PD-1250 Pressure Relief Backdraft

Since 1905, Johnson Controls has provided the highest quality control dampers and controls that fit your application and size requirements.

Johnson Controls now presents the PD-1250 Pressure Relief Backdraft Damper with formed aluminum blade/aluminum frame damper.

Figure 1: PD-1250

Features and Benefits	
❑ **Aluminum Construction**	Maintains a good-looking appearance.
❑ **Blades Overlap Frame**	Provides optimum resistance to weather.
❑ **Non-metallic Blade-to-Blade Seal**	Provides quiet operation during highest spot velocities.

Application

The PD-1250 provides backdraft protection in light to medium duty applications that demand less than 12 cfm per square foot of leakage at 1/2 inch WG.

The PD-1250 provides system relief when operational pressures exceed system defined maximum levels.

Sample Specifications

Furnish and install Johnson Controls® PD-1250 Pressure Relief Backdraft dampers in applications that demand less than 12 cfm per square foot of leakage at 0.5 inch WG.

Frames are to be constructed 6063T5, extruded aluminum with linkage concealed in the side channel to eliminate noise and friction. Corrosion resistant synthetic bearings shall be provided.

Blades are to be constructed with formed or extruded aluminum. Blade edge seals shall be mechanically locked into blade edge.

Performance shall be designed for less than 12 cfm per square foot of leakage at 0.5 inch WG and tested in accordance with AMCA Standard 500. The damper must be rated to operate over a temperature range of 40 to 200°F (-40 to 93°C) standard.

Sizing shall be determined by the designer in accordance with accepted industry practices to ensure proper system performance.

Standard Materials and Construction

Frame	6063T5, extruded aluminum, 0.090 inch (2.3 mm) wall thickness, mitered corners
Blades	0.025 (.6 mm) formed aluminum, or 6063T5 extruded aluminum, 0.050 inch (1.2 mm) wall thickness
Linkage	Concealed in frame
Bearings	Synthetic
Blade Seal	Extruded vinyl

Dimensional Data

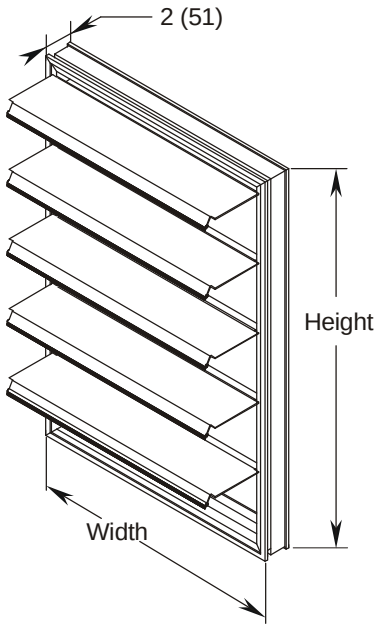

Figure 2: Damper Dimensions, inches (mm)

Table 1: Damper Dimensions

Size Limits	Width x Height, inches (mm)
Minimum	6 x 6 (152 x 152)
Maximum single panel	40 x 48 (1016 x 1219)
Multiple Panel	096 x 072 (2438 x 1829)

Actual size is 1/4-inch (6 mm) less than nominal.

Maintenance

Johnson Controls PD-1250 dampers have no components that require routine scheduled maintenance.

Installation

When used in fan discharge applications, damper should be located at least one-half the fan diameter away from the fan.

For proper operation, dampers are to be installed square and plumb.

The PD-1250 is intended to be self-supporting in the largest single section size. Multiple Section assemblies may require bracing to support the weight and hold against system pressure. Recommend appropriate bracing horizontally at least once every 8 feet of damper width. Vertical assemblies and higher system pressures may require more bracing.

Ordering Information

Use the following to select the product:

1. Determine required size and type of damper.
2. Select the features from Table 2 that match the operation and performance required.
3. Enter width and height of damper.
4. Enter options required.

PD-1250 Pressure Relief Backdraft Dampers include 16-gauge galvanized steel blades, stainless steel bearings, and stainless steel side seals.

Example: PPENN-020x020 is a backdraft/pressure relief damper constructed with parallel extruded aluminum blades and aluminum frame. Dimensions are 20 in. wide x 20 in. high (50.8 cm x 50.8 cm). Blades open at 0.10 inches differential static pressure.

Table 2: PD-1250 Pressure Relief Backdraft Damper Selector

	Ordering Code Number	P	P		N	N	-	w	w	w	x	h	h	h		
Application	P = Pressure Relief Backdraft															
Blade Operation	P = Parallel															
Blade/Frame	E = Extruded Aluminum/Extruded Aluminum F = Formed Aluminum/Extruded Aluminum															
Bearing/Seal	N = None															
Actuator	N = None															
Width	006 to 096 inches, 1-inch increments															
Height	006 to 072 inches, 1-inch increments															
Options (Limit 2)	See the *Factory Options* section for descriptions.															

Factory Options

E Exact whole inch size, no undercut

F 1.5-inch L flange air entering side (Cannot be used with Option G.)

G 1.5-inch L flange air leaving side (Cannot be used with Option F.)

U Upward airflow

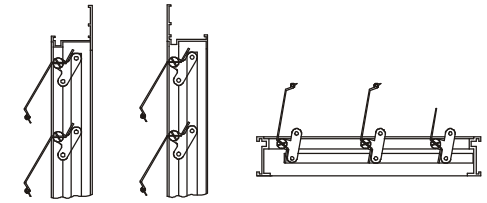

Figure 3: Options

Performance Data

Maximum Back Pressure (External Wind Velocity)	Width	PPEN	PPFN
	12 in. (305 mm) 24 in. (610 mm) 36 in. (914 mm) 40 in. (1016 mm)	6 in. WG (100 mph) 5 in. WG (100 mph) 4 in. WG (90 mph) 3 in. WG (75 mph)	4.5 in. WG (95 mph) 3.5 in. WG (85 mph) 2.5 in. WG (70 mph) 1.5 in. WG (55 mph)
Leakage at Maximum Back Pressure (Above) Based on Differential of 1" WG	12 in. (305 mm) 24 in. (610 mm) 36 in. (914 mm) 40 in. (1016 mm)	40 cfm/sq ft 18 cfm/sq ft 15 cfm/sq ft 15 cfm/sq ft	40 cfm/sq ft 20 cfm/sq ft 15 cfm/sq ft 15 cfm/sq ft
Maximum Spot Velocity		2500 fpm	1500 fpm
Operational Pressures	Start to Open Fully Open	0.10 in. WG 0.15 in. WG	0.03 in. WG 0.10 in. WG
Temperature Rating	-40 to 200°F (-40 to 93°C)		
Approximate Weight	Damper: 5 lb/sq ft (2.7 kg/sq ft)		

When used in fan discharge applications, the damper should be located at a minimum distance equal to one-half the fan diameter away from the fan discharge.

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

Return Policy

All Johnson Controls dampers are built to order and cannot be returned due to customer ordering errors. All dampers are backed by a 3-year warranty that covers defects in materials or workmanship. Refer to the terms and conditions of the sale for specifics.

Johnson Controls

Building Efficiency
507 E. Michigan Street, Milwaukee, WI 53202