

# CASCADE LEAD CAME

## FLAT H CHANNELS



NO.	FACE WIDTH	CHANNEL WIDTH	APPROXIMATE PIECES PER 45 LB. CASE
CL-FH60	3/16"	3/16"	95
CL-FH50	1/4"	3/16"	57
CL-FH48	9/32"	5/32"	62
CL-FH46	3/8"	5/32"	47
CL-FH45	3/8"	3/16"	35
CL-FH44	3/8"	1/4"	34
CL-FH26	1/2"	5/32"	41
CL-FH26R	1/2"	5/32"	30
CL-FH39	9/16"	3/16"	26
CL-FH12	3/4"	5/32"	26
CL-FH21	3/4"	15/64"	20

Cascade Lead Came is made from a very closely controlled alloy that combines a fine grain structure with high strength. Starting with pure lead, exacting quantities of Tin, Antimony, Copper and Bismuth are added to produce came that can be stretched to the breaking point and will still maintain a fine grain structure. This alloy also prevents oxidation which makes for easier soldering and allows a longer shelf life without tarnishing.

## ROUND H CHANNELS



NO.	FACE WIDTH	CHANNEL WIDTH	APPROXIMATE PIECES PER 45 LB. CASE
CL-RH1	11/64"	3/16"	88
CL-RH2	3/32"	5/32"	148
CL-RH3	1/8"	5/32"	117
CL-RH4	7/32"	5/32"	72
CL-RH5	3/16"	3/16"	55
CL-RH5N	3/16"	5/32"	60
CL-RH6	1/4"	5/32"	61
CL-RH7	1/4"	3/16"	57
CL-RH8	5/32"	5/32"	98
CL-RH10	7/32"	3/16"	53
CL-RH18	11/32"	3/16"	38
CL-RH30	1/2"	3/16"	31
CL-RH35	5/32"	3/16"	104
CL-RH36	5/16"	3/16"	41
CL-RH64	1/4"	1/4"HH	35

We carry the #2 Alloy, a medium strength lead which has become very popular, in all sizes. We carry the #1 soft alloy in #CL-RH5, CL-RH7, CL-RH35 and CL-SU55. Full cases come in a 45 pound cardboard case in 6 foot lengths. Refer to the specifications to determine the number of 6 foot pieces per case.

## BORDER U CHANNELS

NO.	DESCRIPTION	FACE WIDTH	CHANNEL WIDTH	APPROX. PIECES 45 LB. CASE
CL-SU55		1/4"	5/32"	58
CL-UH58		5/8"	5/32"	19
CL-RU70		3/16"	5/32"	73
CL-RU80		3/16"	5/32"	66
CL-RU85		1/4"	13/64"	57
CL-RU90		1/8"	5/32"	106
CL-RU92		3/32"	5/32"	99
CL-RU93		9/64"	5/32"	85
CL-RU100		5/64"	5/32"	175
CL-TU500		1/4"	5/32"	22

TABLE OF DECIMAL EQUIVALENTS

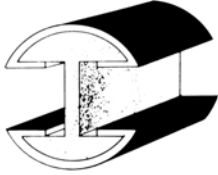
.016	1/64	.313	5/16
.031	1/32	.328	21/64
.047	3/64	.344	11/32
.063	1/16	.375	3/8
.094	3/32	.406	13/32
.109	7/64	.422	27/64
.125	1/8	.438	7/16
.141	9/64	.469	15/32
.156	5/32	.484	31/64
.172	11/64	.500	1/2
.188	3/16	.516	33/64
.203	13/64	.563	9/16
.219	7/32	.625	5/8
.234	15/64	.734	47/64
.250	1/4	.750	3/4
.266	17/64	.875	7/8
.281	9/32	.969	31/32
.297	19/64	1.000	1

# SPECIALTY CAMES

## SOFT BRASS

Catalog # *PMBZ-1/4HR* (40 pieces per case )

Catalog # *PMBZ-7/32HR* (50 pieces per case )



Heavily brass plated zinc roll formed over lead giving it ultimate bendability and a highly polished brass appearance. Strips are 6' long.

## REINFORCED LEAD CAME

Catalog #

RL-3/16 3/16-HRound

RL-1/4 1/4 -HRound

RL-45 3/8 -HFlat



## BRASS JACKETED LEAD CAME

Catalog #

BJL-3/16 3/16-HRound

BJL-7/32 7/32-HRound

BJL-1/4 1/4-HRound

BRASS or ZINC JACKET

LEAD



## ZINC JACKETED LEAD CAME

Catalog #

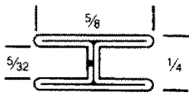
ZJL-7/32

7/32-HRound

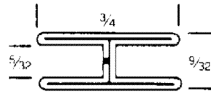
NOTE: NET WT. PER CASE 45 LBS. 6 FT. LENGTHS

# CASCADE ZINC

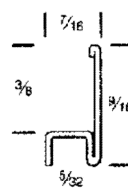
Several profiles formerly made by Chicago Metallic are now being produced by Cascade Metals. High quality zinc came provides additional strength to any stained glass panel, either for border support or internal strengthening.



