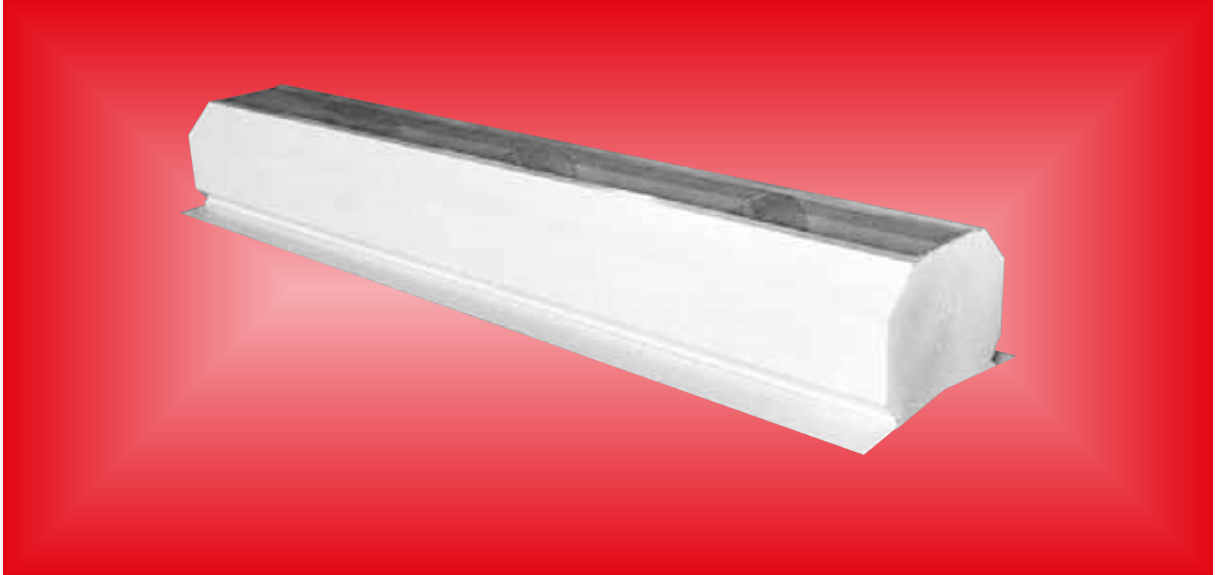


## CONTINUOUS VENTILATORS ...



...used on metal roofing systems roofs conform to MP's high standards and specifications which have been developed, tested and proven over many years. They provide an excellent value for the user.

### **Standard Size**

9" throat and 12" throat— 10 foot sections. Other sizes available upon request. Low profile design can be used for single unit or continuous run installation with no disassembly.

### **Integral Dampers**

Easy-moving damper opens to any degree from fully open to completely closed.

### **Design**

Aerodynamically proportioned to exclude weather — protects air passages and full outlet area.

### **Bird Screen**

Fully protected by 4 x 4 mesh galvanized hardware cloth.

### **Construction**

Durable 26 gauge exterior combined with internal components of 24, 20 and 18 gauge die formed sheet metal and machined parts for long service life.

### **Finish**

Pre-painted or galvalume is standard. Other materials and finishes available upon request.

### **Drainage Area**

Continuous slot — bottom of both sides of windbands.

## BUILDINGS MUST BREATHE!

Ventilators manufactured by Metallic Products are in accordance with the highest design requirements and specifications. 25 years plus of experience in furnishing stationary, gravity-flow, continuous ridge ventilators has proven their efficient performance and lasting quality.

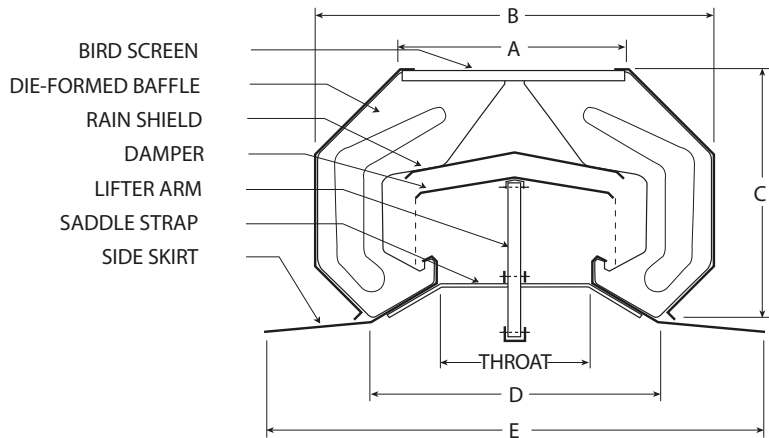
A properly engineered ventilation system using continuous ridge ventilators will control the movement of fresh air through the building removing hot, stale air and air contaminated by manufacturing or production processes. Summer heat is released naturally through gravity ridge ventilators. During winter proper ventilation can assist in the control of condensation and other

moisture problems, such as rust and deterioration of insulation or the damage to stored products.

The Metallic Products's ridge ventilator is a manufactured in 10-foot lengths which can be installed as individual units or in continuous runs. Vents may be furnished with or without dampers to control the flow of air. Operation of dampers is standard by pull chains (Please specify when ordering), multiple damper operation is available for up to 5 or more units.

Ventilators are shipped with a 1:12 end cap and can be field modified to accommodate up to a 6:12 roof pitch.

## DIMENSIONS AND TECHNICAL DATA

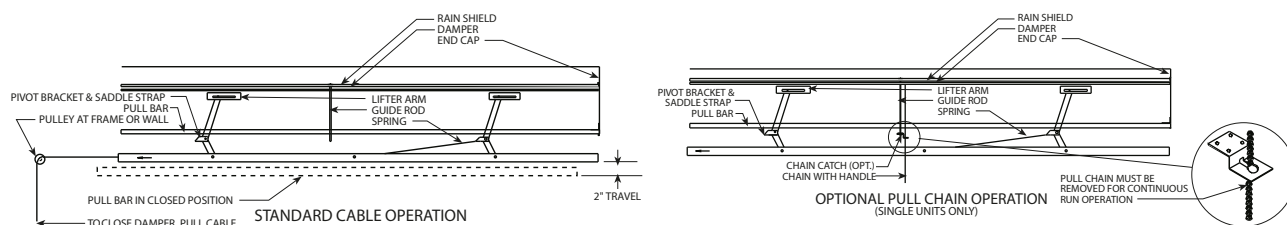
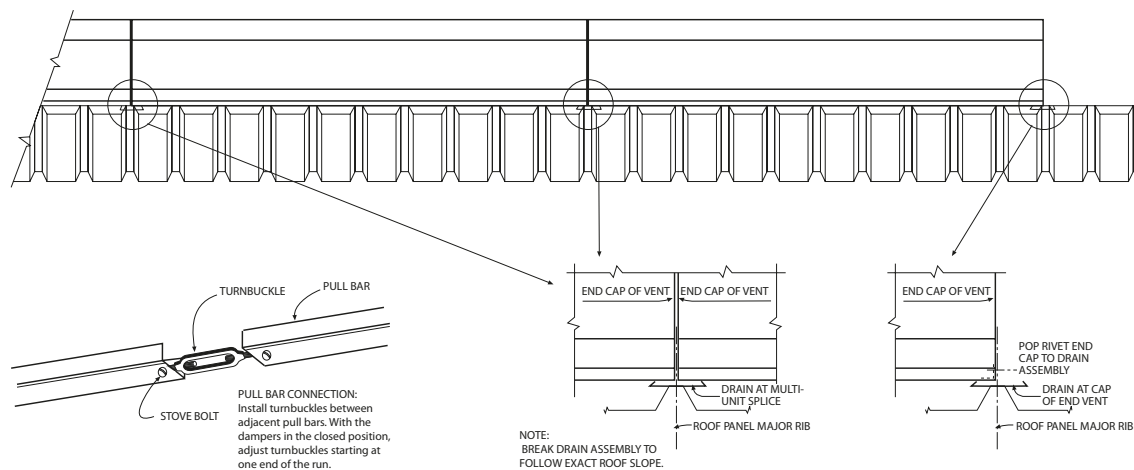


