and production make this one of the most comprehensive books available on the subject. Contains work by 300 jewelers from 26 countries, with 900 photos and over 300 illustrations. Hard cover, 840 pages.
No. **62.498**

5 JEWELER'S RESOURCE - A Reference of Gems, Metals, Formulas and Terminology for Jewelers
By Bruce Knuth
A unique and practical tool for the bench jeweler and student, as well as the retail jeweler. Easy to follow text and illustrations on many aspects of gems and jewelry including: a listing of gems and gem properties, a list of birthstones, diagrams of more than 40 gem cutting styles, legal standards of diamond, gold and silver marketing, formulas and chemical preparations, ring size gauges and sizes, measurement conversion tables and more. Soft cover, 112 pages.
No. **62.443A**

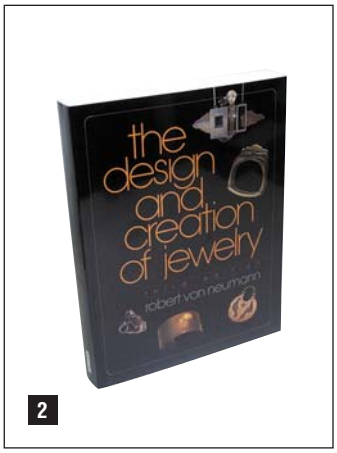
6 The COMPLETE METALSMITH - An Illustrated Handbook
By Tim McCreight
An illustrated handbook describing everything from metals and their properties to tools and how to use them. Easy-to-follow index makes the answers easy to find. Soft cover, 195 pages.
No. **62.500**

7 JEWELRY - Fundamentals of Metalsmithing
By Tim McCreight
Offers the beginning and intermediate metalsmith clear and insightful instruction on jewelry-making methods. Subjects include cutting and bending; texturing; fusing and soldering; cold connections; finishing and patina; stone setting; casting; mechanisms and chains. Illustrated with both demonstration and completed jewelry photos. Hard cover, 145 pages.
No. **62.473**

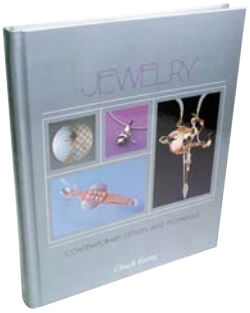
8 METALS TECHNIC - A Collection of Techniques for Metalsmiths
This unique collection gathers the experience of a dozen leaders of fine metalsmithing. From techniques as ancient as granulation and depletion gilding to the latest word in fold forming and anticlastic raising, this book is a valuable addition to every jewelry makers' library. Hard cover, 151 pages.
No. **62.471**



