

**MASONRY HEATER  
HARDWARE**

**DAMPER CATALOG**

**January 1993**

**NICK'S WELDING**

**3005 Washington Road Waldoboro, Maine 04572**

**Telephone 207/832-5350**

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**Masonry Heater Hardware since 1978**

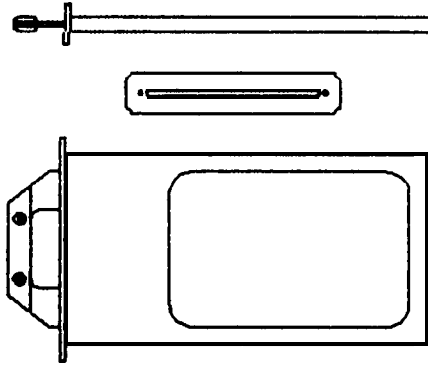
## CHIMNEY DAMPERS

Dampers for rectangular liners come in two configurations - end pull and side pull. The end pull is for installation on the narrow side of the chimney and the side pull is for installation on the wide side. The standard lintel depth "L"(\*) of 4 1/2" can be changed to accommodate stone facing or unusual installation considerations. I also provide dampers for round liners of all sizes and in that case need to know the inside and outside diameters of the liner as well as the inside and outside dimensions of the block or lift being used.

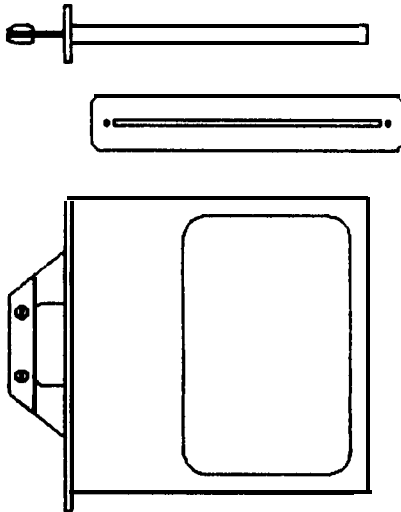
Dampers are designed and made so that the opening in the frame is slightly larger than the inside of the flue liner, and the corners of the opening in the frame are radiused to conform to the radius of the liner. This helps prevent moisture from getting at the liner joint and possibly causing joint deterioration. Because clay liners vary so much I provide a number of different stock sizes for them, as well as one size for Refracto liners.

The damper plate, frame, and cover plate are 3/16" steel plate. The frame is made up of two 3/16" plates with 1/4" x 1/2" flats in between them. A gas vent equalling 5-6% of the flue area is cut into the end of the damper plate. The cover plate is attached to the frame by two 8-32 alloy socket head cap screws. Several lengths of screws are provided so that the frame can be recessed up to 3/4" in the masonry. The handles are two piece wood - Cherry or Hard Maple.

(\*) Letter notation shown on page 8.



**End Pull**



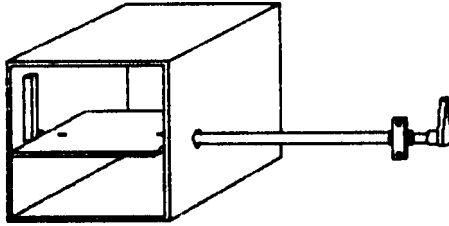
**Side Pull**

## **BASE EXIT DAMPERS**

Base exit dampers come in two configurations - rectangular and round. The rectangular dampers are used in connecting heaters to masonry chimneys, while the round dampers are used in conjunction with prefab chimneys such as Metalbestos, etc. Both styles can be used with custom contraflows, TuliKivi, TempCast, and CrossFire units.

Rectangular dampers are constructed of 1/4" steel plate, both for the flue channel and the damper plate. The damper plate shaft is 5/8" round cold roll steel with a cut-out for the damper plate and the plate is fastened to the shaft with 5/16" Grade 8 bolts and steel lock nuts. Rectangular base exit dampers provide the complete flue transition between the heater and the chimney flue and can be used wherever there is an existing chimney or where the mason is not familiar with the installation of a chimney damper. The flue channel can also be made to deal with angles and offsets, both vertical and horizontal. Gas vent equals 6% of flue area.