DIMENSIONS (In Inches)					
Throat*	A	B	C	D	E
9	13	21¼	14½	18	28¼
12	17	28½	18	22	33

SHIPPING WEIGHTS			
Size	Boxed	Standard Crated	Pkg. Size
9"	124 lbs	209 lbs	124½" X 19½" X 30½"
12"	148 lbs	218 lbs	124½" X 23" X 35"

\* Other sizes available upon request.

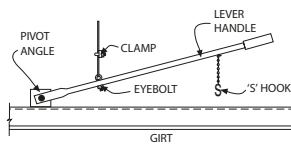


Chain-operated damper utilizes a rugged sash chain through chain locking device. Damper is spring-loaded to open and can be adjusted to any opening from fully open to fully closed. Optional operator packages for multiple units or wall operation are available. (See below.)

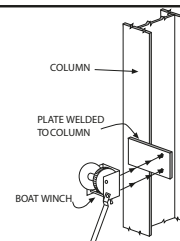
### PERFORMANCE DATA

Throat Size	Vent Above Ground	CFM
9"	10'	1323
	20'	1890
	30'	2241
	40'	2511
12"	10'	1764
	20'	2520
	30'	2988
	40'	3348

Assumes 10° Temperature differential and 5 mph wind speed



FOR CONTINUOUS RUNS  
UP TO 5 UNITS



FOR CONTINUOUS RUNS  
UP TO 10 UNITS



## 9" CONTINUOUS VENTILATOR SPECIFICATIONS

Ventilators are of low profile design to provide gravity type ventilation. Birdscreen is provided to prevent nesting and each unit contains flashing for either single unit or continuous-run installation.

Each unit is 9" x 10' with a base ventilating capacity of 2700 CFM at 20° temperature differential with a 25' stack height.

Exterior parts are 26GA. G90 galvanized, painted galvanized or galvalume. ASTMA446.

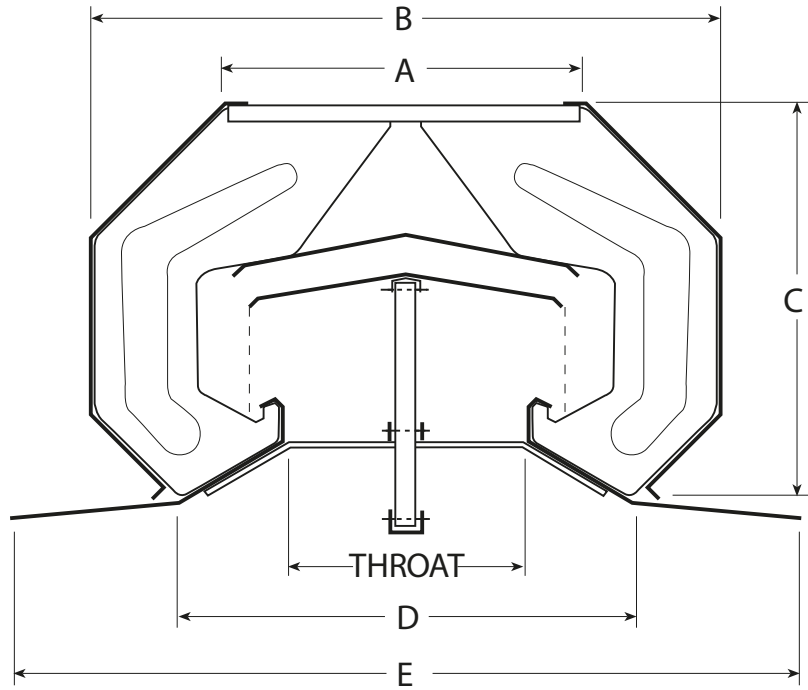
Interior parts are all of G90 galvanized steel.

Substructure consists of 10GA. saddle straps with interior baffles of 24GA. Pull bars and pivot brackets are of 20GA. Lifter arms and damper slides are of 18GA.

Manual operation is through activation of pull bar, which is attached to bell-cranked type lifter arms connected to damper with teflon coated pins through damper slides.

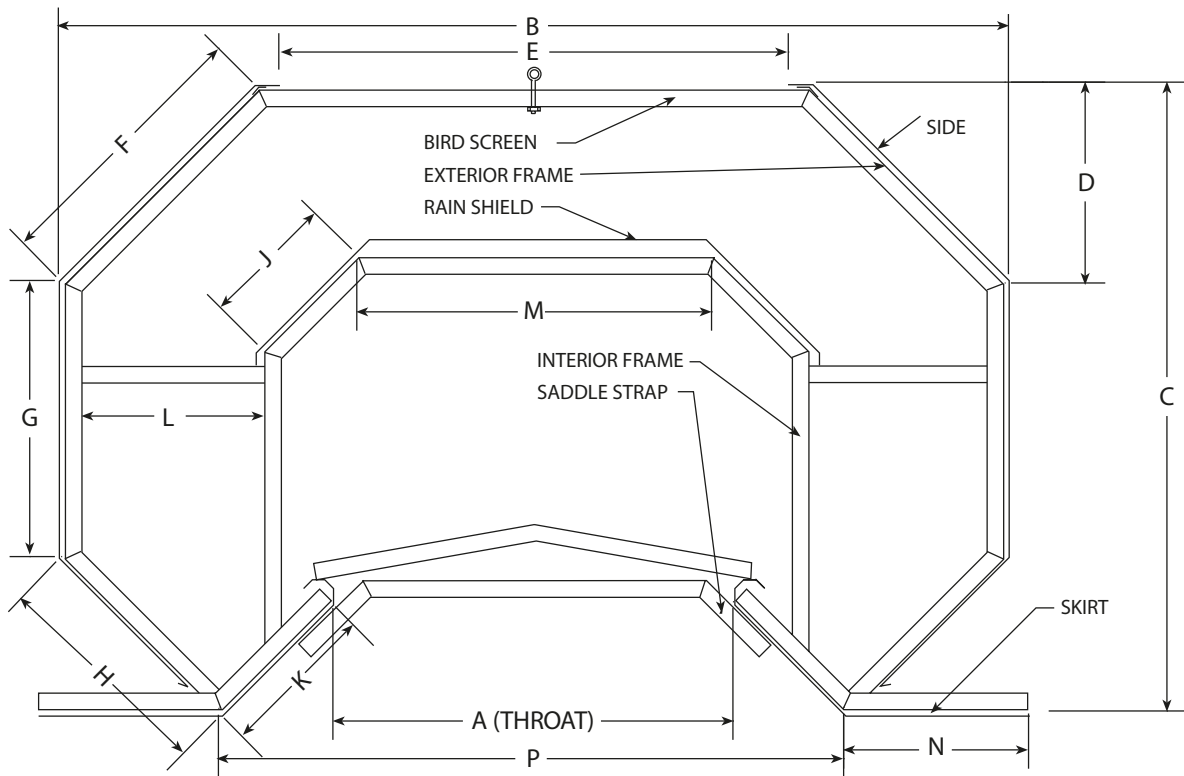
Dampers are spring loaded to remain in open position until pull bar is operated and locked in the closed position. Dampers operate in vertical manner.

