Backdraft Damper

PR55

4" Deep • Single Thickness Blade • -40°F to 190°F Temperature • Aluminum Backdraft Damper

STANDARD CONSTRUCTION

FRAME: .081" thick 6063-T6/T52 extruded aluminum alloy; 1" x 4" x 1" channel frame on all sides
BLADES: .081" thick 6063-T6/T52 extruded aluminum alloy, designed for strength and low leakage with overlapping edges
SHAFTS: ½" dia. extruded aluminum pin-lock design
BLADE SEALS: Silicone rubber off-set leg
BEARINGS: Celcon bearing material so that there will be no metal to metal friction
LINKAGE: Face mounted in the airstream
FINISH: Mill
TEMP. LIMITS: -40°F to 190°F

OPTIONS

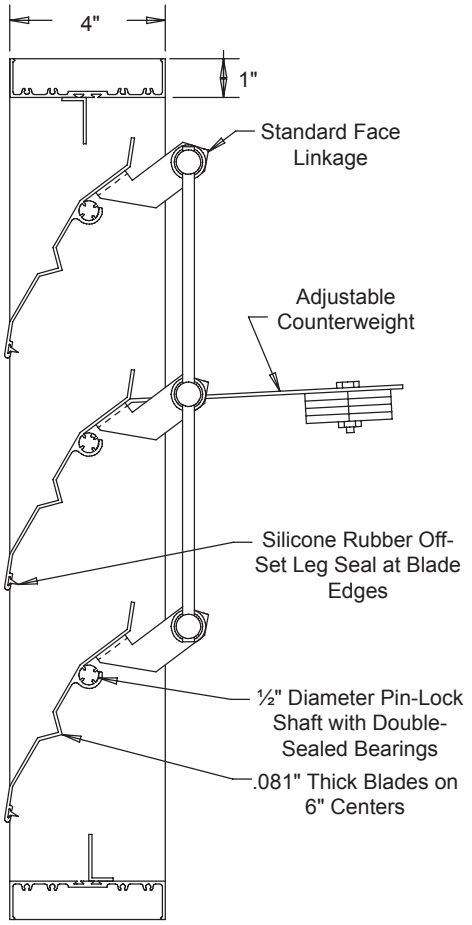
Aluminum (1⅝" x 6" x 1⅝") Frame
Flanged (2" x 4" x ⅝") Frame
Steel (Channel or Flange) Frame
Variety of Bird or Insect Screens
Linkage Out of Airstream
Polyurethane or Neoprene Jamb Seals
Oilite Bronze or Ball Bearings
Counterweights

NOTES

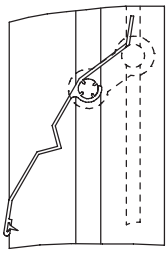
1. "A" width and "B" height are opening dimensions. Dampers are provided by inside dimension.
2. Counterweights are adjustable for infinite opening pressures. Optional locations. Specify if airstream is horizontal, vertical up or down. Specify to assist or resist opening. Specify locations internally (on blades) or externally (on external shaft).
3. When a non-symetrical frame cross section is specified (example: flange frame) specify the flange/airflow orientation.
4. Approximate damper weight is 6½ lbs/sq.ft.

DAMPER SIZE

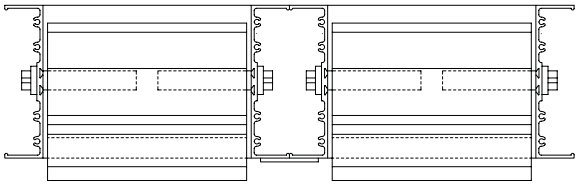
Panels	Min Panel	Max Single Panel
PR55	8"W x 8"H	48"W x 72"H



