

### Application

The WD-400 series are a non-motorized backdraft damper which may be mounted either vertically for intake air or mounted horizontally to allow vertical airflow down and prevent reverse airflow. The dampers are opened by air pressure differential and closed by springs. Optional motor packs are not available.

### Ratings

#### Pressure

Up to 2.0 in. wg (0.5 kPa)

#### Velocity

Up to 2,500 fpm (13 m/s)

#### Temperature

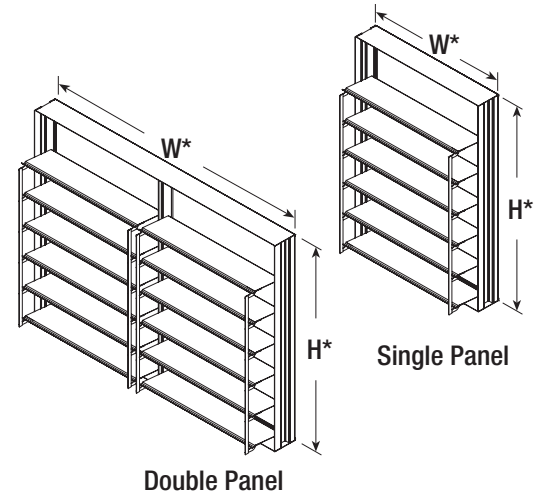
Up to 180°F (82°C)

### Construction

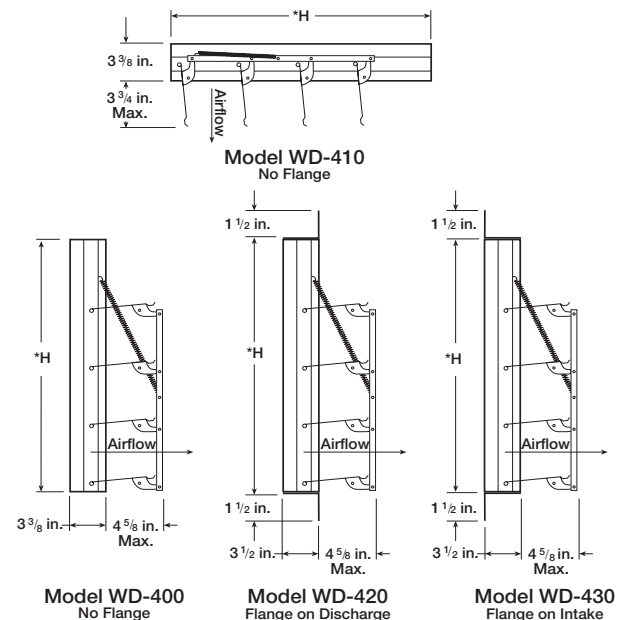
	Standard	Optional
<b>Frame Material</b>	Galvanized steel	-
<b>Frame Thickness</b>	18 ga. (1.3mm)	-
<b>Frame Type</b>	No flange (WD-400 & 410)	-
	Flange on intake (WD-430)	-
	Flange on discharge (WD-420)	-
<b>Blade Material</b>	Roll formed aluminum	-
<b>Blade Thickness</b>	0.025 in. (0.64mm)	-
<b>Blade Seals</b>	Vinyl	-
<b>Axle</b>	3/16 in. (4.8mm) dia. zinc plated steel	304SS
<b>Axle Bearings</b>	Synthetic	-
<b>Linkage Material</b>	Galvanized steel	-

### Size Limitations

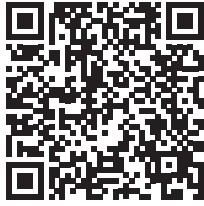
W x H	Minimum Size	Maximum Size	
		Single Panel	Multiple Panels
	All 400 series	All 400 series	WD-400, 410
<b>Inches</b>	8 x 8	31 x 74	150 x 148
<b>mm</b>	203 x 203	787 x 1880	3810 x 3759
			WD-420, 430
			148 x 148
			3759 x 3759



\*W & H dimensions furnished approximately 1/8 in. (3mm) under size.