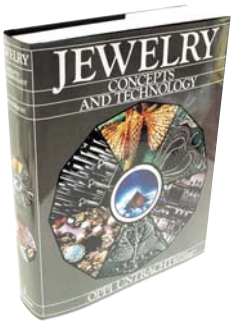
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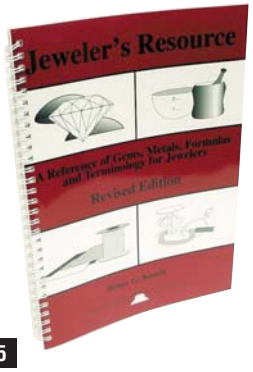
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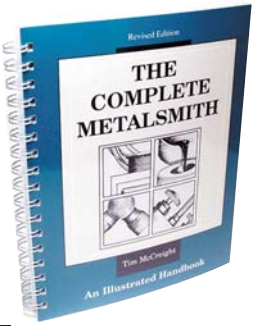
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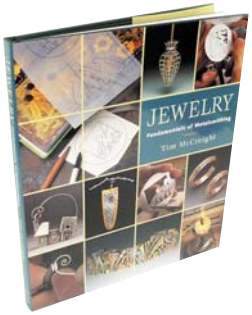
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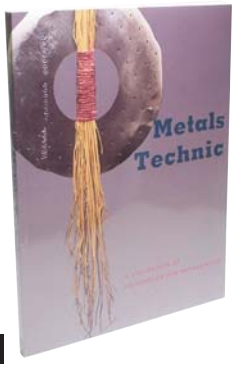
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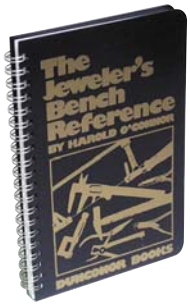
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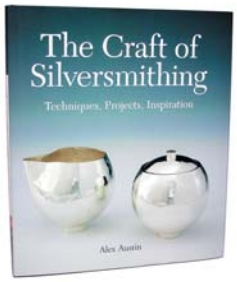
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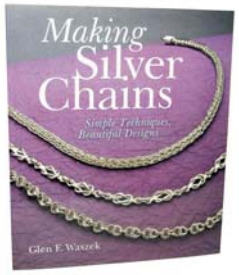
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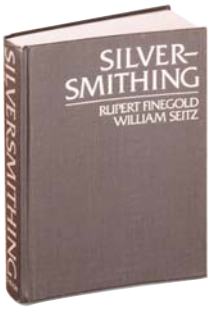
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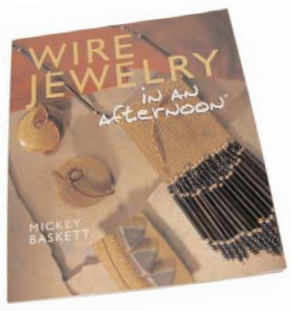
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1 The FLEXIBLE SHAFT MACHINE - Jewelry Techniques
By Harold O'Connor
The flexible shaft machine is probably used more often than any other tool by the practicing craftsman. This well illustrated book serves as a starting point. Soft cover, 47 pages.
No. **62.499**

2 The JEWELER'S BENCH REFERENCE
By Harold O'Connor
A wealth of information on findings, processes, techniques and materials for the novice or intermediate craftsman. Instructs on care and use of equipment and gives expert information on jewelry making techniques. Soft cover, 68 pages.
No. **62.460**

3 SILVERSMITHING and ART METAL for Schools/Tradesmen/Craftsmen
By Murray Bovin
Written for all who do metalsmithing. Contains the latest techniques and practical ideas and includes chapters on art metal work. Instructions are clear, easy to follow and are supported by over 300 illustrations. Soft cover. 184 pages.
No. **62.456**

4 The CRAFT of SILVERSMITHING - Techniques, Projects, Inspiration
By Alex Austin
Create shimmering, sophisticated silversmithed projects using hammers, stakes and other simple tools. This fresh look at a classic craft Is a great introduction for beginners and a great source of new techniques for those with more experience.
No. **62.512**

5 MAKING SILVER CHAINS - Simple Techniques, Beautiful Designs
By Glen F. Waszek
Silver chains are the backbone of any jewelry collection! Walk through the basic processes of silver-working, from soldering to pickling. Start with the basic trace design and work up to sophisticated and original designs.
No. **62.511**

6 SILVERSMITHING
By Rubert Finegold and William Seitz
Silversmithing is an art form in itself. The authors, with their hard-earned knowledge, show you hundreds of details that will make your work special, not just ordinary. Hard cover, 460 pages.
No. **62.501**

7 WIRE JEWELRY in an Afternoon
By Mickey Baskett
These simple projects will appeal to every taste and style, from simple to elegant. Inexpensive to craft, you'll learn an array of techniques to help create original designs
No. **62.515**

8 MAKING METAL JEWELRY - Projects, Techniques, Inspiration
By Joanna Gollberg
Create a wide array of jewelry without having to solder or use a torch. Cold connecting metal techniques provide a solid base or all types of metal work. Learn to create earrings, bracelets, necklaces, etc.
No. **62.516**

