



Model BR-40 Series

Barometric Relief Dampers

Horizontal Mount - Vertical Airflow Down

Application

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. The blade is formed aluminum which increases sensitivity and reduces blade mounted counterbalance weights. 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 0.3 in. wg (0.075 kPa)

Ratings

Back Pressure: 2.0 in. wg (0.5 kPa)

Start -to-Open Pressure: 0.05 in. wg (.01 kPa)

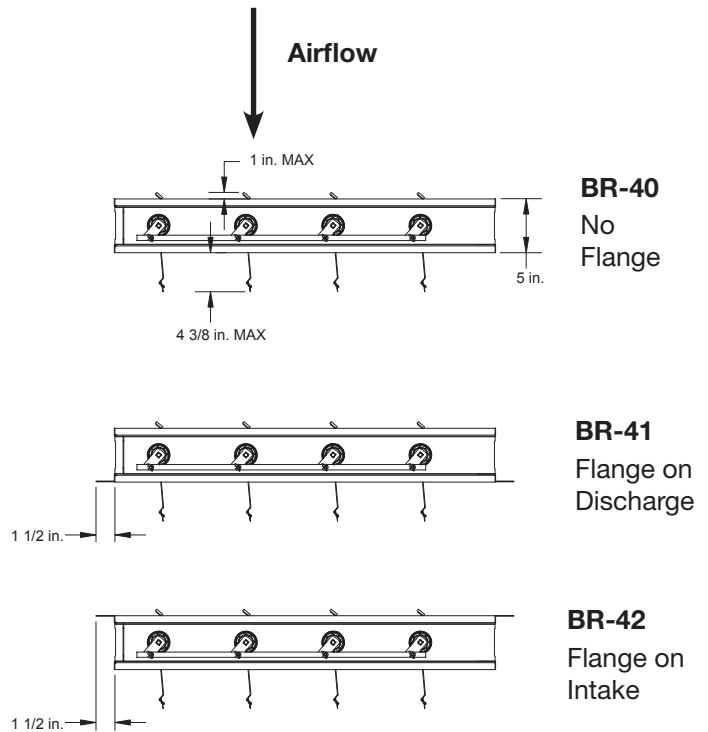
Velocity: 2000 fpm (10.2 m/s)

Temperature: 180°F (82°C)

Construction	Standard	Optional
Frame Material	Galvanized Steel	304SS, Extruded Aluminum
Frame Thickness	16 ga. (1.5mm)	-
Frame Type	No Flange (BR-40)	-
	Flange on Discharge (BR-41)	-
	Flange on Intake (BR-42)	-
Blade Material	Aluminum	-
Blade Seal	TPE	None
Blade Thickness	0.063 in. (1.6mm)	-
Axle	Plated Steel	316SS
Axle Bearings	Galvanized Ball	Acetal w/SS Ball
Linkage Material	Galvanized Steel	-
Jamb Seal	None	EPDM
Counterbalance	Blade mounted with adjustable weights	-
Paint Finishes	None	Baked Enamel, Hi Pro Polyester, Industrial Epoxy



•W & H dimensions furnished approximately 1/4 in. (6mm) undersize.



Size Limitations

W x H	Minimum Size	Maximum Size	
		Single Section	Multiple Sections
Inches	8 x 6	48 x 74	96 x 148
mm	203 x 152	1220 x 1880	2438 x 3759

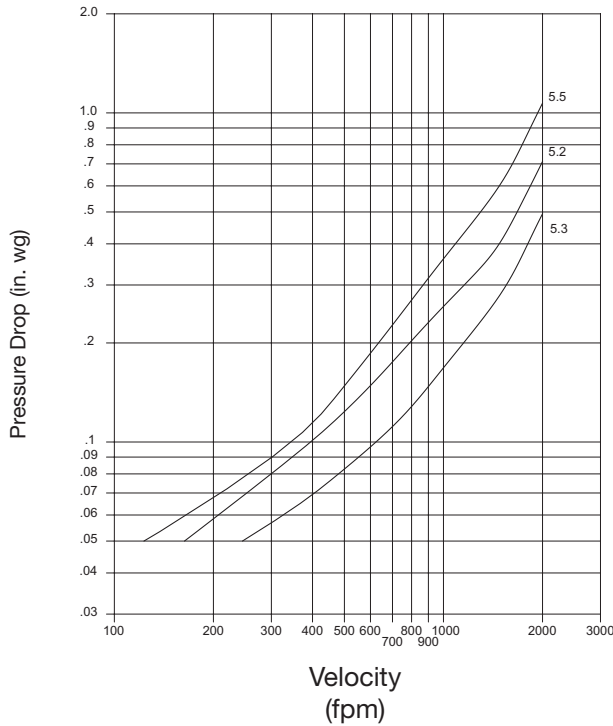
Feature

- Selectable start open from .05 to .30 in. wg (0.012 kPa - 0.075 kPa).

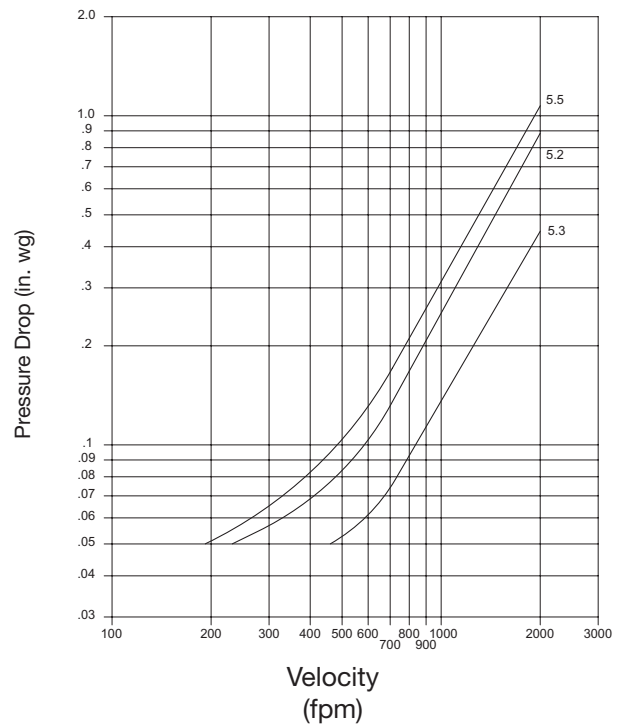
Performance data results from testing a 12 in. x 12 in. and 36 in. x 36 in. (305mm x 305mm and 914mm x 914mm) in accordance with AMCA Standard 500-D using Figure 5.3 (fully ducted), 5.2 (ducted exhausting into an open area), and 5.5 (plenum mounted). All data has been corrected to represent standard air density at 0.075 lb/ft³ (1.201 kg/m³).

Pressure drop data shown is based on minimum start open pressure. Higher start open pressure will result in different pressure drop.

**Damper Size
12 in. x 12 in.
(305mm x 305mm)**



**Damper Size
36 in. x 36 in.
(914mm x 914mm)**



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 TPE 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 (0.5 kPa), velocities to 2000 fpm (10.2 m/s, and temperatures to 180°F (82°C). Testing and ratings to be in accordance with AMCA Standard 500-D.

Basis of design is model BR-40.