WD-400 Series
Non-motorized Backdraft Damper

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.

* W & H dimensions of each section are furnished approximately ⅛ in. (3mm) under size.

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)

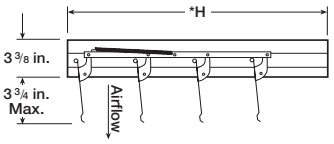
Construction

	Standard	Optional
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	304SS
Axle Bearings	Synthetic	-
Linkage Material	Galvanized steel	-

Size Limitations

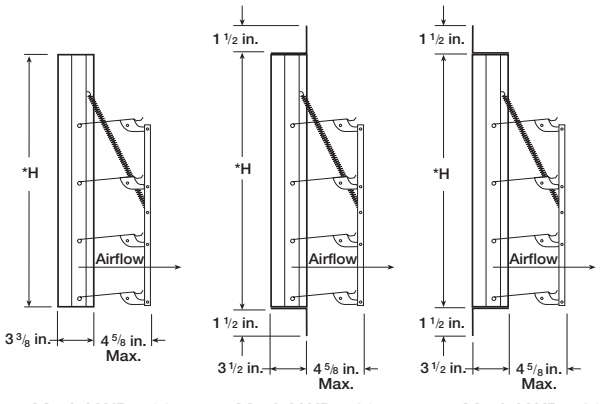
W x H	Minimum Size	Maximum Size	
		Single Panel	Multiple Panels
	All 400 series	All 400 series	WD-400, 410
Inches	8 x 8	31 x 74	150 x 148
mm	203 x 203	787 x 1880	3810 x 3759
			WD-420, 430
			148 x 148
			3759 x 3759

Horizontal Mount



Model WD-410
No Flange

Vertical Mount



Model WD-400
No Flange

Model WD-420
Flange on Discharge

Model WD-430
Flange on Intake

Document Links

CATALOG

DAMPER SELECTION GUIDE

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^3 (1.201 kg/m^3).

WD-400

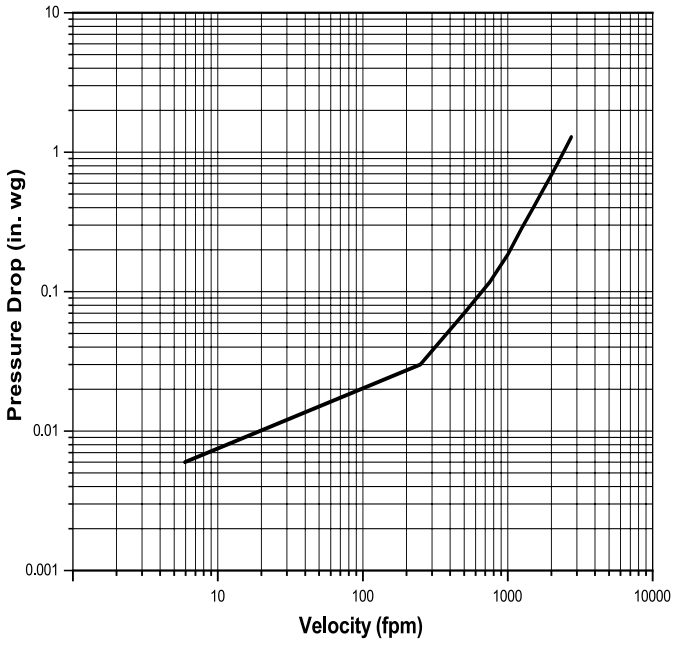
Operational Data	ΔP in. wg (Pa)	Velocity fpm (m/s)
Blades Start to Open	0.006 (1.50)	5.9 (0.03)
Blades Fully Open	0.287 (71.49)	1250 (6.35)

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)

