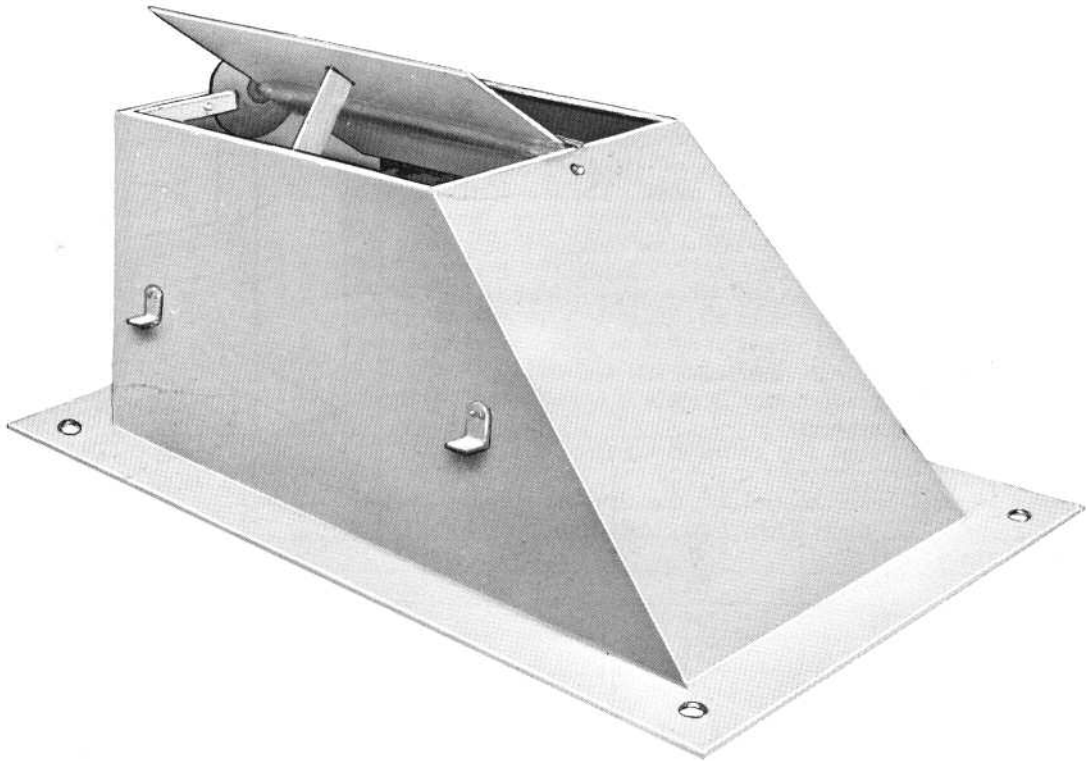


VESTAL

Multi-Opening FIREPLACE DAMPERS

The Answer to Modern Design Fireplaces



Please
READ
Carefully

Important
**INSTALLATION
INSTRUCTIONS**

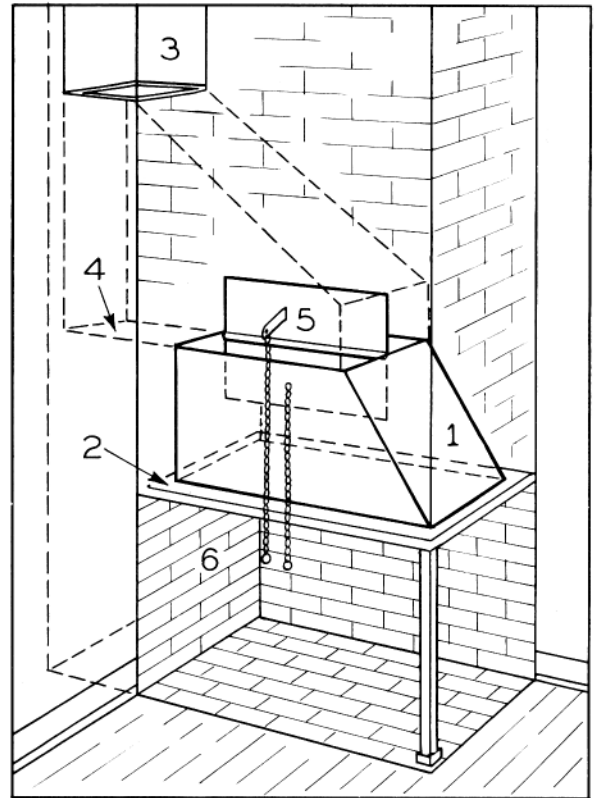
VESTAL MANUFACTURING

P.O. Box 420/Sweetwater, Tennessee 37874
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Check these 6 Important Multi-Opening Construction Advantages

CONSTRUCTION ADVANTAGES:

1. Designed with smooth high funnel throat shape to offer as little obstruction to draft as possible.
2. Designed to permit rapid laying of masonry. All four sides have lintel of adequate strength to carry load. Additional corner post must be provided for projecting corners. See page three.
3. Designed to permit use of different size flue tile depending on area opening of fireplace. See construction details.
4. Allows easy construction of down draft shelf in the masonry. The down draft shelf is an important component of any fireplace. It helps to eliminate puffs of air going directly down the stack into the fireplace and room. The use of the conventional throat damper for fireplaces with more than one side open usually presents a much more difficult problem of forming the down draft shelf in the masonry. Down draft shelf should be incorporated in chimney construction.
5. Removable valve plate with adjustable tension to permit draft adjustment. Once adjustment is made it is rarely necessary to change the adjustment.
6. Simple but durable chain control of the damper opening. Letters "O" and "C" made from heavy cast iron provided on ends of chain.



Why A Special Damper for Multi-Opening Fireplaces?

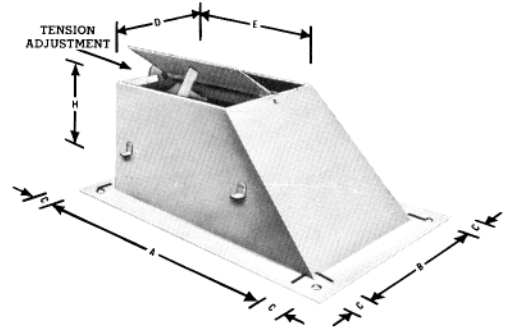
Today's trend toward modern design and ranch style homes has created a desire for the unusual fireplace. The Vestal Multi-Opening Damper is the solution to the problem of how to construct a fireplace that has two or more open sides. The wide flexibility of this damper permits many interesting applications for those who desire to construct the fireplace that is different.