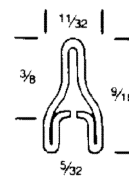
**CCZ-5/8HF**  
5/8" Flat  
Inner Bar



**CCZ-3/4HF**  
3/4" Flat  
Inner Bar



**CCZ-9/16UH**  
9/16" h  
Outer Bar



**CCZ-9/16Y**  
9/16" Contoured  
Outer Bar

# CASCADE ZINC, BRASS & COPPER

Sold in 6' lengths or 22# cases

CCB = BRASS CCC = COPPER CCZ = ZINC



CCB-3/16HR  
CCC-3/16HR  
CCZ-3/16HR



CCB-7/32HR  
CCC-7/32HR  
CCZ-7/32HR



CCB-1/4HR  
CCC-1/4HR  
CCZ-1/4HR



CCB-7/32HF  
CCC-7/32HF  
CCZ-7/32HF



CCB-9/32HF  
CCC-9/32HF  
CCZ-9/32HF



CCB-3/8HF  
CCC-3/8HF  
CCZ-3/8HF



CCB-1/2HF  
CCC-1/2HF  
CCZ-1/2HF



CCB-1/8U  
CCC-1/8U  
CCZ-1/8U



CCB-9/32U  
CCC-9/32U  
CCZ-9/32U



CCB-3/8U  
CCC-3/8U  
CCZ-3/8U



CCB-1/2U  
CCC-1/2U  
CCZ-1/2U



CCB-3/4U  
CCC-3/4U  
CCZ-3/4U

Catalog #	Face	
<i>Channel</i>		
CC?-3/16HR	3/16"	.156
CC?-7/32HR	7/32"	.156
CC?-1/4HR	1/4"	.156
CC?-7/32HF	7/32"	.140
CC?-9/32HF	9/32"	.160
CC?-3/8HF	3/8"	.156

Catalog #	Face	
<i>Channel</i>		
CC?-1/2HF	1/2"	.140
CC?-1/8U	1/8"	.156
CC?-9/32U	9/32"	.156
CC?-3/8U	3/8"	.156
CC?-1/2U	1/2"	.156
CC?-3/4U	3/4"	.156

## LIL NOTCHER

Catalog # LN-45  
LN-90

45° ANGLE MODEL  
90° ANGLE MODEL



This notcher allows you to cut a perfect notch on both sides of an 1/8" "U" channel at the same time and be used with Cascade zinc (CCZ-1/8U), brass (CCB-1/8U) and copper (CCC-1/8U) came exclusively. The Notcher is available in 45° and 90° angle models.

## CASCADE SOFT BRASS

Catalog # CCB-3/16HRS  
Catalog # CCB-7/32HRS  
Catalog # CCB-1/4HRS

CASCADE SOFT BRASS CAME  
CASCADE SOFT BRASS CAME  
CASCADE SOFT BRASS CAME



3/16"



7/32"



1/4"

# SOLDER

<i>Catalog #</i>	<i>Description</i>
2000A	Amerway 50/50
2003A	Amerway 60/40
2004A	Amerway 63/37 (Ultimate)
2005A	Amerway Lead Free
2005A-T	Amerway lead Free with Turmaline



*Catalog #* 2001C  
**SILVERGLEEM 496**

<i>Catalog #</i>	<i>Description</i>
2006C	Canfield Quick Set

(All solder 1/8" Diameter Wire except 2004TC which is 1/16" Diameter. Sold in 1 lb. rolls)

Lead-free and non-toxic. Great for jewelry making instantly freezes. Buff it to a high shine or patina or antique. It is 20-50% stronger than 50/50 or 60/40, depending on the application. Sold in 1/2 pound spools.

## SOLDER MAGIC, ACTION TIN

*Catalog #* 6222 1/2 lb. bottle

A fast tinning method for metals, lamp caps, wires, rebars, copper, brass, steel, and much more. Produces a bright shiny coating.



# BRACING BAR

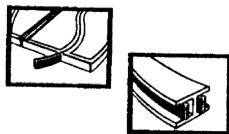
1/8 inch thick bars used to reinforce large window panels to prevent sagging or bowing. These bars are usually placed on edge and soldered where they make contact with lead came. All are available in 6' lengths.

## STEEL (TIN COATED)

<i>Catalog #</i>	
2020	1/8" X 3/8"
2021	1/8" X 1/2"

## STRONG LINE

*Catalog #* SL25



Strong Line is a thin coppered steel strip used to strengthen your stained glass panel from the inside. Strong Line is the right size for copper foil and all lead channels. With Strong Line you see only the beauty of foil or lead lines... the feel has the strength of steel. From the Morton System.

# ZINC TOOLS



## ZINC AND LEAD SAW

Catalog # DT-CS0368 (1/15 hp motor)  
Diamond Tech Power Miter Table Saw

A bench top power saw for cutting zinc or brass came. Comes with blade and chip deflection guard. A mitre guide and a fence is available as an option. Blade height adjusts to 3/4". Table top is 6 1/2" X 9".

## REPLACEMENT BLADE

Catalog # DT-CS0780

## ZINC BENDING MACHINE

Catalog # ZB-1



Designed for use with zinc, brass, and copper channel. Both "U" and "H" channels can be bent on the same set of rollers. The body is made of a strong aluminum frame that screws onto your workbench.

## GRYPHON MITER SAW

Catalog #

MS-1 **Saw**

MS-1B **Blade**

MS-1C **Metal Blade**



Sized and powered for precision cutting, this saw provides premium cuts of thinwall tubing, preformed thin shapes, and solids of brass, zinc, steel, composite fibers or graphite in sizes up to 3/4" square. wt. approx. 15 lbs.

# COPPER FOIL

Pressure sensitive copper foil tape is used in making Tiffany type lamps and window panels. It is wrapped around each piece of glass to be soldered together. It affords the craftsman the opportunity to do much more intricate and detailed work.