1 GOLDSMITHING and SILVER WORK - Jewelry, Vessels and Ornaments
By Carles Codina
Take your goldsmithing and silver work to the next level using time-honored techniques in new exciting ways. Learn the skills essential for the creative jeweler to become proficient in this craft, including construction and soldering to casting and working with platinum.
No. **62.518**

2 TECHNIQUES of JEWELRY ILLUSTRATION and COLOR RENDERING
By Adolfo Mattiello
Illustrating jewelry is the act of transforming ideas into reality. Professional looking illustrations give the designer an advantage. This manual brings the talents and expertise of outstanding jewelry designers into one volume. The templates provide support in giving your ideas a pleasing visual rendering. The manual and template set together, helps either student or trained designer bring design ideas to life.
No. **62.495** Manual with 5 templates
No. **62.49501** Manual only
No. **62.49502** Set of 5 templates

3 SOAPSTONE CARVING for CHILDREN
By Bonnie Gosse
A book for adults as well as children. Takes the novice through simple step-by-step instructions, tool descriptions, detailed photos and how-to sketches. Soapstone is an inexpensive, soft material found all over the world, ideal for carving. Soft cover, 47 pages.
No. **62.101**

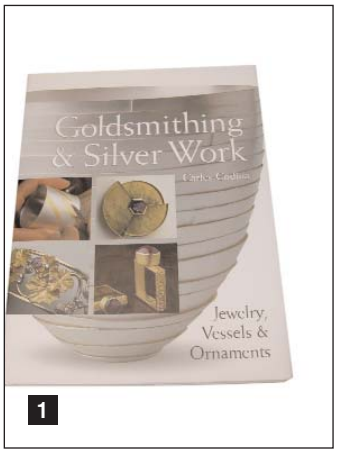
4 The ART of ENGRAVING
By James B. Meek
A magnificent, deluxe book with nearly 1400 photos, drawings and designs. Many focus on gun engraving, but the techniques can be universally applied. This is an instant classic on which no effort was spared. Hard cover, 196 pages.
No. **62.356**

5 PRACTICAL JEWELRY REPAIR
By James Hickling
Provides detailed information about the methods and techniques of the professional repairer and restorer of jewelry. The book is based on the author's 30-year personal experiences in the industry. Hard cover, 192 pages.
No. **62.453**

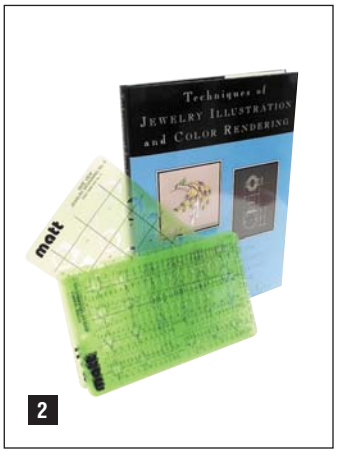
6 The ART of ENAMELING - Techniques, Projects, Inspiration
By Linda Darty
A complete course in enameling for beginners and more advanced artisans. Learn about each type of enamel, tools and equipment needed as well as detailed information in preparing, applying, firing, and setting. No. **62.514**

7 ENAMELS... ENAMELING... ENAMELISTS
By Glenice Lesley Mathews
Features an introduction to enameling along with descriptions of materials and equipment necessary to do enameling. Also gives step-by-step directions for six projects, using the following techniques: Sgraffito and stencils, wet packing, threads and blobs, limoges, renderings, and cloissone. Hard cover, 177 pages.
No. **62.304**

8 CUSTOM KNIFEMAKING - 10 Projects from a Master Craftsmen
By Tim McCreight
Step-by-step illustrated instructions for making 10 unique and beautiful pieces ranging from pre-cut to art knives. Includes sections on tools, materials, forge set-up, sheathmaking and knife design. Soft cover, 222 pages.
No. **62.01513**