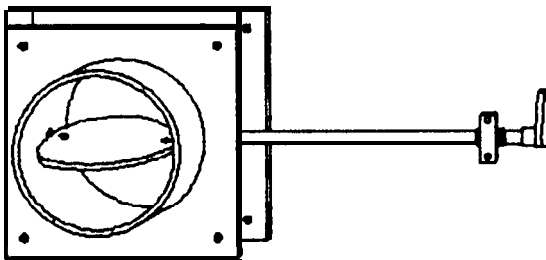
At this time there are no truly stock sizes. As with the chimney dampers, clay liner dimensions vary and even with fairly standard heaters like the TuliKivi, TempCast, and CrossFire, most installations are unique - especially the distance from the heater to the chimney flue. Depending on whether the heater is connected to the narrow or wide side of the liner, "A" and "B" typically fall between 6" and 10 1/2". "C" usually runs 8" to 12", sometimes 16" to 20", and occasionally up to 30" or more.



**Rectangular Base Exit**

Round base exit dampers are constructed of 2 1/4" steel plates and schedule 40 steel pipe. The base exit is fastened to the back of the heater with one 1/4" plate, and an anchor plate, available from the prefab manufacturer, is fastened to the other 1/4" plate. Usually, the manufacturer's anchor plate is then directly attached to a Tee, or a short length of their pipe which attaches to a Tee. The construction of the round damper is otherwise similar to the rectangular damper.

Round base exits are available in 6" and 8" inside diameters. The "A" and "B" dimensions are made the same as the prefab manufacturer's anchor plate. "C" runs about 5" and up.



**Round Base Exit**

## **TOP EXIT DAMPERS**

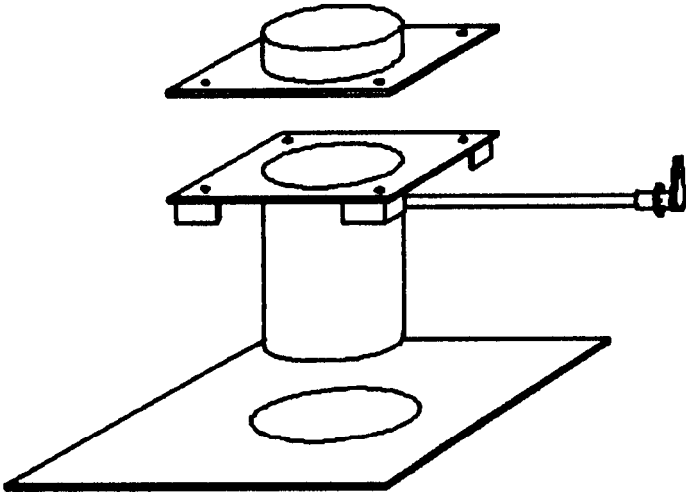
**Top exit dampers are for five-run heaters when using prefab chimneys set directly on top of the heater. The sketch at the right shows a stock damper for the new TuliKivi TU2700. The 1/4" plate shown under the damper rests on the stones that bridge from front to rear at the top of the heater. The damper flue pipe goes through the hole in the plate and through the hole cut in the stone(s) capping the upper chamber. A prefab chimney anchor plate mounts to the upper damper support plate with four 1/4" alloy socket head cap screws. If stove pipe is being used a plate with suitable collar is provided.**

## **OTHER PRODUCTS**

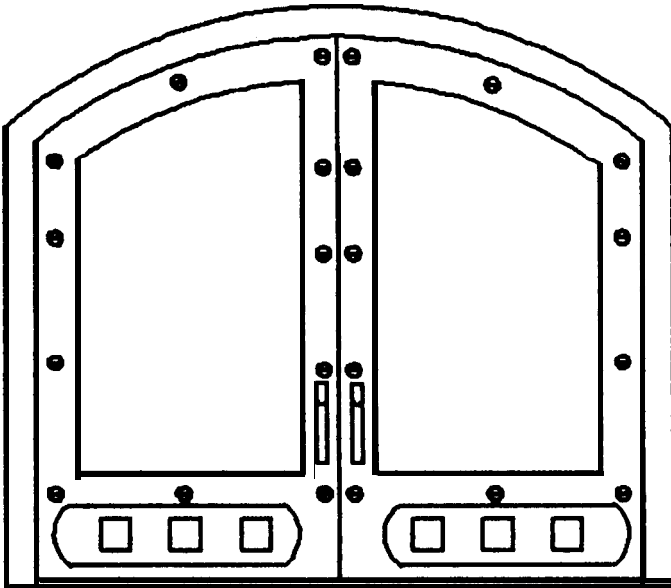
**At right is a sketch of custom glass doors being made for Pat Manley of the Brick Stove Works. The frame is 28" wide by 20" high at the beginning of the arch. The glass is 7/32" Corning Pyroceram made by Schott in Germany. Custom doors without glass are also available.**

