

## BENCH BURNERS



**CARLISLE MINI CC BENCH BURNER**  
Cat. No. 16011

A surface mixed burner that offers a high level of versatility in the flame. It is the perfect bench burner for beginners and experts alike. Recommended pressures are 2 Psi gas and 5 Psi oxygen. They may be used with a mixture of oxygen and either natural gas or propane. The body is constructed of brass and has cooling fins cut into the profile. It has a seven tube matrix made of stainless steel. The stand places the burner head at a 45° angle and allows for a 15° increased or decreased tilt.



**CARLISLE WILDCAT BURNER**  
Cat. No. 16012

The durable WildCat Burner has an extraordinarily powerful flame that can be used with borosilicate and soft glass. It works equally well with propane and natural gas with oxygen. The Wildcat features sturdy brass casing and 19 stainless steel fuel ports. It uses a ball joint for articulation of the burner head and remotely placed metering valves that allow for a wide range of control. It has incredibly efficient combustion and uses the highly effective "Vortex" cooling system which uses oxygen from the burner to pull air through the casing.



**"MINOR" BENCH BURNER**  
Cat. No. 1602

Bench burner has a specially designed with surface mix stainless steel front end and precision needle valves. Uses either natural or propane gas with easily adjustable control valves. Variable flame size with no tips to change and a narrow head for easy manipulation. Smooth action tilt, heavy base and easy take-apart construction. Torch is easily removed from the stand for use by hand or as a lathe burner. Works tubes or rods up to 45mm in diameter. **Recommended operating pressures: .25 to 5 Psi gas, 5 to 15 Psi oxygen.**



**"MAJOR" BENCH BURNER**  
Cat. No. 1603

A sturdy stainless steel surface mix bench burner with a "Minor" Bench Burner mounted on top which replaces the normal center fire. The "Major" Bench Burner supplies flames up to 1-1/2" diameter with the larger burner and up to 3/4" diameter with the smaller burner. Features precision needle valves to regulate the flow of fuel and oxygen to both burner assemblies. The narrow head of the "Minor" assembly allows easy manipulation of work. Operates at fuel gas pressures as low as 0.2 Psi. **Recommended operating pressures: .25 to 5 Psi gas, 5 to 15 Psi oxygen.**



**CARLISLE CC BURNER #5**  
**CENTERFIRE, RACK & PINION**  
Cat. No. 16014

The Carlisle CC Burner #5, Rack & Pinion produces two distinctive flames; the centerfire (pre-mixed) and the outerfire (surface mixed). The centerfire, which has the characteristics of a single ported tip, produces a pre-mixed flame.

The #5 centerfire tip has a large orifice. For fuel gas supply, four metering valves are attached to the back of the mixer body. These valves are color coded. The oxygen valves have green handles while the gas valves have red handles. These valves are standardly interconnected by crossover attachments to limit the feed hose requirements to two. The Rack & Pinion style mount utilizes a pinion gear to pivot the burner in an arc. The user can adjust a knob on the side of the mounting device for quick, accurate positioning. The Heat Exchanger is manufactured from aluminum. It dissipates heat from the burner body. Cooling fins provide increased surface area for the transfer of heat. Ideal for larger soft glass or hard glass working.

## BENCH TORCHES



**NATIONAL 6B BENCH TORCH**  
Cat. No. 1560-3

Has characteristics similar to the National Model 3AB, but is smaller. It is mounted on a heavy stand with a ball swivel permitting the neck and tip to be moved to the optimum operating position. Can be permanently attached to a work surface. Tips are not included with the torch but are available separately. Shown with tip.

**Dimensions:**  
Base diameter: 3" (76mm)  
Torch height: 6.25" (152mm)  
Net weight: 1 lb. 6 oz.

**Compatible TIPS: (See pg. B3)**  
1560-OX1 through 1560-OX5  
1560-HTM0 through 1560-HTM3



**NATIONAL 3AB BLOWPIPE TORCH**  
Cat. No. 1560

Popular torch serves a dual purpose as a hand torch and a bench burner. Top quality, versatile and economical pre-mix torch. It can be used with natural or bottled gases. Torch fits several different tip sizes. (Tip is not included with the torch.)



**THE LITTLE TORCH**  
Cat. No. 16015

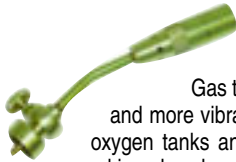
A precision instrument that will help extend torchworking skills beyond previous limits. Makes a thread-thin flame up to 6300°F. Works in tiny places. Comes with five different tips. The three smallest tips have synthetic sapphire orifices for improved flame characteristic and control. Use with oxygen and any one of the commonly available industrial fuel gases.





**TORCH STAND**  
Cat. No. 15611

Designed to fit the National Torch for easy removal or installation (without removing hoses). Fully adjustable. Steel plate base.



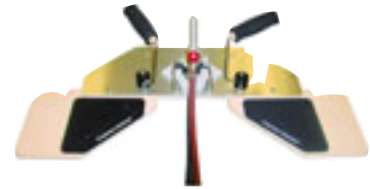
**THE "HOT HEAD" BEADMAKING TORCH** Cat. No. 15613

Developed and designed exclusively for the beadmaking industry, this torch head for MAPP Gas tanks gives more oxygen to the head for truer, clearer and more vibrant colors. Inexpensive, needs no elaborate fuel and oxygen tanks and is easy to set up. The ideal way to get started making glass beads!



**TORCH HOLDER** Cat. No. 15612

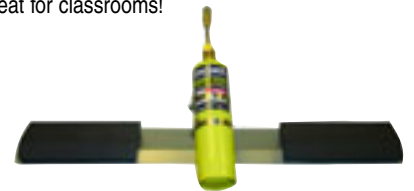
Very secure mounting for MAPP or propane gas tanks. Bracket rests on table edge and fastens with a "C" clamp (not included). Position of the torch head is fully adjustable. Ring clamp allows easy installation or removal of the tank. All metal construction. Recommended for use with the Hot Head Torch (Cat. No. 15613).