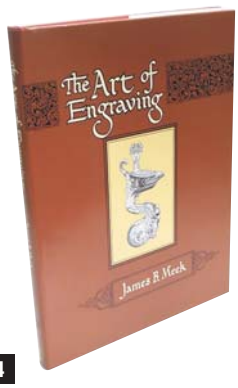
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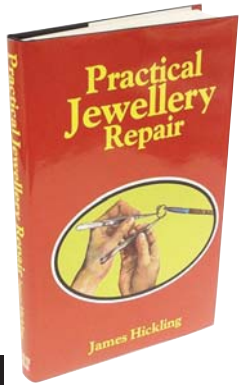
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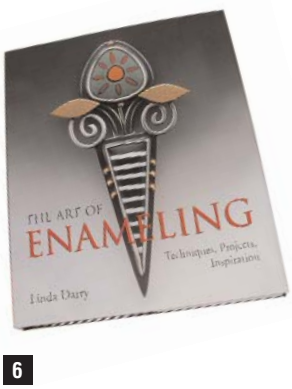
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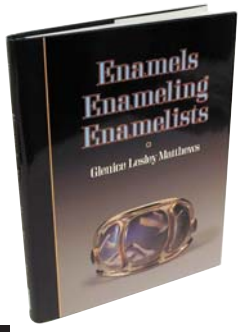
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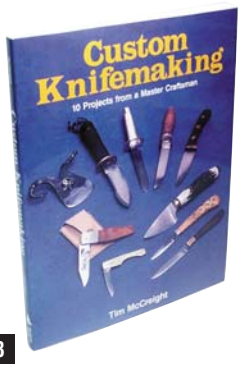
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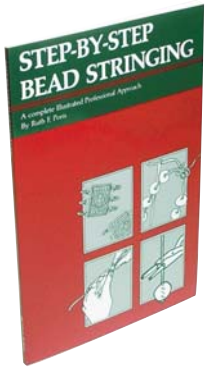
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1 GROBET USA™ PLATING GUIDE

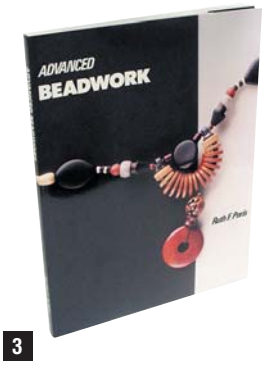
A complete booklet on the subject of plating precious metals.
Soft cover, 12 pages.
No. **62.01215**



2

2 STEP-BY-STEP BEAD STRINGING - A Complete Illustrated Professional Approach

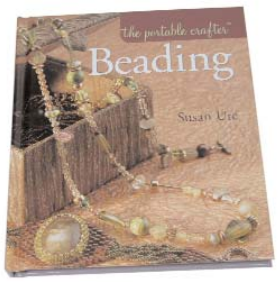
By Ruth F. Poris
Describes basic tools, supplies and findings for bead stringing and describes in detail the techniques necessary to string multiple strands, endless strands and plain strands. Soft cover, 45 pages.
No. **62.463**



3

3 ADVANCED BEADWORK

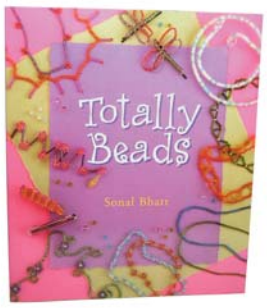
By Ruth F. Poris
With over 300 illustrations and photographs. A perfect book for teachers or individuals having an interest in beadwork. Soft cover, 146 pages.
No. **62.466**



4

4 BEADING - The Portable Crafter

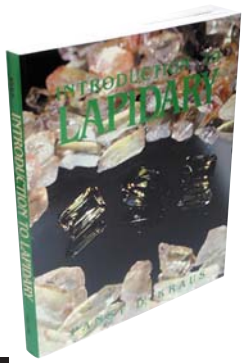
By Susan Ure
This book contains quick and easy projects that can be completed anywhere. Create bracelets, pins, earrings and more!
No. **62.508**



