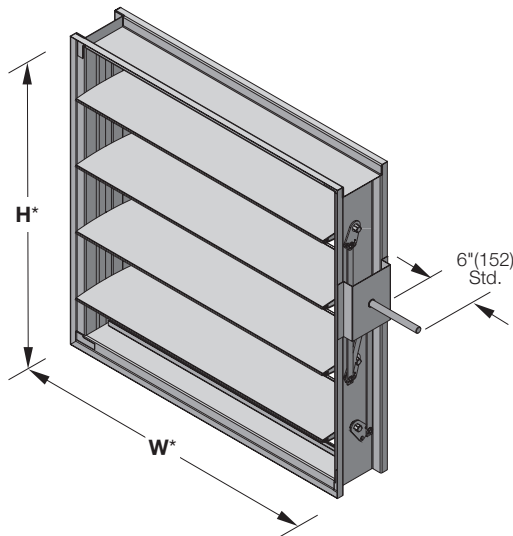




AC-52

(standard)

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

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):

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

■ Flanged frame: ■ One side ■ Both sides

■ PI-50 – Dual position indicator switch package

■ Actuator/Quadrant standoff bracket — for insulated duct:

- 2" (50) ■ 3" (76)

■ Stainless steel oilite sleeve-type bearings

■ Extruded aluminum 13 ga. frame construction

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

- Standard diameter ■ 1" (25) diameter

■ Vertical mounted blades

■ Finish

- Mill ■ Clear Anodized ■ Baked enamel – Gray
- High-performance fluoropolymer – Gray

■ Face and by-pass assemblies:

- Model MDFBR ■ Model MDFBH ■ Model MDFBV

■ High temperature damper construction (275°F)

■ Stainless steel linkage:

- 304

AC-51 and AC-52 control dampers employ aluminum airfoil blades and a rugged hat channel frame to provide extremely low leakage and exceptional air control in medium to high pressure and velocity applications.

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" (152) heavy gauge, dual wall extruded aluminum — airfoil. Parallel (CD-51) or opposed (CD-52) action

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

Linkage: Concealed in frame

Bearings: Synthetic sleeve-type bearings

Seals: TPV blade edge seals and flexible metal jamb seals

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 3/4" (19) diameter jackshaft on all multiple section dampers

Minimum Size: Model CD-51 (one blade): 6" x 5" (152 x 127)
Model CD-51 and CD-52 (two blades): 6" x 10" (152 x 254)

Maximum Size: Single Section: 60" x 72" (1524 x 1829)
Multiple sections: Unlimited

Ratings

Damper Width	Maximum System Pressure	Maximum System Velocity
12" (305)	10.0 in. wg. (2.5 kPa)	6,000 fpm (30.5 m/s)
24" (610)	8.4 in. wg. (2.1 kPa)	5,000 fpm (25.4 m/s)
36" (914)	6.1 in. wg. (1.5 kPa)	4,000 fpm (20.3 m/s)
48" (1219)	5.3 in. wg. (1.3 kPa)	3,000 fpm (15.2 m/s)
60" (1524)	3.1 in. wg. (0.8 kPa)	3,000 fpm (15.2 m/s)

Leakage:

3 cfm/ft² @ 1 in. wg. (0.015 m³/s/ m² @ 0.25 kPa)
8 cfm/ft² @ 4 in. wg. (0.041 m³/s/ m² @ 1.0 kPa)
9.8 cfm/ft² @ 6 in. wg. (0.049 m³/s/ m² @ 1.5 kPa)

Leakage data based on Test Method per ANSI/AMCA Standard 500-D-07, Figure 5.4 Alternate

Temperature:

–25°F to 180°F (–32°C to 82°C) with synthetic bearings
–72°F to 275°F (–58°C to 135°C) with stainless bearings

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

Typical Damper Dimensional Details

AC-51, AC-52

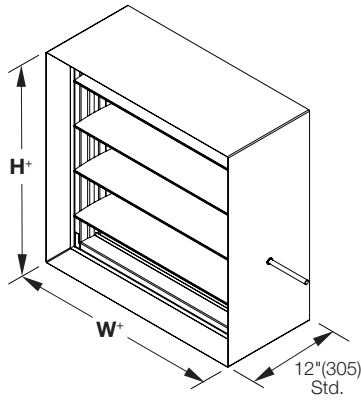
Control Damper
Aluminum Airfoil Blade



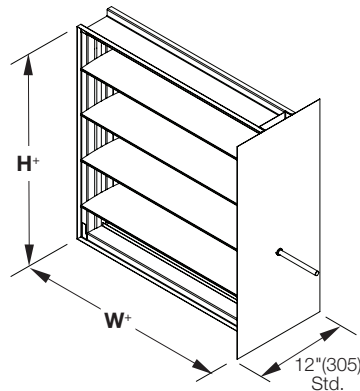
AC-45
(Parallel Action)



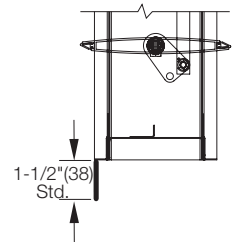
AC-46
(Opposed Action)