**CREATION STATION**

Cat. No. 156127

An innovative, ergonomically-friendly workstation for torchworkers. The Creation Station features a universal torch clamp to hold the torch in place and fully adjustable wrist and elbow rests designed to make fine detail work easier. The workstation can be adapted to any torch size, can be attached directly to the work area, and is designed so that the torchworker can customize the entire unit to suit his/her lampworking needs. Great for classrooms!



**PADDED ARM REST**

Cat. No. 156125

Designed by a lampworker to prevent nerve damage to the forearm. Right and left-handed forearm pads are mounted on a stainless steel base to be set on a table's edge for use. Suitable for use with oxygen-gas burners or tank-mounted torch heads. 26" long. Illustrated with Accessory Torch Adapter (Cat. No. 156126).

**ACCESSORY TORCH ADAPTER (for Padded Arm Rest)**

Cat. No. 156126

Mounts on the center of the Arm Rest. Supplied with two stainless steel clamps. Recommended for use with the Hot Head Torch assembly.



## TIPS FOR NATIONAL BENCH BURNERS



1560-HTM0 7 hole .031"    1560-HTM1 9 hole .040"    1560-HTM2 9 hole .049"    1560-HTM3 9 hole .055"



**SINGLE ORIFICE TIP**

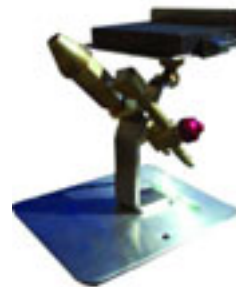
For oxygen/gas

1560-OX1 - .042"    1560-OX4 - .082"  
1560-OX2 - .055"    1560-OX5 - .100"  
1560-OX3 - .070"

Cat. No.	Orifice Size (Standard)	Fuel Capacity CFH	Gas Pressure Psi	Oxygen Capacity CFH	Oxygen Pressure	No. of Orifices
<b>SINGLE ORIFICE - OXYGEN/GAS TIPS:</b>						
1560-OX1	0.042"	1.0	1/4	4	3	1
1560-OX2	0.055"	2.0	1/4	8	6	1
1560-OX3	0.070"	3.0	1/4	12	6	1
1560-OX4	0.082"	4.0	1/4	16	6	1
1560-OX5	0.100"	5.0	1/4	20	8	1
<b>MULTI-ORIFICE TIPS:</b>						
1560-HTM0	0.031"	5	1/4 to 4	20	8	7
1560-HTM1	0.040"	6	1/4 to 4	22	10	9
1560-HTM2	0.048"	7	1/4 to 4	26	12	9
1560-HTM3	0.055"	8	1/4 to 4	28	15	9

**MILLE MARVER**  
Cat. No. 1596

Torch mounted marver for shaping glass. Acts as a shelf to avoid thermal shock when preheating millefiori, chips and rods. 90° angle at the back of the marver plate makes corners and edges on ribbon cane. Mounting clamps provide easy installation when adapting the Mille Marver to the Hot Head Torch, the Minor Bench Burner or the 3A National Torch.



**MINI CC TORCH MOUNTED "CROWLEY" MARVER**  
Cat. No. 16013

The crowning feature of this marver is the separate articulation ball joint. It allows the pad to be angled and moved to almost any position regardless of how the head is angled. It allows having a level marver pad on an angled torch head or anywhere in between. The innovative Crowley Marver uses a threaded connection point to securely attach the marver to the burner. The graphite pad is premium quality EDM grade and is 4" wide x 2.5" deep x .5" thick (102 x 64 x 13mm). It's held in place by two strong grip spring clips.

## REGULATORS



156310

### PREMIER BRAND REGULATORS

Cat. No. 156310 - Oxygen

Cat. No. 156311 - Bottled Gas

Compact design with rear inlet service and cylinder connections. Has "B" size hose fittings, forged brass body with chrome bonnet and a specially compounded diaphragm and seat material with relief valve. 1-1/2" gauges with one piece polycarbonate lens. Oxygen regulator delivers 5-50 Psi. Gas regulator delivers up to 15 Psi.



156311



156312

### PREMIER JR. GAS REGULATOR

Cat. No. 156312

Similar to Cat. No. 156311 with a smaller body. Connects from rear to "barbecue" type household gas bottles.



156313

### OXYGEN ECONOMY REGULATOR

Cat. No. 156313

### BOTTLED GAS ECONOMY REGULATOR

Cat. No. 156314



156314

All brass body & fittings. Side inlet service and cylinder connection. "B" size outlet hose fitting. 2" (51mm) easy to read gauges, with one piece polycarbonate lens.

## HOSES & FITTINGS

### BLOWHOSE

Cat. No. 1581

For use when mouthblowing while glass is manipulated in the flame. Consists of a plastic mouthpiece, 6 feet (2.1m) of flexible hose and a 1/4" (6mm) right angle swivel.



1581

### RIGHT ANGLE SWIVEL

Cat. No. 1580

1/4" (96mm) precision-made solid brass swivel with easy rotation and effective air seal. Fits flexible plastic tubing.



1580



15890X

### HOSE FITTINGS - THREAD TO BARB

Cat. No. 15890X - Oxygen Hose

Cat. No. 1589GS - Gas Hose

For torches with threaded connectors. 9/16" (14mm), 18 thread brass swirl nut to 1/4" (6mm) I.D. hose. Barbed male end. Oxygen fitting has right-hand thread and gas fitting has a left-hand thread.



1589YO

### Y HOSE CONNECTOR

Cat. No. 1589YO - Oxygen Connector

Cat. No. 1589G - Gas Connector

Connects two hoses to either a gas or oxygen tank.

15895



### FLASHBACK ARRESTORS

Cat. No. 15895 - Propane & Oxygen\*

Check Valve helps prevent a flashback flame caused by a reverse flow of gas by quenching the flame. Install male end at regulator and female end toward the torch. Fits regulators with Size B, 9/16", 18 thread coupling. Made of solid brass.

**NOTE:** For torches with a barb fitting, in lieu of a female thread end, an adapter fitting is required (Cat. No. 1589FIT).

\*Not for use with natural gas.