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[Damper Warranty](#)



## Pressure Drop

Performance data results from testing a 24 in. x 24 in. (610mm x 610mm) damper in accordance with AMCA Standard 500-D using Figure 5.5 for the WD-400 and Figure 5.7F for the WD-410. All data has been corrected to represent standard air at 0.075 lb/ft<sup>3</sup> (1.201 kg/m<sup>3</sup>).

**WD-400**

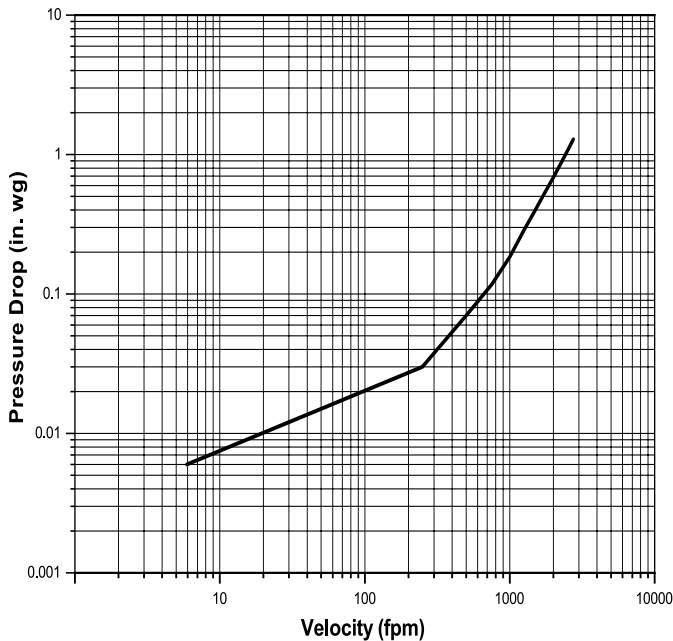
Operational Data	$\Delta P$ in. wg (Pa)	Velocity fpm (m/s)
<b>Blades Start to Open</b>	0.006 (1.50)	5.9 (0.03)
<b>Blades Fully Open</b>	0.287 (71.49)	1250 (6.35)

**WD-410**

Operational Data	$\Delta P$ in. wg (Pa)	Velocity fpm (m/s)
<b>Blades Start to Open</b>	0.027 (6.73)	19.47 (0.10)
<b>Blades Fully Open</b>	0.405 (100.88)	1500 (7.62)

