

BIG FOOT



Only 12" wide by 11" deep by 6¼" high!
Stores even smaller at 12"x 6 ¼" x 6 ¼".

BIGFOOT GEM-MAKER Comes with two 2 ¾" x 1 ⅛" Galaxy Wheels (80 and 220 grit), four 2 ¾" x 1 ⅛" Nova Wheels (280, 600, 1200 and 3000 grit); two Nova wheel adaptors, one 4" canvas pad, 1 gram syringe 14,000 diamond compound, halogen lamp, cab rest, full size Spray Mist coolant system, and variable speed D.C. motor using 115V current.

500-BF-100 16 lbs 1245.00

TRIM SAW ATTACHMENT Comes with 4" x .014 x ⅝" diamond saw blade, blade adaptor and saw table.

500-BFS-105 2 lbs 105.00

NOVA WHEEL ADAPTOR for mounting extra Nova Wheels.

501-ADP-BFR 1 lb. 47.25

NOVA SPACERS Use these spacers when using extra Nova Wheel adaptor. Spacers are 1 ⅛" wide with 1" AH.

501-BFSP-1 ⅛" 6 ozs. 5.50

It wasn't easy to squeeze most of the capabilities of a Genie into a machine the size of a shoebox, but that's BigFoot!

BigFoot is designed to be more convenient in size and weight with only minor compromises in it's capacity to cut stones, and **NO COMPROMISE** at all in quality.

You can grind and polish calibrated cabochons up to 52 x 38 with ease, as well as larger stones of baroque shapes. You have plenty of room between the wheels for making crosses and hearts.

With the trim saw attachment, BigFoot can trim out your smaller slabs with ease. Takes only a minute to remove the right hand wheel adaptor and spin on the adaptor with the saw blade. And blade, adaptor, and saw table all fit into compartments of BigFoot for convenient storage and transport.

Check out these BigFoot features:

- ✓ **Uses six 2 ¾" Galaxy and Nova Wheels in our standard sequence. You can grind and polish with ease using these diamond wheels**
- ✓ **Four wheels are mounted at once for wide (1 ⅛") wheel spacing, with the rapid (no tools required) wheel change feature found on the Genie.**
- ✓ **Uses our standard Spra-Mist coolant system providing plenty of water to the wheels.**
- ✓ **Special pans for using Magnetic Novas are included so that you can polish flats on the right hand side of your BigFoot. (Four inch Magnetic Novas and the proper back plate are sold separately. See pages 16 & 17).**
- ✓ **Has a variable speed control on a quiet, premium quality, D.C. motor. You get plenty of power for the job.**
- ✓ **A halogen lamp is standard equipment, giving you plenty of light right on your work area.**
- ✓ **In spite of it's size, BigFoot actually gives you convenient storage space for accessories, and other tools. You won't believe the efficiency of BigFoot's size and space.**

Put fun and pride into your lapidary hobby or profession—get the right tools for the job

YOU CAN CUT, shape and polish gemstones with speed and ease if you have the right tool for your particular job. Just as a hammer and saw are the basic tools of a carpenter, so are the grinding/polishing machine and rock saw the basic tools of the lapidary. After those, you can add specialty tools to your heart's content, depending on what you want to do.

Start with the best you can afford, especially with your saw and grinding unit. As any wise buyer knows, price alone is not a guide to a good buy—it's what you get for what you pay.

You get real value for your money when you own one of our Gem-Makers. We've designed them to give you lasting service, unusual convenience, and best of all—top per-

formance to put real pleasure into your lapidary hobby or profession.

OUR GEM-MAKERS ARE TOP PERFORMERS because of our diamond grinding and polishing wheels, the way they are made, and their special grit combination. They work fast and efficiently, giving you a beautiful polish on most stones in a matter of minutes.

PROCEDURE IS SIMPLE. Grind your cabochon to shape on the 80 grit Galaxy metal-bond diamond grinding wheel, then proceed to the 220 grit Galaxy wheel to remove all deep scratches. Coarse sanding is done on the 280 grit Nova resin-bond diamond wheel. Spend enough time on this wheel to completely remove all



Big FOOT

scratches left by the grinding wheels, then proceed to the three Nova wheels on the right for final sanding and polishing. For those stones needing another step, we include a pad and diamond compound.

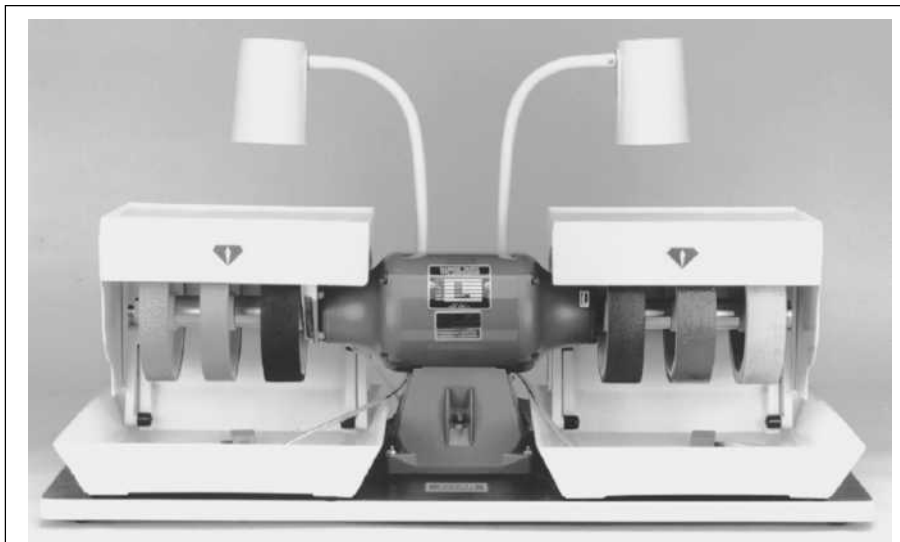
WE MAKE IT SOUND EASY, AND IT IS, EVEN FOR BEGINNERS.

Your first stone may take half an hour or longer, depending on size, material and your own skill, but with practice, you can do a 30 x 40mm agate cab from pre-form to finished stone in ten minutes on a Genie (old pros do it in less). Our machines have this capability because of the diamond wheels and the way they are built.

OUR NOVA RESIN-BOND diamond sanding and polishing wheels out-perform any other method available.

Novas are permanently charged with diamond embedded in a tough, flexible plastic resin backed by a thick, sponge rubber backing. This soft, flexible construction enables the surface of the Nova to conform to your stone, eliminating flat spots and scratches so difficult to remove with other methods of polishing. Novas are durable and do the job fast and efficiently.

The diamonds in our Galaxy metal-bond diamond grinding wheels are plated on a steel rim with nickel alloy. You'll appreciate their smooth, true-running surface, the fact that they never need dressing, and their fast, cool cutting speed.



TITAN WITH STANDARD GRIT SEQUENCE OF WHEELS

From left to right:

- | | |
|---|--|
| 1. 80 grit Galaxy Metal Bond diamond wheel for rough grinding and shaping | and removing scratches from metal bond wheels. |
| 2. 220 grit Galaxy Wheel for final shaping and removing scratches from 80 grit wheel. | 4. 600 grit Nova Wheel for fine sanding |
| 3. 280 grit Nova Resin-Bond wheel for sanding | 5. 1200 grit Nova Wheel for pre-polish |
| | 6. 3,000 grit Nova Wheel for polish |

You'll get the job done fast with a hard working Gem-Maker

FIRST, ALL SIX WHEELS ARE MOUNTED AT ONCE on the three larger machines so you can proceed from one step to the next during the entire grinding and polishing operation. This is important when you consider time. Even the BigFoot has easy wheel change. (See page 1.)

Shown on page 2 is the Titan with our new wheel sequence. Wheels are easily removed on the Titan and Genie and BigFoot so that special carving or other wheels can be installed. Using extra adaptors to mount your special wheels on the Genie and BigFoot makes the change from one set of wheels to another even easier.

EQUALLY IMPORTANT TO THE PERFORMANCE OF THE GEM-MAKERS IS THE SPRAY-MIST COOLANT SYSTEM. Basically, it's an air pump that operates geysers to supply a fine water spray to the underside of the wheels. This means a trouble-free pump (because it pumps air, not water and can't become clogged) and no special plumbing. Pour a little water in the pan and go to work.

Best of all, you have a grinding and polishing machine so clean you can use



Extra adaptors for extra wheels make wheel change easy. Shown above are carving wheels on the Genie using extra adaptors.

it in your kitchen or den without making a lot of mess. You can enjoy your hobby in your house during winter when it's too cold outside in the garage.

YOU CAN GRIND AND POLISH SMALL FLATS ON ALL FOUR OF THE GEM-MAKERS, eliminating the need for a special flat lap machine for this purpose.

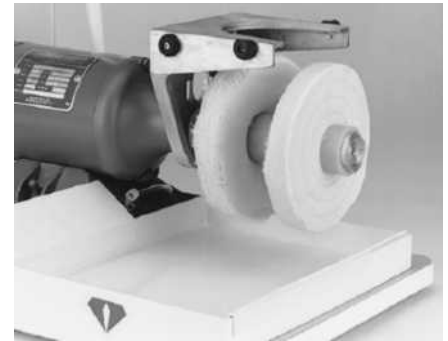
And now you can enjoy the speed and efficiency of polishing flats on our Magnetic Novas. All three of the larger machines will accept a steel back-up plate attached to the right hand wheel adaptor. This allows Magnetic Novas to be quickly applied, used, and removed as you proceed through the sanding and polishing sequence.

The Genie and Titan have special lap connectors on the left hand side of the machine for accepting standard flat lap and discs. Shown below is the Titan with a lap attached to left hand side.

All four machines accept attachments with a 1/4"-20 thread bolt on the right hand side. You can use "No-Hole" diamond laps, our Nova sanding and polishing discs, canvas and leather pads, and similar attachments.



Using standard metal-bond laps and discs is easy on the Titan (Shown above) and the Genie. Both machines have special lap connectors on the left hand side.

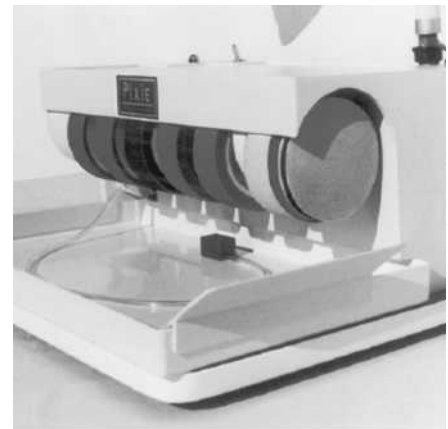


THE GEM-MAKERS ARE ALL VERSATILE AND EASY TO USE.

BigFoot and the Genie both have trim saw attachments. All four machines can be converted to use buffing wheels for polishing metals. (Shown above are two buffing wheels on the Genie.) A lamp comes with each machine and magnifiers are available. BigFoot is especially compact with storage for parts and accessories.

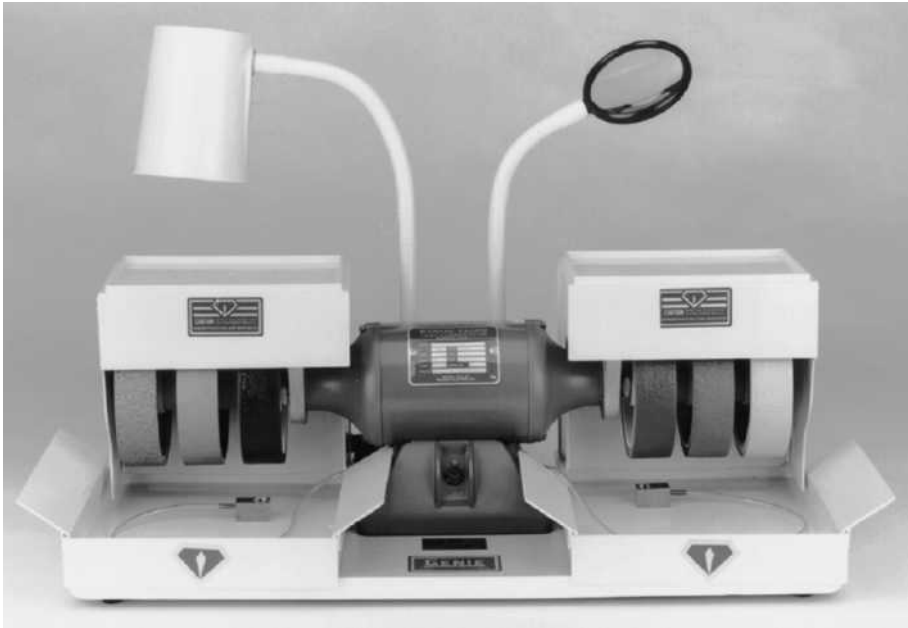
OUR MACHINES GIVE YOU VALUE FOR YOUR MONEY.

We start with a motor big enough for the job and the best we can buy, whatever the machine size. Every other part of the unit is the best for its particular function at a cost that allows the machine to be as reasonably priced as we can manage. We use a lot of plastic because it's lightweight and in most cases, even better than metal. We don't skimp anywhere, especially in our wheels.



A canvas pad with 1/4"-20 bolt is shown attached to right hand wheel of the Pixie. Similar accessories are easily used on all Gem-Makers.

GENIE—THE “MAGICAL” GEM-MAKER



NOTE: Magnifier shown not included.

The Genie Gem-Maker is truly a “magic machine.”

NOT ONLY DOES IT MAKE SHORT WORK of grinding and polishing gemstones, but with a few accessories added, it becomes a trim saw, jeweler’s buffer, flat lap machine, and a way to easily mitre perfect corners for gemstone boxes. Put a Genie in your workshop and you’ll work wonders!

THE GENIE GIVES TOP PERFORMANCE. First and foremost, The Genie will do your grinding and polishing jobs in the fastest and most efficient manner available. And do it in style. Its unique combination of special diamond wheels all mounted together lets you proceed directly from one step to the next without any delay or a lot of bother. Turn out a 30 x 40 agate cab from preform to finished gem in a matter of minutes.

See pages 2 and 3 for more information about this Gem-Maker’s performance.

GENIE IS VERSATILE. You get more than just a G & P machine. The attachments and accessories described below let you perform a variety of functions. For more information, see the pages listed.

- Trim saw attachment with 8" blade lets you convert your Genie to a trim saw in a matter of minutes. Now you can even take a trim saw along when you travel. Page 5.

- Regular flat laps and discs attach to the left end of the motor shaft, letting you grind and polish flats. See pages 18 & 19.

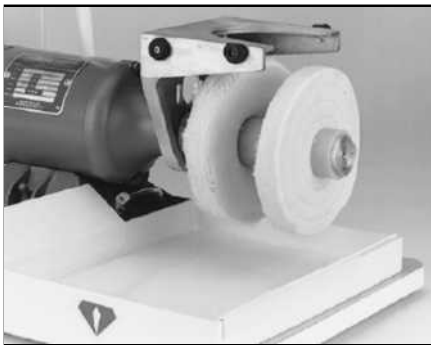
- Now you can polish flats on the Lapcraft “No Hole” discs. They screw into the right hand wheel adaptor of the Genie, giving you a 6" diameter lap with no bothersome center hole. Listed on page 18.

- Our new magnetic Nova Discs make quick work of polishing flats. See pages 16 and 17 to find out more on the Magnetic Novas. Standard Nova Discs, leather and canvas pads and other accessories with a ¼"-20 thread bolt fit the Genie. See pages 15 & 76.

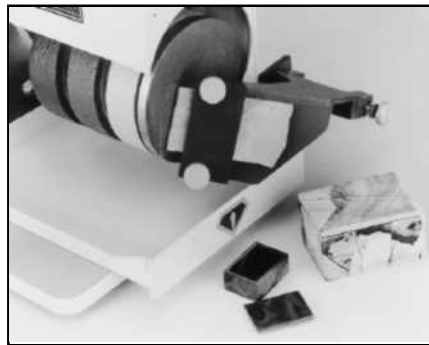
GENIE COMES COMPLETE: It’s powered by a ¼ HP 1800 RPM heavy duty, industrially rated, sealed capacitor start motor, requiring 400 watts at 115 volts A/C. (A similar motor is available for export operating on 230 volts 50HZ.) Wheels include two 6" x 1½" Galaxy diamond grinding wheels (80 and 220 grit), four 6" x 1½" Nova sanding and polishing wheels (280, 600, 1200 and 3,000 grits), 18" lamp, cab rest, 5½" canvas polishing pad, 2 gram syringe 14,000 diamond compound, sample bottle Water Aid, 4 splash guards, and a manual. We also include **SAFETY GLASSES WHICH MUST BE WORN WHEN OPERATING THIS MACHINE.** Note: The magnifier shown above no longer comes with the machine. Order from page 10.

100-GD-100 Genie 115 volts, 60Hz motor Shp. Wt. 59 lbs. \$2150.00
 100-GD-100X Export Model. 230 volts, 50Hz motor Shp. Wt. 59 lbs. \$2220.00

WEAR SAFETY GLASSES WHEN OPERATING THIS MACHINE



Jeweler’s Buff Kit attaches to the right hand side of the Genie. Comes with buffs and rouge for polishing jewelry and other metal parts. See page 9.



Our “Boxer” attachment lets you make perfectly fitted mitred corners for gemstone boxes, or other projects requiring a mitred joint. See page 8.

TRIM SAW ATTACHMENT FOR THE GENIE

Turn your Genie into a handy 8" trim saw in a matter of minutes. Easy installation—uses no oil.



EASY TO INSTALL AND USE: The Genie trim saw attachment is easy to install; requires no tools. Simply remove the three Nova wheels on the right hand side of the machine. Place the saw pan under the shaft. Mount the saw blade on the adapter and spin it onto the right hand shaft. Slip the saw table and hood into place, fill the pan with five pints of water, and you are ready to go.

CLEAN TO USE: Since the saw uses water as a coolant, there is no oily mess or dangerous fumes. You can use the trim saw wherever you use your Genie.

SPECIAL FEATURE GIVES A HEAD START ON GRINDING: The unique angle block included with the trim saw allows you to finish-trim the edges of your cabs at a ten degree angle, giving you a headstart towards grinding the bezel of your cab. Saves you time, effort and your grinding wheels as well.

COMES COMPLETE WITH BLADE: Your trim saw comes complete with a sintered continuous thin rim blade, size 8" x .032 x 1" bore. This is a good, all-purpose cutting blade. **It is not recommended that blades that are much thicker or thinner than the .032 (rim**

thickness) blade supplied be used with this attachment. Thicker blades do not cut well with water as a coolant. Thinner blades need a higher RPM to "stiffen" them, and are more hazardous to use.

TRIM SAW ATTACHMENT: Comes with molded, durable plastic hood and pan, sintered continuous thin rim blade, size 8" x .032 x 1" bore, shaft adapter, angle block, sample bottle of Water Aid, splash guard, and **SAFETY GLASSES THAT MUST BE WORN WHEN OPERATING THIS TRIM SAW.**

100-TSG-105 Trim Saw	8 lbs.	360.00
100-TSB-106 Blade Only	2 lbs.	73.75
410-WA-108 Water Aid	8 oz.	3.00
410-WA-116 Water Aid	16 oz.	4.95



CARVE ON THE GENIE

Turn your Genie into a carving machine by using an extra right-hand adaptor to mount special Galaxy carving wheels on the Genie in place of the Novas on the right hand side. Either set of wheels are easily removed or installed as needed. Shown at right is a set of carving wheels on the Genie while the regular set of Novas is nearby. See page 13 to order the carving wheels.



TITAN – THE RUGGED, HEAVY DUTY GEM MAKER



NOTE: Only one lamp included.

The Titan can take care of your grinding and polishing needs and do it fast and efficiently. It's the choice of dedicated hobbyists and professional cutters.

START WITH IT'S ALL-DIAMOND GRINDING AND POLISHING WHEELS. They are mounted together on the machine, allowing you to proceed from start to finish without wasting time changing wheels. The grit sequence is the best all-around choice for shaping and polishing most stones, and they'll make short work of the task. If you need special grits for your particular job, the wheels are easy to change.

If you need to polish flats, you can attach regular flat laps to the left end using the special lap connector (shown in photo below). On the right hand side use Lapcraft "No Hole" diamond discs, Nova discs, our new Magnetic Novas, or similar accessories having a 1/4"-20 thread bolt for attachment. A special geysers for use with the flat laps is included with the Titan.

If you need to polish metal, we've made up a Jeweler's Buff Kit for the Titan. See page 9 for more information on the kit.

See pages 2 & 3 for more information about this Gem-Maker.

THE TITAN COMES COMPLETE. Includes ¾ HP, 1800 RPM, 115/230V industrially rated motor on 16" x 42" Formica baseboard, double pump Spra-Mist coolant system, cast aluminum quick-change hoods and pans, one 80 grit and one 220 grit 7⁵/₈" x 1¹/₂" Galaxy metal-bond diamond grinding wheel, one set of four 7⁵/₈" x 2" Nova resin-bond diamond sanding and polishing wheels (one each 280, 600, 1200 and 3,000 grit); one 24" flex stem lamp, one 5¹/₂" canvas pad, special disc geysers for laps, cab rest, 2 gram syringe 14,000 diamond compound, set of two splash guards, sample bottle Water Aid, and a manual. We also include **SAFETY GLASSES WHICH MUST BE WORN WHEN OPERATING THIS MACHINE.** Note: Only one of the lamps shown above comes with the machine. To order a second lamp, see page 10.

100-T-100 Titan	115/230V, 60Hz	Shp.Wt. 151 lbs.	\$3565.00
100-T-100X Export Model ...	230V, 50Hz	Shp.Wt. 151 lbs.	\$3840.00

Shipped via UPS in 2 cartons. One weighs 125 lbs. and one weighs 25 lbs.

SAFETY FIRST WEAR YOUR GOGGLES



TITAN IS RUGGED. It features a big ¾ HP, 1800 RPM, 115/230 V. industrially rated motor that is sealed against grit contamination and never needs oiling. (This motor is available for export operating at 230 volts 50HZ.) It has a 1" diameter shaft that is even heavier through the bearings which have a 30 mm bore.

Shown at left is Titan's double pump Spra-Mist system that provides plenty of water to the wheels while you work, keeping your stones cool and the rock dust down. The hoods and pans are rugged, solid cast aluminum, yet are easily removed.



PIXIE – THE COMPLETE, PORTABLE GEM MAKER

Just because the Pixie is compact and light-weight doesn't mean it can't do a great job. It's fast and efficient at polishing stones, and is the Gem-Maker preferred by those working opal.

THE PIXIE has the same six-wheel sequence of diamond grinding and polishing wheels as the larger Gem Makers, and provides you with a fast, efficient way to shape and polish stones. The Pixie is a great favorite of those who specialize in cutting opal.

FOR DOING SMALL FLATS, you can use Lapcraft's 4" "No Hole" diamond discs which fit the right hand side. You can also use Nova discs, our canvas and leather pads, or any other attachment with a 1/4"-20 bolt. You can turn your Pixie into a buffer for polishing metal with our jeweler's kit. See page 9.

THE PIXIE IS COMPACT, LIGHT-WEIGHT. The Pixie features a durable, molded housing of G.E. Noryl® that makes the machine the most lightweight, compact and efficient 4" wheel, grinding and polishing machine available. It weighs less than 30 lbs. including the lamp, and fits on a Formica baseboard that measures only 14½" x 18". It requires no special hook-ups or plumbing, so it can easily be used in your RV or wherever space is limited and a standard 110V outlet is available.

THE PIXIE HAS PLENTY OF POWER FOR THE JOB. The Pixie now comes with a high torque, permanent magnet D.C. motor that has plenty of power for grinding and polishing your stones.



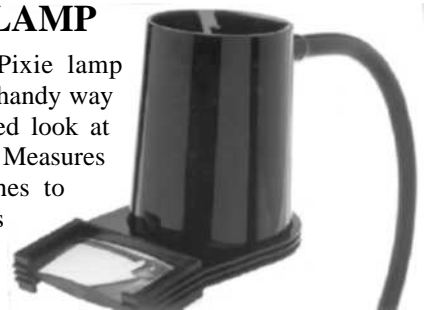
THE PIXIE COMES COMPLETE: Includes one piece housing on a 14½" x 18" Formica baseboard, DC motor, Spra-Mist coolant system, one 80 grit and one 220 grit 4" x 1¼" Galaxy metal-bond diamond grinding wheel, one set of four 4" x 1¼" Nova resin-bond diamond sanding and polishing wheels (one each 280, 600, 1200, and 3,000 grit), one 15" flex stem lamp, one 4" canvas polishing pad, 2 gram syringe of 14,000 diamond compound, handy cab rest, base for geyser, sample bottle of Water Aid, set of two splash guards, and a manual. We also include **SAFETY GLASSES WHICH MUST BE WORN WHEN OPERATING THIS MACHINE.**

100-P-100 Pixie 115 volt, motor Shp. Wt. 36 lbs. .. \$1465.00
 100-P-100X Export Model 230 volt, motor Shp. Wt. 36 lbs. .. \$1565.00



SHADE MOUNTED MAGNIFIER FITS PIXIE LAMP

Fits right on the Pixie lamp shade giving you a handy way to get an illuminated look at what you are doing. Measures 4" x 2" and attaches to lamp shade. Swivels out of the way. Comes with dust cover.



117-DMLM ... 4X 8 oz. 32.14

THE BOXER

With the Boxer you can easily make gemstone boxes with perfect mitered joints

In the past, if you made a box with the common butt joints, your finished box had four unsightly seams showing where the sides were glued together. With mitered joints, the seams are inconspicuous since they occur precisely at the corners of the box.

The Boxer is used to hold a slab at an angle so that it's ends can be quickly ground to an accurate 45 degree bevel on a diamond lap. Four such slabs will then fit together to make the sides of a box. The sides of the box can be up to 3" deep with no limit on length.

The Boxer can be used with a "No-Hole" lap on the right side of a Genie or a standard lap on the left side. The Pixie will require a 4" "No-Hole" lap. A smaller plastic pan from the super market will have to be substituted for the usual Pixie pan. The Boxer can be adapted to either side of the Titan by clamping a mounting board atop the pans.

The best choices for lap grit size are 80 or 100 grit with 180 grit also being usable. Sanding and polishing can be done on conventional equipment or on our Nova Discs and Magnetic laps.

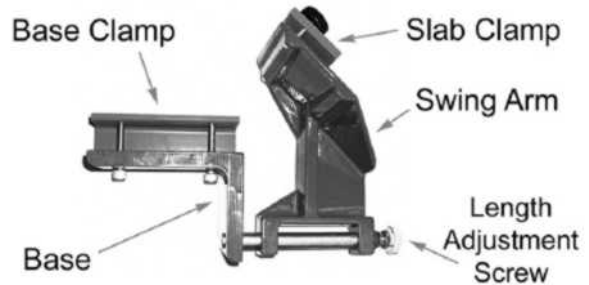


Figure 1

**** IMPORTANT ****

WEAR SAFETY GLASSES WHEN USING THE BOXER

THE BOXER Made of stainless steel and aluminum	
100-BOXER	Shp wt. 5 lbs. 157.50

SHAFT ADAPTORS

SHAFT ADAPTORS FOR GEM MAKERS

These adaptors fit over the shafts of the Genie and Pixie. Have a 1" OD to fit Galaxy and Nova wheels. Order extra right hand adaptors for specialty wheels for easy change out of wheels while working. Both R/H adaptors have hole for accepting a 1/4"x 20 bolt in pads. The L/H Genie adaptor comes with lap connector nut.

101-ADP-GR R/H Genie	8 oz.	68.25
101-ADP-GL L/H Genie	8 oz.	78.75
101-ADP-PR R/H Pixie	6 oz.	36.75
501-ADP-BFR R/H BigFoot	6 oz.	47.25

SHAFT ADAPTORS FOR POLY ARBORS

These adaptors fit shafts of other machines for using laps, pads with 1/4"x 20 thread bolts. Have plain bore with set screws. The 3/4" size also accepts laps with 1/2" center hole. Arbor sizes listed below.

106-AD-1411	1/2" arbor	6 oz.	8.00
106-AD-1412	3/8" arbor	6 oz.	8.00
106-AD-1413	5/16" arbor	6 oz.	8.00
106-AD-1414	1/4" arbor	6 oz.	8.00
106-AD-1415	5/8" arbor	6 oz.	8.00
106-AD-1416	3/4" arbor	6 oz.	8.00



GENIE WHEEL ADAPTOR KIT



Now you can enjoy the convenience of an extra adaptor for adding wheels to your Genie without having to figure out in advance which spacers you might need. This kit contains the extra Genie right hand adaptor, nut, plus seven extra spacers to accommodate any wheel combination. Contains the following spacers: two 1 3/8" wide, three 3/4" wide, one 5/8" wide, and one 1/4" wide.

101-ADP-GRK	2 lbs.	95.00
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JEWELER'S BUFF KITS FOR GEM-MAKERS

You can buff and polish jewelry on your Titan and Pixie as well as on the Genie.

We've put together all the necessary adaptors, spacers, buffs and rouge you need to convert your Gem-Maker to a buffing machine without a lot of expense.

Each kit contains 1 muslin buff, 1 flannel buff, 1 lb. (approx.) bar of Tripoli, one 1 3/4 lb.(approx.) bar of Red Jeweler's Rouge, and the spacers needed for mounting. The Genie and Pixie kits also contain a right hand adaptor for mounting on a shaft. Wheels are mounted directly onto the Titan shaft. The Genie Kit has 6" buffs, Titan 8" buffs, and the Pixie Kit has 4" buffs.



PIXIE BUFF KIT

Contains: 1- 4" muslin buff, 1- 4" flannel buff, 1 lb. (approx.) bar of Tripoli, 1 -1 3/4 lb red jeweler's rouge, 1 R/H adaptor w/nut, one spacer.

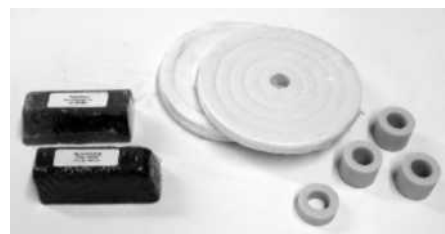
100-JBK-P 3 lbs. 50.25



GENIE BUFF KIT

Contains: 1- 6" muslin buff, 1- 6" flannel buff, 1 lb. (approx.) bar of Tripoli, 1 -1 3/4 lb red jeweler's rouge, 1 R/H adaptor w/nut, 6 spacers.

100-JBK-G 6 lbs. 93.50



TITAN BUFF KIT

Contains: 1- 8" muslin buff, 1- 8" flannel buff, 1 lb. (approx.) bar of Tripoli, 1-1 3/4 lb red jeweler's rouge, 4 spacers. Buffs and spacers fit directly on Titan shaft.

100-JBK-T 4 lbs. 42.50

ADAPTOR FOR USING TAPERED SPINDLE ON GEM-MAKERS

This adaptor allows you to use a 3/8" R/H tapered spindle for attaching buffs to the right hand of the Genie, Pixie and Titan. You can then use buffs with standard pin hole centers on your Gem-Maker. (See page 75 for buffs.) The adaptor spins into the 1/4-20 adaptor hole on the right hand side of the machine to allow you to attach the spindle. Fits tapered spindle 154-TSR4 shown below.

101-ADP-3/8 8 oz. 9.50

TAPERED SPINDLE FOR GEM-MAKERS

Use with adaptor above to attach buffs with standard pin hole centers to your Gem-Maker.

154-TSR4 Shp. Wt. 6 oz. 9.50

MUSLIN AND FLANNEL BUFFS FOR GEM-MAKERS

Use with polish on stone or metal. Have 1" centers. Use 1" bushing to adapt to 3/4", 5/8" or 1/2" arbor. Order bushing from page 14.

Order #	Fits Machine	Type	Dia.	Stitching Ply	Shp. Wt.	Price
100-JPK3	Pixie	Muslin	4"	2 Rows	40 2 oz.	4.25
100-JPK4	Pixie	Flannel	4"	2 Rows	30 2 oz.	6.55
100-JPK1	Genie	Muslin	6"	4 Rows	60 5 oz.	9.25
100-JPK2	Genie	Flannel	6"	3 Rows	30 5 oz.	9.10
100-JPK5	Titan	Muslin	8"	4 Rows	55 10 oz.	10.25
100-JPK6	Titan	Flannel	8"	3 Rows	30 10 oz.	12.25

ADAPTOR TAPERED SPINDLE



Shown on Genie: adaptor, tapered spindle and buff.



BUFFS FOR GEM-MAKERS

CAB REST



FLEX-STEM FACE SHIELD

Protect eyes and face with a clear plastic face shield that adjusts to the right position. It's 10" X 10" with an 18" long flex-arm shaft with offset coupler. Can be mounted on almost any surface, but mounting hardware not included. Order base 117-MS2 below.

- 118-1141-15 Shield Shp. Wt. 3½ lbs 31.75
- 117-MS2 Base Shp Wt. 3 ozs. 5.25

FLEX-STEM LAMPS FOR MACHINES, WORKSHOP, HOME, DISPLAYS

Moffatt Flex-Stem lamps adjust to any position. A quick-coupling base allows the lamp to be removed for storage or attachment to another area. Lamps come in several stem lengths, making them adaptable for use in many places about the shop and home. Flex-stem magnifiers below are interchangeable with lamps on our machines. Mounting base included. All take 100 watt bulb, maximum. Clamp MLCC fits all lamps and magnifiers.

- 117-0624-T 24", fits Titan 3 lbs. 52.56
- 117-0618-G 18", fits Genie 3 lbs. 48.70
- 117-0615-P 15", fits Pixie 3 lbs. 46.24
- 117-0636 36", lamp 4 lbs. 63.24
- 117-MLCC clamp, 3½"deep throat 1 lb. 24.08

FLEX STEM MAGNIFIER

This handy, single lens, two power magnifier can be bent to any position, leaving hands free to examine workpiece. Attach to any flat surface such as workbench, table, or separate base-board. Base attachment screws on mounting surface. Quick-coupling attachment enables magnifier to be detached from base.

- 117-MV15 Magnifier, 15" stem 2 lbs. 35.44
- 117-MV24 Magnifier, 24" stem 2 lbs. 39.88
- 117-MS2 Base attach. replacement 3 oz. 5.25
- 117-RIM Magnifier Rim 4 oz. 8.56
- 117-RCS Connector latch 2 oz. 3.75

MOUNTING BASE

Fits flex-stem lamps & magnifiers listed above. Metal base attaches to almost any flat surface that will take screws. Order extra bases for mounting in different locations so lamp can be moved from one area to another.

- 117-MS2 3 oz. 5.25

MAGNIFIER-SHADE MOUNTED

Fits lamps above, giving you a handy way to get an illuminated look at what you're doing. (Only fits 100 Watt, toggle switch lamps.) Measures 4" x 2" and attaches to lamp shade. Swivels out of the way. Dust cover included.

- 117-DMLM 4X 8 oz. 32.14

FLEX-STEM FACE SHIELD



FLEX-STEM MAGNIFIER



FLEX-STEM LAMP



117-DMLM



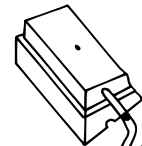
GEYSERS FOR GEM-MAKERS

Solid brass geysers spray water to underside of wheels while Spray-Mist pump is working. (Will not work alone or with other systems.) Use with Base below to provide water to flat laps on Genie or Pixie. Use Disc Geysers for flat laps on Titan..

- 101-GSG-25 Pixie 4 oz. 37.95
- 101-GSG-25 Genie 4 oz. 37.95
- 101-TSG-25 Titan 8 oz. 46.50
- 101-TDG-25 Disc Geysers 12 oz. 36.00

GEYSER BASE

Plastic base snaps onto bottom of brass geysers to convert it for use with discs. Fits Genie and Pixie geysers.



- 101-BASE 2 oz. 3.75

CAB REST

Plastic hand rest makes grinding bezels on cabs easy. Lay your cab on the cab rest and grind the bezel to a uniform angle. Comfortable for resting your hands while grinding and polishing stones. Keeps stones from chattering against wheels causing premature wear.

- 101-CRP for Pixie 6 oz. 22.75
- 101-CRG for Genie 6 oz. 22.75
- 101-CRT for Titan 2 lbs 57.25

MAINTENANCE KITS

Kits include pump leathers, vellumoid gasket, tubing for geysers, and pump belts—all that is necessary for each particular pump. Pixie kit has two belts, Genie kit one. For single pump Titans, order kit 101-TMK. For twin pump Titans, order kit 101-TTK which contains two sets pumps leathers, two belts and tubing.

- 501-BMK Big Foot 6 oz. 32.00
- 101-PMK for Pixie 6 oz. 41.00
- 101-GMK for Genie 6 oz. 35.00
- 101-TMK for single pump Titan 6 oz. 34.00
- 101-TTK for twin pump Titan 6 oz. 55.50

SPARE PARTS FOR GEM-MAKERS

When ordering any of the items below, please state catalog number and year and model of your machine, or give a brief description of your machine so that we can send the proper part.

NOTE: There is a \$2.00 service fee for orders under \$20.00

ITEM	PIXIE			GENIE			TITAN		
	Order #	Price	Wt	Order #	Price	Wt	Order #	Price	Wt
Baseboard, Standard	101-PBB-126	35.75	6 lbs.	101-GBB-126	44.95	9 lbs.	101-TBB-126	168.50	17 lbs.
Plywood, Genie	101-PBB-130	55.75	5lbs.	101-GBB-130	85.25	7 lbs.	—	—	
Bearings	101-GBE-148	12.10	4 ozs.	101-GBE-148	12.10	4 ozs.	101-TBE-148	26.25	4 ozs.
Belt, plastic pumps	101-PPB-150	16.75	2 ozs.	101-GPB-150	16.75	2 ozs.	101-TPB-193	16.75	2 ozs.
Belt, Titan Metal Pump							101-PPB-150	16.75	2 ozs.
Belt, motor	101-PPB-150	16.75	2 ozs.	—			—	—	—
Capacitors, motor * For Pixie made prior to 4/2003	*101-PCA-65	13.50	5 ozs.	101-GCA-65	30.00	5 ozs.	101-TCA-65	30.00	5 ozs.
Hood, RH or LH, state which	101-PHO	236.00	6 lbs.	101-GHO-128	75.00	2 lbs.	101-THO-128	275.00	13 lbs.
Lamp Switch 75 Watt Rotary 100 Watt Toggle	117-SKR 117-SKT	15.75 10.50	2 ozs. 2 ozs.	117-SKR 117-SKT	15.75 10.50	2 ozs. 2 ozs.	117-SKR 117-SKT	15.75 10.50	2 ozs. 2 ozs.
Lap Connector w/screw	—	—		101-G-LAP	23.75	5 ozs.	101-T-LAP	37.50	4 ozs.
Leathers, pump set	101-GPL-145	4.75	1 oz.	101-GPL-145	4.75	1 oz.	101-TPL-145	4.75	1 oz.
Leathers, Titan Twin Pump							101-TPL-245	9.50	1 oz.
Motor, Standard Pixie D.C. Motor	101-PMO-125	230.00	6 lbs.	—	—		—	—	
Genie ¼ HP 110v/60hz	—	—		101-GMO-125	435.00	26 lbs.	—	—	
Titan ¾ HP 110v/60hz	—	—		—			101-TMO-125	880.00	59 lbs.
Motor, Export Genie ¼ HP 230v/50hz	—	—		101-GMO-125X	485.00	26 lbs.	—	—	
Titan ¾ HP 230v/50hz	—	—		—	—		101-TMO-125X	975.00	59 lbs.
Pan	101-PPA-130	38.75	2 lbs.	101-GPA-130	33.25	1 lb.	101-TPA-130	265.00	1 lb.
Pump	101-P-PUMP	143.50	1 lb.	101-G-PUMP	143.50	1 lb.	*101-T-PUMP-B	287.00	1 lb.
Splash Guards, Set Pixie - 2 Genie - 4: Titan - 2,	101-PUO-105	11.00	5 ozs.	101-GUO-105	22.00	8 ozs.	101-TUO-105	12.00	5 ozs.
Spacers, Wheel Standard	101-PSP-1	4.20	1 oz.	101-GSP-¾	5.25	1 oz.	101-TSP-1¾	11.00	5 ozs.
Spacers, Special Order	NA			101-GSP-1⅜	5.25	1 oz.	NA		
				101-GSP-1	6.25	1 oz.			
				101-GSP-⅝	6.25	1 oz.			
				101-GSP-½	6.25	1 oz.			
				101-GSP-¼	6.25	1 oz.			
Tubing, geyser, ft.	101-AHS-138	2.65	1 oz.	101-AHS-138	2.65	1 oz.	101-AHT-141	3.65	1 oz.

GALAXY DIAMOND GRINDING WHEELS

Take the “grind” out of grinding stones.

OUR GALAXY DIAMOND GRINDING WHEELS give you the fast, cool cutting efficiency of diamonds, plus a smooth, true-running surface that never needs dressing.

Galaxy Wheels give you lasting service because of their quality construction. The diamonds are held on a heavy steel ring by an extremely hard, nickel alloy plating for durability. The ring is mounted on a tough glass-filled polyester core, making Galaxies a smooth, quiet running wheel.

GALAXY DIAMOND WHEELS are clean to use. Because the wheels themselves don't wear away as silicon carbide wheels do, you don't get all the mess. Galaxy Wheels must be used with water, but you only need a small amount to keep the wheels and stone wet and cool, and to keep down the rock dust.

Galaxy Wheels have 1" arbor holes, AND NO LONGER COME SUPPLIED WITH BUSHINGS. To order bushings, see column on right.

Both our standard and carving wheels give you a wide choice of grit and wheel sizes to fit your needs. The diamond shaped, interrupted pattern of the Hex Wheels (one shown above at the right) in 80, 60, and 30 grit sizes makes them the coarsest, fastest grinding wheels available.



BUSHINGS FOR WHEELS

These bushings fit arbor sizes 1", 3/4", 5/8", and 1/2". Come in two widths to fit the various Nova and Galaxy Wheels.

TO ORDER FOR GALAXY WHEELS: The two, four, and six inch Galaxy Wheels take one 1" bushing. The 7 5/8" Galaxy Wheels take two 3/4" bushings.

See page 14 to order bushings for Nova Wheels.

101-WB-34	..... 3/4"	2 oz.	2.75
101-WB-44	..... 1"	2 oz.	2.75

SAFETY FIRST WEAR YOUR GOGGLES

PRICE LIST FOR STANDARD GALAXY WHEELS

Grit Size	2 3/8" x 1 1/8"		4" x 1 1/4"		6" x 1 1/2"		7 5/8" x 1 1/2"	
	Order#	Price	Order#	Price	Order#	Price	Order#	Price
Fine 600	100-M2-06F	85.00	100-M4-06F	110.00	100-M6-06F	140.00	100-M8-06F	180.00
Fine 360	100-M2-36	85.00	100-M4-36	110.00	100-M6-36	140.00	100-M8-36	180.00
Fine 220	100-M2-22	85.00	100-M4-22	110.00	100-M6-22	140.00	100-M8-22	180.00
Med Fine 180	100-M2-18	90.00	100-M4-18	120.00	100-M6-18	155.00	100-M8-18	200.00
Med. Fine 120	100-M2-12	95.00	100-M4-12	130.00	100-M6-12	170.00	100-M8-12	220.00
Coarse 100	100-M2-10	100.00	100-M4-10	140.00	100-M6-10	185.00	100-M8-10	240.00
Coarse 80	100-M2-80	105.00	100-M4-80	150.00	100-M6-80	200.00	100-M8-80	260.00
Rough 80 Hex	100-M2-80H	150.00	100-M4-80H	220.00	100-M6-80H	280.00	100-M8-80H	360.00
Rough 60 Hex	100-M2-60H	180.00	100-M4-60H	270.00	100-M6-60H	340.00	100-M8-60H	440.00
Rough 30 Hex	100-M2-30H	240.00	100-M4-30H	350.00	100-M6-30H	450.00	100-M8-30H	580.00
SHIPPING WEIGHTS FOR ALL GALAXY WHEELS								
1 Wheel	1 lb.		2 lbs.		3 lbs.		5 lbs.	

GALAXY WHEELS FOR CARVING



Our Galaxy carving wheels have special shapes and sizes for helping the sculptor grind those difficult grooves and curves in stone.

USE THESE ROUNDED-FACED CARVING WHEELS when doing carving, intarsia, channel work, stained glass and other applications that require curved edges. Use the ¼" and ½" widths for narrow grooves and the 1" wide for larger ones. Four wheel diameters increase your choices.

All Galaxy carving wheels can be used on the Titan. All but the 8" wheels can be used on the Genie. Only the two and four inch wheels can be used on the Pixie. These wheels can also be used on most other grinding machines that have standard arbors.

Galaxy Wheels have 1" arbor holes, AND NO LONGER COME SUPPLIED WITH BUSHINGS. To order bushings, see page 12. The four and six inch diameter wheels take one

ORDERING EXTRA SPACERS FOR MOUNTING CARVERS. You may need to know hub widths to order extra spacers to mount your carvers. Hub width for all 2" dia. carvers is ¾"; for 4" dia. is 1¼"; for 6" dia. is 1"; and for 8" dia. is 1½".

1" bushing. The two inch wheel takes one ¾" bushing and the 7⅝" inch wheel takes two ¾" bushings.

CONVEX CARVER WHEELS							
Grit Size	Wheel Dia.	¼" Wide Wheel		½" Wide Wheel		1" Wide Wheel	
		Order#	Price	Order#	Price	Order#	Price
600 Grit	2"	100-MC2-46	80.00	100-MC2-26	85.00	NA	-
	4"	100-MC4-46	105.00	100-MC4-26	110.00	100-MC4-16	120.00
	6"	100-MC6-46	135.00	100-MC6-26	140.00	100-MC6-16	150.00
	8"	100-MC8-46	175.00	100-MC8-26	180.00	100-MC8-16	190.00
360 Grit	2"	100-MC2-43	80.00	100-MC2-23	85.00	N/A	-
	4"	100-MC4-43	105.00	100-MC4-23	110.00	100-MC4-13	120.00
	6"	100-MC6-43	135.00	100-MC6-23	140.00	100-MC6-13	150.00
	8"	100-MC8-43	175.00	100-MC8-23	180.00	100-MC8-13	190.00
220 Grit	2"	100-MC2-42	80.00	100-MC2-22	85.00	N/A	-
	4"	100-MC4-42	105.00	100-MC4-22	110.00	100-MC4-12	120.00
	6"	100-MC6-42	135.00	100-MC6-22	140.00	100-MC6-12	150.00
	8"	100-MC8-42	175.00	100-MC8-22	180.00	100-MC8-12	190.00
100 Grit	2"	100-MC2-41	95.00	100-MC2-21	100.00	N/A	-
	4"	100-MC4-41	135.00	100-MC4-21	140.00	100-MC4-11	150.00
	6"	100-MC6-41	180.00	100-MC6-21	185.00	100-MC6-11	195.00
	8"	100-MC8-41	235.00	100-MC8-21	240.00	100-MC8-11	250.00

 **Caution: Wear safety glasses when using any Galaxy Wheel.**



USE EXTRA ADAPTORS FOR MOUNTING CARVING WHEELS

Genie owners can obtain maximum convenience by mounting the special carving wheels on a separate right hand adaptor. This eliminates the need of taking the Nova Wheels off their right hand adaptor and putting on the carving wheels each time. Pixie owners can use an extra right hand adaptor (which holds the far right hand Nova Wheel) for the same purpose. Wheels on the Titan fit directly on the shaft. Call us to determine your particular need.

NOVA RESIN-BOND DIAMOND SANDING AND POLISHING WHEELS

With Nova Wheels, sanding and polishing stones doesn't have to be a tiresome battle with flat spots and scratches. Nova Wheels get results fast. The diamonds are embedded within a tough, flexible plastic resin and backed by soft, thick rubber. This soft, flexible construction enables the surface of the Nova Wheel to conform to your stones, eliminating flat spots and scratches.

MUST BE USED WITH WATER.

We recommend that Novas be used in sets rather than in combination with other types of sanding and polishing wheels. Our new all-purpose sequence is the 280, 600, 1200, and 3,000 grit wheels, followed by the use of 14,000 diamond compound. This combination will put an excellent polish on most stones. Some hard-to-polish materials may require more steps following the 3,000 grit Nova Wheel such as 8,000 grit and 14,000 grit Nova Wheels or finer diamond compound. Other polishes such as cerium or tin oxide on a polishing pad will also give excellent results in many cases.

Nova Wheels have 1" arbor holes, AND NO LONGER COME SUPPLIED WITH BUSHINGS. To order bushings, see right. The two, and four inch diameter wheels take one 1" bushing. The six inch diameter wheels take two 3/4" bushings and the 7 5/8" wheels take two 1" bushings.

NOVA WHEELS MUST BE USED WITH WATER AS A COOLANT.



NOVA WHEELS

BUSHINGS FOR WHEELS

These bushings fit arbor sizes 1", 3/4", 5/8", and 1/2". Come in two widths to fit Nova Wheels and buffing wheels with 1" centers.

TO ORDER FOR NOVA WHEELS: The two and four inch diameter Nova Wheels take one 1" bushing. The six inch diameter Nova Wheels take two 3/4" bushings, and the 7 5/8" Nova Wheels take two 1" bushings.

FOR BUFFING WHEELS: Order 101-WB-44 for buffs with 1" centers.

See page 12 to order bushings for Galaxy Wheels.

101-WB-34	3/4"	2 oz.	2.75
101-WB-44	1"	2 oz.	2.75

STANDARD NOVA WHEELS

Grit Size	Wheel Color	2 3/8" x 1 1/8" Wheel		4" x 1 1/4" Wheel		6" x 1 1/2" Wheel		7 5/8" x 2" Wheel	
		Order #	Price	Order #	Price	Order #	Price	Order #	Price
60 COARSE SHAPING	GREEN	100-RW2-70	60.00	100-RW4-70	87.00	100-RW6-70	130.00	100-RW8-70	215.00
140 FINE SHAPING	RUST	100-RW2-15	60.00	100-RW4-15	87.00	100-RW6-15	130.00	100-RW8-15	215.00
280 COARSE SANDING	BLACK	100-RW2-28	60.00	100-RW4-28	87.00	100-RW6-28	130.00	100-RW8-28	215.00
600 FINE SANDING	BROWN	100-RW2-60	60.00	100-RW4-60	87.00	100-RW6-60	130.00	100-RW8-60	215.00
1200 PRE-POLISH	GREY	100-RW2-12	60.00	100-RW4-12	87.00	100-RW6-12	130.00	100-RW8-12	215.00
3000 PRE-POLISH	ROSE	100-RW2-30	60.00	100-RW4-30	87.00	100-RW6-30	130.00	100-RW8-30	215.00
8000 PRE-POLISH	TAN	100-RW2-80	60.00	100-RW4-80	87.00	100-RW6-80	130.00	100-RW8-80	215.00
14000 POLISH	CREAM	100-RW2-14	60.00	100-RW4-14	87.00	100-RW6-14	130.00	100-RW8-14	215.00
50,000 POLISH	LT BLUE	100-RW2-50	60.00	100-RW4-50	87.00	100-RW6-50	130.00	100-RW8-50	215.00
Shp. wt. - 1 item		1 lb.		1 lb.		2 lbs.		2 lbs.	

NOVA SPECIALTY WHEELS, DISCS, POINTS

STANDARD NOVA RESIN-BOND DISCS

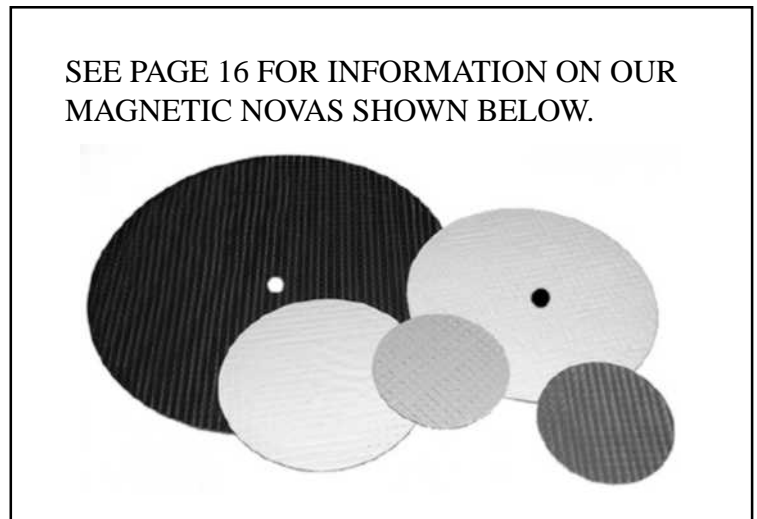
Nova Discs are ideal for polishing backs of cabs, nodules, geode faces, and similar flats as well as for sanding and polishing cabs. They have a soft, rubber backing and are slightly convex (domed) so that under pressure of your stone, they provide an even polishing surface in the middle area often missed with other methods. A standard 1/4"-20 thread bolt is molded into their plastic back-up plate to fit our Gem-Makers and most other machines accepting that size bolt. See page 8 to order an adaptor to fit your machine if it is not one of our Gem-Makers.



NOVA WHEELS AND DISCS MUST BE USED WITH WATER.

STANDARD NOVA DISCS SHOWN ABOVE.

STANDARD NOVA DISCS				
Grit Size	4" Disc		5 1/2" Disc	
	Order#	Price	Order#	Price
280	100-RD4-28	45.00	100-RD5-28	77.50
600	100-RD4-60	45.00	100-RD5-60	77.50
1200	100-RD4-12	45.00	100-RD5-12	77.50
3000	100-RD4-30	45.00	100-RD5-30	77.50
8000	100-RD4-80	45.00	100-RD5-80	77.50
14000	100-RD4-14	45.00	100-RD5-14	77.50
50,000	100-RD4-50	45.00	100-RD5-50	77.50
Shp. wt. - 1 item		1 lb.	1 lb.	



SAFETY FIRST WEAR YOUR GOGGLES

MINI-NOVAS FOR SANDING AND POLISHING

MINI-NOVAS FOR SANDING AND POLISHING THOSE "HARD-TO-GET-AT" PLACES.



Use with power handtools. Flexible, resin-bond diamond sanding and polishing wheels that come in three thicknesses, three diameters, and four grit sizes. The most flexible wheels have diamond on one side of a single layer of canvas. The thickest wheels (about 1/8") are made of two layers of canvas with diamond between them and on

each side. All wheels have a 1/16" arbor hole to fit Dremel and Foredom tools. They can be easily drilled out to fit a larger arbor size. Use with mandrels M1 or M6. (See page 72). Mini-Novas should be used with water. Sets contain one 280, 600, 1200 and 14,000 grit wheels. Wt. 2 oz set.