1589FIT

### HOSE ADAPTER/FLASHBACK ARRESTOR

Cat. No. 1589FIT

For torches with a barb fitting. Adapter provides threaded coupling to fit flashback arrestors.



15662

### TWIN HOSE ASSEMBLY 10' long

Cat. No. 15662

Type T oxygen and gas line hose joined together. I.D. 1/4" (6mm). Includes necessary fittings to connect from burners to tanks. Joined pairs withstand abuse and keep the workplace tidy.



15615

### HOSE ASSEMBLY ADAPTER

Cat. No. 15615

Everything you need to adapt the Hot Head Torch to larger bulk gas tanks. Includes a 5 ft. (1524mm) hose and all the brass fittings needed. Fast and easy!



1576TFL

### SPARK LIGHTER

Cat. No. 1576TFL

Three flint lighter accumulates gas in a shield for instant ignition.

1576EF

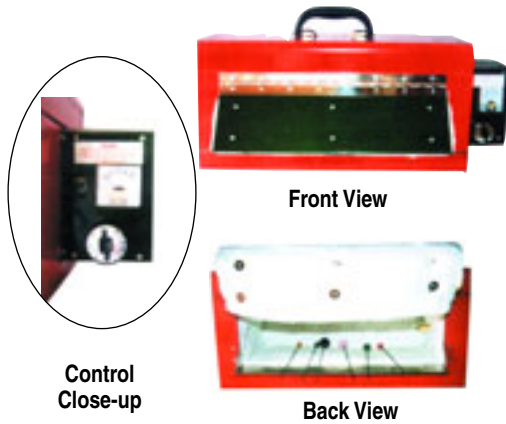


### FLINTS

Cat. No. 1576EF

Card of four clusters. 12 flints total.

See page A4 for Skutt Bead Kiln.



## MARBLE & BEAD ANNEALER

Cat. No. 15285

An affordable kiln designed specifically for annealing beads, marbles or other small projects like Glaskolben™.

### FEATURES:

**Chamber:** 4"H x 16"W x 6.5"D (167 x 406 x 152mm)

**Door Opening:** 4"H x 16"W x 6.5"D (167 x 406 x 152mm)

**Overall Measurement:** 9.5"H x 24"W x 12"D (241 x 609 x 305mm)

**Controller:** Infinite control type with analog pyrometer and type K thermocouple.

**Insulation:** Lining is two 8 lb. layers of noncarcinogenic super wool with a surface hardener.

**Element:** Single Kanthal A-1 encapsulated in a quartz tube tested to fire to 110°F (201°C).

**Weight:** Okay for UPS Shipment

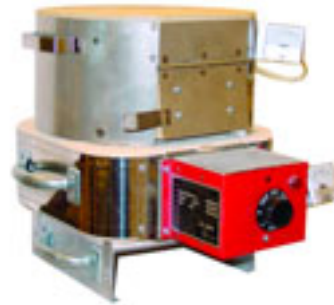
**Volts:** Draw 120

**Amps:** 5.4

**Service Required:** 120 volts, 15 amps.

**Factory Warranty:** 2 years on all parts.

Comes with top unit only.



## PIGGY-BACK BEAD ANNEALER™ from EVENHEAT

Cat. No. 15180

The Piggy-back Bead Annealer™ is designed to use as a top-mounted annealing chamber along with the Evenheat® Hot Box™ kiln. It can also be used with most other small portable kilns that have an outside dimension no greater than 12" (305mm), and an inside chamber no greater than 8" (203mm) (such as the Paragon Caldera™ and the Aim kiln. The chosen kiln must be equipped with Infinite® style controls that will regulate the kiln temperature. Overall measurement: 11" x 13" x 6" (279 x 330 x 152mm). Weight okay for UPS Shipment.



## FIRECHECK FOR NATURAL GAS

Cat. No. 15801

Flashback Arrestors are not suitable for use with natural gas. The pressure is very low. The Fire Check Caps are the answer. This flashback safety device uses a very different method of stopping a flashback, which does not require any minimum pressures.



## STUMP SUCKER, 2" (51mm) - Cat. No. 15621

Developed for Loren Stump, renowned glass sculptor. It is used to vacuum encase small glass sculptures for beads, buttons, paperweights, etc. Consists of a perforated graphite disk over which the sculpture is placed. This in turn is placed in a graphite cup with a tube through which the vacuum is drawn. A glass glob, heated to a soft state, is placed over the sculpture. Advanced lampworking skill is a requisite.



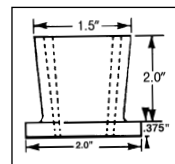
## HOSE SET W/FILTER

Cat. No. 15622

For use on the Stump Sucker.

## ADAPTER 1/4" NPT TO "B" SIZE THREAD

Cat. No. 15802



## BEADMAKING MINI-OPTIC MOLDS

Mini-optic molds designed for the lampworker! Makes a basic shape for murrini. Miniatures of the large cast aluminum optic molds used by glassblowers.



1582-B3



1582-B4



1582-B8



1582-B10



1582-B12

## HEART DESIGN PRESSER

Cat. No. 156808

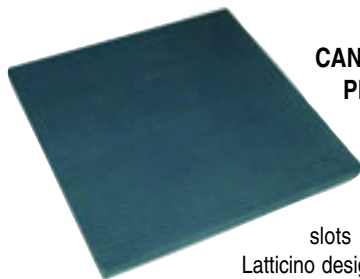
## STAR DESIGN PRESSER

Cat. No. 156809

Tools that press glass gather into a heart or star pattern that can be pulled into a cane. Slice the cane to incorporate into beads for more interesting designs.



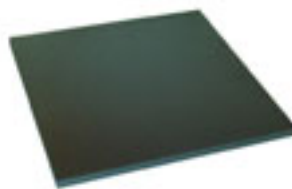
## MARVERING PLATES



### CANE MARVERING PLATE

**Cat. No. 1571**  
6" x 6" x 3/8"  
(152 x 152 x 9.5mm)

47 equally spaced slots position stringers for Latticino designs. Slots are 1 x 1mm spaced 3mm (1/8") apart. Many uses include bead, marble, vase and bottlemaking. Lay stringers in the slots and marver over for cane.