### VENTURE COPPER FOIL (1.5 MIL)

Catalog #	Width	Ft. per roll
2007	1/8"	108'
2008	5/32"	108'
2010	3/16"	108'
2009	7/32"	108'
2011	1/4"	108'
2015	5/16"	108'
2012	3/8"	108'
2013	1/2"	108'
2016B Black	12"X12"	1.25 MIL
2016	12"X12"	1.25 MIL

### VENTURE COPPER FOIL (1.0 MIL)

Catalog #	Width	Ft. per roll
2208	5/32"	108'
2210	3/16"	108'
2209	7/32"	108'
2211	1/4"	108'
2215	5/16"	108'
2212	3/8"	108'
2213	1/2"	108'

### VENTURE SILVERED BACKED COPPER FOIL (1.5 MIL)

Catalog #	Width	Ft. per roll
2010SB	3/16"	108'
2009SB	7/32"	108'
2011SB	1/4"	108'

### VENTURE BLACK BACK COPPER FOIL (1.25 MIL)

Catalog #	Width	Ft. per roll
2010B	3/16"	108'
2009B	7/32"	108'
2011B	1/4"	108'
2012B	3/8"	108'
2013B	1/2"	108'

## DECORATIVE COPPER FOIL (5/16" X 1.5 MIL x 108')

Catalog # 2015SC



An adhesive backed decorative copper foil tape with one edge cut in a scalloped design.

# COPPER FOILING TOOLS

## TABLE FOILER

Catalog # TF-1

## MAGIC FOIL CUTTER

Catalog # FC-1



The TABLE FOILER make glass foiling easier than ever. It dispenses, applies, & crimps foil smoothly and evenly. It comes with rollers for 3/16", 7/32", & 1/4" foil. The MAGIC FOIL CUTTER will allow you to easily cut off the foil without it sticking to your fingers.

## MANUAL FOIL WRAPPING MACHINE

Catalog # FM-1



This machine can be used with 3/16", 7/32", and 1/4" copper foil. It dispenses the foil, centers it on the glass, and crimps the edges while automatically removing the backing. The FM-1 saves hours of time over traditional method of hand wrapping.

## DEIGEL FOILER

Catalog # HM-500

## Rollerpack

Catalog # HM-620



The Diegel Foiler is an indispensable tool for more accurate foiling in less time for the hobbyist and professional glass artist. The patented Guide Pin can center and off-center the foil onto the glass. This gives precise foiling even on bevels or ripple glass. The dual reels accept every size and type of foil in the industry. The rubber tension reel nut will never overtighten while foiling and the peel-off-blade effortlessly removes the paperbacking and pushes it away from the work area. Accuracy and speed makes this a must for every workshop.

## THE COPPER FOIL DISPENSER

Catalog # FD-2



The copper foil dispenser is a must addition to every stained glass studio. Professionals and hobbyists alike will wonder how they ever got along without it.

## 3/16" HAND FOILER

Catalog # GF-3/16"

## 7/32" HAND FOILER

Catalog # GF-7/32"

## 1/4" HAND FOILER

Catalog # GF-1/4"



A lightweight hand-held plastic foiler that quickly applies foil evenly around glass edges.

## HAND CRIMPER

Catalog # GC-1



The accompanying tool to the hand foiler, this crimps the foil neatly and quickly around glass pieces.

## KWIK CRIMP

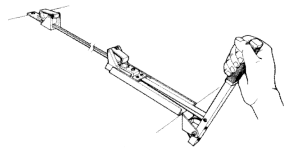
Catalog # KC-1



Burnishes foil to both sides and the edge of your glass quickly, efficiently, and with just one stroke.

# MISCELLANEOUS

## STANTON LEAD STRETCHER Catalog # LS



The Stanton Stretcher is designed to fit any type of bench surface. This Stretcher is completely user friendly and hassle free. Made to facilitate any type of lead came on the market, makes it a welcome addition to any home or professional studio.

## STANTON STRETCHER EXTENTION RAILS Catalog # LS-R



Extension rails allow for ease of stretching any length of lead without constantly having to reposition the lead vice on your workbench.

## LEAD VISE SPRING LOADED Catalog # 4006-A



This spring loaded vise automatically clamps down on the lead came, eliminating those awkward (and possibly dangerous) false starts when stretching lead came.

## LEAD VISE Catalog # 4125-PRO



Used to grip one end of your lead came while stretching it. Nails or screws down to edge of work bench. No spring on the vise.

## PROJECTOSCOPE Catalog # PRO-1



Projects an image from a book or small drawing onto a wall for easy enlargement of patterns. Photo size. 2 1/2" X 5". Bulb not included.

## VALVED PARTICULATE RESPIRATOR. pack of 10 Catalog # RSP-1

95% Filter efficiency level  
Exhalation valve for extra comfort.  
Inner foam provides a custom seal.  
Dual head strp for optimum fit.



## Catalog # RSP-2 FILTERED PARTICULATE RESPIRATOR w/VALVE

Rubberized half mask with adjustable head straps.  
Exhalation valve and large filters for easy breathing.



## GLASS HANDLING GLOVES Catalog # 4020



General purpose gloves for handling glass, they have a Natural Rubber coating on the palm side.

## POWER FLEX GLOVES Catalog # 4023



General purpose gloves for handling glass, these gloves are tighter fitting and allow more dexterity.

**CARBORUNDUM STONE**

Catalog # 4005



Used for grinding down sharp edges. Can also be used for shaping but will leave chipped edges.

**PUTTY STICK**

Catalog # 4025



Pointed Wooden sticks for cleaning excess putty.

**PLASTIC LATHEKIN**

Catalog # 4019



Plastic lathekin for opening the channel of lead and smoothing foil on glass.

**LATHEKIN**

Catalog # 4127



This imported 4-in-1 tool can be used as a lathekin, stopping knife, putty cleaner, and to burnish foil.

**HORSESHOE NAILS**

Catalog # 4010



Traditionally used nail because it minimizes gouges in lead and chips in glass. Sold by the box of 100.