Birdscreen is 4x4 mesh galvanized hardware cloth.



DIMENSIONS (In Inches)					
Throat	A	B	C	D	E
4	6 $\frac{1}{4}$	12 $\frac{1}{2}$	9	10	18
9	13	21 $\frac{1}{4}$	14 $\frac{1}{2}$	18	28 $\frac{1}{4}$
12	17	28 $\frac{1}{2}$	18	22	33
18	26 $\frac{3}{4}$	45 $\frac{5}{8}$	30 $\frac{5}{8}$	30	49
24	33 $\frac{1}{2}$	57	38 $\frac{3}{8}$	36 $\frac{1}{8}$	58 $\frac{1}{8}$
36	47 $\frac{1}{2}$	81 $\frac{1}{4}$	53 $\frac{3}{8}$	55	83 $\frac{1}{2}$
SHIPPING WEIGHTS					
Size	Boxed	Standard Crated	Pkg. Size		
9"	124 lbs	209 lbs	124 $\frac{1}{2}$ " X 19 $\frac{1}{2}$ " X 30 $\frac{1}{2}$ "		
12"	148 lbs	218 lbs	124 $\frac{1}{2}$ " X 23" X 35"		

## WELDED FRAME RIDGE VENTILATORS



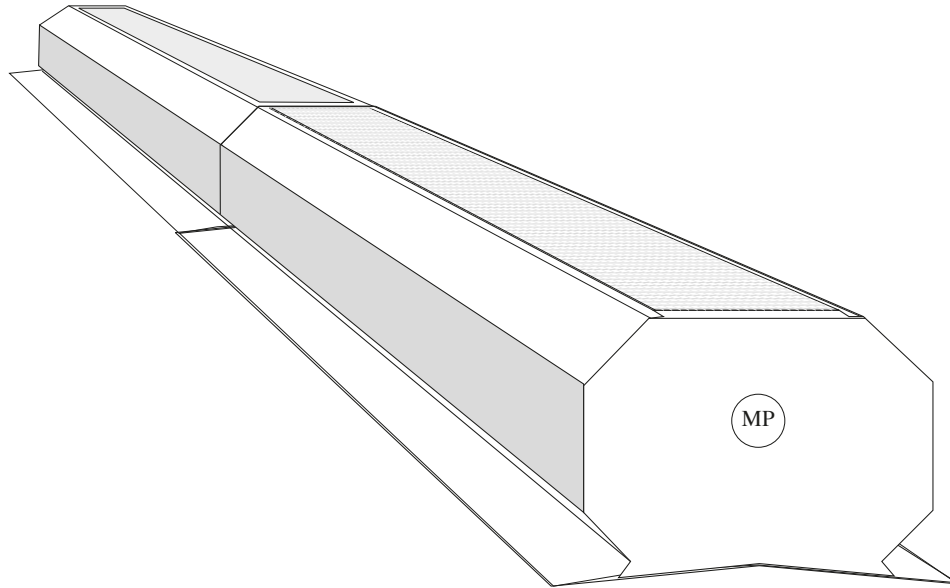
NOTE: EXTERIOR AND INTERIOR FRAME MADE OF  $\frac{1}{8}$ " X  $1\frac{1}{2}$ " X  $1\frac{1}{2}$ " ANGLE HOT-DIPPED GALVANIZED AFTER WELDING. ALL OTHER PARTS MADE OF 22 GA. SHEET METAL, STANDARD WHITE OR GALVALUME.

### WELDED FRAME VENTILATOR DIMENSIONS

A	A/2	B	C	D	E	F	G	H	J	K	L	M	N	P	WT.
15	7½	39	26½	8	22¾	11⅞	11⅞	9⅞	5	6½	7½	16⅞	8	25	
18	9	45⅝	30⅞	10⅞	26¾	13⅞	13⅞	11	5⅞	8¼	9	18⅝	9½	30	275#
20	10	49	32⅝	10¼	28¾	14⅞	14⅞	11⅞	8	9⅞	10	17¾	9	33	
24	12	57	38⅞	11⅞	33½	16¾	16¾	13⅞	8⅞	9¼	12	21½	11	36⅞	324#
30	15	70⅞	45⅝ <sub>16</sub>	14⅞	41	20½	20½	14	9½	11⅞	16	26⅝	11⅞	49¼	
36	18	81¼	53⅞	16⅞	47½	23¾	23¾	19½	12⅞	12½	18	26½	14¼	55	428#
42	21	94	61	18⅞	56	26 <sup>13</sup> / <sub>16</sub>	26 <sup>5</sup> / <sub>16</sub>	22½	14½	13 <sup>9</sup> / <sub>16</sub>	21	31¼	16⅝	62	
48	24	106	65⅞	19¼	67¼	27¼	27¼	26⅞	16⅞	13 <sup>5</sup> / <sub>16</sub>	24	34⅞	20⅞	67½	550#

Purlin Spacing = "P" Plus 3" Each Side

# Table of Capacities for Continuous Ventilators



## CAPACITY:

To determine capacity per unit, multiply "Base Rating" by "Temperature-Height Factor":  $CFM = \text{Base} \times \text{Temperature-Height Factor}$

Based on fresh air intake area 1½ times ventilator throat area. Assumes 5 mph wind speed.

Temperature-Height Factors									
Temperature Difference									
Height	5°	10°	15°	20°	25°	30°	35°	40°	45°
10'	.37	.49	.58	.64	.70	.76	.81	.86	.95
15'	.42	.60	.71	.80	.86	.92	.99	1.05	1.09
20'	.53	.70	.81	.92	.99	1.07	1.14	1.22	1.26
25'	.58	.77	.89	1.00	1.08	1.18	1.25	1.33	1.39
30'	.63	.83	.97	1.08	1.17	1.28	1.36	1.45	1.50
35'	.66	.87	1.02	1.14	1.24	1.35	1.44	1.51	1.58
40'	.70	.93	1.08	1.22	1.30	1.41	1.50	1.61	1.68
45'	.74	.96	1.12	1.28	1.38	1.48	1.59	1.68	1.75
50'	.77	1.01	1.18	1.33	1.44	1.56	1.67	1.75	1.83
55'	.80	1.06	1.23	1.39	1.50	1.64	1.72	1.83	1.92
60'	.83	1.09	1.28	1.44	1.55	1.69	1.79	1.90	2.00
65'	.85	1.12	1.32	1.48	1.61	1.74	1.85	1.97	2.06
70'	.88	1.17	1.36	1.53	1.67	1.79	1.89	2.02	2.11
75'	.90	1.19	1.39	1.57	1.69	1.83	1.96	2.06	2.17
80'	.93	1.22	1.42	1.61	1.72	1.86	2.00	2.11	2.20

Base Ratings	
Size	C.F.M.
4"	1200
9"	2700
12"	3600
15"	4500
18"	5400
24"	7200
30"	9000
36"	10800
42"	12600
48"	14400

**Height** = vertical rise from inlets near floor to ventilator.

**Temperature** = estimated temperature difference between middle of air intake near the floor and ventilator with dampers open.