The conventional throat damper is designed for one set form of construction. The conventional throat damper has a long narrow shaped throat designed to make the fire burn evenly along the back wall of the fireplace with only one open side. Fireplaces with more than one open

side need a damper shaped to help promote the even burning of the fire everywhere on the hearth. A high funnel shape and larger throat area help to solve this problem. The conventional fireplace is enclosed on three sides and has a relative fixed area of opening. Fireplaces with more than one open side have a large area of opening, consequently the size of the flue and the area of the damper throat should be increased proportionately. Fireplaces with one side open are much less affected by cross currents within the room than fireplaces with multi-open-sides. The multi-open side fireplace necessitates stronger draft and larger flue areas to overcome cross currents. The Vestal Multi-Opening Damper is designed for an economic solution to this problem.

SPECIFICATIONS OF MULTI-OPENING FIREPLACE DAMPERS

Ordered By This Model No.	Overall Size AXB	Flue Outlet DXE	Overall Height H	Lintel Size C	Shipping Weight
3016	30" x 16"	13" x 18"	13½"	3"	46
3320	33" x 20"	18" x 18"	16"	3"	63
3620	36" x 20"	18" x 18"	18⅝"	3"	76
4220	42" x 20"	18" x 24"	21½"	3"	83
4824	48" x 24"	20" x 24"	21½"	3"	100



Corner Supports

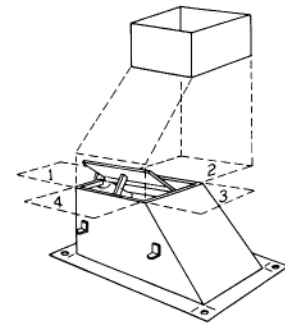
The heavy flanges on all four sides of the damper are adequate to carry the load where the corners are supported by the chimney masonry. Additional supports must be provided for fireplaces that have projecting corners. Square or round post can be supplied to bolt on to this damper. Each post is shipped with a heavy cast iron bearing plate for top and bottom and with the necessary bolts. The bearing plates fasten to any corner of the damper at the bolt holes shown. Lengths are 30 inches only, but may be easily cut on the job to fit exact requirements.