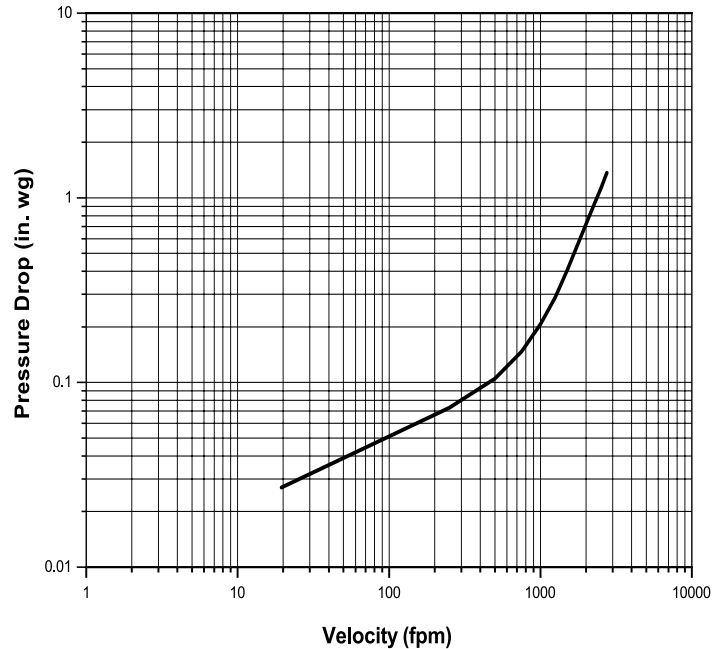
**Pressure Drop**

24 in. x 24 in. (610mm x 610mm) Damper



**Pressure Drop**

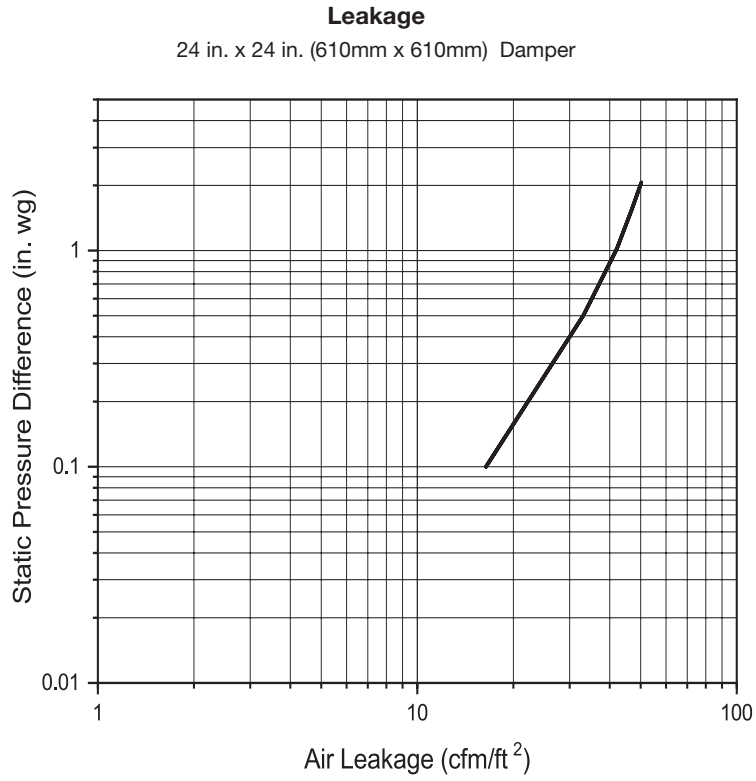
24 in. x 24 in. (610mm x 610mm) Damper



# Performance Data











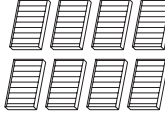

## Leakage

Leakage testing was conducted in accordance with AMCA Standard 500-D and is expressed as cfm/ft<sup>2</sup> of damper face area. All data has been corrected to represent standard air at 0.075 lb/ft<sup>3</sup> (1.201 kg/m<sup>3</sup>).



## WD-400/410 Selection

- Multiple section dampers shown below are supplied as equal size sections. Any damper that has multiple sections, both vertically and horizontally, will require field assembly and will require additional reinforcement (not supplied by factory) to support the assembly. These larger dampers must have the additional reinforcement to give them structural stability.
- Please note that the width dimension is always taken as being parallel to the length of the blades.

