

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

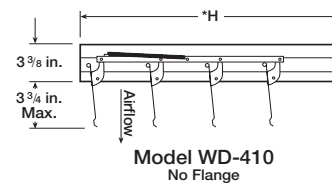
Size Limitations

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

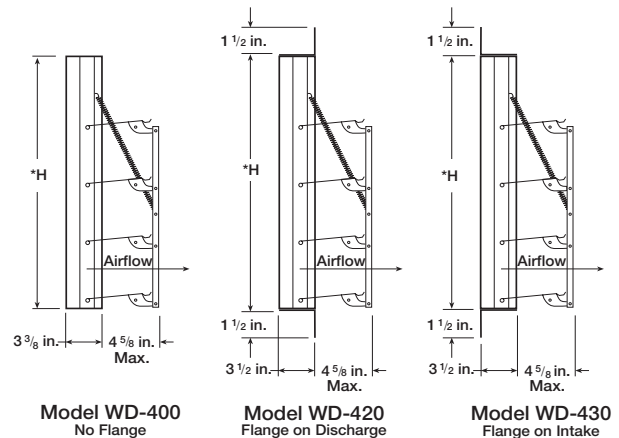


*W & H dimensions furnished approximately 1/8 in. (3mm) under size.

Horizontal Mount



Vertical Mount



Document Links



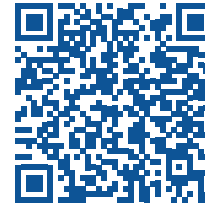
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Performance Data

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/ft³ (1.201 kg/m³).

WD-400

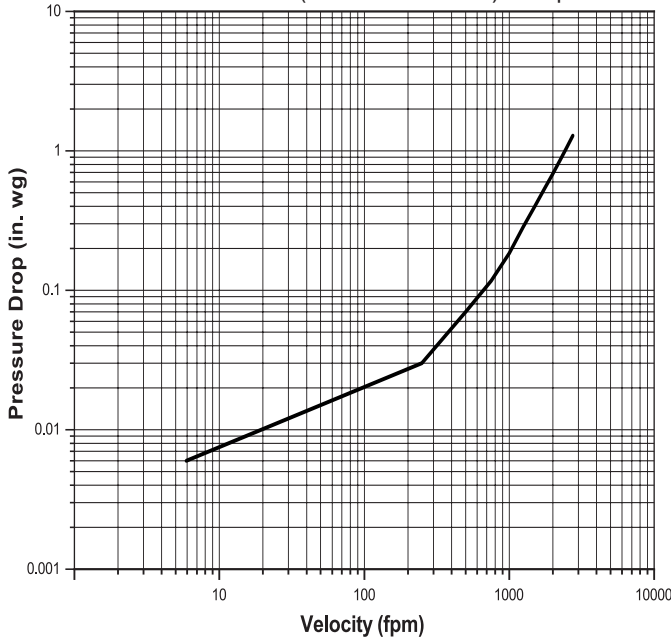
Operational Data	ΔP in. wg (Pa)	Velocity fpm (m/s)
Blades Start to Open	0.006 (1.50)	5.9 (0.03)
Blades Fully Open	0.287 (71.49)	1250 (6.35)

WD-410

Operational Data	ΔP in. wg (Pa)	Velocity fpm (m/s)
Blades Start Open	0.027 (6.73)	19.47 (0.10)
Blades Fully Open	0.405 (100.88)	1500 (7.62)