Order By This Model No.	Description	Length	Shipping Wt.
CP-20-R	2 ½" Diameter Round	30"	13 lbs.

Suggested Construction Details

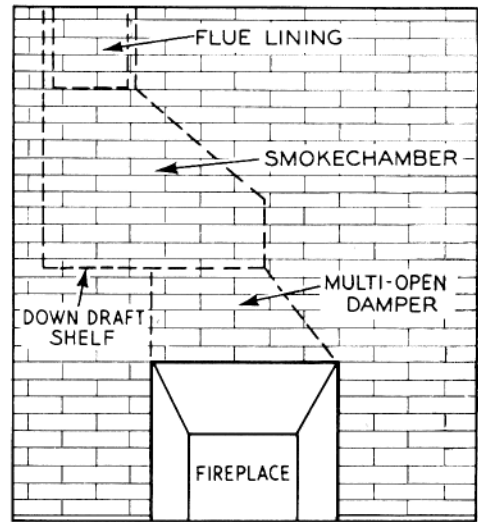
An important advantage of this damper is that it permits a choice of flue locations as shown in diagram at right. Often the flue cannot be located directly above the fireplace requiring slanting or turning of the flue lining. This obstructs draft and adds to the construction cost. Often this damper can solve the knotty problem of location for the architect even on a fireplace with only one side open. Diagram at right shows how the down draft shelf may be built on any one of four sides. Reversing the damper gives four optional positions depending on the best location for the stack. It is very important that masonry construction be kept one-half inch away from metal at all places to allow for normal heat expansion and contraction.



Multi-opening fireplaces for all practical purposes may be divided into five different types. Each type is described below; within each type there are an unlimited variety of applications. These diagrams suggest some, but by no means all of the possible construction details. Fireplaces with more than one open side should not be treated as though they had only a single open face, in regard to flue lining capacity. Flue capacity should be based on adding together the sum of the square inch area of each open face of the fireplace. The net sectional area of the flue and the total area of all open sides should be in a proportion of not less than one to ten. Any fireplace with more than one open side is difficult to build. *Consult your architect.*

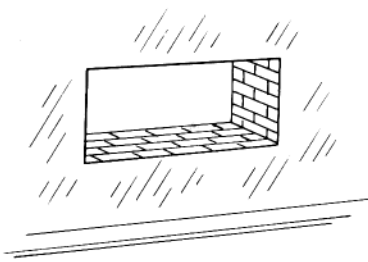
TYPE I — One Side Open Only (Conventional Fireplace)

For fireplaces of this type we generally recommend our conventional throat damper. However, for the designer considering fireplaces with unusually high opening, or unusually deep opening, or requiring greater freedom of stack location, the multi-opening damper may be the most economical.

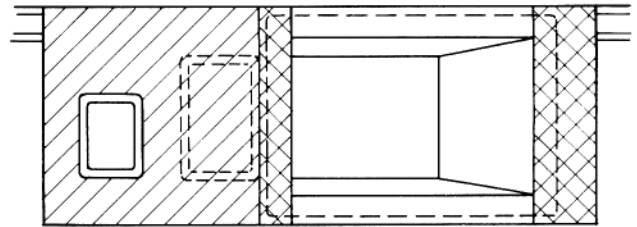


Damper Mod. No.	Hearth Size Width x Depth	Maximum Height of Opening for Flue Tile Sizes			
		8 1/2" x 13"	13" x 13"	13" x 18"	18" x 18"
3016	30" x 20"	32"	42"	52"	
3320	33" x 24"	29"	38"	46"	
3620	36" x 24"	26"	35"	45"	55"
4220	42" x 24"	25"	34"	44"	54"
4824	48" x 28"	20"	30"	38"	46"