Wheel Size		Set of four 280, 600,1200,14000	
Diameter	No. of Layers	Order #	Price
1/2"	1	100-2Q1-S	4.95
1/2"	2	100-2Q2-S	7.95
1/2"	3	100-2Q3-S	11.90
3/4"	1	100-3Q1-S	9.90
3/4"	2	100-3Q2-S	15.85
3/4"	3	100-3Q3-S	23.75
1"	1	100-4Q1-S	14.85
1"	2	100-4Q2-S	23.75
1"	3	100-4Q3-S	35.65

MAGNETIC NOVA LAPS FOR LAPPING

Our Magnetic Nova Laps give you the fast polishing performance of Novas combined with the convenience of an easy on-off magnetic lap. They attach right onto most flat laps and are easily removed.

Magnetic Nova Laps have a 1/16" thick backing of solid rubber containing magnetized iron particles so the laps will adhere to a cast iron, steel or nickel plated lap. The rubber is coated with a thick layer of our special Nova resin-bond diamond formula for fast action and lasting service. The surface of the Magnetic Nova is made with a grid pattern for better performance.

You can use the Magnetic Novas on your present flat lap set-up in most cases, but they will not work on aluminum or diamond coated discs. If your lap set-up will accommodate an attachment using a 1/4"-20 bolt (such as on the Genie, Titan and Pixie), then you can use one of the special back plates listed on the opposite page. These steel faced back plates along with the Magnetic Novas will give you a non-interrupted polishing surface for maximum efficiency.

Our recommended general purpose grit sequence for sanding and polishing most flats, especially on our Diamond RLD machines (see page 20) is 60, 280, 600 and 1200 grits, followed by our super Premium Cerium Oxide Polish on a felt pad. We also recommend the use of a 60 grit Diamond Plated Disc to precede the 60 grit Magnetic Nova for those slab surfaces with deep saw marks or other features requiring grinding preparation. Other grit sequences can be used with excellent results depending on the materials to be polished.

Magnetic Novas come in a variety of grits and sizes to accommodate most needs. We also make a 24" diameter Magnetic Nova by SPECIAL ORDER.

NOTE: Magnetic Novas for our RLD Lap machines require arbor holes: 12RLD requires a 5/8" arbor hole and the 18RLD requires a 1" arbor hole. To order see chart at right.



Shown above is Magnetic Nova being removed from an 18RLD lap machine.

HOW TO ORDER ARBOR HOLES

Standard Magnetic Novas no longer come with arbor holes unless requested. ALL ARBOR HOLES ARE SPECIAL ORDER, BUT THERE IS NO ADDITIONAL CHARGE FOR THIS SERVICE. Allow 2-3 days extra.

To order an arbor hole in any Magnetic Nova, please specify arbor hole size you require by adding the following Special Order numbers to the standard order number of the Magnetic Nova.

- For 1/2" arbor hole, add -4 to the order number.
- For 5/8" arbor hole, add -5 to the order number.
- For 3/4" arbor hole, add -6 to the order number.
- For 1" arbor hole, add -8 to the order number.

Example: 100-RM08-60-5 This signifies an 8" diameter, 60 grit Magnetic Nova with a 5/8" arbor hole.

If you have any questions, please call our Customer Service Representatives.

MAGNETIC NOVA LAPS						
Grit Size	4" Laps: 26.00 ea.	6" Laps: 52.00 ea.	8" Laps: 84.00 ea.	12" Laps: 165.00 ea.	16" Laps: 285.00 ea.	18" Laps: 335.00 ea.
	Order #	Order #	Order #	Order #	Order #	Order #
60	100-RM04-70	100-RM06-70	100-RM08-70	100-RM12-70	100-RM16-70	100-RM18-70
140	100-RM04-15	100-RM06-15	100-RM08-15	100-RM12-15	100-RM16-15	100-RM18-15
280	100-RM04-28	100-RM06-28	100-RM08-28	100-RM12-28	100-RM16-28	100-RM18-28
600	100-RM04-60	100-RM06-60	100-RM08-60	100-RM12-60	100-RM16-60	100-RM18-60
1200	100-RM04-12	100-RM06-12	100-RM08-12	100-RM12-12	100-RM16-12	100-RM18-12
3000	100-RM04-30	100-RM06-30	100-RM08-30	100-RM12-30	100-RM16-30	100-RM18-30
8000	100-RM04-80	100-RM06-80	100-RM08-80	100-RM12-80	100-RM16-80	100-RM18-80
14,000	100-RM04-14	100-RM06-14	100-RM08-14	100-RM12-14	100-RM16-14	100-RM18-14
50,000	100-RM04-50	100-RM06-50	100-RM08-50	100-RM12-50	100-RM16-50	100-RM18-50
Shp. wt.	1 lb.	1 lb.	1 lb.	1 lb.	2 lbs.	3 lbs.

MAGNETIC PLATED DIAMOND DISCS

Magnetic Plated Diamond Discs have diamond metal-bonded to a magnetic backing which will adhere to a steel back-up plate. Grit sizes range from 60 to 600 for grinding and sanding flats. They are especially efficient at removing saw marks from slabs.

MAGNETIC PLATED DIAMOND DISCS								
Grit Size	8"		12"		* 16"		* 18"	
	Order #	Price	Order #	Price	Order #	Price	Order #	Price
60	205-08-060	178.00	205-12-060	305.00	205-16-060	420.00	205-18-060	600.00
100	205-08-100	130.00	205-12-100	265.00	205-16-100	365.00	205-18-100	500.00
260	205-08-260	95.00	205-12-260	225.00	205-16-260	310.00	205-18-260	450.00
360	205-08-360	85.00	205-12-360	195.00	205-16-360	290.00	205-18-360	400.00
600	205-08-600	85.00	205-12-600	195.00	205-16-600	290.00	205-18-600	400.00
Shp. Wt.		1 Lb.	2 Lbs.		3 Lbs.		3 Lbs.	

The 8" Plated Disc has no center hole for an uninterrupted working surface. It can be used with the 8" steel-faced back plate (see below) that fits the right hand side of the Titan.

The 12" and 18" Plated Discs fit our model 12RLD and 18RLD rotating lap machines (see page 20). The 12" Plated Discs have a 5/8" center hole, and the 16" and 18" Plated Discs have a 1" center hole.

*THE 16" AND 18" MAGNETIC PLATED DIAMOND DISCS ARE SPECIAL ORDER.

Shown at right is a Genie with a 6" steel faced back plate attached to the right hand wheel adaptor of the machine. Magnetic Novas (6" size shown lying on machine pan) can be used on the steel-faced back plate, and are easily attached and removed from the plate.



STEEL-FACED BACK PLATES



These aluminum plates with steel facing offer full surface area without usual center hole. They are similar to the "No-Hole" diamond laps with a 1/4"-20 thread bolt for attaching to the Genie and Titan or other machines accepting that size bolt accessory. Use with 4", 6" and 8" Magnetic Novas, 8" Plated Discs and similar accessories which attach and remove easily from the back plate.

Shown at right above is the back side of a six inch steel back plate showing the 1/4"-20 bolt for attachment. Six and eight inch plates are ribbed; the four inch plate is not. Also shown is a four inch plate showing the smooth steel surface for attaching Magnetic Novas and Plated Discs.



Order #	Item	Shp. wt.	Price
106-14434	4" Back Plate	1 lb.	45.00
106-14432	6" Back Plate	2 lbs.	55.00
106-14433	8" Back Plate	2 lbs.	65.00

DIAMOND DISCS FOR FACETING, LAPPING

STANDARD DIAMOND DISCS

Lapcraft's STANDARD DIAMOND DISCS are designed expressly for the lapidary field and are available in a variety of diameters and mesh sizes. They are made with high quality man-made diamond using single, whole crystals. The diamond is bonded to a solid base that is ground flat and parallel to exacting specifications. Made in USA.

Lapcraft Standard Diamond Discs come with standard 1/2" arbor hole. Special arbor sizes available on request.

"NO HOLE" DIAMOND DISCS

Lapcraft's NO HOLE DIAMOND DISCS offer a full face, flat grinding surface without the usual center hole obstruction. Diamond covers the entire work surface. On the back of the disc is a 1/4"-20 machine screw for screwing into the end of any arbor with the same internal thread. NO HOLE DISCS are made in USA.

CAUTION: wear safety glasses when using these discs.



GRIT SIZE RECOMMENDATIONS FOR STANDARD AND "NO HOLE" DISCS

- 80, 100 EXTRA COARSE:** For fast grinding and shaping.
- 180 COARSE:** Fast facet performing and light cab roughing.
- 260 MEDIUM:** General facet performing and opal cab roughing.
- 360, 600 FINE:** Light facet performing and cab finish grinding.
- 1200 EXTRA FINE:** General prepolishing finish for faceting.
- 1500, 1800 SUPER FINE:** Dead-smooth facet prepolish.
- 3000 SUPER FINE:** Super smooth facet prepolish.
- 8000; ULTRA FINE:** For special finishes.

Grit Size	STANDARD DIAMOND DISCS				"NO HOLE" DIAMOND DISCS			
	6"		8"		4"		6"	
	Order #	Price	Order #	Price	Order #	Price	Order #	Price
80	106-6102	150.00	106-6104	225.00	106-4100	95.00	106-4225	155.00
100	106-4019	125.00	106-4028	185.00	106-4101	80.00	106-4226	135.00
180	106-4020	95.00	106-4029	120.00	106-4102	73.00	106-4227	110.00
260	106-4021	90.00	106-4030	105.00	106-4103	62.00	106-4228	100.00
360	106-4022	85.00	106-4031	100.00	106-4104	60.00	106-4229	95.00
600	106-4023	75.00	106-4032	95.00	106-4105	58.00	106-4230	85.00
1200	106-4024	85.00	106-4033	105.00	106-4106	58.00	106-4231	90.00
1500	106-4025	85.00	106-4034	105.00	106-4107	58.00	106-4232	90.00
1800	106-4026	85.00	106-4035	105.00	106-4108	58.00	106-4233	90.00
3000	106-4027	95.00	106-4036	130.00	106-4109	65.00	106-4234	95.00
8000	106-4037	95.00	106-4038	130.00	106-4110	65.00	106-4235	95.00
Ship.Wt. Ea.	1 LB		2 LBS.		1 LB		1 LB	

DIAMOND DURA-DISCS

Dura-Discs give you the efficiency of a diamond lap for faceting and finishing flat surfaces at an economical price.

The Standard Dura-Discs come in a variety of grit sizes, allowing you to process most stones through the coarse and fine sanding processes.

Dura-Discs must be used with a separate back-plate. Standard Dura-Discs are described below. SEE PAGE 17 TO ORDER THE MAGNETIC PLATED DISCS.

STANDARD 6" AND 8" SIZES

The standard Dura-Discs are precision ground, 1mm thick steel discs heavily plated with diamond for fast cutting and long life. Use them with worn out standard laps as back-plates, or with the Master Lap sold below. Dura-Discs have a 1/2" center hole that allows them to be securely fastened to the back-plate.

STANDARD DURA-DISCS				
Grit Size	6"		8"	
	Order #	Price	Order #	Price
60	700-72-06-0060	120.00	700-72-08-0060	168.00
100	700-72-06-0100	88.00	700-72-08-0100	120.00
180	700-72-06-0180	65.00	700-72-08-0180	85.00
260	700-72-06-0260	57.00	700-72-08-0260	80.00
320	700-72-06-0320	49.00	700-72-08-0320	70.00
600	700-72-06-0600	45.00	700-72-08-0600	64.00
1200	700-72-06-1200	42.00	700-72-08-1200	60.00
1500	700-72-06-1500	42.00	700-72-08-1500	60.00
Shp. Wt.	1 lb.		2 lbs.	

DIAMOND SLURRY

This oil soluble diamond slurry is made especially for use on the FINALAP and other hard laps. It is popular for finishing materials where a highly reflective surface is desired. Has the proper consistency for easy charging of a lap. The 1 Micron size is 14,000 grit and the 1/2 Micron size is 50,000 grit.

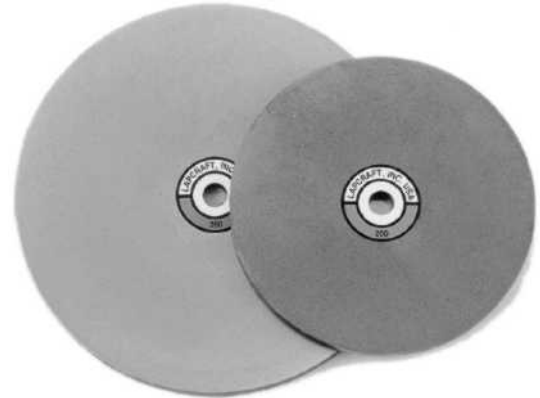
106-6058 1 Micron 3 oz 4.50
 106-6059 1/2 Micron 3 oz 4.50

CAUTION:

Wear safety glasses when using any of the discs & laps on this and opposite page.

UNCHARGED LAPS FOR FINAL POLISHING

We offer a variety of laps designed to be charged by the craftsman with his or her personal preference of diamond abrasive or other conventional abrasives. See pages 66-69 for abrasives.



MASTER LAP

Use these aluminum laps as backing for a variety of thin laps, including the Dura-Discs. Precision flat, approximately 1/4" thick aluminum. Arbor hole 1/2".

105-4501 6" lap 1 lb 32.00
 105-4502 8" lap 1 lb 39.00

FINALAP

A unique polishing lap that gives a brilliant polish on a variety of stones such as quartz, corundum, beryl, peridot, etc. The FINALAP is designed to be charged with diamond slurry. Has a dense metallized resin surface which resists grooving and gouging. It readily accepts a diamond charge and requires no break-in time.

105-4523 6" lap 1 lb 65.00
 105-4524 8" lap 2 lbs 75.00

TIN LAP

Excellent lap for use with cerium oxide or tin oxide as a final polish. Precision surfaced. Comes with 1/2" arbor hole unless otherwise specified.

105-4505 6" lap 1 lb 123.00
 105-4506 8" lap 2 lbs 156.00

COPPER LAP

Can be charged with a variety of abrasives including diamond. Precision surfaced. Standard 1/2" arbor hole unless otherwise specified.

105-4509 6" lap 1 lb 71.00
 105-4510 8" lap 2 lbs 88.00

DIAMOND ROTATING DISC FLAT LAPS

Now you can polish bookends and large slabs of petrified wood in short order using our Diamond Rotating Disc Flat Lap machines modified for use with our Magnetic Novas.



You save time polishing larger flats in two ways. First, the actual polishing process for each step is reduced by the speed and efficiency you get using our resin-bond diamond Magnetic Nova Laps. Under normal circumstances, it only takes 14 to 25 minutes for each grit step to polish your large flat. Second, you save a lot of time by not having the usual clean-up job between grit changes. Changing grits with Magnetic Novas simply means removing one flexible lap from the back-plate and installing the next—taking only a few moments at most. (See photo.) Since the diamonds in Magnetic Novas are permanently bonded to their working surfaces, there's little chance of contamination.

Our recommended general-purpose grit sequence of Magnetic Novas for Diamond RLD machines is 60, 280, 600 and 1200 grits, followed by our new Super Premium Cerium Oxide Polish on a felt pad. We also recommend the use of a 60 grit Plated Diamond Disc to precede the 60 grit Magnetic Nova for those slab surfaces with deep saw marks or other features requiring grinding preparation. Other grit sequences can be used with excellent results depending on the material to be polished.

You can use a regular cast iron lap on your Diamond RLD, but you will need to reduce the motor speed. Please contact our Technical Dept. for information.



FEATURES FOR THE DIAMOND RLD MODELS:

- Models come with motor, adjustable drip tanks, and aluminum back plates. Arbor shaft is 1". Bearings are 1", factory lubricated and sealed to prevent contamination.
- Powder coated, heavy duty fabricated steel plate boxes. The 18RLD's measure 24" x 24"x 34" with a 7 ¾" deep tank. The 12RLD's are 15"x 15"x 13 ¾" with a 6 ¾" deep tank.
- Regular RLD models are designed to run the best speed for lapidary use. Variable speed models may be desired for other applications. Call for technical assistance for your application
- Accessories can be found as follows: Magnetic Novas, page 16; felt polishing pads, page 76, Super Cerium Oxide and other polishes, page 67, Plated Diamond Discs, page 17.

Item	12" Models			Item	18" Models		
	Order #	Shp Wt.	Price		Order #	Shp Wt.	Price
12 RLD Diamond 1/3 HP 110V-60Hz	620-40-12RLD	140 lbs.	1655.00	18 RLD Diamond 3/4 HP 110V-60Hz **	620-40-18RLD	291 lbs.	2530.00
12 RLDV Diamond Variable 1/2 HP VS **	*620-40-12RLDV	150 lbs.	2790.00	18 RLDV Diamond Variable 1 HP VS **	*620-40-18RLDV	291 lbs.	3965.00
12 RLDX Diamond Export 1/3 HP 220V-50Hz	620-40-12RLDX	135 lbs.	1880.00	18 RLDX Diamond Export 3/4 HP 220V-50Hz	620-40-18RLDX	291 lbs.	2755.00
Aluminum back plate for diamond laps	621-40-117086	12 lbs.	456.75	Aluminum back plate for diamond laps	621-40-117078	25 lbs.	766.50
12 RLD Splash Guards (2)	621-40-118457	2 lbs.	55.00	18 RLD Splash Guards (3)	621-40-118458	3 lbs.	95.00
Crating fee machine	620-40-C12		104.00	Crating fee machine	620-40-C18	-	203.00

* Variable speed machines are SPECIAL ORDER

Allow 4 -6 weeks for delivery

** Shipped via truck.

ROTATING DISC FLAT LAPS

If you need to precision grind and polish a flat surface on stone, glass or optics, the rotating disc laps will do the job.

These rotating flat laps are built to fulfill the fundamental requirements of precision lapping. You get maximum stability and wheel balance. Lap plates on standard models are cast iron, machined to exacting tolerances and grooved with concentric V-groove circles for retention of the abrasive charge. Your surfaces will be FLAT. Rotating laps work faster than the oscillating type machine, but the workpiece must be held and kept in constant motion throughout the process.

FEATURES FOR STANDARD RLS MODELS:

- Models come with motor, adjustable drip tank, and cast iron plate.
- Powder coated, heavy duty fabricated steel plate boxes. The 18RLS's measure 24" x 24" x 34" with a 7 3/4" deep tank. The 12RLS's are 15"x 15"x 13 3/4" with a 6 3/4" deep tank.
- Water reservoir has adjustable valve to regulate flow of water or water-abrasive mixture on standard machines. The drip spout can be easily moved over the rotating disc.
- Arbor shaft is 1". Bearings are 1" factory lubricated and sealed to prevent contamination.
- Variable speed machines allow instant speed adjustments through use of a variable speed motor and controller.
- Machines and extra 18RLS lap must be crated for shipment.



Model 12RLS



Above: Cast iron lap plate

**SAFETY
FIRST
WEAR YOUR
GOGGLES**

Model 18RLS

Item	12" Models			Item	18" Models		
	Order #	Shp Wt.	Price		Order #	Shp Wt.	Price
12 RLS Standard 1/3 HP 110V-60Hz	620-40-121897	144 lbs.	1650.00	18 RLS Standard 3/4 HP 110V-60Hz **	620-40-121889	291 lbs.	2510.00
12 RLSV Variable speed 1/2 HP VS **	*620-40-121897V	150 lbs.	2785.00	18 RLSV Variable speed 3/4 HP VS **	*620-40-121889V	291 lbs.	3850.00
12 RLSX Stand. Export 1/3 HP 220V-50Hz	620-40-121897X	135 lbs.	1875.00	18 RLSX Standard Export 3/4 HP 220V-50Hz	620-40-121889X	291 lbs.	2735.00
12 RLSVX Variable speed Export	620-40-121897VX	150 lbs.	2835.00	18 RLSVX Variable speed Export	620-40-121889VX	291 lbs.	3900.00
Cast iron back plate for standard laps	621-40-117085	25 lbs.	489.00	Cast iron back plate for standard laps	621-40-117077	76 lbs.	771.00
Crating fee machine	620-40-C12	-	104.00	Crating fee machine	620-40-C18	-	203.00
				Crating fee 18RLS plate	621-40-117077C	-	41.00
* Variable speed machines are SPECIAL ORDER. Allow 4 -6 weeks for delivery **Shipped via truck.							

DOUBLE DECK VIBRATORY LAP

You can be rough grinding and finish polishing at the same time with this 18" double pan set-up. Use the top pan with its special pad for all polishing, and the lower pan for the other stages of grind and pre-polish.

Slabs rotate in a circular orbit so there is little damage to any stone edge. Each pan comes with a heavy duty vinyl tubing around the outer edge to act as a buffer between moving slabs and sides of pan.

The upper pan comes with a polishing pad that can be charged with a variety of polishes for the final process on your slabs. Each pad should only be used with one type of polish. If you need to use different polishes, each should have its own polish pad to prevent contamination. The polishing pad is used over a smooth-surfaced aluminium plate.

The lower plate is aluminum finished with special indentations for use with silicon carbide grits for grinding and sanding flat stones. It comes with a heavy duty vinyl bumper ring to serve as a buffer between moving slabs and edge of pan.

Brackets hold the two pans in place, one above the other, and are designed for easy removal of the pans.

Machine is made of non-rusting aluminum castings. Only weighs 50 pounds so can be moved from place to place but is still heavy enough for stability while in operation.

For use overseas, order the transformer listed below.



DOUBLE DECK LAP MODEL DL-18
The machine comes with frame, motor, two pans, polishing pad, set of brackets.



Double Lap shown with top pan removed.

Item	Order #	Shp Wt.	Price
Double Deck Lap	620-42-2000	53 lbs.	1230.00
Smooth Pan	621-42-2003	12 lbs.	250.00
Rough Pan	621-42-2004	12 lbs.	250.00
Polish Pad	621-93-0060	4 oz.	12.00
Bracket (Set of 4)	621-42-2115	2 lbs.	51.45
Rubber Ball	690-42-2005	6 oz.	5.00
Spring	690-42-2007	6 oz.	10.25
Spider	690-42-2002	7 lbs.	125.00
Counterweight	690-42-2009	8 oz.	25.00
110V Motor, Cord, Switch	690-42-5000	8 lbs.	250.00
Transformer	104-WIZ-8634	1 lb.	80.00

GRIT SEQUENCE FOR LAPPING

The choice of abrasive grit sizes for the lapping process follows somewhat that in tumbling or stone polishing procedures. The choice also depends upon the material, and preference of the person doing the work. The following sequence of silicon carbide grits is commonly used, and will generally produce a satisfactory polish on most materials: 60/90, 220, 400, 600, 1000, and then a polish. Generally, the more steps the better the polish.

“VI-BRO-LAPS” IN TWO SIZES

Both the 20" and 27" Vi-Bro-Lap models give you the satisfaction of achieving flat surfaces on geode halves, agate, petrified wood and other material, yet relieves you of the necessity for constant attention to the lapping process.

The Vi-Bro-Lap can accommodate a number of specimens at the same time. The tempered aluminum lap plate is grooved in a criss-cross pattern. This permits abrasive particles to circulate between the lap plate and the workpiece so that the abrasive itself is continuously being crushed to a smaller size. This reduces the number of different grit sizes which are needed.

When the workpiece surface is ground flat and satin smooth, the lap plate is turned over to the other side on which a polishing pad is cemented. Using a polishing compound on this pad, a fine mirror like finish is produced on the workpiece.

SPECIFICATIONS

- Lap plates are manufactured from heat treated aluminum alloy to produce a tough, wear-resistant surface. Each surface has milled V-grooves in a square grid pattern.
- Suspension is controlled by aircraft strength cable, adjustable for fine leveling to keep workpieces evenly distributed over the lap plate surface.
- 20VL measures 21" W x 21" D x 21" H.
27VL measures 28" W x 28" D x 30" H.
- Frame is welded, fabricated steel for stability.
- Comes with 1/3 HP motor, polish pad and galvanized circle. Export model available.

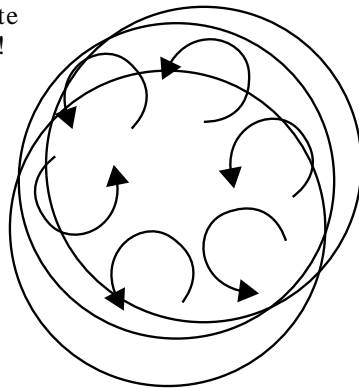


A UNIQUE DOUBLE ACTION WORKS FOR YOU

While the Vi-Bro-Lap plate oscillates, work-piece rotates! This gives faster grinding surface speed; distributes abrasives, assures a flat polished surface, and equalizes wear on lap plate.

Allow 3-4 weeks for delivery.

We have most parts for older Vi-Bro-Laps. Call us for information.



Item	20" Model 20VL			27" Model 27VL		
	Order #	Shp Wt.	Price	Order #	Shp Wt.	Price
Model with 1/3 HP 110V 60 Hz motor	620-41-108415	176 lbs.	1910.00	620-41-108423	270 lbs.	2200.00
Export model with 1/3 HP 220V 50 Hz motor	620-41-108415X	176 lbs.	2110.00	620-41-108423X	270 lbs.	2400.00
Crating fee- machine	620-41-C20	-	183.00	620-41-C27	-	203.00
Replacement plate with pad	621-41-118208	28 lbs.	625.00	621-41-118190	84 lbs.	795.00
Crating fee 27VL plate				621-41-118190C	-	62.00
Polish pad cemented to galvanized circle	621-41-117176	3 lbs.	57.00	621-41-117184	5 lbs.	90.70
Polish pad	621-41-117101	5 oz.	18.00	621-41-117119	6 oz.	24.00
Cable & eye bolt kit	690-41-100438	8 oz.	19.00	690-41-100420	8 oz.	19.00
Rubber foot	690-41-104120	6 oz.	11.50	690-41-104120	6 oz.	11.50
Flange bearing	690-90-4120	2 lbs.	67.00	690-90-4120	2 lbs.	67.00
Pillow block bearing	690-90-5684	2 lbs.	47.00	690-90-5684	2 lbs.	47.00

THE GRYPHETTE

Use this handy glass grinder for all your stained glass needs, and apply the same techniques to using stone slabs for creating lampshades, boxes, windows, etc.



Handy for wirerapping too. Use the Grove Grinder Head for a fast, easy way to groove around the edges of stone and glass pieces for wrapping your wire.

DIAMOND GRINDING HEADS



STANDARD



GROOVE GRINDER



GRINDING PIN

CAUTION:
WEAR SAFETY GLASSES
WHEN USING GRINDERS

The Gryphette Grinder offers remarkable performance and efficiency at an affordable price that makes it attractive for beginning glass artists, wire wrappers, the lapidary and for use in classrooms. Add the fact of its compact size and simplicity of operation, and it makes a practical grinder for any artist with limited space.

The Gryphette Grinder features a powerful DC motor that lets you can grind shapes in your material at medium pressures without worry that you'll be overloading the motor.

The working table measures 6 5/8" x 6 5/8". Comes with a flexible spray guard that allows large or specially shaped pieces of glass or stone to be to be ground without removing the guard. It simply bends out of the way.

Overall size of grinder (excluding accessories) is approx. 7 5/8" x 7 5/8" x 6" high from base to table top. Use only with properly grounded three prong 110 volt 60 cycle outlet.

The Gryphette Grinder is made of high impact plastic, and so simple in design and operation that Gryphon offers a five-year warranty on parts and workmanship.

GRYPHETTE GLASS GRINDER comes with medium 3/4" diamond grinding bit, and flexible spray guard.

725-50 6 lbs Shp Wt 79.00

STANDARD HEADS: Come in 1" and 3/4" diameters, and three grits. The coarse (C) grit grinds at greater speed and is longer lasting, but will chip glass more. The medium (M) grit is best for all around grinding, while the Fine grit (F) will smooth the surface left by the coarse grit.

THE GROOVE GRINDER is great for grooving stone and glass edges to hold silver and gold jewelry wire in wire wrapping or other forms of jewelry making. Can also be used for making special effects where a narrow groove is desired. Comes in medium grit only.

THE GRINDING PIN can be used to drill holes in glass or stone slabs, then used to grind elaborate shapes within the inner surface. Head sits above grinder table.

DIAMOND HEADS							
All heads come with hex wrench. Shp. Wt ea. 8 oz.							
Dia	Grit	Order #	Price	Dia	Grit	Order #	Price
1"	C	726-1000C	19.95	3/4"	C	726-0750C	18.95
1"	M	726-1000M	19.95	3/4"	M	726-0750M	18.95
1"	F	726-1000F	19.95	3/4"	F	726-0750F	18.95
Grinding Pin				1/4"	C	726-0250C	18.95
Grinding Pin				1/4"	M	726-0250M	18.95
Grinding Pin				1/4"	F	726-0250F	18.95
The Groove Grinder				1"	M	726-2000M	20.95

VFP VERTICAL FLAT POLISHER

Polish flats in record time with our new VFP Flat Polisher. You can polish small cabs all the way up to two foot slabs, or as big as you can hold against the 12" diameter vertical flat polishing pad.

You can't bog down the motor either, for it's a 175 RPM gearhead drive with a 1/2 HP motor. Charge the 12" x 1/2" felt pad with your favorite polish and go to work. (See page 67 to order) Pad must be kept moist with an occasional squirt of water from a spray bottle. Recharge the pad with polish as needed. Motor and gearhead mount to the edge of your bench top. Felt pad protrudes approximately 3 1/2" beyond edge of bench and about 2 1/2" below top. Machine is approximately 18" long by 10" wide (including pad), and 10" high.

THE VFP POLISHER comes with 175 RPM gearhead with 1/2 HP 110V 60Hz motor, 12" dia. steel back plate, and 12" dia. x 1/2" thick felt polishing pad, goggles.

550-VFP-12 Shp. Wt. 75 lbs. 925.00
 VFP 12" STEEL REPLACEMENT PLATE has 5/8" AH with hub and set screw.

551-VFP-20 Shp. Wt. 12 lbs. 147.00
 VFP FELT REPLACEMENT PAD 12" diameter x 1/2" thick. Glues to back plate.

100-PAD-U-12F Shp. Wt. 1 lb. 59.85

GROUND FAULT CIRCUIT INTERRUPTER	
Use with any of our machines using up to 15 Amps. Portable. Plugs into standard 3-prong electrical outlet. Recommended for use where household outlets have no built-in ground fault protection. Shuts off power to prevent shock.	
104-GFCI.....	Shp. Wt. 1 lb. 20.00

GEM CARVER'S WORKSTATION

Stop the splash and mess when you carve with this handy workstation developed by master carver, Dick Friesen. The unique arrangement of double, adjustable shields prevents water splashing towards you as you carve, either with a Freedom Flexshaft unit, or the fixed-shaft Multi-Flex. The Carver's Workstation also incorporates a water tank with adjustable valve to control amount of water to your workpiece. A flexstem lamp easily puts light right to where you work. Made of powder coated metal with a clear shield that protects you from splash without obstructing your view as you work.

660-WS Shp. Wt. 8 lbs. 198.00

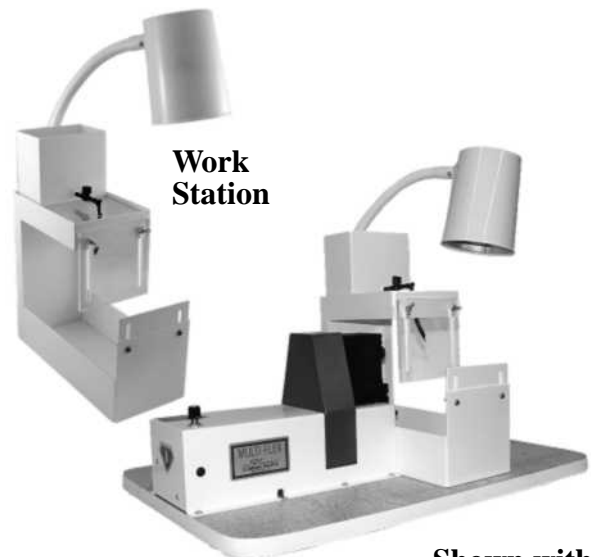


Shown above: Gearhead, motor and 12" felt pad on steel back plate.

Below: Gearhead and motor mounted to a bench.



SAFETY FIRST WEAR YOUR GOGGLES



Shown with Multi-Flex

THE MULTI-FLEX SYSTEM

Here's a handy system that lets you start with one machine, and later convert it to another function. You can set up for a capping machine, then add on components for a trim saw, multiple-use carving unit, or a single wheel grinder and flat lap as well.

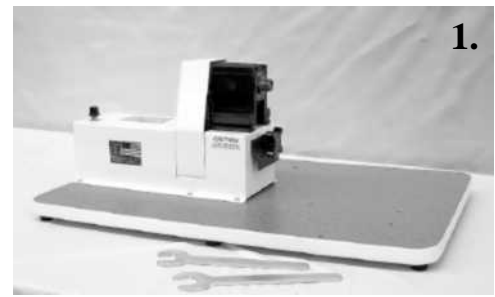
The heart of the system is the Powerhead (Photo 1) It's high torque DC motor and pulley system provides a variable speed range of 100 to 9000 RPM. You get plenty of power at the turn of a control knob. Comes mounted on 16" x 24" Formica base board. Available in 115V and 220V versions. See page 27.

CABBER SYSTEM (Photo 2) Set-up uses 2" wheels. Adaptor (I) mounts 3 wheels at a time. With two adaptors plus a set of 2" Galaxy and Nova Wheels, you have a diamond grinding and polishing unit that's fast and efficient. You will need the Powerhead (A), Hood (G), Pan (D), EZ-Cool recirculating system (B), one or more Adaptors (I), and your choice of 2" wheels. (See pages 12-14.)

TRIM SAW SYSTEM (Photo 3) You can trim slabs up to 9" wide or cut fine opal. Uses 4", 5" or 6" blades. The variable speed allows proper blade surface feet per minute. Saw Assembly Kit (H) contains a blade adaptor for 4", 5" and 6" blades with $\frac{5}{8}$ " arbor holes, saw table, and a unique blade guard with direct water feed. You will also need the Pan (D), EZ-Cool recirculating system (B), Powerhead (A), and a blade (See pages 50-51.)

CARVING SYSTEM (Photos 4 & 5) The Multi-Flex system was first designed for carvers, giving them both a fixed point carver that's still preferred by the master carvers in Europe, or a flex-shaft/handpiece system more commonly used here. For the fixed point carver, you need Adaptor (M) and Chuck (Q) or Adaptor (N) and chuck (P). For the flex-shaft setup, you need Adaptor (O) and Flex-Aid (R) plus a handpiece. (See page 33.) For either set-up, you need the Powerhead (A), Pan (D) and a coolant system, either (B) or (C). The Shield (F) will keep the splatter down. Also see Carvers Workstation on page 25.

DISC/WHEEL GRINDER (Photos 6 & 7) Use both flat laps or grinding wheels with the special Hinged-Lid Shield (E). For laps, lid is closed; for wheels, it's open. You can use 4", 5", and 6" discs with $\frac{1}{2}$ " arbor holes, and 4" and 6" wheels. You will need Shield (E), Adaptor (K) for discs and Adaptor (L) for wheels. You also need the Powerhead (A), Pan (D), and either coolant system (B) or (C).



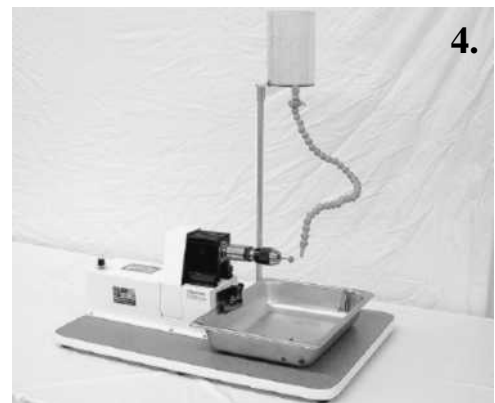
1.



2.



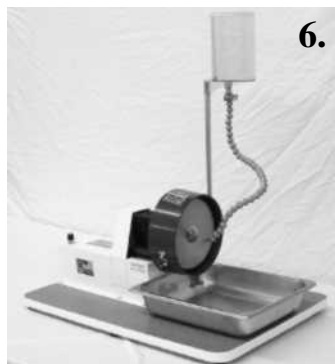
3.



4.



7.



6.



5.

SELECTING YOUR MULTI-FLEX SYSTEM COMPONENTS

Using the Roman Numerals at right, choose the Basic System you need. Refer to the list below and find the Roman numeral you have chosen. Items marked with a ✓ under your Roman Numeral are Basic Requirements. If you have a choice between two items your choices are marked with matching symbols. (☐ ○)

BASIC SYSTEM SET-UPS

- I. Cabber Unit
- II. Saw Unit
- III. Carving Unit, Flexible
- IV. Grinder Unit
- V. Carving Unit, Fixed, Taper Mount
- VI. Carving Unit, Fixed, Thread Mount

	Item	I	II	III	IV	V	VI	Order #	Price	Wt.
A	Powerhead with 115V motor, speed control, 16" x 24" base-board, one spanner wrench, safety glasses.	✓	✓	✓	✓	✓	✓	660-29-0000	550.00	25 lbs.
A	Powerhead with 220V motor, speed control, 16" x 24" base-board, one spanner wrench, safety glasses.	✓	✓	✓	✓	✓	✓	660-29-0000X	650.00	25 lbs.
B	EZ-Cool recirculating pump with Locline tubing and valve. Requires pan for water supply. Minimum 1" water depth.	✓	✓	☐	☐	☐	☐	660-70-8000	55.25	2 lbs.
C	Drip tank with valve, Locline tubing. Mounts on powerhead baseboard.			☐	☐	☐	☐	660-70-19002	72.75	1 lb.
D	Pan, stainless steel. Measures 10 1/2" x 12 1/2". Must be used with cabber hood (G) saw (H) and EZ-Cool (B)2.	✓	✓	✓	✓	✓	✓	660-29-5021	35.90	2 lbs.
E	Shield, cast aluminum. Has hinged lid. Use with 4", 5", and 6" laps or single 4" and 6" wheel set-ups.				✓			660-29-4000	93.45	4 lbs.
F	Shield, Polycarbonate. Approx. 8"x 29" long. Slotted to fit in Pan (D). Or use Workstation shown on page 25.			✓		✓	✓	660-29-5070	20.25	1 lbs.
G	Hood, metal, for use with 2 inch wheels. 12" W x 8 1/2"H x 3 1/2" deep. Comes with metal splash guard, tubing for use with recirculating pumps. Must be used with Pan (D).	✓						660-29-1020	44.00	2 lbs.
H	Saw Assembly Kit. Contains adaptor for 4", 5", and 6" blades with 5/8" AH, saw table, blade guard with water feed. Must be used with Pan (D) and EZ-Cool recirculating system (B).		✓					660-29-2000	215.00	5 lbs.
I	Adaptor, 1" dia., for use with 2" grinding and polishing wheels. 1 1/4" D x 6 3/4" L with nut and two 3/4" plastic spacers. Holds three 2" wheels. Accepts pads with 1/4-20" bolts for attachments.	✓						660-29-1002	66.00	1 lb.
J	Adaptor 1/2" plain, for attaching RH 1/2" tapered spindle. (Use with Spindle (U) below.)							660-29-3000	33.00	1 lb.
K	Adaptor, 1/2" diameter, for attaching discs with 1/2" arbor holes. Stainless steel. Use with Shield (E).				○			660-29-5030	33.00	2 lbs.
L	Adaptor 1" diameter, for attaching 4" or 6" single wheels, expanding drums, buffs. Comes with nut and two 3" flanges. Use with Shield (E).				○			660-29-5040	53.25	2 lbs.
M	Adaptor 6" long x 3/8"-24 thread, for use with keyed chuck (Q) for fixed point carving. Longer length allows more maneuverability, while carving.						✓	660-29-5050	48.30	2 lbs.
N	Adaptor, JT1 for use with taper keyless drill chuck (P) for fixed point carving.					✓		660-29-5060	37.80	2 lbs.
O	Adaptor, 1/4" plain, for use with Flex-Aid (R) for handpieces.			✓				660-29-5080	33.00	1 lb.
P	Chuck, keyless drill chuck 0-1/4 JT1 for fixed point carving. Use with adaptor (N).					✓		661-29-5065	88.25	1 lb.
Q	Chuck, keyed, 3/8" - 24 thread. Use with adaptor (M).						✓	661-29-5055	28.10	1 lb.
R	Flex-Aid for 1/4" plain shaft. Foredom flexible shaft for use with handpieces for carving, Handpiece not included. (See page 33.) Use with adaptor (O).			✓				103-BO-14	25.00	1 lb.
S	Spanner wrench for changing adaptors on Powerhead. Includes pin for use on older Multiflex machines.							690-29-0040	7.75	1 lb.
T	Lamp 18" flexible stem. 100 watt. Comes with button for mounting on Powerhead baseboard.							117-0618-G	48.70	3 lbs.
U	Tapered spindle, RH-1/2" for use with polishing buffs. Must be used with adaptor (J).							154-TSR6	9.50	6 oz.

THE "SCULPTURE" ROCK LATHE

This rock lathe machine lets you preform rounded shapes in stone. You can preform eggs, candlesticks, vases, display bases, handles and spheres up to 8" long and 8" in diameter.

Blade and motor carriage is on a roller crossfeed powered by an independent gear motor and lead screw with a clutch. This complete assembly floats freely up and down on roller bearings as it follows the template of your design. The stone is held in place by the heavy duty tightening rod and is rotated into the blade by another independent gear motor. The complete machine is made from powder coated steel plate and has stainless steel rails and coolant pan.

The blade is cooled by a recirculating pump feeding coolant from the pan through two "Lockline" coolant hoses. These adjustable lines allow you to position the coolant flow where you need it. Flow is controlled by valves.

Our Galaxy Carving Wheels can also be used on the Sculpture so that you can finish grind and sand your workpiece.

Overall size is 33½" x 21". Weight is approx. 75 lbs. Must be crated for shipping. Will ship via UPS/FEDEX. ALLOW 4-6 WEEKS FOR SHIPMENT.

THE SCULPTURE ROCK LATHE INCLUDES:

Frame and carriage assemblies made from steel plate that is powder coated for long life. Has stainless steel carriage rails.

Saw blade is powered by high torque D.C. motor. Includes two gearhead motors for driving the Y carriage and turning the rod holding the workpiece.

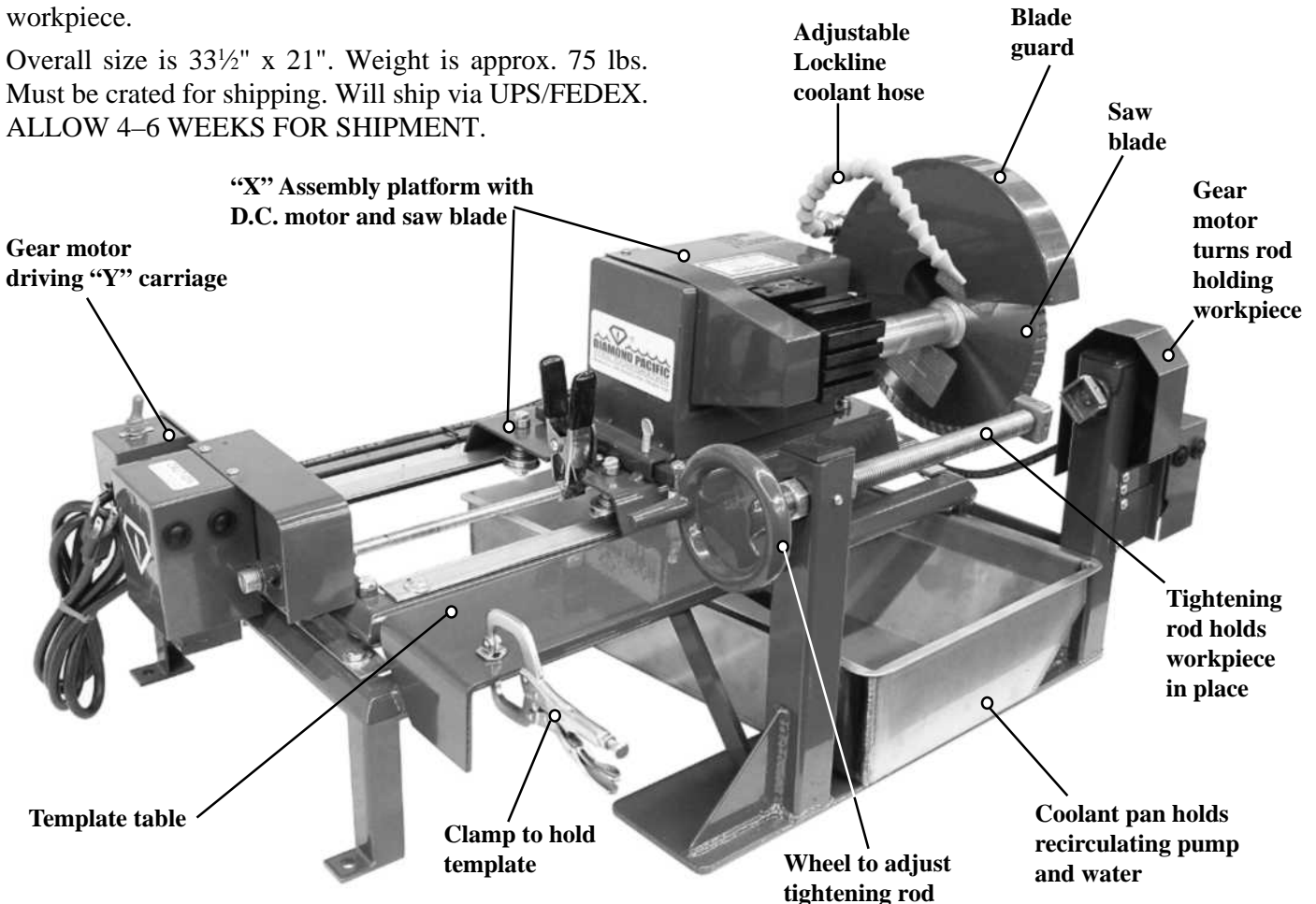
Coolant system consisting of recirculating pump, stainless steel coolant pan, two adjustable Lockline coolant hoses and two control valves.

Heavy duty 8" x .090 x 5/8" diamond saw blade.

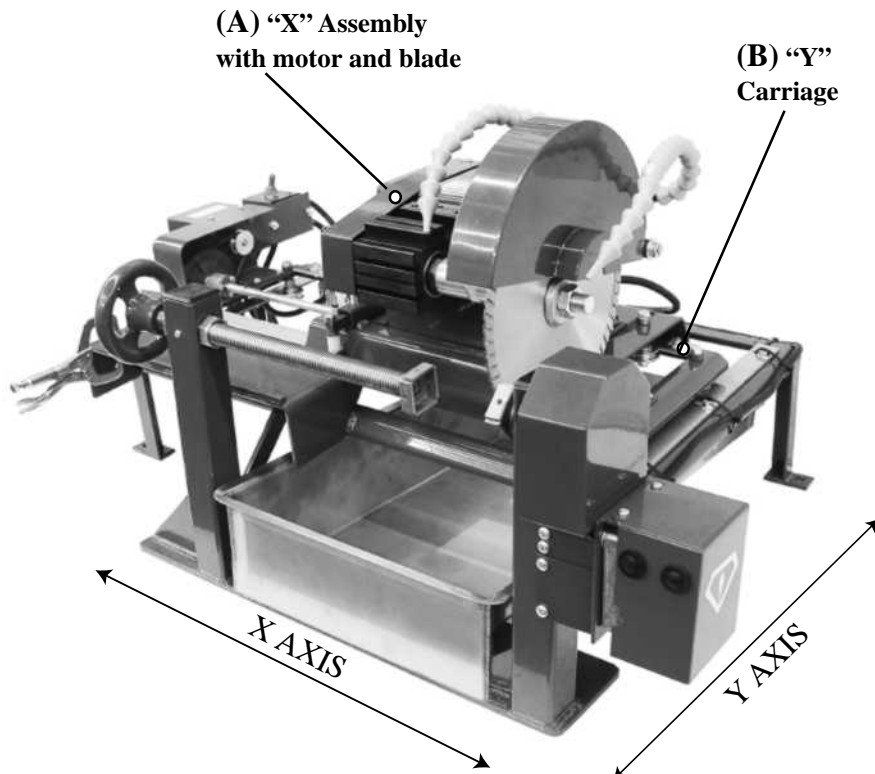
SAFETY GOGGLES WHICH SHOULD BE WORN WHEN USING THIS MACHINE.

Shipping Weight 140 pounds. Must be crated.

640-34-1000	..... 115V Model	..... 2470.00
640-34-1000X	... 230V Model	..... 2670.00
640-34C	..... Crating Fee	..... 183.55
640-925D	..... Replacement Blade	2 lbs. . 157.00



THE “SCULPTURE” ROCK LATHE



The “Sculpture” is based on the simple XY linear movement principle. The X axis moves across the face of the workpiece (from left to right) and is driven by a power feed screw. The Y axis is then left free to move up and down, guided by the template tracer arm following the shape of the template.



A. The X assembly platform is powered by a gear motor driving a screw feed that moves the platform from left to right, keeping the cutting edge of the blade moving across the length of the workpiece.

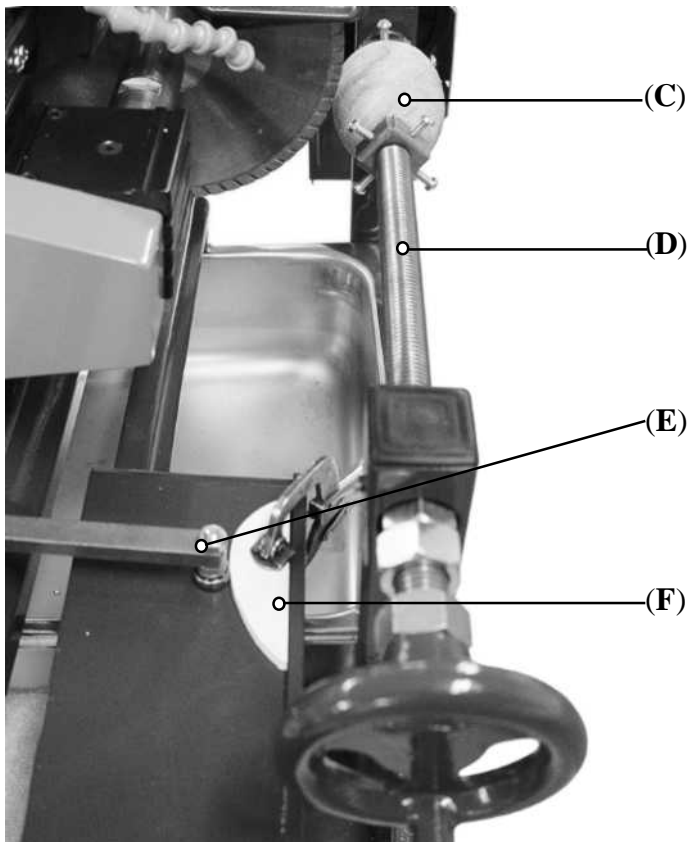
B. The Y carriage assembly carries the X platform and moves it up and down, and is guided in its movement by the template tracer arm following the shape of the template.

C. Workpiece is held in place by the tightening rod. The workpiece is rotated in place by a gearhead motor as the blade moves across the workpiece, following the template.

D. Tightening the rod adjusts to fit workpiece between the clamps holding it.

E. Template tracer arm has a special roller bearing that fits the edge of the template which must be at least 1/4" thick. As X platform moves to right, template tracer bearing follows edge of template, guiding Y carriage in moving saw blade to cut desired shape.

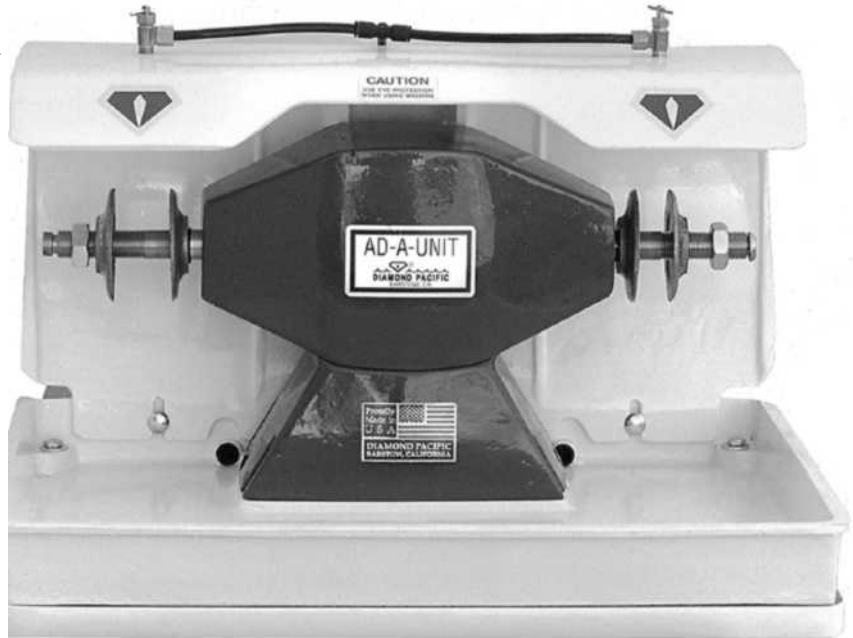
F. Template for egg shaped workpiece shown clamped in place on template table. Template represents one-half of desired shape of finished piece.



AD-A-UNIT ARBOR SYSTEM

For the shop that needs an extra arbor for those many special jobs, this versatile series can fill the bill

- You can buy the heavy duty 8" Husky Arbor alone as a replacement or addition to your shop, or—
- You can buy the arbor with a heavy duty, powder coated steel hood and pan for use with your own motor for power or—
- You can buy the unit complete with arbor, hood and pan, and 1/3 HP 110V 60 Hz motor with a baseboard.
- Also available is the complete AD-A-UNIT-MB model with a 220V 50 Hz motor for export.
- A 1/2 HP variable speed model is available. Call us with your needs.



SHOWN ABOVE: Ad-A-Unit with 8" Husky arbor, powder coated steel hood and pan.

The complete units are ideal for use in industrial shop set ups and for community center and club workshops. Excellent for multiple stations.

You can mount a wheel or expanding drum on each end of the shaft. Both ends have a 1/2" step for mounting laps. The right hand will also accept 1/4" - 20 screw back discs. You can set up the unit as either a stone or metal finishing unit. Attach our special Galaxy Carving Wheels and you have a machine for carving stone.

You can use expanding drums with belts, a variety of grinding and polishing wheels such as our diamond Galaxy and Nova Wheels, and various buffing wheels.

The 8" arbor is heavy duty, cast aluminum with a split housing so just the removal of four screws allows you to change the belt or remove the shaft for bearing replacement. Arbor shaft is 3/4" stainless steel with overall length of 18". Cushion mounted bearings and 3-step pulley. Rear or below motor mount.

