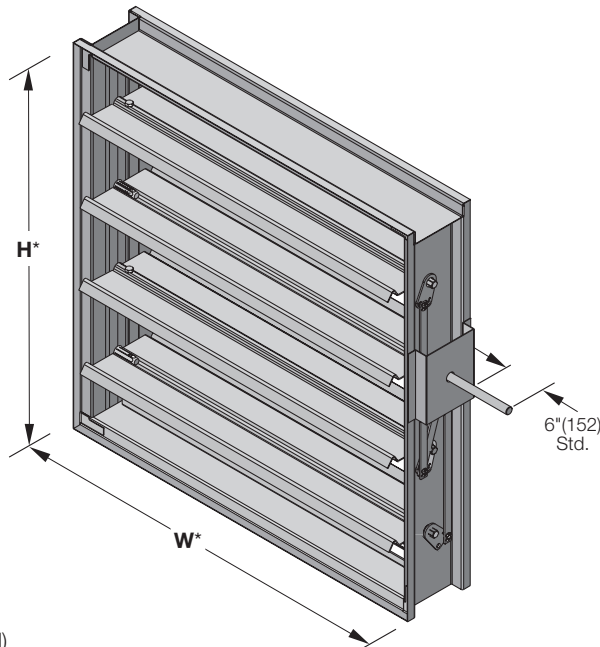




AC-42

(standard)

*Damper dimensions furnished approximately 1/4" (6) undersize. (Drive axle supplied loose for field installation)

Standard Construction

Frame: 5" x 1" (127 x 25) galvanized steel hat channel with interlocking corner gusset. Equivalent to 13 gauge (2.4) channel frame. Low profile head and sill are used on sizes less than 13" (330) high.

Blades: 6" x 16 gauge (152 x 1.5) galvanized steel — triple-V. Parallel (model AC-41) or opposed (model AC-42) action

Axles: 1/2" (13) diameter plated steel hex

Linkage: Concealed in frame

Bearings: Synthetic sleeve-type bearings

Control Shaft: 1/2" x 6" (13 x 152) round drive axle with outboard shaft support bracket and bearing supplied on all single section dampers for field installation. Factory installed jackshaft supplied with all multiple section dampers: 1/2" (13) dia. for W>48" (1219) or H>72" (1829), 3/4" (19) dia. for W >96" (2438).

Minimum Size: Model AC-41 (one blade): 6" x 5" (152 x 127)
Model AC-41 and AC-42 (two blades): 6" x 10" (152 x 254)

Maximum Size: Single Section: 48" x 72" (1219 x 1829)
Multiple sections: Unlimited

AC-41 and AC-42 control dampers employ triple-V blades and a rugged hat channel frame for automatic air control and manual balancing in medium pressure and velocity applications.

Ratings

Damper Width	Maximum System Pressure	Maximum System Velocity
12" (305)	5.0 in. wg. (1.2 kPa)	3,000 fpm (15.2 m/s)
24" (610)	4.0 in. wg. (1.0 kPa)	3,000 fpm (15.2 m/s)
36" (914)	3.0 in. wg. (0.8 kPa)	2,500 fpm (12.7 m/s)
48" (1219)	2.5 in. wg. (0.6 kPa)	2,000 fpm (10.2 m/s)

Leakage: 8.0 cfm/ft² @ 4.0 in. wg. (0.04 m³/s/ m²@ 1.00 kPa)
4.0 cfm/ft² @ 1.0 in. wg. (0.02 m³/s/ m²@ 0.25 kPa)

Temperature:

-25°F to 180°F (-32°C to 83°C) with synthetic bearings
-72°F to 275°F (-58°C to 135°C) with stainless bearings

Options

■ Factory-installed actuators:

- Manual locking quadrant (supplied loose)
- 24 VAC ■ 120 VAC ■ 230 VAC
 - Pneumatic ■ Modulating
- External mount (requires sleeve or sideplate option)
- Internal mount (requires jackshafting)

■ Factory installed sleeve ■ Factory installed side plate

- Gauge: ■ 20 (1.0) ■ 16 (1.6)
Length: ■ 16" (406) ■ 24" (610) ■ Other_____

■ Transitions (sleeve required):

- Flanged ■ Round ■ Oval
- Duct connections: ■ DM-25 ■ DM-35 ■ S & Drive

■ Flanged frame: ■ One side ■ Both sides

■ Low leakage seals: TPV blade edge and flexible stainless steel jamb

■ PI-50 – Dual position indicator switch package

■ Actuator/Quadrant standoff bracket — for insulated duct:

- 2" (50) ■ 3" (76)

■ Stainless steel oilite sleeve-type bearings

■ Type-304 stainless steel construction

■ Jackshafting (required with internal mounted actuators and standard on all multiple section dampers)

- Standard diameter ■ 1" (25) diameter

■ Vertical mounted blades

■ Face and by-pass assemblies:

- Model MDFBR ■ Model MDFBH ■ Model MDFBV

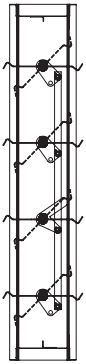
■ High temperature damper construction (275°F)

NOTE: Dimensions in parentheses () are millimeters.
Information is subject to change without notice or obligation.