TYPE II — Two Long Sides Open (Through Fireplace)

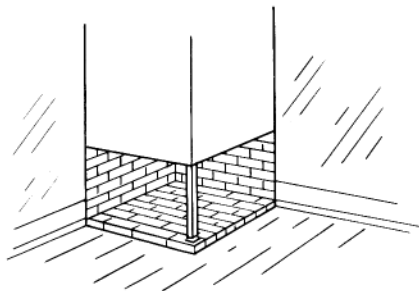


This is one of the most popular types of multi-opening fireplaces. It has a large variety of applications and is used to give a view of the one fire from two different rooms. Construction is simpler and more economical than some of the other types.

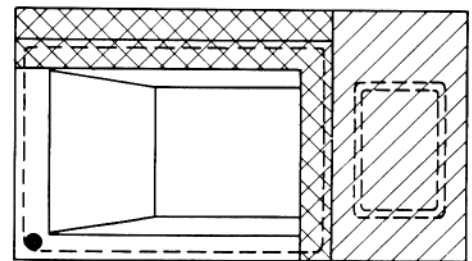


Damper Mod. No.	Width x Depth Hearth Size	MAXIMUM HEIGHT OF OPENING FOR FLUE TILE SIZES				
		13" x 13"	13" x 18"	18" x 18"	20" x 24"	24" x 24"
3016	30" x 24"	22"	31"	41"		
3320	33" x 28"	20"	29"	37"		
3620	36" x 28"	17"	26"	32"		
4220	42" x 28"		25"	31"	38"	
4824	48" x 32"		20"	28"	34"	40"

TYPE III — One Long Side, One Short Side Open (Projecting Corner Fireplace)

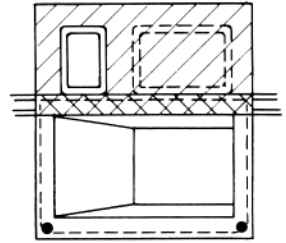
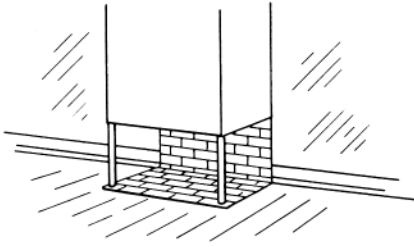


This also is popular and one of the more common types of multi-opening fireplaces. It has various applications and is very adaptable to different type floor plans.



Damper Mod. No.	Hearth Size Width x Depth	MAXIMUM HEIGHT OF OPENING FOR FLUE TILE SIZES			
		13" x 13"	13" x 18"	18" x 18"	20" x 24"
3016	34" x 20"	27"	36"	46"	
3320	37" x 24"	23"	32"	42"	
3620	40" x 24"	22"	31"	39"	
4220	46" x 24"	20"	28"	38"	46"
4824	52" x 28"	17"	25"	34"	42"

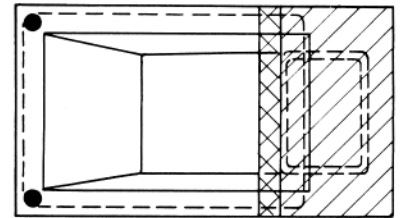
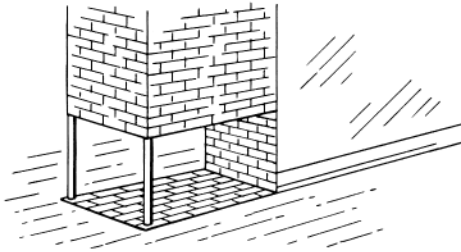
TYPE IV — One Long Side, Two Short Sides Open



This type of multi-opening fireplace may be used for either a mid-wall location or a diagonal corner location. Side walls may be extended or left fully recessed. Hard to construct. Consult your architect.