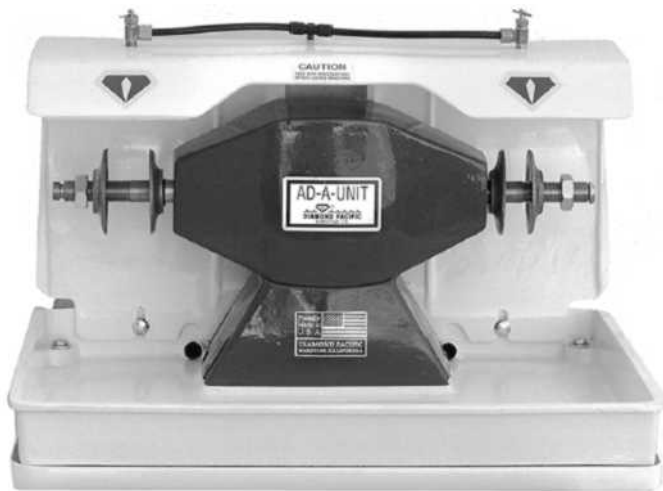
The hood and pan are powder coated steel. The pan has two pipe threaded drain holes and the hood has an overhead water manifold with two valves for providing coolant (water) to wheels mounted on arbor shaft.

CAUTION: Use safety glasses to protect your eyes when using this machine.



AD-A-UNIT-MB: 8" Husky arbor with belt, 3-step pulley, hood, pan, 1/3 HP motor and laminated baseboard. 20" W x 26"L.	630-28-2200. Shp Wt. 66 lbs.....	925.00
AD-A-UNIT-MB: EXPORT MODEL same as above but with 220V 50 Hz motor.	630-28-2200X..... Shp Wt. 66 lbs.....	1075.00
AD-A-UNIT: WITH VARIABLE SPEED CONTROL. Has 1/2 HP motor .	630-28-2200V	Shp Wt. 82 lbs .. 1915.00
	630-28-2200VX EXPORT ..	Shp Wt. 82 lbs .. 2015.00
CRATING FEE: Variable speed units only.	630-28C	116.00

AD-A-UNIT ARBOR SYSTEM



BASIC AD-A-UNIT

AD-A-UNIT: Basic Ad-A-Unit comes with the 8" Husky arbor, belt and three-step pulley. Also includes heavy duty, powder coated steel hood and pan with coolant system consisting of overhead water manifold with two valves for providing the coolant. Fan has two pipe threaded drain holes. Can be used with your own motor and baseboard.

630-28-2000 Shp. Wt. 47 lbs..... 660.00



HUSKY 8" ARBOR

HUSKY 8" ARBOR: with belt and 3-step pulley. Use with your own motor and coolant system. You can mount a wheel, buff or expanding drum on each end of the shaft. Both ends have a 1/3" step for mounting laps. The right hand shaft will also accept 1/4-20 screw back discs. See below for various attachments that can be used with any of the models of Ad-A-Units.

630-28-2100 Shp. Wt. 13 lbs..... 362.00

**SAFETY
FIRST
WEAR YOUR
GOGGLES**

HOOD with water manifold and two valves	690-28-2002	..... Shp.Wt. 12 lbs.	215.00
PAN with two pipe threaded drain holes.	690-28-2001	..... Shp. Wt. 19 lbs.....	179.50
AD-A-UNIT SHAFT	690-28-2103	..... Shp Wt. 00 lbs.....	138.00
BEARINGS. Need two per arbor.	690-90-16204	..... Each 4 oz.	19.00
RUBBER BEARING MOUNT	690-90-0002	..... Shp Wt. 00 lbs.....	6.50
BELT FOR MB MODEL	690-91-4310	..... Each 10 oz.	7.50



DRUMS



BELTS

These Ad-A-Unit machines are quite versatile. For the wheels, drums, buffs and belts shown, use listings below.



WHEELS



BUFFS

Expanding drums	70
Silicon Carbide Belts	70
Galaxy Grinding Wheels	12-13
Nova Sanding and Polishing Wheels	14
Polishing Buffs	75

FOREDOM® HAND POWER TOOLS



MORE POWER IN FOREDOM'S NEW KIT 2230 WITH A FULL 1/2 HP REVERSIBLE MOTOR FOR ALL GENERAL PURPOSE USE.

This new SR full 1/2 HP motor has been re-designed and re-engineered for more power and performance along with the famous Foredom features of reversability, reliability and versatility. The SR operates at speeds up to 18,000 RPM, and will accommodate most of Foredom's "Quick Disconnect" handpieces.

Kit 2230 comes with the general purpose, # 30 handpiece with a geared 3-jaw chuck that will take any size shank accessory or drill bit up to 5/32 (4mm) in diameter. The # 30 handpiece has Foredom's "Quick Disconnect" feature that makes changing handpieces quick and easy. Handpiece comes with 103-CKH-1 chuck key with easy grip, molded plastic handle.

Kit comes with the FCT foot operated control with plastic housing and extra wide footpad, low profile and non-skid pads on the bottom for ease of use. It provides smooth control throughout the speed range.

Kit 2230 comes with a 54 piece accessory kit developed especially for making jewelry. Includes handy rotating tool holder, and flex shaft grease.

The hang-up style SR motor is 1/2 HP, UL listed 110/130V with sealed, permanently lubricated ball bearings and is CSA listed. **NOW COMES WITH A TWO YEAR WARRANTY FROM FOREDOM.**

103-K2230 115V 15 lbs. 269.00

A FOREDOM® MINIATURE POWER TOOL is a flexible shaft machine, consisting of a motor which drives a handpiece by means of a protected flexible shaft. A control provides continuously variable speed.

Foredom Flexible shaft power tools are versatile shop tools for the professional and amateur alike. Their advantages over other types of hand held electric and air driven tools include:

Variable speed – Foot or dial controls provide the right speed for the accessory and job.

Slim, lightweight, smooth running handpieces – the vibration, noise and heat associated with hand held motors in electric or air tools are eliminated.

Reliable and economical – ball bearing, fan cooled, universal motors are easy to maintain and economical to operate.

A selection of handpieces – each can easily be connected to the flexible shaft and together with the wide variety of accessories, allows you to grind, carve, drill, sand, deburr, engrave, polish, rout, and brush with ease, speed, and precision.



Kit 2230



FOREDOM KIT 2230-2CE WITH CE MARK

Same basic kit as above, but the 1/2 HP SR CE motor meets all the CE (European) electrical and safety requirements. It must be used with the FCT-2CE foot control (shown below) that is included in the kit. Comes with the special 230 Volt control power cord and Continental European required plug.

The SR CE motor has all the same specifications as Foredom's new series SR motors as described at left above. Foredom "Quick Disconnect" handpieces can be used with this motor, but the slip joint handpieces cannot be used.

Kit 2230-CE contains: SR CE hang-up style motor. # 30 Handpiece, FCT-2CE foot control, 54 piece accessory kit, rotating burr and tool holder, flex shaft grease. **TWO YEAR WARRANTY.**

103-K2230-2CE Shp. Wt. 18 lbs. 298.00

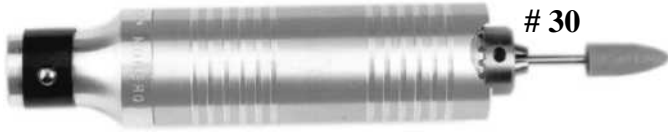


FCT-2CE Control shown with CE required plug.

NOTE: Other plug options for 230V use in United Kingdom and Australia available. Special order. Requires 4 weeks. Call for information.

FOREDOM® INTERCHANGEABLE HANDPIECES

General purpose handpieces # 30, 44T, 28 and 20 have Foredom's Quick Disconnect feature that makes it fast and easy to interchange handpieces or to attach and remove them. Handpiece # 20 features Foredom's Quick Change Bur Release that allows you to insert and remove burs without the use of a chuck key or pin and wrench. All handpieces have pre-lubricated ball bearings that require no additional lubrication and are suitable for continuous use. NOTE: Burs shown are not included.



30

30 Foredom's most popular handpiece features a geared 3-jaw #0 chuck that takes any size shank accessory shank or drill bit up to $\frac{5}{32}$ " (4mm). Comes with 103-CKH-1 chuck key with molded plastic handle. Various bench top tools are available to work with the versatile # 30, including Foredom's drill press and handpiece holder (page 34). $5\frac{3}{16}$ " long, 1" dia, weight, 5.85 oz.

103-HP30 Shp Wt 10 oz. 65.00



44T

44T Collet-type chuck handpiece accommodates accessories with shank sizes up to $\frac{1}{4}$ " in diameter. Comes with three collets: $\frac{3}{32}$ " (2.35mm), $\frac{1}{8}$ " (3.18mm) and $\frac{1}{4}$ " (6.4mm), and pin and chuck wrench. Other fractional and metric collets are available in Collet Set 440 (page 34). Can also be used in Foredom's handpiece holder and drill presses. (page 34). $5\frac{5}{8}$ " long, 1" dia. (center) $\frac{3}{4}$ " dia, (taper), weight 5.85 oz.

103-HP44 Shp wt 9 oz. 59.00



28

28 Collet-type chuck handpiece with a slender, comfortable design and tapered grip. Comes with $\frac{3}{32}$ " (2.35mm) and $\frac{1}{8}$ " (3.18mm) collets, and pin and chuck wrench. Other fractional and metric collets are available in collet set 600 (page 34). $5\frac{1}{4}$ " long, $\frac{3}{4}$ " dia. (center) $\frac{1}{2}$ " dia. (taper), weight 3 oz.

103-HP28 Shp wt 5 oz. 59.00



20



20 Has molded plastic front grip with tapered sides for easy and close handling. Comes with Lever Action for quick and easy insertion and change of accessories. To insert an accessory, rotate lever 90° away from handpiece body, insert accessory, and move lever forward or back 90° into locked position. $5\frac{5}{8}$ " long, $1\frac{1}{8}$ " dia. (center) $\frac{3}{8}$ " dia. (front taper), weight 4 oz.

103-HP20 Shp wt 5 oz. 89.00

SPEED CONTROLS FOR NEW $\frac{1}{8}$ HP SERIES SR MOTORS



FCT-2CE



FCT-1



SCT-1

The reliable FCT is Foredom's most popular foot operated speed control. It features solid state circuitry in a heavy duty plastic housing with an extra wide footprint, low profile, and non-skid pads on the bottom for ease of use. It provides smooth control throughout the entire speed range. CSA listed. 7" long, $4\frac{1}{2}$ " wide, $2\frac{5}{8}$ " high.

103-FCT-1 (115V) Shp Wt 2 lbs. 35.00

The FCT-2CE control is for use with SR CE $\frac{1}{8}$ HP machines only. Has same features as FCT-1 above.

103-FCT-2CE (230V) Shp Wt 2 lbs. 70.00

The SCT offers the same electronics and smooth control as the FCT but in a much heavier, cast iron housing. The bottom surface of the SCT is covered with non-skid material. The added weight of the metal housing eliminates any unexpected movement of the control along the floor. CSA listed. $6\frac{3}{4}$ " long, 4" wide, $2\frac{5}{8}$ " high.

Not available for use with SR CE machines.
103-SCT-1 (115V) Shp Wt 6 lbs. 60.00

DRILL PRESS STAND

Use your handpiece in this drill press and convert your flexible shaft machine into a drill press for drilling straight, accurate holes in gemstones, metal, wood, plastic and glass. It's a rugged, precision tool made with machined cast iron base, table and housing for stability and accuracy. Sturdy locking nut presets stroke depth from 0 to 1 1/4". Use with #30, 30H, 44, 44T and 44HT handpiece. Handpiece in photo not included.

103-DP-30 9 lbs. 169.00

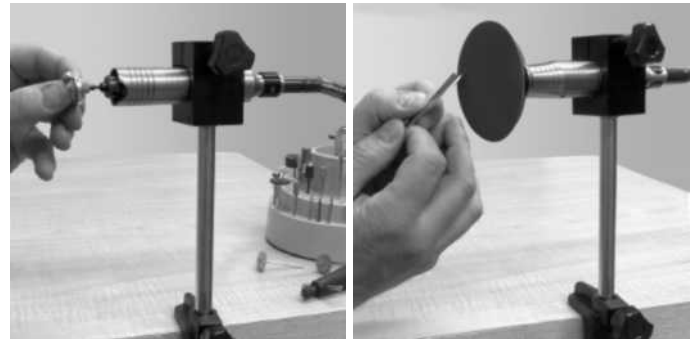


Stroke Length: 1 1/4"
Throat: 2"
Post Diameter: 3/4"
Height: 14 1/4"
Adjustable Table:
3 3/16" x 3 3/16"
Base Plate: 3 3/4" x 3 1/2"

HANDPIECE HOLDERS

Holds handpiece in position for use as a high speed lathe for grinding, carving, etc. while controlling workpiece with both hands. Adjustable height up to 10" above work surface. Rotates 360°. Comes with BC-1 bench clamp. For #30, 30H, 30SJ, 44, 44T & 44HT handpieces.

103-HH-30 2 lbs. 39.00



HANDPIECE HOLDER

MAINTENANCE SUPPLIES

Maintenance kits



Maintenance Kits for flex shaft motors contain a shaft, a pair of motor brushes, grease and operating manual. Kits are suitable for 115 and 230 volt motors, except where noted.

- 103-MK-10 New maintenance kit for all new 1/8 HP series SR, SRM, and SRB motors 16.00
- 103-MK-8 Maintenance kit for 1/8 HP series SR, SRM, SRB, S, SM, and SB motors 16.00
- 103-MK-9 Maintenance kit for 1/10 HP series CC, MM, and DD 115 volt motors only 16.00
- 103-MK-9A Maintenance kit for 230 volt CC motors 16.00

Motor Brushes

Priced per pair. Suitable for 115 & 230V units except where noted.

- 103-132P New pair of brushes for all new 1/8 HP series SR, SRM, and SRB motors 8.00
- 103-2019P Pair of motor brushes for 1/8 HP series SR, SRM, SRB, S, SM, and SB motors, H, HM, HB, and series K motors 8.00
- 103-119P Pair of brushes for CC, MM, and DD 115 volt only 8.00
- 103-117P Pair of brushes for CC 230 volt and R, RB, EE, MMG, and GG motors 8.00

Replacement Shafts and Sheaths

- 103-93S Inner shaft for series TX, SR, (1/8 and 1/8 HP), I, PG, S, CC, R and K motors 9.00
- 103-77S Standard material outer sheath that comes equipped on all motors except series L, PG, EE, and F 13.00
- 103-77N Neoprene material outer sheath that comes equipped on series L motors and is optional for all other motors except series EE and F 14.00

Lubrication supplies

- 103-10005 Foredom Motor and Handpiece Oil in hypodermic dispenser 3.00
- 103-10006 Foredom Flexible Shaft Grease in 1 oz. container 3.50

BASE AND YOKE ASSEMBLY

Turn your hang-up style motor into a bench top model with the cast iron base and yoke assembly. It is easy to install and includes mounting screws. For series S, SR, and R motors. 103-UA10451 7 lbs. 45.00



#440



#600



103-CKH-1

COLLET SETS FOR HANDPIECES

- No. 440 set for handpieces 44 and 44T Seven collets: 1/16", 3/32", 3mm, 1/8", 5/32", 6mm, 1/4".
103-440 4 oz. 45.00
- No. 600 set for handpiece 28, 8, 8D, Set of four collets 1/32", 1/16", 3/32" and 1/8" .
103-600 4 oz. 25.00

CHUCK KEY

- Fits handpiece 30, 30H, 30SJ and 25C. Has comfortable plastic handle making accessory change easier, and key more difficult to misplace.
103-CKH-1 4 oz. 4.95

GRYPHON DIAMOND BAND SAW KIT



The simple, rugged construction of the Gryphon Band Saw assures years of service, without expensive and frustrating maintenance. You have a 12" square of platform area. The coolant system uses tap water—no additives required. The reservoir measures 10" x 9". Motor is 1/3 HP direct drive DC at 2850 RPM.

You can make those “impossible” cuts in rock slabs and even fusion glass with this Gryphon C-40 Band Saw. It works like a wood band saw to cut curves and other intricate shapes in stone and glass. Simply guide the workpiece and the saw does the rest. The diamond blade cuts fast and the improved tension adjustment gives you increased control over the cutting process.

The Gryphon Band Saw uses thin diamond blades which remove less material than wire or ring saw blades, and eliminates “double cutting” on projects such as foiled lampshades. The band saw is also the quietest saw available, and easily cuts the most intricate patterns in glass and stone.

We now include two diamond blades in our Gryphon C-40 Kit. You get one Black Diamond Blade (standard with the saw), and one special Heavy Duty Fusion Blade for cutting dense stone and glass. Both are included at a price less than the usual saw and standard blade alone.

The Black Diamond band saw blade is 37" in diameter with a .020" cutting width x .140" deep. Both the Black Diamond Blade and the Heavy Duty Fuser Blade (also 37" diameter) fit other band saws using this size blade.

You can cut material up to 3" thick, but you must cut SLOWLY and CAREFULLY. One inch thick material is the practical maximum thickness.

FOR EXPORT USE, a transformer is required. Use the one listed in chart below.

Order #	Description	Shp.Wt.	Price
725-70-9800	GRYPHON MODEL C-40 DIAMOND BAND SAW KIT comes with 1/3 HP DC motor, coolant system, one Black Diamond Blade, one Heavy Duty Fusion Blade. Made in U.S.A. Limited one year warranty by manufacturer.	17 lbs.	390.00
726-70-9801	BLACK DIAMOND BLADE –Twin pack. Two high quality diamond blades. Standard replacement blades. *See note below.	1 lb.	106.75
726-70-9807	HEAVY DUTY FUSER BLADE. Coarse grit diamonds make this blade suitable for cutting rock slabs, fused glass, and similiar tough materials. * See note below.	1 lb.	60.25
*NOTE: All blade above are 37" long and fit other band saws using this size blade.			
726-70-9802	BLADE GUIDES. Pack of 4 replacement guides.	8 ozs.	6.85
726-70-9805	MAINTENANCE KIT. Contains upper and lower bands, and replaceable bushing for lower wheel.	8 ozs.	20.50
104-WIZ-8634	TRANSFORMER, For overseas use.	8 lbs.	80.00

THE TAURUS 3™ RING SAW

You get two diamond ring saws in one with the new Taurus 3™!

First is the high performing saw with table standard for cutting glass. Second, just take out the Taurus 3™ saw from it's tank and use it like a skill saw to cut work that is too big or heavy to bring to the saw.

THAT'S NOT ALL YOU GET with the new Taurus 3™ saw. It's got a new built-in face shield and built-in, battery free, permanent light source. It's much, much quieter than the early Taurus saws, fewer parts that wear, and a new, slim design for increased performance.

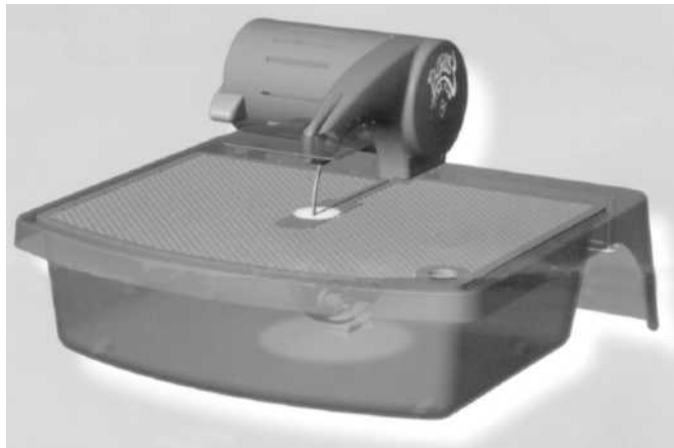
THIS IS THE SAW that will cut any shape for you in glass, slabs of rock, soft metal or plastic sheets. Make that Tiffany style lamp or sun-catcher without all the tedious conventional ways of cutting and grinding.

CUTS IN ALL DIRECTIONS. There are diamonds all around the blade not just on the edge. Wherever your material touches, front, back, left or right (360 degrees), it cuts. You will be able to cut all shapes faster with total precision. Leaves a smooth edge that requires little or no finish grinding.

CUTS UNDERWATER WHILE YOU STAY DRY. Designed so that the water is deposited around the entire blade continuously. The water stays on the blade and will not fly off into your face or the surrounding area.

CUTS EVERYTHING BUT FINGERS. Safe for adults and children. The diamond ring blade is amazing in that it does not cut your skin but will cut almost everything else.

LASTS LONGER. The continuous cooling of the ring blade and heavy duty seamless construction lets you use all 360 degrees of the blade for cutting, not just one edge, giving you longer life than with other diamond blades.



Above:
Complete saw with tank and grid table.



Right: Saw removed from tank for use as a separate saw.

STABILIZER FOOT FOR TAURUS 3

This saw blade stabilizer greatly reduces grommet wear, and gives you more control and stability when cutting thicker material. Perfect for using with Mega Blade as well as the standard blade, separating blade and slicer blade.



The Stabilizer Foot also fits older Taurus 3 Ring saws without any modifications Order below. (Stabilizer Foot now included with newer Taurus 3 Saws.)
121-1034 2 lbs 15.00

THE TAURUS 3™

Comes with 5¾" diamond ring saw, 1/5 HP, 110V, 50-60 Hz motor with on/off switch. Durable plastic tank and grid table, light, eye shield, stabilizer foot.

121-1003 Shp. Wt. 14 lbs 455.00

EXPORT MODEL

121-1004 ... 220V/50Hz Shp. Wt. 14 lbs ... 540.00

THE SUPER SLICER. Holds pattern bars and other small items to allow repeatedly parallel thin cuts to be made. Fits the Taurus Ring Saws and almost all saws including band saws, trim saws, jig saws, etc.

121-1047 .. Shp Wt. 1 lb 25.00

TAURUS RING SAW BLADES


STANDARD BLADE: Good for all kinds of glass, soft tile and marble where intricate cuts are required. Omni-directional. Because the blade is round, you have the ability to cut in any direction. The diamond coating covers entire blade allowing the blade to cut quickly while grinding the edge, leaving it smooth.

SEPARATING BLADE: For internal cuts, omni-directional. The Separating blade is the same size as the standard blade, and has exactly the same cutting action. The difference is that the Separating blade is made from a stainless steel wire that is coated with the same high quality process, but has a coupling attached to it that allows you to open the blade, slide it through your drill hole, re-attach and make internal cuts with no entry point.

SLIM BLADE: Use where narrower cut is desired. For glass, tile and stone up to 1/4 inch thick, and non-ferrous metals such as 12 gauge silver, copper and brass. Because of the Slim blade's diminutive size, it has greater ability to create designs. Omni-directional.

MEGABLADE: Cuts curves and straight lines in thick glass, porcelain, granite and stone. Because of it's "tear drop" shape, the Mega blade is the strongest, but is used differently than the omni-directional blades. It cuts mainly on the front and back, so to create a curve, you need to guide the material around the blade.

SLICER BLADE: Thinnest kerf, making it ideal for removing the least amount of material. Cuts like a band saw but will not bind. Cuts forward and backwards.

 **DICHROIC BLADE:** Made just for cutting thin Dichroic Glass. This blade has the popular slim blade design with a fine diamond grit that will not chip the delicate dichroic finish. Also works well with iridescent coated glass, allowing you to form intricate shapes with perfect edges.

All TAURUS 3™ blades come with 2 orange groove grommets. All TAURUS II blades come with 4 red grommets, 3 yellow grommets and 2 hole reducers. All blades have shipping weight of 2 ozs.				
Blade Type	Taurus 3	Price	Taurus II or II.2	Price
Standard	121-1042	65.85	121-1039	65.95
Separating	121-1043	65.85	121-1041	65.95
Slim Blade	121-1044	65.85	121-1040	65.95
Megablade	121-1045	74.95	NA	—
Slicerblade	121-1046	74.95	NA	—
Dichroic Glass	121-1049	75.00	NA	—

RING SAW ACCESSORIES

For Saw	Description	Order #	Price	Shp. Wt.
Taurus 3	Accessory Tools Kit with instructional video. Contains tools for cutting 30/45/60 degree angles. 45 degree bevel edger for making perfect boxes, a straight edge for cutting straight lines, a circle maker for making perfect circles, and instruction book with an instructional video that shows you how to use the accessory kit and the separating blade.	121-1024	16.75	1 lb.
	Taurus 3 Instructional DVD.	121-0494	5.00	1 lb.

THE WIZARD 6" TRIM SAW



It's the biggest little saw on the market. It can cut an 12" square tile right down the middle, yet it's base is barely more than a foot square itself. No other trim saw, even the larger ones, has this capacity.

- You can carry it around with one hand even when its loaded with coolant. It has a built-in carrying handle, and a unique coolant system that allows this "portable" convenience.
- The Wizard uses water as a coolant so there's no messy oil to contend with.
- The high intensity lamp is easily positioned to light the work area and is built into the saw. Replacement bulbs are available.
- Blades are easily changed, as the removable blade guard comes off with a few turns of a knob. NOTE: Blades shown in photos are not included.
- The Wizard is all metal, with pan and table of stainless steel. The housing and pan have an industrial powder coated finish for great looks and life.
- The high torque, permanent magnet D.C. motor has plenty of power for trimming any hardness of rock. Domestic motor is 115V and Export Model is 230V. The 115V model includes an ALCI (Appliance Leakage Circuit Interrupter) to protect against electric shock.
- The unique angle block included with the trim saw allows you to finish-trim the edges of your cabs at a ten degree angle, giving you a headstart towards grinding the bezel of your cab.

WIZARD TRIM SAW

THE WIZARD comes with high intensity lamp, sample bottle of Water Aid, angle block, and safety goggles. NOTE: The blade is not included with the saw so that you can choose your own blade. Requires 5/8" arbor hole. To order a blade, see page 51 and choose from a number of blade types and thicknesses.

100-WL-100 Shp. Wt. 22 lbs 875.00
 100-WL-100X Export Shp. Wt. 22 lbs 975.00

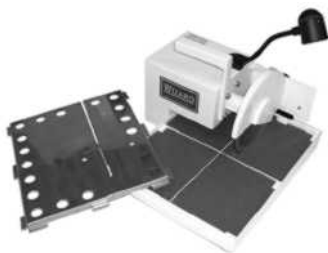
NOTE: The blade is not included with the saw so that you can choose your own blade. Requires 5/8" arbor hole.

TO ORDER BLADES: See page 51 and choose from a number of blade types and thicknesses.

REPLACEMENT BULB FOR LAMP.
 101-WIZ-726 Shp. Wt. 2 oz. 15.00

In photo below, the stainless steel table is removed to reveal the four compartments in the pan, each containing a sponge. Water is added to the sponges that control the supply of water to the saw blade. Excess water is held in the sponges, preventing spills and water sprays.

IMPORTANT :
 These sponges must be removed after **EACH USE** of the saw to prevent the blade from rusting.



MODEL TC-6 6" TRIM SAWS

You can even slab small stones with these trim saws by using the optional vise.

The MODEL TC-6 6" trim saw has an 8" x 10" flat table for cutting large slabs. Table swings up for easy cleaning. Has removable shield. Cast aluminum construction with impact resistant finish. Stainless steel 5/8" arbor with two sealed bearings and extra neoprene seal on tank side.

This saw must be used with oil as a coolant. We recommend Roc-Oil, for fast cutting without the usual disadvantages of oil. (See page 48.)

NOTE: To order 6" blades for this saw, see pages 49-51.

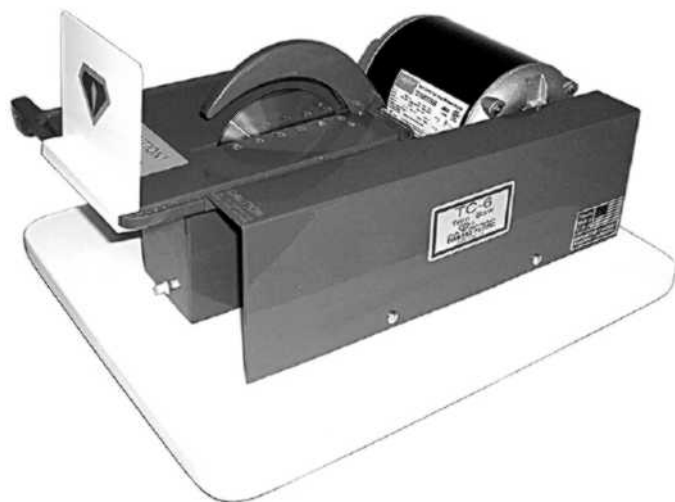
MODEL TC-6-1000 BASIC SAW

Includes basic 6" saw with removable splash guard. (Blade, motor and vise not included.)

600-06-1000 Shp. Wt. 9 lbs 250.00

SLABBING VISE. Converts saw for slabbing.

600-06-5000 Shp.Wt. 1 lb 70.00



MODEL TC-6-3000 TRIM SAW

Includes basic 6" saw, 1/3 HP 1725 RPM 110V/60Hz motor, splash guard, base board. (Vise and blade not included.)

600-06-3000 Shp. Wt . 32 lbs 540.00

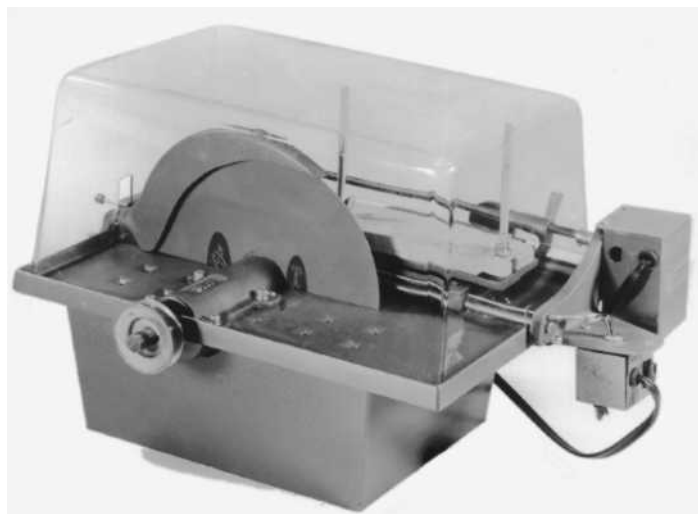
EXPORT MODEL TC-6-3000X

Same as above except motor is 220V/50Hz.

600-06-3000X Shp. Wt. 32 lbs 690.00

MODEL TC-10 10" TRIM/SLAB SAW

This saw makes it easy to trim and slab small rocks.



MODEL TC-10 TRIM/SLAB SAW Comes with 1/3 Hp 110V 60 Hz motor, power feed, vise, and see-through hood. (Blade not included.)

600-10-2500 Shp Wt. 66 lbs 1540.00

EXPORT MODEL TC-10X

Same as above but with 220V 50 Hz motor.

600-10-2500X Shp Wt. 66 lbs 1665.00

Slabbing rocks is easy using the power feed mechanism. For slabbing, secure your rock in the large vise—it takes rocks up to 3 5/8" x 6" wide by 6" long—and the power feed goes from there. Vise glides smoothly and accurately on two stainless steel rails. Vise cross feed is 2". Power feed has automatic shutoff switch.

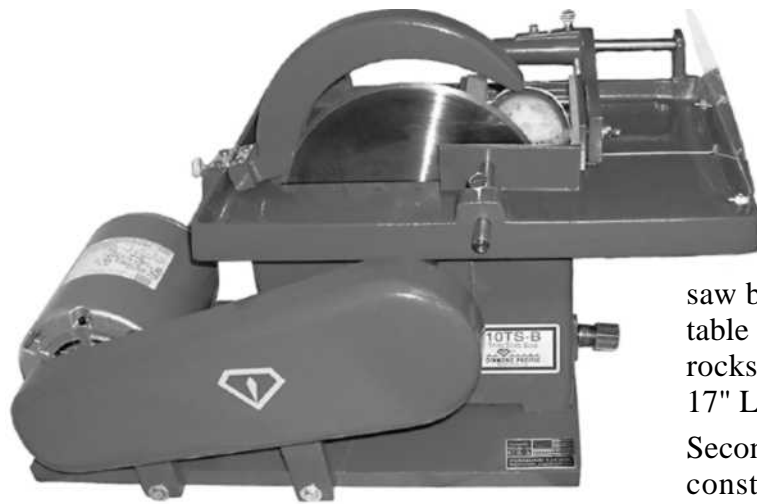
Trimming slabs is also easy. Arbor is centered on 13" x 17" table, making a 90° perpendicular cut every time. Stainless steel arbor shaft has two sealed ball bearings and an extra neoprene seal at tank.

Clean up is easy too. Hinged table flips up for access to coolant tank and sludge removal.

Tank is durable aluminum construction with impact resistant finish for long life.

Use oil as a coolant. Takes approx. one gallon. We recommend Roc-Oil. See page 48.

NOTE: To order 10" blades for this saw, see pages 49-51. See page 47 for spare parts.



MODEL 10TS-B

You'll get years of service from this 10" trim/slab saw.

First, it has all the features needed to make it a versatile trim and slab saw. Easy to use as a trim saw because the vise rotates off to one side to free the table for trimming. With the vise in place, you can slab rocks up to 3½" in diameter. Table measures 12" W x 17" L. Overall size approx. 26" L x 15" W.

Second, it's built solid and rugged with cast aluminum construction with a durable, impact-resistant finish. Arbor shaft is 5/8" stainless steel with lubricated, factory sealed ball bearings, and an extra neoprene oil seal on the tank side.

This saw should be used with oil as a coolant. Takes 8 oz. coolant for initial load.

See page 48 for coolant. We recommend Roc-Oil.

Vise jaws are steel plate with hardwood facings. Designed for a time-tested, economical gravity feed system, the vise has 1½" lateral movement for cross-feeding and adjustable stop guide for constant thickness cuts.

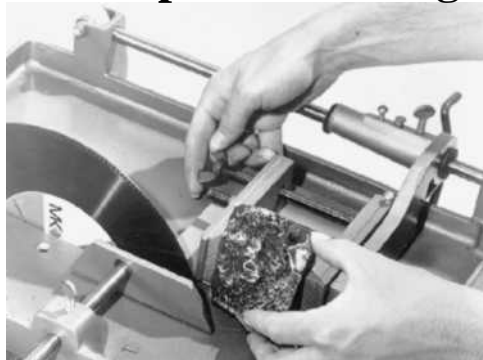
MODEL 10TS-B TRIM/SLAB SAW comes with vise, splashguard and ½ HP 110V 60 Hz motor.
600-10-1219 Shp Wt. 68 lbs 1260.00

EXPORT MODEL 10TS-BX same as above except with 220V 50 Hz motor.
600-10-1219X..... Shp. Wt. 68 lbs. 1495.00

NOTE: This saw does not come with a blade. To order a 10" blade, see pages 49-51.

See page 47 for spare parts.

Tips for slabbing with gravity feed trim/slab saws



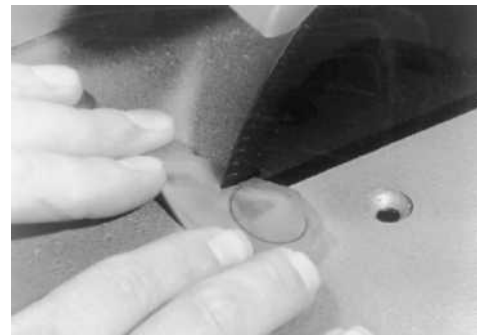
1. Object to be slabbed is clamped in vise. The cut is started by hand pressure.



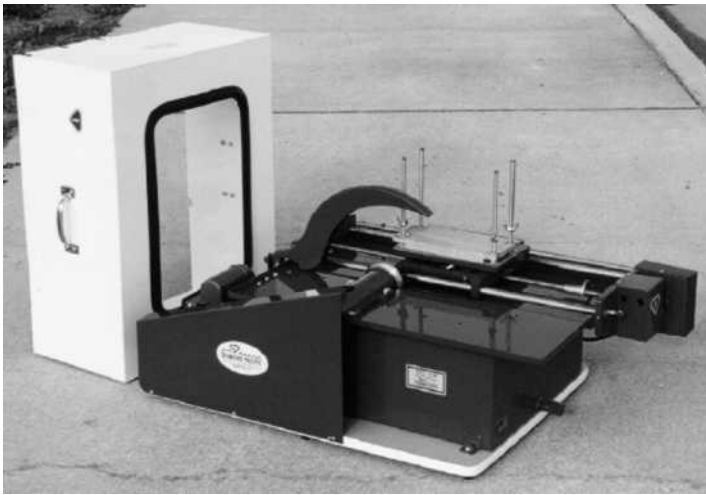
2. A bucket of sand is attached to the gravity feed cable to maintain an even pressure throughout.



3. Gravity feed and vise are removed. Once this is done, slabs can be held by hand to be trimmed to desired shape.



4. All cuts must be made in a straight line. Be careful not to put side pressure on the blade. Successive straight cuts approximate curved lines that will be finished on a grinding wheel. Make all trim saw cuts outside the template mark.



MODEL TC-14 TRIM/SLAB SAW

The Model TC-14 14" saw will handle all your trimming jobs and most of your slabbing needs as well—all in one rugged, powerful saw.

Check out all the features you get

- Power feed motor is geared for continuous operation.
- Removable table vise holds a 5" x 7" rock. Will cut a 5 ¼" depth over the vise.
- Saw arbor housing is cast aluminum with ¾" stainless steel arbor shaft and two sealed ball bearings. Saw table and tank are heavy gauge steel plate. Measures 24"W x 39" L x 21" High.
- Industrial powder coat finish on all appropriate parts.
- Motor available in ½ HP 110V 60Hz or 220V 50Hz.

Start with the trimming job. The vise can be completely removed to allow access to the blade and deck which measures 19½"W x 26"L. The arbor is mounted on top of the deck so the center of the blade is even with the deck top. This makes 90° corner trim cuts easy to do.

Add the vise and power feed and you can slab rocks up to approximately 5" x 7" in size. The vise has over 3" cross feed adjustment, and moves on strong, stainless steel glides. The power feed motor is geared for continuous operation with a slip clutch and safety shut off switch. Powder coated metal hood with acrylic window lets you watch the saw at work and helps keep the coolant contained.

Oil must be used with this saw for fast cutting operation. Requires 2½ gals. coolant for first fill. We recommend Roc-Oil. See page 48.

NOTE: Blade not included in saw price. Choice of blade depends on your application. See pages 49-51 or call us for more information.

MODEL TC-14 SAW comes complete with base, tank, vise, power feed assembly, ½ HP 110V 60 Hz motor, guards and hood. (Blade not included.)
 600-14-1000 Shp. Wt. 246 lbs. 2620.00
 EXPORT MODEL same as above but with 220V 50Hz motor.
 600-14-1000X Shp. Wt. 246 lbs. 2745.00
 Saw must be crated for shipment.
 CRATING FEE for either saw.
 600-14C Crating fee 166.00

SPARE PARTS FOR SAWS PAGES 39-41

Item	Order #	Price	Shp. Wt.	Item	Order #	Price	Shp. Wt.
TC-6 Arbor Assy	690-06-2000	135.00	3 lbs.	10TS-B Arbor Assy	690-10-118001	286.65	3 lbs.
TC-6 Arbor Bearing	690-90-1081	11.40	6 oz.	10TS-B Arbor Bearing	690-90-16202	22.30	8 oz.
TC-6 Arbor Seal	690-90-5062	5.75	2 oz.	10TS-B Arbor Seal	690-10-102574	11.00	2 oz.
TC-10 Arbor Assy	690-10-2100	259.10	3 lbs.	10TS-B Arbor Gasket	690-10-100547	3.50	2 oz.
TC-10 Arbor Bearing	690-90-16202	22.30	8 oz.	10TS-B Sump Gasket	690-10-100545	4.75	2 oz.
TC-10 Plastic Hood	690-10-2006	117.86	3 lbs.	TC-14 Arbor Assy	690-14-4100	324.45	6 lbs.
				TC-14 Arbor Bearing	690-90-16204	19.00	4 oz.

SWING ARM SLAB SAWS

In a swing arm type of saw, the blade is mounted on a heavy swinging arm and moves vertically under gravity down through the rock. The rock remains stationary while a cut is being made.

You easily adjust the cutting speed by setting a needle valve that controls the flow of fluid from a hydraulic cylinder that supports the arm.

The arm is raised for the next cut by an electric pump that forces the hydraulic fluid back into the cylinder.

Apart from this smooth, simple feed system that doesn't need the usual sliding (or rolling) carriage, this type of saw has the advantage of using only one-half to two-thirds as much floor space, as they are shorter in the front to rear dimension.

Here are some advantages that you get only in Diamond Pacific's new swing arm saws:

- Electric pump to raise the arm rather than a hand pump.
- Single belt drive sealed inside the swing arm,
- Table cross feed uses miter gears so handle can be mounted in front to save your knuckles.
- Table lifts out of saw tank leaving nothing in your way when cleaning the tank.
- Your rock is clamped to a table having a generous amount of travel in both front to rear and left to right directions.
- Adjustable lamp puts light where you need it.
- Saw tank sits on a cabinet type stand that houses the 15 gal. coolant recirculating system. Tank and cabinet are heavy gauge steel plate with a durable powder coat finish

* **Blade Not Included in Saw Price.** Choice of blade depends on your application. Please call for more information.



Photo shows *blade, vise and table.

MODEL SA-18 SWING ARM SLAB SAW

- Overall Size: 38"L x 29" W x 59" H.
- Table is 12" x 13½" with a crossfeed of approximately 9".
- Motor: ¾ HP 110V/220V 60 Hz. A 220V 50 Hz is available
- Shipping Weight: 670 lbs. Must be crated for shipment.
- SPECIAL ORDER: Allow 4-6 weeks for shipment.

599-18	110V 60 Hz	8065.00
599-18X	220V 50 Hz	8385.00
599-18C	Crating Fee.	364.00

MODEL SA-24 SWING ARM SLAB SAW

- Overall Size: 48"L x 38" W x 71" H.
- Table is 18" x 20" with a crossfeed of approximately 13".
- Motor: 1 HP 110V/220V 60 Hz. A 220V 50 Hz is available
- Shipping Weight: 1160 lbs. Must be crated for shipment.
- SPECIAL ORDER: Allow 4-6 weeks for shipment.

599-24	110V 60 Hz	9799.00
599-24X	220V 50 Hz	10,055.00
599-24C	Crating Fee.	406.00



The TR Series rock saws (shown above is the TR-24 model) are re-designed and improved saws that we developed from the models we purchased from Contempo Lapidary in 1997. In turn, Contempo had developed their large saws from principles and features used by long time manufacturers such as Highland Park, Beacon Star, Frantom and others. Some of these older saws are still in operation after 30–40 years. We build our modernized saws to the same high standards of long life and performance.

MAXIMUM WORKPIECE SIZES

Model	Blade Size	Height	Length
TR-18	18"	6 ¾"	16"
TR- 24	24"	8 ¾"	20"
TR- 36	36"	14"	25"

THE MODEL TR SERIES LAPIDARY SLAB SAWS

Built to handle large and heavy pieces of rock, these saws are also widely used in industry for other applications—cutting concrete and asphalt specimens for testing in construction projects, slicing core samples in the oil industry, geological specimens, etc.*

Whatever the job, these rugged slab saws are designed for years of dependable service. Our Powerglide Feed System, coolant recirculating system, double safety switches, superior materials, etc., give you a large slab saw that is easy to use and built to last.

While the diameter of the saw blades makes a difference in the size of the saw and its components, the features and construction of the TR-18, TR- 24 and TR-36 Slab Saws are much the same.

***NOTE:** The standard TR Series slab saws are designed for lapidary use. For other industrial or commercial uses, modifications must be made to the saws. Please call us with your specifications to receive a quote.

SAW BOX AND HOOD

The tank not only serves to contain the coolant lubricant essential to the cutting process, it also forms the foundation or chassis for the saw mechanisms. In the TR Series, the tank is made of welded steel plate rather than sheet metal. Legs are heavy duty angle iron welded to the tank and braced to support the saw and heavy loads. The saw is solid with almost no vibration.

The hood is lighter weight steel plate for easier lifting, with a clear, plexiglass window for viewing the saw blade in operation. The hood confines the saw while in operation for safety's sake, and also confines the coolant which is thrown in a heavy spray from the rotating blade. The TR-36 has hydraulic cylinders to help raise and lower the hood. The two smaller saws have locking elbow braces with safety locking pin. Two safety switches on all three saws prevent the motor from running when the hood is up.

“V” GUIDE RAIL SYSTEM AND VISE

Since the saws are designed for heavy duty slabbing and quartering of large specimens, the vise and rail system are made to handle the job. V-grooved ball bearing guide rollers glide the vise carriage smoothly on precision ground, steel V-rails attached to heavy steel channels. Exact tolerances insure matching of hardened bearings, rollers and rails. Alignment of the rails to the blade is within approximately .005 maximum across the full blade diameter.

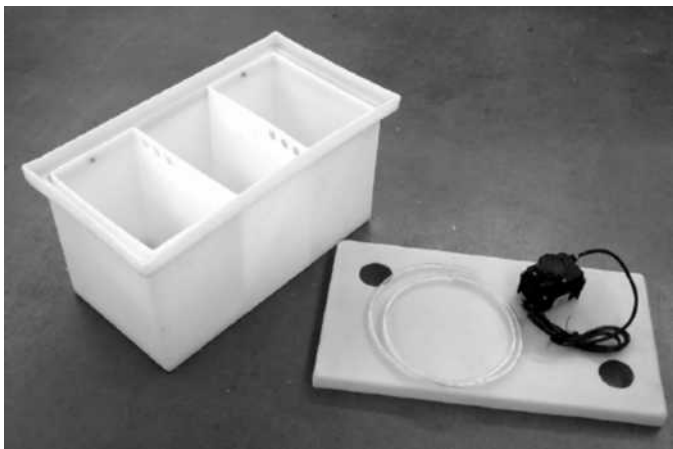
The vise is readily accessible for loading with wood faced jaws that open extra wide. It's made of cast aluminum for the 18" and 24" saws, and welded steel for the 36" saw. The vise is easily adjustable and will hold the material securely as it passes through the cutting blade.

POWERGLIDE HYDRAULIC FEED SYSTEM

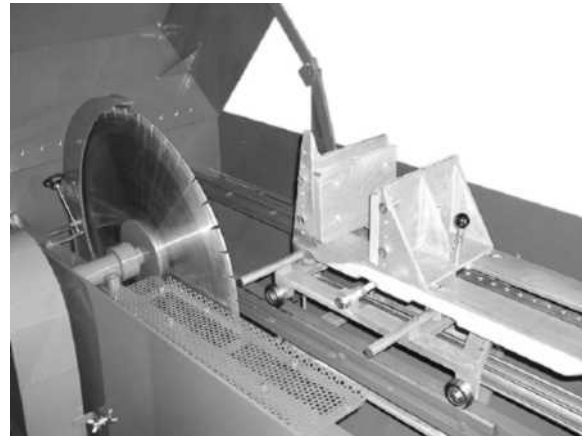
The Powerglide hydraulic feed system is standard on all three saws and is superior to screw feed systems by providing control of cutting speed and length of cut. Your saw blades will cut better and last longer because the hydraulic system feeds the material without slowing down the blade RPM. Another plus is the ability to stop and start the movement of the vise, allowing you to cut a “starting notch” in any surface. This kind of control helps prevent blade damage and “tweaking” of the rock from the vise.

The system consists of a hydraulic pump supplying fluid to a special hydraulic cylinder that in operation, moves the vise carriage with rock through the blade. Speed and pressures are determined by the type of material being cut, and are set by adjusting the easy-to-use regulator, gauge and feed valve.

A safety cut-off device prevents the vise carriage from moving beyond desired length of blade cut.



“V” guide rail system is standard on all 18” to 36” saws. Shown is system for TR-24 saw.



MULTI-STAGE FILTER AND RECIRCULATION SYSTEM FOR SLAB SAWS

We’ve improved and enlarged the coolant recirculating systems for our saws, and have made them available in kits for use on most other large slab saws as well. The system can move large volumes of clean oil over the cutting surface of the saw blade to keep it cool and lubricated. The holding tanks are heavy duty plastic with multiple settling chambers to filter out particles from the coolant. The tank and submersible pump are easily cleaned. See photo below.

Specifications for systems for TR Series saws approximate those given below for separate kits available for other large slab saws.

RECIRCULATING SYSTEMS FOR SLAB SAWS			
The kits contain submersible pump, coolant tank, hose and fittings. Systems will fit most saws and are easily installed using common hand tools.			
Tanks for 14" - 24" saws hold approx. 15 gal. and measure 17"W x 22"L x 12"H. Comes with lid.			
Tanks for 30" - 36" saws hold approx. 30 gal. and measure 18"W x 24"L x 18"H. Comes with lid.			
Kit Size	Order #	Shp. Wt.	Price
For saws 14"-24" pump 1/10HP 100V 60Hz	600-24-8000	14 lbs.	498.75
For saws 14"-24" pump 1/10HP 220V 50/60Hz	600-24-8000X	14 lbs.	514.50
For saws 30"-36" pump 1/10HP 100V 60Hz	600-36-8100	28 lbs.	609.00
For saws 30"-36" pump 1/10HP 220V 50/60Hz	600-36-8100X	28 lbs.	624.75

MODELS TR-18 AND TR-24 SLAB SAWS

These 18" and 24" saws are the best commercial and industrial models on the market.

The standard TR-18 and TR-24 series slab saws are designed for lapidary use, providing anyone wanting to cut large pieces of rock with a heavy duty, reliable rock saw.

These saws are also ideal for many industrial and commercial needs, such as cutting concrete and asphalt specimens for testing in highway and other construction projects. For those applications, modifications to the saw generally must be made. For anyone with such special requirements, just provide us with your specifications and we will give you a quote on building a saw to fit your particular need.



STANDARD FEATURES FOR BOTH MODELS:

- **Powerglide Hydraulic Feed System** pushes rock to blade for steady cutting. See page 44. Both saws must be used with oil—we recommend Roc-Oil described on page 48.
- **V-Guide Rail System** with heavy cast-aluminum vise features quick release pin and positive screw tightening. (See page 44.)
- **Multi-Stage Filter and Recirculation System.** See page 44 for complete description of this 15 gallon capacity tank system that makes easy work of the process.

- **Arbor Shaft is 1" Diameter** in a one piece, cast aluminum arbor housing with sealed ball bearings.
- **Heavy Duty Tank of 3/16" Steel Plate.** Tank has sloped bottom for proper drainage of coolant. Heavy steel legs on casters allow moving of saw. Leveling screws on each leg. Steel hood has large plexiglass top window for visibility of saw in operation.
- **Safety Features** include full steel belt guard and hood activated cut-off switch.
- **Blade Not Included in Saw Price.** Choice of blade depends on your application. See pages 49–51 or call us for more information.

NOTE: 1 HP saws wired for 110V require a 20 amp circuit and a NEMA 5-20R receptacle.

NOTE: 1½ HP saws wired for 110V require a 30 amp circuit and receptacle, and are special order.

MODEL TR-18 SAW

- Tank Size: 43.75"L. x 26.75" W. x 14.75" Deep.
- Overall height: 43"
- Cross Feed: 6.5"
- Vice Opening: 7"
- Depth of Cut: 6¼" with 5" flange
- Motor: 1 HP 110V/220V 60 Hz. standard saw wired for 110V 60 Hz.
A 220V 50 Hz is available
- Shipping Weight: 670 lbs. Must be crated for shipment.
- **SPECIAL ORDER:** Allow 4-6 weeks for shipment.

600-18-8000	110V 60 Hz.....	6990.00
600-18-8000X	220V 50 Hz.....	7315.00
600-18C	Crating Fee.	369.00

MODEL TR-24 SAW

- Tank Size: 60"L x 30.5" W. x 17.75" Deep.
- Overall height: 48"
- Cross feed: 8"
- Vise Opening: 17"
- Depth of cut: 8¾" with 6" flange.
- Motor: 1½ HP 110/220V 60 Hz. standard saw wired for 220V 60 Hz.
A 220 V 50 Hz is available.
- Shipping Weight: 890 lbs. Must be crated for shipment.
- **SPECIAL ORDER:** Allow 4-6 weeks for shipment.

600-24-9000	220V 60 Hz.....	8710.00
600-24-9000X	220V 50 Hz.....	9060.00
600-24C	Crating Fee	411.00

MODEL TR-36 SLAB SAW



This 36" professional slab saw is a giant in size and performance

For all its size, the Model TR-36 saw is easy to operate and provides professional cutters of gem material, glass and core samples with reliable performance cut after cut. The true workhorse and "secret" of many successful cuts is the Power Glide Hydraulic feed system. The basic design and simplicity of function insures fast, clean cutting of materials. You are able to set pressure and feed at a constant positive pressure. The Power Glide even has a "power return" feature which returns the carriage after a slice has been cut.

Arbor shaft is 1". Blade is constantly cooled and cleaned by the recirculating system. (Blade not included. See below. *) Coolant is directed to both sides of the blade throughout the cutting operation. Recirculation tank holds 30 gallons.

Vise is operated by a 1" Acme thread screw. It has a 23½" opening with 14" depth of cut, 11½" crossfeed for a maximum of 14"H x 23½"D x approx. 30"W rock size. Jaw face is 15" wide. V-Guide rails have 4" U Channel supports.

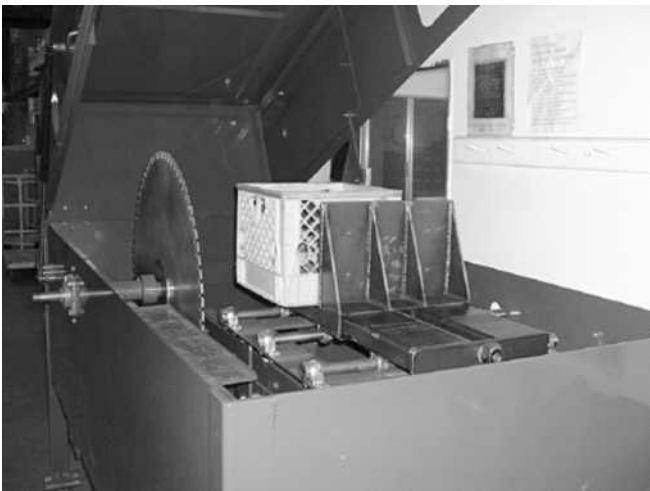
The tank is made of ¾" steel plate and measures 96" long x 40" wide by 27" deep. The hood has four heavy duty, gas assist springs for lifting. Safety shut off switch stops saw when the hood is raised.

Comes with 3 HP continuous duty motor. Specify 220V 60 Hz. or 240V 50 Hz. (5 HP and 3-phase motors also available in either frequency. Call for quotation.)

(Shown in top photo: Jim Hare and Jon Moore, part of Diamond Pacific crew.)



Control panel for Power Glide System is easily accessible.



Cuts rocks up to 14" H x 25" D x Approx 35" W.

***Blade not included in saw price.** Choice of blade depends on your application. See pages 49-51 or call us for more information.

The Model TR-36 Saw is special order. Allow 6-8 weeks plus delivery time. Saw must be crated. Shipping weight is 2000 pounds. (Crate size: Approx. 6'H x 5'W x 10'L.)