## METALLIC PRODUCTS CONTINUOUS VENTILATOR DESIGN EVALUATION AND CERTIFICATION

This is to certify that the construction of the Metallic Products 10ft. sections of ridge ventilators with 10 ga. Base Straps, 24 ga. Baffles, and 26 ga. Sides, Ends, Skirts and Dampers will withstand wind loads of 100 MPH when adequately supported by the roof panel to which it is attached. Minimum required attachment is No. 14 self tapping screw to the top of each major roof panel rib.

Wind load is determined in accordance with the MBMA Design Manual procedure. The following analysis could be construed as Parts and Portions of the building structure, such as load supporting systems of structural roof panels, purlins, bracing, and framing.

The typical installation procedure for vents is to fasten each side skirt to the roof panel with a minimum of 1-#14 STS @ 12" o.c. (2 fasteners per linear foot of vent). Various Manufacturers test data has indicated that the resistance of these fasteners exceeds the design values used by Metallic Products by a factor in excess of 2 1/2 to 1. This design value is 50 lbs. pull out and 100 lbs. shear per fastener when installed in 26 ga. galvanized panels of 50,000 psi minimum yield stress.

The probable extreme standard condition would be a roof with mean height of 60 ft. and a slope between 10 and 30 degrees (4/12 included).

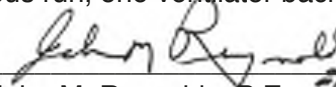
1. Assume the clear distance at the ventilator between roof sheets to be 24" max. (This is probably greater than would occur for a 12" throat vent.)
2. Assume total vent is in "Z" edge strip. Building would have to be at least 100 ft.wide and 25 ft. high at the eave.
3. Velocity Pressure  $q = 30.4$  PSF (100 MPH) (Table 5.2b in the MBMA Low Rise Building Systems Manual)
4.  $S_e$  @ Interior edge from figure 5.5c, with roof angle between 10 and 30 degrees = 2.1
5. Uplift Pressure =  $30.4 \times 2.1 = 63.84$  PSF.
6. Reduce because it is due to wind =  $63.84 \times 3/4 = 47.88$

## METALLIC PRODUCTS CONTINUOUS VENTILATOR DESIGN EVALUATION AND CERTIFICATION

12" Standard Throat Ventilator: The 24 inch ridge opening results in  $2 \times 47.88 = 95.76$  lbs. per ft. uplift on ventilator or 47.88 lbs per fastener which is less than the 50 lbs. per fastener design stress. The ventilator is less than 2 ft. high resulting in a shear stress of less than 50 lbs./fastener from an equal horizontal wind load.

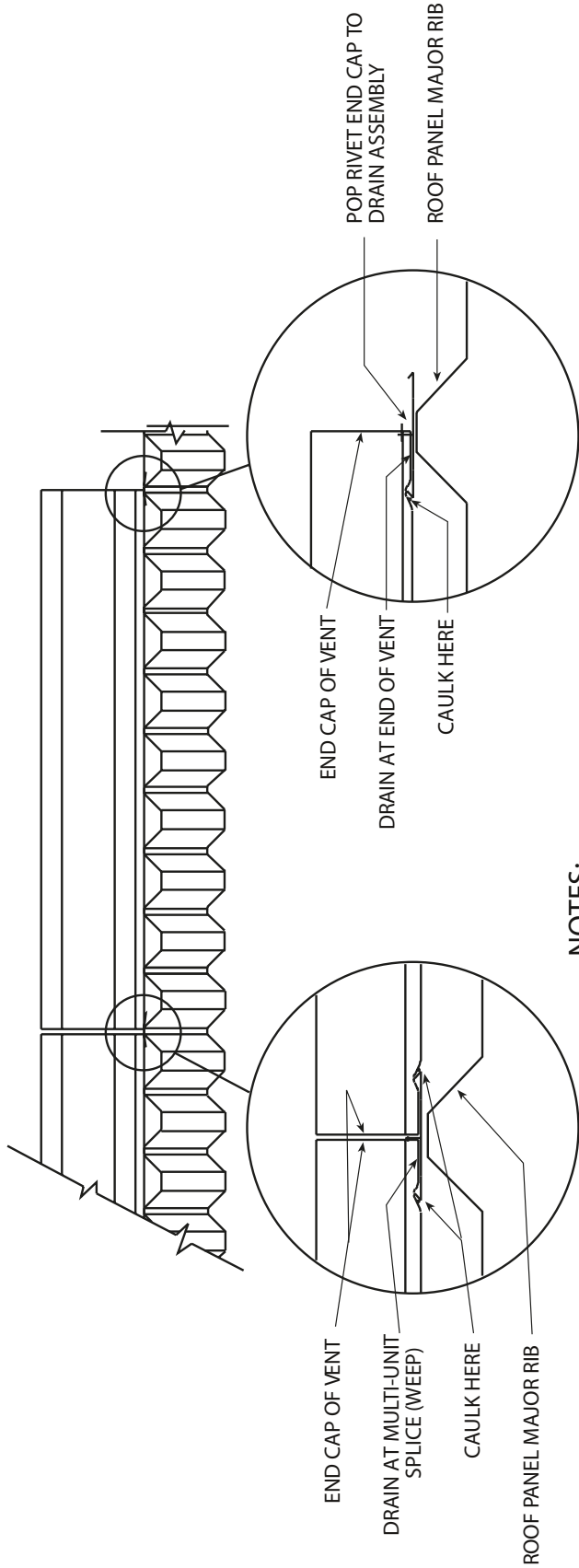
The building design used to create this wind loading exceeds the dimensional parameters of most standard buildings offered by Metal Building Manufacturers. The location of the vent at the very end of the building ridge (within the "Z" edge strip) is not unusual when continuous vents are used for the full building length. However, a more common arrangement is to place the vents, one in the center of each bay or to begin the continuous run, one ventilator back from the end wall peak.

Evaluation conducted by:

  
John M. Reynolds, P.E.