**DOUBLE FACED HAMMER**

Catalog # 4021



Plastic on one end for hammering nails, and rubber on the other end for tapping glass.

**SAFETY GLASSES**

Catalog # 4011



Light weight, all clear plastic (Not Tinted). To prevent small particles from entering your eyes.

**WIRE BRUSH**

Catalog # 4012-S Steel Bristles



Used to clean areas to be soldered.

**BENCH BRUSH**

Catalog # 4013



For cleaning your work table.

**PUTTY BRUSH**

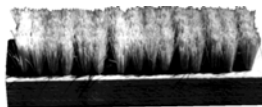
Catalog # 4014



For brushing in putty and cleaning your finished work. Size 3" X 8" Approx. Made of Tampico natural bristle.

**SMALL PUTTY BRUSH (PLASTIC BRISTLE)**

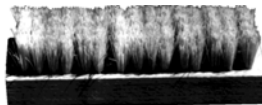
Catalog # 4014A



For application of putty. Size 1 1/2" X 5" Approx. Plastic bristles.

**SMALL PUTTY BRUSH (NATURAL BRISTLE)**

Catalog # 4014B



For application of putty. Size 1 1/2" X 5" Approx. . Same as above except it is made of Tampico natural bristles.



**LUSTER BRUSH**

Catalog # 4017



PZAZS' natural bristle brush will clean the glass and polish the lead and patinaed copperfoil within seconds. Insert the shaft into any lightweight hand held power drill. Hold the brush at a slight angle on the project, running it right to left, then back and forth over a small area. Repeat. A 10 x 10 inch section should take no more than 20 seconds to polish.

**BRUSH RE-FILL**

Catalog #4017R

**ACID BRUSH**

Catalog # 4015



Used to apply flux or patina. Horse hair bristles.

**SPONGE APPLICATOR**

Catalog # 6030



A very handy accessory for applying liquid patina or liquid flux.

**SINGLE BLADE CRAFT KNIFE**

Catalog # 4022

**REPLACEMENT BLADES (5 BLADES PER CARD)**

Catalog # 4022A

**REPLACEMENT BLADES (BOX of 100 BLADES)**

Catalog # 4022B



This tool is of sturdy aluminum construction. It is used to cut patterns, stencils or other paper products.

**FAIRGATE NON-SKID RULER**

Catalog #      LENGTH

OE9-12      12"

OE9-18      18"

OE9-24      24"



A hard aluminum rule with screened calibrations. The corked back prevents it from moving while being used.

**PLASTIC GLASS CUTTING L-SQUARE**

Catalog #      LENGTH      COLOR

L-12      12"      BLACK

L-12PK      12"      PINK

L-12PR      12"      PURPLE

L-12TQ      12"      TURQUOISE

L-18      18"      TAN

L-24      24"      TAN

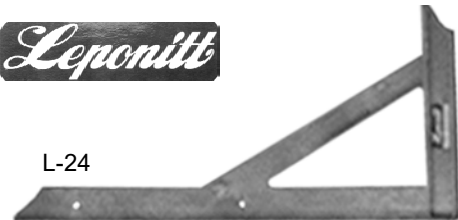
L-37      36"      TAN

L-50      50"      TAN

These plastic "L" squares are durable and inexpensive. The mini "L" square (L-12) is made of a tough non-abrasive material that will not scratch glass or warp out of shape. It is light and easy to maneuver so it is ideal for cutting small mirror squares or picture frame glass. The larger "L" squares (L-18, L-24, L-37 and L-50) are made of a strong and rugged but lightweight material that will not fracture or chip the straight edges nor will it scratch the glass. The manufacturer's specifications boast a one millimeter tolerance in 48 inches for these one piece impact mold squares.



L-12

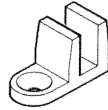


L-24

**DESIGNER GLASS CLIPS**

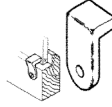
Designer clips are used to secure any type of glass into an existing area. Available in all sizes shown.

Catalog # DGC-3 1/4" MINI-CLIP  
Package of 25



Catalog # DGC-5 Adjustable Clip  
Package of 25

\*Catalog # DGC-4 1/4" CABINET GLASS CLIP  
Package of 25 clips and 25 screws  
\*\* Available in Clear, Brown and White



Catalog # FH-1 HOOKS (PAIR)

Attractive brass hooks(4 screws included) for hanging your finished windows.



FS-1 BRASS FRAMING SCREWS (4 pkg. - 1<sup>5</sup>/<sub>8</sub>" )

Attractive brass screws for screwing corners of wood frames together when making custom frames.



**HANDY HANGERS (BRASS)**

50 pcs. per bag.  
Catalog # HH-1



**COPPER WIRE**

Catalog # OE-7

This 16 GA. copper wire is used to reinforce lamps or to make small hinges for boxes. 23' Long.



**JUMP RINGS (BRASS)**

Packaged in 1oz. poly bag  
Catalog # JR-RND4 1/4"  
Catalog # JR-RND8 3/8"



**SUCTION CUPS (1<sup>5</sup>/<sub>8</sub>" )**

Catalog # OE-6

1<sup>5</sup>/<sub>8</sub>" Suction cups with a wrap-around metal hook for hanging larger items.



Catalog # OE-500S  
Catalog # OE-500B  
Catalog # OE-500C



(CURVED FLAT) BOX CHAIN



Catalog # OE-600S



LADDER CHAIN



Catalog # OE-700S  
Catalog # OE-700B



SPROCKET CHAIN



Catalog # OE-800B



#14 JACK CHAIN

Catalog # OE-900B  
Catalog # OE-900BN



#16 JACK CHAIN

B=Brass BN=Black Nickle C=Copper S=Silver

**16 GA. PRE-TINNED COPPER WIRE**

Catalog # OE-7-S16 22 ft.