605-36-1000	220V 60 Hz	17,000.00
605-36-1000X	240V 50 Hz.	17,500.00
605-36C	Crating fee	676.00

SPARE PARTS FOR SAWS

When ordering any of the items below, please state catalog number and year and model of your machine, or give a brief description of your machine so that we can send the proper part.

NOTE: There is a \$2.00 service fee for orders under \$20.00

SPARE PARTS FOR TR-18, TR-24 and TR-36 SAWS				
ITEM	FITS MACHINE	ORDER #	PRICE	WEIGHTS
Arbor Bearing Insert (inner)	TR-18, TR-24	690-90-1160	71.50	8 oz.
Arbor Bearing Flange (outer)	TR-18, TR-24	690-90-4104	66.80	8 oz.
Arbor Bearing Insert (inner)	TR-36	690-90-2220	67.46	8 oz.
Arbor Bearing Flange (outer)	TR-36	690-90-4200	61.20	8 oz.
Coolant Pump, 110 Volt	TR-18, TR-24, TR-36	690-70-7430	143.00	1 lb.
Coolant Pump, 220 Volt	TR-18, TR-24, TR-36	690-70-7430X	150.00	1 lb.
Flange, 5" x 1" (sold individually)	For 18" Saws	690-66-2504	75.00	2 lbs.
Flange, 6" x 1" (sold individually)	For 24" Saws	690-66-2604	90.00	4 lbs.
Flange, 8" x 1" (sold individually)	For 36" Saws	690-36-4006	125.00	6 lbs.
Hydraulic Cylinder	TR-18	690-18-7001	380.00	4 lbs.
Hydraulic Cylinder	TR-24	690-24-7001	446.25	5 lbs.
Hydraulic Cylinder	TR-36	690-36-7001	514.50	7 lbs.
Hydraulic Pressure Regulator	TR-18, TR-24, TR-36	690-24-7102	143.90	1 lb.
Hydraulic Pump	TR-18, TR-24, TR-36	690-24-7201	325.50	1 lb.

SPARE PARTS FOR OLDER HIGHLAND PARK SAWS

We have worm gears and worms for some older Highland Park saws. Most older gears have a part number on them, such as G-1039. Use that number to locate and order a new gear from the chart below. Otherwise, send in the old part so that we can match it with a new gear. If you need both a gear and a worm, make

certain to order the proper corresponding worm for the gear. Since there are many older model saws with different gears and worms, we cannot guarantee a fit in every case, but a new part may be returned if unused and undamaged.

WORM GEARS				MATCHING WORMS			
Order #	Old Part #	Shp. Wt.	Price	Order #	Old Part #	Shp. Wt.	Price
690-49-103010	G-1031	7 oz.	91.00	690-49-102988	HLTH	2 oz.	44.25
690-49-103028	G-1038	7 oz.	99.00	690-49-102996	HLUH	2 oz.	52.75
690-49-103036	G-1039	1 lb.	120.00	690-49-102996	HLUH	2 oz.	52.75
690-49-103051	G-1047	2 lbs.	279.00	690-49-103002	HLVH	4 oz.	58.10
690-49-103052	G-1046	1 lb.	160.00	690-49-103002	HLVH	4 oz.	58.10

SPLIT NUTS (CLUTCH) FOR HIGHLAND PARK SAWS

These split nuts are for older saws manufactured by Highland Park Co. If you are uncertain as to the size you need, give us a call. We cannot guarantee a fit in every case, but a new part may be returned if unused and undamaged.

Highland Park	Split Nut, 3/8" - 16	690-49-110630	79.50	2 lbs.
Highland Park	Split Nut, 3/4" - 16	690-49-116533	79.50	2 lbs.
Highland Park	Split Nut, 1/2" - 20	690-49-110640	79.50	2 lbs.
Highland Park	Split Nut, 5/8" - 18	690-49-116640	79.50	2 lbs.
Highland Park	Split Nut, Double 1" - 14	690-49-116525	159.00	4 lbs.
Highland Park	Split Nut Spring	690-49-102954	13.75	2 ozs.
Frantom 18"-24" Saws	Split Nut (clutch) 5/8" - 18	690-92-1700	235.00	3 lbs.

BLADE COOLANTS

Before buying any saw blade, make certain you know which type of coolant your rock saw requires. All diamond saw blades cut faster in an oil lubricant, but the old standard cutting oils have many undesirable features. Some saw blades and rock saws still must be used with oil, especially the larger blades and saws. Water is now often used as a coolant, but it can rust some blades and rock saws. Using the correct coolant will directly affect blade performance. The following is a general guideline:

SOFT ROCK: Use water, water soluble oil, or oil.

MEDIUM HARD ROCK: Use a water soluble oil or oil.

HARD, DENSE ROCK SUCH AS AGATE: Use an oil coolant only.



“ROC-OIL”—A GREAT NEW CUTTING OIL

At last! A cutting oil for rock saws that has none of the usual disadvantages of other cutting oils. ROC-OIL is rated as a food-grade mineral oil that is non-toxic, non-hazardous and non-flammable under normal conditions. It has no odor, won't burn your skin (unless you are very sensitive) and has a flash point of 275°—way above normal temperatures. YET IT CUTS GREAT! Use it in any rock saw.

412-RO-1 1 gal. Shp. Wt. 10 lbs. 28.00
 412-RO-4 4 gal case Shp. Wt. 40 lbs. 105.25

“ROC-CUT” WATER SOLUBLE LUBRICANT

Use "Roc-Cut" in your trim saws, cabbers, faceting units, and sanders—whatever uses a splash or recirculating system. It's inexpensive (mix 1 part with 30 parts water) and it will prevent rusting as well as give you a great cutting lubricant. Nontoxic, non-allergenic, has no vapors, odor or greasy film. Can be filtered and re-used indefinitely. NOT for slab saws when cutting quartz materials, nor for leaving in tank.

711-70-1116. 16 oz. Shp wt 2 lbs 7.50
 711-70-1117. 1 gal Shp wt 10 lbs 42.00



WATER AID

Concentrated wetting agent

WATER AID

Water Aid is a concentrated wetting agent. It increases cutting action of sawing, grinding, and sanding/polishing operations using water by eliminating surface tension and preventing hydroplaning. It's biodegradable and normally harmless to skin. Approx. 6 drops per pint is all that's needed.

410-WA-108 8 oz. bottle 11 oz 3.00
 410-WA-116 16 oz. bottle 1½ lbs 4.95
 410-WA-110 1 gal 9 lbs 26.00

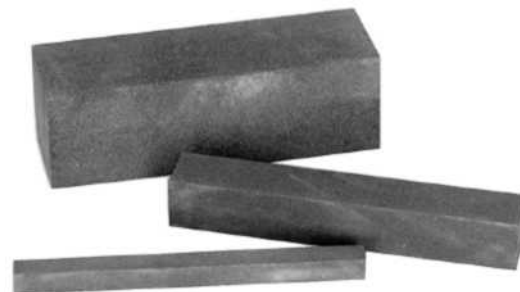
ROCK GRABBER CLAMPS



These handy clamps fit easily into most saw vises, making it possible to cut a stone to the last thin slab section. Made of durable cast aluminum. Comes in two sizes: 3" and 5".

601-70-1003 3" 1 lb. 20.00
 601-70-1015 5" 1 lb. 21.50

BLADE DRESSING STICKS



These dressing sticks make it easy to sharpen saw blades to keep them cutting properly. Made of special aluminum oxide and designed for dressing diamond blades. Shp. Wt. : 8 oz.

For Blades:	Stick Size	Order #	Price
4" – 8"	½" x ½" x 6"	109-SS-05	4.00
10" – 14"	1" x 1" x 6"	109-SS-10	10.50
16" +	2" x 2" x 6"	109-SS-20	17.50

SELECTING A DIAMOND SAW BLADE

Selecting the best saw blade for your needs requires the consideration of several factors:

1. The type of material to be cut, its value and purpose. The more expensive the material, the thinner the blade you should use to reduce material loss.
2. The capacity of the saw, its condition, blade RPM, and other equipment characteristics. For slabbing, thin blades should only be used on machines that are in good condition and are capable of high RPM's. Thicker blades usually give better service for general slabbing purposes.
3. Production volume to be cut.
4. Operator experience. Generally, thinner blades should only be used by experienced operators as they can be more easily damaged. For school room type conditions, thicker blades will generally last longer.
5. The type of coolant required by both the blade and saw. Some saws and blades should only be used with oil, while others can be used with just water or water with a proper additive.
6. Type of blade rim. The diamond edge of the segmented and notched rim blades have an interrupted surface which improves cutting ability and coolant flow.

Sintered continuous rim blades mean just that—the edge of the blade has a continuous rim of sintered diamond matrix. Most smaller and thin rimmed blades are either of the sintered continuous or plated rim type.

NOTE: Blades need sharpening as they are worn from use. See page 48 to order blade dressing sticks.

DIAMOND SAW BLADE REPAIRS

Saw blade manufacturers no longer offer the saw blade repair services that they once provided.

If you have a NOTCHED RIM blade that only needs to be re-tensioned, please call us for instructions.

We are not able to offer any assistance with other types of repairs. Continuous Rim, Notched or Segmented diamond blades cannot have the diamond replaced or redone. Warped or dished Notched Rim blades, (like the MK-297 or MK-301) that require more than roll tensioning or hammering, are no longer repairable.

TIPS ON THE CARE AND MAINTENANCE OF SAW BLADES

1. For longer life with your saw blade, your saw and equipment must be in proper condition. Whenever you install a new blade, check your arbor shaft for radial and axial play. Try moving the shaft back and forth, and in and out. Any movement indicates the arbor shaft needs adjustment, new bearings, or replacement.

Lapidary blades are manufactured with the arbor hole .005" over-size to provide a snug fit on the shaft. If the shaft is worn, the blade will not spin concentrically with the arbor.

The machine should be located on a level floor or platform so that it will not vibrate during operation. All belts should be properly tensioned.

2. Flanges support the blade over a large surface area and help prevent deflection at the beginning and ending of a cut where there is little or no workpiece support. They must measure at least one quarter of the blade diameter. Make certain the flanges are smooth, flat and parallel, without gouges or burns on the surfaces. Flanges must be recessed about three quarters of their diameter from their center. This provides support to the blade around its outer area while avoiding distortion of its center core.

3. A lapidary diamond saw blade requires a lubricant which also works as a coolant. An ample supply must be directed into the saw cut to lubricate the blade rim and workpiece, and to flush out all debris. A light cutting oil is best, and is required for most slabbing operations. A water soluble oil or plain water can sometimes be used in trimming operations. Rust inhibitors should be used and extra care taken to prevent rusting of the blade and/or saw.

4. With a new blade it is best to make your first cut using a soft, abrasive material. This will assure that the blade is properly broken in by bringing the rim into concentricity with the arbor and will open up the rim, increasing diamond protrusion.

5. Start cuts by feeding in the workpiece when the blade is running at operating speed. Make sure the surface of the workpiece will not cause the blade to deflect at point of contact. If the blade starts cutting to either side of its plane of rotation, you will get a nonparallel cut and even damage to the blade.

When a cut is almost complete, a break will often occur, leaving a jagged spur. This spur can damage the blade. To prevent this, infeed pressure should be reduced or stopped near the end of the cut. Saws with automatic power cut-off, when properly set, will do this for you. With screw feeds, the workpiece and vise can be hand fed.

6. A diamond blade should be reversed occasionally to insure even wear and long life. A diamond blade can become glazed over at its cutting edge especially when cutting hard, dense material. To sharpen the blade, make a few cuts in a soft, abrasive material. This will generally abrade away some of the metal bond and rim and expose more diamond.

GUIDE TO OPERATING SPEEDS FOR BLADES

The chart below shows the recommended operating range for various sizes of blades. Blade speed should be matched to the blade used and the type of material being cut. In general, harder materials and blades with a thicker rim require slower speeds, while softer materials and blades with thin rims require faster speeds.

Blade Diameter (inches)	Revolutions Per Minute	Blade Diameter (inches)	Revolutions Per Minute
4	2400-5700	14	750-1600
5	1900-4500	16	700-1400
6	1600-3800	18	600-1200
7	1400-3200	20	550-1100
8	1200-2800	24	450-950
9	1100-2500	30	350-750
10	950-2200	36	300-700
12	800-1900		

DETERMINING SAW SPEEDS

To make certain your saw runs at the correct RPM's for the diameter of a blade, use the chart below. Chart is based on motors running at 1750 RPM.

Left hand column lists diameter of the motor pulley, while the top column across lists the diameter of the pulley on the equipment. With these two pulley diameters, you can locate the RPM speed of that particular setup. For instance, a motor pulley diameter of 3.0" with an equipment pulley of 2.5" will operate a saw blade at 2070 RPM's. Using the chart Guide to Operating Speeds for Blades, you will find this is a proper speed for blades 5" to 10" in diameter. But if your saw takes either a 4" blade or one with 12" or more in diameter, you will need to change pulleys.

If you need assistance with determining proper pulley diameters, please call for technical assistance.

DIA-LASER STAINLESS STEEL BLADES

- Rust proof stainless steel bodies.
- Excellent performance in water only coolant.
- Cuts fast and free at standard speeds.

The Dia-LASER Blades from Lapcraft are ultra-thin, stainless steel blades made to conserve gem materials when cutting precious stones. The cutting teeth are premium multi-pointed diamond crystals chosen for their strength and sharpness. These cutting points are securely metal bonded onto the outer edge of hardened, rust proof, circular stainless steel bodies. The end result—super abrasive circular saw blades that cut with speed and ease through the hardest and toughest materials with minimum effort.

Order your Dia-LASER stainless steel blade from chart below. Choose correct catalog number for your arbor hole size. For shipping weights, see chart on page 51.

Dia.	Rim Thickness	Order #		Price
		1/2" Arbor	5/8" Arbor	
4"	.010	109-9010	109-9011	25.00
4"	.024	109-9020	109-9021	25.00
5"	.010	109-9030	109-9031	27.00
5"	.024	109-9040	109-9041	27.00
6"	.014	109-9050	109-9051	29.00
6"	.024	109-9060	109-9061	29.00
6"	.045	109-9070	109-9071	32.00
8"	.024	109-9080	109-9081	44.00
8"	.045	109-9090	109-9091	44.00

Dia. Motor Pulley	Pulley measurements listed in mm (in.) Driven equipment speed in RPM's											
	32 (1.25)	38 (1.5)	46 (1.75)	51 (2.0)	58 (2.25)	64 (2.5)	76 (3.0)	102 (4.0)	127 (5.0)	165 (6.5)	203 (8.0)	254 (10.0)
32(1.25)	1725	1435	1230	1075	950	850	715	540	430	330	265	215
38(1.5)	2075	1725	1475	1290	1140	1030	850	645	515	395	320	265
45(1.75)	2400	2000	1725	1500	1340	1200	1000	750	600	460	375	315
51(2.0)	2775	2290	1970	1725	1530	1375	1145	850	685	530	430	345
58(2.25)	3100	2580	2200	1930	1725	1550	1290	965	775	595	485	385
64(2.5)	3450	2870	2460	2150	1900	1725	1435	1075	850	660	540	430
76(3.0)	4140	3450	2950	2580	2290	2070	1725	1290	1070	800	615	515
102(4.0)	5500	4575	3950	3450	3060	2775	2295	1725	1375	1060	860	700
127(5.0)	6850	5750	4920	4300	3825	3450	2865	2150	1725	1325	1075	860
165(6.5)	8950	7475	6400	5600	4975	4480	3730	2790	2240	1725	1400	1120
203(8.0)	-	9200	7670	6900	6125	5520	4600	3450	2750	2120	1725	1375
254(10.0)	-	-	9850	8620	7670	6900	5750	4300	3450	2650	2150	1725
302(12.0)	-	-	-	-	9200	8280	6900	5160	4130	3180	2580	2075
381(15.0)	-	-	-	-	-	-	8635	6470	5170	3970	3230	2580
457(18.0)	-	-	-	-	-	-	-	7750	6200	4770	3880	3100



MK-297 CRITERION™

The MK-297™ Criterion is the benchmark of the lapidary industry. The notched, sintered rim is compressed to exacting standards making this a durable, fast cutting blade suitable for commercial use. Use oil as a lubricant for best results.

Dia.	Thickness		Arbor Size	Order #	Price
	Core	Rim			
6"	.025	.050	5/8" x 1/2"	300-0605054-87	63.00
8"	.032	.065	5/8" x 1/2"	300-0806554-87	83.00
10"	.040	.075	5/8" x 1/2"	300-1007554-87	119.00
12"	.050	.085	5/8" x 1/2"	300-1208554-87	167.00
14"	.050	.085	1" x 3/4"	300-1408586-87	203.00
16"	.050	.085	1" x 3/4"	300-1608586-87	246.00
16"	.064	.100	1" x 3/4"	300-1610086-87	260.00
18"	.064	.100	1" x 3/4"	300-1810086-87	305.00
20"	.075	.115	1" x 3/4"	300-2011586-87	333.00
24"	.075	.115	1" x 3/4"	300-2411586-87	446.00

MK-301 GEMKING™

A superior notched-rim lapidary saw blade with a high concentration of a special type and grade of industrial diamonds that cuts hard materials such as agate, petrified wood and jasper. Use oil as a lubricant for best results.

Dia.	Thickness		Arbor Size	Order #	Price
	Core	Rim			
10"	.025	.060	5/8" x 1/2"	300-1006054-81	117.00
12"	.032	.065	1" x 3/4"	300-1206586-81	178.00
14"	.050	.085	1" x 3/4"	300-1408586-81	262.00
16"	.050	.085	1" x 3/4"	300-1608586-81	278.00
18"	.064	.100	1" x 3/4"	300-1810086-81	408.00
20"	.075	.115	1" x 3/4"	300-2011586-81	500.00
24"	.075	.115	1" x 3/4"	300-2411586-81	640.00
24"	.105	.145	1" x 3/4"	300-2414586-81	743.00
30"*	.105	.145	1"	300-3014580-81	1052.00
36"*	.125	.155	1"	300-3615580-81	1496.00

*See shipping note.

*** SHIPPING NOTE:**

All 30" and 36" blades must be crated for shipment. Add \$35.00 crating fee, (Order No 300-36C) to the shipping costs, of your blade.

MK-303 PROFESSIONAL™

The MK-303 Professional™ series blades are premium quality with high diamond concentration, ideal for cutting agate, quartz, jasper, jade and similar stones of that hardness. The 4" through 14" blades are sintered continuous rim, producing smooth cuts. The smaller blades are used for cutting valuable materials when waste must be held to a minimum and speed of cut is essential. The Professional blades last longer and will cut faster than ordinary notched rim diamond blades. *See shipping note below when ordering 30" and 36" blades. USE OIL AS A LUBRICANT.

Dia.	Rim Thickness	Arbor Size	Order #	Price
4"	.014	1/2"	300-0401440-83	44.00
4"	.014	5/8"	300-0401450-83	44.00
4"	.020	1/2"	300-0402040-83	46.00
4"	.020	5/8"	300-0402050-83	46.00
5"	.020	1/2"	300-0502040-83	48.00
5"	.020	5/8"	300-0502050-83	48.00
6"	.014	1/2"	300-0601440-83	50.00
6"	.014	5/8"	300-0601450-83	50.00
6"	.020	1/2"	300-0602040-83	52.00
6"	.020	5/8"	300-0602050-83	52.00
6"	.032	5/8" x 1/2"	300-0603254-83	55.00
6"	.040	5/8" x 1/2"	300-0604054-83	58.00
7"	.050	5/8" x 1/2"	300-0705054-83	63.00
8"	.025	5/8" x 1/2"	300-0802554-83	66.00
8"	.032	5/8" x 1/2"	300-0803254-83	68.00
8"	.060	5/8" x 1/2"	300-0806054-83	70.00
9"	.060	5/8" x 1/2"	300-0906054-83	71.00
10"	.032	5/8" x 1/2"	300-1003254-83	73.00
10"	.040	5/8" x 1/2"	300-1004054-83	76.00
10"	.050	5/8" x 1/2"	300-1005054-83	99.00
12"	.065	1" x 3/4"	300-1206586-83	182.00
14"	.070	1" x 3/4"	300-1407086-83	207.00

Blades in 16" through 36" diameters listed below are segmented rim blades. Blades 18" and larger may require longer lead times before shipment.

16"	.085	1" x 3/4"	300-1608586-83	277.00
18"	.085	1" x 3/4"	300-1808586-83	450.00
20"	.100	1" x 3/4"	300-2010086-83	550.00
24"	.100	1" x 3/4"	300-2410086-83	775.00
30"*	.125	1"	300-3012580-83	1400.00
36"*	.200	1"	300-3612580-83	1579.00

WEIGHT CHART FOR SAW BLADES

Blade Size	Shipping Weight	Blade Size	Shipping Weight
4-6"	1 pound	18"	8 pounds
8-10"	2 pounds	20"	10 pounds
12"	3 pounds	24"	15 pounds
14"	4 pounds	*30"	40 pounds
16"	6 pounds	*36"	50 pounds

TUMBLE POLISHING STONES

The tumbling of stones has been going on in Nature for eons of time, as anyone who has picked up a smooth and rounded stone from a beach can testify. This process in Nature is the same that man uses today to tumble polish gemstones: rubbing one stone against another in an abrasive substance, and generally in water. Man carries the process a step further—uses machines (tumblers) to achieve a high polish on his gemstones.

Tumblers can come in several kinds and dozens of shapes and sizes, as described on the following page. All use the basic process of grinding, sanding, and polishing stones through movement in a series of abrasives from coarse to fine.

The steps in tumbling vary from the use of an extremely fine polishing material for only a few hours to put a final polish on a valuable gemstone, to the general sequence of coarse grit (60/90) silicon carbide through three, four or more polishing abrasives in subsequently finer grit, to the final polishing step. This can take from a few days to four to six weeks.



Most stones with a hardness of 5 to 7 1/2 on the Moh scale (see page 64) will tumble polish well. Softer and harder stones may still polish, but may require more or special steps and abrasives to achieve a satisfactory polish. Some stones will never polish no matter what you do to them.

Tumble polishing stones is an easy and great way to start kids (and adults) on a lifelong interest in the natural world around them. Finding your own rocks, and turning them into shining marvels of Nature is a rewarding experience.

BOOKS ON TUMBLING

HOW TO TUMBLE POLISH GEMSTONES

Wexler. Step-by-step instructions for turning pebbles and rough stones into sparkling gemstones. Provides information on selecting and preparing stones to polish, abrasives, types of tumblers, techniques and tips, and a section on turning your finished stones into jewelry. Softbound 8 1/2" x 11", 29 pages with both color and black and white photos.

240-231 6 oz. 5.95

GEM TUMBLING AND BAROQUE JEWELRY MAKING

Victor. Gives detailed information on the various stages of grinding and polishing, including polishing stones. Has separate sections on various common gemstones and their unique problems, such as agates, common opal, tiger eye, petrified wood, beach agates and "junkite". Describes types of tumblers and gives instructions on how to build your own. Includes section on making jewelry. Softbound 6" x 6", 38 pages. photos, drawings and charts.

240-230 6 oz. 5.50

HOW TO TUMBLE ROCKS INTO GEMS—SECRETS OF THE PROS REVEALED

Smith, 9th. Edition. A guide to tumble-polishing rough rock into finished gemstones. Covers basic types of equipment, selecting materials, fillers, abrasives, etc. along with steps in processing. Covers stone and metal polishing in rotary and vibratory type tumblers. Illustrated with charts in easy-to-follow style. Spiral-bound, 102 pages.

240-236 8 oz 18.95

GEM & LAPIDARY MATERIALS

Zeitner. A complete handbook of common materials used in the lapidary arts throughout history and up to the present. The author is well known for her writings on lapidary arts, gems and minerals for over fifty years, and in this book, provides the beginner and the experts with the history, use and importance of a wide range of rocks and minerals used by cutters, collectors and jewelers. Illustrated with both black and white and full-color photos. Softbound. 350 pgs.

240-484 1 lb. 40.00

TYPES OF TUMBLERS

There are two main types of tumblers—the rotary and the vibratory. The first tumblers were of the rotary type, where a barrel revolves as it rides on two parallel revolving shafts. The vibratory type sits and shakes, causing the load to move within the barrel but without the harsher action of the rotary. Both types require a series of abrasives starting with coarse and working up to a fine polish.



ROTARY TUMBLERS

Shown is the 12T twelve pound Rotary Tumbler. (See page 61.)

Rotary tumblers are the most familiar type, and range in barrel capacities from around 4 lbs. to commercial sizes that will process hundreds of pounds of material. The smaller units (2–4 lbs. capacity) are popular for youngsters and beginners, but the less expensive kinds have more maintenance problems. A well built rotary tumbler can last for years, however, even decades, if given care.

Rotary (barrel) tumblers are generally easy to load, require a minimum of attention, and produce satisfactory results on most stones and metals. Their main tumbling action abrades away any sharp edges and points, leaving finished stones with rounded surfaces and contours. Rotary tumblers are not suitable for material that is pre-formed and desired to retain its shape.

Rotary tumblers generally take more time to finish a load of stones, from four to six weeks or more, depending on material and abrasives used. They also use more grit per load, but generally need fewer steps in the tumbling process, and less attention the rest of the time.

VIBRATORY TUMBLERS

Shown is the Mini-Sonic MT-14 Vibratory Tumbler (See page 57.)



Vibratory tumblers have either mechanical or electronic drives. Mechanical units use motors for power, while the Mini Sonic and Vibra Sonic tumblers use magnetic energy. They have no moving parts such as shafts, belts or pulleys, and are exceptionally long lived.

The action in vibratory tumblers is more gentle than that found in rotary tumblers. The barrel in a vibratory tumbler remains stationary even as it vibrates, producing a continuous movement of material and grit within the barrel.

Because of their unique, gentle polishing action, vibratory tumblers do not wear away the shapes of stones, so that they retain their original form. Hearts and squares will come out as hearts and squares. This makes vibratory tumblers ideal for polishing preforms, carvings, metal jewelry, castings, etc.

Vibratory tumblers are generally faster in polishing a given load of material than a rotary tumbler, but actual time can vary from one day for a final polish on a preform to several weeks on hard-to-polish stones when starting from scratch.

The VT-35 Vibra-Sonic Tumbler shown at right below has a load capacity of 35 pounds. See page 60.



MT-10 Mini-Sonic (Page 56.)



VT-35

THE MT-4SV MINI-SONIC® VIBRATORY TUMBLER



HOW A MT-4SV WORKS

The MT-4 Mini-Sonic Tumbler operates without shafts, belts, pulleys, eccentric weight or even a motor—no moving parts, so the MT-4 will far outlast other types of tumblers. It operates on a unique principle employing interrupted electrical current that provides vibration as the driving force powering the rotation of the load. Operating frequency is in excess of 3,500 vibrations per minute.

The MT-4SV Mini-Sonic Tumbler is the best all-around tumbler on the market when it comes to performance, easy operation, and long-lasting service. You can tumble polish almost any kind of stone, from opal to topaz, delicate carvings and preforms, as well as metal items such as coins, jewelry findings, shell casings, etc.

It's unique tumbling operation is the key to the high performance of the MT-4SV. The vibratory motion is achieved without any moving parts. It improves the polishing process and uses only a small amount of abrasives compared to ordinary tumblers.

Load capacity is approximately four pounds including stone, fillers and abrasives. You control the rotation and intensity of the tumbler operation with solid state electronic controls.

Hoppers give exceptionally long wear. They are made of cast ABS plastic. With no motor, belts or pulleys to worry about, you have a tumbler built for years of worry free service.

Model	Voltage	Order #	Price	Shp. Wt.
MT-4SV	110V	432-004-V	270.00	11 lbs.
MT-4SV *Export	220V	432-004-VX	290.00	11 lbs.
MT-4SV *Export	240V	432-004-VXA	298.00	11 lbs.
Hopper -4	Fits All Models	433-04H	56.75	2 lbs.

* Export models come 220 or 240 Volt. Specify voltage or country of ultimate destination when ordering.

TRY OUR IMPROVED VIBRA-DRY MIXES

Use our new improved Vibra-Dry mixes and you will be pleased with the outstanding polish you can achieve on stone and metals. Vibra-Dry is an ideal polishing media for the MT-4 and all our other Mini-Sonic and Vibra-Sonic tumblers because it was originally developed for use in those machines. See page 65 to order Vibra-Dry mixes.



THE KG-1 MINI-SONIC® VIBRATORY TUMBLER



KG-1

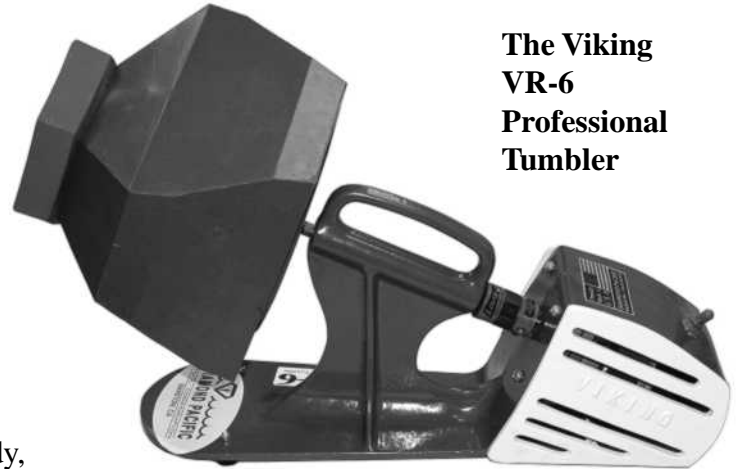
The KG-1 Mini-Sonic vibratory tumbler is a handy, compact version of the larger Mini-Sonic electronic tumblers. It has the same tumbling action, same quiet operation when it's at work safely polishing your stones.

This Mini-Sonic tumbler will process almost any type of stone—from opal to topaz as well as shells, metals, etc. Tumble polish baroques, preforms, beads, etc. fast and efficiently without changing the shapes.

It's a handy size with about a 2.2 pound load capacity—a good size for kids and those just wanting to polish small batches of stones—but the KG-1 is suitable for anyone wanting to tumble stone or metal parts in modest quantities.

The KG-1 has the same high performance as the larger Mini-Sonic tumblers when it comes to long life and little maintenance. All operate without shafts, belts, pulleys, eccentric weights or even a motor—no moving parts to wear out. Even the hoppers give exceptionally long wear. They are made of cast poly-vinyl, while the tumbler housing is durable ABS plastic. You will get a tumbler built for years of worry-free service.

TRIPLE-FOLD ROTARY ACTION



**The Viking
VR-6
Professional
Tumbler**

Cut your jewelry tumbling and burnishing time almost in half with the Viking VR-6 Tumbler. It's been a favorite of professional jewelers for almost forty years because of its convenient size, easy-to-use features, and excellent performance.

The unique, patented barrel provides triplefold action to the load which cuts your tumbling time almost 50%. It's also easy to use when it comes to loading and unloading the barrel. The lid and barrel itself are quickly removed to make the job easy. The barrel holds about six pounds of load and grit, making it an ideal size for most applications.

The Viking VR-6 is built rugged for exceptionally long life. Base is solid cast aluminum with a durable finish, on-off switch, and built-in handle for carrying around. Heavy duty gear motor is totally enclosed.

Model Number	Speed Control	**Load	Shp. Wt.	110V Models		220V Models		240V Models	
				Order #	Price	Order #	Price	Order #	Price
KG-1	Manual	2.2 lbs.	9 lbs.	435-002-S	140.00	435-002-SX	147.00	435-002-SXA	155.00
VR-6	N/A	6 lbs.	20 lbs.	430-006	455.00	* Export models come 220 or 240 Volt. Specify voltage or country of ultimate destination when ordering.			
Hopper -2.2	Fits KG-1 only	2.2 lbs.	2 lbs.	433-02H	34.15				
Barrel -6	Fits VR-6 only	6 lbs.	10 lbs.	431-06B	112.75				

** Load capacity for materials and grit is approximate since materials vary.

Choose the tumbler that suits your needs: Five MINI-SONIC options to choose from

You control the tumbling action with a Mini-Sonic Tumbler, from the gentle processing of opal to the full power processing of agates, jaspers, topaz, etc. Tumble polish baroques, preforms, beads, sea shells, metals, etc., fast and efficiently and without changing the shapes to any measurable degree. You can even tumble polish carvings without wearing away delicate features.

Both the MT-10 and MT-14 feature dial speed controls for selecting the power required to control tumbling action and speed of rotation.

The Mini-Sonic tumblers are not your ordinary vibratory tumblers—the patented action of the Mini-Sonic tumblers is achieved without shafts, belts, pulleys, eccentric weights or even a motor. Without any moving parts to wear out or a motor to burn up, these tumblers will outlast any other vibratory type tumbler.

Hoppers are of cast polyvinyl and the tumbler housing is made of durable ABS plastic. You get quality materials and workmanship in the Mini-Sonic tumbler.

NOTE: The single speed models with manual controls are no longer available.

HOW TO ORDER

We offer two tumbler base sizes with a variety of hoppers, as per the options illustrated. First select the base, either the MT-10 or MT-14, that will best suit your needs. Then select the hopper option you prefer, and use the appropriate chart for that option to order from.

You do not necessarily have to limit the number of hoppers you select to the options shown. Having extra hoppers, especially for the polishing stage, is recommended to prevent contamination.

****NOTE:** Export models come in both 220V and 240V. If you need the 240V model, please state so on your order or specify country of ultimate destination. Prices vary on 240V models.



Option 1



Option 2

Choose from two MT-10 options

Model Number	Qty to Order	110V Models		**220V Model See note for 240V		Shp.Wt	
		Order #	Price	Order # ^S	Price	Ea.	Total
MT-10 Base	1	432-010-V	362.00	432-010-VX	397.00	20 lbs.	20 lbs.
Hopper-10	1	433-10H	113.50	433-10H	113.50	5 lbs.	5 lbs.
MT-10 Option 1 Totals			475.50	-	475.50	-	25 lbs.

Model Number	Qty to Order	110V Models		**220V Model See note for 240V		Shp.Wt	
		Order #	Price	Order #	Price	Ea.	Total
MT-10 Base	1	432-010-V	362.00	432-010-VX	397.00	20 lbs.	20 lbs.
Hopper-4	2	433-04H	113.50*	433-04H	113.50*	2 lbs.	4 lbs.
MT-10 Option 2 Totals			475.50	-	475.50	-	24 lbs.

* Total for two Hopper-4's. Price each 56.75

MISC SPARE PARTS - MINI-SONIC AND VR-6 TUMBLERS

Part Description	Fits	Order #	Price	Shp.Wt.
Compression Spring	Mini-Sonics	490-400196	10.80	2.oz
Tune-up Kit, MT, Current KG-1	Mini-Sonics	490-402097	47.00	8.oz
Tune-up Kit, KG-1 Old models	KG-1	490-402095	48.85	8.oz

Choose from three MT-14 options

Model Number	Qty to Order	110V Models		**220V Model See note for 240V		Shp. Wt	
		Order #	Price	Order #	Price	Ea.	Total
MT-14 Base	1	432-014-V	402.00	432-014-VX	437.00	26 lbs.	26 lbs.
Hopper-14	1	433-14H	170.25	433-14H	170.25	6.5 lbs.	6.5 lbs.
MT-14 Option 1 Totals			572.25	-	572.25	-	32.5 lbs.



Option 1
MT-14 Shown with
One Hopper -14

Model Number	Qty to Order	110V Models		**220V Model See note for 240V		Shp. Wt	
		Order #	Price	Order #	Price	Ea.	Total
MT-14 Base	1	432-014-V	402.00	432-014-VX	437.00	26 lbs.	26 lbs.
Hopper-4	1	433-04H	56.75	433-04H	56.75	2 lbs.	2 lbs.
Hopper-10	1	433-10H	113.50	433-10H	113.50	5 lbs.	5 lbs.
MT-14 Option 2 Totals			572.25	-	572.25	-	33 lbs.



Option 2
MT-14 Shown with
One Hopper -4
One Hopper -10

Model Number	Qty to Order	110V Models		**220V Model See note for 240V		Shp. Wt	
		Order #	Price	Order #	Price	Ea.	Total
MT-14 Base	1	432-014-V	402.00	432-014-VX	437.00	26 lbs.	26 lbs.
Hopper-4	3	433-04H	170.25*	433-04H	170.25*	2 lbs.	6 lbs.
MT-14 Option 3 Totals			572.25	-	572.25	-	32 lbs.

* Total for three Hopper-4's. Price each 56.75



Option 3
MT-14 Shown with
Three Hopper -4's

**** WHEN ORDERING EXPORT MODEL, STATE VOLTAGE REQUIRED OR COUNTRY OF ULTIMATE DESTINATION. SEE NOTE ON PAGE 56.**

EXTRA HOPPERS WITH LIDS FOR MINI-SONIC TUMBLERS

Hopper Type	Fits Models:	**Load Capacity	Shp. Wt.	Order #	Price
Hopper - 4	All except KG-1	4 lbs. approx.	2 lbs.	433-04H	56.75
Hopper -10	All except KG-1 & MT-4	8 lbs. approx.	5 lbs.	433-10H	113.50
Hopper -14	Fits MT-14 only	12 lbs. approx.	6½ lbs.	433-14H	170.25

** Load capacity for materials and grit is approximate since materials vary.

EXTRA LIDS FOR MINI-SONIC TUMBLERS AND VR-6 TUMBLERS

Lid Fits	Order #	Price	Shp. Wt.	Lid Fits	Order #	Price	Shp. Wt.
Hopper -2.2	433-02L	16.80	8 oz.	Hopper - 14	433-14L	28.00	1 lb.
Hopper - 4	433-04L	17.35	8 oz.				
Hopper -10	433-10L	19.95	1 lb.				

Build your own VIBRA-SONIC tumbler

Select hopper options to suit your own needs

You get to choose the size and number of hoppers for your particular operation with the VSV model series of the Vibra-Sonic tumblers. You can have up to six different loads in various stages of finish going at the same time.

You also get the unique process of the Vibra-Sonic tumblers that produces both a rotary and vibratory tumbling action reducing processing time up to one-tenth that of ordinary tumblers. Only the load rotates at over 2500 vibrations per minute.

Open type hoppers are easy to load and unload, and permit access for inspection during operation. Your materials tumble quietly, quickly and without splash or gas buildup. Even the most delicate of materials can be processed without breakage or loss of detail.

Shown on opposite page are the various combinations for hoppers available for the VSV-12 and VSV-24 machines. The VSV-50 only comes with Hopper-50 which has a 50 lb. load capacity. The capacity of the other combinations varies from 4 lbs. to 28 lbs. Hoppers are individually cast from pure polyvinyl for quiet, long life. Each hopper (except the Hopper-50) is interchangeable with most Mini-Sonic tumblers as well as the VSV models.

There are three adaptors, one for each of the three VSV models. When ordering, make certain the adaptor you select is suitable for the hopper you desire.

Base fits all three VSV models. It is made from solid, cast aluminum with a durable powder coat finish. Motor is 1/3 HP 120V 60 Hz. Export model available in 240V 50 Hz.

UNIVERSAL BASE FOR VIBRA-SONIC VT AND VSV MODELS



Base fits both the Vibra-Sonic VT machines shown on page 60, and the VSV models shown here with their various hopper configurations. VT hoppers are interchangeable without modification; the VSV models do require different adaptors for the different hopper options. Bases are solid cast aluminum with a durable powder coat finish. They have adjustable actions and quiet, sealed bearings. Motor is 1/3 HP 110V, 60Hz. Also available in 240V 50Hz.

HOW TO ORDER

You will first need to choose the VSV model you prefer: VSV-12, VSV-24 or VSV-50. Then you need to choose the proper adaptor for that model, and finally, the quantity and size of the hoppers that will fit the adaptor. The Hopper 50 will only fit on the VSV-50 adaptor. The adaptor for the VSV-12 will hold only a single row of hoppers. In ordering, specify base order number, adaptor order number, and quantity and order number for hoppers you will need to make your machine complete.

PARTS FOR VIBRA-SONIC VSV MODELS

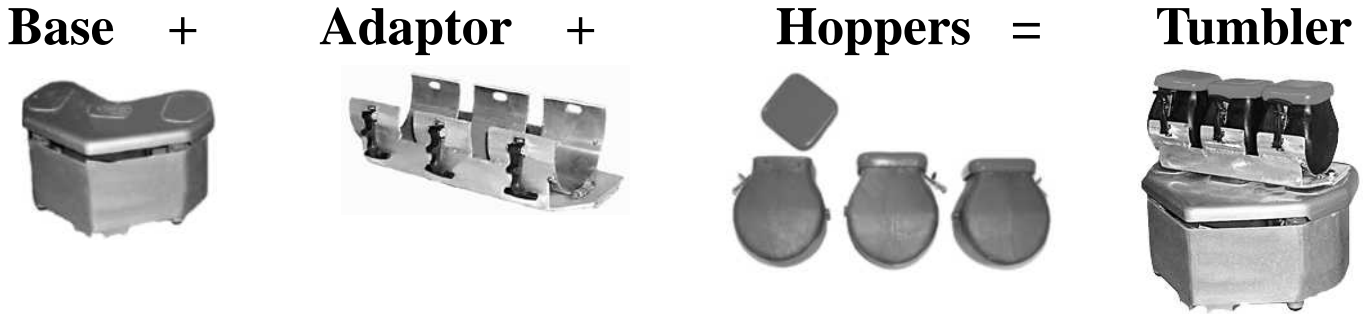
Item	Fits Model:	Order #	Shp. Wt.	Price
Base 110V/60H	All Models	438-BASE	35 lbs.	911.00
Base 240V/50H	All Models	438-BASE-X	35 lbs.	1021.00
Adaptor 12	VSV-12	437-A12	5 lbs.	175.00
Adaptor 24	VSV-24	437-A24	10 lbs.	310.00
Adaptor 50	VSV-50	437-A50	11 lbs.	227.00
Hoppers	See below to order.			

HOPPERS WITH LIDS FOR VSV VIBRA-SONIC TUMBLERS

Hopper Type	Fits Models:	**Load Capacity	Shp.Wt.	Order #	Price
Hopper - 4	All except VSV-50	4 lbs. approx.	2 lbs.	433-04H	56.75
Hopper -10	All except VSV-50	8 lbs. approx.	5 lbs.	433-10H	113.50
Hopper -14	All except VSV-50	12 lbs. approx.	6½ lbs.	433-14H	170.25
Hopper -50	Only fits VSV-50	50 lbs. approx.	12 lbs.	439-50H	226.80
Lid, 50H	Only fits 50H Hopper***	-	2 lbs.	433-50L	45.70

** Load capacity for materials and grit is approximate since materials vary. *** See page 57 for other hopper lids.

Select hopper options to suit your own needs

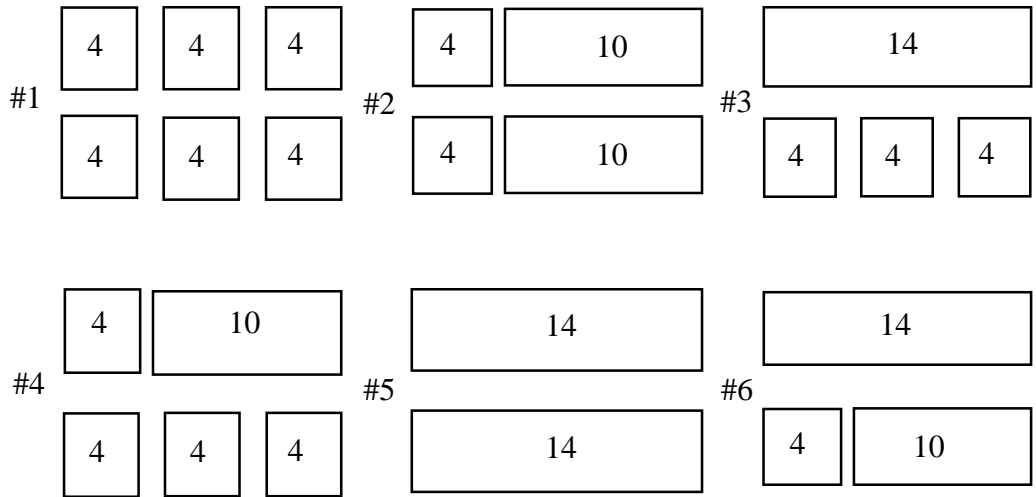


VSV-24



The VSV-24 Model takes the Adaptor-24 on a base.

Hopper options for VSV-24

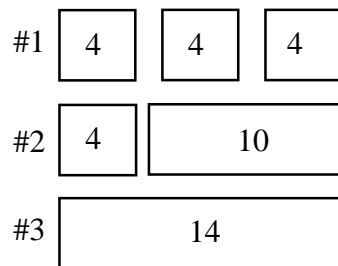


VSV-12



Hopper options for VSV-12

The VSV-12 Model takes the Adaptor-12 on a base.



VSV-50

VSV-50 Model

The VSV-50 Model only takes Hopper-50 and Adapter-50 on a base.



See page 58 to order

50

COMMERCIAL VIBRA-SONIC TUMBLERS HEAVY-DUTY, LARGE CAPACITY VT MODELS



VT-12
Shown with
Two Hoppers VT-12



VT-14
Shown with
One Hopper VT-14



VT-35 Shown with One
Hopper VT-35



**Universal Base for
Vibra-Sonic VT
and VSV Models**

The VT models of the Vibra-Sonic tumblers have been the industry standard for over forty years, and still out-perform and outlast any other type of vibratory tumbler available.

Their unique process for producing both vibratory and rotary tumbling action reduces processing time for loads of both stone and metal. Material can be processed without breakage or loss of detail.

VT hoppers are open for easy access for inspection and loading, and are quickly removable for unloading. Materials tumble quiet, quick and without splash or gas buildup.

The VT-35 hopper has a 35 lb (3.0 gal) capacity. Has a wing-nut lock lid for a liquid tight seal. It's vertical, upright style gives it more aggressive action without the risk of leaking or spilling.

The VT-12 model features two 6 lb hoppers allowing you to perform grinding and polishing operations simultaneously. Removable hoppers are made of cast aluminum, lined with vinyl and are easily interchangeable on all Vibra-Sonic universal base units.

The VT-14 single hopper model is ideal for smaller stones or long pieces. Has a vinyl lined, aluminum lid for a liquid tight seal. Capacity is 14 lbs.

Base fits both the Vibra-Sonic VT machines and the VSV models shown on page 58 with their various hopper configurations. VT hoppers are interchangeable without modification; the VSV models do require different adaptors for the different hopper options. Bases are solid cast aluminum with a durable powder coat finish. They have adjustable actions and quiet, sealed bearings. Motor is 1/3 HP 110V, 60Hz. Also available in 240V 50Hz.

HOW TO ORDER

Select the hoppers that best suit your needs. All three hopper sizes fit the bases. The VT-12 Model takes two of the VT-12 hoppers for better balance of the machine, but just one hopper can be run at a time. To order, state base order number, and quantity and order number of hoppers desired.

PARTS FOR VIBRA-SONIC VT MODELS

Item	Fits Model:	Order #	Shp. Wt.	Price
Base 110V/60H	All Models	438-BASE	35 lbs.	911.00
Base 240/50H	All Models	438-BASE-X	35 lbs.	1021.00
Hopper VT-12	VT-12	439-06HC	7 lbs.	226.80
Hopper VT-14	VT-14	439-14HC	16 lbs.	443.00
Hopper VT-35	VT-35	439-35HC	27 lbs.	527.00
Hopper Lid	VT-12	439-06HCL	8 oz.	23.10
Motor, 1/3 HP 50/60 hz	Base	490-860996	20 lbs.	245.00
Bearing, VT	VT Motor	490-865696	10 oz.	71.00
Bearing, old style	VT Motor	490-865996	10 oz.	67.00
Pillow Block				
Drive Belt for VT and VSV models. Need two per tumbler.		490-861796	4 oz.	9.25 Each

VT HOPPER (VIKING) RE-LINES. VT Hoppers are solid cast aluminum lined with pure polyvinyl. Hoppers are re-linable for extended life and use. See page 63 for information on ordering a re-line job.

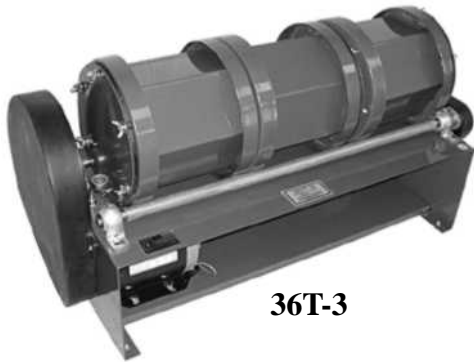
HEAVY DUTY COMMERCIAL TUMBLERS



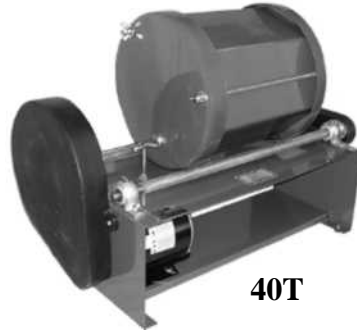
12T



24T-2



36T-3



40T



65T

You get the best heavy-duty rotary tumbler on the market with one of these tumblers that are based on the original Highland Park design well known for its efficiency and long life. These rotary tumblers are ideal for tumble finishing large loads of stone and for light deburring, burnishing, peening, cleaning and finishing metal parts. Any material, when properly cushioned, can be tumbled with little fear of chipping or breaking.

The barrel for the 65T is one piece, molded polypropylene with a neoprene lid gasket. Other barrels are steel with removable liners. Liner for the 12T is made of heavy rubber for quiet action. The 40T barrel liner is durable, hard polypropylene.

The double pulley drive on the barrel rollers eliminates barrel slippage. Roller shafts are polyurethane covered. Rollers are mounted on heavy duty bronze bearings. Roller bearing barrel guides keep barrels aligned. All units include 1/3HP motor with three wire cord and switch. Motors are mounted inside the base.

Overall Tumbler Dimensions

12T: 13" wide x 12" deep x 18" high

24T-2: 28" wide x 13" deep x 21½" high

36T-3: 34" wide x 13" deep x 21½" high

40T: 28" wide x 13" deep x 21½" high

65T: 28" wide x 13" deep x 24" high

Model Number	Barrels Included	Load Capacity***		Barrel Dia.	110V 60Hz Models		220V 50Hz Models		Shp. Wt.
		Weight	Volume		Order #	Price	Order #	Price	
12T	1	12 lbs.	5 Qt	9"	610-30-1200	665.00	610-30-1200X	790.00	49 lbs.
24T-2	2	24 lbs.	10 Qt	9"	610-30-2400	825.00	610-30-2400X	950.00	74 lbs.
36T-3	3	36 lbs.	15 Qt	9"	610-30-3600	955.00	610-30-3600X	1080.00	86 lbs.
40T	1	40 lbs.	4 Gal	12"	610-30-4000	1025.00	610-30-4000X	1150.00	83 lbs.
65T	1	65 lbs.	8.5 Gal	15"	610-30-6500	895.00	610-30-6500X	1020.00	74 lbs.

EXTRA BARREL ASSEMBLIES, LINERS AND GASKETS

Item	Fits Tumbler Model	***Load Capacity Material & Grit	Barrel Dimensions	Order #	Price	Shp. Wt.
Barrel assembly*	12T, 24T, 36T	12 lbs.	9" end dia., 9" length	611-30-1210	95.00	10 lbs.
Liner	For above 12# barrel	12 lbs.	Fits inside 12# Barrel	611-30-1212	42.00	4 lbs.
Lid Gasket	For 12# barrel	-	-	611-30-1219	9.25	1 lb.
Barrel assembly*	40T	40 lbs.	12" end dia., 12" length	611-30-4010	386.25	23 lbs.
Liner	For above 40# barrel	40 lbs.	Fits inside 40# Barrel	611-30-4012	92.00	6 lbs.
Lid Gasket	For 40# barrel	-	-	611-30-4019	20.00	1 lb.
Barrel with lid**	65T**	65 lbs.	15" end dia., 15" length	611-30-6510	260.00	15 lbs.
Lid Gasket	For 65T barrel	-	-	611-30-6519	27.75	1 lb.

* Includes barrel, liner & lid. ** The 65T Barrel requires no liner. ***Approximate-materials vary.

RAYTECH VIBRATORY TUMBLERS



TV-5



TV-10



AV-18



AV-40

Using a vibratory tumbler can save you time and money. Unlike rotary tumbling where just the top, sliding layer of the load is being worked, the entire load in a vibratory tumbler is ground or polished continuously. This makes the finishing time shorter. Vibratory tumbling also has the advantage of retaining the overall shape of pieces better while still removing imperfections such as burs. In gem production, vibratory tumbling is preferred for preforms where shape must be retained.

The TV-5 unit is a favorite of hobbyists. It will process about four pounds of rock. Bowl diameter is 8" with convenient solid lid system. (The TV-5 should not be used for continuous commercial use.)

The TV-10 has a heavy duty drive and suspension combined with a tough, cross linked polyethylene bowl. Bowl has noise dampening cover and drains for liquid. (Cannot be used with steel shot.)

The AV-18 and AV-40 models are built rugged for industrial use. All are designed with heavy duty drive and suspension systems, and equipped with adjustable amplitude. Machine bowls are made of tough polyethylene with a sound dampening lid to reduce noise while in operation. All bowls have a drain for liquids.

All AV style models are SPECIAL ORDER machines. Please allow 2-3 weeks for delivery.

THE MODELS LISTED HERE ARE FOR STONE FINISHING ONLY. Contact us if you need models for steel burnishing operations. **PRICES SUBJECT TO CHANGE.**

Model	Bowl Dia.	**Load capacity Material & Grit	Motor Size	Shp. Wt.	110V 60Hz Models		220V 50Hz Models	
					Order #	Price	Order #	Price
TV-5	8"	5 lbs.	1/57 HP	7 lbs.	113-23-001	105.00	113-24-106*	114.95
Bowl TV-5	8"	5 lbs.	-	3 lbs.	113-23-005	23.95	113-23-005	23.95
TV-5 Bowl lid nut/gromet		-	-	2 oz.	113-23-004	1.50	113-23-004	1.50
TV-10	10"	10 lbs.	1/25 HP	16 lbs.	113-23-009	259.00	113-24-108*	269.00
Bowl TV-10	10"	10 lbs.	-	5 lbs.	113-23-010	90.00	113-23-010	90.00
AV-18	12"	18 lbs.	1/15 HP	21 lbs.	115-23-024	435.00	115-24-113	439.00
Bowl AV-18	12"	18 lbs.	-	5 lbs.	115-23-036	145.00	115-23-036	145.00
AV-40	17"	35 lbs.	1/3 HP	51 lbs.	115-23-026*	1060.00	115-24-114*	1120.00
Bowl AV-40	17"	35 lbs.	-	16 lbs.	115-23-032*	295.00	115-23-032*	295.00

* Special order, allow 2-3 weeks delivery.