### GRAPHITE MARVERING FLAT PLATE

**Cat. No. 1577**  
12" x 12" x 1/2"

(305 x 305 x 13mm)  
Made of high density, fine-grained graphite, this plate is an ideal and useful fixture for the torchworking artist.



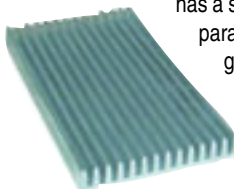
### VERMICULITE

**Cat. No. 4831** - 1-1/2 lb. (680g) carton  
**Cat. No. 48312** - 18 lb. (8kg) bag  
Useful for annealing hot pieces directly from the torch. Allows project to cool slowly—minimizing stress.

### BEAD-MAKING GROOVED MARVER PLATE

**Cat. No. 1597**  
1-7/8" x 4" x 5/8" (48 x 102 x 15.8mm)

A combination marver and pattern impresser. One side has a smooth finish, and the other has 12 vertical parallel fins with rounded tops. Rolling the hot gather over the fins produces a linear pattern, a grid pattern or a diamond (pineapple) pattern. Made of solid aluminum. A versatile tool for the beadmaker.



## WORK SURFACE

### NON-ASBESTOS WORK SURFACE

**Cat. No. 1583** - 16" x 24" x 3/8"  
(406 x 610" x 9mm)  
**Cat. No. 15831** - 10" x 12" x 1/4"  
(254 x 305 x 6mm)

A rigid flame-proof, non-asbestos material work surface. Buff-gray color.



48436  
48437  
48438 & 48439  
48443

### WINE STOPPERS

Metal & rubber wine stoppers for displaying lampworked and fused glass objects. Use Wooden Bases to display or store Wine Stoppers.

- Cat. No. 48436** - Flat
- Cat. No. 48437** - Round
- Cat. No. 48438** - Large Bead
- Cat. No. 48439** - Short Bead
- Cat. No. 48443** - Trough Top
- Cat. No. 48441** - One Hole Base
- Cat. No. 48442** - Two Hold Base



48442



### LETTER OPENERS

(pictured from left to right)

- Cat. No. 484221** - Flat Topped
- Cat. No. 484222** - Round Topped
- Cat. No. 484223** - Short Mandrel Top
- Cat. No. 484224** - Long Mandrel Top

Four different styles of letter openers! Choose the Flat and Round topped styles for attaching small fused glass designs. Add glass beads to the Short and Long Mandrel Topped openers to convert them into a unique works of art.

## "PINK SLIPPER" BEAD RELEASE



Cat. No. 15904 [17.6 oz. (500g) bottle]

Cat. No. 15905 [7 oz. (200g) bottle]

Tested and approved by professional beadmakers. A release and lubricating agent for steel mandrels. Dries with a smooth finish. Not the usual dark, gooey release! Pink Slipper is bright and clean to work with. It has the right viscosity to coat a mandrel evenly with one dip, yet with enough cover to hold a large bead securely while being manipulated, even combed. Releases the finished bead cleanly and without fuss. Dip and go recommendation.



## AIR-DRY BEAD RELEASE



Cat. No. 1590

Release agent that is ideal for pre-coating and air-drying steel mandrels for beadmaking. Easy to coat and ready-to-use as needed. 36 per carton. Net Wt. 8 oz. (226g)



## FLAME-DRI™ BEAD RELEASE



Cat. No. 1591 - 1.85 lbs. (839g) - 9 per carton

Cat. No. 15915 - 8 oz. (227g) - 36 per carton

Release and lubricating agent for steel mandrels used for beadmaking. Flame-Dri™ Release eliminates the need for pre-coating and air-drying mandrels. Just dip the mandrel in the prepared Flame-Dri™ Release and into the flame for immediate use! Cuts preparation time. Wide-mouthed jar for dipping ease.



## STAINLESS STEEL TUBING

Cat. 153906

Use as a miniature blowpipe or as a mandrel to make large diameter bead holes. 16" (406mm) long x 1/4" (6mm) diameter.



## BEAD MANDREL REST

Cat. No. 1609 - 8" x 2" (203 x 51mm)

Stainless steel V-shaped platform to rest hot mandrels, glass and tools for easy access while working. Supports 15 mandrels (has 15 slots).



## CARBON RODS - Cat. No. 1538-

Made of fine grain, high density graphite, these rods have many uses in the lampworking studio. Rods may be tapered in a pencil sharpener or on a sander. 12" (305mm) long.



CARBON RODS		Diameter	
Cat. No.	Description	Standard	Metric
1538-1	Carbon Rod	1/4"	6.4mm
1538-2	Carbon Rod	3/16"	4.8mm
1538-3	Carbon Rod	1/2"	12.7mm
1538-4	Carbon Rod	3/4"	19mm
1538-5	Carbon Rod	1"	25mm

## BIG HOLE MANDRELS

Cat. No. 15410 -

7/16" (11mm) core

Cat. No. 15411 -

5/8" (16mm) core

Cat. No. 15412 -

1" (25mm) core

New big glass hole mandrels are used to make large holes in glass beads, rings and loops for scarves, sculptures or core formed vessels. The mandrels have a 5/32" (4mm) diam. x 10" (254mm) long shaft. The handle is thin enough to make quicker rotations and thick enough to make it difficult to bend.



## STAINLESS STEEL MANDRELS (RODS)

Cat. No. 153903 - 1/16" x 10" (1.5 x 254mm)

Cat. No. 1539025 - 5/64" x 10" (2mm x 254mm)

Cat. No. 1539015 - 3/32" x 10" (2.4 x 254mm)

Cat. No. 153902 - 1/8" x 10" (3 x 254mm)

Stainless steel rods excellent for beadmaking when coated with separator. Available in four diameters. 10 per package.



## BEAD MANDREL BLOCK

Cat. No. 1611

Sturdy support for coated mandrels. Keeps the mandrels upright while drying. Can hold twenty mandrels up to 1/8" (3mm) in diameter. Smoothly sanded block measures 6" x 3.5" x 1.5" (152 x 89 x 38mm).