**Also:**

- **Heating flue bypasses for heaters and oven bypasses for cookstoves. These provide quicker, cleaner starts with cold stoves and/or poor draft conditions.**
- **Range tops, doors, 8 ovens for cook stoves.**
- **Custom hardware and steelwork to meet almost any requirement.**



TU2700 Top Exit Damper



Custom Glass Doors

## ORDERING INFORMATION

Using the system of notation shown at the right, almost any damper or bypass can be ordered by phone.

When ordering chimney dampers, have the inside measurements, A & B, of the flue liners you'll be using. If you're using stone or anything other than common brick, determine what the lintel depth L should be. Measure from the inside of the liner to the face of the chimney. Is it side pull or end pull?

When ordering rectangular base exit dampers, determine the height and width, A & B. These are outside measurements - the inside is 1/2" less. C is the length of the flue channel from end to end. SF is the distance from the heater end of the flue channel to the center of the damper plate shaft. For most TuliKivi installations this is 3" - which sets the channel end even with the inside of the 60mm stones and allows the 5/8" needed to mount the outer support bearing at the rear of the heater. SL is the distance from the side of the channel to the outside of the heater.

Ordering round base exits is the same as above except A & B are the measurements of the anchor plate provided by the chimney manufacturer.

Heating flue bypasses use the same notation as rectangular base exit dampers.

For orders requiring angles or offsets it's best to FAX or mail a sketch or print.



## Net Price List

### Standard Chimney Dampers

8" x 8"	s 75.00
8" x 12" End Pull	80.00
8" x 12" Side Pull	85.00

Above Dampers with up to 9" Lintel, add \$10

Dampers for angled chimney faces are \$20-30 above base prices.

### Rectangular Base Exit Dampers

Since there are no standard sizes, the following are typical prices for measurements A, B, and C.

7" x 7" x 9 1/4"	S 80.00
7" x 10 1/2" x 9 1/4"	85.00
7" x 10 1/2" x 16"	95.00

### Round Base Exit Dampers

6" (C up to 12")	\$ 85.00
8" "	95.00

### Heating Flue Bypass

7 1/2" x 10 1/2" x 12"	\$ 115.00
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### Oven Bypass

2 3/8" x 8 3/8" x 8"	s 55.00
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Nick's Welding 3005 Washington Road Waldoboro, ME 04572

Telephone: 207/832-5350

rev. 1/27/93 HN

## Order Form

**Date:**

**Name :**

**Chimney Damper End Pull.... Side Pull....**

**Rectangular Base Exit....**

**Round Base Exit....**

**Flue Bypass....**

**Oven Bypass....**

**A....**

**C....**

**SF....**

**B....**

**L....**

**SL....**

**Notes:**

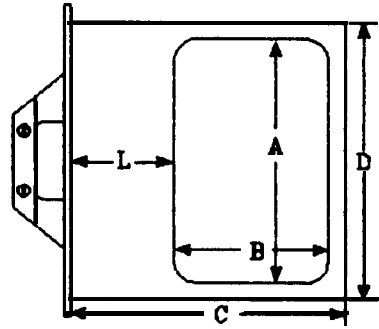
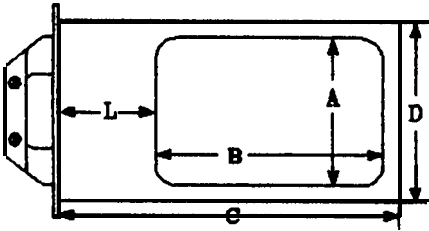
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**Telephone:**