5

5 TOTALLY BEADS

by Sonal Bhatt
Beaded projects that are fun, fashionable and easy to make. This book is great for any beginner or teenager interested in beading.
No. **62.509**



6

6 INTRODUCTION to LAPIDARY

By Pansy D. Kraus
An introduction to all aspects of lapidary, describing the processes and tools and equipment, from the basics of getting started to studio visits with renowned artists. Many photographs and illustrations. Soft cover, 196 pages.
No. **62.01503**



7

7 The BASICS of BEAD STRINGING - A Complete Illustrated Approach for Beginner and Advanced Designers

By Debby Kanan
Well illustrated, completely updated, including: tools, bead selection, stringing materials, getting started, hand knotting a necklace and helpful tips. Illustrations are life sized and very easy to follow.
Soft cover, 48 pages.
No. **62.465**



8

8 PEARL and BEAD STRINGING with Henrietta

By Henrietta Virchick
Step-by-step demonstrations enable you to create genuine, precious and semi-precious jewelry, or restring pearls and beads quickly and easily. Included are various beading techniques such as finger knotting and using tools correctly. Contains many illustrations and color photographs of finished products. Soft cover, 78 pages.
No. **62.01453**

1 **GEM IDENTIFICATION MADE EASY**
By Antoinette L. Matlins and A.C. Bonanno
This book explains in non-technical terms how to use pocket, portable and laboratory instruments to identify diamonds and colored gems. It also shows how to separate real gems from the imitation and look-alike. Hard cover, 270 pages.
No. **62.412**

2 **GEMSTONES**
By Christine Woodward and Roger Harding
This book, with color pictures, discusses stones and gems in their natural state and details how they are mined. The book also focuses on the most valuable cut gems. Soft cover, 76 pages.
No. **62.418**

3 **GEMSTONES of the WORLD**
By Walter Schumann
Authoritative reference work, with color photographs of more than 1400 specimens, many shown before and after cutting. Special sections on fabricated and synthetic gems, recognizing gems by color, birthstones and organic gems such as coral and pearl. Includes technical data on gemstone properties, formation and structure of gems and cutting. Soft cover, 256 pages.
No. **62.417**

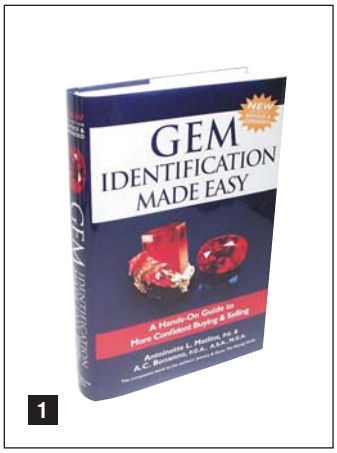
4 **GOLD and PLATINUM JEWELRY BUYING GUIDE**
By Renée Newman, GG, MA
This guide offers detailed guidelines on judging jewelry quality. Covers how to buy jewelry on a budget, how to detect fakes, caring for your gold and platinum jewelry, and how to spot poor craftsmanship. Gives you a wealth of information on gold chains, mountings, multi-colored gold and coin jewelry. Many photographs, both color and black and white. Soft cover, 156 pages.
No. **62.01504**

5 **DIAMOND RING BUYING GUIDE**
By Renée Newman, GG, MA
Explains how to spot value and avoid rip-offs. Written by an experienced gemologist, it gives practical advice on selecting diamonds and ring mountings. Also tells how to care for and protect diamond jewelry, and how to compare prices of gold, platinum and diamond jewelry. Soft cover, 150 pages.
No. **62.404**

6 **GEM and JEWELRY POCKET GUIDE**
By Renée Newman, GG, MA
Find simple buying tips from a respected gemologist in this handy pocket-sized guide. It contains highlights on diamonds, pearls, colored gem stones, platinum and gold jewelry. Great for shoppers and travelers. Soft cover, 156 pages.
No. **62.405**