## BEAD CORE SCRAPER SET

Cat. No. 15781

Simplifies cleaning

bead core after removing from the mandrel wire or rod. Set contains two each of 1.2mm, 1.6mm and 2.0mm scrapers. Use two at a time for larger diameter cores. Scraper rods have the appearance of barbed wire.



All for use in manipulating hot glass.



## ADJUSTABLE PIN VISE

Cat. No. 15395



## TUNGSTEN ROD 3-1/4" x 3/32"

Cat. No. 15396

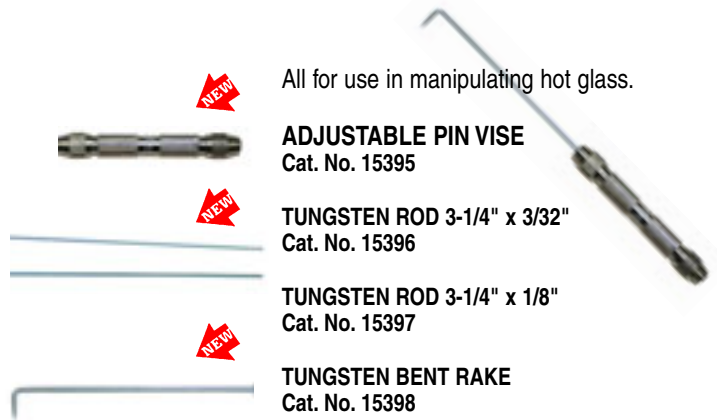


## TUNGSTEN ROD 3-1/4" x 1/8"

Cat. No. 15397

## TUNGSTEN BENT RAKE

Cat. No. 15398





## SPEEDY SHARP CARBIDE CUTTER

Cat. No. 15675

"Speedy Sharp" carbide cutter is used for score-cutting glass tubing and rods. Two-sided carbide blade stays sharp with hard usage. Blade is set in comfortable plastic handle-container with lid.



## BEADMAKERS RAKE

Cat. No. 153904

Raking (combing) is the process of drawing a metal rod across the surface of softened glass. The rake is a 1/8" (3mm) stainless steel rod bent to 90° at the end. It has been sharpened to a point and slightly blunted to make a furrow in the molten glass. The rod is secured to a wooden handle.

## BEADMAKERS RAKE/PICK COMBO TOOL

Cat. No. 15614 - 8" long (203mm)

A lightweight versatile beadmaker's tool. Serves as a rake or dimpling tool and has many other uses. Knurled grip for positive handling with plated steel ends. Weighs less than 1 oz. (28g).



## BRASS FLARING TOOL

Cat. No. 1566

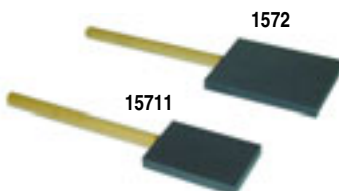
All-purpose tapered shaping tool that is mounted on an insulated wooden handle. Shaping area is 1" (25mm) wide and 1/16" (1.6mm) thick.



## BEAD HOLE CLEANER

Cat. No. 15782

Handy tool for cleaning dried bead release residue from bead core. Steel barbed shaft 1/16" (1.6mm) diameter x 2" (51mm) long. Wooden handle.



## GRAPHITE PADDLE

Cat. No. 15711 - 2" x 3" x 3/8" (51 x 76 x 9.5mm)

Ideal for beadmaking. Fine grain, high density graphite with a wooden handle.

## GRAPHITE PADDLE

Cat. No. 1572 - 3" x 4" x 3/8" (76 x 101 x 9.5mm)

Rectangular paddle made from fine grain, high density graphite with a wooden handle.



## MINI PADDLE

Cat. No. 15745

1" x 4" x 1/4" (25 x 101 x 6mm). Graphite micro paddle with a wooden handle.



## GRAPHITE MICRO TOOLS

Cat. No. 1574 - 6 piece set

Made from fine grain, high density graphite. The 6-piece set with wooden handles includes:

### 3 Paddles:

Rectangular: 1" x 4" x 1/4" (25 x 101 x 6mm)

Rectangular: 1-1/2" x 1-3/4" x 1/4" (38 x 45 x 6mm)

Triangular: 1-1/2" x 1-3/4" x 1-3/4" x 1/4" (38 x 45 x 45 x 6mm)

### 3 Rods:

1/4" diameter x 4" (6 x 101mm)

1/4" diam. x 4" (6 x 101mm) sharpened to a point

1/4" diam. x 4" (6 x 101mm) flat on one side



## HOTLINE™ ROD LOPPER

Cat. No. 1564 - 8" (203mm)

Hand-held tool for cutting glass rods. Minimum pressure on the handgrips leaves a clean edge on sliced rods. Adjustable guide centers the rod between cutter heads. Long-wearing cutter heads may be rotated for long life. Cutter jaws open to 5/8" (16mm). Optimum cutting can be done on rods up to 3/8" (9mm). Weight: 12-1/2 oz. (354g).



## UTILITY SHEARS

Vintage design is ideal for trimming the ends of hot glass rods or for using in other soft, hot glass applications.

Comfortable Grip. Smooth action. Silver color.

Cat. No. 156404 - Small

[5" (51mm) overall with 1-1/4" (32mm) blades]

Cat. No. 156403 - Large

[7-1/2" (190mm) overall with 2-7/8" (73mm) blades]

## HOT GLASS SHEARS

Cat. No. 156401

6" (152mm) overall length

With 2" (51mm) blades, this vintage design is ideal for trimming the ends of hot glass rods or for using in other soft, hot glass applications.



## STAINLESS STEEL OVAL END GRIPPER

Cat. No. 157503 -

9-1/2" (241mm) long

A tweezer-type tool with serrated open oval shaped ends.

Ratchet at finger side locks when squeezed.

Stainless steel construction.