May 7, 1997

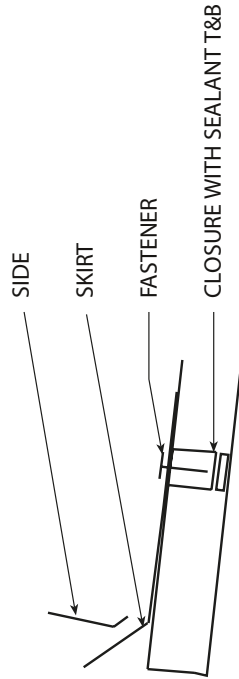




**NOTES:**

BE SURE WEEPS ARE LEFT OPEN FOR 5:12 AND UP ROOF PITCHES, THE TWO BOTTOM RIVETS MUST BE REMOVED BEFORE END SKIRT MAY BE PLACED ON VENT. REPLACE RIVET WITH SCREW.

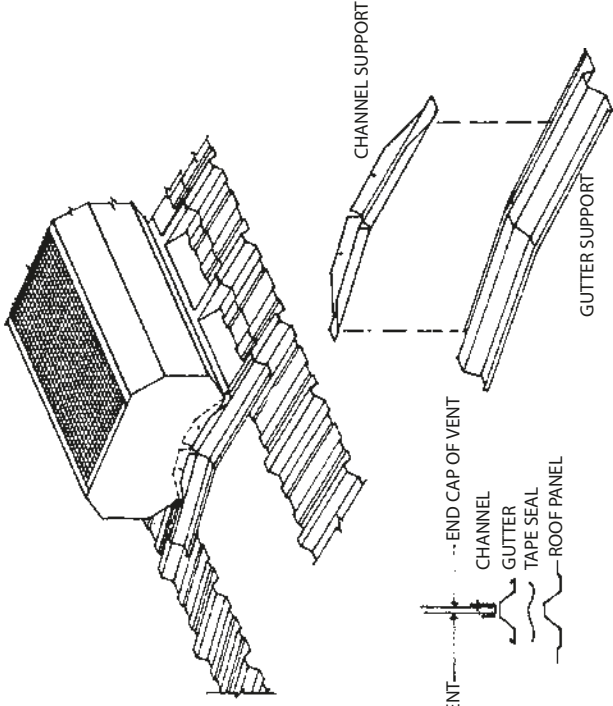
**NOTE:**  
 BREAK DRAIN ASSEMBLY TO FOLLOW EXACT SLOPE OF ROOF



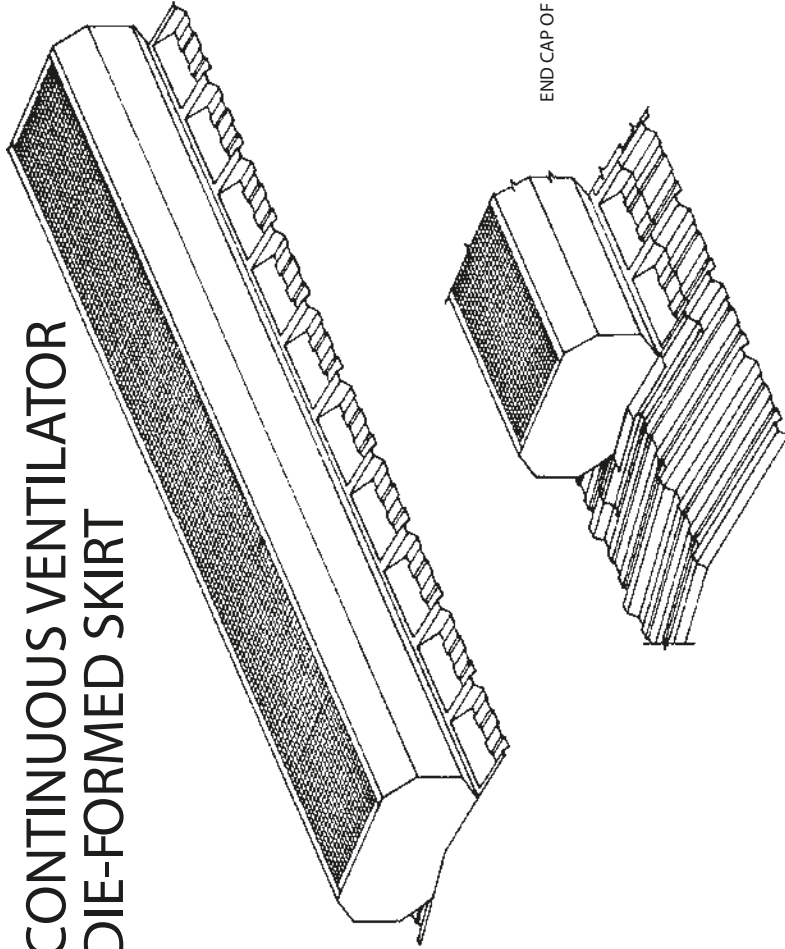
END VIEW

**RIDGE VENT FLASHING WITHOUT DIE-FORMED SKIRTS**

END SKIRT DETAIL AND  
CONTINUOUS VENT SPLICE

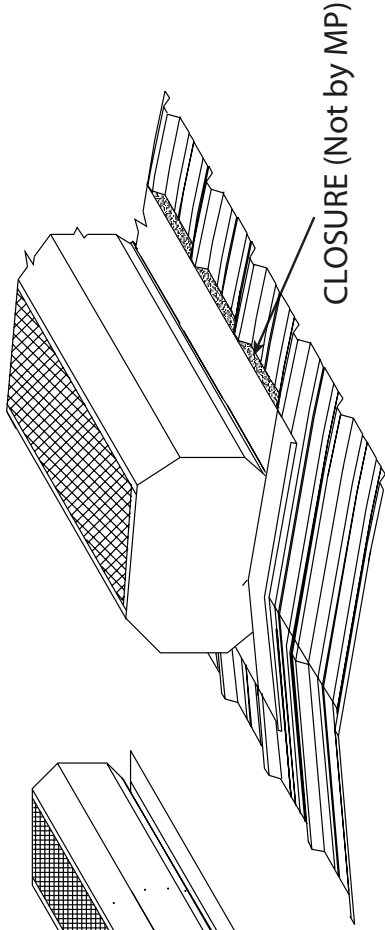
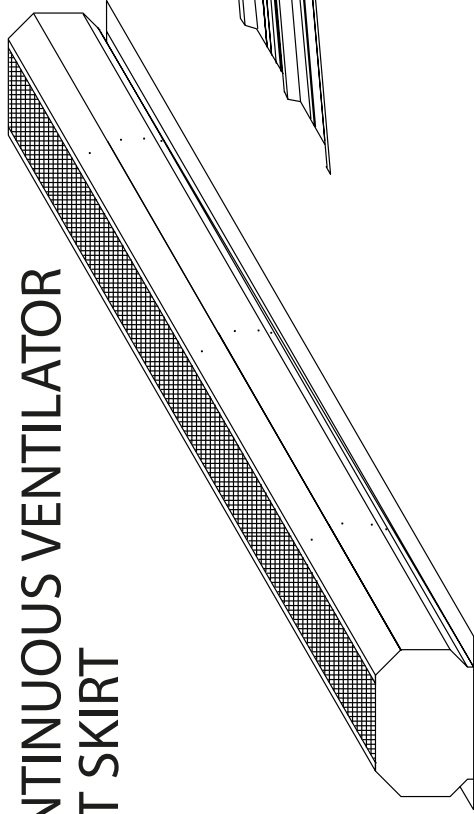


