

## Application

AC-91 and AC-92 industrial control dampers employ double skin airfoil blades and a rugged flanged frame for automatic air control and manual balancing in medium to high pressure applications.

## Standard Construction

**Frame:** 8" x 2" x 14 ga. (203 x 51 x 2) galvanized steel channel.

**Blades:** 6" x 14" gauge (152 x 2.0) equivalent galvanized – steel airfoil. Parallel (model AC-91) or opposed (model AC-92) action.

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

**Linkage:** Concealed in frame.

**Bearings:** Stainless steel sleeve-type, pivot in bushing, press fit into frame.

**Seals:** Silicone blade edge seals integrally rolled and mechanically fastened to blades.

**Control Shaft:** 1/2" x 6" (13 x 152) round drive shaft with shaft support bracket and bearing mounted to damper frame with factory mounted/welded manual locking quadrant.

**Lifting Lugs:** 7/8" (22) diameter, one on each jamb of frame.

**Minimum Size:** AC-91 (one blade): 8" x 6" (203 x 152)

AC-92 (two blades): 8" x 10" (203 x 254)

**Maximum Size:** Single section: 48" x 96" (1219 x 2438)  
Multiple sections: Unlimited

## Options

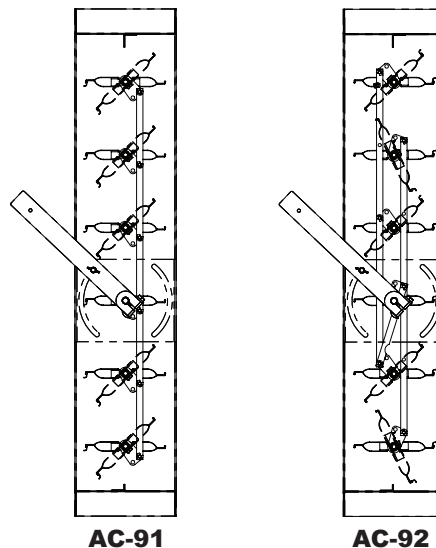
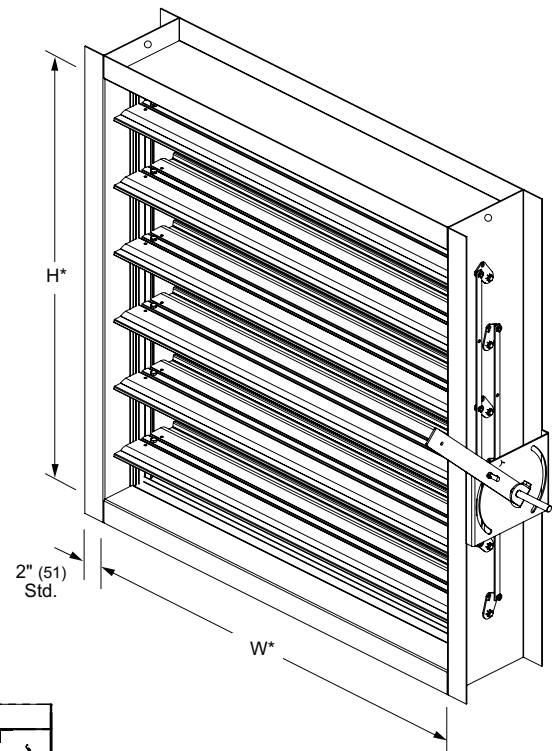
- Factory mounted electric or pneumatic actuator.
- Type-304 Stainless steel construction.
- No blade edge seals.
- Low leakage seals: Silicone blade edge seals integrally rolled and are mechanically fastened to blade and stainless steel jamb seals.
- 12 gauge (2.8) frame.
- High temperature construction.
- Vertical mounted blades with thrust washers.
- Bolt holes in damper frame:
  - One side
  - Both sides
- Extended perimeter mounting flange.