## FORCEPS WITH CURVED TIP

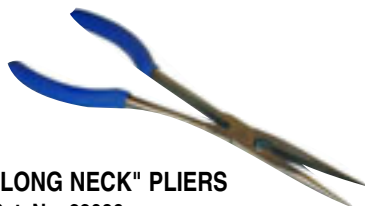
Cat. No. 1575012

12" (305mm) long.

Tweezer-type tool

with curved serrated tip. Ratchet at finger grips lock when squeezed for a positive grip. Plated steel.

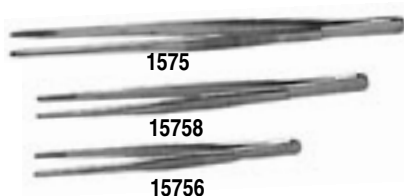




## "LONG NECK" PLIERS

Cat. No. 22086

Extra length for reaching and holding small objects, and sturdy for tough jobs. Length 11" (279mm), 3" (76mm) jaw with serrated tip. Also has 3/8" (10mm) wire cutter jaw.



## TWEEZERS

Cat. No. 1575 - 10" (254mm) Stainless

Cat. No. 15756 - 6" (152mm) Stainless

Cat. No. 15758 - 8" (203mm) Stainless



## STAINLESS STEEL BENT TWEEZERS

Cat. No. 157501 - 7" (203mm) long

A useful lampworking tool. These traditional tweezers (squeeze to close) have sharp curved points. Pin assures alignment of closed points. Stainless steel.



## STAINLESS STEEL SELF-CLOSING TWEEZERS

Cat. No. 157502 - 6-1/2" (165mm) long

Once clamped, these tweezers won't let go until released. Squeeze to open, release to close. Curved tips are finely serrated. Stainless steel with heat-resistant fiber grips.



## PARALLEL ACTION MASHER

Cat. No. 157901 - 8-3/4" (222mm) long

Heavy-duty pliers with 1-1/2" (38mm) square mashing plates. Plates remain parallel when squeezed. Spring maintains open position until squeezed. Maximum open position: 11/16" (17.5mm).



## SIX FINGER HOLDER

Cat. No. 156551

Six fingers grip marbles or beads.

Adjustable to hold 7/8" to 2-3/4" objects.



## FOUR FINGER HOLDERS

Cat. No. 156512 - Small

3/8" to 1-1/4" diameter (9.5 - 32mm) 18 gauge wire.

Cat. No. 156513 - Medium

7/16" to 1-3/4" diameter (11- 44mm) 16 gauge wire.

Cat. No. 156514 - Large

3/4" to 2-1/4" diameter (19 - 57mm) 14 gauge wire.

Curved fingertips open and close with sliding collars to assure a firm grip on glass shapes. Curved tips are also designed to grip the inside of rings, tubes, etc.



## E-Z MARBLE MOLD

Cat. No. 15724

Versatile marble mold has six cavities for forming 5/8", 3/4", 7/8", 1", 1-1/4", and 1-1/2" diameter marbles. (16, 19, 22, 25, 32 and 38mm). Band clamp allows circular mold to be rotated for operator's convenience. Carbon block, 3-1/2" diameter (90mm) is 1" (25mm) thick. Smooth reverse side serves as a marvering surface. Mold with wooden handle is 10" (254mm) long.



## BEAD MOLD PADDLE

Cat. No. 15731 - 3" x 6" x 1" (76 x 152 x 25mm)

Beadmakers ask for this handy tool. A heavy-duty dual purpose mold and paddle. Bead wells on one side (flat surface on opposite side). Sturdy wooden handle.

**Eight bead wells** (diameters):

6, 8, 10, 15, 18, 20, 25 and 30mm

**Two oval wells:** 8 x 16mm; 9 x 18mm

**Four teardrop wells:** 6 x 9mm; 8 x 12mm; 15 x 25mm; 18 x 30mm

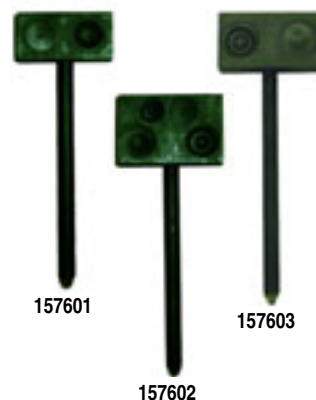


## BEAD MARVERING PADDLE

Cat. No. 157331

4-1/2" x 2-1/2" x 3/4" (114 x 64 x 19mm)

Designed especially for beadmaking, this paddle makes a smooth, round or cylindrical bead. Marvering wells are 1/2" (12.5mm), 5/8" (15mm), 3/4" (20mm) and 1" (25mm) in diameter. Mandrel slots allow the hot bead to rotate for either a sheer or rounded end. A convex 10mm head protrudes for indenting a concave bead end if desired. Smooth back makes the paddle dual purpose for conventional marvering.



## BUTTON MOLDS

Cat. No. 157601 - Standard

Cat. No. 157602 - All-in-One

Cat. No. 157603 - Special

Graphite paddles with circles of different diameters, depths and profiles. Standard molds have gentler and simpler shapes than the Special mold, making them ideal for adding custom decorations to the surface.

**Standard paddle** has two flat and two convex cavities. **Special paddle** has five cavities—one mild convex, two deep convex and two multi-depth. **All-in-One paddle** has nine cavities—two flat, three deep convex, one mild convex and three multi-depth.



**GLASS FORMING TOOLS**  
**Cat. No. 1569 - Curved Jaw Tool**  
 1-1/2" (38mm) diameter pad.



**PATTERN IMPRESSING PLIERS**  
**Cat. No. 1568FF- Fish Fin/Bird Tail**  
**Cat. No. 1568F - Fine Leaf**  
**Cat. No. 1568C - Coarse Leaf**  
 Pattern plates mounted on top quality 8" (203mm) long-nose pliers for mashing molten rod ends. Leafmakers form a V-vein pattern on one side of the glass. A Fish Fin or Bird Tail impresser forms parallel grooves on both sides of the glass.



**FORMED LEAF MAKER**  
**Cat. No. 156804**  
 6-1/4" (159mm) overall length. Matching impression plates make a realistic 7/8" x 1-3/8" (12 x 35mm) curved leaf design.