** Approximate-materials vary.

SPARE PARTS FOR TUMBLERS

When ordering any of the items below, please state catalog number and year and model of your machine, or give a brief description of your machine so that we can send the proper part.

NOTE: There is a \$2.00 service fee for orders under \$20.00

FITS MACHINE	ITEM	ORDER #	PRICE	WEIGHTS
Mini-Sonic	Speed Control w/knob	490-401996	30.45	2 oz.
Mini-Sonic	Speed Control w/knob 220V	490-401997	31.25	2 oz.
Mini-Sonic	Compression Spring	490-400196	10.80	1 oz.
Mini-Sonic	Foot Spring	490-401196	8.50	1 oz.
Mini-Sonic	MT Hopper latch	490-405196	12.45	6 oz.
Mini-Sonic	Mini-Sonic Tune Up Kit MT	490-402097	47.00	7 oz.
KG-1	Lid for 2.2 lb. Vinyl Hopper	433-02L	16.80	4 oz.
VR-6	Barrel	431-06B	112.75	10 lbs.
VR-6	Barrel Lid	431-06L	17.85	7 oz..
VR-6	Motor	490-602596	135.00	4 lbs.
VR-8/12	Lid	439-06HCL	23.10	8 oz.
VT-Viking	Motor 1/3 HP 50/60 Hz	490-860996	245.00	18 lbs.
VT-Viking	Spring, vinyl coated with cup	490-861696	29.00	5 oz.
VT-Viking	Bearing	490-865696	71.00	11 oz.
VSV-50	Lid, Hopper	433-50L	45.50	2 lbs.
12T	Lid, Barrel	611-30-1218	9.10	1 lb.
12T	Shaft, Long	690-30-104463	6.55	1 lb.
12T	Shaft, Short	690-30-104471	6.05	1 lb.
12T	Shaft Tubing Kit	611-93-001	12.50	5 oz.
24T,40T,65T	Shaft, Short	690-30-104420	10.75	2 lbs.
24T,40T,65T	Shaft, Long	690-30-104430	11.25	2 lbs.
24T, 40T, 65T	Shaft Tubing Kit	611-93-002	23.35	10 oz.
36T	Shaft, Long	690-30-104406	13.90	3 lbs.
36T	Shaft, Short	690-30-104414	13.35	3 lbs.
36T	Shaft Tubing Kit	611-93-003	28.90	1 lb.
65T	Lid, Barrel	611-30-6516	55.15	1 lb.
Rotary	Tumbler Guide, long w/bearing	690-30-102618	19.90	6 oz.
Rotary, All models	Tumbler Shaft Bearing	690-90-2529-1	7.90	8 oz.

VIKING HOPPER RELINES

Viking VT hoppers are solid cast aluminum lined with pure polyvinyl. Hoppers are re-lineable for extended usage. To have a hopper relined, send it to us freight pre-paid and allow 45 days for processing your order.	Hopper Model:	Order #	Shp. Wt.	Price
	VT-12 Reline	440-021496	7 lbs.	115.00
	VT-14 Reline	440-021596	16 lbs.	222.00
	VT-35 Reline	440-021696	27 lbs.	283.00
	Lid, VT-14 Reline	440-021796	3 lbs.	33.00
	Lid, VT-35 Reline	440-021896	4 lbs.	33.00

USING TUMBLING ABRASIVES

The main principle in polishing stone is to start with a coarse abrasive for grinding, and work through a series of increasingly finer abrasives to the final polish. The whole process is basically this simple, but there are variations in gemstone properties, types of abrasives, many recommended grit (abrasive) sequences, and results produced by the different types of tumblers. All these variations and choices can be confusing, especially to a beginner, so it should be remembered that tumbling is basically simple, not an “exact science”, and can be great fun once the basics are mastered.

The first choice to be made is the type of tumbler to be used, Rotary or Vibratory. A brief description of the two types is given on page 53. Further descriptions can be found on the pages in this catalog listing the tumblers themselves.

Both rotary and vibratory tumblers use the standard silicon carbide grits with water in the mix as well as a filler of some type. However, Vibra-Dry mixes can be used in vibratory tumblers for the polishing steps, and produce higher polishes on almost all stones and metals. (See page 65.) Vibra-Dry mixes do not use water, and can be re-used multiple times.

The beginner should be aware that some stones will not polish in either type of tumbler nor with any grit sequence. In order not to waste your time and money, be selective. See section on “Selecting Stones”.

Over the years, individuals have developed procedures



and grit sequences that give them good results, but what works for one person doesn't always work for someone else. As a result, you will find that advice, books and manufacturer's instructions vary in their recommendations. All follow the basic principle of tumbling, but reading “Use 80 grit to start” in one source and “Use 60/90 to start” in another is confusing. Both work, and there is actually little difference between those grit sizes. In fact, most grit sizes that are used actually cover a range in particle size. The 60/90 range includes 80 grit, for example. Finer grits and polishes are more closely graded so that particle size is more uniform and so are the results. As a consequence, finer grits and polishes are more expensive.

Fillers are recommended for use in both types of tumblers and in each step in almost all grit sequences. Fillers soften the action, fill space between stones, and carry the grit to the stone's surface more efficiently. Fillers generally can be reused if thoroughly cleaned between grit sequences. We recommend the ceramic bits for both stones and metals as they seem to do the best job and will last longer.

SELECTING STONES

It is important that you select stones that will polish in order to be successful at tumble polishing. The looks of rocks can be deceiving, but in general, those with a hard surface and sometimes shiny look to them, are likely to polish.

Stones with hardness of around 5 to 7½ on the Moh Scale of Hardness are best. This includes the agates and jaspers which are the easiest to polish. Softer and harder stones, and certain stones such as Apache Tears and jade are special challenges, and require special procedures.

Listed below is the Moh Scale of Hardness which rates minerals on a scale of 1 to 10, with No.1 Talc being very soft, and No.10 Diamond the hardest of all. A mineral with a high number can scratch those with lower numbers.

MOH SCALE OF HARDNESS

- | | |
|-------------|---------------|
| 1. Talc | 6. Orthoclase |
| 2. Gypsum | 7. Quartz |
| 3. Calcite | 8. Topaz |
| 4. Fluorite | 9. Corundum |
| 5. Apatite | 10. Diamond |

SCRATCH TEST FOR HARDNESS

Use the simple field test below to identify the relative hardness of a stone. Stones in the range of 6.5 to 7.5 will usually polish well.

Fingernails scratch	2 to 2.5
Pennies scratch	3
Knifeblades scratch	5.5
Window glass scratches	5.5
Steel files scratch	6.5
Garnet scratches	7 to 7.5
Carborundum scratches	9.5



VIBRA-DRY+ MIXES

We've added two super-fine mixes of 75,000 and 100,000 grits to our improved line of Vibra-Dry polishes. These two super-fine mixes will give the professional a polish on precious stones and fine jewelry pieces that's been only dreamed of until now. You will enhance both the looks and value of your stones and jewelry. Even our standard Vibra-Dry mixes will produce a brilliant finish seldom achieved by any other method.

Vibra-Dry+ mixes allow you to polish stones and metal pieces without the addition of water, additives, thickeners, or fillers of any kind. Everything you need is in the mix. No more worry about keeping the right amount of liquid or slurry levels, and no mess at the end of each polishing step. Vibra-Dry+ is a dry process, so that your stones, coins or jewelry pieces can be easily removed from the mix, cleaned with only a polishing cloth or rinsed in water. The mix is then ready to process another batch of material. You save time, labor and compound, and achieve a superb polish as well.

Vibra-Dry+ mixes are formulated for the pre-polish and final polishing steps in processing stones and metals in vibratory tumblers, they are not recommended for use in rotary or barrel type tumblers.

There are three main ways to use Vibra-Dry+ to polish stones and metals. For someone, especially a professional jeweler, who wants to put a final, outstanding shine to finished pieces of jewelry, loose faceted stones, pre-formed or poorly finished cabochons, then using the 25,000 and 50,000 Vibra-Dry+ mixes fills the need. This applies to most metal pieces as well, such as finished jewelry, castings, coins, etc. In some cases of severe tarnish or fire scale, the metal pieces may need to be run through one or more coarser grits of Vibra-Dry+ first.

For those wanting to process valuable or delicate materials such as amber, pearls, opals, etc., most of the finishing process may be done just using a series of Vibra-Dry+ mixes, avoiding the use of most or all silicon carbide steps. It just depends on your material.

Then for those just wanting to tumble polish rough stones such as agate and similar gemstone materials, prepare your stones by processing them through the standard silicon carbide grits: 60/90, 220, and 600 grits, followed by 800 grit aluminum oxide pre-polish. This sequence prepares most stones even for standard final polishes, but a far better shine is achieved by then using the 25,000 or 50,000 Vibra-Dry+ mixes.

For the ultimate polish, try our 75,000 and 100,000 polishes. For more information on these two super polishes, call our Technical Representative.

The Guidelines given here are just that. For most stones from 6 to 8 in hardness, going through the silicon carbide grits will prepare your stones properly. Softer stones are harder to polish, and you might find that using some of the coarser Vibra-Dry+ mixes will help.

GUIDELINE FOR SELECTING GRIT SEQUENCE	
MATERIAL HARDNESS	USE VIBRA-DRY
Soft: 2-4 MOH scale (Amber, coral, pearl, etc.)	600-3000-25,000-50,000
Soft-Medium: 4-5 MOH scale (Apache tears, glass, shell, etc.)	3000-25,000, 50,000
Medium: 5-6 MOH scale (Jade, opal, turquoise, etc.)	3000-14,000-25,000, 50,000
Hard: 7-8 MOH scale (Agates, jasper, topaz, etc.)	14,000, 25,000, 50,000
All stones & metals for super polish	75,000 and 100,000

VIBRA-DRY EXTENDER Relubricates and extends life of mixes. SEE PAGE 77 TO ORDER.

VIBRA-DRY PLUS POLISHING COMPOUNDS								
AMOUNT	1 LB.		2 LBS.		5 LBS.		25 LBS.	
	GRIT	ORDER #	PRICE	ORDER #	PRICE	ORDER #	PRICE	ORDER #	PRICE
600	421-00600-01	26.00	421-00600-02	46.80	421-00600-05	104.00	421-00600-25	455.00
1700	421-01700-01	26.00	421-01700-02	46.80	421-01700-05	104.00	421-01700-25	455.00
3000	421-03000-01	26.00	421-03000-02	46.80	421-03000-05	104.00	421-03000-25	455.00
8000	421-08000-01	26.00	421-08000-02	46.80	421-08000-05	104.00	421-08000-25	455.00
14,000	421-14000-01	32.00	421-14000-02	57.60	421-14000-05	128.00	421-14000-25	560.00
25,000	421-25000-01	32.00	421-25000-02	57.60	421-25000-05	128.00	421-25000-25	560.00
50,000	421-50000-01	34.00	421-50000-02	61.20	421-50000-05	136.00	421-50000-25	595.00
75,000	421-75000-01	40.00	421-75000-02	72.00	421-75000-05	160.00	421-75000-25	700.00
100,000	421-90000-01	46.00	421-90000-02	82.80	421-90000-05	184.00	421-90000-25	805.00

GRIT KITS FOR STONES

Kits are designed primarily for those just learning the fun of tumbling stones. The abrasives included will polish a variety of stones from soft to hard.

The KW-10 kit contains enough abrasives for approximately 8–10 loads for the MT-4 tumbler. You will have more loads for the KG-1 and less for the Raytech TV-5 and similar tumblers. The KW-20 kit contains enough abrasives to do about 3–4 loads in tumblers with 8 to 10 pound barrels.

When using larger tumblers, it is more economical to purchase grits in larger quantities, and in the grit sizes to fit your needs.

WET KITS FOR ROTARY OR VIBRATORY TUMBLERS

The KW-10 and KW-20 wet kits can be used in rotary and vibratory tumblers, and use water in each step. Kits contain the following: 60/90, 220 and 600 silicon carbide grits, aluminum-oxide pre-polish, Lusterite polish, ceramic media for filler, measuring cups, instructions.

403-KW-10 Shp.wt. 7 lbs 34.75
 403-KW-20 Shp.wt. 13 lbs 57.75

BEGINNING WET KIT FOR KG-1 AND MT-4 MINI-SONIC TUMBLERS

The MT-1 kit is designed for vibratory tumblers such as the KG-1 and MT-4 Mini-Sonic tumblers. The kit contains the following: 60/90, 220 and 600 silicon carbide grits, aluminum-oxide prepolysh, Lusterite polish, and ceramic media for filler. You will have enough grit for several loads in either tumbler.

403-MT-1 Shp.wt. 3 lbs 13.90

ROCK FOR TUMBLING

Package contains assorted gemstone materials of suitable size and hardness for tumbling. Materials may include bloodstone, rose quartz, red and green jaspers, amethyst, tigereye, and other stones of 6½ to 7 hardness. Mixed varieties, sorry no choice of stone. Size of stones varies, but averages 1½" in diameter. Can be broken into smaller pieces if desired. Approximately 2 lbs. per package.

403-TR-10 Shp. Wt. 2½ lbs.. 12.25

SILICON CARBIDE ABRASIVES

These abrasives have sharp, hard grains for fast cutting. Use in tumblers, flat laps, sphere machines or wherever coarse and fine grinding grits are needed. The grit sequences below are standard, but can be varied depending on material and need. Standard sequence for rotary tumblers is 60/90, 220 and 600 silicon carbide, followed by a polish. For best results, use an aluminum oxide pre-polish 800 grit before the final polish. Use this same silicon carbide sequence including the aluminum oxide pre-polish, in vibratory tumblers. When lapping, add the 400 and 1000 grits to the standard sequence.

Silicon carbide abrasives are packaged in sturdy containers for convenient storage and use. Prevents leakage and contamination.

SILICON CARBIDE ABRASIVES				
GRIT SIZE	ORDER #	NET WT.	SHIP WT.	PRICE
UNGRADED 60/90 COARSE GRIND	400-0090-01	1 lb.	1¼ lbs.	4.35
	400-0090-02	2½ lbs.	3 lbs.	8.35
	400-0090-05	5 lbs.	5½ lbs.	15.50
	400-0090-10	10 lbs.	11½ lbs.	29.00
	400-0090-50	50 lbs.	53 lbs.	116.50
GRADED 220 COARSE GRIND	400-0220-01	1 lb.	1¼ lb.	4.80
	400-0220-02	2½ lbs.	3 lbs.	9.50
	400-0220-05	5 lbs.	5½ lbs.	17.70
	400-0220-10	10 lbs.	11½ lbs.	32.10
	400-0220-50	50 lbs.	53 lbs.	122.60
GRADED 400 FINE GRIND	400-0400-01	1 lb.	1¼ lb.	8.35
	400-0400-02	2 lbs.	3 lbs.	12.60
	400-0400-05	5 lbs.	5½ lbs.	29.60
	400-0400-10	10 lbs.	11½ lbs.	55.60
	400-0400-50	50 lbs.	53 lbs.	212.50
GRADED 600 PRE-POLISH	400-0600-01	1 lb.	1¼ lb.	10.35
	400-0600-02	2 lbs.	3 lbs.	15.85
	400-0600-05	5 lbs.	5½ lbs.	37.75
	400-0600-10	10 lbs.	11½ lbs.	73.80
	400-0600-50	50 lbs.	53 lbs.	273.65
1000 GRADED PRE-POLISH	400-1000-01	1 lb.	1¼ lb.	17.85
	400-1000-02	2 lbs.	3 lbs.	28.40
	400-1000-04	4 lbs.	5 lbs.	55.80
	400-1000-08	8 lbs.	9 lbs.	94.20
	400-1000-40	40 lbs.	43 lbs.	363.50

ALUMINUM OXIDE PRE-POLISH POLISHES FOR STONE

For use as a pre-polish on soft and difficult to polish stones such as Apache tears and tigereye. Can also be used as a final polish on extremely hard materials (+8 on MOH scale.) Great for slabs. 800 grit. Net wt. 1 lb.

GRIT SIZE	ORDER #	NET WT.	SHIP WT.	PRICE
800	400-86-01	1 lb.	1¼ lbs.	9.00
	400-86-02	2 lbs.	3 lbs.	16.35
	400-86-05	5 lbs.	5½ lbs.	38.75
	400-86-10	10 lbs.	11½ lbs.	62.80
	400-86-25	25 lbs.	26 lbs.	112.75

ALUMINA POLISHES

Use these high grade aluminum oxide polishing compounds for both tumbling and lapping processes. New processing techniques produce this extremely fine, well graded polish.

POLY-AL F IS A SUPERIOR POLISH. It has an ideal particle size, 0.2 microns, to put a super polish on almost any stone that has been prepared properly for polishing.

401-ALF-4 4 oz. Size Ship Wt. 8 oz. 11.25
 401-ALF-1 1 lb. Size Ship Wt. 1¼ lb. 40.55
 401-ALF-5 5 lb. Size Ship Wt. 5¼ lb. 185.95

POLY-AL Z is our most **ECONOMICAL** polishing powder. Gives an excellent polish if given additional time. It is 0.35 microns.

401-ALZ-4 4 oz. Size Ship Wt. 8 oz. 6.90
 401-ALZ-1 1 lb. Size Ship Wt. 1¼ lb. 20.65

POLY-AL T is **SUBMICRON**, 0.8 microns, and hard enough to prepare stones for polishing if silicon carbide is used for sanding. As a polish, it is a major improvement over tin oxide. On flat laps, it polishes stones faster than anything but diamond dust.

401-ALT-4 4 oz. Size Ship Wt. 8 oz. 11.50
 401-ALT-1 1 lb. Size Ship Wt. 1¼ lb. 41.35
 401-ALT-5 5 lb. Size Ship Wt. 5¼ lb. 190.55

POLY-AL LS is an **AGGRESSIVE** powder. At 1.4 – 1.6 microns, it is an ideal prepolish.

401-AL-LS-4 4 oz. Size Ship Wt. 8 oz. 4.80
 401-AL-LS-1 1 lb. Size Ship Wt. 1¼ lb. 13.80
 401-AL-LS-5 5 lb. Size Ship Wt. 5¼ lb. 59.75

USE POLY-AL ALUMINA POLISHES FOR FLAT LAPS, DISCS, BELTS

All alumina slurries for flat laps, discs, and belts are simple to make. Mix polish either with water, mineral oil, or a 50-50 oil and dishwashing detergent mixture.

DIAMOND “SUPER POLISH”

New stick form of “Super Polish” allows you to apply the polish directly to buffs and brush wheels. Compound form in vial can be applied directly to your workpiece or to felt, leather pads or small buffs and brushes. “Super Polish” is used by professional carvers because of its exceptional polishing abilities. You can use it for all stones and most metals, especially high caret gold alloys. A little bit goes a long way. Stick or vial contains 3 grams polish. Shp. Wt. each 8 oz.

400-SP-012 Vial Blue 1200 grit 25.00
 400-SP-020 Vial Green 2000 grit 25.00
 400-SP-140 Vial Yellow 14,000 grit 25.00
 400-SPS-012 ... Stick Blue 1200 grit 25.00
 400-SPS-020 ... Stick Green 2000 grit 25.00
 400-SPS-140 ... Stick Yellow 14,000 grit 25.00

SUPER PREMIUM CERIUM OXIDE

Cerium oxide is one of the best all-purpose polishes, and our new highly refined “Super Premium” grade is one of the best “Super Polishes” we’ve tested. Gives an excellent polish to almost any stone, especially when used on a felt pad.

Our standard and premium grade cerium oxide will give you an excellent polish when used on pads or for tumbling. For the money, they are a great buy.

400-80-01 ... Standard 1 lb ... Shp wt. 1¼ lbs. 9.40
 400-80-05 ... Standard 5 lb ... Shp wt. 6 lbs 39.75
 402-82-01. .. Premium 1 lb ... Shp wt. 1¼ lbs. ... 14.40
 402-82-05. .. Premium 5 lb ... Shp wt. 6 lbs 66.05
 402-83-04 Super 4 oz ... Shp wt. 8 oz 8.70
 402-83-01. Super 1 lb ... Shp wt. 1¼ lbs. ... 27.30
 402-83-05. Super 5 lb ... Shp wt. 6 lbs 115.25

TIN OXIDE POLISHING COMPOUND

Puts an excellent polish on almost all gemstones, including the hard-to-polish ones.

400-90-04 ... ¼ lb. Shp wt. 6 oz. 12.00
 400-90-01 ... 1 lb. Shp wt. 1¼ lbs. 44.00

LUSTERITE POLISHING COMPOUND

A hard, finely pulverized pyrochemically produced compound suitable for polishing gems of various hardness. Use Lusterite I as you would cerium or tin oxide. Use Lusterite II for tumbling. Mixes with water. Easy to clean up. Net weight 1 lb. each.

400-65-01 Lusterite I Shp wt. 1½ lbs. 8.00
 400-75-01 Lusterite II Shp wt. 1½ lbs. 8.00



METAL POLISHES

RED ROUGE – The standard compound for a final coloring and a high polish on precious metals such as gold and silver. Not for burnished surfaces. Bar weight approx. 1¼lbs.

400-50 Shp wt. 2 lbs. 9.65

TRIPOLI (Brown) – The most popular general compound for cutting down and buffing base metals. Gives a smooth, satin finish to copper, aluminum, pewter, gold and even hard plastic surfaces. Also ideal for preliminary coloring operations. Comes in bar form. Approx. wt: 1lb.

400-20 Shp wt. 2 lbs. 3.00

GREEN ROUGE – Produces a super bright finish on most white metals. This rouge has some cutting action and should not be used on plated articles. Works like ZAM on stones. Comes in bar form. Approx. wt: 1¼lbs.

400-30 Shp wt. 2 lbs. 6.50

WHITE ROUGE – Fast cutting, produces high gloss finish on white metal such as stainless and chrome. Bar weight approx. 1¼lbs.

400-40 Shp wt. 2 lbs. 6.25

BURNISHING COMPOUND

Use with burnishing media for achieving bright finishes on jewelry metals. Great on both silver and gold. Starting ratio is a heaping tablespoon to a gallon of water. Adjust as necessary. Net Wt. 1 lb.

400-BC-20 Shp. Wt. 1 lb. 4 oz. 4.95

STAINLESS STEEL SHOT

Use as a burnishing media for metals. Contains a mixture of balls, ball-cones, and angle cut cylinders that are the right shape and size for jewelry work. No pins. Stainless steel shot will not rust. Use with burnishing compound. Net wt. 1 lb.

400-SS-10 Shp Wt. 1 lb. 4 oz. 30.00

FILLERS FOR TUMBLING STONE AND METALS

Fillers are an important addition to the stone/grit mix in almost any tumbling sequence or tumbler. Fillers help distribute the grit to the stone or metal part, and act as a cushion between the parts. As a general rule, filler should comprise about one-third of the load.

CERAMIC MEDIA

Non-abrasive, angle cut cylinders. Works well as a filler and carrier in tumbler loads of stone. Also used as a burnishing media on jewelry metals. Really speeds the job and helps leave a super finish. Cylinder size approx. 5/32" x 5/16". Net weights. 1 lb. and 5 lbs.

400-CM-01 Shp. Wt. 1 lb. 4 oz. 5.50

400-CM-05 Shp. Wt. 5 lb. 4 oz. 24.70

400-CM-10 Shp. Wt. 10 lb. 2 oz. 49.50

WALNUT SHELL FILLER WITH POLISH

Ground walnut shells treated with red rouge make an excellent final polish for metals including silver, gold, brass, etc. Keeps items separated and aids in the tumbling process. Packaged in 1 lb. and 5 lb. bags.

400-WSR-1 . 1 lb with Rouge .. Shp. Wt. 1 lb. 4 oz .. 4.75

400-WSR-5 . 5 lb with Rouge .. Shp. Wt. 5 lb. 4 oz . 19.00

WALNUT SHELL FILLER - PLAIN

Makes a good filler for tumbling gemstones. Keeps stones from hitting each other during the tumbling process.

400-WS-1 .. 1 lb Plain Shp. Wt. 1 lb. 4 oz. ... 3.00

400-WS-5 .. 5 lb Plain Shp. Wt. 5 lb. 4 oz. 10.00

CORN COB FILLER

Ground corn cobs. Makes an excellent filler for polishing stones. Softer than walnut shells. Comes in 1 lb. and 5 lb. bags.

400-CC-1 1 lb Shp. Wt. 1 lb. 4 oz. 4.00

400-CC-5 5 lbs. . Shp. Wt. 5 lb. 4 oz. 15.00

CERAMIC MEDIA FOR TUMBLE FINISHING METALS

If you are tumble finishing large amounts of metal parts, we can supply you with 50 lb. lots or more of ceramic media. Comes in various shapes and grits. Call us for information.

DIAMOND COMPOUND

Quality diamond compound for your gemstone sanding and polishing needs. This compound exceeds U.S. standards specifications for purity, size and uniformity. The diamonds have been scientifically graded for size and shape, and come in a specially compounded medium for easy, economical application. Each mesh size is color coded for quick identification. Packaged in convenient, disposable plastic syringes in three different quantity sizes. Use with Gem Lube lubricant. See page 77. Weight per syringe: 2 oz.



DIAMOND POLISHING COMPOUND							
Size		1 Gram Syringe		2 Gram Syringe		5 Gram Syringe	
Mesh	Mic	Order #	Price	Order #	Price	Order #	Price
100,000	¼	340-C100-1	3.00	340-C100-2	4.50	340-C100-5	9.00
50,000	½	340-C500-1	3.00	340-C500-2	4.50	340-C500-5	9.00
14,000	1	340-C140-1	3.00	340-C140-2	4.50	340-C140-5	9.00
8,000	3	340-C800-1	4.50	340-C800-2	8.00	340-C800-5	17.50
3,000	6	340-C300-1	6.00	340-C300-2	11.00	340-C300-5	22.00
1,200	15	340-C120-1	6.00	340-C120-2	11.00	340-C120-5	22.00
600	30	340-C600-1	6.00	340-C600-2	11.00	340-C600-5	22.00
325	60	340-C325-1	6.00	340-C325-2	11.00	340-C325-5	22.00
260	-	340-C260-1	6.00	340-C260-2	11.00	340-C260-5	22.00
180	-	340-C180-1	7.00	340-C180-2	13.00	340-C180-5	25.00
100	-	340-C000-1	7.00	340-C000-2	13.00	340-C000-5	25.00

DIAMOND SPRAY

Lapcraft diamond spray comes in a convenient non-aerosol pump spray bottle. The diamond is suspended in a high-tech vehicle packed with 1 full carat of precisely graded diamond powder. This packaging produces the uniformity of particle dispersion needed to make diamond abrasives most effective without a limited shelf life. Shipping weight: 3 oz.



DIAMOND SPRAY		
Order #	Micron / Mesh	Price
106-6050	¼ (100,000)	9.75
106-6051	½ (50,000)	9.75
106-6052	1 (14,000)	9.75
106-6053	3 (8,000)	9.75
106-6054	6 (3,000)	9.75
106-6055	9 (1,800)	9.75
106-6056	15 (1,200)	9.75
106-6057	30 (600)	9.75

DIAMOND POWDER

This fine quality micron diamond powder has been carefully graded to give you blocky crystals. Use for charging laps, polishing pads—wherever you need a high quality diamond abrasive for polishing stones. Weight, vial: 2 oz

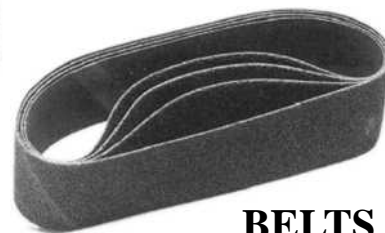
DIAMOND POWDER				
Size	1 Ct. Vials		5 Ct. Vials	
Mesh	Order #	Price	Order #	Price
100,000	340-P10-1	3.00	340-P10-5	10.00
50,000	340-P50-1	3.00	340-P50-5	10.00
14,000	340-P14-1	3.00	340-P14-5	10.00
8,000	340-P80-1	4.50	340-P80-5	12.00
3,000	340-P30-1	4.50	340-P30-5	12.00
1,200	340-P12-1	4.50	340-P12-5	12.00
600	340-P60-1	4.50	340-P60-5	12.00
325	340-P32-1	4.50	340-P32-5	12.00
260	340-P26-1	5.00	340-P26-5	15.00
180	340-P18-1	5.00	340-P18-5	15.00
100	340-P00-1	5.00	340-P00-5	15.00
80	340-P08-1	5.00	340-P08-5	15.00
60	340-P06-1	5.00	340-P06-5	15.00

SILICON CARBIDE DISCS AND BELTS

High quality silicon carbide discs and belts for sanding and polishing both stone and glass. Use either wet or dry and in both directions. Discs fit plates with 6" or 8" diameters. Belts fit the 6" and 8" expanding drum sizes listed below. Both discs and belts come in the most common grit sizes including the 3" x 41½" belt for a wet belt sander.



DISCS



BELTS

Fits	Order number	Description	Mesh	Shp. Wt. Each	Price
6" Discs	702-85-5006-100	DISC, 6"	100 GRIT	6 oz.	1.35
	702-85-5006-220	DISC, 6"	220 GRIT	6 oz.	1.35
	702-85-5006-320	DISC, 6"	320 GRIT	6 oz.	1.35
	702-85-5006-400	DISC, 6"	400 GRIT	6 oz.	1.35
	702-85-5006-600	DISC, 6"	600 GRIT	6 oz.	1.35
8" Discs	702-85-5008-080	DISC, 8"	80 GRIT	6 oz.	2.30
	702-85-5008-100	DISC, 8"	100 GRIT	6 oz.	2.30
	702-85-5008-220	DISC, 8"	220 GRIT	6 oz.	2.30
	702-85-5008-320	DISC, 8"	320 GRIT	6 oz.	2.30
	702-85-5008-400	DISC, 8"	400 GRIT	6 oz.	2.30
	702-85-5008-600	DISC, 8"	600 GRIT	6 oz.	2.30
6" x 2½" Drum	702-85-6625-080	BELT 2½" x 18 ¹⁵ / ₁₆ "	80 GRIT	6 oz.	2.40
	702-85-6625-100	BELT 2½" x 18 ¹⁵ / ₁₆ "	100 GRIT	6 oz.	2.35
	702-85-6625-220	BELT 2½" x 18 ¹⁵ / ₁₆ "	220 GRIT	6 oz.	2.35
	702-85-6625-320	BELT 2½" x 18 ¹⁵ / ₁₆ "	320 GRIT	6 oz.	2.35
	702-85-6625-400	BELT 2½" x 18 ¹⁵ / ₁₆ "	400 GRIT	6 oz.	2.35
	702-85-6625-600	BELT 2½" x 18 ¹⁵ / ₁₆ "	600 GRIT	6 oz.	2.35
8" x 3" Drum	702-85-6830-080	BELT 3" x 25 ⁷ / ₃₂ "	80 GRIT	6 oz.	3.35
	702-85-6830-100	BELT 3" x 25 ⁷ / ₃₂ "	100 GRIT	6 oz.	3.15
	702-85-6830-220	BELT 3" x 25 ⁷ / ₃₂ "	220 GRIT	6 oz.	3.15
	702-85-6830-320	BELT 3" x 25 ⁷ / ₃₂ "	320 GRIT	6 oz.	3.15
	702-85-6830-400	BELT 3" x 25 ⁷ / ₃₂ "	400 GRIT	6 oz.	3.15
	702-85-6830-600	BELT 3" x 25 ⁷ / ₃₂ "	600 GRIT	6 oz.	3.15
Wet Belt Sanders	702-85-6341-080	BELT 3" x 41½"	80 GRIT	6 oz.	5.50
	702-85-6341-100	BELT 3" x 41½"	100 GRIT	6 oz.	5.15
	702-85-6341-120	BELT 3" x 41½"	120 GRIT	6 oz.	5.15
	702-85-6341-220	BELT 3" x 41½"	220 GRIT	6 oz.	5.15
	702-85-6341-320	BELT 3" x 41½"	320 GRIT	6 oz.	5.15
	702-85-6341-400	BELT 3" x 41½"	400 GRIT	6 oz.	5.15
	702-85-6341-600	BELT 3" x 41½"	600 GRIT	6 oz.	5.15

EXPANDING DRUMS

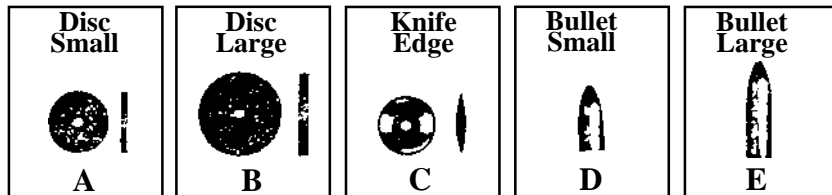


Use expanding drums with either diamond or silicon carbide belts for sanding and polishing gemstones. The flexible surface of the drum conforms to the shape of a stone when run at low speeds, and at higher speeds hardens from centrifugal force to provide a surface for grinding. The pliable rubber drums expand during rotation, holding the belts firmly in place. Belts are easily changed by sliding on and off drums when machine is stopped. Come with bushings to fit 1", ¾", ⅝" and ½" arbors. For use with arbors with threaded shafts and retaining nuts.

Order number	Size	Shp. Wt.	Price
710-71-5061	6" DIAMETER X 1½" WIDTH	3 lbs.	55.65
710-71-5062	6" DIAMETER X 2½" WIDTH	3 lbs.	62.00
710-71-5083	8" DIAMETER X 3" WIDTH	5 lbs.	76.00

CRATEX RUBBERIZED ABRASIVE WHEELS

Use these Cratex wheels and points on metal and stone. Great for deburring, smoothing, cleaning and polishing. Come in a variety of shapes and sizes to help you work those hard-to-reach surfaces, grooves, holes, etc. Can be used to polish molds, dies, patterns, and light castings, and for cleaning contact points and soldered spots. Contain first quality silicon carbide that has been treated to remove impurities. Graded for proper grit sizes. **MAXIMUM SPEED IS 25,000 RPM.** Best results are obtained at 30% to 80% maximum speed using light pressure. Come in packages of 3. Shipping Weight. 3 oz. per package.



ABRASIVE WHEEL KIT

Save when you buy this 36 piece kit of the most popular rubber bonded Cratex Wheels. Contains 12 of Large Disc (3 ea. of C, M, F & XF) 12 of Knife Edge (3 ea. of C, M, F, & XF) and 12 of Small Bullet (3 ea. of C, M, F & XF). Includes M6 and M25 mandrels with 1/8" shank. Maximum speed 25,000 RPM.

160-STK-36 1 lb. 29.95



Type Shape	ORDER # BY GRIT SIZE				Pkg. Price	Dimensions			Use Mandrel
	Coarse	Medium	Fine	X Fine		Dia.	Thick-ness	Arbor Hole	
A	160-ST-1504C	160-ST-1504M	160-ST-1504F	160-ST-1504XF	2.00	5/8"	3/32"	1/16"	103-M1
B	160-ST-1506C	160-ST-1506M	160-ST-1506F	160-ST-1506XF	2.55	7/8"	1/8"	1/16"	or
C	160-ST-1500C	160-ST-1500M	160-ST-1500F	160-ST-1500XF	1.85	5/8"	3/32"	1/16"	103-M6
D	160-ST-1552C	160-ST-1552M	160-ST-1552F	160-ST-1552XF	2.55	3/8"	5/8"	1/16"	103-M25
E	160-ST-1553C	160-ST-1553M	160-ST-1553F	160-ST-1553XF	5.00	3/8"	1" long	1/8"	103-M7

CUT-OFF WHEELS

These aluminum oxide (resin bonded) cut-off wheels cut all metals smoothly and rapidly. They are fast, cool, odor-free and long lasting. Come in packs of 10. Weight per pkg: 1 oz.

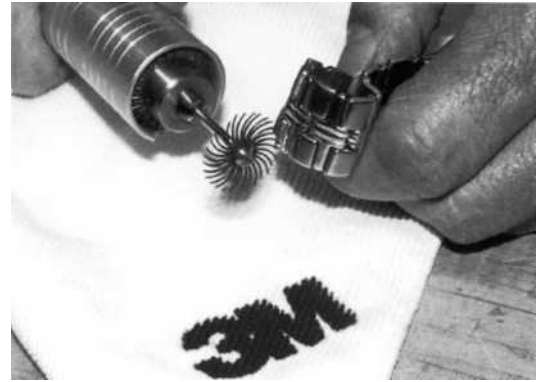
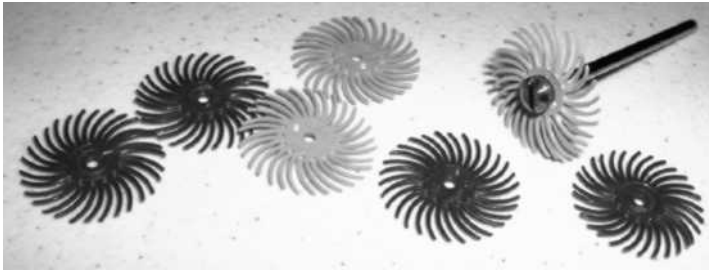
CUT-OFF WHEELS						
Type	Order #	Price Pkg. of 10	Dia.	Thickness	Arbor Hole	Use Mandrel
	160-ST-1310	4.85	7/8"	.030	1/16"	103-M1 3/32"
	160-ST-1315	5.25	1 1/4"	.032	1/16"	or 103-M6 1/8"

HEATLESS WHEELS

Heatless wheels are used for the rapid and safe reduction of all types of materials-metals, stone, acrylics and porcelain. They are compounded of hard, sharp, abrasive crystals imbedded in a special binder. This provides for heatless grinding and prevents the grinding surface from clogging allowing for rapid cut. The molded-in bushing maintains proper arbor hole size and reduces wear on mandrels. Come in packages of 3. Wt. per pack: 3 oz.

HEATLESS WHEELS						
Type	Order #	Price pkg of 3	Dia.	Thickness	Arbor Hole	Use Mandrel
	160-ST-1151	1.85	1/2"	1/8"	Pin Hole	103-M1 3/32"
	160-ST-1152	1.85	1/2"	3/16"	Pin Hole	
	160-ST-1161	1.85	3/4"	1/8"	Pin Hole	
	160-ST-1162	1.85	3/4"	3/16"	Pin Hole	or
	160-ST-1171	1.85	1"	1/8"	Pin Hole	103-M6 1/8"
	160-ST-1172	1.85	1"	3/16"	Pin Hole	

3-M BRISTLE DISCS FOR METAL FINISHING



Recommended speed for most applications: 15,000 RPM. More specific speeds are listed in the chart below. **DO NOT EXCEED MAXIMUM OPERATING SPEED OF 30,000 RPM. WEAR SAFETY GLASSES WHEN USING THESE DISCS.**

Shp. wt. pkg: 2 oz.

RECOMMENDATIONS FOR JEWELRY APPLICATIONS

Heavy Cleaning	36x,50x,80x	15,000	to	20,000 RPM
Fire-scale removal	36x,30x,80x,120x	15,000	to	20,000 RPM
Light oxide removal	120x, 220x,400x	10,000	to	15,000 RPM
Pre-polishing	220x,400x,Pumice	12,000	to	18,000 RPM
Semi-finishing	400x,Pumice	5,000	to	10,000 RPM
Blending	220x,400x,Pumice	8,000	to	15,000 RPM
Texturing	50x,80x,120x,220x	5,000	to	10,000 RPM
Polishing	1 micron, 6 micron	15,000	to	20,000 RPM

The 3M small Radial Bristle Disc has a flexible bristle design that can be used for cleaning, pre-polishing, semi-finishing, blending and texturing. Excellent for gold, silver, copper, pewter and brass applications. Especially good for removing the oxides from jewelry without messy compounds. Great for cleaning hard to reach areas and fine detail.

Easy to Use

- Color coding helps selection of proper abrasive grade.
- Flexible bristles conform to the part and clean without removing base material. Helps reduce damage and rework.
- Uniform concentration of abrasive mineral provides a higher cut rate than wire brushes for a faster, more uniform finish. Lowers operational costs.
- Single discs can be mounted on most standard mandrels. For wider coverage, discs can be ganged on the M01 and M06 mandrels. Each will hold six of 3/4" or 9/16" diameter discs or three of the 1" discs. Use electric or pneumatic straight shaft grinders.

Order #	Price Pk of 6#	Size Dia.	Grade/ Grit	Color	Order #	Price Pk of 6#	Size Dia.	Grade/ Grit	Color
141-25755	7.50	3/4"	80x	Yellow	141-27614	7.50	9/16"	120x	White
141-25757	7.50	3/4"	220x	Red	141-27615	7.50	9/16"	220x	Red
141-25758	7.50	3/4"	400x	Blue	141-27616	7.50	9/16"	400x	Blue
141-25759	7.50	3/4"	Pumice	Pink	141-27617	7.50	9/16"	Pumice	Pink
141-27610	8.50	1"	36x	Brown	141-27618	7.50	9/16"	Polish I	Lt. Green
141-27611	8.50	1"	50x	Green	141-27619	7.50	9/16"	Polish II	Peach
141-27612	8.50	1"	80x	Yellow	Order mandrels below				
141-27613	8.50	1"	120x	White					

MINIATURE MANDRELS

Use these miniature mandrels with wheels, points and cones. Made of high quality steel for precision work.

SMALL WHEEL MANDRELS

Mandrels M01 and M06 are for standard wheels. M02 and M35 have reinforced shoulders. M35 comes with extra long screw for mounting thicker wheels or ganging bristle discs or sanding discs.

M14 has enlarged head for support of disc or blade type tools.

POINT AND CONE MANDRELS

Mandrels M07 and M25 are standard mandrels.

Maximum safe speed is 25,000 RPM.



MANDRELS			
Wt. 1 oz. ea.			
Order #	Price	Shank Size	Arbor Hole
103-M01	1.00	3/32"	1/16"
103-M02	1.50	3/32"	1/8"
103-M06	1.50	1/8"	1/16"
103-M07	1.50	1/8"	1/8"
103-M14	2.00	1/8"	1/8"
103-M25	1.50	1/8"	1/16"
103-M35	2.00	1/8"	1/8"

Caution: Wear safety glasses when using these tools.

EXPANDABLE BUR HOLDER BLOCKS

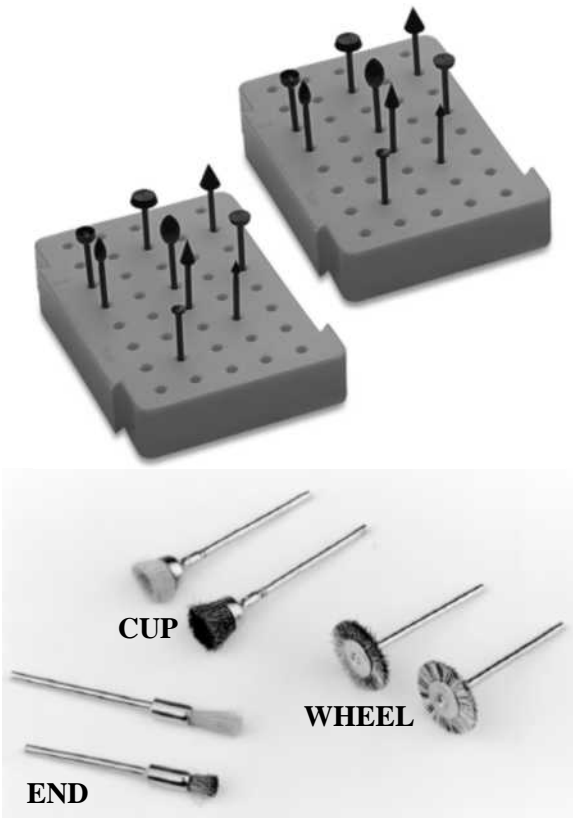
These simple 40 hole plastic blocks can be attached together to store unlimited numbers of mini brushes, buffs, drills, beading tools, diamond carving points and much more. Each section measures 4 1/4" x 3 1/8" with 3/32" holes.

150-HOL-332.10 EACH. 6 oz. 2.95

METAL AND BRISTLE BRUSHES

Steel, brass and bristle brushes come in three popular shapes. Use metal bristles for a brushed finish on metal. Use steel on white metals and brass on yellow metals. Bristle brushes are used for finishing metal in delicate or pattern areas. Also good for cleaning. Mounted on 3/32" shanks. Come three brushes of one kind per package. Ship Wt. 6 oz. pkg.

Maximum Speed Rating: 25,000 RPM.



Material	Wheel		Cup		End	
	Order #	Pkg	Order #	Pkg	Order #	Pkg
Brass	200-BR-102	4.95			200-BR-112	3.75
Steel	200-BR-104	4.95			200-BR-114	3.50
Soft Bristle	200-BR-106	1.60	200-BR-107	3.25	200-BR-116	1.95
Hard Bristle	200-BR-110	1.60	200-BR-111	3.25	200-BR-120	1.95

ENGRAVING BUR SET

These vanadium steel burs are great for fine detail work on metal, wood, glass, ceramics and some stones. Use for etching, engraving and other detail work. They come with 3/32" shanks. Maximum Speed Rating: 35,000 RPM. One each of five burs shown included in the kit.

103-K65 SET .. 8 oz. 4.25

Head Diameter

Head Length

A	1/32	1/16	3/32	3/64	3/32
B	1/32	1/16	3/32	3/64	5/64

CUT-LUBE FOR METAL BURS

Hi-tech lubrication for most cutting applications. Use with burs or when sawing, drilling or drawing wire to insure cooler, cleaner cuts. Cut-Lube adheres to the tool surface and is less affected by heat than oil. Increases the life of all your cutting tools. The two ounce stick is made in the U.S.A. and comes in a convenient push up plastic sleeve. Not for diamond points.

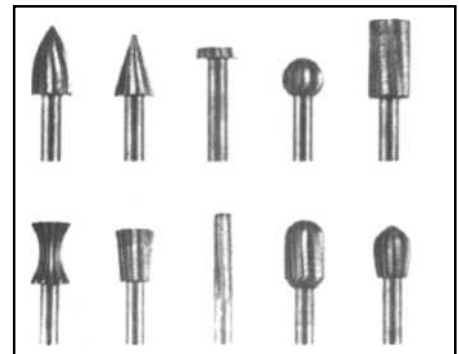
152-BUR-180 3 oz. 3.25



WAX CARVING BUR SET

These ten burs are ideal for carving wax for molds. Made of tool steel, they are deeply fluted so that they will not clog with wax. Also good for carving and working wood. Each of the pieces is a different shape similar to those shown in the illustration. They have 1/8" shanks and come in a convenient hang-up pouch.

150-BUR-950 SET 8 oz. 31.20



RUBY STONE ABRASIVE POINT SET

Ruby points work best for quick, fine finishing of semi-precious metals, but can also be used for carving stones. Made of aluminum oxide with 3/32" shanks to fit most standard handpieces. This 12-piece assortment comes in a handy, hang-up plastic wallet. Point shapes and sizes approximate those illustrated. Maximum Speed Rating: 35,000 RPM.

152-ABR-616 SET 8 oz. 15.95

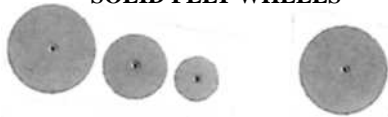


MINIATURE BUFF WHEELS

MUSLIN BUFFS



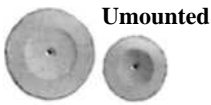
SOLID FELT WHEELS



24 PC. ASSORTED FELT BOBS



KNIFE EDGE WHEELS



Unmounted



FORMED FELT BOBS

BUD ROUND POINTED CYLINDER

FLANGES FOR WHEEL BUFFS

Use on buffing wheels with 1" bore centers for increased efficiency and safety. Aluminum, sold in pairs. Ship. wt. 3 oz. pr.

Order #	Arbor Size	Price
200-AF-535-1/2	1/2"	1.10
200-AF-535-5/8	5/8"	1.10
200-AF-535-3/4	3/4"	1.10

ARBOR ADAPTOR FOR BUFF WHEELS

Adaptor has 1/4" shank to fit most electric hand drills. Fits wheels with 1/2" arbor hole. Flanges hold wheels securely. For wheels 4" or more in dia. 200-AA-505 .. 6 oz..... 5.00



TAPERED SPINDLES

For straight shaft motors. Steel with threads cut deep to provide firm grip on buffs, wheels, etc. Held to shaft by 1 set screw. Length 3" to 4". Choose right or left hand threads. Ship wt 6 ozs.



For Shaft Diameter	L/H Thread	R/H Thread	Price
1/4"	154-TSL1	154-TSR2	9.50
5/16"	154-TSL7	154-TSR8	9.50
3/8"	154-TSL3	154-TSR4	9.50
1/2"	154-TSL5	154-TSR6	9.50
5/8"	154-TSL9	154-TSR10	10.00

MUSLIN BUFFS These miniature buffs are used for final buffing and polishing on soft and precious metals. 160-BF-1030 buffs are chemically treated to hold polishing compound better. Use 103-M01 or 103-M06 mandrel. Package of 3.

Order #	Dia.	Stitching	Ply	Treated	Price/pkg
200-MGTI-OW	1"	2 Rows	16	No	4.00
160-BF-1030	1"	2 Rows	10	Yes	4.00

CHAMOIS WHEEL BUFF (Not shown) These fine, soft buffs have a shellac hardened pin hole center. For use with rouge for final coloring of gold. Use 1" with 103-M01 or 103-M06 mandrel. Use 2" buff on tapered spindle.

Order#	Dia.	Stitching	Ply	Ship Wt.	Price/Ea
200-CHM-1	1"	1	5	3 oz	4.25
200-CHM-2	2"	3	10	2 oz.	8.50

SOLID FELT WHEELS Good for polishing or lapping metal and stones. Made of highest grade wool felt compressed for uniform texture, hardness and shape. 3 per package except 200-BUF-10 comes in package of 10. Use M01 or M06 mandrel.

Order #	Dia.	Thickness	Hardness	Price/pkg
160-BF-985	1"	1/8"	Hard	2.25
160-BF-980	5/8"	1/8"	Hard	.65
160-BF-975	1/2"	1/8"	Hard	.65
200-BUF-10	1"	1/4"	Soft	2.50

KNIFE EDGE WHEELS For use in crevices and other hard-to-reach places. Unmounted. 3 per package.

Order #	Dia.	Hardness	Use Mandrel	Price/pkg
160-BF-1001	1/2"	H	M01	2.75
160-BF-815	1"	H	M06	4.25



24 PIECE ASSORTED FELT BOBS Molded felt bobs in shapes similar to those shown. Shapes come in different sizes, and in medium, hard and rock hard. For use on hard and soft metals and stone. Use with polishing compounds. Mounted on 1/8" shanks.

103-FK3 Shp. Wt 1 lb. 41.00

FORMED FELT BOBS Made of high quality felt. These formed bobs come in a variety of shapes for difficult polishing jobs. Mounted. Mandrel shank is 3/32". 3 per package.

Order #	Shape	Hardness	Mounted	Price/pkg
160-BF-1070	Bud	H	Yes	5.60
160-BF-1075	Round	H	Yes	5.60
160-BF-1080	Pointed	H	Yes	5.60
160-BF-1090	Cylinder	H	Yes	5.60

WHEEL BUFFS

These buffing wheels come in a variety of materials for different applications.

Bufs come with standard pin hole type center to fit tapered spindles, except for numbers 7 and 8 which have a 1" bore.

1. COARSE MUSLIN - Shellac centers, use with adhesive compounds such as Tripoli for removing scratches.

Order #	Dia.	Stitching	Ply	Shp. Wt.	Price
200-CM4X42	4"	3 Rows	40	2 oz.	3.50
200-CM6X50	6"	4 Rows	50	5 oz.	7.90

2. FINE MUSLIN - Leather centers, use with any rouge compound for a bright finish.

Order #	Dia.	Stitching	Ply	Shp. Wt.	Price
200-FM4X50	4"	3 Rows	50	2 oz.	4.10
200-FM6X60	6"	4 Rows	60	6 oz.	10.20

3. MUSLIN, YELLOW TREATED - Chemically treated for use with abrasive compounds for cut down. 4" shellac center, 6" leather center.

Order #	Dia.	Stitching	Ply	Shp. Wt.	Price
200-YL4X40	4"	3 Rows	40	2 oz.	4.50
200-YL6X20	6"	4 Rows	20	4 oz.	2.50
200-YL6X50	6"	4 Rows	50	6 oz.	8.95

4. COTTON FLANNEL - Soft flannel with shellac centers, use with rouge for final polish.

Order #	Dia.	Stitching	Ply	Shp. Wt.	Price
200-FL4X30	4"	3 Rows	30	2 oz.	5.65
200-FL6X30	6"	4 Rows	30	5 oz.	8.35
200-FL8X30	8"	4 Rows	30	10 oz.	11.50

5. LOOSE PLY MUSLIN - Has no stitching, lead center. Use for final polish with rouge. The 4" buff is made of COARSE muslin, and the 6" buff is FINE muslin.

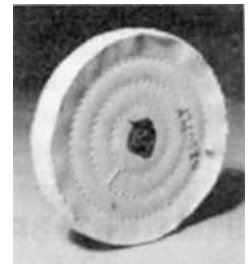
Order #	Dia.	Stitching	Ply	Shp. Wt.	Price
200-LC4X36	COARSE 4"	None	36	4 oz.	5.30
200-LC6X54	FINE 6"	None	54	8 oz.	10.50

6. RAZOR EDGE - Muslin, yellow treated, leather center. For use with abrasive or rouge in hard-to-reach areas.

Order #	Dia.	Stitching	Ply	Shp. Wt.	Price
200-RE4X12	4"	4 Rows	12	2 oz.	4.30
200-RE6X12	6"	8 Rows	12	3 oz.	5.35



1.



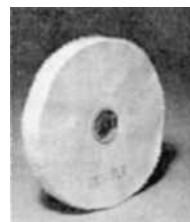
2.



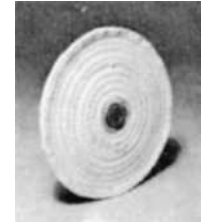
3.



4.



5.



6.



7.



8.

7. SOLID FELT WHEELS

Now in those hard-to-find larger sizes and all three hardnesses. Bufs are made of high grade wool felt compressed for uniform texture and hardness. For polishing and lapping metal and stones. Can be charged with polishing compounds. Wheels are bored to 1", and may be pushed to fit 3/4", 5/8", and 1/2" arbors.