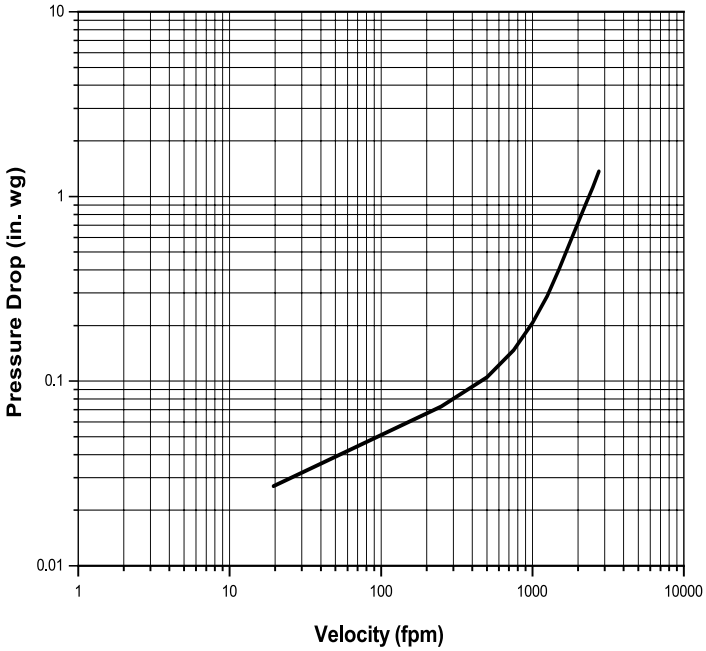
Pressure Drop

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



Pressure Drop

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



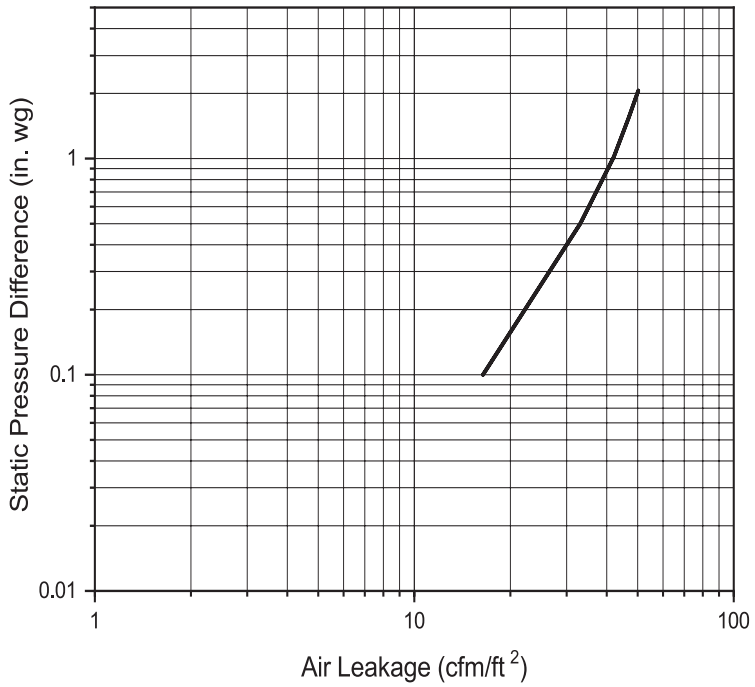
Performance Data

Leakage

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