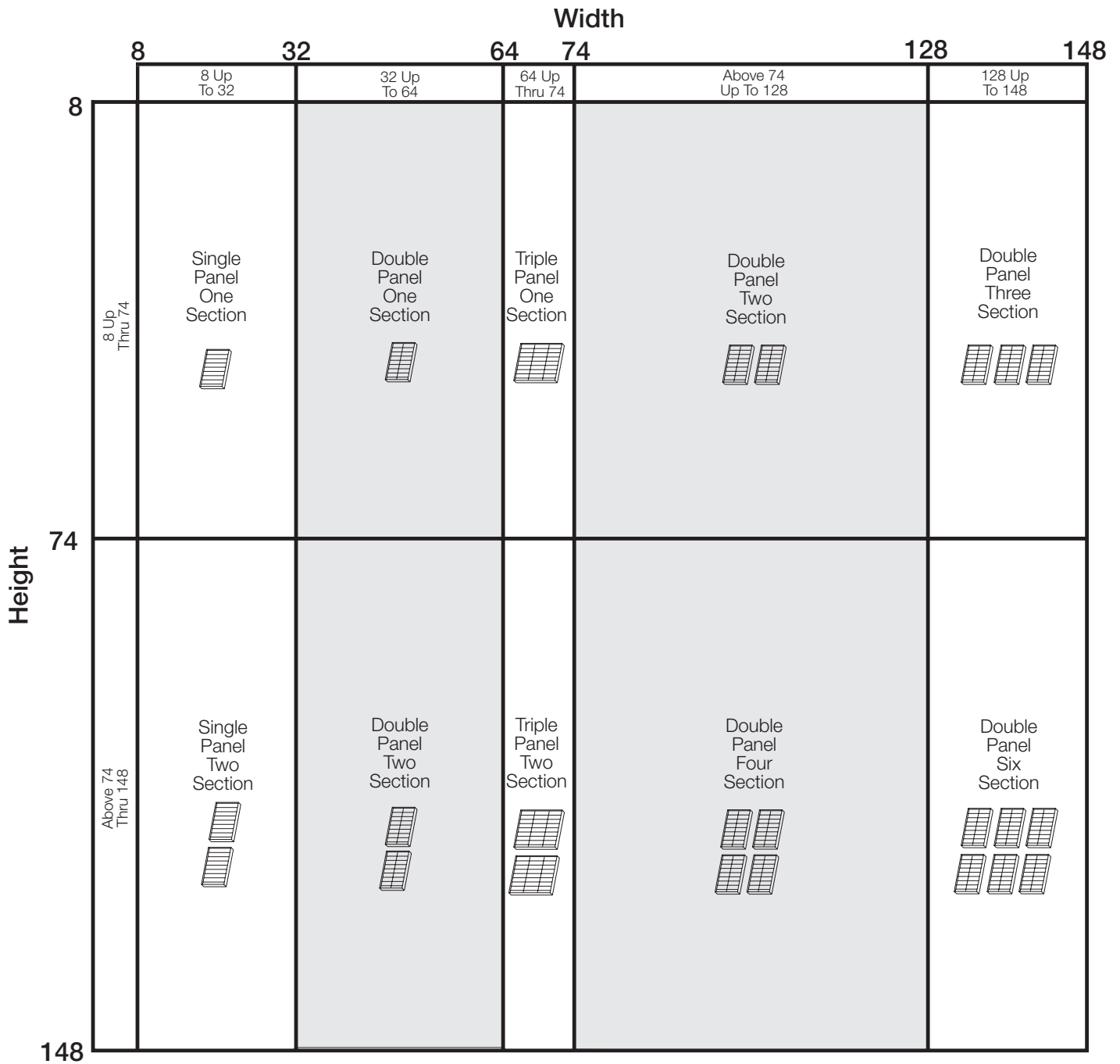
		Width						
		8	32	50	64	100	128	150
		8 Up To 32	32 Up Thru 50	Above 50 Up To 64	64 Up Thru 100	Above 100 Up To 128	128 Up To 150	
Height	8	Single Panel One Section 	Double Panel One Section 	Single Panel Two Section 	Double Panel Two Section 	Single Panel Four Section 	Double Panel Three Section 	
	74	Single Panel Two Section 	Double Panel Two Section 	Single Panel Four Section 	Double Panel Four Section 	Single Panel Eight Section 	Double Panel Six Section 	
	148							

Note: A 26 in. x 26 in. and a 30 in. x 30 in. WD-410 will be supplied as a Double Panel, One Section damper.

\*Width and height given in inches.

## WD-420/430 Selection

- Multiple section dampers shown below are supplied as equal size sections. Any damper that has multiple sections, both vertically and horizontally, will require field assembly and will require additional reinforcement (not supplied by factory) to support the assembly. These larger dampers must have the additional reinforcement to give them structural stability.
- Please note that the width dimension is always taken as being parallel to the length of the blades.



\*Width and height given in inches.