**STAR MASHER**  
**Cat. No. 156905**  
 Use to make a star murrini. Form a 3/4" (19mm) gather of glass, approx. 2" (5mm) long. Punty an end. Heat at pinch point and pinch along the cylinder side to form a star leg. Repeat as needed, then pull to desired diameter.



**SHAPING TOOL**  
**Cat. No. 153601 - 7" (178mm) long**  
 A handy multi-purpose tool with a 6-sided stainless steel 90° pointed head. Has one flat-folded side and a curled side for making flutes, spirals, twists and other shapes.



**MINI FLATTENER**  
**Cat. No. 15701**  
 A handy tool for beadmakers. Flatteners are 1/2" square (12.5mm) on 8" long (203mm) tweezers.



**PARALLEL CLOSING GLASS FLATTENER**  
**Cat. No. 1579 - 9-1/2" (241mm) overall length, 2" (51mm) square x 1/16" (1.6mm) thick stainless steel pads mounted on a spring-loaded steel frame. Designed for parallel closing which maintains uniform thickness. Insulated with wooden handles.**



**HANDY MASHERS**  
 The mashers at left facilitate making leaves



or similar objects with a torch. Angled mashers save marvering time when producing angular shapes. They require little pressure to "squeeze" out the desired shape. Add one or all three to a lampworking tool kit.



**Cat. No. 156805 - Flat Leaf Masher with Veins**  
 Length - 6-3/4" (171mm)  
 Diameter of impression - 1-1/8" (29mm)



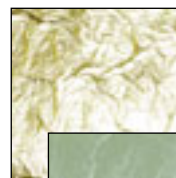
**Cat. No. 156806 - Angle Leaf Masher with Veins**  
 Length 6-3/4" (171mm)  
 Diameter of impression - 1-1/8" (29mm)



**Cat. No. 156807 - Angle Leaf Masher w/o Veins**  
 Length - 6-3/4" (171mm)  
 Diameter of impression - 1-1/8" (29mm)

## JEWELRY & BEADMAKING GOLD & SILVER LEAF

22 karat gold and pure silver available in leaf form for jewelry and beadmaking. Packaged in books. The sheets are interleaved with an ultra-thin roughed sheet of paper for protection and easy release.



**22 KARAT GOLD LEAF**  
**Cat. No. 16501**  
 3-3/8" square (85.7mm). 25 sheets.



**PURE SILVER LEAF**  
**Cat. No. 16502**  
 3-3/8" square (85.7mm). 25 sheets.



**PURE SILVER FOIL**  
**Cat. No. 165021**  
 3-3/4" square (95.2mm) 25 sheets to a "book". Thicker than leaf and easier to handle.  
**Cat. No. 16503 - 9" square (228mm) sheets. Pack of 10 sheets.**



**GOLD FOIL**  
**Cat. No. 16504**  
 8" square (203mm) sheets. 23.4 karat gold. Pack of 10 sheets.  
**Cat. No. 16505**  
 3-3/8" sq. (25.7mm) 10 leaf book.

## DIDYMIUM GLASSES

Didymium glass absorbs the bright yellow sodium flare (589 NM) which occurs when heating glass in the torch flame. They allow safe viewing of glass as it is worked in the flame. For the beginning lampworker using MAPP gas or propane torches with soft, soda-lime glass. May also be used for periodic viewing of fusing/kiln projects. This brand is not recommended for high pressure torch flames on hard glass, pyrex or quartz.



### DIDYMIUM SAFETY GLASSES

**Cat. No. 4970**

Polycarbonate Phillips ACE 202 Amethyst Contrast Enhancer Glass didymium lenses filter some infrared and U-V light. Advanced Didymium optics now absorb more yellow sodium flare. Multi-fit bridge and universal fitting with nickel silver temples. Plastic frames and metal reinforced arms.



### GOLD COATED DIDYMIUM II SAFETY GLASSES

**Cat. No. 49701**

Dual purpose safety glasses for the hot glass worker. Lens surfaces are 24K gold coated to reflect against radiant energy such as that emitted from an open furnace or Glory Hole. Didymium lenses are made of scratch resistant polycarbonate. Frames have side shields for peripheral protection. The lenses have a darker blue color under the gold surface which passes less light than Cat. No. 4970 (for small furnace or Glory Hole exposure).



### CLIP-ON FRAME PHILLIPS 202 DIDYMIUM GLASSES

**Cat. No. 49706**

The same "ACE" Amethyst Contrast Enhancer optics as used in Cat. No. 4970. Clip-on metal frames are lightweight with a gold finish. Clips over most prescription glasses. 48mm lenses.

## "ACE" CONTRAST ENHANCEMENT GLASS

"ACE", short for Amethyst Contrast Enhancer, utilizes rare earth oxides in didymium glass composition to achieve unique color enhancing characteristics. This concept selectively positions transmission in the blue, green and red spectral regions, whereby one can improve color discrimination between different colored objects. ACE glass is very efficient in filtering sodium flare in addition to providing ultraviolet protection to 390NM. It makes it very comfortable to view under high ambient light when working with glowing hot glass over a long period of time. Filters the sodium flare from 575 to 600NM.



### "ACE" PROFESSIONAL DIDYMIUM GLASSES

**Cat. No. 49707**

Comfortable, lightweight frames fitted with ACE 202 Amethyst Contrast Enhancer Glass. It is sometimes referred to as AUR 92 Glass. Has excellent color enhancing characteristics. Recommended for the serious professional hot glass craftsman who works with borosilicate (Pyrex Brand) as well as soda-lime (soft) glass. Allows comfortable flame viewing over a long duration.



### BENCH MOUNT DIDYMIUM GLASS

**Cat. No. 49708**

Now have the safety of viewing the torch flame and the freedom of not having to wear eye safety glasses all in one.

The "ACE" 202 Amethyst Contrast Enhancer Didymium Glass is mounted on an adjustable stand which is placed between the flame and the viewer. Full 4" x 4" (102mm) glass may be adjusted vertically while the swivel tilts vertically or horizontally.