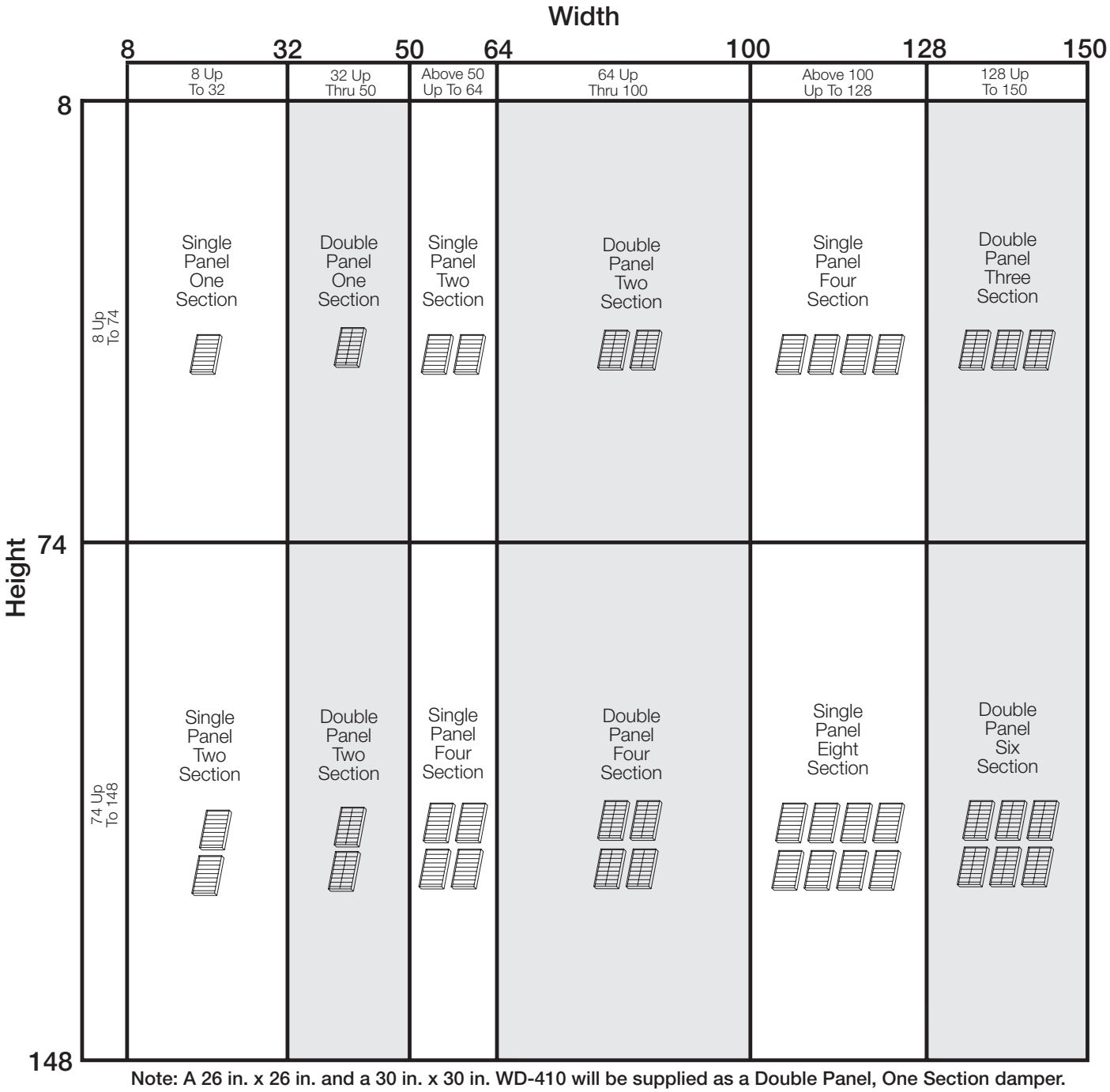
Leakage

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.

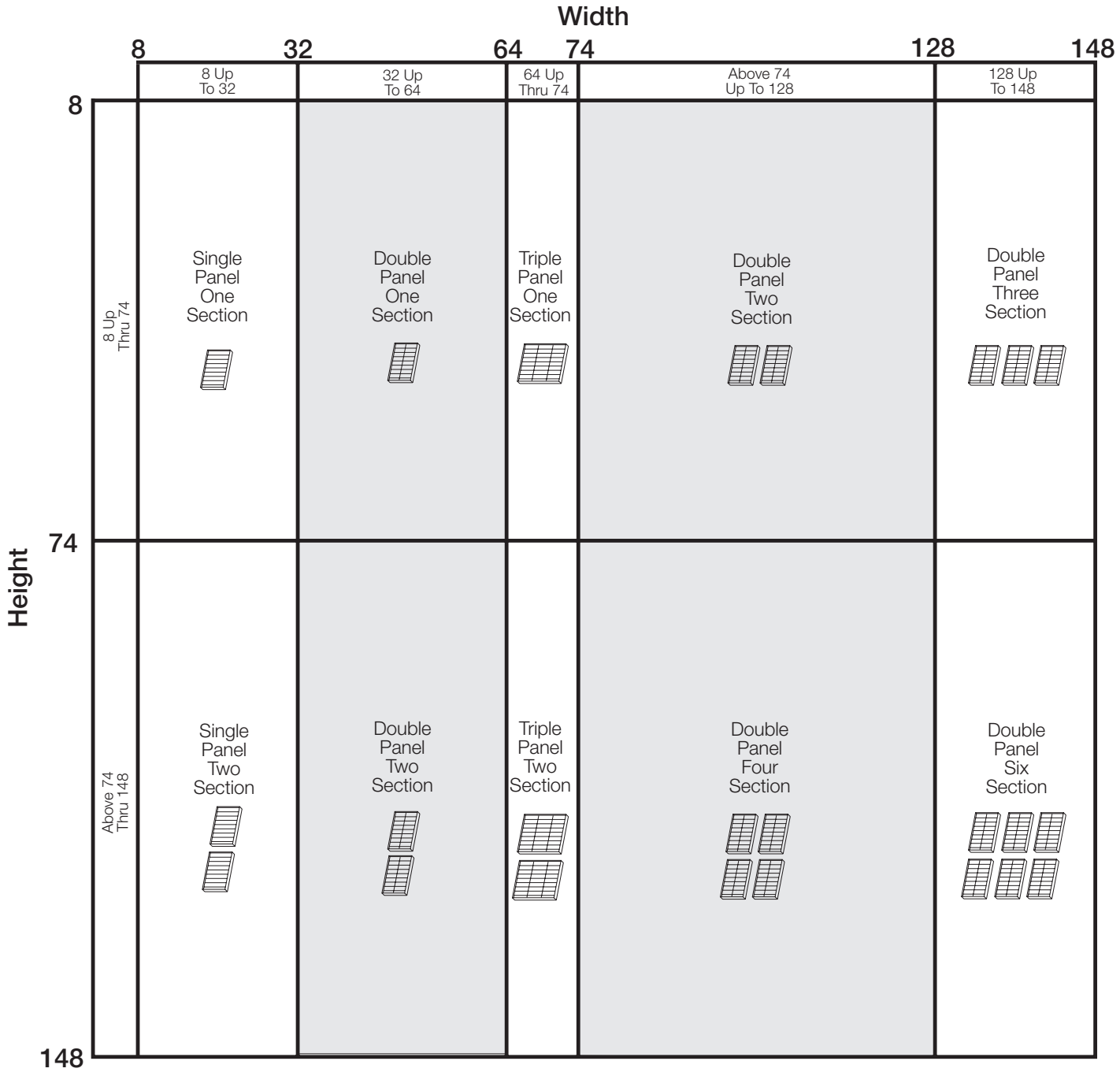


Note: A 26 in. x 26 in. and a 30 in. x 30 in. WD-410 will be supplied as a Double Panel, One Section damper.

*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.

WD-400 Series, R15, January 2025