

Application and Design

The BR-40 series is an eccentrically pivoted backdraft damper for low velocity systems. BR-40 series is a horizontally mounted damper and designed to allow vertical airflow down and prevent reverse airflow. To increase sensitivity and reduce blade mounted counterbalance, the blade skin is formed aluminum. On-blade counterweights are provided to fine tune start-to-open and full open blade operation. Ball bearings minimize friction.

Recommended Applications:

- Gravity hood intake and exhaust
- Stairwell pressurization
- Room pressurization
- Ductwork outlets

Poor Applications:

- Propeller fan outlets (high velocity)
- Centrifugal fan outlets (high velocity)
- Building pressurization (sensitive to wind)
- Pressure relief exceeding 0.13 in. wg (32 Pa)

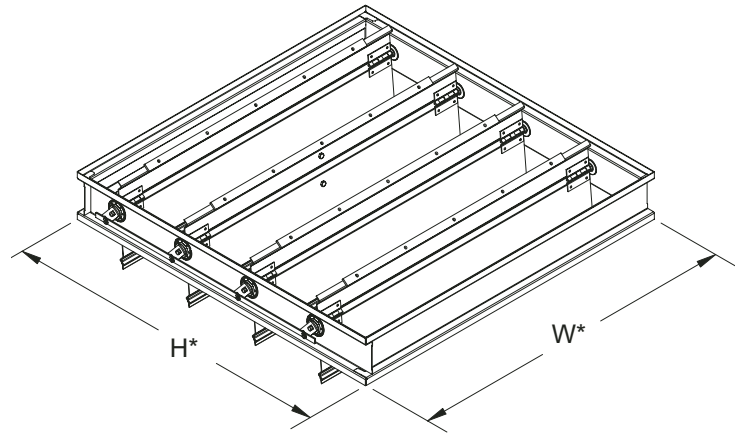
Ratings

Back Pressure: 2.0 in. wg (500 Pa)

Start-to-Open Pressure: 0.05 in. wg (12 Pa)

Velocity: 2000 fpm (10.2m/s)

Temperature: 180°F (82°C)



Standard Construction

Frame: Insert mount 16 ga. (1.5mm) galvanized steel hat channel

Blades: 0.063 in. (1.6mm) formed aluminum, eccentrically pivoted

Axles: 3/8 in. (9.5mm) square plated steel

Bearings: Galvanized steel press-fit ball

Linkage: Side mounted (out of airstream)

Blade Seals: Pressure activated vinyl

Counterbalance: Blade mounted with adjustable weights

*W & H dimensions furnished approximately 1/4 in.(6mm) under size.

Size Limitations

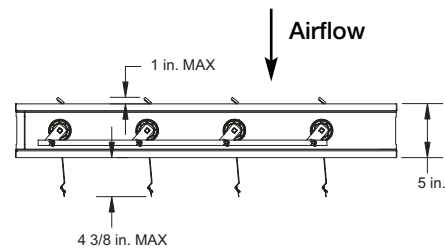
Minimum Size: 8 in. W x 6 in. H
(203mm x 152mm)

Maximum Panel Size: 48 in. W x 74 in. H
(1220mm x 1880mm)

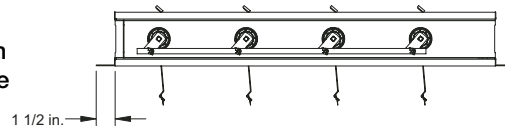
Options

- EPDM segmented jamb seals
- Stainless steel or aluminum frame
- Stainless steel axles and linkage
- Selectable start open from .05 to .13 in. wg (12 Pa - 32 Pa)