7 **The PEARL BUYING GUIDE**
By Renée Newman, GG, MA
Pearl buying made simple. Written in easy-to-read everyday English by consumer author Renee Newman, GG (GIA), a gemologist, lecturer and talk show guest. Lots of explanatory photos and step-by-step pointers on how to buy the best pearls for the money. Learn how to recognize real pearls, compare prices and save money. Soft cover, 188 pages.
No. **62.406**

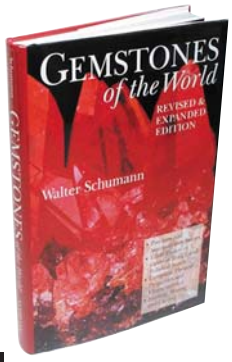
8 **JEWELRY and GEMS - The Buying Guide**
By Antoinette L. Matlins and A.C. Bonanno
With over 100 illustrations, it's a thorough, comprehensive, easy to understand laymans course in gem and jewelry buying. Valuable price charts, money-saving tips, a "how-to-know-what-you're-buying" book. Covers diamonds, pearls, precious and other popular gems. Soft cover, 213 pages.
No. **62.411**



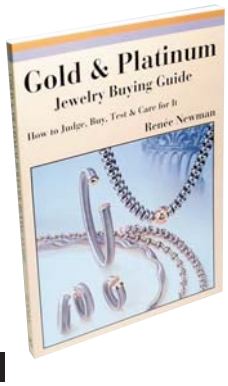
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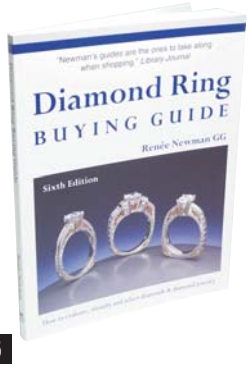
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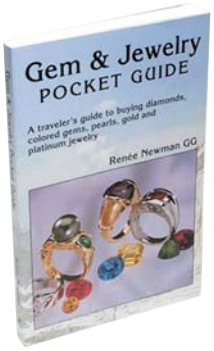
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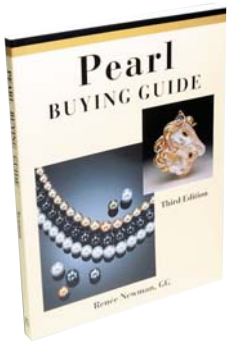
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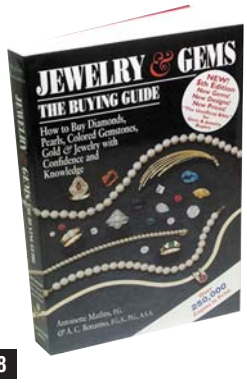
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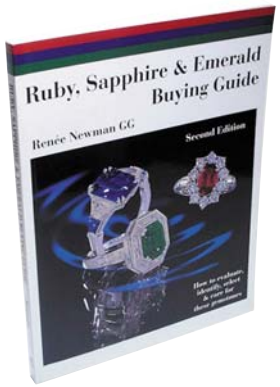
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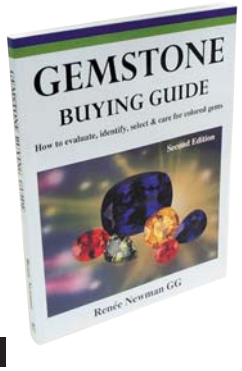
1

1 RUBY, SAPPHIRE and EMERALD BUYING GUIDE

By Renée Newman, GG, MA

Written by a gemologist and lecturer with broad experience who will teach you how to tell a ruby from red glass and a good sapphire from a bad one. The first and only consumer book on the ruby, sapphire, & emerald. Tells you how to spot value and avoid rip-offs. Many photos and step-by-step pointers on how to get the most for your money. Soft cover, 204 pages.

