

Application and Design

Model MBD-15 is a manual balancing damper designed to regulate the flow of air in a HVAC system. They are not intended to be used in applications as a positive shut off or for automatic control. Design incorporates heavy gauge galvanized steel construction for durability and longevity. MBD-15 meets SMACNA's recommended construction requirements for manual balancing dampers.

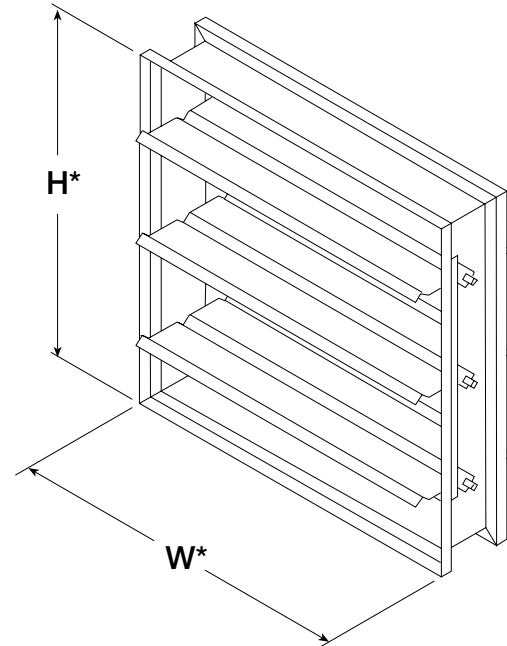
Ratings

Pressure: 2.0 - 4.0 in. wg (0.5 kPa - 1 kPa) - pressure differential.

Velocity: 2000 fpm (10.2m/s)

Temperature: 180°F (82°C)

Construction	Standard	Optional
Frame Material	Galvanized Steel	-
Frame Thickness	16 ga. (1.5mm)	-
Frame Type	5 in. x 1 in. (127mm x 25mm) Channel	-
Blade Material	Galvanized steel	-
Blade Thickness	16 ga. (1.5mm)	-
Blade Type	3V	-
Blade Operation	Opposed	Parallel
Axle	1/2 in. (13mm) dia. Plated Steel	-
Axle Bearings	Synthetic (acetal) sleeve	Bronze
Linkage Material	Plated Steel	-
Operator	1/2 in. (13mm) Locking manual quadrant with 1 1/2 in. (38mm) standoff bracket for external insulation	-
Extension Pin	1/2 in. (13mm) Diagonal glass reinforced polymer extends 3 1/2 in. (89mm) beyond frame	1/2 in. (38mm) Steel extension pin



*W&H dimension furnished approximately 1/4 in. (6mm) undersize.

Size Limitations

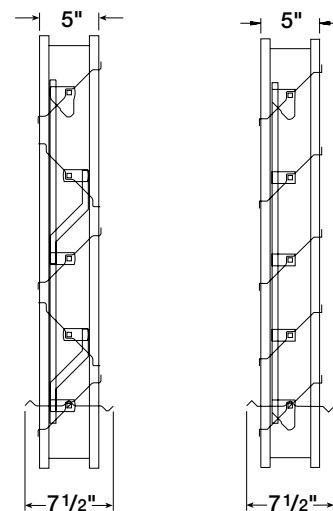
W x H	Minimum Size	Maximum Size	
		Single Section	Multiple Section
Inches	6 x 6	48 x 60	96 x 96
mm	152 x 152	1219 x 1524	2438 x 2438

Features

- Linkage concealed in jamb.