Typical Damper Dimensional Details

AC-41, AC-42

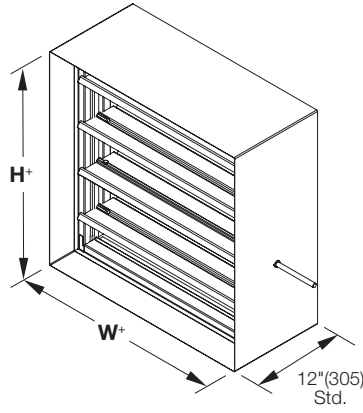
Control Damper
Triple-V Blade



AC-41
(Parallel Action)

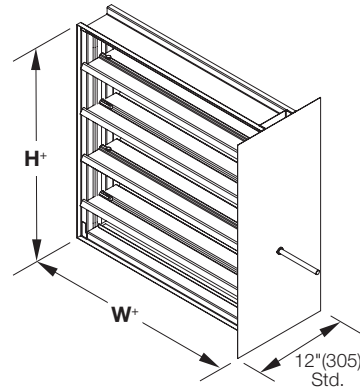


AC-42
(Opposed Action)

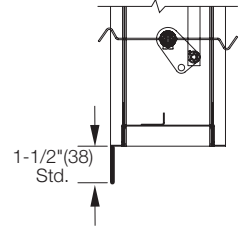


Sleeve (Optional)

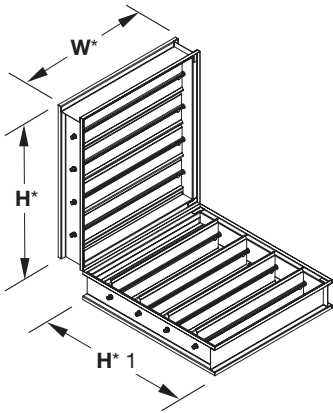
*Damper dimensions furnished approximately 1/4" (6) undersize. (sleeve thickness not included)



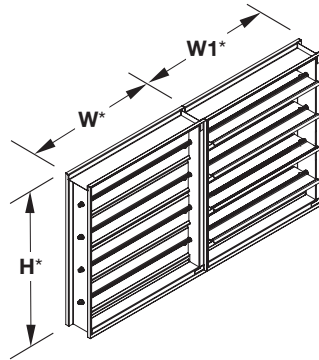
Sideplate (Optional)



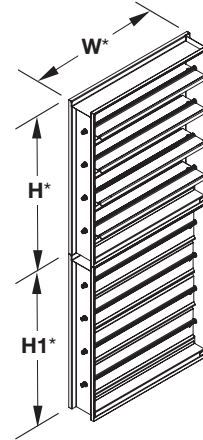
Flange Frame



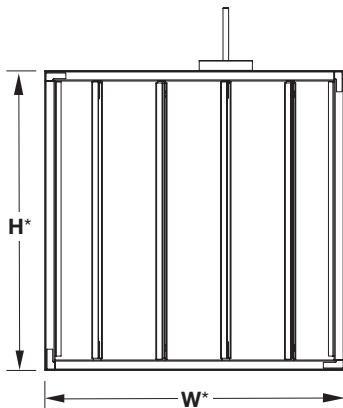
Model **MDFBR**



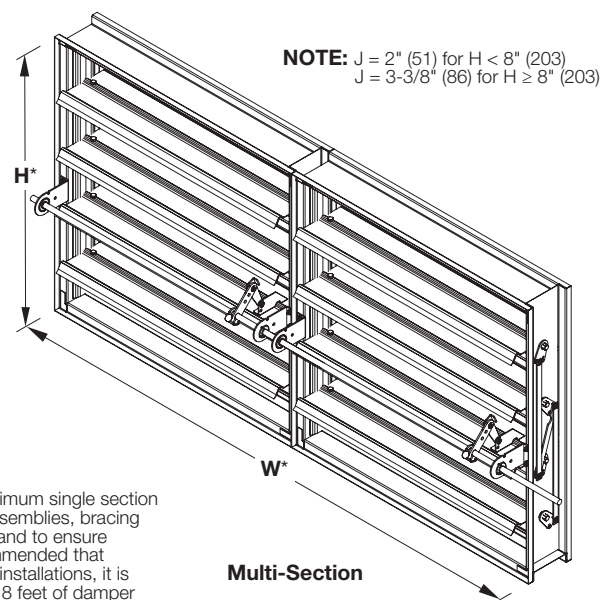
Model **MDFBH**



Model **MDFBV**

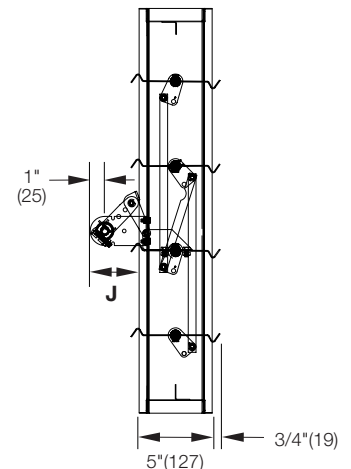


Vertical Bladed



Multi-Section

NOTE: J = 2" (51) for H < 8" (203)
J = 3-3/8" (86) for H ≥ 8" (203)