Order #	Size	Hardness	Shp Wt	Price
148-615-H	6 x 1 1/2"	Hard	1 lb.	58.72
148-615-M	6 x 1 1/2"	Medium	1 lb.	50.14
148-615-S	6 x 1 1/2"	Soft	1 lb.	43.26
148-815-H	8 x 1 1/2"	Hard	2 lbs.	110.06
148-815-M	8 x 1 1/2"	Medium	2 lbs.	94.08
148-815-S	8 x 1 1/2"	Soft	2 lbs.	80.94

8. MUSLIN AND FLANNEL BUFFS FOR GEM-MAKERS All six have 1" center holes that can be adapted to 3/4", 5/8" or 1/2".

Order #	Fits Machine	Type	Dia.	Stitching	Ply	Shp. Wt.	Price
100-JPK3	Pixie	Muslin	4"	2 Rows	40	2 oz.	4.25
100-JPK4	Pixie	Flannel	4"	2 Rows	30	2 oz.	6.55
100-JPK1	Genie	Muslin	6"	3 Rows	60	5 oz.	9.25
100-JPK2	Genie	Flannel	6"	3 Rows	30	5 oz.	9.10
100-JPK5	Titan	Muslin	8"	4 Rows	55	10 oz.	10.25
100-JPK6	Titan	Flannel	8"	3 Rows	30	10 oz.	12.25

POLISHING PADS



All pads below have a rigid plastic back plate with 1/4"-20 thread bolt that will fit the Pixie, Genie, Titan, and other machines designed for such attachments.

Felt pads approx. 1/2" thick, medium hard. Use with most polishing compounds. Ship. Wt. 8 oz. ea.

Canvas pads can be used with diamond compound, or with other polishes. Leather pads come either smooth or rough side up. Both canvas and leather pads have a foam rubber backing so they will conform to the shape of your stone. Shipping Weight: 5 ozs.

Type	4 Inch		5 1/2 Inch	
	Order #	Price	Order #	Price
Canvas, untreated	100-PAD-4CU	8.15	100-PAD-5CU	11.05
Leather, rough	100-PAD-4LR	9.20	100-PAD-5LR	12.10
Leather, smooth	100-PAD-4LS	9.20	100-PAD-5LS	12.10
Felt	100-PAD-4F	17.70	100-PAD-5F	23.70

FELT DISCS

These discs are graded grey felt (85% wool) with high tensile strength and excellent resistance to wear. Discs with magnetic rubber backing can be used on metal back plates and laps. Plain discs can be glued to back plates or used in other applications. Polishing compounds will adhere well to the surface.

Diameter	Unbacked			Magnetic		
	Order #	Price	Shp Wt	Order #	Price	Shp Wt
4"	100-PAD-U-04F	8.15	2 oz.	-	-	-
6"	100-PAD-U-06F	15.15	7 oz.	-	-	-
8"	100-PAD-U-08F	30.55	12 oz.	100-PAD-M-08F	32.35	1 lb.
12"	100-PAD-U-12F	59.85	1 lb.	100-PAD-M-12F	68.10	2 lbs.
18"	100-PAD-U-18F	134.65	4 lbs.	100-PAD-M-18F	161.70	5 lbs.

POLISHING DISCS

Genuine leather and quality foam rubber discs. Make your own polishing pads or use on regular polishing heads. Rubber is 1/4" thick. Shp. Wt. each, 5 ozs.

Dia.	Leather		Foam Rubber	
	Order #	Price	Order #	Price
6"	101-82-110026	5.25	101-82-106526	3.50
8"	101-82-110028	10.50	101-82-106534	5.00
10"	101-82-110020	16.30	101-82-106542	7.35

LEATHER SQUARE KIT

Use these squares of leather to cover your polishing discs. Leather can be cut to fit. Use piece of strong wire contained in kit to fasten leather to your disc. Charge with any polishing compound. Leather can be used rough or smooth side. Shp. Wt. 12 ozs. each.

703-82-122283 8" sq. fits 6" disc 16.15
 703-82-122291 10" sq. fits 8" disc 19.85
 703-82-122309 12" sq. fits 10" disc 23.85

SAFETY GOGGLES

Safety goggles provide limited protection from light to moderate impact hazards such as metal, stone or wood chips, small flying particle and sparks. Have rigid clear faceplate and soft plastic sides for comfort. Can be worn over normal size glasses.

101-GOGGLE 6 oz. 3.60

POLISHING WHEELS

See pages 74 & 75 for standard and miniature polishing wheels.



POLISHING CLOTHS



DELUXE ROUGE CLOTH

Individually packaged, these cloths are actually a double cloth, one impregnated with rouge, the other without rouge to keep hands clean. Use for final polishing. Size 10" x 10½".

150-POL-169 2 oz. 4.55

BRILLIANT POLISHING CLOTH

This polishing cloth is treated with a specially developed chemical agent which cuts through tarnish better than other cloths. No residue is left behind to dull shine. You get your brass, chrome, copper, silver and gold brilliant without getting any messy rouge on your hands. Size: 12" by 8".

150-POL-705 2 oz. 3.95

DOUBLE BRILLIANT POLISHING CLOTH

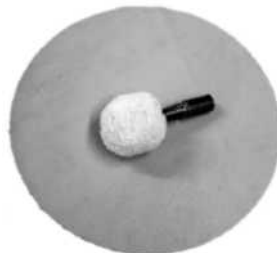
This double cloth is chemically treated for a super shine on one side and natural on the other for final polishing. Cleans and polishes all precious metals with little effort for a brilliant and lasting shine. 100% cotton. Size: 7.5" by 12".

150-POL-170 2 oz. 4.55

BUFFS FOR BRACELETS



Round Buff on Left, cylinder on right



Round buff shown on tapered spindle

BRACELET OR GOBLET BUFFS

Just the thing for polishing the inside of bracelets, glass goblets and similar shapes, even tubing and pipes. Use the entire buff surface instead of just the edge. Made of 100% soft cotton, hand sewn with shellacked centers. Have pin hole for attaching to a tapered spindle. Apply the polishing compound of your choice.

The round buff is approximately 1½" x 1½" with a domed polishing surface. The cylinder buff is approximately 2" dia. with a 2" long polishing surface.

200-GBR015... Round Shp. Wt. 6 ozs. 10.80
 200-GBR020... Cylinder Shp. Wt. 6 ozs. 14.20

EXTENDERS, LUBRICANTS



GEM-LUBE

Use this silicone extender fluid with diamond compound on canvas and leather polishing pads, phenolic laps, etc. Provides a lubricant to the polishing surface to keep your gemstone cool and the rock dust in a fluid form that is easily wiped away. Gem Lube cannot be shipped via air. Use Microsol.

410-LUBE 2½ oz can ... 6 ozs. Shp.Wt. 7.60

410-LUBE-C ... Case of 24 7 lbs. Shp.Wt. 164.00

MICROSOL

Silicone based extender fluid. Use about one drop per six drops diamond compound to help spread compound over pad or lap. Makes compound a little more fluid and easy to spread.

106-1112 1 oz vial 2 ozs. Shp. Wt. 4.00

VIBRA-DRY EXTENDER

This specially formulated extender compound relubricates standard Vibra-Dry abrasives and extends their life so that they can be re-used longer. NOTE: Cannot be shipped by air or overseas.

420-100299 4 oz. 7.95

420-100499 16 oz. 28.50



WATER AID WETTING AGENT

Water Aid is a concentrated wetting agent. It increases cutting action of sawing, grinding, and sanding/polishing operations using water by eliminating surface tension and preventing hydroplaning. It's biodegradable and normally harmless to skin. Approx. 6 drops per pint is all that's needed.

410-WA-108 ... 8 oz. bottle 11 oz 3.00

410-WA-116 ... 16 oz. bottle 1½ lbs 4.95

410-WA-110 ... 1 gal 9 lbs 26.00

Gemstone carving offers the ultimate challenge and reward in lapidary art. Carving a stone, from a small opal to a six foot piece of marble, challenges the creative mind to see the material's best potential and bring the vision to reality.

On pages 74 through 83 we show some of the basic tools for gemstone carving. See page 13 for Convex Carvers. More tools can be found elsewhere throughout the catalog. See page 26 for the multi-flex machine.



NOVA MINIATURE SANDING AND POLISHING POINTS

Carvers find these miniature Nova sanding and polishing points answer many of their carving problems. You get the speed and high performance of our Nova resin-bond diamond formulas in shapes and sizes for use on your carvings

in the sanding and polishing processes. Mandrel size is 3/32" which fits most Foredom and Dremel power tools. Illustrations show approximate shape and size. Weight each or set: 2 oz. **Nova points must be used with water.**

SAFETY FIRST WEAR YOUR GOGGLES		N1M		N1L		N2M		N2L	
Grit Size	Color	Order #	Price	Order #	Price	Order #	Price	Order #	Price
60	GREEN	100-N1M-70	7.50	100-N1L-70	8.00	100-N2M-70	7.50	100-N2L-70	8.00
140	RUST	100-N1M-15	7.50	100-N1L-15	8.00	100-N2M-15	7.50	100-N2L-15	8.00
280	BLACK	100-N1M-28	7.50	100-N1L-28	8.00	100-N2M-28	7.50	100-N2L-28	8.00
600	BROWN	100-N1M-60	7.50	100-N1L-60	8.00	100-N2M-60	7.50	100-N2L-60	8.00
1200	GREY	100-N1M-12	7.50	100-N1L-12	8.00	100-N2M-12	7.50	100-N2L-12	8.00
3000	ROSE	100-N1M-30	7.50	100-N1L-30	8.00	100-N2M-30	7.50	100-N2L-30	8.00
8000	TAN	100-N1M-80	7.50	100-N1L-80	8.00	100-N2M-80	7.50	100-N2L-80	8.00
14000	CREAM	100-N1M-14	7.50	100-N1L-14	8.00	100-N2M-14	7.50	100-N2L-14	8.00
50,000	LT BLUE	100-N1M-50	7.50	100-N1L-50	8.00	100-N2M-50	7.50	100-N2L-50	8.00
Set of four 280, 600,1200,3000		100-N1M-S	27.00	100-N1L-S	28.80	100-N2M-S	27.00	100-N2L-S	28.80

MINI-NOVAS FOR SANDING AND POLISHING

MINI-NOVAS FOR SANDING AND POLISHING THOSE "HARD-TO-GET-AT" PLACES.



Use with power handtools. Flexible, resin-bond diamond sanding and polishing wheels that come in three thicknesses, three diameters, and four grit sizes. The most flexible wheels have diamond on one side of a single layer of canvas. The thickest wheels (about 1/8") are made of two layers of canvas with diamond between them and on

each side. All wheels have a 1/16" arbor hole to fit Dremel and Foredom tools. They can be easily drilled out to fit a larger arbor size. Use with mandrels M1 or M6. (See page 72). Mini-Novas should be used with water. Sets contain one 280, 600, 1200 and 14,000 grit wheels. Wt. 2 oz set.

Wheel Size		Set of four 280, 600,1200,14000	
Diameter	No. of Layers	Order #	Price
1/2"	1	100-2Q1-S	4.95
1/2"	2	100-2Q2-S	7.95
1/2"	3	100-2Q3-S	11.90
3/4"	1	100-3Q1-S	9.90
3/4"	2	100-3Q2-S	15.85
3/4"	3	100-3Q3-S	23.75
1"	1	100-4Q1-S	14.85
1"	2	100-4Q2-S	23.75
1"	3	100-4Q3-S	35.65

LASCO DIAMOND CARVING BURS

Lasco's diamond tools give you a choice in grit sizes, from 40 grit for roughing out to 600 grit for pre-polish finish. The Lasco-bond process assures a uniform diamond surface that won't peel or pull out. The Lasco tools hold a cutting area without skipping, binding or jumping. You'll enjoy fast, vibration free, self cleaning reduction. Made in USA of natural diamond. Shown approx. size. Ship wt. 2 oz. Order from charts below.

All 1/8" Shanks



Price	\$10.00 ea.	\$10.00 ea.	\$9.00 ea.	\$11.00 ea.
40 Grit	173-CL95-040	173-CLR95-040	173-B60-040	173-B100-040
80 Grit	173-CL95-080	173-CLR95-080	173-B60-080	173-B100-080
150 Grit	173-CL95-150	173-CLR95-150	173-B60-150	173-B100-150
200 Grit	173-CL95-200	173-CLR95-200	173-B60-200	173-B100-200
400 Grit	173-CL95-400	173-CLR95-400	173-B60-400	173-B100-400
600 Grit	173-CL95-600	173-CLR95-600	173-B60-600	173-B100-600

All 3/32" Shanks



Price	\$10.50 ea.	\$9.50 ea.	\$9.00 ea.	\$10.50 ea.
40 Grit	173-BW6-040	173-BW7-040	173-CLR85-040	173-F100-040
80 Grit	173-BW6-080	173-BW7-080	173-CLR85-080	173-F100-080
200 Grit	173-BW6-200	173-BW7-200	173-CLR85-200	173-F100-200
600 Grit	173-BW6-600	173-BW7-600	173-CLR85-600	173-F100-600

All 3/32" Shanks



Price	\$6.95 ea.	\$6.95 ea.	\$7.75 ea.	\$6.95 ea.
80 Grit	173-K2-080	173-W22-080	173-BW4-080	173-BW1-080
200 Grit	173-K2-200	173-W22-200	173-BW4-200	173-BW1-200
600 Grit	173-K2-600	173-W22-600	173-BW4-600	173-BW1-600

All 3/32" Shanks



Price	\$6.95 ea.	\$6.95 ea.	\$6.95 ea.	\$6.95 ea.
80 Grit	173-CL1-080	173-TR44-080	173-T44-080	173-T22-080
200 Grit	173-CL1-200	173-TR44-200	173-T44-200	173-T22-200
600 Grit	173-CL1-600	173-TR44-600	173-T44-600	173-T22-600

All 3/32" Shanks



Price	\$6.95 ea.	\$6.95 ea.	\$6.95 ea.	\$6.95 ea.
80 Grit	173-EL44-080	173-CC22-080	173-P22-080	173-CLR1-080
200 Grit	173-EL44-200	173-CC22-200	173-P22-200	173-CLR1-200
600 Grit	173-EL44-600	173-CC22-600	173-P22-600	173-CLR1-600

All 3/32" Shanks

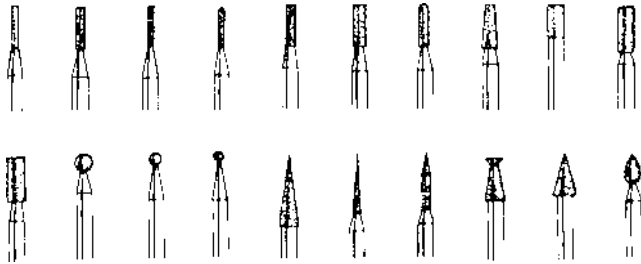


Price	\$6.95 ea.	\$7.75 ea.	\$6.95 ea.	\$6.95 ea.
80 Grit	173-SG2-080	173-B50-080	173-B40-080	173-B20-080
200 Grit	173-SG2-200	173-B50-200	173-B40-200	173-B20-200
600 Grit	173-SG2-600	173-B50-600	173-B40-600	173-B20-600

DIAMOND CARVING POINTS













Now you can have a wide variety of diamond points at a reasonable price. These points are nickel plated and with proper care will give lasting service. Twenty piece set comes with 3/32" diameter shanks. Kit contains one each of the point types shown below. Illustrations show approximate shape and size. Use with water. Imported.

170-24-08093A 20 piece set 10 oz 9.80

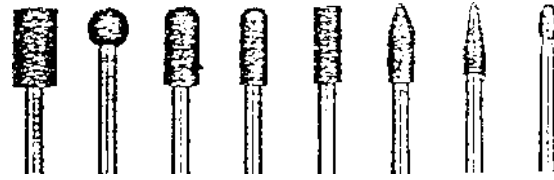


PHENOL POINTS & WHEELS

You can finish extremely hard stone with Phenol Points, especially fire agate free-forms and jade carvings. Tools must be charged with diamond compound. The more the tool is used, the more the diamond becomes embedded in the point. Use any grit combination, but 325, 1200 and 50,000 will do a good job in most cases. Use a separate tool for each grit. Avoid contamination. Use Gem Lube or Microsol (pg 77) as lubricant, not water. Tools are most effective using a flex-shaft machine at 500 RPM. Illustrations are approx. size. Shank 1/8" dia, Approx 1 3/8" long. Ship wt. 2 oz. ORDER TOOLS BY NUMBERS SHOWN. Price ea. \$6.50

<p>149-10</p>  <p>5/16"</p>	<p>149-11</p>  <p>5/16"</p>	<p>149-12</p>  <p>1/4"</p>
<p>149-13</p>  <p>3/8"</p>	<p>149-14</p>  <p>1/2"</p>	<p>149-15</p>  <p>3/4"</p>
<p>149-16</p>  <p>3/8"</p>	<p>149-17</p>  <p>1/2"</p>	<p>149-18</p>  <p>3/4"</p>
<p>149-19</p>  <p>3/8"</p>	<p>149-20</p>  <p>1/2"</p>	<p>149-21</p>  <p>3/4"</p>

JUMBO HEAD DIAMOND POINT SET



Use these jumbo sized diamond points on stone, ceramics, carbides & wood. Points shown approximate shape and size. Shank size is 3/32". Set contains one each of the above eight shapes. Use with water. Imported. Standard 150 grit.

170-24-08094 8 piece set 6 oz 11.90

LASCO DIAMOND CARVING TOOLS

Lasco's diamond tools give you a choice in grit sizes, from 40 grit for roughing out to 600 grit for pre-polish finish. The Lasco-bond process assures a uniform diamond surface that won't peel or pull out. The Lasco tools hold a cutting area without skipping, binding or jumping. You'll enjoy fast, vibration free, self cleaning reduction. Made in USA of natural diamond. Shank size of tools 1/8". Shown approx. size. Ship wt. 2 oz. Order from charts below.



DOMES WHEELS

Price	\$28.00 each	\$28.00 each
40 Grit	173-DOM-040	173-WHL-040
80 Grit	173-DOM-080	173-WHL-080
150 Grit	173-DOM-150	173-WHL-150
200 Grit	173-DOM-200	173-WHL-200
400 Grit	173-DOM-400	173-WHL-400
600 Grit	173-DOM-600	173-WHL-600

SAFETY
FIRST
WEAR YOUR
GOOGLES

DIAMOND DISC SET



Great for slicing and cutting stone while carving. Six piece set contains five 3/4" discs with diamond plated on both sides and a 1/8" shank mandrel. Diamond is 120 grit. Use with water. Imported.

170-24-50000 8 oz 15.90

NEW DUMONT® SINTERED DIAMOND POINTS

Dumont® Sintered diamond tools are made of diamond crystals molded into a metallic binder under extreme heat and pressure to produce a tool of extremely long life as new diamonds are exposed in use. Despite a unit cost higher than plated

diamonds or abrasive stones, sintered diamond tools actually represent the most economical choice in most applications. They will last 5 to 10 times longer than plated diamonds which only have one or two layers of diamond, and up to 100 times longer than most other abrasive points. These tools can be "re-sharpened" when necessary by SLOWLY turning it (4,000 rpm/15 sec) against a wet dressing stone to expose new diamond particles.

NOTE: All tools have 3/32" shanks. Shown less than full size. Rated at 25,000 RPM max. Shp. Wt. 2 Oz. each.

A. Head Dia. in mm B. Head Length in mm					
Order #	103-0712	103-0714	103-0734	103-0736	103-0732
Price	25.00	25.00	25.00	30.00	35.00
A	3.1	3.7	1.8	3.1	4.7
B	3.1	3.7	6.5	9.0	3.5

A. Head Dia. in mm B. Head Length in mm					
Order #	103-0754	103-0756	103-0758	103-0761	103-0742
Price	30.00	30.00	25.00	30.00	25.00
A	3.7	3.1	2.7	3.7	1.6
B	10.0	12.0	8.5	10.0	6.5

A. Head Dia. in mm B. Head Length in mm					
Order #	103-0763	103-0765	103-0768	103-0782	103-0753
Price	25.00	30.00	30.00	35.00	30.00
A	2.1	3.7	3.1	5.0	3.1
B	7.0	10.0	12.0	13.0	9.0

A. Head Dia. in mm B. Head Length in mm					
Order #	103-0745	103-0746	103-0775	103-0021	103-0022
Price	30.00	35.00	35.00	45.00	45.00
A	3.7	5.0	5.0	.3	.5
B	10.0	13.0	13.0	-	-

DIAMOND CARVING WHEELS

These mini grinding wheels and discs have diamond nickel plated to the working surfaces of the tool, as shown in the illustrations below. They come in a variety of diameters and thicknesses to help solve your carving problems. All tools are 80 grit. Use with water. Imported.

GRINDING WHEEL

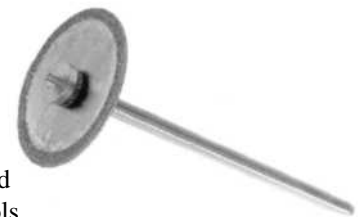
V-SHAPE DISC



MINI GRINDING WHEELS				
Order #	Diameter	Thickness	Arbor	Price
170-24-93701	3/4"	1/8"	1/8"	6.30
170-24-93702	3/4"	1/4"	1/8"	7.30

MINI V-SHAPE GRINDING DISC				
Order #	Diameter	Thickness	Arbor	Price
170-24-95710	3/4"	1/8"	1/8"	7.80
170-24-95720	3/4"	1/4"	1/8"	8.70

LAPCRAFT DIAMOND "SLITTER"



THIN diamond slicing discs that can be mandrel mounted for use with flexible shaft tools.

Comes in four different diameters. Use with water. The 1", 3/4" and 5/8" slitters have 1/16" arbor holes. The 2" has 1/8" arbor hole. Made in USA. Wt. 2 ozs. See page 72 for mandrels.

- 106-12150 ... 5/8" Requires M01 or M06 mandrel 14.00
- 106-12155 ... 3/4" Requires M01 or M06 mandrel 14.25
- 106-12160 ... 1" Requires M01 or M06 mandrel 15.00
- 106-12165 ... 2" Requires M02 or M14 mandrel 25.00

DIAMOND CORE DRILLS



LAPCRAFT CORE DRILLS are metal-bonded, high strength diamond drills designed for fast cutting and long life. The rigid steel shanks are plated and rust free. Use with water. Made in USA. Ship. Wt. 2 oz. each.

Order #	Outside Drill Dia.	Shank	Price
106-2200	1/8"	3/32"	20.00
106-2201	3 1/2 mm	1/8"	20.00
106-2202	1/4"	5/32"	30.00
106-2203	5/16"	5/32"	31.00
106-2204	3/8"	1/4"	33.00
106-2205A	10 mm	1/4"	35.00
106-2205	7/16"	1/4"	35.00
106-2206	1/2"	1/4"	38.00
106-2207	9/16"	1/4"	40.00
106-2208	5/8"	3/8"	42.00
106-2210	3/4"	3/8"	48.00
106-2212	7/8"	3/8"	55.00
106-2213	1"	3/8"	60.00
106-2214	1 1/16"	3/8"	65.00
106-2220	1 1/4"	3/8"	80.00
106-2240	1 1/2"	3/8"	82.00

CLOCK FACE CORE DRILL packs come three drills per pack in either 3/8" OD, 7/16" or 10mm. Ship. Wt. 3 oz.

Order #	Description	Price
106-2205A-3	10 mm 3-pack for Clocks	87.25
106-2204-3	3/8" 3-pack for Clocks	87.25
106-2205-3	7/16" 3-pack for Clocks	87.25

NOTE: USE WATER AS A LUBRICANT WITH ALL THESE DIAMOND DRILLS AND OTHER DIAMOND TOOLS.



STANDARD DIAMOND DRILLS

MICROMITE DIAMOND DRILLS from Lapcraft are outstanding performers and the choice of professionals. The mandrels are made of durable steel and are plated with rapid cutting man-made diamond. As a result, you get a drill that gives you low cost per hole drilled. Use with water. Speed 5000-20,000 R.P.M. Made in USA. Ship. Wt. 2 oz.

Size MM	Size Inches	Each		Package of 6	
		Order #	Price	Order #	Price
3/4	.030	106-2001	4.00	106-2001-6	22.00
1	.040	106-2002	4.00	106-2002-6	22.00
1 1/4	.050	106-2003	4.00	106-2003-6	22.00
1 1/2	.060	106-2004	4.00	106-2004-6	22.00
1 3/4	.070	106-2005	4.00	106-2005-6	22.00
2	.080	106-2006	4.50	106-2006-6	23.00
2 1/4	.090	106-2007	4.50	106-2007-6	23.00
2 1/2	.100	106-2008	5.00	106-2008-6	24.00
3	.120	106-2009	5.50	106-2009-6	28.00
3 1/2	.140	106-2010	6.00	106-2010-6	30.00
4	.160	106-2011	6.50	106-2011-6	35.00

LAPCRAFT DRILL SETS

MICROMITE ASSORTED DRILL SETS save you money and give you variety as well. Ship. Wt. 3 oz. per set.

Order #	Description	Price
106-2000-3	Three-pak contains one ea: 1mm, 1 1/4 mm, 1 1/2 mm.	12.00
106-2000-6	Six pak contains one ea: 3/4 mm, 1mm, 1 1/4 mm, 1 1/2 mm, 2mm, 2 1/2 mm.	25.00
106-2000-11	Eleven pak contains one ea. of all standard sizes from 3/4 mm to 4mm	50.00



DIAMOND TWIST DRILLS

Use these electroplated, diamond twist drills on stone, ceramics, glass, carbide and other hard non-metallic materials. All drills have 3/32" shanks and are plated with medium-fine diamond grit. Use with all standard handpieces. Use water as a lubricant. Imported. Shp. Wt. 2 oz. each. Set 1 lb.

Order #	Size	Price
150-DIB-210.70	1.00 mm	6.00
150-DIB-210.90	1.30 mm	6.00
150-DIB-211.00	1.40 mm	6.00
150-DIB-211.20	1.60 mm	6.00
150-DIB-211.40	1.80 mm	6.00
150-DIB-211.60	2.10 mm	6.00
150-DIB-210.00	SET OF SIX	35.10

WET GRINDER KIT

This Barranca wet stone grinder is the solution for grinding and polishing surfaces on large stone specimens.

The Barranca Wet Stone Grinder will achieve a high quality finish on almost all stone surfaces—flat, contoured, curved and even convex areas. The machine uses a diamond metal-bond cup for grinding, and a series of resin bond diamond sanding and polishing pads that attach with hook and loop to the backer pad. A central water feed keeps the polishing pads and stone wet. It's a messy process—should be done outdoors, but you'll finally be able to polish surfaces on those petrified wood stumps in your yard or other large specimens.

This wet grinder has a powerful, variable speed motor that operates on standard house current (110V 60Hz). Export version operates 220V 50/60 Hz. Comes with Ground Fault Circuit Interrupter for safety. Lightweight water attachment has adjustable valve that provides water to the pads. Spindle lock makes it easy to change backer pads.

WET GRINDER KIT

Includes variable speed motor, GFCI, water attachment, set of ten 4" diamond discs, (grit sizes 30, 50, 120, 220, 400, 800, 1800, 3500, 8500, and 13,000) 4" felt buff pad, 4" rubber backer pad, 4" coarse (40/50 grit) wet grinding turbo wheel, 4" fine (120/140) flat dry grinding wheel, wrenches and carrying case. EXPORT KIT SPECIAL ORDER.

260-381504 115V Kit 14 lbs. 650.00
 260-381504-EX 220V Export ... 14 lbs. 650.00



Barranca Wet Polishing Kit

DRY GRINDING WHEEL (A)
 Continuous rim for dry grinding. Fine grit (120/140).
 262-380402 4" 1 lb. 148.00

WET GRINDING TURBO WHEELS (B)
 Use with water.
 262-364016 Coarse. 40/50 4" 1 lb. 114.00
 262-364011 Medium .. 60/80 4" 1 lb. 114.00
 262-364009 Fine. 80/120 .. 4" 1 lb. 114.00

HOOK AND LOOP BACKER PADS (C)
 For use with diamond discs and felt wheels below. Flexible rubber pads are used for contoured surfaces; rigid pads for straight edges and flat surfaces. 4,000 RPM maximum speed. Thread size 5/8" -11.

262-370040 .. Flex rubber pad 1 lb. 18.00
 262-370041 .. Rigid pad 1 lb. 18.00

FELT BUFFING PADS (D)
 Have hook and loop backing for attaching to backer pad.
 262-377004 4" 8 oz 11.00

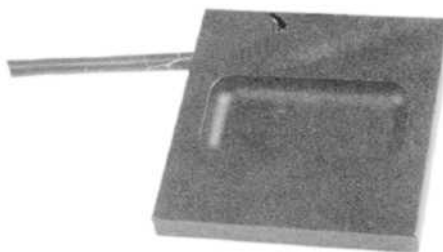
POLISHING PADS FOR WET GRINDER

These diamond polishing pads are designed to produce a high quality finish on almost any shaped surface—flat, contoured, convex or curved. Stone surface must usually be prepared first with grinding cup. Center hole permits water lubrication during polishing operations. Hook and loop backing allows for quick pad changes and grit identification. Pad diameter: 4". Use with backer pads listed above. Shp Wt. 8 oz. each.

Grit	Finish	Order #	Price
30	Extra Coarse	262-374030	40.00
50	Extra Coarse	262-374050	40.00
120	Coarse	262-374120	40.00
220	Medium Coarse	262-374220	40.00
400	Honed Smooth	262-374400	40.00
800	Fine	262-374800	40.00
1800	Very Fine	262-374180	40.00
3500	Extra Fine	262-374350	40.00
8500	Super Fine	262-374850	40.00
13,000	Super Fine	262-374130	40.00



147-DOP POT



115-31-098 DOP POT



ALCOHOL LAMP

ELECTRIC DOP POT. Comes complete with removable copper pan that can also be used as a pickling pan for silversmithing. In 15 to 20 minutes after starting, the dop wax will reach proper temperature and maintain that temperature as long as pot is in operation. (Does not work with black dop wax.) Spare copper pan available.

147-DOP Complete 1 lb. 54.00
 147-PAN Pan only 6 oz. 11.00

ELECTRIC DOP POT. Simple, easy to use design. About 4 x 4 x 1/2" thick with attached cord. Use top surface of plate for heating stones. Warm-up time varies from 12 to 35 minutes depending on type of wax. (Does not work with black dop wax.)
 115-31-098 110V/60Hz 2 lbs. 49.95

ALCOHOL LAMP. For heating wax carvers and spatulas and melting various waxes. Has 3/16" wick and burns denatured alcohol. Faceted body sets at convenient angles for dopping. Wick adjusts with thumb wheel. Replacement wicks come in packages of 2.

150-LMP-422.00 Lamp 9 oz. 6.95
 150-LMP-422.10 Wicks 1 oz. 1.35

BLACK DOP WAX. Use with hot dops above. Softens at 170°. Gives excellent adhesion for faceter. Four 5/8" x 10" 1/4 lb sticks per pkg.

200-DOP-BL 1 1/2 lb. 13.75

DIAMOND DOP. High performance tenacious wax used by diamond cutters. Resists flow under pressure. Often holds stones for pre-forming when other waxes fail. Price per stick.

115-32-005. 2 oz. 8.75

FACET WAX. Brown wax with high adhesive, high shellac content. Preferred by many facetors. Softens at 145°. Four 3/8" x 4" sticks per pack.

115-32-004 12 oz 6.75

GREEN DOP WAX. The standard utility wax for general lapidary work. Provides good adhesion. Use with hot dops above. Softens at 150°. Four 5/8" x 10" 1/4 lb sticks per 1 lb pkg.

200-DOP-GR 1 1/2 lb. 13.55

WOODEN DOP STICKS. Easy to use, inexpensive. You can dop many stones at one time. Assorted diameters from 1/4" to 5/8". About 4" long. Pkg. of ten.

721-70-1001 6 oz. 4.00



DOP WAX

WOODEN DOP STICKS



OPTICON Seals and cements fractures in flat or curved, polished or unpolished stone. Eliminates fracture reflection and structural weakness and in addition accomplishes the filling of pits. Opticon 224 resin is amber clear and when heated to a low viscosity has the property of high penetration of fractures, much like glycerine or oil. 9 oz. Shipped via UPS ground only in USA.
 133-224 1 lb. 21.50

MEASURING CUPS Use these disposable plastic cups for mixing epoxy and resin. Graduated 1 oz. cup makes mixing easy. Translucent, flexible polypropylene. Cups come in packages of 10 and 25.

200-MC-610 10/pkg 1 oz. 75
 200-MC-625 25/pkg 2 oz. 1.25

WARNING:
GLUES CONTAIN TOXIC MATERIALS. READ DIRECTIONS ON LABELS BEFORE USING AND FOLLOW ALL INSTRUCTIONS.



SHIPPING NOTICE
 All items on this page and the Opticon filler on page 84 can only be shipped via UPS Ground Service within the Continental States. No air or overseas shipments due to Federal regulations. Sorry.



SUPER SOLVENT

SUPER SOLVENT For cyanoacrylate glues. Use to clean up excess glue or break an existing bond. Can normally be used on hands, most fabrics and surfaces, but solvent should be tested on a small area first. Should not be used on lacquer, butyrate or nitrate based finishes.
 129-US-1 2 oz. 5.98

INSTANT CYANOACRYLATE GLUES
 Select the cyanoacrylate glue that fits your needs. All are "instant" bonding, dry clear and can be buffed to a high polish, have incredible bonding strength and can be used on almost any type of material. Keep unopened bottles in freezer at 32° or below for extended life. Store used bottles at room temperature.



330 EPOXY Water clear. Sets in about 1 hr. at room temp. Made specifically for bonding gem materials to metal findings. Also used for invisible bonding of glass, china, ceramics, stone, metals and other non-porous materials. 1 fl. oz. per set. Case contains 24 sets.
 133-330 2 oz. 4.25
 133-330-C ... Case 3 lbs. 92.00

"SPECIAL" T (Green Label) Sets in 20-50 seconds depending on material. Thicker consistency and greatest gap filling ability.
 129-SPT4 2 oz. 10.95

"SUPER T" (Yellow Label) Sets in 10-25 seconds. Thick like syrup to fill small gaps between parts that don't fit perfectly.
 129-ST1 1/2 oz. 3.60
 129-ST4 2 oz. 9.95
 129-ST1-C .. Case of 12 ... 1 lb. 41.00

220 EPOXY Amber clear, sets in approx. 12 hrs at room temp. Use same as 330 above. Has great adhesive strength. 1 fl. oz. per set. Case contains 24 sets.
 133-220 2 oz. 4.25
 133-220-C...Case of 24 ... 3 lbs. 92.00

NCF AEROSOL ACCELERATOR



NEW NCF AEROSOL ACCELERATOR
 Use with cyanoacrylate glues to speed curing time on difficult-to-bond materials or under adverse conditions. Contains special ingredients which clean bonding surfaces and start curing at even lower temperatures. **CONTAINS NO CHLOROFLUOROCARBONS.**
 129-NCF-A 6 oz. 11.95

"HOT STUFF" (Red Label). Normally sets in 3-10 seconds. Thin like water for exact fit or deep penetration.
 129-HS1 1/2 oz. 3.60
 129-HS4 2 oz. 9.95
 129-HS1-C.. Case of 12 ... 1 lb. 41.00

3M FEATHERING DISC ADHESIVES
 Use to bond sanding and buffing discs to back plates. Bonds instantly but allows discs to be peeled off backing after use. Works on rubber, plastic, metal backup pads. Comes in 5 oz. tube.
 140-08051 Tube 8 oz. 10.00



BEADING ADHESIVE HYPOCEMENT
 Known as "Watch Crystal Cement". Apply to knots and/or finished ends of bead strand to prevent knot from coming loose. Knot can then be covered with a bead or bead tip. Tube contains 1/3 fl. oz. with pinpoint tip for easy use.
 160-CE-411 2 oz. 5.00



THE ARI CRIMPER

Forms a smooth, unobtrusive crimp. No more unsightly sharp edged crimps formed by conventional flattening methods. Used with "French" crimp beads or crimp tubes up to 3mm in diameter, it forms a finished crimp whose diameter is less than 2mm—smaller than the crimp itself.

150-PLR-585 6 oz. 12.95

MICRO-CRIMPING PLIER

The Beadalon® micro-crimper creates a smooth, unobtrusive crimp and eliminates sharp edges which can result from using conventional methods. The lower position is for crimping and the upper position is used to round finished crimp. Fits the smallest crimps.

150-PLR-586 6 oz. 12.95

CRIMPER PLIERS



CRIMP BEADS finish off wire connections when beading. Use crimpers shown above. Bead is placed in lower groove of the tool with wires side by side. Make one firm compression. Then put crimp bead into upper position, turn 90° and make another firm compression. This rounds the crimp and creates the perfect crimp connection. Packages contain approx. 1.5 grams of beads. Wt. 1 oz. each pkg.

Order #	210-JBS-07	210-JBS-08	210-JBS-05	210-JBS-06	210-JBS-01	210-JBS-02	210-JBS-03	210-JBS-04
Price	2.00	2.00	2.50	2.50	4.00	4.00	2.50	2.50
Shape	Round	Round	Round	Round	Tube	Tube	Tube	Tube
Color	Silver	Gold	Silver	Gold	Silver	Gold	Silver	Gold
Crimp Size	1	1	2	2	1	1	2	2
Wire Size, Inches	.010-.019	.010-.019	.024	.024	.010-.019	.010-.019	.024	.024
Wire Size, mm	.25-.48	.25-.48	.60	.60	.25-.48	.25-.48	.60	.60
Use Crimper	Micro	Micro	Standard	Standard	Micro	Micro	Micro	Micro

JEWELRY FINDINGS KIT



TWEEZER SET



BEADING TWEEZERS



JEWELRY FINDINGS KIT

This kit contains an assortment of jewelry mountings especially for those just starting out making cabochons and needing something in which to mount their stones. Kit contains one belt buckle, two pendants, one bolo set: string, pair of tips, and bolo mounting. *Designs, colors, and sizes vary, but bolo mounting and tips will be the same color—gold or silver.* Mountings are gold or silver colored metal. *No choice in selections, but kit is priced below standard retail prices.*

104-JFK-1 8 oz. 15.50

ALL PURPOSE TWEEZER SET

Four popular styles cover your basic needs and give years of service. General purpose, medium point is suitable for beading. Curved-point with pin interlock keeps jaws from twisting when doing heavy work. Negative-lock has fine point for delicate jobs. Use the cross-lock with fiber-grip handles for soldering. Lengths vary from 4½" to 6½".

150-TWZ-700 Set 8 oz. 9.95

BEADING TWEEZERS

Designed with needle like points for knotting thread between beads. Stainless steel, needle like points, Length 5".

150-TWZ-735.1 2 oz. 2.25

Stainless steel, length 4¾".

150-TWZ-735.5 2 oz. 3.00

Bent tip knotting tweezers. Bent tips make it easier to see knotting process. Design may vary from illustration.

153-TW10 2 oz. 3.95

BASIC PLIERS FOR JEWELRY CRAFTS

The two basic beading pliers are chain nose and round nose. The pliers below are the best quality we could find at a reasonable price. They are approximately 4" to 5" long—the right size to fit in your hand. They feature PVC grips, double leaf springs, box-joint construction with a brush finish for good looks. You get a great value at this price.



CHAIN NOSE

ROUND NOSE



CHAIN NOSE PLIER For closing crimp beads, opening and closing jump rings, holding and forming wires, etc. Has smooth jaws with slightly beveled edges to avoid marring. Nose is tapered to a fine point.

150-PLR-490.00 6 oz. 5.95

ROUND NOSE PLIERS Smooth, round, tapered jaws for curving wires such as jump rings, loops, closing bead tips, etc.

150-PLR-490.10 6 oz. 5.95

MASTER COILER PLIER



The Master Coiler makes loops and coils consistently without nicking wire. These pliers allow you to hold the wire with the flat jaw while rotating the round jaw to form the perfect loop. Made of polished stainless steel jaws with a standard step-jaw.

152-PLR-747 6 oz. 13.00

SINGLE-END SLIDE PIN VISE Pin vise has knurled slide for easy one-hand operation. Capacity of 0 to 0.8mm. Length is 4 1/2".

150-PIN-221 6 oz. 4.65

DOUBLE END PIN VISE A different size steel collet mounted at each end of hollow handle makes this a highly versatile tool. Use to hold drills, taps, reamers, wire, rods, or precision knife blades. Collet capacity: 0 to .081" (0 to 2.06mm). Nickel-plated. Length approx. 4 1/2". May vary slightly from photo.

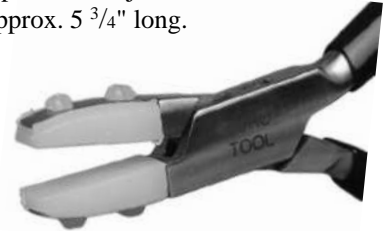
160-PV-657 6 oz. 4.60

SWIVEL HEAD PIN VISE All metal, hexagonal swivel head pin vise comes with two double end collets for 0 to 3.3mm" capacity. Overall length of pin vise is 3 1/2".

150-PIN-220 10 oz. 4.60

NYLON JAW PLIERS FOR WIRE WORKING

The wire workers delight! With these nylon jawed pliers you'll have no more nicks and scratches on your wire to rebuffer and re-finish. They work like magic to straighten wire "mistakes" as well. Just place the wire inside the jaws and draw the pliers along the wire several times to straighten. These pliers also harden wire components when squeezed gently between the jaws. Because the jaws are made of nylon, the wire is protected from the damage that can be caused by metal jaws. Pliers are made of polished stainless steel with PVC grips and box-joint construction. Jaws are replaceable. Pliers are approx. 5 3/4" long.



WIRE WORKING NYLON JAW PLIER

STRAIGHT NOSE PLIERS

150-PLR-830.00 Plier 6 oz. 22.50

152-PLR-830.05 Replacement Jaws 3 oz. 4.15

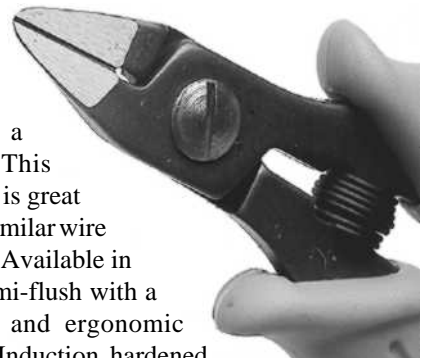
THIN STRAIGHT NOSE PLIERS

150-PLR-829.00 Pliers 6 oz. 19.95

152-PLR-829.05 Replacement jaws 3 oz. 4.15

FLUSH AND SEMI-FLUSH SIDECUTTERS

Here's a reasonably priced flush cutter that offers the perfect answer to craft people who need strength in a precision sidecutter. This cutter, made in Europe, is great for Soft Flex Wire and similar wire for beading, crafts, etc. Available in both ultra-flush and semi-flush with a smooth spring return and ergonomic cushion grip handles. Induction hardened jaws are 61 Rockwell hardness. Length approx. 5".



152-PLR-470.00 Flush 6 oz. 22.00

152-PLR-470.10 Semi-Flush 6 oz. 22.45



SINGLE END PIN VISE



DOUBLE END PIN VISE



SWIVEL HEAD PIN VISE

HANDY FOUR PIECE BEAD REAMING SET

This new diamond bead reamer set is handy enough to carry in your pocket. Three different diamond plated tools fit into the 4½" long aluminum case/handle. Unscrew cap and select tool type you need and fit into chuck on end of case/handle. Case has clip for attaching to your pocket. Use for reaming out all size beads from seed size to large.

- 150-DIB-275.00 Four Piece Set 4 oz. 14.80
- 150-DIB-275.50 45° Edging Point 1 oz. 1.65
- 150-DIB-275.55 Large Reamer 1 oz. 2.85
- 150-DIB-275.05 Small Reamer 1 oz. 1.85

BEAD REAMER SET

This bead reamer set is an excellent tool for bead stringers. One diamond tool is long and sharp for reaming bead holes. The other has a 45° point for rounding off the edges of holes so that they do not cut through bead cord. Both tools are mounted in hardwood handles.

- 150-DIB-270.01 Set 8 oz. 8.95

REAMERS/BROACHES

Use for reaming out bead holes and similar jobs with set of six popular sized reamers. Contains No. 45 through 72 (according to English Stubs gauge.) Five sided with regular taper. Made in Germany.

- 152-BRO-174 8 oz. 11.15

BEADING AWL

Has a comfortable PVC handle. Use it for knotting bead cord, picking and probing knots.

- 150-PIK-400.35 6 oz 3.45

BEADING AWL

Has sharp, tapered point used to encourage knots into place and for removing misplaced knots. Also use to clean out bead holes. 5" long.

- 153-AWL-1 2 oz 3.30

KNOT CUTTER

For cutting knots between beads when you prepare to restring. Also handy for cutting tiger tail (jeweler's wire). Approx. 5½" long.

- 153-PL-170 6 oz. 5.95

ALL PURPOSE SCISSOR

Ideal for cutting beading string. Two sharp points and super keen edges make these scissors indispensable for routine as well as specialty applications.

Length approx. 3¼".

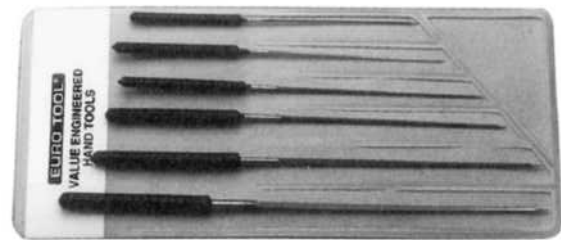
- 150-SCI-455 2 oz 3.35

THREAD CLIPPER

Sharp, steel blades with pointed ends are ideal for snipping bead thread. Approx. 4" long.

- 153-TC-100 6 oz. 2.25

BEAD REAMERS: Use for reaming out bead holes, smoothing edges.

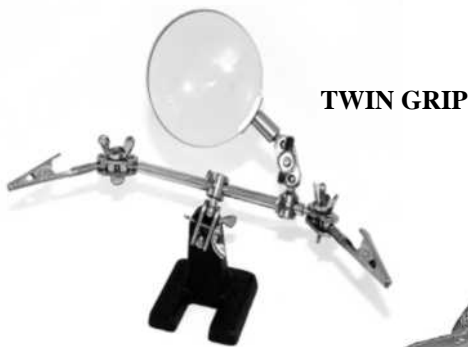


BEADING AWLS: Use for working knots in beading thread.



SCISSORS, SNIPPERS: Use for cutting beading thread and jeweler's wire.





TWIN GRIP

TWIN GRIP with 2X power magnifier. Ball joints permit positioning of clamps and magnifier at any angle. Center bar can be removed and replaced with crosslock tweezers.

164-SP-14 1 lb. 8 oz. 12.50



EXTRA HAND

EXTRA HAND has many uses in jewelry making and other crafts. It keeps your hands free for soldering, gluing, and positioning, while work is held firmly at any angle required. Has a 6 1/2" long, self-locking tweezers mounted in double ball joints connected to a heavy iron base. Base may vary from that shown. Replacement tweezers is nickel plated.

160-HO-475 1 lb. 4 oz. 7.95

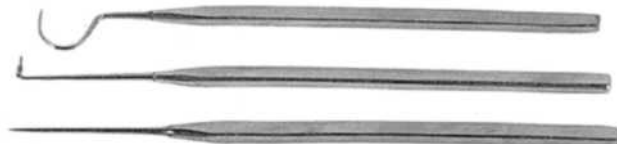
160-TW-385 Replacement tweezers 8 oz. 2.75



BEZEL ROLLER

BEZEL ROLLER Polished steel rocker in wooden handle. Rolls and pushes bezel against stone in rings, brooches, pendants, etc. Recommended for larger settings.

160-DI-540 6 oz. 3.90



SET OF 3 PROBES

SET OF 3 PROBES These stainless steel tools have strong yet flexible tips that are very useful for positioning, adjusting and gluing stones or small parts. Overall lengths approximately 5 1/2" - 6".

164-PB4N 3 oz. 6.95



SCRAPER

SCRAPER Here is another of those multiple-use tools craftsmen depend on. It is designed for cleaning, smoothing, deburring metals, cleaning surfaces for soldering, removing excess solder, and opening bezels. Has hollow-sided, triangular shape blade with three sharp edges, mounted in hardwood handle.

160-SR-950 2 oz. 5.65



BURNISHERS

BURNISHER When smoothing and finishing soft metals or setting edges on knives and scrapers, jewelry hobbyists, model makers, and metal workers reach for these burnishers. Oval-shaped, tool steel, 1 1/2" long blade is set in wood handle.

160-BS-121 Curved 2 oz. 2.50

160-BS-111 Straight 2 oz. 2.50



WEDGE CLAMP

NON-MAR WEDGE CLAMP Holds jewelry, glass, plastics, wire, tiles, metals firmly for painting, polishing, buffing, drilling, filing, gluing, shaping. As wedge is driven in opposite end, leather lined jaws tighten to grip without marring the item. Solid body and wedge made of tough, resilient, mineral-filled nylon.

160-RN-530 6 oz. 6.80



WIRE PRONG HOLDERS

WIRE PRONG HOLDERS Press top of this unique tool and slim, stainless steel prongs emerge from tip. Release pressure and prongs close around your gemstone, gripping it tightly for inspection or display. Length: 5".

150-HOL-653 3 prong 1 oz. 2.50

150-HOL-654 4 prong 1 oz. 2.50



RING GRIPPER

RING-GRIPPER Holds your ring in a vise-like grip while leaving the entire outer surface of the ring exposed for polishing. A simple turn of the thumb screw instantly locks the ring in place—reverse to release it. Tool is always cool—no more burned or blistered fingers from overheated rings.

101-DE-104 4 oz. 32.00

BENCH VISE

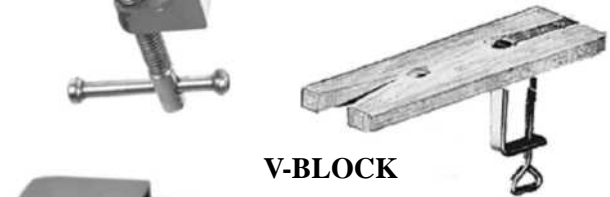
This handy vise can be either clamped or screwed onto the workbench. Has twin guide rods to assure parallel closing and rigidity. Jaws are 1½" wide, and smooth to prevent marring of soft metals. 150-VIS-204 2 lb. 9.95



BENCH VISE

V-BLOCK AND CLAMP

This handy bench extension gives the extra support and space needed for filing, sawing, and drilling. Especially useful when using jeweler's saw. Block size: 2¼" x 7½". Clamp fits table up to 1¾" thick. 150-BPN-105 1 lb. 7.30



V-BLOCK

BENCH PIN-ANVIL COMBINATION

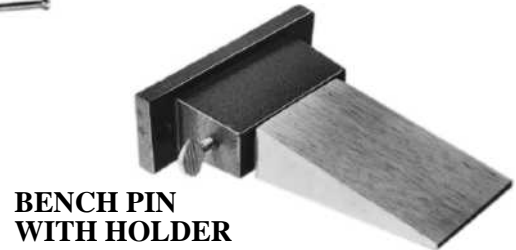
For supporting pieces being flattened, filing and laying out work. Anvil top is smoothly finished. Wood pin measures 4" long by 1¾" wide and is replaceable. 160-AN-118 3 lbs 8 oz. 13.25
160-BP-170 Pin only 4"L x 1¾"W 5 oz 2.40



BENCH PIN ANVIL

BENCH PIN IN METAL HOLDER

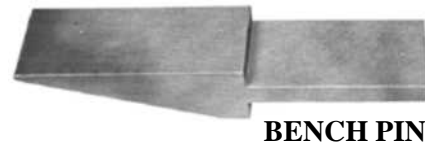
Holder screws onto edge of work bench, extending working space. Thumb screw holds wood bench pin which is included. Pin is 5½"L x 2¼" W. 160-BP-166 1 lb. 1 oz. 7.95



BENCH PIN WITH HOLDER

BENCH PIN

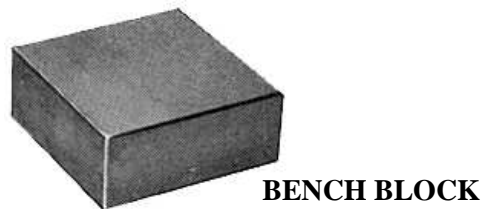
Wooden, fits into metal holder above or slot in workbench as a support for filing, sawing, setting, etc. Pin is 5½"L x 2¼" W. 160-BP-161 8 oz. 3.00



BENCH PIN

BENCH BLOCK

Used to support work while flattening or when laying out designs. Case hardened steel milled smooth. Measures 2 ½" x 2 ½" x ¾". 160-AN-125 1 lb. 13.75



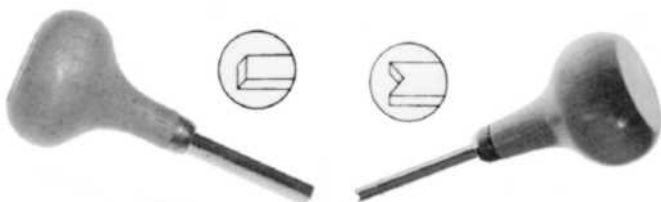
BENCH BLOCK



PRONG LIFTER

PRONG LIFTER

Special tool in hardened steel. Use for removing stones from claw or prong settings. 7 different sized notches prevent damage either to stones or setting. Total length: 5". 160-DI-555 2 oz. 6.55



**PRONG
PUSHER**

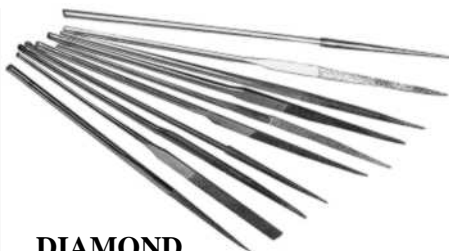
**BEZEL
PUSHER**

PRONG PUSHER

Polished steel tip set in comfortable wood handle. Use for pushing prongs or crown points around stones. 150-PSH-770 6 oz. 2.60

BEZEL PUSHER

Has polished groove in tips that wipes and sets bezel against stone. Mounted in wooden handle. 152-DI-535 6 oz. 3.10



**DIAMOND
NEEDLE
FILE SET**

FILE SETS

WAX FILE SET



DOUBLE END WAX FILE



BARRETTE



HANDFLAT



HALF ROUND



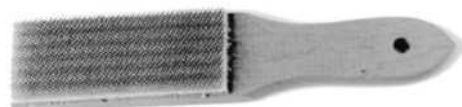
NEEDLE FILE HANDLE



HAND FILE HANDLE



FILE CLEANER



FILE CLEANER

Remove all small particles that clog the teeth of your files with this handy file cleaner. Steel wire bristles are set in hardwood handle. Made in USA.
152-FCL-751 8 oz. 5.95

ECONOMY NEEDLE FILE SETS

An exceptional value for the price. Each set contains files that meet rigid temper requirements with sharp cutting surfaces. Standard shapes in the No. 2 cut. Average length 5½". Imported.

SET OF TWELVE FILES

150-FIL-995 12 oz. 12.60

SET OF SIX POPULAR FILES (Not shown.)

150-FIL-993 8 oz. 6.85

DIAMOND NEEDLE FILE SET

This TEN piece diamond file set from PROMAX contains just about every shape you need for those small, difficult carving jobs. Two layers of diamond plated to steel give long life. Grit size is 220 mesh. Approx. 5" long.