**18 GA. PRE-TINNED COPPER WIRE**

Catalog # OE-7-S18 34 ft.

This copper wire is pre-tinned and ready to patina. Used to construct loops for hanging or for other similar projects.



**INNER TUBE ONLY**

Catalog # OE-2A

**OUTER TUBE ONLY**

Catalog # OE-2B



This type of hinge is used on boxes and terrariums. The outer brass tube is 3/32". The inner brass tube is 1/16". The outer tube rotates over the inner tube. The picture above is what the hinge looks like after tubes are cut and fitted. Rods are 12" long.

Catalog # OE-3 **PATTERN PAPER**  
Oil impregnated, size 24" X 36"

This pattern paper is made from heavy stock, oil impregnated stencil board paper. It will not shrink when exposed to water.

Catalog # OE-4 **CARBON PAPER**  
Size 24" X 36"

Catalog # 1771 **DOUBLE STICK TAPE (1/2" X 36 YD.)**

Great for sticking patterns to glass.

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**DURAINK PEN**

Catalog # OE-12

Black felt tip marking pen.



**SHARPIE PEN  
METALLIC SILVER**

Catalog # OE-13

Metalic Silver felt tip pen.



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**WHITE MARKER**

Catalog # OE-14

A quick-drying white felt tip marker. Opaque ink will not wash off while grinding.



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**GREASE PENCIL**

Catalog # OE-15

Most common pencil used on glass surfaces. Available in yellow only.



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**METALLIC MARKERS**

Catalog # NIJI-S (Small Tip)

Catalog # NIJI-X (Extra Fine Tip)

Catalog # NIJI-L (Extra large)

Available in gold and three sizes: Small nib and extra fine. Used to color solder joints when using brass came.



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**LUMO LUMOCOLOR MARKERS**

Catalog # LU-317B (Medium Blk)

Catalog # LU-318B (Fine Blk)

Available in Black and Red. Lumo Markers contain water-proof ink, will not lift off in grinding process.



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**MARK STAY II**

Catalog #6205

Mark you glass with a marking pen, apply a thin film of Mark Stay II with your finger over it and grind your glass. Mark Stay will keep marks from being washed away while grinding your glass or using a wet saw.



# CREATORS STAINED GLASS

## BEETLE BITS CUTTING SYSTEM & FLYING BEETLE CUTTER

Catalog # CSG-BB

Catalog # CSG-FB

Aids in scoring angles and straight edges and increases productivity tremendously on production work. The compass dial allows you to find and set angles with ease. This cutting system plugs into the Waffle Grid worksurface. Also compatible with the Morton cutting board. The Flying Beetle glass cutter is designed to slide effortlessly up and down the cutting bar at a perfect 90 degrees to the glass giving a perfect score each time. The Flying Beetle is made from impact resistant polycarbonate and utilizes the Toyo TC-10 cutter head part #SC-1A.

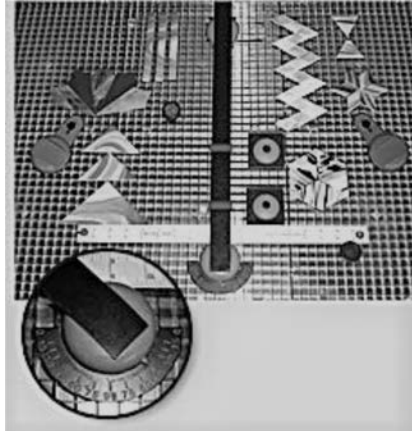
Includes:

- 1- Swivling bar rest with compass dial.
- 2- Adjustable angle bar rests
- 1- Stationary bar rests
- 2- Multi-directional glass stops (also sold separately)
- 1- 18" base ruler
- 1- 23" cutting bar
- 1- oil well

### ADDITIONAL ACCESSORIES

Catalog # CSG--B35      35" cutting bar

Catalog # CSG-GS      Glass Stops

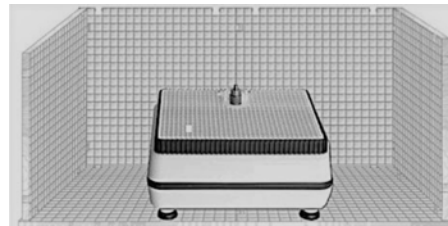


## WAFFLE GRID SURFACE

Catalog # CSG-WG2      2-Pack

Catalog # CSG-WG6      6-Pack

This interconnecting grid allows the user to configure to the shape of their work table. Through unique design, you can configure around a corner, as a connecting backsplash or even randomly turn up individual grids to have smooth areas amid the grided areas, (6-pack shown assembled into a splash guard). Made of high impact polycarbonate, the surface of 1/2" pockets is rounded and smooth, to allow your glass to glide. Want to clean out debris from just one section just lift it out. no need to disturb your whole work surface. The Waffle Grid comes in a 6- pack and a 2-pack. The components are 11 1/4" x 11 1/4".

