# GREENHECK

## **WD-400 Series**

Non-motorized Backdraft Damper Horizontal or Vertical Mount (Intake)

## **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)



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

#### **Horizontal Mount**



1 ½ in.

\*H

1 ½ in.

3 1/2 in

#### **Vertical Mount**



Model WD-400

No Flange



1 <sup>1</sup>/<sub>2</sub> in.

Model WD-430 Flange on Intake

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	³⁄₁₀ in. (4.8mm) dia. zinc plated steel		
Axle Bearings	Synthetic		
Linkage Material	Galvanized steel		

### **Size Limitations**

W v Ll	Minimum Size	Maximum Size		
wхп		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	









**SPECIFICATIONS** 



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



#### 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-410					
Operational	ΔΡ	Velocity			
Data	in. wg (Pa)	fpm (m/s)			
Blades Start	0.027	19.47			
Open	(6.73)	(0.10)			
Blades Fully	0.405	1500			
Open	(100.88)	(7.62)			



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



WD-400 Series

#### 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 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.