170-24-00010 Set of 10 4 oz. 21.90

WAX FILE SET

Set provides the six most popular shapes for quick cutting and preforming wax models. Teeth are finer, more per inch than standard files. Points are fine, not blunt. 5½" long.

152-FIL-905 ... Set 6 oz. 39.95

DOUBLE END WAX FILE

Good for filing down wax models as teeth do not clog easily. One end is coarse. Length 8¼".

150-FIL-999 14 oz. 20.00

PRECISION SWISS HAND FILES

Made from fine cutting steel, milled to exact shape and size. Files have durability and hardness combined with the right feel. Cut measures 6". Weight 4 ozs.

Order #	Style	Cut	Price
152-FIL-100.2	Barrette	2	17.95
152-FIL-110.2	Hand Flat	2	10.35
152-FIL-120.2	Half Round	2	18.25

HAND FILE HANDLE

Hardwood handle, strong metal collar. Use with 6" hand files above. Twist on.

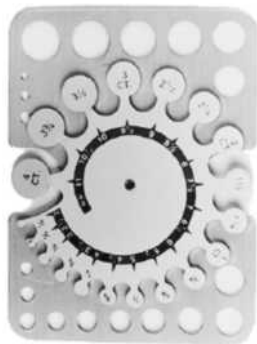
150-HAN-175 6 oz. 2.40

NEEDLE FILE HANDLE

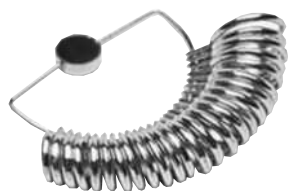
Universal, reuseable, plastic handle. Has non-slip chuck, holds file firmly.

150-HAN-725 6 oz. 4.50

STONE GAUGE



STONE AND MOUNTING GAUGE



METAL RING SIZE GAUGE



PLASTIC RING SIZE GAUGE



BRASS GAUGE



DIAL CALIPER



SOLID STEEL MANDREL



ALUMINUM MANDRELS



PLASTIC MANDREL

GAUGES

STONE GAUGE Stone diameters are measured with the calibrated gauge holes provided in 1/2mm steps from 2mm to 11mm. Corresponding gauges for mountings are provided on the center wheel. Useful in choosing the right setting bur.

162-GA-172 1 oz. 7.40

STONE AND MOUNTING GAUGE Aluminum gauge with holes for measuring stones, while the round extensions are used to measure mountings. One side shows mm's and the other the corresponding carat weight for diamond.

160-GA-171 2 oz. 5.25

METAL RING SIZE GAUGE

Professional finger ring sizer. Nickel plated, 1/2 round. Easy to read colored numerals. Sizes 1-13 with half sizes according to U.S. standard.

150-GAU-251 3 oz 13.25

PLASTIC RING GAUGE Graduated in half sizes from 1 to 13. Accurate, durable and inexpensive. On a chain.

150-GAU-255 2 oz 1.00

PRECISION BRASS GAUGE 80mm sliding gauge includes inch scale in 1/16ths as well. 3" long.

150-GAU-168.80 3 oz 11.95

PRECISION PLASTIC GAUGE (Similar to brass gauge shown) 75mm sliding gauge includes inch scale in 1/32nds as well. 4 1/2" long. Made in Switzerland.

150-GAU-172 3 oz 5.20

DIAL CALIPER Easy to read. Quickly and accurately measures inside and outside dimensions of mountings. Measures in millimeters. Maximum is 150 mm with accuracy to 0.1 mm. Has zero adjust dial. Made of high impact, glass-filled nylon. Only 9" long.

150-GAU-184 5 oz 22.40

RING MANDRELS

STEEL RING MANDREL

Solid steel mandrel. Use for shaping and enlarging rings as well as measuring. Made of hardened and polished tool steel, grooved, graduated in one quarter sizes with long smooth taper to give adequate work space. Handle is knurled for better grip.

154-RG-16 3 lbs. 24.00

Professional ring mandrel made of solid aluminum. Graduated in 1/4 sizes from 0-13. For sizing only.

160-GA-193 2 lbs. 13.05

Grooved ring mandrel made of solid aluminum. Use with faceted stones. Graduated in 1/4 sizes from 0-13. For sizing.

160-GA-192 2 lbs. 14.95

Plastic ring mandrel. Economical, rigid plastic. Graduated in 1/4 sizes from 1-15. For sizing only. Imported.

160-GA-194 8 oz. 3.60

HAMMERS

BRASS MALLET

Nicely balanced, solid brass head will not mar soft or delicate metals. Head 2" long on metal handle.

150-HAM-215 4 oz. 6.95

CHASING HAMMER

Use flat head to flatten, shape and form objects in silversmithing, arts and crafts. Also to strike chasing tools. Round end is for forming decorative patterns and designs. Head is 1" diameter.

162-HA-365 8 oz. 8.50

BALL PEIN HAMMER

Hardened steel head with hardwood handle. Made especially for the jeweler.

162-HA-350 .. 2 oz. ... shp. wt. 6 oz. 4.70

162-HA-351 .. 4 oz. ... shp. wt. 8 oz. 5.90

RAWHIDE MALLETS

American made from the finest quality rawhide. Mounted on a smooth hardwood handle. Head is heavily shellacked to prevent marring work. Use for forming or flattening. Head 1 1/4" dia. x approx. 2 1/2" long.

160-MA-171 Shp. wt. 4 oz. 23.00



JEWELER'S SAWS

DEEP THROAT SAW FRAME High-quality, well-balanced frame is strongly constructed with hardwood handle. Adjusts to accommodate broken blades. 5" deep throat.

150-SAW-315 1 lb. 18.45

DELUXE SAW FRAME WITH TENSION SCREW Ideal for use with diamond wire blades. Holds blades firmly with serrated holders. Tension screw tightens blade to exact tension desired. Frame adjusts to accommodate broken blades. 4" deep. Not shown but similar to SAW-315 above.

150-SAW-334 1 lb. 19.95

JEWELER'S SAW FRAME This saw frame offers durable construction with a hardwood handle, large thumbscrews and a 3" depth. Frame adjusts to accommodate broken blades.

150-SAW-650 1 lb. 9.80



JEWELER'S SAW BLADES

These Swiss made sawblades are premium quality at a reasonable price. Come 12 per package. Blades increase in size from 4/0 to 0 and from 1 to 4. Size #4/0 is smallest blade and #4 is largest. Price is \$2.25 per pack of 12. Shp. wt. 1 oz per pck.

Order No.	Size	Order No.	Size
150-SAW-400.03	4/0	150-SAW-400.07	1
150-SAW-400.04	3/0	150-SAW-400.08	2
150-SAW-400.05	2/0	150-SAW-400.09	3
150-SAW-400.06	0	150-SAW-400.10	4

DIAMOND WIRE SAW BLADES

These diamond wire saw blades cut forms and shapes in any slabbed stone-jade, quartz, agate, glass, etc. Also cut silver and copper. Cut in any direction.



106-3106	3/4 mm	180 grit	2 oz.	18.00
106-3105	1 mm	100 grit	2 oz.	19.00
150-SAW-270.6	1.5 mm	60 grit	2 oz.	8.95
150-SAW-271.0	1.2 mm	100 grit	2 oz.	8.95
150-SAW-271.2	1.15 mm	120 grit	2 oz.	8.95
150-SAW-271.4	1.1 mm	140 grit	2 oz.	8.95

SOLDER CUTTING PLIER



SOLDER CUTTING PLIER

This handy tool cuts sheet gold or silver into 1/16" squares for easy handling and melting. Made of stainless steel with box-joint construction.

150-PLR-818 6 oz. 16.65

CERAMIC ROD AND HOLDER



CERAMIC SOLDERING ROD

Keeps rings in position while soldering and prevents collapse or movement. Holds heat longer and more efficiently, and works cleaner than standard carbon rods. Mounted on a pivoting base for easy adjustment and positioning. For rings size 4 and up.

162-HO-625 Base w/rod 2 lbs. 24.00

162-HO-626 Ceramic rod only 1 lb. 10.35

TRIPOD WITH SCREEN

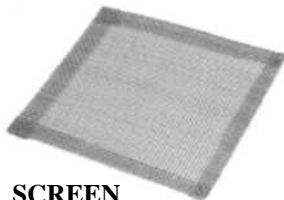


TRIPOD WITH MESH SCREEN

Set tripod with screen over an alcohol lamp or Bunsen burner to heat wax pot or keep it warm. Can also be used so that work can be heated from below while soldering or enameling. Comes with 6" square mesh screen.

162-BT-268 1 lb. 9.65

SCREEN



HEATING SCREEN

Use with tripod (above), or on a block, so that workpiece can be heated from below while soldering or enameling. Measures 6" square.

160-BT-270 8 oz. 2.85

CERAMIC SOLDERING BLOCK



HONEYCOMB SOLDERING BOARD

Popular honeycomb design holds pins to keep work in place while soldering. Made of a non-asbestos ceramic. Board is lightweight and reflects heat. Size is 3 7/8" x 5 5/16"

150-SOL-430 8 oz. 8.50

SILVER BEARING SOLDER

A low-temperature, silver bearing solder paste which will speed up soldering tasks because it works with the heat of a match or lighter. Will join 22 different combinations of metals. Easy-to-use, no-mess, no-waste syringe, holds 7.1 grams.

152-SOL-820.07 3 oz. 5.00

COPPER TONGS

Handy for lifting objects from pickling and other acid type solutions. The fishtail type with double points holds more awkward objects securely. Both approx. 8 1/2" long.

150-TWZ-920.02 Curved 6 ozs. 4.50

150-TWZ-920.01 Fishtail. 6 ozs. 4.50

SOLDERING TWEEZERS

The polished steel jaws are available either straight or curved. These strong cross-locking tweezers have heat resistant fiber grips and will hold your work securely. Length 6".

150-TWZ-740 Straight 3 oz. 3.35

150-TWZ-741 Bent 3 oz. 3.35

SOLDERING PICK

This deluxe titanium soldering pick is specifically made to lift minute drops of molten solder. Features a number 35 high-tech titanium rod to which solder cannot stick, unlike most soldering picks with steel wire picks. Has a non-conductive, non-roll handle.

150-SPK-930 2 oz. 4.55

COPPER TONGS

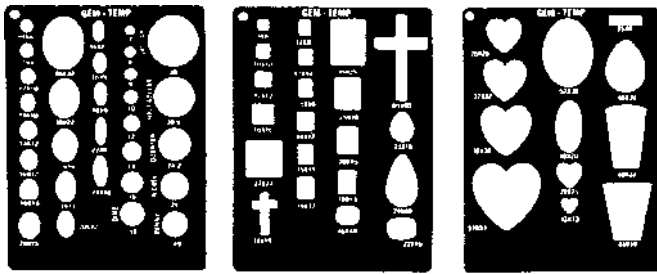


SOLDERING TWEEZERS



SOLDERING PICK

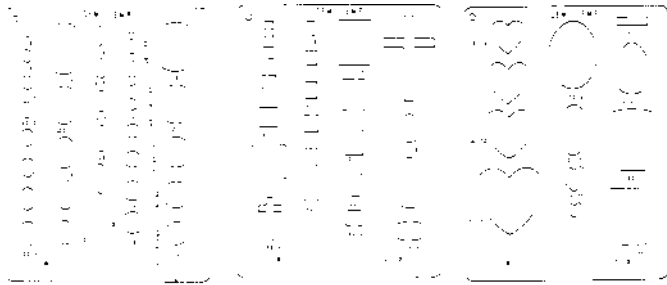




325

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345

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347

SEE PAGE 86 FOR FINDINGS KIT FOR MOUNTING STONES



SCRIBING PENCILS

DIAMOND TIPPED SCRIBE



DIAMOND TIPPED SCRIBE in a ball point pen package, complete with protective cap. Light weight and slips in your pocket. Scribe plastic, glass, stone or metals.

150-SCB-432 2 oz. 10.00



CARBIDE SCRIBE

SCRIBING PENCILS. The basic tool for making the outline of cabochon shapes on slabs. The pencils, one aluminum and the other brass, come as a set. The scribes are easy to see and will not wash off during sawing or grinding. Sharpen pencils on any grinding wheel.

130-14-115 Set 3 oz. 2.20

CARBIDE SCRIBE. Our carbide pocket scribe with clip is always where you want it — in your pocket. Hardened carbide tip ensures extended life.

150-SCB-435 2 oz. 6.95



DIVIDER

DIVIDER

This good quality 3" divider is used for making circles, measurement transferal and finding centers. Features a quick-adjust setting nut.

150-DIV-300.99 6 oz. 5.60

TEMPLATES

GEM-TEMP TEMPLATES are anodized aluminum, color coded for quick identification. Precision stamped markings are permanent. Precision cut designs stay accurate and resist wear, last for years. Double GEM-TEMP templates enable you to see and scribe both sides of slab while it is held firmly in place.

SINGLE OVALS AND CIRCLES (blue)

130-325 1 oz. 6.50

DOUBLE OVALS AND CIRCLES (blue)

130-325D 3 oz. 14.95

SINGLE SQUARES AND RECTANGLES (gold)

130-326 1 oz. 6.50

DOUBLE SQUARES AND RECTANGLES (gold)

130-326D 3 oz. 14.95

SINGLE MISC. SHAPES (red)

130-327 1 oz. 6.50

DOUBLE MISC. SHAPES (red)

130-327D 3 oz. 14.95

SET OF THREE, one each color, with scribe.

130-GT3 5 oz. 19.60

GEM-TEMP PLASTIC TEMPLATES are made of heavy duty plastic. Won't corrode or bend out of shape. Precision cut.

130-345 1 oz. 4.75

130-346 1 oz. 4.75

130-347 1 oz. 4.75

SET OF GEM-TEMP PLASTIC TEMPLATES One each of templates 345, 346, & 347. Includes scribe. Heavy duty plastic won't corrode or bend out of shape.

130-349 Set 3 oz. 13.50



Model DA

OptiLOUPE

optivisor®

The original Binocular Magnifier with optical lenses

Don't settle for plastic lenses when it comes to saving your eyesight and improving your vision for close-up work. OptiVisor's lenses are prismatic, optical glass ground and polished to precise, optical standards. They are bevel edged and mounted in an interchangeable plastic frame, allowing you to have different lens powers for different needs. OptiVisor is still your best buy in a headband magnifier.

Order #	Magnification	Shp. Wt.	Price
116-DA-02	Magnifies 1½ X at 20" focal length	12 oz.	41.55
116-DA-03	Magnifies 1¾ X at 14" focal length	12 oz.	41.55
116-DA-04	Magnifies 2 X at 10" focal length	12 oz.	41.55
116-DA-05	Magnifies 2½ X at 8" focal length	12 oz.	41.55
116-DA-07	Magnifies 2¾ X at 6" focal length	12 oz.	43.00
116-DA-10	Magnifies 3½ X at 4" focal length	13 oz.	43.00
116-DA-LP1	OPTILOUPE Monocular attachable lens. Adds 2½ extra power to your OptiVisor. Attaches to either eyepiece.	2 oz.	9.30
116-DL	Lens Plate Nos. 2, 3, 4 & 5 State number when ordering.	2 oz.	25.30
116-DL-07	Lens Plate No. 7	2 oz.	24.25
116-DL-10	Lens Plate No. 10	2 oz.	24.25
116-DA-00	Headpiece assembly, No lens*	10 oz.	21.40
116-PT3	Leather comfort band	1 oz.	5.00

Optivisor is equipped with these unique features

- **Adjustable Headband** - Conforms to fit all head sizes - fabricated from a special blend of lightweight ABS material - comfortable when worn for long periods of time.
- **It Tilts** - Adjustable pivots allow the visor to be tilted out of the way when not needed and at your fingertips when you need magnification.
- **Genuine Leather Comfort Band** - Padded with orthopedic felt - adds to comfort.
- **Made completely in the U.S.A** by skilled craftsmen.

OptiVISOR
as seen by
normal vision



1½ X at 20"



1¾ X at 14"



2 X at 10"



2½ X at 8"



2¾ X at 6"



3½ X at 4"



OptiLOUPE Option
Adds 2½ X
to all models
116-DA-LPI

ORDER OPTIVISOR IN ANY OF THESE SIX LENS POWERS

The VisorLIGHT™

Puts light on your viewing area when using your optivisor®

New Visorlight™ attaches to your Optivisor, illuminating the magnified viewing area as you work. Gives you a hand-free light with 6000 candle power Xeonon Laserbeam. Takes two AA batteries for 5 to 6 hours use. Made in U.S.A.

MODEL LT-06 mounts on back side of visor.

116-LT-06 Shp wt. 1 lb. 23.05

MODEL LT-42 Extended battery pack mounting. Fits in pocket or belt. Has 42" cord.

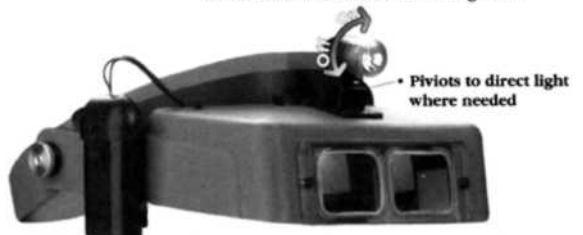
116-LT-42 Shp. wt. 1 lb. 23.05

REPLACEMENT BULBS for LT-06 and LT-42

116-LT-2204 Shp. wt. 8 oz. 6.10



• Rotate lens clockwise to turn light on,
Rotate counter clockwise to turn light off



• Pivots to direct light where needed

HAND LENS

DIAMOND CUT 10X LENS

New Diamond Cut is attractive and provides better grip. Triplet. 10X has good depth of field. Comes in either 18mm or the 21.5mm with larger field of view. Black finish. Leather case. (The 747 has larger lens than the 745 shown in photo.)

- 150-ELP-745 18mm 2 oz. 12.95
- 150-ELP-747 21.5mm 2 oz. 15.95

TRIPLET 10X LENS

Economical yet offers 10X, 18mm triplet lens. Black finish. Comes with leather case.

- 150-ELP-744 2 oz. 9.85

LARGE 21.5mm 10X TRIPLET LENS

Case is hexagonal, but head is actually an elegant twelve faceted design. Silver finish. Leather case.

- 150-ELP-746 2 oz. 15.65

DIAMOND TRIPLET 10X 20.5mm LENS

Quality three-piece bonded lens is ground for distortion free viewing and extra sharpness. Rubber grip added for comfort and better control. Chrome/Black. Leather case.

- 152-ELP-759 2 oz. 22.95

HEXAGONAL 15X TRIPLET LENS

A more powerful 15X lens with three-piece, color corrected lens. Has 20.5mm field of view. Chrome/Black. Leather case.

- 152-ELP-758 2 oz. 21.00

IMPROVED VERSALUME ULTRAVIOLET LAMP

This is the most versatile and powerful portable ultraviolet lamp on the market today. It's both short and long wave. Use in the field with four "AA" batteries (not included) or plug into your outlet at home using the 115V A/C adaptor that is included with the lamp. Gives a full 4 watts of UV power. Well made of durable plastic, yet is lightweight and compact for easy packing. Built in handle opens to make a stand for the lamp. Has lifetime filters. Comes with lamp, adaptor, and 60 page book, "The Story of Fluorescence".

- 115-10-020 2 lbs. 84.95
- 115-11-062 Extra bulb 8 oz. 40.00

POCKET SCALES

This versatile scale has a weighing capacity of 350 gr. and a built-in heavy cover. It features digital auto calibration, memory function, four key easy operation, and a large LCD display. Readability is 0.1g. It is equipped with an automatic shut-off which turns the scale off in four minutes with no weighing activity. Weighs in grams, ounces, dwt, and ozt. Runs on three AAA batteries. Size is 5" x 3 1/4" x 1" Imported.

- 152-SCL-293 12 oz. 107.70



VERSALUME ULTRAVIOLET LAMP WITH ADAPTOR

CAUTION

Be careful to limit exposure of your eyes to shortwave ultraviolet rays. These rays can "sunburn" the eyes and cause uncomfortable irritation. You should not look into a shortwave lamp when it is turned on. When working near a shortwave lamp we recommend the wearing of protective glasses.



FACTS YOU SHOULD KNOW WHEN CHOOSING PLIERS



CHAIN NOSE PLIERS

Traditional and the most popular pliers. Use to make bends, loops and similar forming operations on wire or sheet metal. In bead stringing, use to lock crimp beads, attach needles to bead cord, etc. Handy for most gripping, pulling, manipulating actions.



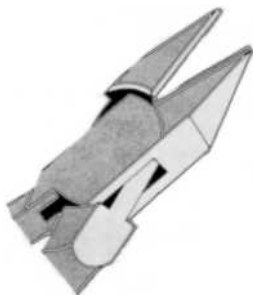
FLAT NOSE PLIERS

For gripping and holding flat or square objects securely, and for making angular bends and similar forming operations.



ROUND NOSE PLIERS

For making bends, loops, circles, coils in wire or sheet metal. The tapered, round jaws are smooth and will not scratch or nick soft metals. In bead stringing, use for closing bead tips, curving wire such as jump rings, looping eye pins, etc.



BOX JOINT CONSTRUCTION

Outlasts and outperforms all other types.

- * Retains precise alignment, even under strain and after considerable use.
- * Jaws never develop looseness or wobble, yet open and close smoothly.

SONORA PLIERS

The Sonora line offers a new feel in pliers, with a textured, non-slip grip that will make your work a lot easier. Sonora pliers have box joints and are made of highly polished, stainless steel that will remain rust free. A real value for the money.



CHAIN NOSE

150-PLR-260 6 oz. 11.75



BENT CHAIN NOSE

150-PLR-264 6 oz. 11.75



FLAT NOSE

150-PLR-262 6 oz. 11.75



ROUND NOSE

150-PLR-261 6 oz. 11.75



SIDECUTTER

150-PLR-265 6 oz. 12.55



WIREWRAPPING CUTTERS

SEMI-FLUSH SIDE CUTTERS. Necessary for cutting all types jewelry wire. Features double leaf springs, box joint construction with PVC grips and brush finish. A real value for the money. Approx. 4 1/2" long.

150-PLR-490.15 6 oz. 6.75

JEWELER'S SHEARS

SUPER SHEARS

These fine German made shears will cut anything from paper to heavy tin. Tempered stainless steel blades with plastic handles for comfort. Come in two lengths.

152-SHR-304 7 1/2" 6 oz. 15.55

152-SHR-305 5 1/2" 6 oz. 13.65



SHEARS

Cut up to 20 gauge sheet stock with these high quality shears. Made of steel with tempered blades. Overall length is seven inches with 1 1/2" blades. Come with straight or curved blades. Made in France.

152-SHR-530 Straight 6 oz. 22.35

152-SHR-531 Curved. 6 oz. 25.55



EURO-TOOL® PREMIUM QUALITY PLIERS

These are premium quality German box joint pliers. They are lightweight, suitable for professionals for fine work. Heads are superbly polished highest grade steel. Vinyl coated handles have double leaf springs. Lengths vary.



FLAT NOSE

For gripping flat objects and making right angle bends. Smooth jaws come to fine even taper.

150-PLR-105 6 oz. 19.95



CHAIN NOSE

The most popular style for all purpose bending and holding. Smooth jaws with slightly beveled edges to avoid marking. Nose tapered to a fine point.

150-PLR-100 6 oz. 20.30



ROUND NOSE

Perfectly round and finely tapered to the tips. Used for making loops and round bends. Smooth for delicate wire.

150-PLR-110 6 oz. 20.30



HOLE PUNCHING PLIERS

New, slim line jaws have a 2.0mm punch with precise clearance for a clean cut. Use to size leather, plastic bands, etc. Length is 5 3/4".

150-PLR-138.05 6 oz. 10.95



FLAT NOSE

This extra narrow flat nose plier has jaws only 2.2 mm wide, making it ideal for smaller jobs, especially making 90° angles with wire. Has PVC grips, dual-leaf springs, box joint jaws.

150-PLR-491 6 oz. 7.95

VALUE LINE PLIERS FROM EURO-TOOL®

You get real value for your money with these pliers. They have quality features at a reasonable price. Offer comfort and durability with double-leaf springs, box joint construction, PVC grips and brushed finish.



FLAT NOSE

For gripping and holding flat or square objects securely, and for making angular bends and similar forming operations. Can also be used for some manipulating and pulling. Insides of jaws are smooth.

150-PLR-490.05 6 oz. 5.95



CHAIN NOSE

Use to make bends, loops and similar forming operations with wire or sheet metal, and for gripping, manipulating and pulling. Smooth jaws have slightly beveled edges to avoid marring. Nose tapers to fine point.

150-PLR-490.00 6 oz. 5.95



BENT CHAIN NOSE

Handy for hard to reach places. Has multiple uses for jewelers, crafters, or anyone wanting a handy tool at a handy price.

150-PLR-490.50 6 oz. 6.50



ROUND NOSE

For making bends, loops, circles, coils on wire or sheet metal. Can also be used for some manipulating functions. The tapered circular jaws are smooth so that they will not scratch or nick soft metals.

150-PLR-490.10 6 oz. 5.95

EURO-TOOL® PREMIUM QUALITY SPECIALTY PLIERS FOR JEWELERS

Pliers on this page, (except for PLR-469) are premium quality German box joint pliers. Lightweight, suitable for professionals for fine work. Heads are superbly polished highest grade steel. Vinyl coated handles have double leaf springs. 4½" overall length. Cutters are extremely durable.



NEEDLE NOSE

This plier has extra-long chain nose jaws for specialty applications such as beading.

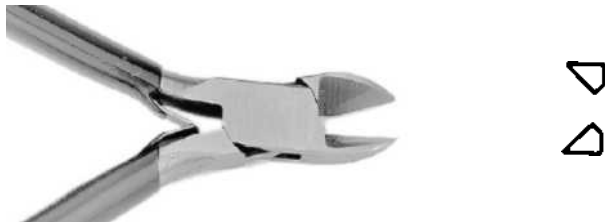
152-PLR-560 6 oz.23.05



END CUTTER

This semi-flush end-cutter is perfect for cutting close to objects. The jaws are at right angles to the handles.

150-PLR-120 6 oz.29.60



SIDE CUTTER

The most popular cutter. Has a rockwell hardness of 62.

150-PLR-115 6 oz.26.00



FLUSH CUT WIRE CUTTERS

Shear action means a smooth flush cut on both sides. Gives extended life as 90° cutting edges dull less than conventional cutters. Return springs and ergonomic handles.

152-PLR-469.11 6 oz. 19.45



STONE SETTING PLIER

Made in West Germany and highly polished. These stone setting pliers have one jaw smooth, the other notched. Fine head allows access to tight spots. 5" long.

152-PLR-700 6 oz.32.95



LOOPING PLIERS

One jaw is round, the other flat. For looping wire or flat strips of metal. Made in Germany with plastic grips. Length 5½"

152-PLR-735 6 oz.20.65



BENDING PLIERS

These bending pliers are German made with cushion grips for comfort. They are 5" long.

152-PLR-725 6 oz.24.95



BENDING PLIERS

For making sharp loops and bends in wire or metal. One jaw is round, the other concave. Designed for jump rings and similar rings. Length 5½".

152-PLR-745 6 oz.22.40



BENDING PLIERS

One jaw is flat, the other half-round. For bending and shaping flat metal and wire. 5½" long with plastic grips.

152-PLR-740 6 oz.20.65



WESGEM GEM SET PLIERS

This unique tool lets you set and tighten diamonds and other gemstones without fear of breakage. It's fast and easy to use too. Ingenious depth control method eliminates expensive mistakes. Pliers give 10 to 1 power ratio, yet a special control screw stop prevents slipping and breakage. It will tighten almost any type or size of prongs, mountings, findings in seconds. Original Heavy Duty Model 100-NS

- 161-100-NS 6 oz. 44.95
- New "Mini" Model 100. Same features as above, but smaller with long pointed jaws.
- 161-100 6 oz. 44.95



STONE SETTER KIT FOR WES-GEM PLIERS

Now you can close (or tighten) all prongs at the same time while setting stones in rings, pendants and earrings. Four different setters fit the Wes-Gem Model 100-NS pliers only.

- 161-100-SS 8 oz. 34.95



BENT CHAIN NOSE

Box-joint bent chain nose has a multitude of uses in every shop. Great quality at an extremely competitive price. 4 1/2" long.

- 150-PLR-150 7 oz. 22.55

LOOP-CLOSING PLIERS

Small hollow jaws for holding and closing jump rings, small loops, etc. Made of stainless steel.

- 150-PLR-718 7 oz. 10.80



SPLIT RING PLIERS

Just put the tooth jaw between the overlapping split ring and squeeze. The split ring pops open, ready for the user to put on chains, etc. Great tool.

- 150-PLR-589.00 6 oz. 7.95



PRONG-OPENING PLIERS

A revolutionary new idea! A plier for opening prongs which will not fracture stone. You have total control no matter what size prong. Plier puts no pressure on the top of the stone. Top jaw is a claw which grips the prong cleanly and the lower jaw is grooved to hold the prong.

- 150-PLR-132 7 oz. 27.00



PRONG-CLOSING PLIERS

New bent nose pliers with grooves so that the tip doesn't slip off when closing prongs. Recommended for stonemasons doing small prongs. 4 1/2" long.

- 150-PLR-155 7 oz. 26.60



RING-HOLDING PLIERS

Hollow jaws hold rings while work is being done, particularly polishing the inside. The pliers are made of stainless steel with box joints and cushioned grips.

- 150-PLR-715 7 oz. 11.90



ROSARY PLIERS

Combination round nose/side cutter is especially designed for work on rosaries. Has box joint and is suitable for all assembly operations. Approx. 5" long.

- 162-PLR-540 7 oz. 23.05



GEOLOGICAL TOOLS

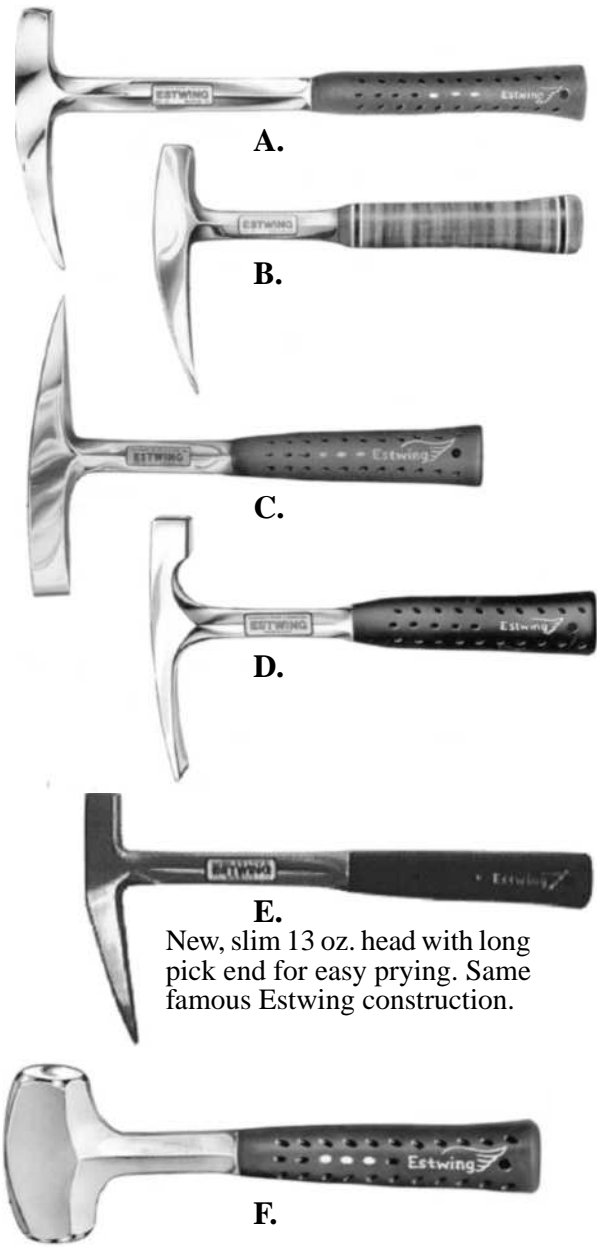
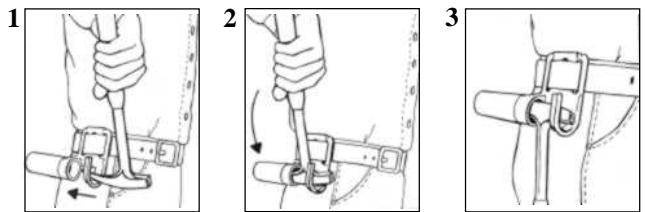
You can rely on Estwing rock picks and hammers to be rugged and safe. These tools are solid steel with one piece head-handle construction. The head cannot come off while you are using it. Estwing picks are made of forged tool steel, perfectly tempered, with a blue nylon vinyl grip molded to the handle. They are made for years of use.

HAMMERLOCK® PICK HOLSTER

Locks your pointed or chisel edge picks in place. Keeps sharp points safely enclosed. Provides a safe, convenient and sure way to carry picks in the field. Made of high impact plastic

110-HH2 8 oz. 5.60

Caution:
Wear safety glasses when using any of these tools.



E.
New, slim 13 oz. head with long pick end for easy prying. Same famous Estwing construction.

NOTE: Estwing Tools not available for shipment outside the USA and Canada.

TOOL TYPE	ORDER #	ITEM	WEIGHT	PRICE
A.	110-E3-23LP	ROCK PICK - Pointed tip, full polished nylon-vinyl grip, 16¼" length	22 oz.	42.50
B.	110-E30	ROCK PICK - Pointed tip, full polished, leather grip	22 oz.	38.35
	110-E3-14P	ROCK PICK - Pointed tip, full polished nylon-vinyl grip	14 oz.	37.00
	110-E3-22P	ROCK PICK - Pointed tip, full polished nylon-vinyl grip	22 oz.	38.30
C.	110-E3-WC	CHIPPING HAMMER - Full polished, nylon-vinyl grip	20 oz.	31.35
D.	110-E3-12PC	ROCK PICK - Chisel edge, full polished nylon-vinyl grip	12 oz.	36.65
	110-E3-20PC	ROCK PICK - Chisel edge, full polished nylon-vinyl grip	20 oz.	36.85
	110-E3-24PC	ROCK PICK - Chisel edge, full polished nylon-vinyl grip	24 oz.	39.00
E.	110-E3-13P	ROCK PICK - Long pointed tip, full polished nylon-vinyl grip	13 oz.	30.80
F.	110-B3-2LB	CRACK HAMMER - Painted finish, nylon-vinyl grip	2 lbs.	34.00
	110-B3-3LB	CRACK HAMMER - Painted finish, nylon-vinyl grip	3 lbs.	34.00
	110-B3-4LB	CRACK HAMMER - Painted finish, nylon-vinyl grip	4 lbs.	38.30
	110-B3-4LBL	CRACK HAMMER - Painted finish, long handle, nylon-vinyl grip	4 lbs.	40.10

CHISELS

Estwing's tried and proven cold chisels for wedging, splitting and prying. Made of forged steel with durable, impact resistant hand grips.



G.



H.



I.



J.

SPECIALTY TOOLS

NEW GEO/PALEO PICK -An improved version of the former HOE-PICK. The Geo-Paleo Pick has all steel construction. Handle is 25" overall with textured vinyl grip for comfort. Head is 14" from pointed edge to chisel edge. Durable powder coated finish.



M.

**SAFETY
FIRST
WEAR YOUR
GOGGLES**

NOTE: ESTWING TOOLS NOT AVAILABLE FOR SHIPMENT OUTSIDE THE USA AND CANADA.



K.



L.



N.

TOOL	ORDER #	ITEM	WEIGHT	PRICE
G.	110-ERC-12	ROCK CHISEL - For digging out pockets, vinyl cushion grip, 1/2"x 12"	10 oz.	11.30
H.	110-ERC-9	ROCK CHISEL - For wedging & prying, vinyl cushion grip, 5/8"x 9"	22 oz.	16.10
I.	110-ERC-8	ROCK CHISEL - For splitting, vinyl cushion grip, 1 1/4"x 8"	16 oz.	14.90
J.	110-ERC-7	ROCK CHISEL - For splitting, vinyl cushion grip, 2 1/2"x 7"	13 oz.	14.90
K.	110-3	ROCK PICK BELT SHEATH - For pointed tip picks	3 oz.	7.05
	110-4	ROCK PICK BELT SHEATH - For chisel edge picks	3 oz.	6.65
L.	101-GOGGLE	CLEAR SAFETY GOGGLES - Soft vinyl frame	2 oz.	3.60
M.	110-GP-100	GEO-PALEO PICK - Length 25"	5 lbs.	69.76
N.	110-BP-12	BLACK PLASTIC GOLD PAN - Ruffles on one third of inside pan, 12" diameter	6 oz.	4.85
	110-BP-14	BLACK PLASTIC GOLD PAN - Ruffles on one third of inside pan, 14" diameter	9 oz.	6.90
	110-BP-16	BLACK PLASTIC GOLD PAN - Ruffles on one third of inside pan, 16" diameter	16 oz.	8.35

Desert Gem Trails

Strong. The best guide to locations in the Mojave and Colorado Deserts. Over 140 localities mapped out. While some areas are now closed to collecting, it's still the best source for those remaining. Illustrations. Maps. 80 pages.
240-409 6 oz. 5.00

Gem Trails of Arizona

Mitchell. Over 90 collecting sites are listed in this 3rd. edition with clear maps and photographs. Color photos show specimens to be found. Over 144 pages.
240-401 8 oz. 11.95

Gem Trails of Northern California

Mitchell. Features sites from the Oregon border south to the Monterey area. Beautiful color photographs showcase the specimens that can be found at the sites described. Detailed text and maps make locating collecting areas easy. 160 pages.
240-441 8 oz. 12.95

Gem Trails of Southern California

Mitchell. The newest and most definitive guide to 71 of the best collecting sites for gems, minerals and fossils in Southern California from San Luis Obispo to San Diego. Detailed maps, text, and B/W locale photos lead the way and vivid color photos of specimens excite the anticipation of great finds. 224 pages.
240-442 8 oz. 12.95

Gem Trails of Colorado

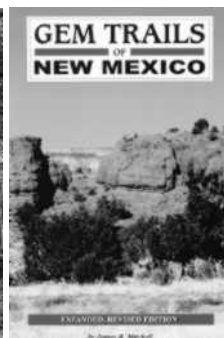
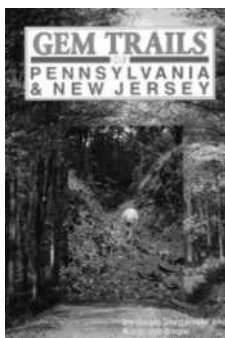
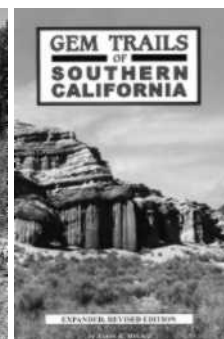
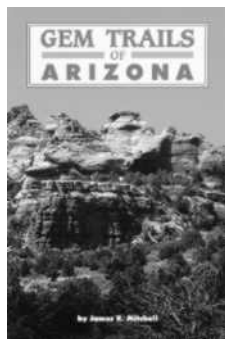
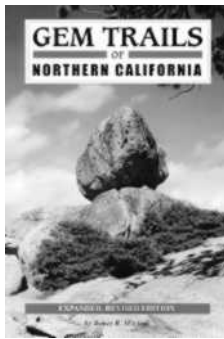
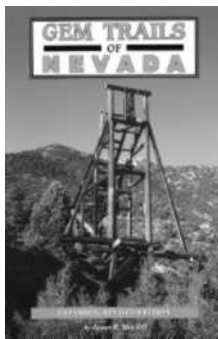
Mitchell. Covers 75 sites for collecting sapphires, topaz, blue barite, and much more. Maps with mileages for every site as well as photos. 144 pages.
240-419 8 oz. 9.95

Gem Trails of Utah

Mitchell. Revised and expanded guide to the many collecting locations in Utah. Detailed descriptions of the fossils and gemstones along with photos and maps fill 168 pages.
240-406A 6 oz. 12.95

Gem Trails of Texas

Cross. Revised and expanded edition of a popular best-selling guide to Texas gem trails. Includes over 50 of the best sites in the state. Written by an experienced rockhound from the state. Includes a new color insert of the best fossils and rocks the state has to offer, detailed maps, numerous B/W photos, glossary, mineral index and clear, exact directions tell what to look for at each site. 160 pgs.
240-405 8 oz. 12.95



Gem Trails of New Mexico

Mitchell. Revised edition. Detailed descriptions with photos and maps of over 61 locations for collecting gemstones and minerals. 240 pages.
240-403 6 oz. 12.95

Northwest Gem Fields and Ghost Town Atlas

Johnson. Complete guide to collecting rocks, minerals, bottles and relics from gem fields and ghost towns throughout WA, OR, ID, MT and WY. Includes detailed maps. 48 pages.
240-437 8 oz. 5.50

NEW Treasure Hunter's Gem and Mineral Guides

Rygle. Newly revised, these guides give state-by-state details on more than 250 gems and minerals the U.S. has to offer, and affordable "fee-dig" sites where they can be found. Includes maps, illustrations and B/W photos.

Northwest TH Gem & Mineral Guide (157 pgs)
240-420 8 oz. 14.99

Northeast TH Gem & Mineral Guide (188 pgs)
240-421 8 oz. 14.99

Southwest TH Gem & Mineral Guide (185 pgs)
240-424 8 oz. 14.99

Southeast TH Gem & Mineral Guide (179 pgs)
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Midwest Gem, Fossil and Mineral Trails Great Lakes States

Zeitner. Maps, photos and detailed first-hand information provides the collector with a guide to the many sites of fossils, garnets, and more in 12 Midwestern states.

Revised edition. 128 pages.
240-408 6 oz. 10.95

Midwest Gem, Fossil and Mineral Trails Prairie States

Zeitner. Gives descriptions of materials to be found, maps of localities, hints on collecting, with excellent photos throughout. 128 pages.

240-407 6 oz. 10.95

Gem Trails of Nevada

Mitchell. Agate, carnelian, fossils, garnets, geodes, wood and obsidian are just a few of the minerals covered. Lists 75 sites with detailed maps and photos. 224 pages.

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Gem Trails of Oregon

Mitchell. Covers entire state with directions to little known areas as well as popular ones. Over 80 localities described with a special section on beach collecting. Maps and photos throughout. 192 pages.

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Gem Trails of Pennsylvania and New Jersey

Stepanski & Snow. Revised edition. Some 47 sites are listed where beautiful mineral specimens and fossils can be found. Authoritative text includes information on equipment, clubs and tourist attractions. B/W photos, detailed maps, and a striking color insert will entice the reader to "hit the trail." 160 pages.

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Geodes: Nature's Treasures

Cross & Zeitner. A full color exploration of geodes written by two highly respected authors. This is an extensive look into the fascinating world of geodes from how they are created, where they are mined, to the exquisite variety of crystal forms within. 260 pages.

240-307 2 lbs. 21.95

Rockhound Guide Series.

Informative guides to collecting sites, featuring maps, detailed directions, advice on field techniques and collecting and preparing specimens. .

Rockhounding Arizona, Blair. 165 pgs.

242-466 1 lb. 12.95

Rockhound's Guide to New Mexico, Crow. 160 pgs.

242-468 1 lb. 12.95

Rockhounding Utah, Kappele, 180 pgs.

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Rockhounding Wyoming, Graham, 158 pgs.

242-471 1 lb.. 12.95

Rockhounding Colorado, Kappele. 216 pgs.

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The Rockhound's Handbook

Mitchell. This handbook goes beyond just listing collecting areas. Provides an excellent resource for learning how rocks are formed, what to look for in the field, preserving and preparing specimens, deciding on the best tools, and more. Softbound. 184 pages. Color photos, diagrams, etc.

240-356 14 oz. 12.95

Rockhounding Montana

Feldman. Completely revised & expanded. A guide to Montana's gold, sapphires, agates, crystals and more. Lists 60 popular sites. Maps photos, appendixes. 154 pages.

242-423 8 oz. 14.95

Evidence From the Earth:Forensic Geology & Criminal Investigatiion

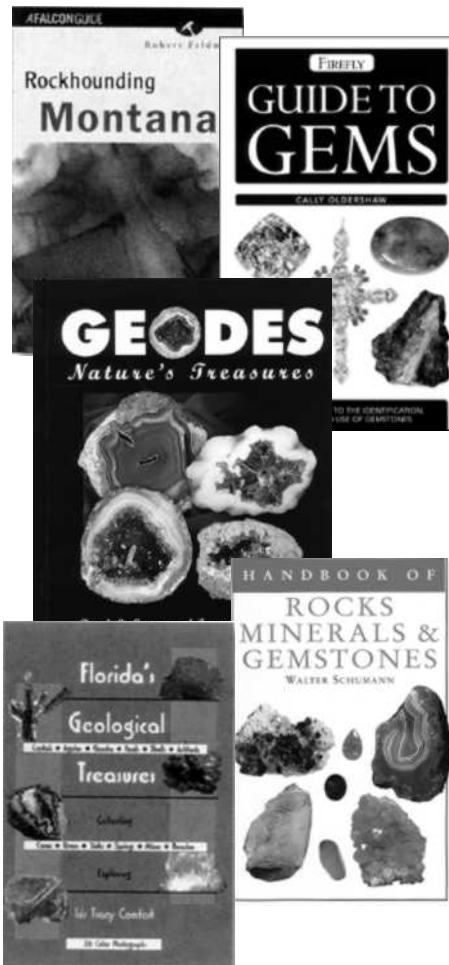
Murray. Learn about the use of earth materials and geologic techniques for criminal investigation from an expert in the field. A readable account of the history, methods and famous cases involving soil and rock evidence. 250 pages.

240-842 1 lb. 20.00

An Illustrated Guide to Fossil Collecting

Casanova & Ratkevich. Locations of fossils in the U.S., cataloging, and preserving. 240 pages.

240-447 8 oz. 9.95



Firefly Guide to Gems

Oldershaw. Richly illustrated guide to the identification and uses of gemstones from around the world. Clear and accessible introductions to the geology, chemistry and properties of gems are included, as well as world maps of gem locations, over 850 photos and more than 50 diagrams and drawings. 224 pages.

240-358 8 oz. 14.95

Finding Fault in California: An Earthquake Tourist's Guide

Hough. With humor and ease, geologist Susan Hough leads you to the state's most accessible and active faults, telling the stories behind the major temblors that have shaken the region. Includes GPS coordinates, photographs, and maps. 264 pages.

240-843 1 lb. 18.00

Handbook of Rocks, Minerals & Gemstones

Schumann. This essential guide discusses the science of minerals—origin, properties, structure, and classification. Written for the layman and scientist followed by a description of the properties and characteristics of each rock and mineral. Complete with 600 color photos. 380 pages.

240-359 12 oz. 22.00

Florida's Geologic Treasures

Comfort. For those seeking natural collectibles in the sunshine state, geologic surprises abound. Minerals and fossils are in abundance. Quarry cuts and off shore coral forests showcase the state's treasures.

Explore collecting sites across the state. Includes maps, color photos, and extensive information on clubs, museums. 160 pages.

240-464 1 lb. 11.95

Gem and Mineral Collector's Guide to Idaho

Ream. Revised and updated. Over 36 localities where plume agate, garnet, opal, petrified wood, topaz and other gems and minerals can be found. Maps and photos. 80 pages

240-241 6 oz. 9.95

Colorado Rockhounding

Voynick. The "Bible" of Colorado Rockhounds. Covers more than 350 collecting sites, with an overview of the state's geologic origins and mining history. County-by-county guide illustrated with maps and B/W photos. 392 pages.

240-462 1 lb. 20.00

Minerals of Arizona: A Field Guide for Collectors

Bearce. The complete guide for both novice rockhounds and experienced mineral collectors with new and exciting collecting sites that exist and are accessible. Includes topographical maps, full color and B/W photos, and site difficulty scales. 224 pgs.

240-477 1 lb. 23.00

Field Guide to Geology

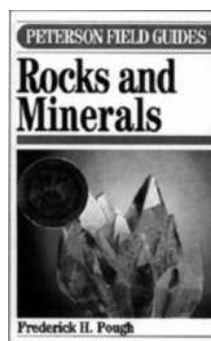
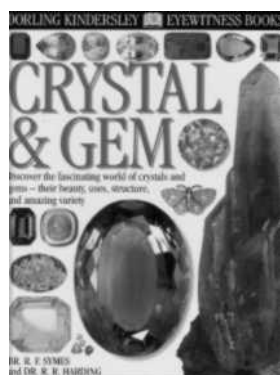
Lambert. Excellent basic reference to the ingredients and processes that forged our planet. Diagrams, maps, and photos. 256 pages.

240-341 1 lb. 16.95

Rocks and Minerals of California

Brown, Allan, Stark. Revised edition. Illustrations, color photos, and maps make this a handy reference book. Also provides listing of minerals along with the US topo maps on which they can be found. 200 pages.

240-413 1 lb. 11.95



DK Handbook Series

(formerly Eyewitness Handbooks)

Designed for beginners and experienced collectors alike, these field guides make identification of individual specimens sure, simple and straightforward. Each entry has a full color illustration as well as color-coded bands that provide at-a-glance facts for quick reference. Easy to use and beautiful to look at, this series is an invaluable resource for every collector. Softcover, 5 3/4" x 8 1/2".

DK Handbook of Gemstones

Pellant. 180 pages.
240-439 1 lb 20.00

DK Handbook of Fossils

Walker & Ward. 320 pages.
240-440 2 lbs 20.00

DK Smithsonian Books

Superb color photographs on every page make this series of books outstanding. Texts are written by experts in a clear, concise style that is suitable for youngsters and adults. Even children who cannot yet read will enjoy the many beautiful photos illustrating the particular subject of the book. These are excellent books, with 8 1/2" x 11" hardbound covers averaging over 60 pages each.

Eyewitness Rocks and Minerals

240-432 1lb. 4 oz. 15.99

Eyewitness Crystal and Gem

240-433 1 lb. 4 oz. 15.99

Eyewitness Fossil

240-434 1 lb. 4 oz. 15.99

Eyewitness Dinosaur

240-435 1 lb. 4 oz. 15.99

Minerals

Hochleitner. A deluxe field guide and mini-encyclopedia for amateur geologists, rock collectors, and nature lovers. Identify minerals using 500 full-color photos plus 300 drawings of crystals. The author's color-key identification method, plus the fold-out guide helps for quick identification in the field. Provides information on fundamentals of mineralogy, and much more. Handy 5 1/2" x 8 1/2". 237 pages.
240-308 1 lb. 16.95

Illustrated Guide to Common Rocks and Their Minerals

Brown & Allan. Provides the basic groundwork for understanding and identifying common rocks by addressing the general nature and three main classifications of rocks and the component minerals that make them. 59 pages.
240-483 8 oz. 4.95

Gem & Lapidary Materials

Zeitner. A complete handbook of common materials used in the lapidary arts throughout history and up to the present. Lavishly illustrated with full-color photos 350 pgs.
240-484 1 lb. 40.00

Audubon Field Guide to North American Fossils.

Contains 474 excellent color identification photos of fossil sponges, corals, trilobites, shells, etc. Also 33 color photos of fossil-bearing rocks, plus 15 maps. 420 fossils covered in detail with notes on 300 others. Size 4" x 7 1/2" x 1 1/4" thick with leathrette cover. 846 pages.
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Audubon Field Guide To North American Rocks and Minerals

Chesterman. 794 color plates are cross referenced to detailed descriptions of field patterns and rock locations. Excellent and comprehensive. 850 pages.
240-305 2 lbs. 19.95

Peterson Field Guide To Rocks and Minerals

Pough. Detailed descriptions of 270 minerals: geographic distribution, physical properties, chemical composition, crystalline structure, and more. Simple procedures and tests to ensure accurate identification. Portable format, color photos. 320 pages.
240-485 1 lb. 20.00

Guide To Rocks & Minerals Of The Northwest

Leaming. Introductory, full-color photo guide that highlights the best and much-prized rocks and minerals of the northwest. 32 pgs.
240-350 6 oz. 5.95

The Complete Guide Book About Geodes Of The Midwest

Smith. Learn how to locate, collect, crack and open, clean and preserve, identify and classify, and show and display geodes in Illinois, Iowa and Missouri. Includes color photos, charts, and tips about geodes. 75 pgs
240-351 8 oz. 17.95

Field Geology Illustrated

Maley. Revised edition. An excellent field reference to aid in recognizing, interpreting and describing geologic features at the outcrop. Detailed descriptions, illustrations and photographs of geologic features in their field setting. Contains 235 B/W photos, each accompanied by an interpretive sketch and detailed description. 316 pages.
240-342 1 lb. 35.00

Gem & Jewelry Pocket Guide

A Traveler's Guide to Buying Diamonds, Colored Gems, Pearls, gold and Platinum jewelry. Newman. A concise overview of gems, gold, and platinum and what to look for when buying them. Know what the right questions are to ask, how to spot fake and lab-grown gems, jeweler's marketing ploys, and how to avoid hassles with customs. 156 pgs,
240-489 6 oz. 11.95

Rocks From Space

Norton. This non-technical introduction to the fascinating meteorites, asteroids, comets, and impact craters is lavishly illustrated and tells the story of cosmic debris—the science, superstition and folklore, and the tales of people who collect them. 449 pages. Revised.

240-456 2 lbs. 32.00

Simon & Schuster's Guide to Rocks and Minerals

Ed. Prinz, Harlow, Peters. Includes over 1000 illustrations, 600 in full color. Contains precise information on appearance, classification and formation on rocks and minerals. 608 pages.

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Simon & Schuster's Guide to Gems and Precious Stones

Ed. Lyman. Over 450 full-color photos and comprehensive entries on the major gems and precious stones of the world. 384 pgs.

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Simon & Schuster's Guide to Fossils

Arduim. More than 280 full-color photos of the most significant fossils from animal and plant groups, plus information on age, appearance, geographic distribution, environment, classification and more.

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Where To Find Gold in Northern California

Klein. This new and current book reveals the secrets to finding the best gold-bearing areas in northern California with helpful maps, photos and illustrations. Learn about the new tools, methods and equipment from a veteran prospector, miner and treasure hunter. 125 pages.

240-509 1lb. 10.95

You Can Find Gold With a Metal Detector

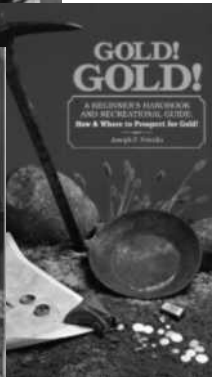
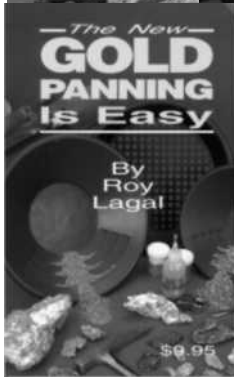
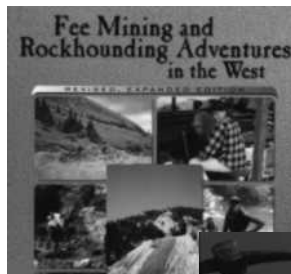
Garrett & Lagal. Complete information on using detectors to find gold nuggets, veins and ore with illustrated panning instructions. 140 pages.