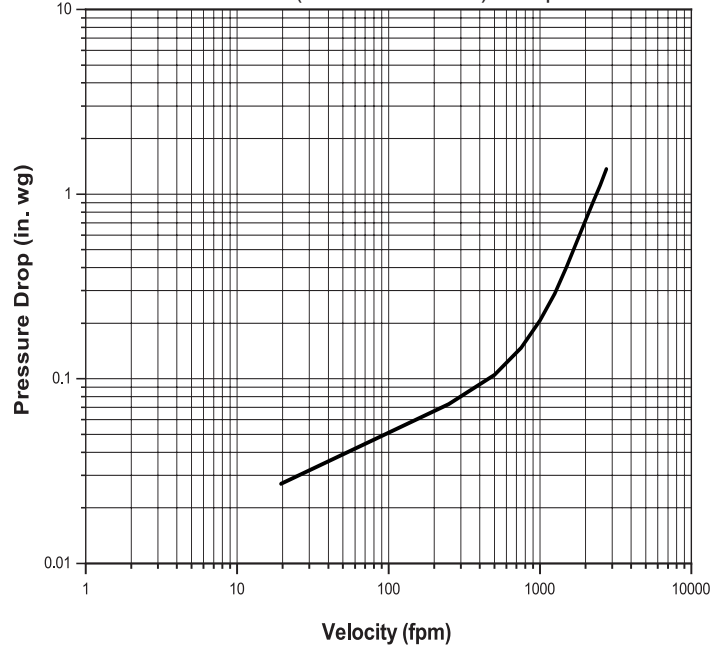
Pressure Drop

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



Pressure Drop

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

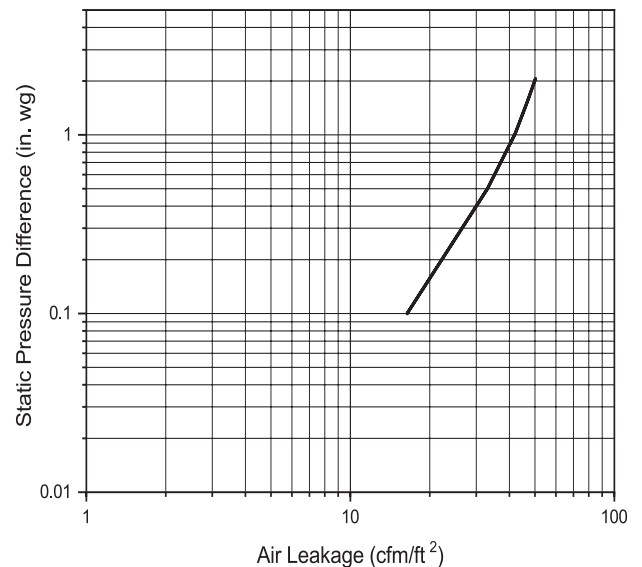


Leakage

Leakage testing was conducted in accordance with AMCA Standard 500-D and is expressed as cfm/ft² of damper face area. All data has been corrected to represent standard air at 0.075 lb/ft³ (1.201 kg/m³).











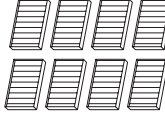

Leakage

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



WD-400/410 Selection

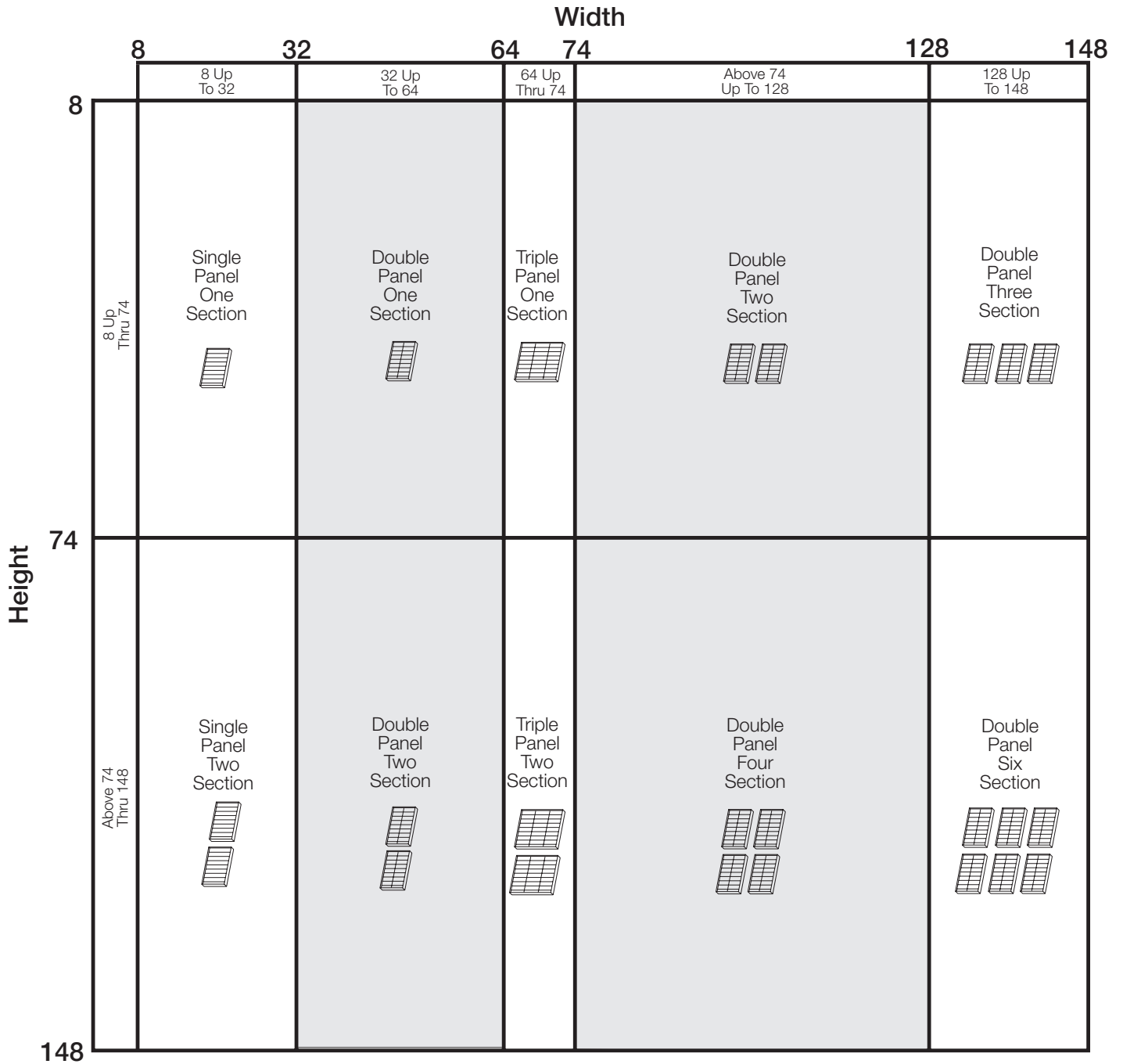
- Multiple section dampers shown below are supplied as equal size sections. Any damper that has multiple sections, both vertically and horizontally, will require field assembly and will require additional reinforcement (not supplied by factory) to support the assembly. These larger dampers must have 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 Up To 74	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 Up To 148	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.

- 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.