Section View



Optional Jamb Linkage and Jamb Seals



Mullion typ.
Top View

Louvers & Dampers
A Westok Company

SD-PR55-09.03

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March 2009

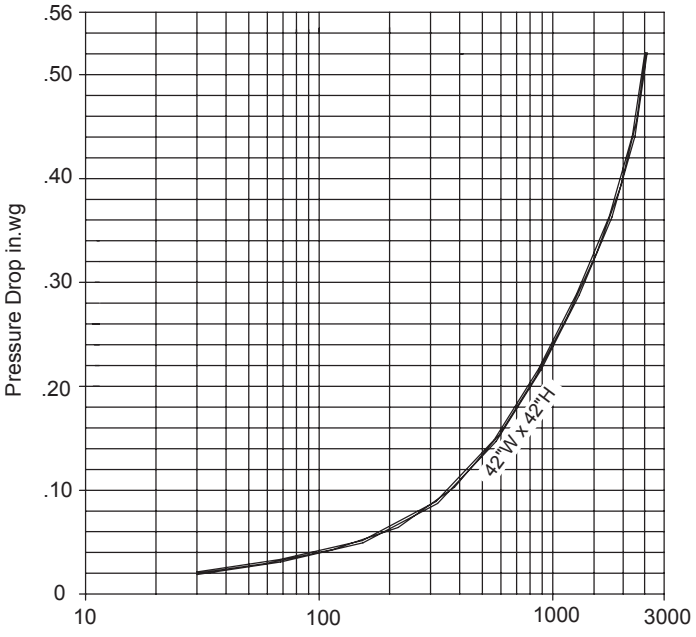
PR55

Backdraft Damper

4" Deep • Single Thickness Blade • -40°F to 190°F Temperature • Aluminum Backdraft Damper

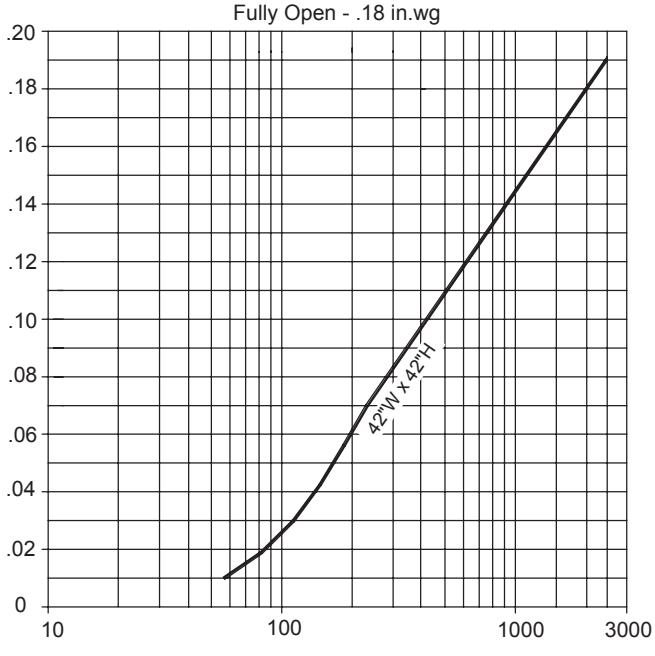
Typical performance for model PR55 Backdraft Damper. Size tested 42"W x 42"H, furnished with counterweight to assist opening.

Without Ductwork
Damper installed per AMCA 500 Fig. 5.4 (Face Mounted to a Plenum). Pressure is corrected to .075 lb./cu.ft. air density.
Operational Pressures
Start to Open - .01 in.wg
Fully Open - .52 in.wg



Face Velocity fpm
Velocity vs. Pressure Drop

With Ductwork
Damper installed per AMCA 500 Fig. 5.3 (Ductwork installed upstream and downstream of damper). Pressure is corrected to .075 lb./cu.ft. air density.
Operational Pressures
Start to Open - .01 in.wg
Fully Open - .18 in.wg



Face Velocity fpm
Velocity vs. Pressure Drop

Air Leakage:
Air leakage quantities shown in the chart are results of tests per AMCA standard 500 and are shown at .10 in.wg differential pressure and corrected to .075 lb./cu.ft. air density.

Total CFM Air Leakage at .10" Static Pressure Differential Through Closed Damper

Height \ Width	12	18	24	30	36	42	48
12	3.0	4.5	6.0	7.5	99.0	10.5	12.0
24	6.0	9.0	12.0	15.0	18.0	21.0	24.0
36	9.0	13.5	18.0	22.5	27.0	31.5	36.0
48	12.0	18.0	24.0	30.0	36.0	42.0	48.0
60	15.0	22.5	30.0	37.5	45.0	52.5	60.0
72	18.0	27.0	36.0	45.0	54.0	63.0	72.0

For determining leakage values greater than .10 in.wg to a maximum 4 in.wg use the multiplier correction chart below.

Static Pressure (in)	.2	.3	.4	.5	1.0	2.0	3.0	4.0
Multiplier Correction Factor	1.7	2.0	2.3	2.7	4.0	5.0	6.7	8.3

Air leakage ratings are based on AMCA standard 500 using test set up Fig. 5.4 with damper in the closed position without the aid of a counterweight or other mechanical means to provide closing torque. For a size 42"W x 42"H damper with blade and jamb seals.

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