240-551 1 lb. 9.95

Recreational Gold Prospecting For Fun and Profit

Butler. This informative book is for those who have thought about looking for gold as a hobby. Learn the basic geologic properties of gold and the terrain where it is found: become familiar with the various techniques and equipment used by prospectors; and get tips on how to plan a family gold prospecting adventure. 206 pages.

240-552 1 lb. 12.95



Golden Guides

Handy reference guides to add pleasure and knowledge to your hobby. Take along on field trips. All have color illustrations on almost every page. Clear, concise descriptions written by experts. Books measure 4" x 6" and average 150 pages or more.

Rocks and Minerals: A Field Guide to Identification

Measures 4½" x 7½" with 280 pages.

240-417 14 oz. 14.95

Rocks and Minerals

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Fossils

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Geology

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Fee Mining and Rockhounding Adventures in the West

Monaco. Revised edition. Informative guide to over 94 collecting locations. Also includes 150 museums, caves, points of interest and fairs and festivals throughout the western states. Seasons, days and hours of operation are included for each site as well as the address, directions, cost, tools and supplies needed. Organized by state, it is an invaluable guide for the prospector or gem hunter. 240 pages.

240-563 8 oz. 15.95

Fee Mining and Rockhounding Adventures in the East

Monaco. New version for the Eastern states. Contains a guide to the collection locations, points of interest and fairs and festivals in the East.

240-564 8 oz. 15.95

Gold! Gold!

Petralia. Beginner's handbook. Historic and geographic background. Why gold is where it is and how to recover it. Old and new mining methods. 148 pages.

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Gold Panning is Easy

Lagal. Presents gold panning methods. Discusses prospecting with the metal and mineral detector as well as traditional gold panning methods. Illustrated. 134 pages.

240-504 8 oz. 9.95

Gold Fever - The Art of Panning and Sluicing.

De Lorenzo. Explains the techniques of panning for gold, how to use a sluice box, where to look for gold, and more. Filled with illustrations and maps. 80 pages.

240-501 6 oz. 6.95

Advanced Nugget Shooting: Prospecting For Gold With a Metal Detector

McCulloch. Previously 'Nuggetshooting', this newly revised book is packed with information on selecting a detector, tuning a detector, other necessary equipment and techniques, where to go and how to find the elusive gold nuggets. 20 pgs.

240-553 6 oz. 5.95

Gold Prospectors's Handbook

Black. Geological background, dynamics of stream flow, how to pan for gold, and what tools to use. Non-technical but advanced book for the prospector. 176 pages.

240-506 1 lb. 10.95

Gold Digger's Atlas

Johnson. This complete book of maps shows where gold has been found in the Western United States. 64 pages.

240-507 8 oz. 6.00

Where to Find Gold & Gems in Nevada

Klein. Gold-bearing regions and selected gem and rock hound areas organized by county. Maps, photos, directions and interesting historical anecdotes. 110 pages.

240-454 8 oz. 8.95

Instant Guide to Rocks and Minerals

Feger and Fitzsimons. Compact identification guide to the most familiar rocks, minerals, and crystals of North America described and illustrated in color. Hard cover. 128 pages. Available Spring 2005.

240-354 1 lb. 6.99

Gemstones of the World

Schumann. With nearly a million copies in print, this revised and expanded edition is the most complete book ever published on the subject. All known gemstone types are discussed, and over 1,500 multi-color photos showcase each gemstone in both its natural state and its polished and cut renditions. A special section on rocks as precious Stones is included as well as new-on-the-market stones, synthetics and imitations. The essential reference for hobbyists, jewelers and rockhounds. 272 pgs. 240-347 1 lb. 24.95

Gem Care

Ward. Contains everything you need to know to properly care for your jewelry and gems from abalone to zoisite. When to use ultrasonic cleaners; which chemicals are safe; how to care for pearls; how to clean precious metals, and much more. Illustrated throughout with the high quality photos that characterize this series. 32 pages. 240-338 8 oz. 9.95

Fred Ward Book Series

This popular series focuses on individual gems, their color, history and lore. Gives buying tips and sources. All books in the series feature beautiful color photos throughout. 64 pages. Shp. Wt. 1 lb. ea.

- 240-332 ... DIAMONDS 14.95
- 240-333 ... EMERALDS 14.95
- 240-334 ... PEARLS 14.95
- 240-335 ... JADE 14.95
- 240-336 ... RUBIES & SAPPHIRES ... 14.95
- 240-344 ... OPALS 14.95

NEW Agates: Treasures Of The Earth

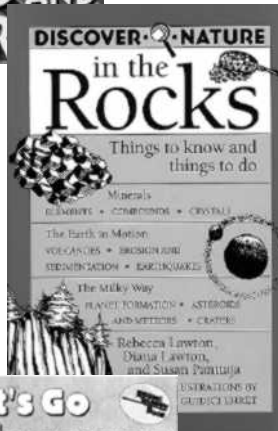
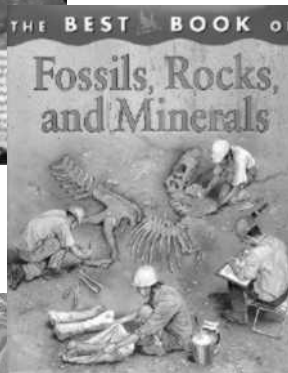
Pabian, Jackson, Tandy and Cromartle. The agate is one of the world's most strikingly beautiful semi-precious gems, and collectors worldwide are drawn to the stone's infinite variety of colorations and banding. This identification guide is comprehensive and easy-to-use. It is illustrated throughout with full color photographs and includes a worldwide listing of where agates are found. Hard cover, 192 pages. 240-360 1 lb. 35.00

NEW The Beauty of Banded Agates: An Exploration of Agates from Eight Major World Sites

Carlson. Gorgeously present 12" x 9" photo journal of banded agate sites from around the world, with over 260 museum quality color agate photos. Explore the beautiful features of each specimen as well as the collecting histories for each site; full glossary, references and index. 160 pages. 240-361 1 lb. 38.95

Painting on Rocks for Kids

Wellford. Great book for kids (and adults). Shows how to draw a design on a rock with a pencil, then paint the details to make lizards on rocks, bugs, rockburgers and other fun foods, flowers, weird eggs and more. Every page in color with designs and instructions. 64 pages. 240-816 12 oz. 12.99



Let's Go Rock Collecting

Gans. Easy-to-understands text introduces children ages 5 to 9 to rocks, how they are formed, what they are made of, and how they are used. Original color artwork and color photos. 32 pages. 240-854 1 lb. 5.99

Wonders of Our World

Morris. This series of books offers young readers 7-14 a lively and visually exciting introduction to the physical world. Each book features full-color photographs and diagrams that illustrate and explain the world around us. 32 pgs.

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240-804 6 oz. 6.95

EARTHQUAKES

240-849 6 oz. 6.95

VOLCANOES

240-807 6 oz. 6.95

Everybody Needs a Rock

Baylor & Parrall. When children follow this author's highly individualistic rules for finding just the right rock for themselves, they may discover an understanding and interest for rocks as well. Ages 3-7. 31 pgs.

240-802 6 oz. 6.99

The Best Book of Fossils, Rocks, and Minerals

Pellant. The perfect book for the budding explorer. Find out how to recognize rocks and become an expert fossil hunter. Discover the mysteries of minerals and learn all about the Earth's precious treasure, from gems and metals to coal and oil. Includes illustrations, reference section, glossary and index. Hard cover, 32 pages. 240-805 6 oz. 12.95

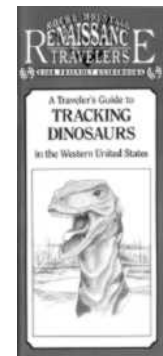
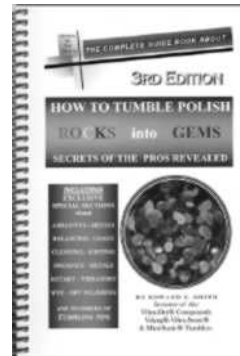
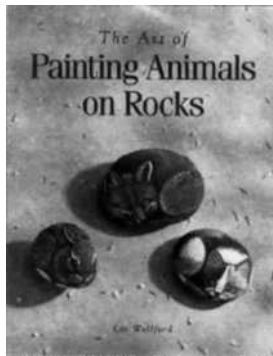
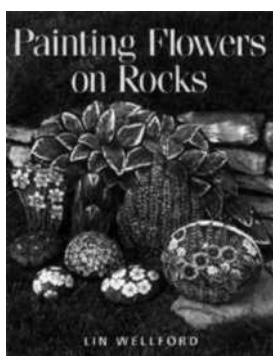
DK Backpack: 1001 Facts About Rocks and Minerals

Crammed with 1001 facts researched and written by experts. Contains more than 550 illustrations and photographs. Brings the world of rocks and minerals to life. Ages 10 and up. 192 pgs.

240-803 8 oz. 8.99

Discover Nature in the Rocks: Things to Know and Things to Do.

Lawton. Combines dozens of simple, non-intrusive activities with detailed illustrations and information text to provide a friendly introduction to a hands-on study of rocks and the earth. Great for adults & kids. 224 pgs. 240-840 1 lb. 14.95



Opal Cutting Made Easy

Downing. The novice is introduced to cutting opal using an explicit step-by-step method with numerous illustrations. Subjects include orienting tips, sawing, cutting to size and yield, creating doublets and triplets. 76 pages.

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Cox. Illustrations, photos, and detailed instructions will tell and show you how to cut a cabochon. Everything to start you on your way to expert cutting.

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Cox. Learn how to master special shaped cabochon cutting, assembled stones, star stones and cat's eyes. Special sections on opal and jade. 65 pages of detailed, illustrated text.

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How to Tumble Polish Gemstones

Wexler. Step-by-step instructions for turning pebbles and rough stones into sparkling jewels. A guide to the type of tumbling equipment available and how to use it.

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Handbook of Gemstone Carving

Wertz. An easy-to-follow book on carving gemstones. A complete guide for amateurs with step-by-step instructions for carving flat work, in the round, and portraits in stone. Filled with instructions and photos.

240-232 6 oz. 5.00

Introduction To Lapidary

Kraus. Excellent book for the amateur lapidary and hobbyist. Presents different types of gem cutting and polishing, from tumbled stones, cabochons and bead making to sphere making, carving, and faceting. Describes basic processes and techniques and provides helpful hints. Explains equipment used. Photos on every page, many in full color. 196 pages. Softbound.

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DVD - Cabochon Making For Pleasure and Profit

Jacobsen/Morrow. Everything you need to know to get started on your way to making beautiful cabochon cut stones! Award winning instructors take you behind the scenes and guide you step-by-step on how to cut, grind, sand and polish cabochon stones. Within hours, you will be able to begin cutting and polishing your own beautiful stones for jewelry or specimens of all the wonderful stones available. Even the experienced lapidary can learn new methods from this video. Well done, easy to follow. Approx. 1 hour.

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VCR Tape - Opal Cutting Made Easy

Downing. Covers step-by-step instructions for selecting, cutting and polishing opals. About 30 minutes.

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Gem Tumbling and Baroque Jewelry Making

Victor. Gives detailed information on the various stages of grinding and polishing, how to avoid common mistakes, types of tumblers, and a section on baroque jewelry making. Illustrated. 58 pages.

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Turquoise Unearthed: An Illustrated Guide

Lowry. The definitive resource for turquoise rockhounds and serious collectors alike. Get the fascinating history of turquoise mining, see beautiful colors and forms that make this gemstone like no other. Lavishly illustrated throughout. 80 pages.

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How To Use Diamond Abrasives

Riggie. Subjects cover methods of cutting and polishing gemstones with diamond abrasives, from using sawblades on trim and slab saws to diamond grinding wheels and machines. Well illustrated with drawings and photographs.

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Wallford's Painting on Rocks Series

Almost anyone can learn how to turn rocks into animals, pets, a flower garden and even a town with easy-to-use acrylic paints. These guides have step-by-step instructions with color photos. Soft bound 8½" x 11" .

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Rock Sculpture - The Joy of Stone Carving

Stage. Covers materials suitable for carving; anatomy, proportion, motion in figures; and equipment. Photos. 46 pages

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How to Tumble Rocks Into Gems—Secrets of the Pros Revealed

Smith, 2nd. Edition. A guide to tumble-polishing rough rock into finished gemstones. Covers basic types of equipment, selecting materials, fillers, abrasives, etc. along with steps in processing. Covers stone and metal polishing in rotary and vibratory type tumblers. Illustrated with charts in easy-to-follow style. Spiral-bound.

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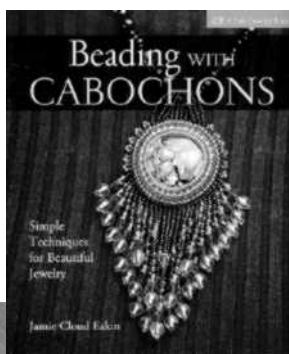
A Traveler's Guide to Tracking Dinosaurs in the Western US

Panezner. A handy guide with color photographs, map and listings for exhibits and museums. It includes a geologic overview and explains about the dinosaurs that lived in this region and where their fossils can now be found. 48 pages.

240-357 8 ozs. 6.95

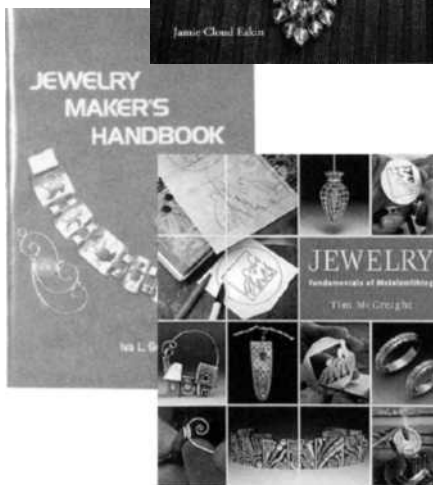
Beading with Cabochons: Simple Techniques for Beautiful Jewelry

Eakin. The only current comprehensive guide to working with cabochons that covers all the basics, as well as a range of new creative techniques and hot trends. Includes sections on tools and materials, bead selection and fabulous, all color, photos and illustrations. Hard cover. 128 pages. 240-136 12 oz. 24.95



Jewelry Maker's Handbook

Geisinger. All techniques are shown step-by-step which allows the reader to follow along and create the project in the book. Profusely illustrated with photos and drawings. 240-127 6 oz. 5.95



How To Design Jewelry

Austin and Geisinger. Design is the element that adds something special to jewelry creations. Answers will be found in this book which will enable the craftsman of fashion jewelry to make pieces with that professional artistic appearance. 240-128 6 oz. 4.50

How To Repair Jewelry

Phelps. Detailed, step-by-step instructions show the jewelry craftsman how to fix broken chains, replace lost parts, rebuild broken prongs, remove and re-set gemstones, solder without removing gems, size rings and much, much more. Also tells how to remodel old pieces. 240-129 6 oz. 5.00

Jewelry Craft Made Easy

French. For the hobbyist who prefers purchasing already finished gemstones, mountings and findings for assembling beautiful and interesting jewelry. 240-130 6 oz. 5.95

Indian Jewelry Making Vol I & II

Branson. A beautiful all-color photographic presentation of traditional silversmithing methods. Techniques, tools and designs are clearly shown. Spiral bound for ease in bench work. 240-131 12 oz. 21.95

Jewelry Making Techniques Book

Oliver. Guidebook for blending over 50 simple techniques, such as cutting, forming, soldering, casting and stone-setting with more sophisticated methods for creating eye-catching jewelry. Covers weighing, measuring, tools, decoration, assembly, finishings, fittings along with projects that included mixing metals and stones for a variety of jewelry pieces. 128 pgs. 240-123 6 oz. 22.99

Practical Casting

McCreight. The first six chapters deal with wax investment casting, the method most used in jewelrymaking. Remaining chapters describe alternate casting techniques. Spiral binding. Illustrated. Glossary. 122 pages, 6" x 9". 240-100 9 oz. 18.95

Jeweler's Resource: A Reference of Gems, Metals, Formulas and Terminology for Jewelers

Knuth. A unique and practical tool for the bench jeweler or jewelry student. The most complete counter reference available for the retail jeweler. Easy to follow text and illustrations. Spiral-bound. 112 pages. 240-124 6 oz. 21.95

Design Language

McCreight. One hundred art-related terms are structurally and etymologically examined. Helps people to learn design by using vocabulary to explore style, form and composition. Hard cover, 191 pgs. 240-125 8 oz. 10.95

Facet Cutters Handbook

Soukup. Here's what the author says. . . "I took it upon myself to write a book that would help beginners in our club faceting class." This book contains everything one needs to know in order to facet a gemstone expertly. 22 beautiful cuts. 240-200 6 oz. 5.00

Art Clay Silver & Gold: 18 Unique Jewelry Pieces To Make In A Day.

Truty. An all-in-one resource for working with art clay silver and gold clay. Color photos illustrates step-by-step instructions for making 18 gorgeous silver and gold pieces that you can make in a day. 128 pgs. 240-140 1 lb. 21.99

The Art of Gem Cutting

Dake. Teaches how to buy rough stones, cut the gems, choose the right equipment, and how to properly use the equipment. Gets you started on the right path into the hobby of gem cutting. 240-246 6 oz. 5.50

Lost Wax or Investment Castings

Sopcak. A how-to-do manual that shows you how to make the equipment you need and how to use it. Includes chapters on making a vacuum investment mixer, burn-out oven, pressure casting machine, wax wire extruder, and more. Explains how to invest wax patterns, make rubber molds and duplicate patterns. Illustrated. 64 pages. 240-101 6 oz. 5.00

Findings & Finishings

Bateman. The right findings and finishings transform humdrum jewelry into stunning accessories. This essential guide shows you how to "focus on the details" to move your skills to the next level. Filled with detailed steps and descriptions, color photos and exquisite style design ideas. 116 pages. 240-138 1 lb. 21.95

Jewelry: Fundamentals of Metal-smithing

McCreight. From the author of "The Complete Metalsmith" comes this brilliantly written book examining the basic techniques of this ancient and accessible craft: fabricating, surface treatments, joining, finishing, stone setting, chain making, mechanisms, and casting. Illustrated with photos, drawings, and examples of exceptional contemporary jewelry. Hard cover, 143 pages. 240-204 2 lbs. 29.95

The Complete Metalsmith: An Illustrated Handbook

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The Encyclopedia Of Jewelry Making Techniques: A Comprehensive Visual Guide to Traditional and Contemporary Techniques.

McCrath. Just a few of the entries covered include acrylics, etching, inlaying, enameling, casting, stamping, blanking, patinating, oxidizing and chain making. Complete with instructions for designing and presenting jewelry concepts as working drawings. Step-by-step color photos make instructions easy to understand. Hardcover, 176 pages. 240-201 1 lb. 27.95

Working With Precious Metal Clay

McCreight. Learn 50 projects that show how to use the material by showing specific applications with 25 techniques. An additional section describes 10 tools that you can make in your own studio. Complete with 300 drawing, directions for making your own tools, and a handy wire binding. A must have book on this new revolutionary material. Hard cover. 128 pgs. 240-139 1 lb. 29.95

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Jenkins and Thrasher. Step-by-step instructions and illustrations tell how to make pins, pendants, chains, necklaces, rings, bracelets, earrings, stickpins and novelties. 240-135 6 oz. 5.00

Wonderful Wire & Bead Crafts

Baskett. Make useful household items or unique keepsakes to treasure with more than 50 projects using different wires, stones, beads and more! Find out about the healing powers and qualities attributed to various beads and stones, and how to use them to craft lovely jewelry pieces. 128 pgs. 240-199 1 lb. 14.95

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Peterson. Handcraft distinctive jewelry based on Old English designs and techniques designed by Vikings. Step-by-step diagrams and 70 projects—from easy to challenging. Hard cover 60 pgs. 240-210 1 lb. 14.95

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Soukup. Here is an easy-to-learn method for fabricating soldered jewelry pieces. All steps are clearly shown with photos and detailed text. 240-134 6 oz. 5.00

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Allison. "All the skills and tools you need to get started." Every basic step illustrated in full color and clear close-ups. Covers working with beads, making loops, clamps, etc., and bending gold and silver wire. 9" x 11" spiral bound. 110 pages. 242-102 1.5 lbs. 19.95

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Simple Glass Beading

Wood. Readers will discover the glorious color and vibrancy of glass beads that can be used to create eighteen beautiful projects including purses, boxes, picture frames, cushions and scarves. A wide range of beading techniques is shown and explained to create your project. Hard cover. 112 pages. 200 color photos. 240-109 2 lbs. 22.99

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Moods in Wire: An Extended Guide to the Fine Art of Wirewrapping

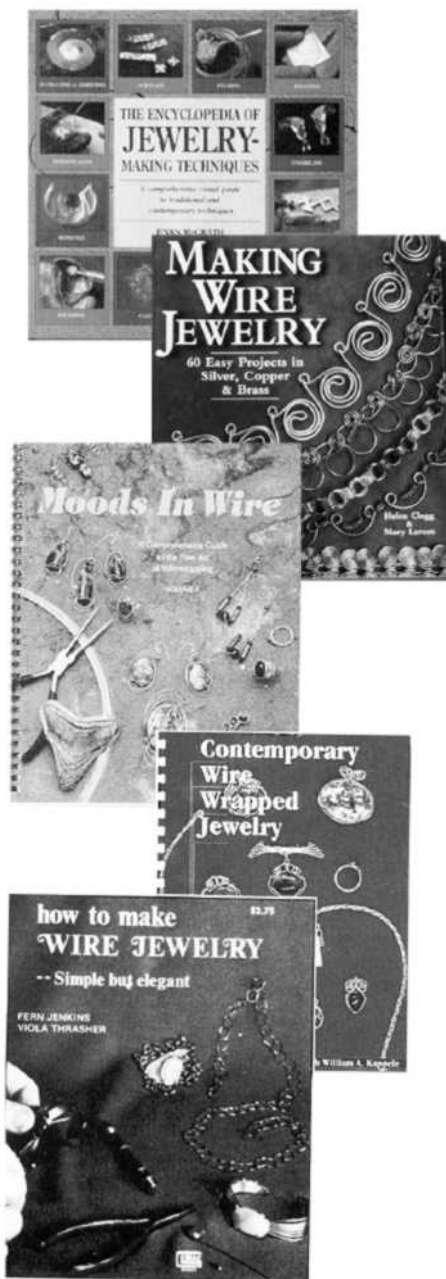
Sinclair. Second Edition. Still the best instruction book on wirewrapping. Over 130 pgs. and hundreds of easy to follow illustrations taking you step-by-step from basic to advance designs. Book is wire bound so it will lay flat when being used as an instruction manual. 242-157 1 lb. 29.95

Beaded Jewelry With Found Objects

Rodgers. Whether it's something you found in the local hardware store or picked up on your last outdoor adventure, you can convert everyday objects into jewelry pieces. Shows beading techniques, including strap and fringe variations. 225 how-to-illus. 100 color photos. 128 pages. 8½ x 11. 240-193 1 lb. 19.99

Making Wire jewelry

H. Clegg & M. Larom. Making wire jewelry is easy to learn and fun to do. All it takes is wire, pliers, and a few short hours. Learn how to twist, bend and turn copper, brass or silver into graceful necklaces, earrings, bracelets, and rings with more than 60 projects. With this clearly illustrated "how to" book and some easy to find tools, you can create a wardrobe of fabulous handcrafted metal jewelry. Softcover. 112 pages. 240-202 1 lb. 18.95



Step-By-Step Bead Stringing

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Beads: The Art of Stringing

Ragan. Simplified, step-by-step guide with many different knotted designs. 58 pages.
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The Beader's Bible

Crouchley. One of the largest collections of patterns ever supplied in one book. Contains more than 300 fabulous bead designs with dozens of applications for purses, pendants, chokers, necklaces, bracelets, napkin rings, picture frames and more. Every design is charted in full color using realistic bead graphics plus a photograph to show the finished piece. All essential information provided. Hardbound, spiral. 6¾ x 8". 128 pages, all in color.
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Ray & Wilke. Everyone from the novice beader to the experienced jewelry maker will find plenty to love and learn in this book. Written by experienced jewelry designers who walk you through the basics, then launch into a plethora of designs for you to replicate. Featured are 75 projects along with 250 full color photos and illustrations to provide easy-to-follow instructions. Covers basics, tools, tips, style, color and design options. Softbound, 8½ x 11, 144 pages.
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A combined five author contribution that brings a wealth of creativity to making your own dazzling, colorful and wonderfully textured beads. Get unique effects using felt, metal, glass, polymer clay and more. Find out how to make the most of each treasure by using them in new jewelry designs to wear. 140 pages.
240-120 2 lbs. 17.95

Basics of Bead Stringing

Kanan. Gives instructions for the basic steps and techniques for stringing beads. Shows how to repair and restring your old jewelry, and design and string new ones. Illustrations & color photos. 82 pages.
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Vintage-Style Beaded Jewelry

Morrell. The growing revival of interest in vintage style jewelry makes this book a must for those wanting to create their own modern heirlooms, or repair damaged costume jewelry and thrift store treasures. Clear step-by-step projects and the use of simple techniques such as wiring and beading mean that even the beginner can produce stunning results. Shows 35 original projects to make, plus offers ingenious ideas on reusing old junk and thrift store buys. Softbound. 8½ x 11. Color. 128 pages.
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The Best Little Beading Book

Conner. The most complete beadbook of its kind in the market today—includes thousands of illustrations, step-by-step instructions for hundreds of projects, glossaries illustrating different beads, materials and equipment and much more. Covers everything from how to make your own beads to how to start a small jewelry business highlighted by full-color photographs of fabulous jewelry. 276 pages.
240-168 1 lb. 28.95

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Durant. This compact, handy, spiral-bound manual will be the most valuable tool in every bead box. Easy-to-read and filled with definitions and illustrations of techniques, beads and tools. step-by-step instructions on many beading projects. 104 pgs.
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Art of Seed Beading

Gourley. Techniques you haven't tried before, a variety of projects to complete, and designs that spark your creativity. Learn several types of stitches, bead weaving, loom work and get tips on the best beads to buy. 128 pages.
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Case. Illustrates the vast choice of beads available, and blends over 80 projects with easy-to-follow instructional techniques and color photos. Whether restringing an old necklace or making something special and new, the information is here, including a glossary of beading terms . 128 pages.
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Beautiful Beading

Withers. Over 30 original designs for hand-made beads, jewelry and decorative objects. Work with exciting materials like polymer clay, paper mache, and metal to create fantastic beads in beautiful colors, textures and patterns. Techniques range from simple, such as threading, to more complex, weaving by hand on a loom. Softcover. 124 pages.
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Making Glass Beads

Jenkins. For thousands of years, glass beads have fascinated people in cultures around the world. This book shows how to make your own with a few simple tools and readily available materials. Detailed instructions and step-by step color photographs guide you through each technique, and examples of beads made by talented artists will inspire you. Hard cover, 112 pgs.
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IV. ORDER & SHIPPING INFORMATION

Use any one of these easy ways to order:

✓ **By toll free phone**
(USA and CANADA)
1-800-253-2954
International
1-760-255-1030

✓ **By fax**
1-760-255-1077
Fax your order any time of day or night.

✓ **By mail**
Simply fill out our handy order form or your own purchase order and send it to our mailing address below.

OUR BUSINESS HOURS

OFFICE: 8 A.M. – 5 P.M. Mon. thru Fri.
To order, check on a previous order or for other inquiries, please call during the hours above. Office closed Saturday and Sunday.
RETAIL SHOP: 9 A.M. – 5 P.M. Mon. thru Fri.
Saturday, 9 A.M. – 4* P.M.
*We close on holidays, and the Saturday preceding Monday holidays, and sometimes early other days. If you are coming from out of town, please call to make certain we will be open, or to make an appointment.

OUR ADDRESSES

MAILING ADDRESS: For all correspondence, remittances and orders.
P.O. Box 1180
Barstow CA 92312-1180
SHIPPING AND PLANT LOCATION:
Please send all returns, etc. by UPS to our plant location:
2620 W. Main St.
Barstow, CA 92311
EMAIL: diamondpacific@aol.com

HOW TO ORDER

State catalog number, item description and size when applicable. Also state year (or year purchased) and model type of machine when ordering replacement parts as some parts vary slightly from model to model.

DEALERS

Please write or call for dealer information.

PRICES

All prices subject to change without notice. **Items will be invoiced at current prices.** We reserve the right to correct any errors in this catalog.

MINIMUM ORDER FEE

Orders under \$20.00, including orders for spare parts, will be charged a \$2.00 service fee in addition to shipping and processing fees.

SPECIAL ORDER FEE

For special order items not manufactured by Diamond Pacific there will be a \$10.00 Special Order fee in addition to shipping and processing charges.

PAYMENT

Payment must accompany order. We do honor Visa, Master Card, Discover Card, and American Express. Send your card number, expiration date, and your signature when ordering by mail if you wish to use a credit card. California residents must add sales tax.

SHIPPING CHARGES

When sending payment with your order, please allow enough to cover shipping and processing charges. Any overage will be refunded upon completion of your invoice. Shortages may be sent COD.

To determine shipping and processing charges, please refer to Shipping Information on the following pages. Large equipment will be shipped via truck freight prepaid and billed to your invoice.

SHORTAGES

Orders may be shipped in two or more cartons, and will be marked that way. If a shipment is not completed within a reasonable time, usually three or four working days, contact your carrier and Diamond Pacific.

For shortages in otherwise complete shipments, contact Diamond Pacific immediately and provide the invoice number as shown on the packing slip.

Examine the contents and packing material carefully for small items that may have been missed during the unpacking of the parcel.

RETURN OF MERCHANDISE

Any merchandise received that is not satisfactory may be returned to us within ten days of receipt for full refund of **purchase price of item only**, provided merchandise is returned in its ORIGINAL CONDITION and shipping is prepaid. Insure the items for full value as we cannot be responsible for loss or damage in return transit. Any item returned after the 10 days may not be accepted for refund and will be subject to a 20% re-stocking fee.

ORDER & SHIPPING INFORMATION

USA ORDERS

We generally ship United Parcel Service or Fed Ex Ground Services whenever possible. Include your complete shipping address along with your mailing address and phone number. UPS/FEDEX will not deliver to a post office box. If you require parcel post, please advise us.

CANADIAN ORDERS*

We ship UPS to those Canadian areas having that service, otherwise, orders weighing less than 66 lbs. will be shipped parcel post. Heavier orders will be shipped truck freight. **ORDERS CANNOT BE SHIPPED COD INTO CANADA.**

FOREIGN ORDERS*

We ship parcel post on orders below the weight limits for your country, and air or ocean freight collect on heavier orders. Generally, air freight is the best way. Please include complete shipping instructions. Fed Ex, UPS, DHL or other air services are available to most countries. Brokerage and Customs fees are the responsibility of the Customer. We do not have any information on these charges; they are incurred at your country's Port of Entry.

SPECIAL AIR SERVICE*

Please call for quotes if you wish air service. We ship UPS 2nd Day or UPS Next Day service within the USA.

*** NOTE: We cannot ship adhesive products to Canada or elsewhere outside the USA. Also, we cannot ship these products within the USA via air freight.**

DAMAGE IN SHIPMENT

Open your packages upon receipt. SAVE ALL PACKING AND CARTONS UNTIL YOU ARE CERTAIN MERCHANDISE IS NOT DAMAGED. Any adjustment for damage to merchandise in shipment must be made to the carrier.

Please Note →

If there is any visible damage at time of delivery, the carrier must make note of this on receipt. In case of

concealed damage discovered after unpacking, contact the delivery carrier immediately and request an inspection. SAVE ALL PACKING AND CARTONS.

DELIVERY LEAD TIME AND BACK ORDER POLICY

Orders for standard catalog items are normally packed within 3–5 business days and shipped by ground carrier. Please allow sufficient transit time from our factory to your destination when estimating delivery time. For large quantities, special order or modified items, please call for prices and delivery time. If an item is not available for shipment within the delivery time, it will be back ordered and shipped as soon as possible by ground carrier. Back ordered items will be indicated on each shipment's packing list.

Our back order policy does not apply to International shipments because of shipping restrictions. These items should be added to your next order.

HOW TO DETERMINE YOUR SHIPPING CHARGES

To determine your shipping and processing charges, you will first need to find your Zone by consulting the Official Zone Chart below. Then use the chart on page VI to find the shipping charge in your zone column for the weight of your order. Use the next full pound rate for fractions of a pound.

The rates on the chart do include insurance coverage up to \$25,000.00.

Shipping charges listed in the chart on page IV are subject to change without notice. We will refund any differences and shortages may be sent COD. A \$8.50 COD fee will apply in addition to the shortage.

OFFICIAL ZONE CHART

This chart shows the zone from Barstow, California, for your ZIP Code. To use the chart find your ZIP Code Prefix (the first three numbers of your ZIP Code). Your

delivery ZONE from Barstow is shown to the right of the prefix. To determine the estimated shipping costs use the standard shipping/handling chart on the next page.

ZIP CODE PREFIX	UPS ZONE	ZIP CODE PREFIX	UPS ZONE	ZIP CODE PREFIX	UPS ZONE	ZIP CODE PREFIX	UPS ZONE	ZIP CODE PREFIX	UPS ZONE	ZIP CODE PREFIX	UPS ZONE	ZIP CODE PREFIX	UPS ZONE
004-306	8	399	8	492	8	565	6	636-639	7	700-709	7	797-799	5
307	7	400-402	7	493-495	7	566-567	7	640-649	6	710-711	6	800-812	5
308-324	8	403-418	8	496-497	8	570-576	6	650-652	7	712-716	7	813-815	4
325	7	420-424	7	498-499	7	577	5	653	6	717-719	5	816-832	5
326-349	8	425-426	8	500-503	6	580-588	6	654-655	7	720-725	7	833	4
350-362	7	427	7	504	7	590-591	5	656-676	6	726-738	6	834-838	5
363	8	430-459	8	505	6	592-593	6	677-679	5	739	5	840-847	4
364-367	7	460-469	7	506-507	7	594	5	680-689	6	740-768	6	850-851	3
368	8	470	8	508-516	6	595	6	690	5	769	5	852	4
369-375	7	471-479	7	520-559	7	596-599	5	692	6	770-789	6	853-854	3
376-379	8	480-489	8	560-562	6	600-634	7	691-692	6	790-794	5	855-860	4
380-397	7	490-491	7	563-564	7	635	6	693	5	795-796	6	863-864	3
												865-874	4
												875-877	5
												878-879	4
												880-885	5
												889-892	3
												893-898	4
												900-935	2
												936-939	3
												940-961	4
												970-975	5
												976	4
												977-994	5

SHIPPING AND PROCESSING CHARGES*

To determine your shipping and processing charges, you will first need to find your Zone by consulting the Official Zone Chart on page V. Then find the shipping charge in your Zone column

for the weight of your order. Use the next full pound rate for fractions of a pound.

* See page V for complete information

We will bill at current shipping charges.

Lbs	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Lbs	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
1	\$7.96	\$8.09	\$8.28	\$8.53	\$8.87	\$8.98	\$9.14	76	\$39.39	\$44.22	\$47.45	\$53.41	\$61.24	\$69.48	\$75.52
2	\$8.23	\$8.59	\$9.22	\$9.34	\$9.85	\$10.04	\$10.49	77	\$40.72	\$45.46	\$48.63	\$54.59	\$62.35	\$70.78	\$76.08
3	\$8.44	\$8.94	\$9.72	\$9.96	\$10.51	\$10.79	\$11.55	78	\$42.06	\$46.72	\$49.83	\$55.79	\$63.47	\$72.03	\$76.82
4	\$8.74	\$9.41	\$10.27	\$10.59	\$11.12	\$11.41	\$12.27	79	\$43.40	\$47.97	\$51.02	\$56.98	\$64.59	\$73.13	\$77.87
5	\$9.28	\$9.65	\$10.76	\$11.09	\$11.63	\$12.00	\$12.97	80	\$44.74	\$49.22	\$52.22	\$58.18	\$65.72	\$74.24	\$78.92
6	\$9.47	\$10.03	\$10.98	\$11.43	\$12.01	\$12.47	\$13.42	81	\$46.09	\$50.49	\$53.42	\$59.38	\$66.85	\$75.36	\$79.98
7	\$9.96	\$10.36	\$11.29	\$11.85	\$12.46	\$12.94	\$14.01	82	\$47.46	\$51.74	\$54.61	\$60.58	\$67.97	\$76.47	\$81.01
8	\$10.34	\$10.72	\$11.62	\$12.16	\$12.89	\$13.53	\$14.88	83	\$48.85	\$53.00	\$55.81	\$61.79	\$69.10	\$77.59	\$82.06
9	\$10.69	\$11.05	\$11.92	\$12.51	\$13.26	\$14.22	\$15.76	84	\$50.24	\$54.25	\$56.84	\$62.97	\$70.21	\$78.65	\$83.08
10	\$11.09	\$11.24	\$12.26	\$12.91	\$13.81	\$15.14	\$16.75	85	\$51.66	\$55.50	\$58.03	\$64.17	\$71.34	\$79.61	\$84.12
11	\$11.50	\$11.78	\$12.59	\$13.32	\$14.42	\$16.15	\$17.87	86	\$53.09	\$56.75	\$59.22	\$65.36	\$72.44	\$80.57	\$85.16
12	\$11.90	\$12.22	\$12.95	\$13.74	\$15.08	\$17.15	\$19.08	87	\$54.55	\$58.02	\$60.57	\$66.57	\$73.49	\$81.54	\$86.20
13	\$12.34	\$12.66	\$13.27	\$14.13	\$15.80	\$18.18	\$20.28	88	\$56.02	\$59.27	\$61.76	\$67.76	\$74.55	\$82.50	\$87.26
14	\$12.67	\$13.09	\$13.62	\$14.52	\$16.63	\$19.17	\$21.49	89	\$57.50	\$60.52	\$62.95	\$68.96	\$75.59	\$83.46	\$88.32
15	\$13.06	\$13.56	\$13.96	\$14.94	\$17.47	\$20.20	\$22.68	90	\$58.99	\$61.77	\$64.13	\$69.99	\$76.64	\$84.38	\$89.34
16	\$13.24	\$13.85	\$14.23	\$15.29	\$18.10	\$21.01	\$23.63	91	\$60.30	\$63.02	\$65.47	\$71.18	\$77.68	\$85.34	\$90.40
17	\$13.55	\$14.35	\$14.72	\$15.91	\$18.98	\$22.00	\$24.84	92	\$61.60	\$64.26	\$66.64	\$72.20	\$78.71	\$86.34	\$91.43
18	\$13.89	\$14.85	\$15.24	\$16.68	\$19.86	\$22.99	\$26.04	93	\$62.92	\$64.99	\$67.97	\$73.37	\$79.73	\$87.34	\$92.46
19	\$14.30	\$15.38	\$15.83	\$17.42	\$20.74	\$23.98	\$27.28	94	\$64.30	\$66.76	\$69.18	\$74.43	\$80.81	\$88.37	\$93.54
20	\$14.70	\$15.93	\$16.41	\$18.21	\$21.64	\$25.00	\$28.53	95	\$65.65	\$68.02	\$70.52	\$75.62	\$81.85	\$89.39	\$94.59
21	\$15.13	\$16.47	\$16.97	\$18.95	\$22.51	\$25.99	\$29.74	96	\$67.03	\$69.28	\$71.87	\$76.82	\$82.93	\$90.41	\$95.65
22	\$15.54	\$17.00	\$17.58	\$19.67	\$23.41	\$27.00	\$30.95	97	\$68.41	\$70.53	\$73.05	\$78.00	\$83.97	\$91.42	\$96.71
23	\$15.99	\$17.52	\$18.17	\$20.38	\$24.28	\$27.98	\$32.18	98	\$69.81	\$71.66	\$74.39	\$79.04	\$85.03	\$92.43	\$97.76
24	\$16.41	\$18.02	\$18.77	\$21.06	\$25.17	\$29.00	\$33.41	99	\$71.22	\$72.79	\$75.72	\$80.07	\$86.07	\$93.44	\$98.80
25	\$16.84	\$18.53	\$19.37	\$21.70	\$26.05	\$30.01	\$34.62	100	\$72.63	\$73.95	\$77.06	\$81.27	\$87.13	\$94.45	\$99.85
26	\$17.32	\$19.03	\$19.95	\$22.40	\$26.97	\$30.97	\$35.84	101	\$73.84	\$75.11	\$78.40	\$82.46	\$88.18	\$95.46	\$100.89
27	\$17.78	\$19.51	\$20.55	\$23.09	\$27.88	\$31.94	\$37.03	102	\$75.03	\$76.24	\$79.40	\$83.57	\$89.20	\$96.45	\$101.90
28	\$18.21	\$20.02	\$21.18	\$23.79	\$28.77	\$32.92	\$38.27	103	\$76.22	\$77.39	\$80.41	\$84.53	\$90.19	\$97.43	\$102.90
29	\$18.68	\$20.53	\$21.82	\$24.50	\$29.69	\$33.99	\$39.53	104	\$77.41	\$78.53	\$81.42	\$85.51	\$91.19	\$98.41	\$103.92
30	\$19.17	\$21.08	\$22.47	\$25.23	\$30.63	\$35.10	\$40.78	105	\$78.61	\$79.69	\$82.43	\$86.48	\$92.19	\$99.40	\$104.90
31	\$19.59	\$21.56	\$23.07	\$25.91	\$31.49	\$36.13	\$41.99	106	\$79.83	\$80.86	\$83.44	\$87.46	\$93.20	\$100.38	\$105.91
32	\$19.90	\$22.06	\$23.68	\$26.63	\$32.38	\$37.16	\$43.23	107	\$81.06	\$82.03	\$84.46	\$88.44	\$94.20	\$101.36	\$106.92
33	\$20.34	\$22.59	\$24.29	\$27.36	\$33.23	\$38.21	\$44.44	108	\$82.29	\$83.21	\$85.49	\$89.42	\$95.21	\$102.34	\$107.92
34	\$20.76	\$23.11	\$24.89	\$28.06	\$34.12	\$39.26	\$45.65	109	\$83.54	\$84.39	\$86.51	\$90.41	\$96.22	\$103.33	\$108.95
35	\$21.19	\$23.66	\$25.52	\$28.77	\$35.01	\$40.32	\$46.89	110	\$84.79	\$85.58	\$87.55	\$91.39	\$97.23	\$104.32	\$109.96
36	\$21.61	\$24.13	\$26.08	\$29.46	\$35.86	\$41.35	\$48.09	111	\$85.71	\$86.55	\$88.53	\$91.73	\$98.20	\$105.26	\$110.90
37	\$22.05	\$24.67	\$26.67	\$30.18	\$36.68	\$42.38	\$49.29	112	\$86.69	\$87.57	\$89.58	\$93.34	\$99.22	\$106.25	\$111.89
38	\$22.46	\$25.17	\$27.27	\$30.89	\$37.51	\$43.44	\$50.46	113	\$87.63	\$88.58	\$90.60	\$94.30	\$100.21	\$107.21	\$112.86
39	\$22.83	\$25.67	\$27.88	\$31.57	\$38.32	\$44.45	\$51.60	114	\$88.60	\$89.59	\$91.63	\$95.28	\$101.22	\$108.18	\$113.84
40	\$23.23	\$26.24	\$28.48	\$32.29	\$39.15	\$45.50	\$52.77	115	\$89.55	\$90.60	\$92.66	\$96.26	\$102.21	\$109.14	\$114.82
41	\$23.62	\$26.71	\$29.05	\$32.99	\$39.96	\$46.53	\$53.91	116	\$90.52	\$91.61	\$93.70	\$97.24	\$103.22	\$110.11	\$115.80
42	\$24.02	\$27.21	\$29.62	\$33.68	\$40.73	\$47.57	\$55.06	117	\$91.49	\$92.64	\$94.73	\$98.23	\$104.23	\$111.08	\$116.80
43	\$24.40	\$27.72	\$30.21	\$34.39	\$41.51	\$48.58	\$56.22	118	\$92.45	\$93.67	\$95.78	\$99.20	\$105.23	\$112.04	\$117.75
44	\$24.79	\$28.20	\$30.74	\$35.08	\$42.26	\$49.59	\$57.37	119	\$93.44	\$94.70	\$96.83	\$100.19	\$106.24	\$113.01	\$118.73
45	\$25.13	\$28.72	\$31.32	\$35.78	\$43.01	\$50.62	\$58.52	120	\$94.41	\$95.73	\$97.87	\$101.19	\$107.25	\$113.98	\$119.72
46	\$25.45	\$29.19	\$31.80	\$36.41	\$43.68	\$51.51	\$59.58	121	\$95.39	\$96.77	\$98.93	\$102.17	\$108.27	\$114.95	\$120.71
47	\$25.74	\$29.62	\$32.31	\$37.05	\$44.32	\$52.43	\$60.63	122	\$96.38	\$97.80	\$99.99	\$103.17	\$109.28	\$115.91	\$121.71
48	\$26.07	\$30.06	\$32.80	\$37.68	\$44.98	\$53.33	\$61.63	123	\$97.36	\$98.85	\$101.05	\$104.18	\$110.30	\$116.88	\$122.72
49	\$26.35	\$30.45	\$33.28	\$38.29	\$45.59	\$54.17	\$62.51	124	\$98.35	\$99.89	\$102.11	\$105.18	\$111.32	\$117.85	\$123.69
50	\$26.63	\$30.82	\$33.73	\$38.85	\$46.18	\$55.03	\$63.37	125	\$99.36	\$100.96	\$103.20	\$106.19	\$112.35	\$118.83	\$124.70
51	\$26.93	\$31.14	\$34.19	\$39.42	\$46.76	\$55.84	\$64.16	126	\$100.34	\$102.01	\$104.27	\$107.19	\$113.37	\$119.80	\$125.71
52	\$27.22	\$31.46	\$34.61	\$39.94	\$47.33	\$56.51	\$64.98	127	\$101.34	\$103.07	\$105.35	\$108.19	\$114.39	\$120.76	\$126.69
53	\$27.48	\$31.79	\$35.00	\$40.44	\$47.86	\$57.13	\$65.64	128	\$102.34	\$104.13	\$106.43	\$109.20	\$115.41	\$121.73	\$127.70
54	\$27.76	\$32.08	\$35.44	\$40.94	\$48.42	\$57.65	\$66.27	129	\$103.35	\$105.21	\$107.53	\$110.23	\$116.45	\$122.71	\$128.69
55	\$28.02	\$32.37	\$35.77	\$41.49	\$48.96	\$58.08	\$66.81	130	\$104.37	\$106.28	\$108.60	\$111.22	\$117.47	\$123.67	\$129.70
56	\$28.27	\$32.66	\$36.15	\$42.02	\$49.50	\$58.41	\$67.28	131	\$105.38	\$107.36	\$109.70	\$112.25	\$118.51	\$124.65	\$130.70
57	\$28.51	\$32.98	\$36.51	\$42.55	\$50.02	\$58.81	\$67.76	132	\$106.41	\$108.45	\$110.82	\$113.28	\$119.55	\$125.62	\$131.69
58	\$28.75	\$33.24	\$36.85	\$42.99	\$50.52	\$59.16	\$68.23	133	\$107.42	\$109.52	\$111.91	\$114.29	\$120.58	\$126.59	\$132.70
59	\$28.98	\$33.51	\$37.16	\$43.37	\$50.99	\$59.53	\$68.65	134	\$108.45	\$110.61	\$113.02	\$115.33	\$121.63	\$127.57	\$133.71
60	\$29.24	\$33.78	\$37.47	\$43.69	\$51.41	\$59.87	\$69.08	135	\$109.47	\$111.71	\$114.14	\$116.36	\$122.67	\$128.54	\$134.71
61	\$29.47	\$34.02	\$37.77	\$43.98	\$51.84	\$60.17	\$69.51	136	\$110.50	\$112.81	\$115.25	\$117.39	\$123.71	\$129.52	\$135.72
62	\$29.69	\$34.28	\$38.07	\$44.28	\$52.22	\$60.56	\$69.90	137	\$111.54	\$113.91	\$116.37	\$118.43	\$124.76	\$130.49	\$136.75
63	\$29.93	\$34.57	\$38.44	\$44.58	\$52.54	\$60.87	\$70.32	138	\$112.56	\$115.01	\$117.50	\$119.47	\$125.81	\$131.46	\$137.73
64	\$30.17	\$34.89	\$38.82	\$44.88	\$52.92	\$61.17	\$70.65	139	\$113.46	\$115.98	\$118.48	\$120.37	\$126.82	\$132.40	\$138.61
65	\$30.40	\$35.23	\$39.19	\$45.18	\$53.24	\$61.51	\$71.00	140	\$114.44	\$117.24	\$119.75	\$121.55	\$127.91	\$133.41	\$139.76
66	\$30.62	\$35.60	\$39.54	\$45.49	\$53.55	\$61.82	\$71.40	141	\$115.70	\$118.36	\$120.89	\$122.59	\$128.96	\$134.39	\$140.76
67	\$30.85	\$35.99	\$39.89	\$45.70	\$53.84	\$62.09	\$71.62	142	\$116.74	\$119.47	\$122.02	\$123.63	\$130.01	\$135.36	\$141.77
68	\$31.04	\$36.41	\$40.23	\$45.99	\$54.12	\$62.34	\$71.83	143	\$117.79	\$120.59	\$123.17	\$124.68	\$131.07	\$136.33	\$142.77
69	\$31.33	\$36.87	\$40.59	\$46.29	\$54.42	\$62.57	\$72.06	144	\$118.86	\$121.73	\$124.32	\$125.73	\$132.14	\$137.31	\$143.79
70	\$31.62	\$37.13	\$40.97	\$46.58	\$54.71	\$62.79	\$72.28	145	\$119.92	\$122.86	\$125.47	\$126.79	\$133.19	\$138.29	\$144.79
71	\$32.72	\$37.99	\$41.51	\$47.33	\$55.67	\$63.10	\$72.72	146	\$120.98	\$124.00	\$126.62	\$127.85	\$134.26	\$139.27	\$145.80
72	\$34.05	\$39.23	\$42.70	\$48.61	\$56.78	\$64.11	\$73.28	147	\$122.04	\$125.14	\$127.78	\$128.89	\$135.32	\$140.24	\$146.81
73	\$35.39	\$40.49	\$43.89	\$49.85	\$57.90	\$65.57	\$73.85	148	\$123.10	\$126.28	\$128.95	\$129.98	\$136.40	\$141.22	\$147.83
74	\$36.71	\$41.72	\$45.07	\$51											

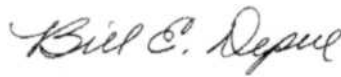
September, 2007

“Made in USA”. These words of pride and assurance are coming to mean more and more these days when almost any product in stores is imported, and many are inferior or defective. Many more are well made and reasonably priced, the reason consumers buy them.

We put “Made in USA” labels on most of the products we manufacture, but the truth is, we aren’t certain where some of the material or parts we use actually come from. Nuts and bolts, wiring, powder coating, steel, components in plastic and the motors we use. These parts and materials may or may not be “Made in USA”, but most of the components in our machines are made in our own machine shop or in factories in Southern California. They are as “Made in USA” as we can realistically make them.

We are exporting more and more of our products to other areas of the world, so try to make each one worthy of the label “Made in USA”. As part of our expanding overseas market, we now carry export versions of the Pixie, Wizard, Multi-Flex, and Sculpture Machines. We also have a variable speed export motor for some of our flat laps.

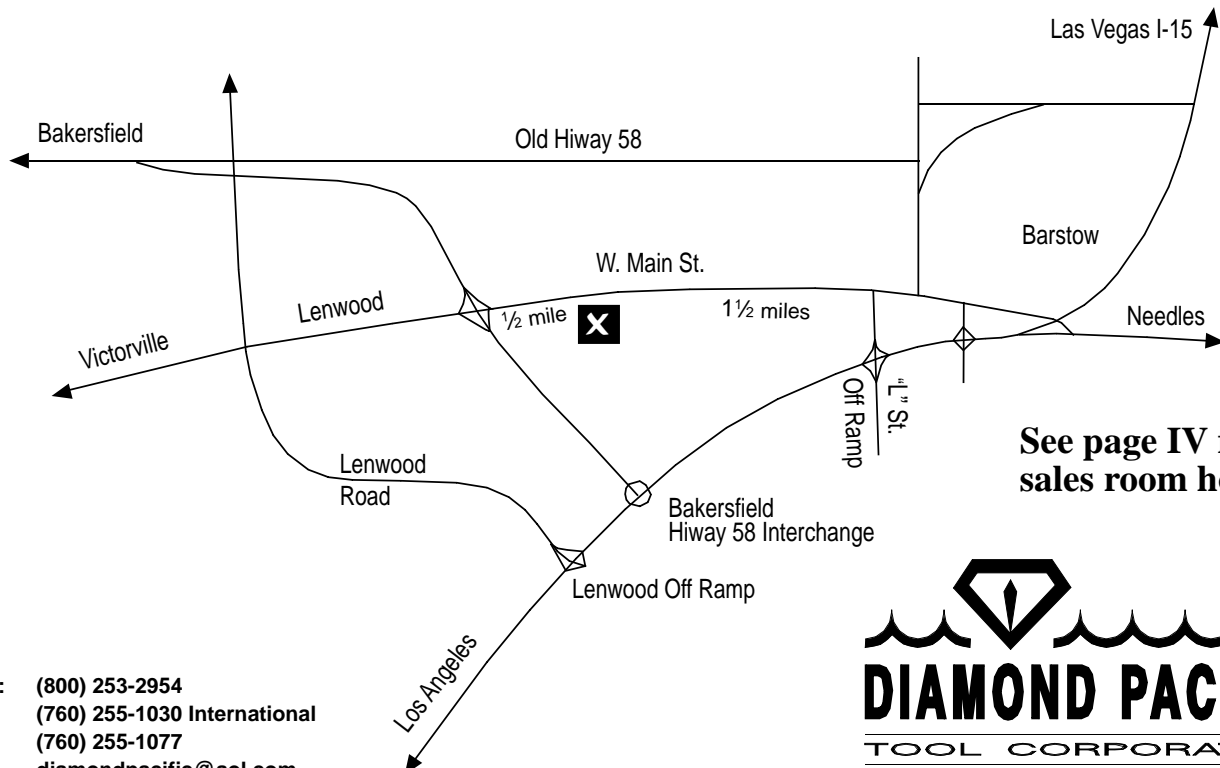
Sincerely,



Bill E. Depue
President

NOTE: The photo on the inside back cover loses the “golden light” of the original in the process of printing, but it’s still an interesting photo of “rocks”. The photo was taken at a well known rockhunting site in the Mojave Desert. If you can identify the area and would like a free “computer generated” copy of the photo, let us know before November 1, 2007, and we’ll send you one.

We invite you to stop by our plant whenever you are in our area.



See page IV for
sales room hours.

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