### GREEN SHADE 2.5 SAFETY GLASSES

**Cat. No. 49692**

Snug-fitting with side shields on the temples. 55 x 50mm lenses. Provides partial protection from impact, ultraviolet and infrared rays. Plastic frames.

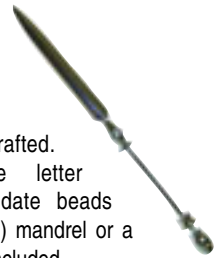


## BEAD SUNDRIES

### SILVER LETTER OPENER

**Cat. No. 16700**

Beautiful and well-crafted. Silver-plated beadable letter openers will accommodate beads made on a 3/32" (2mm) mandrel or a 1.5mm hole. Beads not included.



### MAGNIFYING GLASS

**Cat. No. 16701**

Beautiful and well-crafted silver plated magnifying glass measures 5-1/5" (132mm) long. It will accommodate beads made on a 3/32" (2mm) mandrel or a 1.5mm hole. Beads are not included with this product.



### BRASS LAMP TOPPER

**Cat. No. 16702**

Embellish your home decor, make a seasonal statement or give a unique & practical gift! Base fits standard lamp base screws to create your own beaded finial! Also can be used as a freestanding Bead Stand!



Base is about 3/4" (19mm) wide at the bottom and a little over 1/2" (13mm) high. Rod is almost 2-1/2" (64mm) long and will accommodate beads made on a 3/32" (2mm) mandrel. Rod is threaded on both ends to easily add or exchange bead designs!



### HEART KEY CHAINS

**Cat. No. 16704 - Silver Color**

WOW! Brushed silver makes this a very classy finding, which can also be used as a necklace pendant! Durable parts also protect beads! Houses a round bead best, but may use spacers or multiple beads, as long as they fit within the 15mm opening (about 5/8"). Beads can be made on a standard 3/32" mandrel.

### STEEL CABLE CHOKER

**Cat. No. 16705**

Perfect for wearing your favorite cabochon. Choker necklace made of coated steel cable. 16" in length with a magnet clasp. In packs of 3.





### PROFESSIONAL GLASSWORKER KIT

**Cat. No. 15993**

Now sold with the Carlisle Wildcat Burner (Cat. No. 16012)! This starter kit has everything necessary to work with borosilicate glass (oxygen and propane tanks are not included). Includes a comprehensive hands-on, step-by-step instruction book. Kit includes:

DESCRIPTION	Cat. No.
Carlisle Wildcat Burner . . . . .	16012
Spark Lighter . . . . .	1576TFL
Carbide Knife (glass cutting) . . . . .	1567
Graphite Paddle (3" x 4") . . . . .	1572
Didymium Safety Glasses . . . . .	4970
Tweezers (10") . . . . .	1575
Oxygen Regulator . . . . .	156310
Gas Regulator, Propane . . . . .	156311
Hose Set for Oxygen & Gas . . . . .	15662
Insulated Table Board (16" x 24" x 3/8") . . . . .	1583



### THE DELUXE KIT\*

**Cat. No. 159842**

Tools and supplies for use with oxygen and bottled gas. Includes a Minor bench burner which is recommended for beadmaking.

Kit includes:

DESCRIPTION	Cat. No.
1 Minor Bench Burner . . . . .	1602
1 Spark Lighter . . . . .	1576TFL
1 Glasspro Nipper . . . . .	20571
2 Sheets Fiber Blanket (6 x 12") . . . . .	
1 7oz. bottle Pink Slipper . . . . .	15905
10 Stainless Steel Mandrels . . . . .	1539025
1 Pair Didymium Safety Glasses . . . . .	49701
1 Table Protector Board (16" x 24") . . . . .	1583
1 Graphite Paddle (3" x 4") . . . . .	1572
1 Propane Regulator . . . . .	156312
1 Oxygen Regulator . . . . .	156310
1 Hose Set . . . . .	15662

\*NOTE: Kit does not include oxygen or bottled gas.



### BEADMAKERS STARTER KIT

**Cat. No. 15951**

Everything for making beads, marbles and small 3-D glass objects. Kit includes:

DESCRIPTION	Cat. No.
1 Hot Head for MAPP Gas* . . . . .	15613
10 Rod Mandrels - 1/8" Stainless . . . . .	153902
Bead Rake . . . . .	15614
Grooved Marver Plate . . . . .	1597
Rod Scrubber . . . . .	—
1 7oz. bottle Pink Slipper . . . . .	15905
Table Clamp (to secure tank) . . . . .	—
2 sheets of Fiber Blanket (6" x 12") . . . . .	—
15 pc. Effetre Rods, Asst. (each 13-1/2" long) . . . . .	—
1 oz. Tube Millefiori Slices . . . . .	1554
Work Surface . . . . .	15831

\*NOTE: KIT DOES NOT INCLUDE OXYGEN OR BOTTLED GAS. Propane gas may be used with the Hot Head, but is not suitable for some bright colors.



### FLEXILENS ON CLAMP

**Cat. No. 49601**

An 18" (457mm) flexible arm with a large rimless lens provides an uninterrupted view between magnified and non-magnified work. Can be clamped onto table tops and other solid objects. Perfect for lampworking and any other detailed

hobbies. Very flexible and easily movable. Lens: Quality acrylic, 5" (127mm) diameter. 1.75x magnification.

### FLEXILENS ON BASE

**Cat. No. 49602**

An 18" (457mm) flexible arm with a large rimless lens provides an uninterrupted view between magnified and non-magnified work. Ideal for all detailed crafts. Great for use on a flat surface. Lens: Quality acrylic, 5" (127mm) diameter. 1.75x magnification.



### DAYLIGHT COMPACT LAMP

**Cat. No. 49603**

Daylight simulation lamp. Ideal for matching glass samples, detailed mosaic work and many other uses. When not in use, folds to 3-1/2" x 10-1/2" (90 x 267mm). Convenient for standing on a bench or hanging on a wall. Bright 13 watt low energy daylight tube provides perfect color matching, reduced glare and reduced eye strain. White color, 155 volts.

