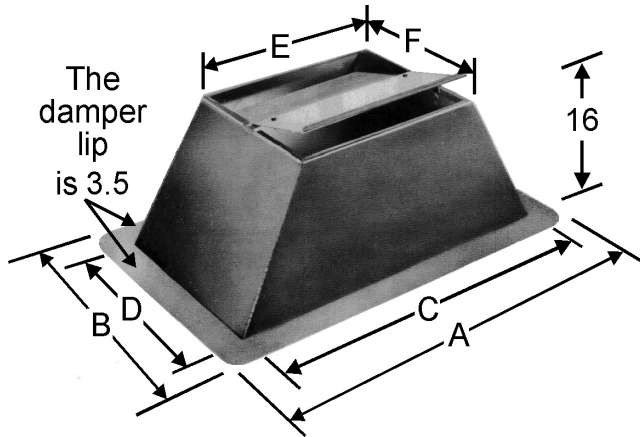


Square Form Damper

Installation Instructions



This type of damper permits many different applications. These instructions provide the basic dimensions, and some important features of a square form damper installation. However, not every aspect is covered. In addition to these instructions, consult an expert or a masonry fireplace manual concerning your particular installation.



Dimensions

All dimensions are in inches.

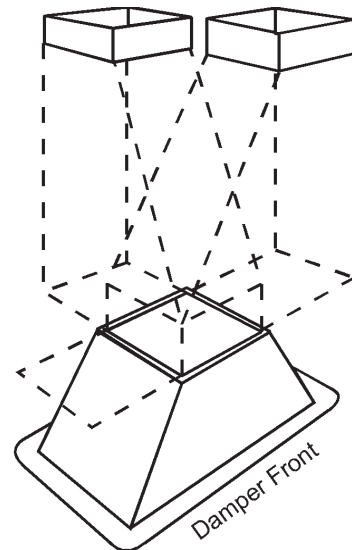
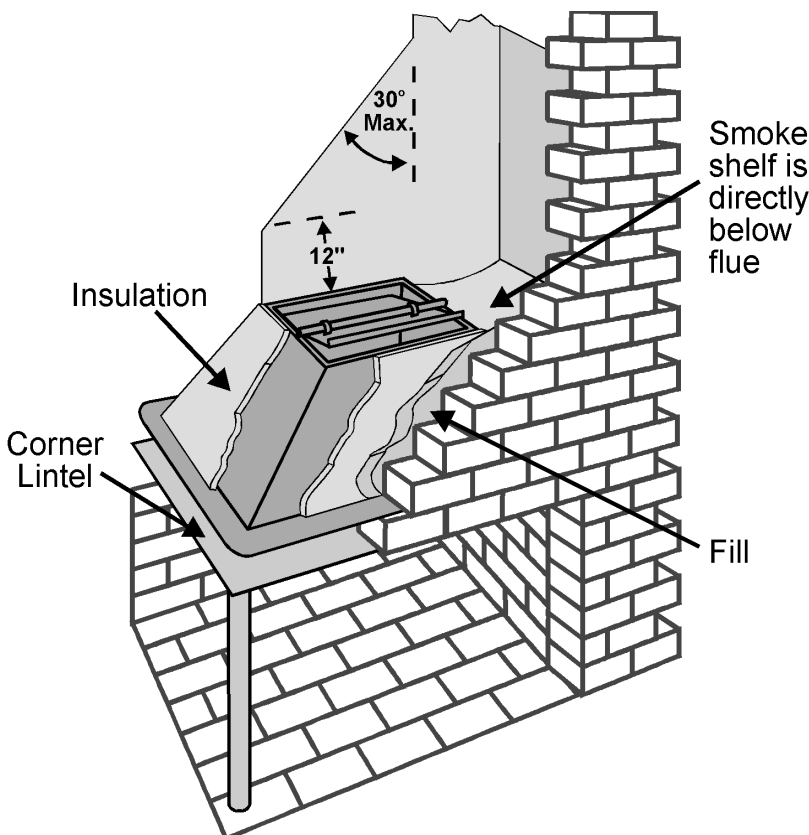
Stock No.	Overall Size (A x B)	Base Size (C x D)	Dome Size (E x F)	Lintel Height
1830	37 x 28.5	30 x 21.5	14 x 18	22
1836	41 x 28.5	34 x 21.5	17 x 18	22
1842	47 x 28.5	40 x 21.5	24 x 18	22
1848	53 x 28.5	46 x 21.5	30 x 18	22

Conforms with **IBC® & IRC®**

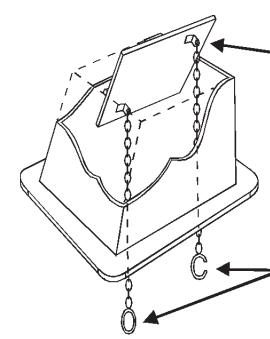
Made from Heavy Gauge Steel

Insulation provided to prevent masonry cracking

Construction Details



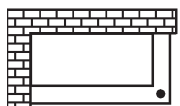
The smoke shelf and chamber should be located either to one side or the other or to back of the damper as shown in the sketch to the left.