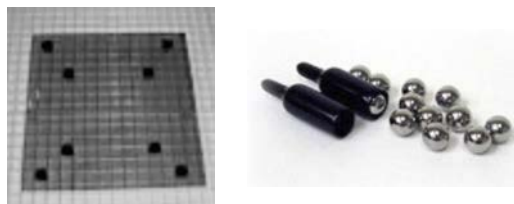


## FRICTION BUTTONS & SPEED BALLS

Catalog # CSG-FRB      8-Pack

Catalog # CSG-SB      12-balls plus 2 ball positioners

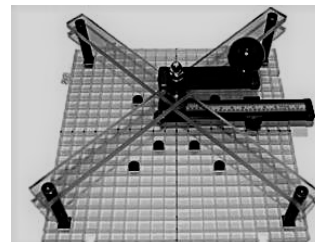
Friction button work with Waffle Grids or Morton's cutting board to provide cushioning as well as friction so that your glass will stay in place while cutting, while the Speed Balls do just the opposite. They allow you to easily slide the glass accross the grid surface when using the Beetle Bits cutting system



## CIRCLE PRO 12

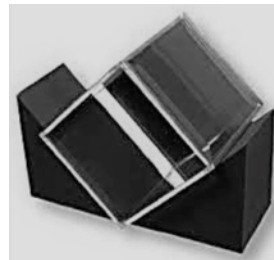
Catalog # CSG-CP12

Cutting perfect circles is no problem with the Circle Pro 12. Make circles from 3/8" up to 12" with precision and ease. Smooth operation and a Toyo TC-10 cutting head make this the best cutter for small to medium size circle cutting. Clean up is a snap with the included Waffle Grid base. Folds up for easy storage.



**Handy Wedge Set of 2**  
Catalog # WD-2

The Handy Wedge is made of soft rubber for a secure grip on your project. Acts as a support for 3 dimensional projects during the soldering process.



## OAK FRAMING STOCK

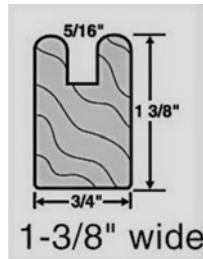
**HARDWOOD STRIPS**

Catalog # OF-1N **OAK STRIP 3/4" X 1 3/8" X 6'**  
Catalog # OF-CB **OAK, Corner Brackets and hardware**

This Red Oak framing stock is made from beautiful heart wood and is very straight and consistent across the length of each piece. Corner Brackets allow for easy assembly of frames by eliminating the need for mitering. Giving your work a nicely finish, 3 dimensional corner assembly.



Oak Framing Stock  
OF-1N



OAK, Corner Brackets  
OF-CB



## CHEMICALS

**GLASFLUX**

\* Catalog # 6200 4 oz. bottle  
\*\* Catalog # 6200G 1 gallon

Glasflux is a popular flux which can be used on either lead or copper foiled work. It rinses easily with water and has no unpleasant fumes. Non-acid; comes with safety cap.

\* Cannot be shipped by air or U.S. Mail.  
\*\* Cannot be shipped.



**NOKORODE FLUX, 1.7 oz. PASTE**

Catalog # 6020 1.7 oz. tin  
Catalog # 6020L 1 lb. tin

A useful product for those hard-to-get-to soldering jobs (on-site repairs, bevels, etc.) in that it does not drip or run.



**CLASSIC 100 GEL FLUX**

Catalog # 6226 4 oz  
Catalog # 6226HP 8oz

The first odorless, non-smoking flux for copper foil, lead and zinc came. Easy to use, works with traditional and lead-free solders. Cleans quickly with water and is non-corroding after washing.



**OLEIC ACID**

Catalog # 6002 4 oz. bottle  
Catalog # 6002G 1 gallon

A non-toxic natural flux specifically used for soldering lead came.



### BLACK PATINA FOR SOLDER

\*Catalog # 6210 8 oz. bottle  
\*Catalog # 6210P 16 oz. bottle

A chemical used to darken all lead and solder. Surfaces to be treated should be free of flux and dirt. Comes with safety cap.

\* Cannot be shipped by air or U.S. Mail.



### SUPER BLUE BLACK PATINA FOR ZINC

Catalog # 6018 3oz. bottle  
Catalog # 6018Q 1 quart

A chemical used to darken zinc. Surfaces treated should be free of flux and oil. Comes with safety cap.

\* Cannot be shipped by air or U.S. Mail.



### COPPER PATINA FOR SOLDER

Catalog # 6202 4 oz. bottle  
Catalog # 6202G 1 gallon

A chemical used to antique all soldered surfaces to a copper or bronze color. Surfaces to be treated should be free of flux and oil. Comes with safety cap.

\* Cannot be shipped by air or U.S. Mail.  
\*\* Cannot be shipped.



### BLACK PATINA FOR ZINC

Catalog # 6021 4oz. bottle  
Catalog # 6021G 1 gallon

A chemical used to darken zinc. Surfaces treated should be free of flux and oil. Comes with safety cap.

\* Cannot be shipped by air or U.S. Mail.  
\*\* Cannot be shipped.



### OXY-STOP Stained Glass Cleaner

Catalog # 6228P 16 oz.  
Catalog # 6228G gallon

A one-step wonder cleaner. Original, non-toxic, non-caustic, non-corrosive



### KWIK CLEAN

Catalog # 6040 16 Fl. oz.  
Catalog # 6040G Gallon

Flux and Patina Cleaner, eliminates white mold. Use throughout your stained glass project to clean contaminants, oil and flux to a streak free shine on the solder, came and glass.



### CJ's FLUX REMOVER

Catalog # 6016 8 Fl. oz.  
Catalog # 6016P Pint

CJ's Flux remover thoroughly removes greasy mess and residues from all types of flux and solder while preventing oxidation crust from improper cleaning. Allows copper patina to produce a bright, shiny finish. Makes clean-up quick and easy.



### SIMICHROME POLISH

Catalog # 6019 1 3/4 oz. tube

Simichrome polish is used to polish copper patinaed surfaces to a brilliant finish.



### FINISHING COMPOUND

Catalog # 6215 12 oz.  
Catalog # 6215G 1 gallon

Adds luster and protects lead, brass, copper, solder, and most patina finishes. Cleans and waxes glass to a brilliant shine.