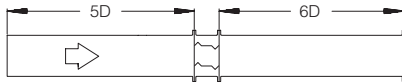
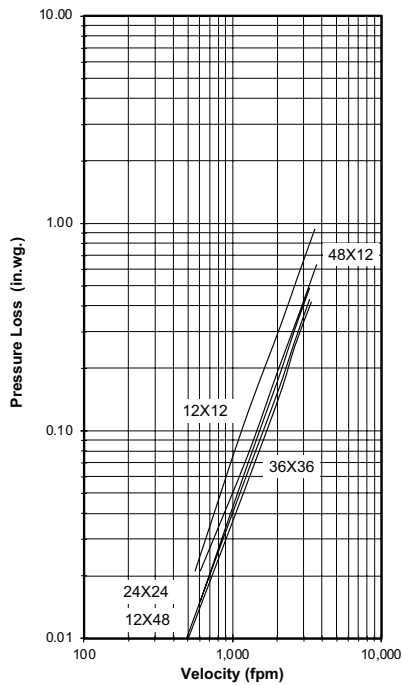


Dampers are designed to be self-supporting in the maximum single section size. When dampers are installed in multiple section assemblies, bracing may be required to support the weight of the dampers and to ensure structural integrity against system pressures. It is recommended that multiple sections be appropriately braced. In horizontal installations, it is recommended that suitable supports be installed every 8 feet of damper width. Dampers installed in vertical multiple assemblies and/or higher system pressures, may require additional bracing.

*Damper dimensions furnished approximately 1/4" (6) undersize.

Pressure Loss vs. Velocity

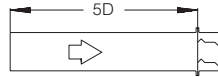
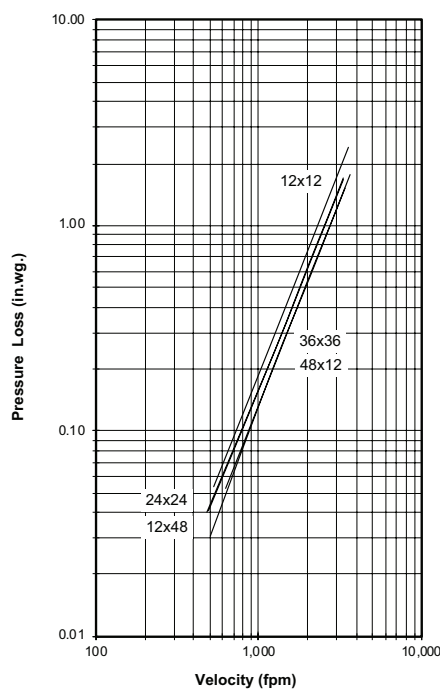
Figure 5.3 — Ducted Inlet and Outlet



Ducted Inlet and Outlet

AMCA Figure 5.3 Illustrates a fully ducted damper. This configuration represents the lowest pressure drop of the three test configurations because entrance and exit losses are minimized by straight duct runs upstream and downstream of the damper.

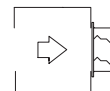
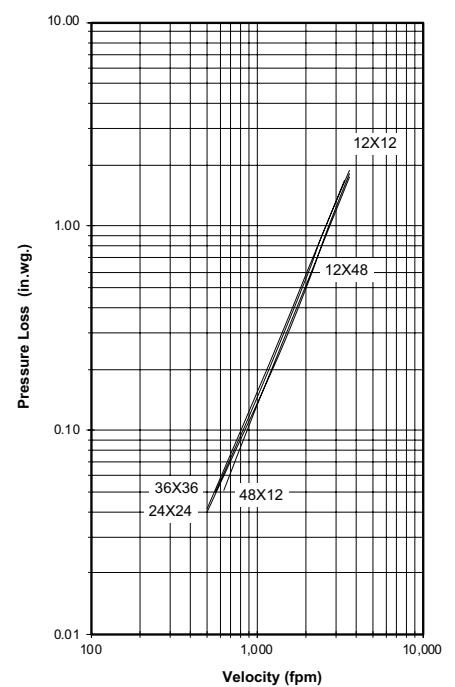
Figure 5.2 — Ducted Inlet



Ducted Inlet

AMCA Figure 5.2 Illustrates a ducted damper exhausting air into an open area. This configuration has a lower pressure drop than Figure 5.5 because entrance losses are minimized by a straight duct run upstream of the damper.

Figure 5.5 — Plenum Mount



Plenum Mount

AMCA Figure 5.5 Illustrates a plenum mounted damper. This configuration has the highest pressure drop because of extremely high entrance and exit losses due to the sudden changes of area in the system.