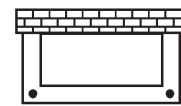
Check the damper blade movement. Adjust the tension as needed.

Check for the correct operation of "O" (open) & "C" (close).

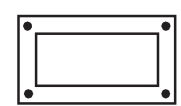
Multiple-Opening Fireplace Variations



L Shaped



Three Faced



Open All Around



See Through

Continued on back



Square Form Damper

Installation Instructions



Construction Details (continued)

Always install according to local building codes.

Foundation:

The foundation should be poured concrete — not mortar or other softer material. It should extend a minimum 6" beyond the masonry on all sides and be from 8" to 12" or more thickness, depending on the size of the fireplace. It is recommended that it be reinforced with steel or mesh. Check your local building code.

Concrete Hearth Slab:

The hearth should extend a minimum 18" in front of the fireplace and a minimum 12" on each side. The floor joist must be cut and "headed" to allow for the hearth. Lay 1/2" reinforcing rods across the narrow width of the ash pit and across the 8" front masonry wall to the floor joist header. They should be on 8" centers and covered with expanded metal. The concrete hearth slab should now be poured. Reinforcing rods should be placed in the slab approximately 4" on center. Leave open area for ash dump.

Firebox Construction:

Lay fire brick for the inner hearth over concrete slab underneath firebox area. Do not extend beyond face masonry. The shape and dimensions of the firebox depend upon the plan being constructed. Build firebox of fire brick. Use thin mortar joints. Top opening should fit the bottom side of the damper. Fill in area between sides of firebox and exterior fireplace wall with masonry. Fill area behind and to top of firebox with rubble or masonry.

Setting Damper:

Set damper on top of firebox opening. Completely cover damper with insulation provided with the damper. Lay masonry around damper. Fill area between damper and masonry with rubble or masonry. Do not wedge masonry against damper.

Smoke Chamber:

The smoke shelf and chamber should be located either to one side or the other, or to back of the damper. (See the sketch on first page.) The chamber should start at the dome opening of the damper and extend to the bottom of the flue liner. It should extend at least 12" above the dome before sloping towards the flue liner to allow unobstructed operation of the damper blade. The sides of the chamber should slope gently up to the flue liner. Sharp ledges and offsets will restrict and disrupt the flow of the rising smoke. All sides of the area should be parged (trowelled) smooth.

Flue Size:

All fireplaces require the proper flue size in order to create the proper draft and avoid smoking. The size of the flue is calculated to match the fireplace opening. In general, the flue's inner cross section should be 1/10 of the total fireplace opening. For example, a see-through fireplace opening 27" high by 32" wide equals 1728 square inches of opening, and needs a flue with a inner cross section of 172.8 square inches or larger.

Masonry Chimney:

Set a section of flue liner on top of the smoke chamber opening. Lay a minimum 4" of masonry around the liner. Leave an air space (1" on exterior; 2" on interior) between the masonry and any wood or combustible material or framing. Make sure each joint is sealed when the next section of liner is added. The chimney should extend 4' above a flat roof, or 2' above the ridge of a pitched roof. The top of the chimney above the roof must be 2' above any point on the roof within 10' of the chimney.

Masonry Cap:

The top of the chimney should be capped with concrete and slope up to the liner. The liner should extend 2" or more above the cap. Multiple liners in a single chimney should be separated by 4" of masonry, and the top of the liners should be staggered 4" in height.

Masonry Face:

The masonry face may be laid after setting the damper or after the chimney is completed. The measurements of the fireplace opening are important. See the dimension chart and drawings for width and height measurements.

A combustible mantel should be placed 12" or more above the fireplace opening. If the mantel is placed less than 12" above the fireplace opening, it may only project 1/8 inch for each inch above the opening. For example, a mantel ten inches above the fireplace opening may project 1/8" x 10" or 1 1/4".

WARNING: The insulation material that comes with a damper contains fiberglass wool. It may cause irritation to skin, eyes, and respiratory tract. Avoid contact with eyes and skin. Protect yourself by wearing long sleeved, loose fitting clothing, gloves and eye protection when handling and applying material. (Do not tape sleeves or pants at wrists or ankles.) As an extra precaution, you may choose to wear a disposable dust respirator at all times. Wash with soap and warm water after handling. Wash work clothes separately and afterwards wipe out washer.