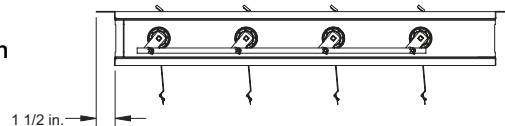
BR-40
No flange



BR-41
Flange on Discharge



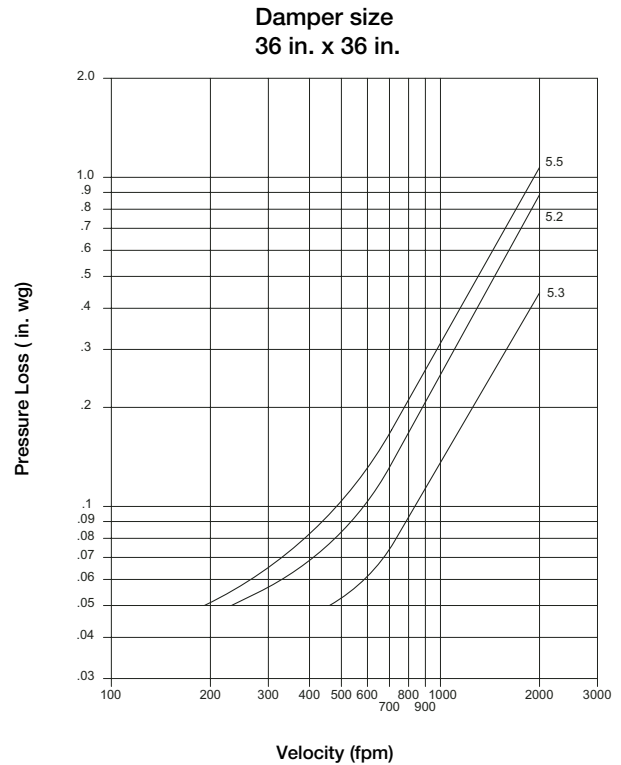
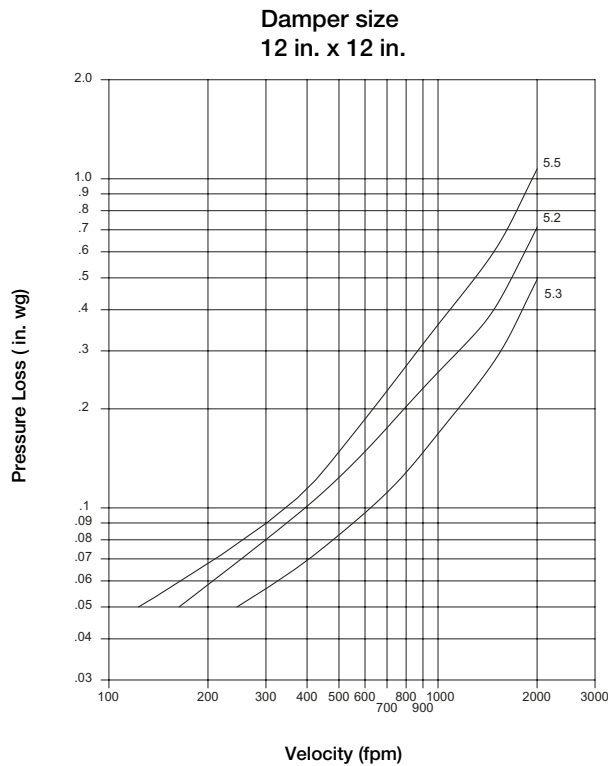
BR-42
Flange on Intake



PERFORMANCE DATA

BR-40 SERIES

Performance data results from testing a 12 in. x 12 in. and 36 in. x 36 in. damper in accordance with AMCA Standard 500D using Figure 5.3 (fully ducted), 5.2 (ducted exhausting into an open area), and 5.5 (plenum mounted). All data has been corrected to represent standard air density at 0.075 lb/ft³ (1.201 kg/m³).



Specifications

Barometric backdraft dampers meeting the following specifications shall be furnished and installed where shown on plans and/or as described in schedules.

Dampers shall consist of: 16 ga. (1.5mm) insert mount galvanized steel hat channel frame with 5 in. (127mm) depth; blades from 0.063 in. (1.6mm) thick formed aluminum, eccentrically pivoted; 3/8 in. (9.5mm) square plated steel axles with galvanized steel press-fit ball bearings; damper shall be equipped with pressure activated vinyl blade seals; and internal plated steel blade-to-blade linkage with blade mounted counterbalance weights.

Damper manufacturer's printed application and performance data including pressure, velocity and temperature limitations shall be submitted for approval showing damper suitable for pressures to 2 in. wg (500 Pa), velocities to 2000 fpm (10.2m/s) and temperatures to 180°F (82°C). Testing and ratings to be in accordance with AMCA Standard 500D.

Basis of design is Greenheck model BR-40.



BR-40 series
Rev. 2 July 2004
Copyright © 2004 Greenheck Fan Corp.