

## VANE INLET DAMPER Model - VID

**Primary Function** – Designed for flow and modulation of CLASS I and CLASS II fans in clean or moderately dirty flow streams.

### STANDARD CONSTRUCTION

**FRAME**

12 Ga. Galvanized Steel (see table below)

**BLADES**

16 Ga. Galvanized Steel

**BLADE AXLES & BEARINGS**

AXLE – 1/2" diameter plated steel BEARING – stainless steel with thrust washers

**HUB**

Open – 12 Ga. Galvanized Steel

**LINKAGE**

Plated Steel

**MIN. & MAX. TEMPERATURE**

-40° F to 250° F

**MAXIMUM SIZE**

72" Diameter

**MINIMUM SIZE**

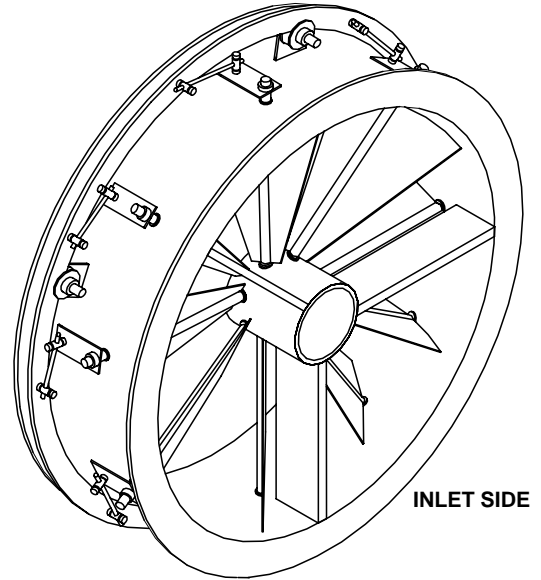
12" Diameter

**FINISH**

Shop Primer

**ACTUATOR**

None



INLET SIDE

### OPTIONAL CONSTRUCTION

**SPECIFIED MATERIAL** – Available in stainless steel

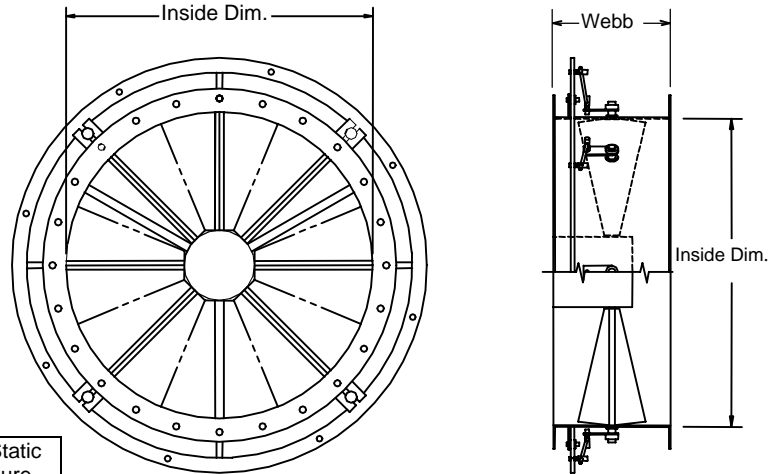
**BLADE AXLES & BEARINGS** – 3/4" to 2" dia

**FINISH** – Air-dry primer, polyurethane, epoxy, or enamel. Baked epoxy or enamel. For industrial special purpose coating, please consult Dowco.

**BOLT HOLES** – Based on standard bolt circles available

**ACTUATORS** – Manual, Electric, or Pneumatic.

Specify Rotation of Inlet Air as Viewed From Inlet Side



Bolt holes are optional

### SPECIAL PURPOSE CONSTRUCTION

For higher temperatures and velocities, please consult Dowco.

FRAME DIMENSIONS				
Inside Dim. (dia.) from to		Flange	Webb	Max. Static Pressure
12"	25"	1-1/2 x 12 ga.	9" x 10 ga.	8" wg.
26"	42"	2 x 3/16 thk.	9" x 3/16"	8" wg.
43"	60"	2 x 3/16 thk	10" x 3/16"	6" wg.
61"	72"	2-1/2 x 3/16 thk	12" x 1/4"	4" wg.