CONTINUOUS VENTILATOR  
DIE-FORMED SKIRT

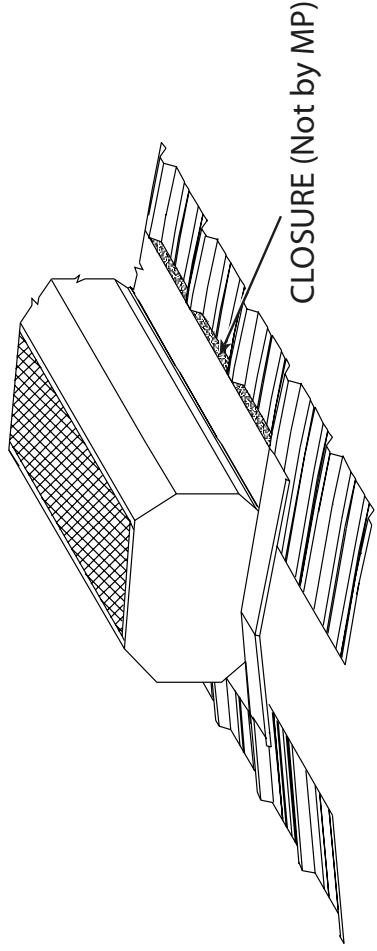


END OF VENT DETAIL

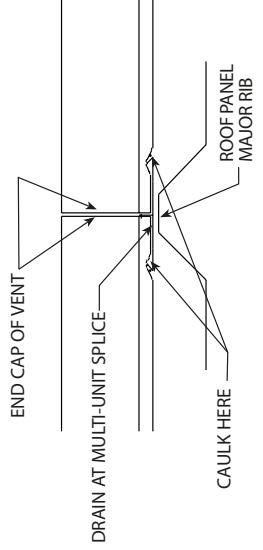
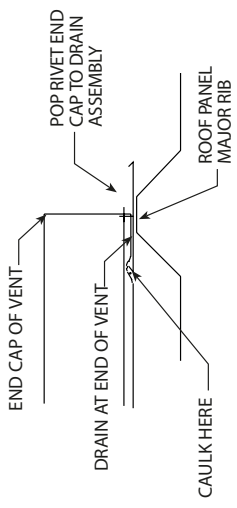
# CONTINUOUS VENTILATOR FLAT SKIRT

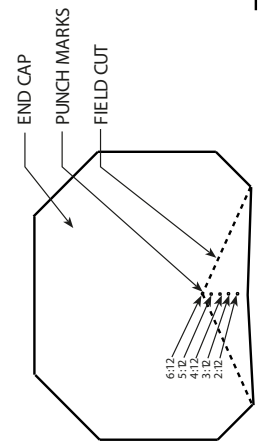
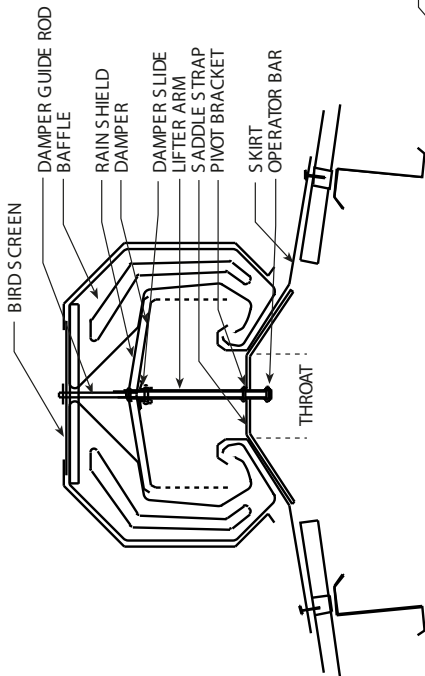


## END OF VENT DETAIL

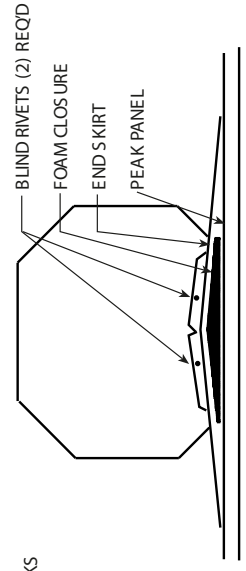


## END SKIRT DETAIL AND CONTINUOUS VENT SPLICE



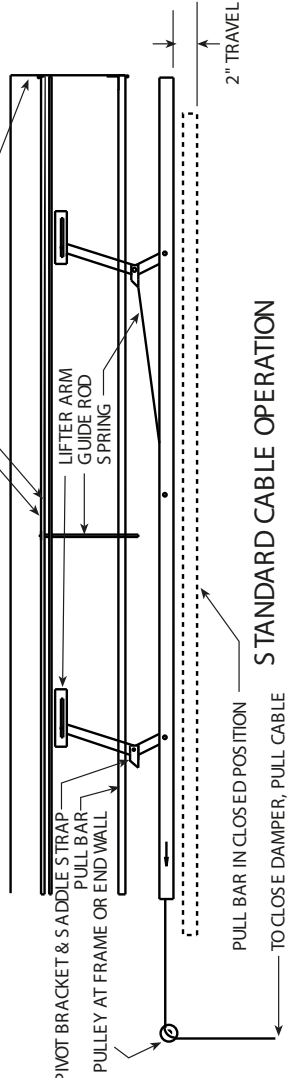


**END CAP DETAIL**  
NOTE: DOTTED LINE INDICATES FIELD CUT FOR 6:12 ROOF SLOPE. OTHER SLOPES AS NOTED.

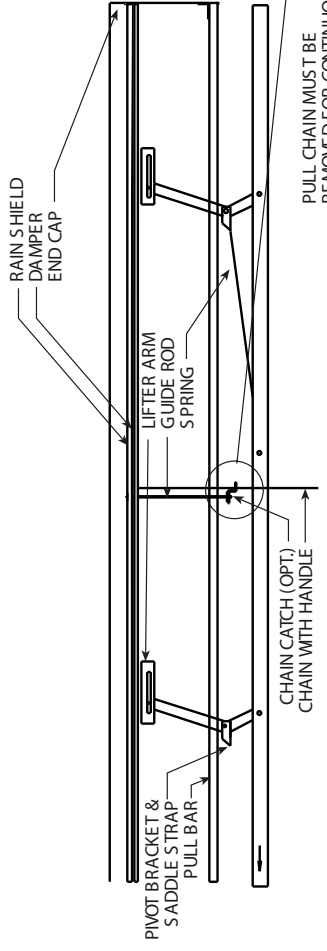
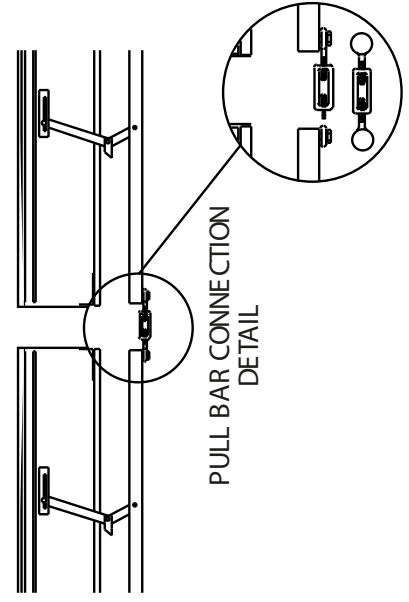


**ROOF PITCH LESS THAN 1:12 INSTALLATION:**  
INSTALL END SKIRT FOR 1:12 ROOF SLOPE AND FOAM CLOSURE WITH TAPE SEALER TOP AND BOTTOM.