Options (at additional cost)

- 2 in. (51mm) stand off bracket
- Galvanized steel sleeves
- Flanges



Opposed Blade

Parallel Blade

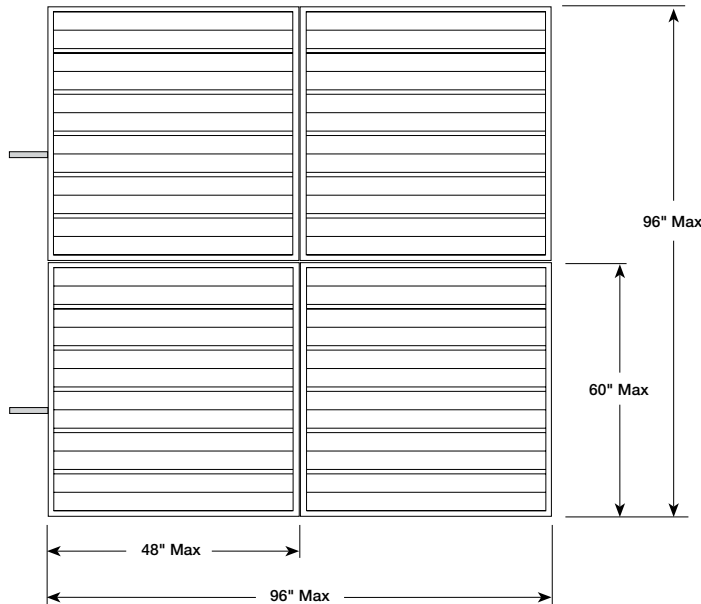
Performance Data

Damper Width in. (mm)	Maximum System Pressure in. wg (kPa)	Maximum System Velocity fpm (m/s)
48 (1219)	2 (.5)	2000 (10.2)
36 (914)	2.5 (.63)	
24 (610)	3 (.75)	
12 (305)	4 (1)	

NOTE: Maximum recommended system pressure and velocity ratings are conservative to prevent misapplication. Dampers are structurally capable of withstanding higher limits, however it is recommended that Greenheck be contacted for an engineering evaluation before exceeding these limits.

Temperature: Applications above 180°F (82°C) may require special considerations.

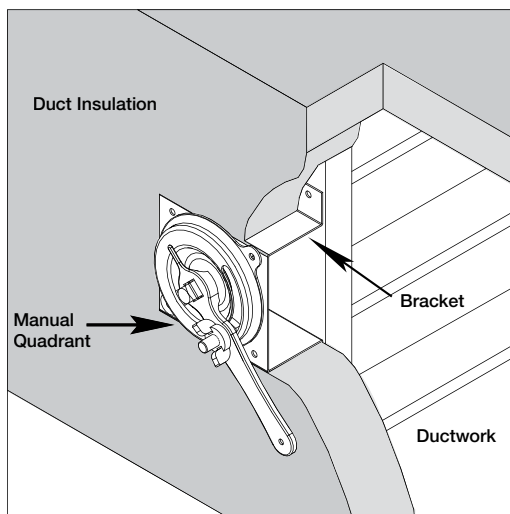
Maximum Size and Installation Information



Maximum size for a MBD-15 is 96 in. W x 96 in. H (2438mm x 2438mm). Dampers over 48 in. (1219mm) wide and/or 60 in. (1524mm) high are shipped as 2 equal sections (requiring field assembly).

For dampers larger than 96 in. W x 96 in. H (2438mm x 2438mm), use Greenheck model VCD-20 series.

Standoff Bracket



1½ in. (38mm) standoff bracket is standard. It is used to extend the manual quadrant away from the ductwork to accommodate external insulation.

Specifications

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

Dampers shall consist of: a 16 ga. (1.5mm) galvanized steel hat channel frame with 5 in. (127mm) depth; triple V type blades fabricated from 16 ga. (1.5mm) galvanized steel; ½ in. (12mm) dia plated steel axles; external (out of the airstream) blade-to-blade linkage.

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 4.0 in. w.g. (1 kPa), velocities to 2000 fpm (10.2m/s) and temperatures to 180°F (82°C). Testing and ratings to be in accordance with AMCA Standard 500-D.

Basis of design is Greenheck model MBD-15.

NOTE: Temperatures in excess of 180°F (82°C) require special consideration.