DATE	ARCHITECT / ENGINEER				CUSTOMER
PROJECT					
ITEM	QTY	W	H	DESCRIPTION	

DEPENDABLE PRODUCTS SINCE 1955

**SAFE-AIR/DOWCO**

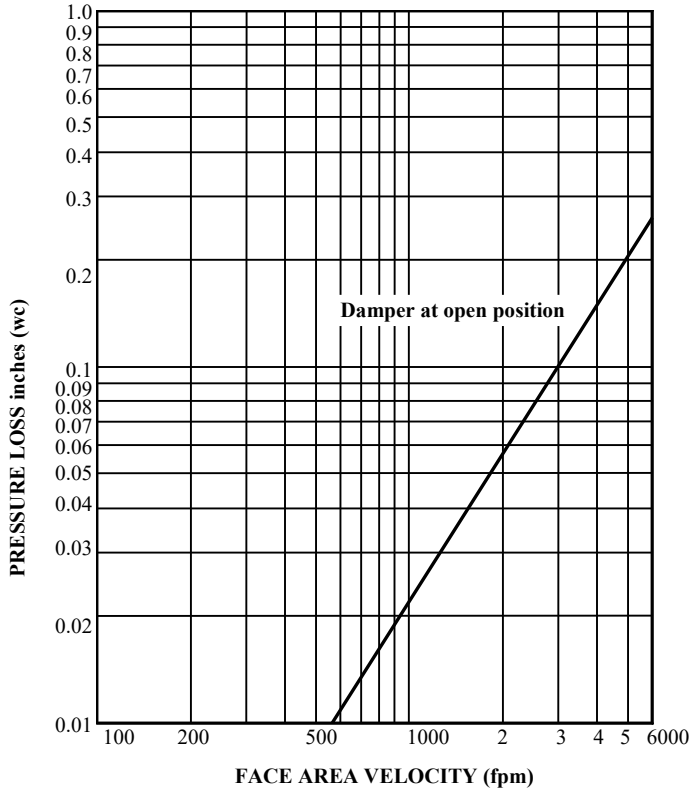
Engineering and General Offices

1855 South 54<sup>th</sup> Avenue, Cicero, Illinois 60804

Phone 708-652-9100 FAX 708-652-9158

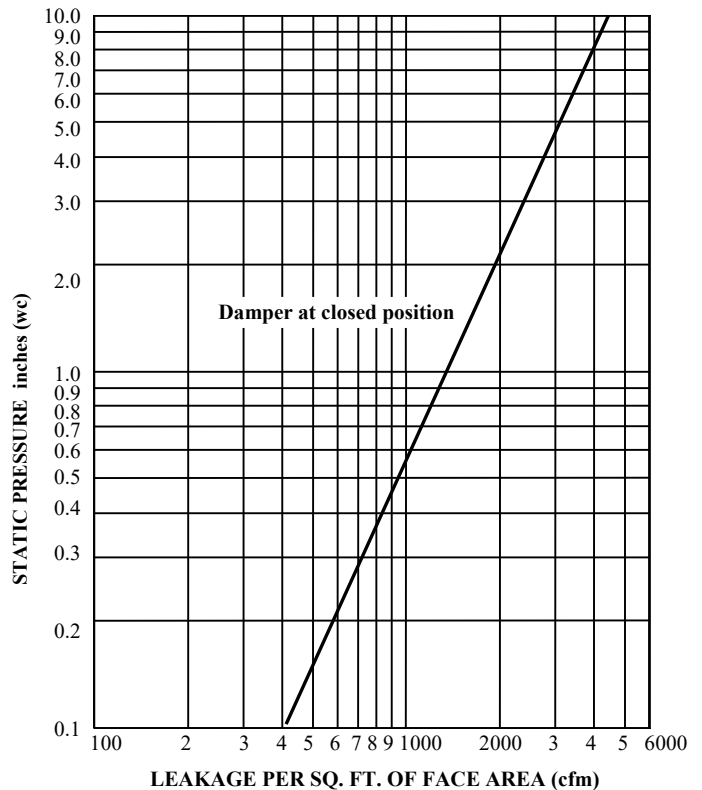
All tests performed at an independent laboratory and based on AMCA standards for air performance.

**AIR PERFORMANCE**



**FACE AREA VELOCITY (fpm)**  
24" diameter sample tested per AMCA Std. 500, Figure 5.3

**AIR LEAKAGE**

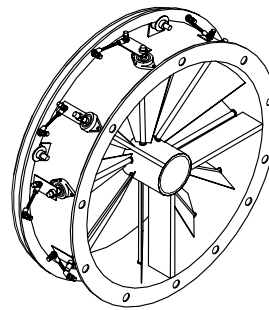


**LEAKAGE PER SQ. FT. OF FACE AREA (cfm)**  
48" diameter sample tested per AMCA Std. 500, Figure 5.5

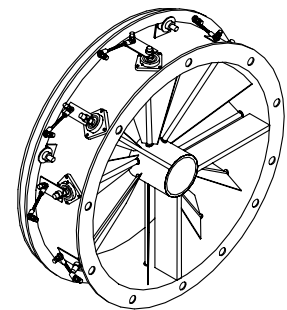
**CALCULATING PRESSURE LOSS**

Based upon a given flow rate (in CFM), the flowing pressure loss may be determined from the "air performance graph", knowing the sq. ft. of face area of the damper. Alternately, the face area may be determined based upon a volumetric flow rate and a maximum pressure loss. Utilizing the "air performance" graph.

\_\_\_\_\_ in. W.C. Max. Pressure Loss Intake or Exhaust  
 \_\_\_\_\_ FPM (Face Area Velocity From "Air Performance" Graph)  
 \_\_\_\_\_ CFM / \_\_\_\_\_ FPM Free Area Velocity = \_\_\_\_\_ Sq. Ft. Face Area



With 2-bolt flange bearing



With 4-bolt flange bearing

STANDARD BOLT HOLE PATTERN FOR VANE INLET DAMPERS				
Order Size (Inches)	Flange (F)	Holes Size (Diameter)	Number of Holes	Bolt Circle Factor
12 to 18	1-1/2"	7/16"	8	2"
19 to 22	1-1/2"	7/16"	12	1-3/4"
23 to 24	1-1/2"	7/16"	12	1-7/8"
25	1-1/2"	7/16"	16	1-7/8"
26 to 36	2"	7/16"	16	2-3/8"
37 to 50	2"	7/16"	24	2-3/8"

- Actual I. D. Size = Order Size + 1/8"
  - Actual O. D. Size = Actual I. D. Size + (F x 2)
  - Bolt Circles = Order Size + Bolt Circle Factor
- Bolt holes start perpendicular to blade axles (12 o'clock)