**ROOF PITCH GREATER THAN 5:12 INSTALLATION:**  
REMOVE TWO BOTTOM RIVETS BEFORE INSTALLING END SKIRT. REPLACE THE RIVETS WITH SHEETING SCREWS ONCE END SKIRT IS IN PLACE.

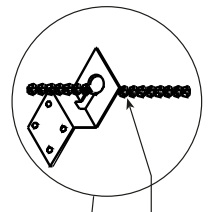


**STANDARD CABLE OPERATION**



**OPTIONAL PULL CHAIN OPERATION**  
(SINGLE UNITS ONLY)

PULL CHAIN MUST BE REMOVED FOR CONTINUOUS RUN OPERATION





## CONTINUOUS VENT OPERATORS DRAWING VEW-1

### DETAIL 3 - TYPE A

#### OPERATOR #624 - HAND PULL-CABLE

- 35 ft. Plastic Coated Cable
- 2 Cable Clamps
- 1 Chain Catch
- 2 Pulleys

### DETAIL 3 - TYPE B

#### OPERATOR #634 - HAND PULL-CHAIN

- 35 ft. Chain
- 2 Pulleys
- 1 Chain Catch

### DETAIL 3 - TYPE C

#### OPERATOR #618 - LEVER TYPE

- 40 ft. Cable
- 2 Pulleys
- 2 Cable Clamps
- 1 Lever Handle
- Mounting & Installation Hardware

### DETAIL 3 - TYPE D

#### OPERATOR #632 - BOAT WINCH TYPE

- 60 ft. Cable
- 2 Pulleys
- 1 Boat Winch
- Mounting & Installation Hardware

### OPERATOR #616

- 1 Lever Handle Mounting Hardware

### OPERATOR #619 - EXT.

- 50 ft. Cable
- 3 Eye Bolts
- 2 Cable Clamps

### OPERATOR #634A

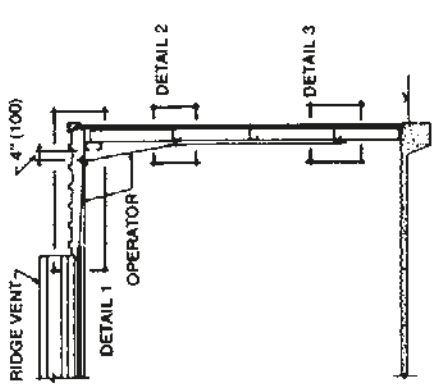
- 10 ft. Chain
- 1 Pulley
- 1 Chain Catch

### OPERATOR #634B

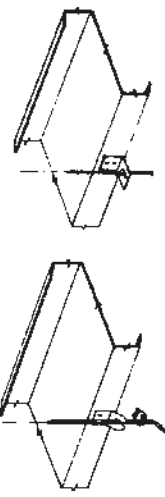
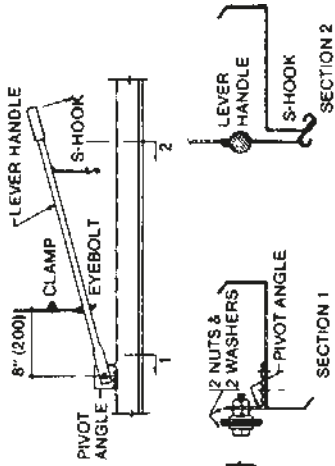
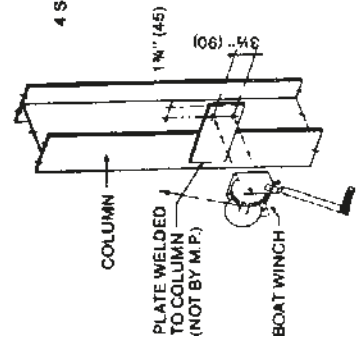
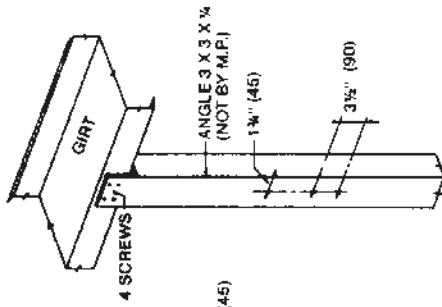
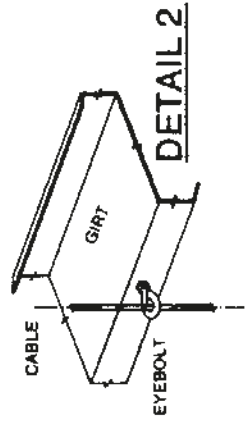
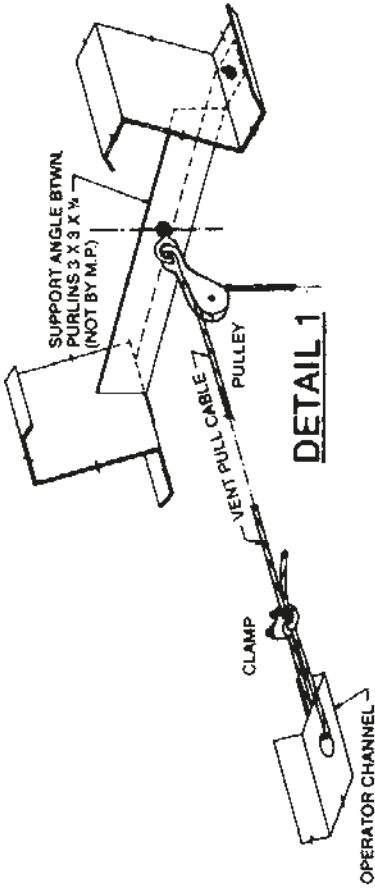
- 4 ft. Chain
- 1 Pulley
- 1 Chain Hook

### SINGLE UNIT OPERATOR FOR MONOVENT

- 10 ft. Chain Installed



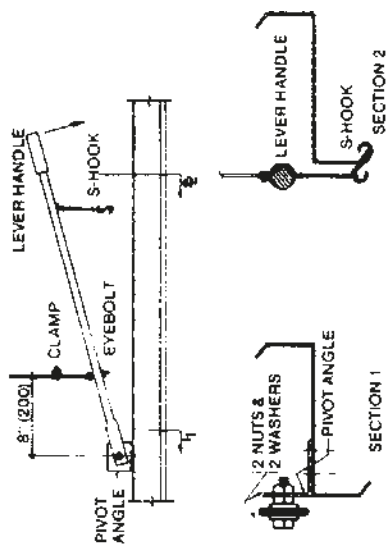
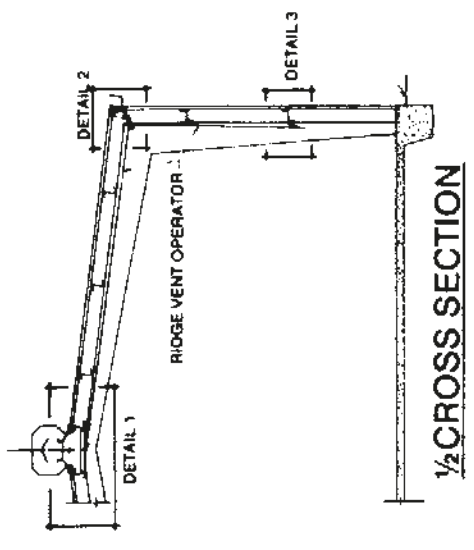
**END WALL SECTION**