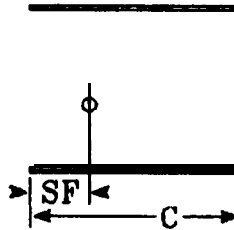
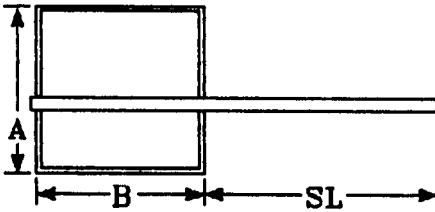
**Shipping Date:**

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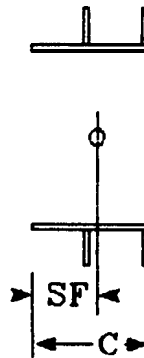
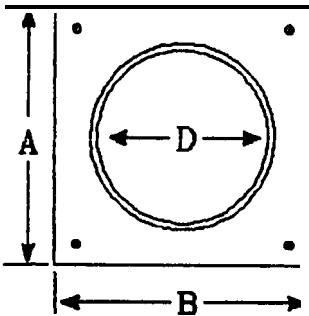
**Nick's Welding 3005 Washington Road, Waldoboro, ME 04572**  
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Chimney Dampers



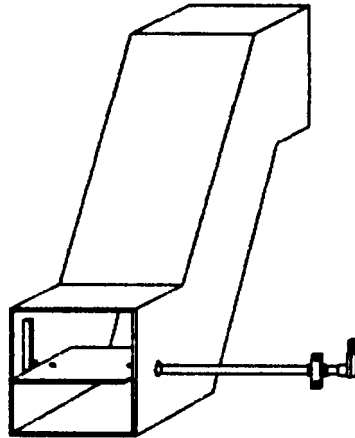
Rectangular Base Exit



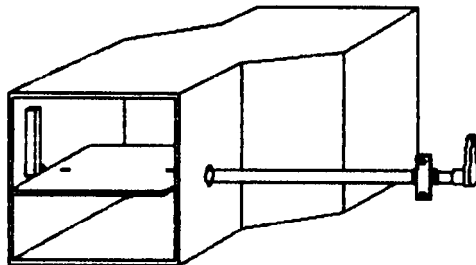
Round Base Exit

**TRUTH REVEALED (you can't make an 8 page catalog)**

This was going to be eight pages but at this point I discovered pages 4 8 5 would be on opposite sides of half a sheet of paper which couldn't be stapled in. So here's some miscellaneous stuff to make up two pages.



Sometimes you get to the job site and find the opening has been cut into the flue at some distance from the floor, as happened in the case above. Sometimes you find the chimney wasn't laid up quite where you wanted it, as in the case below. These are actual case histories.



To find the area of a circle - square the diameter and multiply the square by 0.7854. For instance, for a diameter of 8 -

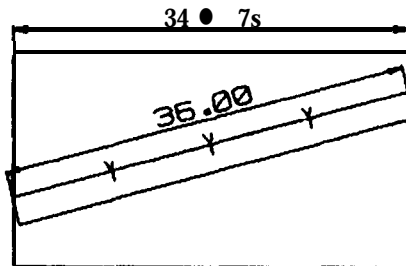
$$8 \times 8 = 64, 64 \times .7854 = 50.2656$$

For quick "head" calculations - square the diameter and multiply by  $\frac{3}{4}$ . The error is less than 5% and is on the small side.

To divide the circumference of a circle into sixths, set a compass or dividers equal to the radius and mark around the circumference.

Now, for something I learned from H.H. Seigle's excellent book, "Carpenter's Tools and Their Care" -

To divide a piece of material of random width into equal parts, lay a scale or rule across it diagonally so that the number on the high end is easily divisible by the number of pieces you wish to have. Such as, here is a piece  $34 \frac{3}{4}$ " wide which is divided into 4 equal pieces by laying a rule at 36" on the high end and marking at 9", 18", and 27".



You already knew it! Oh well, I'm not too good at catalogs. Steelworking's another matter.

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Hans Nicolaisen