No. **62.414**



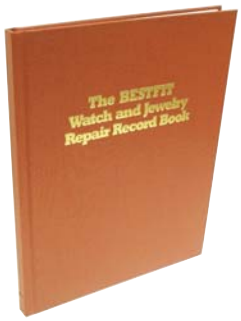
2

2 GEMSTONE BUYING GUIDE

By Renè Newman GG, MA

A full-color, comprehensive guide to evaluating, identifying, selecting and caring for a variety of colored gem stones. The Gemstone Buying Guide teaches both consumers and professionals how to judge color, transparency, flaws and brilliancy. A valuable resource for every jewelers' and gem lovers' library. Soft cover, 148 pages.

No. **62.422**



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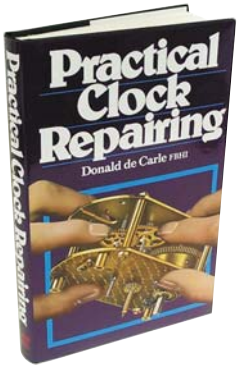
3 The BESTFIT WATCH and JEWELRY REPAIR RECORD BOOK

Hard cover, 142 pages.

Complete Information:

• Name and address of owner • Tag and record number • Dates received, repaired and delivered • Received by and delivered to • Complete description of case, case no., movement no. and markings • Repairs made with charges and special information • Wide spaces between lines • Wide spaces for each category of information • Room for 2000 entries • Each line is a complete transaction with all information at your fingertips. • These records should be kept for at least three years.

No. **62.01135**



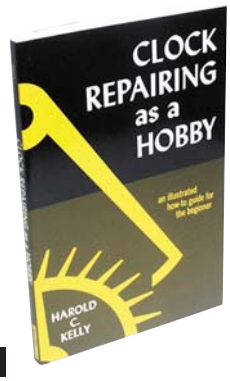
4

4 PRACTICAL CLOCK REPAIRING

By Donald de Carle, FBHI

Deals with the usual faults likely to develop in each type of movement in general use, from grandfather to alarm clocks. All tools and equipment are described and illustrated, along with information on proper use. With 400 illustrations. Hard cover, 240 pages.

No. **62.225**



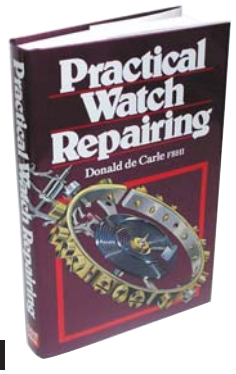
5

5 CLOCK REPAIRING as a HOBBY

By Harold C. Kelly

Intended for the beginner, it's main purpose is to provide basic information and guidance without overwhelming the novice with more detailed knowledge than he can use. Step-by-step introduction on what to expect when opening a clock. Each major system of the clock is described and explained in detail. Separate chapters discuss typical problems, cleaning techniques, regulations and common repairs Also of special interest is a chapter on tools and equipment. With 48 illustrations. Soft cover, 124 pages.

No. **62.218**



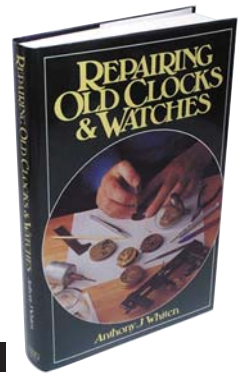
6

6 PRACTICAL WATCH REPAIRING

By Donald de Carle, FBHI

This book contains 550 illustrations describing the theories and processes of repairing and adjusting the modern watch precisely and with meticulous detail. Hard cover, 299 pages.

No. **62.224**



7

7 REPAIRING OLD CLOCKS and WATCHES

By Anthony Whiten

Geared for the less affluent collector. Concentrates on the more common timepieces available and how to deal with each component, suggesting original short cuts and ingenuous ideas for making simple tools. Step-by-step sequences and complete movements with all important parts identified in position. High readability and originality. Hard cover, 296 pages.

No. **62.243**

TURN YOUR VIDEO RECORDER INTO YOUR PRIVATE INSTRUCTOR!
Video tapes enable you to learn and improve your craft by watching as well as listening. Tapes give you the ability to review each section as many times as necessary. Having a tape is like having an instructor next to your bench. All tapes are available in VHS format.