### GLASS CLEANER

\* Catalog # 6012 22 oz. spray can

A special glass cleaner made especially for the glass industry. It is professional strength and leaves a streak free surface.

\* Cannot be shipped by air or U.S. Mail.



### SUPERCUTTER CUTTING OIL

Catalog # 6213 4 oz. bottle

A synthetic lubricant specially formulated for Toyo supercutters. It is non-corrosive and water soluble.



### D-LEAD HAND SOAP

Catalog # 6028HP 8 oz.  
Catalog # 6028Q Quart  
Catalog # 6028G Gallon

A specially formulated soap to remove heavy metals from the skin and pores. It is especially effective as a cleansing agent for lead, nickel, cadmium, cobalt, zinc, mercury, copper and silver. Grease and grime rinse away with the heavy metals. Rinses clean!



### GLASS PRO STAINED GLASS PUTTY

Catalog # 6216G 1 gallon  
Catalog # 6216Q 1 quart  
Catalog # 6216HP 1/2 pint

A pre-darkened putty designed specifically for the stained glass trade. Available in four convenient sizes.



### "DAP" WEATHER SEALANT # 1012

Catalog # 6015G 1 gallon can

A grey colored putty which is used to seal, weather proof, and strengthen stained glass windows.



### PUTTY BLACKENER

Catalog # 6217 1 lb. box

Black pigment used to darken putty.



### WHITING

Catalog # 6017 1 1/2 lb. container  
Catalog # 6017-5 5 lb. container  
Catalog # 6017-50 50 lb. bag

Whiting is a powder used in the process of weatherproofing and cleaning your stained glass window by removing excess putty.



### ARMOR ETCH ETCHING CREAM®

\* Catalog # 6011 4 oz. bottle  
\* Catalog # 6011-22 22oz.  
\* Catalog # 6011G 10 lb.

A ready-to use chemical used to frost the surface of any type of glass.

\* Cannot be shipped by air or U.S. Mail.



### Etch All® Etching Cream

Catalog # 6231 4 oz.

A non acid reusable cream etches glass, mirror, ceramic glazes, porcelain and marble. Can also be used to finger print proof sandblasted areas.



**WELDBOND MULTIPURPOSE GLUE**

Catalog # 6022S 5.4 oz. bottle  
 Catalog # 6022 14.2 oz bottle  
 Catalog # 6022G 3 liter bottle



**EZ-GRIND COOLANT**

Catalog # 6034 8 oz. bottle

When added to reservoir water, advanced formula EZ-Grind eliminates friction, heat wear and suction drag caused by grinding or sawing glass. When used properly, EZ-Grind will prolong the life of your diamond cutting products as well as increase cutting speed EZ-Grind contains an advanced lubricant which is designed to facilitate easier clean up of glass particles from grinder reservoir.



**TIP TINNER/CLEANER**

Catalog # 6043 15g / 0.5oz

Used for cleaning and tinning soldering iron tips.



**SAL AMMONIAC BLOCK**

Catalog # 6024 8 oz. block

A solid block of Sal Ammoniac used for cleaning and tinning soldering iron tips.



**EDGE SEALANT, MIRROR**

\* Catalog # 6025G 4 oz. Bottle

Protects mirror backing from corrosion caused by flux and other corrosive materials.



**BLUESTIK**

Catalog # 6039

Bluestik secures glass pieces to pattern allowing you to move project on layout board without the glass pieces shifting. It takes very little on each piece of glass to hold pieces in place. Easily removable, and reusable when used with clean hands. 1 oz. pk.



**CLEAR SILICONE SEALANT**

Catalog # 6219 2.8 oz. tube

Easy to use. Glues, waterproofs, seals, and insulates. Not for use with mirror.



**NO-SPILL CHEMICAL HOLDER**

Catalog # IM-CH

4 ounce Chemical Bottle Holder, built wide and low to the bench, it holds your chemical bottles, keeps them from being knocked over by soldering cords and careless hand swipes. It can be used to hold flux, patina and cutting oil bottles.



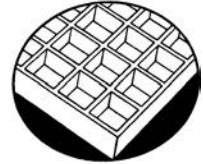


# MORTON SYSTEM

## The Morton System *Don't Do Glass Without It!*

A **Morton Surface** permits glass crafting anywhere in the home. Because glass chips fall into the surface pockets, your work area stays clean.

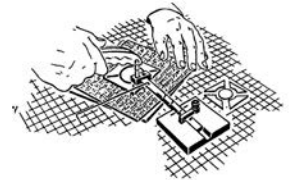
The **Mini Surface (SS02P)** measures 14 1/4" by 11 1/2" and is packed with 2 pieces that plug together. The plug together system allows you to make your work surface as large as you like.. The Mini Surface is a popular starting place for many hobbyists



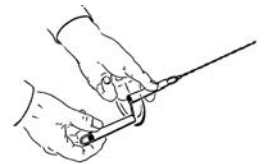
The **Cutter Caddy (CC06)** is a handy way to keep your Morton Surface organized. Use the six durable plastic holders for cutters, glass markers, pencils... and more.



The **Teeny Circle Guide (TCS1)** teams up with the turn table to make a great cutting jig. Circles range from as small as you can break to 7". Instructions for making circles and a whole lot more make this accessory a must for anyone working with glass.



Use the **Morton Twister (MT01)** to twist copper wire, brass wire and lead came. Create your own decorative edge trim with this easy to use tool.



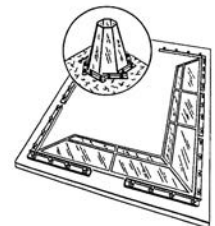
The **Clean Cut (ZM01)** will make perfect 45-degree border miters and accurate 90-degree cuts with a standard hacksaw. The miter vise is designed to hold but not crush the zinc, copper, lead or brass. Be sure to have this tool in your workshop.