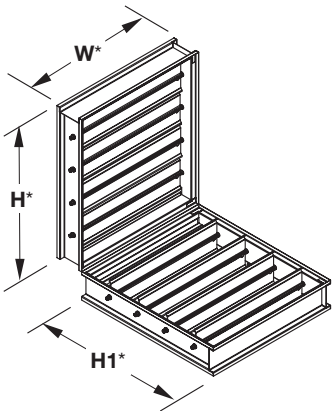
Sleeve (Optional)
*Damper dimensions furnished approximately
1/4" (6) undersize. (sleeve thickness not included)



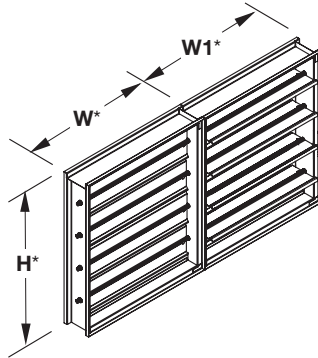
Sideplate (Optional)



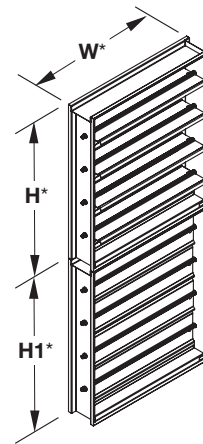
Flange Frame



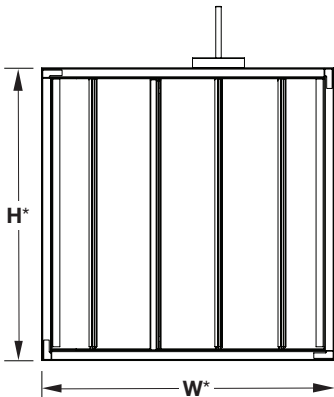
Model **MDFBR**



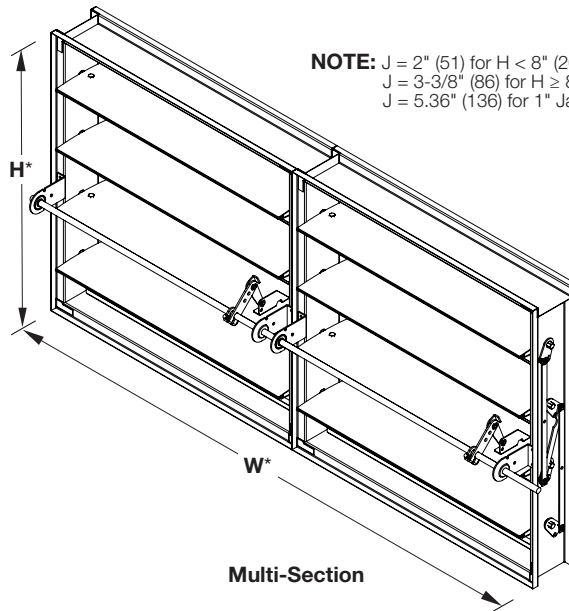
Model **MDFBH**



Model **MDFBV**

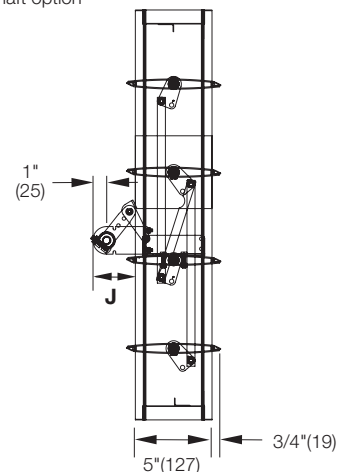


Vertical Bladed



Multi-Section

NOTE: J = 2" (51) for H < 8" (203)
J = 3-3/8" (86) for H ≥ 8" (203)
J = 5.36" (136) for 1" Jackshaft option



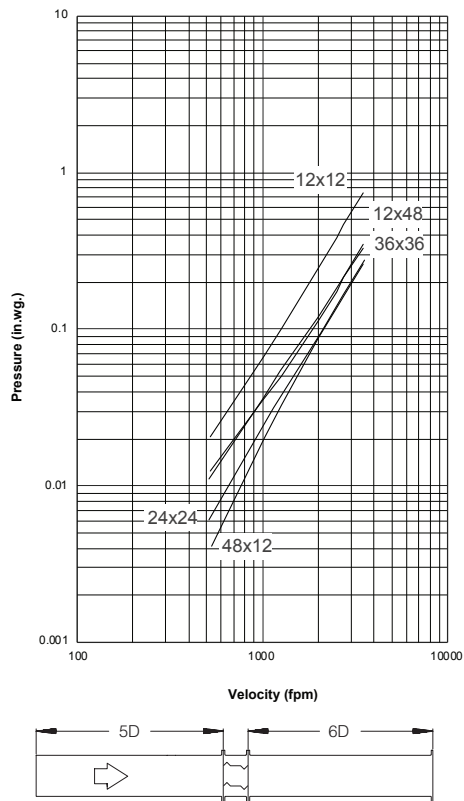
Dampers are designed to be self-supporting in the maximum single section size. When dampers are installed in multiple section assemblies, bracing may be required to support the weight of the dampers and to ensure structural integrity against system pressures. It is recommended that multiple sections 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.

Airflow Performance Data

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.