DIAMOND SETTING

A series of instructional video tapes covering various aspects of diamond setting by Robert R. Wooding, world renowned diamond setter and author. Each video tape includes step-by-step demonstrations and close-up viewing with the use of genuine diamonds and 14K gold. Ideal for beginners or advanced setters. Be sure to look in our book section for books by Robert R. Wooding.

DIAMOND SETTING - An Introductory Procedure
Covers basic diamond setting procedures, along with an explanation of the necessary tools and their uses. Running time: 53 minutes.
No. **63.003**

FANCY CUT DIAMONDS
Covers advanced diamond setting techniques, using fancy cut diamonds; oval, pear, heart-shaped, marquise, triangular and emerald cut. Running time: 1 hour, 53 minutes.
No. **63.001**

CHANNEL SETTING DIAMONDS
Covers advanced diamond setting techniques; open channels, curvature channels and inlaid channels for round and square cut diamonds. Running time: 1 hour.
No. **63.002**

DIAMOND and STONE SETTING
Stone setting techniques such as prong, hammer, bead and pave. Running time: 40 minutes.
No. **63.1420**

WAX MODELING the MATT WAY
Professionally prepared video tape showing the versatility and simplicity of wax-working with Matt tools. Running time: 16 minutes.
No. **63.1422** VHS version
No. **63.1422/PAL** PAL version for use in Europe

PEARL STRINGING... WHY KNOT?
Instructional tape divides the subject into a series of steps. Stringing and knotting are thoroughly covered in an easy to follow manner with practice exercises. Running time: 15 minutes.
No. **63.1425**

TRI-CORD™ PROFESSIONAL BEAD STRINGING
An instructional video tape demonstrating use of the Tri-Cord™ knotting tool. Running time: 30 minutes. See our Tri-Cord™ knotting tool and kits on page 23.
No. **63.01513**

PEARL and BEAD STRINGING with Henrietta
Henrietta Virchick teaches you how to make a beautiful mother-of-pearl necklace and bracelet. You are given step-by-step instructions on various techniques for creating genuine, precious and semi-precious high fashion jewelry. Useful for beginners or experienced craftsmen. Running time: 50 minutes.
No. **63.1514**

The COMPLETE METALSMITH by Tim McCreight
A video encyclopedia of basic jewelry making techniques. Covers the major elements of joining, cutting, forming and surface techniques. Included is a section illustrating techniques for making three pieces of jewelry. Running time: 70 minutes.
No. **63.004**

GOLD REFINING
Shows the basic refining process in an easy to understand format. Covers the chemicals, acids and equipment needed to recover gold from workshop waste with actual step-by-step demonstrations of the refining process for three precious metal wastes; sweeps, karat gold and stripping sediment. Running time: 58 minutes.
No. **63.1402**

PLUMB GOLD SOLDERING and RUBBER MOLD CUTTING
The first part of this dual topic tape gives you an overview of torch soldering, covering its varied uses and applications. The second part deals with the correct procedure for cutting and preparing rubber molds. Running time: 45 minutes.
No. **63.1416**

LOST WAX CASTING
The complete lost wax casting cycle is discussed and demonstrated. Forming, sprueing, investing, casting, burnout and finishing are performed. Running time: 72 minutes.
No. **63.1418**

INVESTMENT CASTING PARTS I, II and III
The theory and proper techniques of the casting process are covered. Includes demonstrations of wax model making, sprueing, mold making and cutting, investing, burnout, vacuum casting and metal melting. Two tape set. Total running time: 3 hours.
No. **63.1419A**

INVESTMENT CASTING PARTS IV and V
A complete demonstration of the lost wax casting process as described in parts I, II and III. Total running time: 70 minutes.
No. **63.1419B**

Videos are supplied in sealed packages and cannot be returned if seal has been broken for any reason.

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

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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.

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

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