The **Layout System** replaces the wood board and strips of the project board. The system is easy to use, easy to clean and easy to store. By utilizing inexpensive softboard you save with each project.

The **Layout Block System (LB01)** is the starter set. Projects up to 16" by 26" can easily be accomplished. Includes ten 6-inch blocks 40 pins.

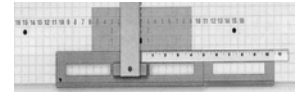
The **Layout Add-Ons** make the base system more flexible. The **12-inch Layout Add-Ons (LB02)** contain four 12" blocks four 3" blocks and 40 pins and greatly increase the capacity of the base system. The **23-inch Layout Add-Ons (LB23)** contains 2 blocks and 16 pins. The **17-inch Layout Add-Ons (LB17)** contains 2 blocks and 16 pins. The **Pins (LB16)** contains 16 pins.



The **Studio Cutting Bar (PG03)** is a 31-inch straight edge for the Glass Shop. The Studio Bar expands the Glass Shop for work with larger sheets of glass.

# MORTON SYSTEM

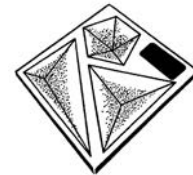
The **Fence Extension & Ruler (PG02B)** lets you copy angles and sizes from a pattern. Any angle can be transferred to the Glass Shop. A special ruler helps you size the piece to be made and allow for the glass cutter at the same time. The protractor has a special fixture to help set the Glass Shop bar. This item now comes with the PG01.



The **Safety Break System (SB01)** gives control of the breaking process. The Morton Runner improves power and control of hand breaking. Today's Safety Break has a different look than in 1980. Through many changes, the integrity of the original block and button is still intact. The Safety Break will start the break anywhere. Starting in from the edge helps to save long slender points and the added control of the break will help reduce flaring. Control means less grinding. The Morton Runner gives the finesse and speed of hand breaking with an additional advantage. The design evens the pressure and results in a break free of flares. The Morton Runner comes with a handy neck strap. Although it may seem unusual at first to wear your glass breaker, after using the Runner you won't get dressed without it.



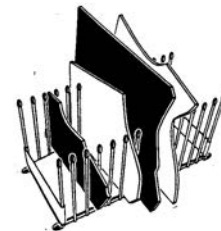
The **GS Assembly Tray (PG05)** is our idea of project assembly. Several step-by-step projects are included with the tray. Using squares, rectangles, triangles or pentagons, projects are quickly assembled into jewelry boxes, fancy paperweights, a lamp and much more. The Assembly Tray is the perfect reason to own the Glass Shop.



Strip cutting setups and multiple angle setups are reasons for extra **Glass Stops (PG06B)** Package of 5 glass stops.

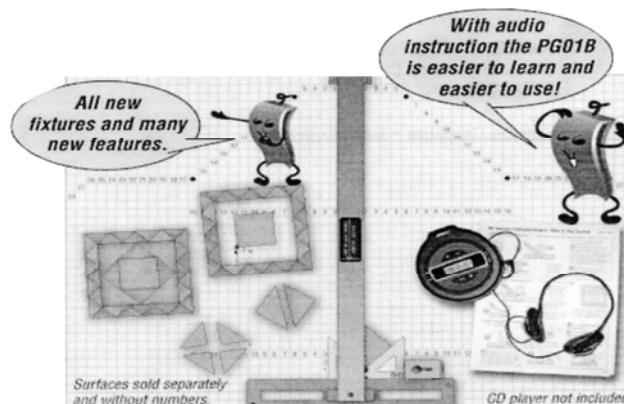


Use the **Glass Caddy (GC01)** near your work area to organize the glass you're using for your current project. As you cut your big pieces into several smaller pieces, use the Glass Caddy to hold all of your usable scrap. Holds up to 45 square feet of stained glass.



More products are available from Morton in the grinder accessory section and bracing section.

The **Portable Glass Shop (PG01B)** is a new version of the Glass Shop. After 20 years of great service the PG01 has been retired. The markings, on your current Morton Surface, are easily modified to work with this new Glass Shop. The 78 minute audio CD and the Instruction manual will have you understanding and using the PG01B faster and easier than ever before. Most of you don't like reading directions and this new concept will make learning fun again. New features like a reversible Squaring Fence for regular and thin art glass, cool new fixtures like the fast angles, both metric and inch scales and audio support makes the PG01B a must have for art glass enthusiasts.



# MORTON SYSTEM

The Circle & Border System (**CBS1**) is the ultimate accessory for the Portable Glass Shop. Putting a glass border around a glass circle uses a lot of glass and leaves you with hard to use scrap...the CBS1 changes how you do it. Complete with computer program to calculate all the sizes, and video instruction to show you how to use your system.



*Cutting surface and glass cutter not included.*

Catalog #	Description	Catalog #	Description
SS02P	Mini Surface	PG01B	Portable Glass Shop
CC06	Cutter Caddy	PG03	Studio Cutting Bar
TCS1	Teeny Circle Guide	PG02B	Fence Extension & Ruler
MT01	Morton Twister	SB01	Safety Break System
ZM01	Clean Cut	PG05	Assembly Tray
LB01	Layout Block System	PG06B	Glass Stops
LB02	12 + 3-inch Layout Add-ons	GC01	Glass Caddy
LB17	17-inch Layout Add-On	CBS1	Circle & Border System
LB23	23-inch Layout Add-Ons		
LB16	Push Pins (16) Add-Ons		