Damper Mod. No.	Hearth Size Width x Depth	MAXIMUM HEIGHT OF OPENING FOR FLUE TILE SIZES				
		13" x 13"	13" x 18"	18" x 18"	20" x 24"	24" x 24"
3016	38" x 20"		27"	37"		
3320	41" x 24"		24"	33"	40"	
3620	44" x 24"		23"	31"	37"	
4220	50" x 24"		21"	29"	36"	42"
4824	56" x 24"		20"	27"	33"	38"

TYPE V — Two Long Sides One Short Side Open



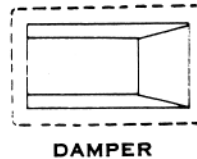
This type fireplace is usually used on the end of a partition separating two rooms; such as a dining room and living room. In this type fireplace the side walls may be extended or fully recessed as in type IV. Hard to construct. Consult your architect.

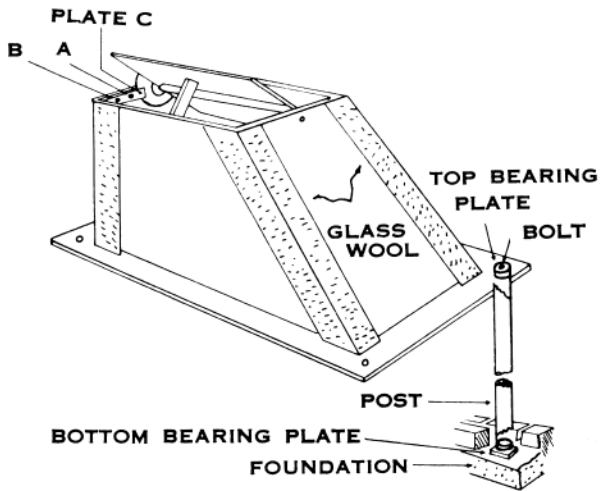
Damper Mod. No.	Hearth Size Width x Depth	MAXIMUM HEIGHT OF OPENING FOR FLUE TILE SIZES				
		13" x 13"	13" x 18"	18" x 18"	20" x 24"	24" x 24"
3016	34" x 24"		23"	31"		
3320	37" x 28"		19"	28"	35"	
3620	40" x 28"			27"	34"	
4220	46" x 28"			25"	33"	38"
4824	52" x 32"			22"	27"	33"

NOTE: All hearth sizes in the above tables are based on 4" thickness of facing.

Above tables are suggested maximum height of fireplace openings for the various sizes of the rectangular flue tile lining. The maximum height openings as shown in these tables are based on a chimney height of 20'. For 18' chimney height reduce the listed heights in the tables by 1", for 16' height chimney by 2", and for 14' height chimney by 4". The height of the chimney is measured from the hearth level. The lower the chimney the less the draft. During construction leave the damper valve plate open. It is less likely to get jammed by falling mortar, and the masonry will cure out better. Try the damper to make sure it opens wide and closes tight. It may be necessary to clean out fallen mortar in order to obtain a tight closure. Do not build a fire in the fireplace for several days. Allow time for the masonry to dry and cure thoroughly or it will crack.

Legend:





Valve Plate Adjustment

Diagram at left shows the method of adjusting the tension so that the valve plate will remain in any desired position. The screws (A & B) sometime loosen during shipment. These may be tightened with a wrench by reaching up inside the damper. Once tension is properly adjusted it is very rare that re-adjustment is needed. By removing bolt at "A" and loosening bolt at "B" and allowing plate "C" to pivot down on bolt at "B" the valve plate may be easily removed if it ever becomes necessary to clean the down draft shelf.

Fiber Glass Packing

With each damper, glass wool is supplied. Separate the insulation into 1" thick pads and place along the four corners of the damper as shown in the diagram above. The purpose of this is to help absorb heat expansion and to prevent masonry being laid too close to the damper. A thin mixture of mortar brushed on the steel will help hold the glass wool in place while the masonry is being laid.

CAUTION: Room must be allowed for normal expansion and contraction of the damper. Do not lay masonry tight against the sides of the damper. Keep masonry $\frac{1}{2}$ inch away from the metal of damper.



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