## Ratings

Damper Width	Maximum System Pressure	Maximum System Velocity
12" (305)	9.0 in. wg (2.2 kPa)	4000 fpm (20.3 m/s)
24" (610)	8.0 in. wg (2.0 kPa)	4000 fpm (20.3 m/s)
36" (914)	6.0 in. wg (1.5 kPa)	3500 fpm (17.8 m/s)
48" (1219)	4.5 in. wg (1.1 kPa)	3000 fpm (15.2 m/s)

**\*\* Leakage:** 4.2 cfm/ft<sup>2</sup> @ 2 in. wg (0.02m<sup>3</sup>/s/ m<sup>2</sup> @ 0.5 kPa)  
6.4 cfm/ft<sup>2</sup> @ 4 in. wg (0.03m<sup>3</sup>/s/ m<sup>2</sup> @ 1.0 kPa)  
17.8 cfm/ft<sup>2</sup> @ 8 in. wg (0.09m<sup>3</sup>/s/ m<sup>2</sup> @ 2.0 kPa)

**Temperature:** -25°F to 250°F (-32°C to +121°C), available up to 450°F (232°C) when required – consult with C&S.



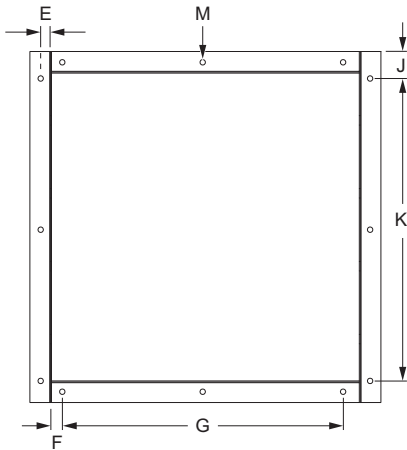
Model **AC-92**

\* Damper dimensions furnished approximately net I.D.

\*\* Results based upon a 36" x 48" (914 x 1219) damper.

**NOTE:** Dimensions in parentheses ( ) are millimeters.

# AC-91 and AC-92 Bolt Hole Dimensions

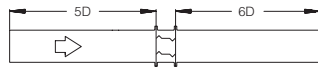
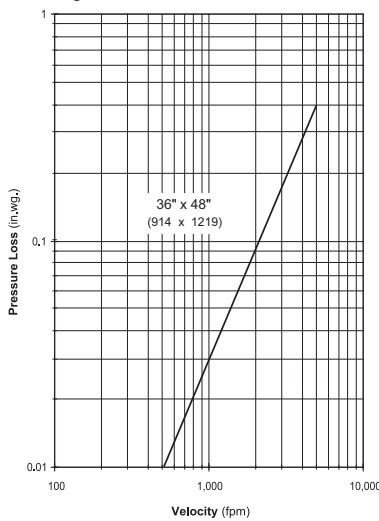


Dimension	Description
M _____ inches	Hole Diameter
E _____ inches	Centerline of Bolt Hole From Inside Edge of Frame
F _____ inches	First/Last Hole in Head/Sill
G ___ @ ___(x) inches	Number of Holes/Spacing in Head/Sill
J _____ inches	First/Last Hole in Jamb
K ___ @ ___(z) inches	Number of Holes/Spacing in Jamb

## Airflow Performance Data

### Pressure Loss vs. Velocity

Figure 5.3 — Ducted Inlet and Outlet

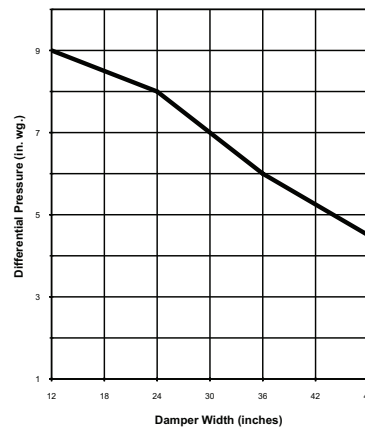


#### Ducted Inlet and Outlet

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.

Pressure drop testing was performed in accordance with AMCA Standard 500-D using Figure 5.3 — Ducted Inlet and Outlet. All data has been corrected to represent air density of 0.075 lb/ft. Actual pressure drop in any ducted HVAC system is a combination of many elements. This information, along with analysis of other system influences, should be used to estimate actual pressure losses for a damper installed in a given HVAC system.

### Pressure Limitations



### Velocity Limitations