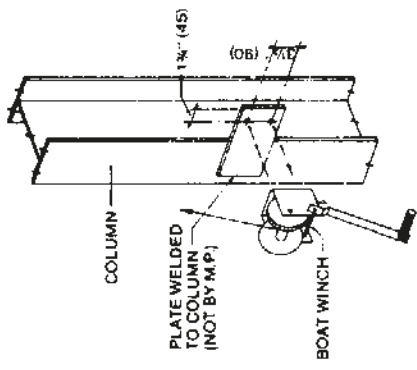
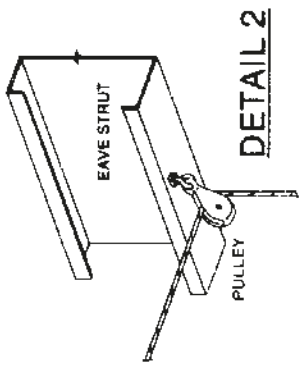
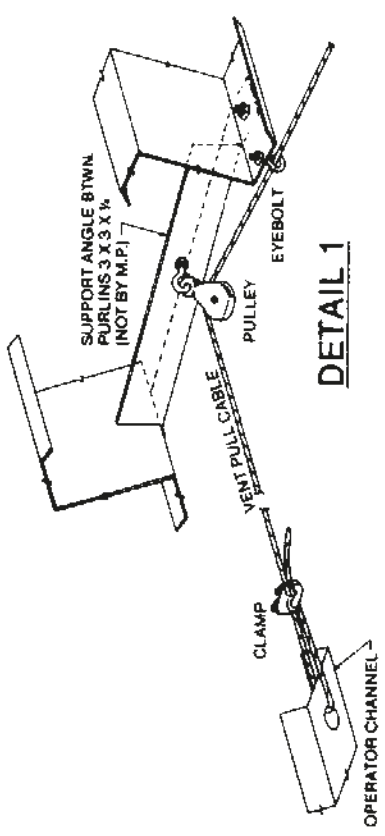
**AT COLUMN BTWN. COLUMNS**  
**DETAIL 3 - Type D    DETAIL 3 - Type A    DETAIL 3 - Type B    DETAIL 3 - Type C**

- OPERATOR A: 3/16" UNCOATED AIRCRAFT CABLE WITH CABLE KEEPER
- OPERATOR B: NO. 35 ZINC COATED SASH CHAIN WITH CHAIN KEEPER
- OPERATOR C: HAND LEVER TYPE
- OPERATOR D: BOAT WINCH TYPE

- 3 UNITS MAX.
- 3 UNITS MAX.
- 6 UNITS MAX.
- 12 UNITS MAX.



DETAIL 3 - Type C



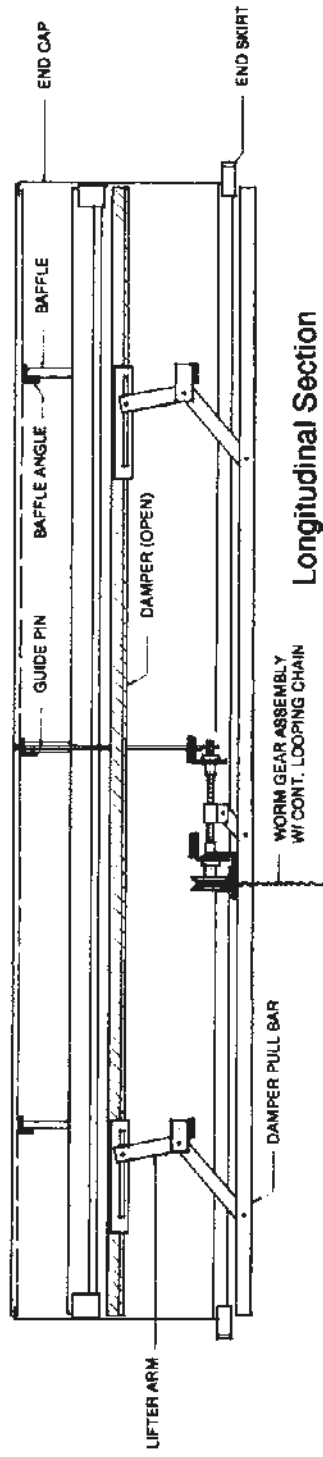
DETAIL 3 - Type B

DETAIL 3 - Type A

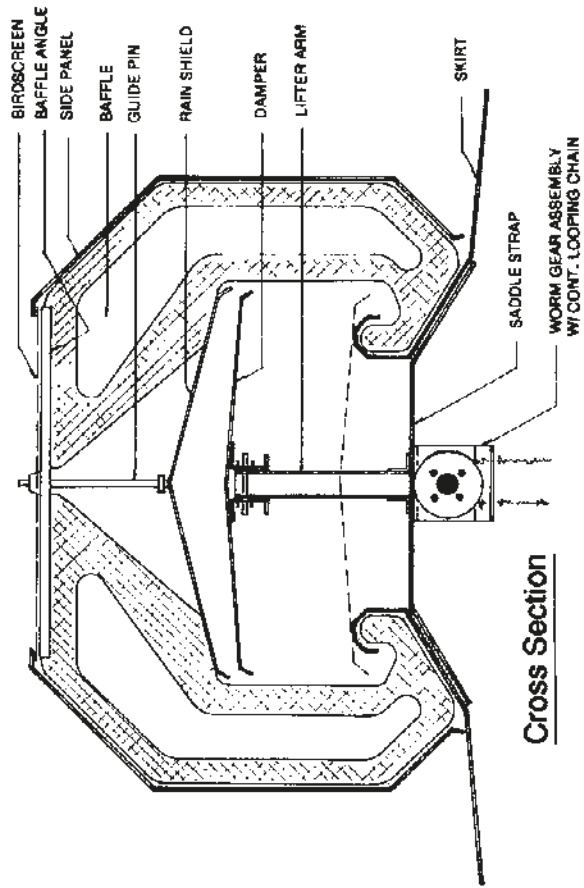
DETAIL 3 - Type D

- 2 UNITS MAX.
- 2 UNITS MAX.
- 5 UNITS MAX.
- 10 UNITS MAX.

- OPERATOR A: 3/16" UNCOATED AIRCRAFT CABLE WITH CABLE KEEPER
- OPERATOR B: NO. 35 ZINC COATED SASH CHAIN WITH CHAIN KEEPER
- OPERATOR C: HAND LEVER TYPE
- OPERATOR D: BOAT WINCH TYPE



**Longitudinal Section**



**Cross Section**