

Application

AC-25R-CO₂ low leakage control damper employs a sturdy round frame and a single round blade for automatic air control. A modulating Belimo actuator controlled by a CO₂ sensor sends open or close signals according to fresh air needs.

Standard Construction

Frame: 12" x 20 ga. (305 x 1.0) galvanized steel.

Blades: 14 gauge (2.0) equivalent galvanized steel — round.

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

Bearings: Synthetic

Seals: Polyethylene blade edge seals.

Control Shaft: 1/2" x 5" (13 x 127) round drive axle.

Sensor: CO₂ Room Sensor.

Damper Actuator: Modulating, 24V proportional.

Transformer: 120V to 24V. Supplied loose.

Minimum Size: 6 Ø (152 Ø)

Maximum Size: 24 Ø (610 Ø)

Options

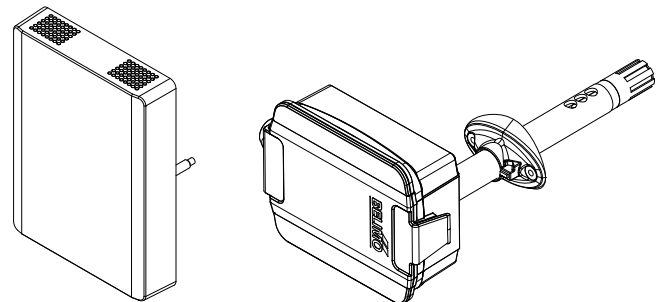
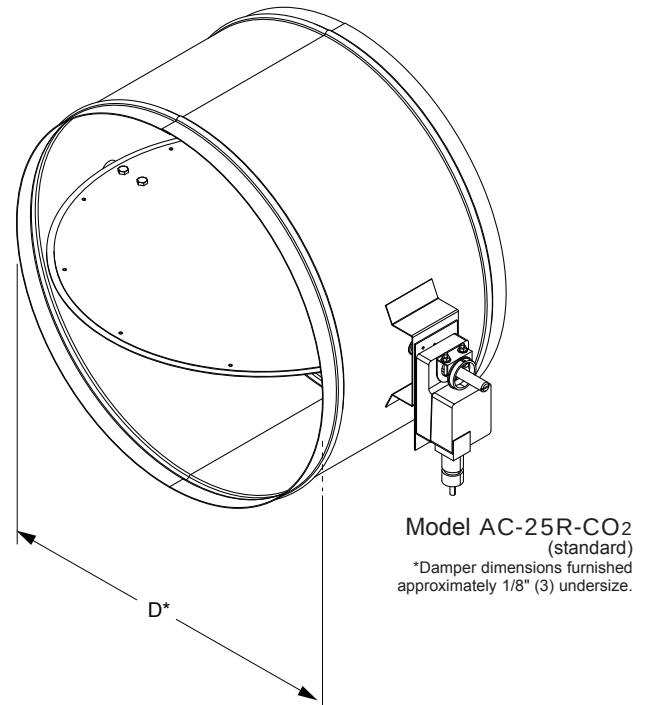
- ☐ Actuator/Quadrant standoff bracket – accommodates up to 1" (25) thick insulated duct.
- ☐ Stainless steel Oilite bearings.
- ☐ Type-304 stainless steel construction.
- ☐ CO₂ Duct Sensor.

Ratings

Damper Diameter	Maximum System Pressure	Maximum System Velocity
6" (152)	10.0 in. wg. (2.5 kPa)	4000 fpm (20.4 m/s)
12" (305)	8.0 in. wg (2.0 kPa)	4000 fpm (20.4 m/s)
18" (457)	6.0 in. wg (1.5 kPa)	3500 fpm (17.8 m/s)
24" (610)	4.0 in. wg (1.0 kPa)	3000 fpm (15.3 m/s)

Maximum Leakage: 5.5 cfm/ft² @ 10 in. wg (0.028m³/s/ m² @ 2.5 kPa)
 5.0 cfm/ft² @ 8 in. wg (0.026m³/s/ m² @ 2.0 kPa)
 3.3 cfm/ft² @ 4 in. wg (0.017m³/s/ m² @ 1.0 kPa)
 1.5 cfm/ft² @ 1 in. wg (0.008m³/s/ m² @ 0.25 kPa)

Temperature: -25°F to 180°F (-32°C to +83°C)

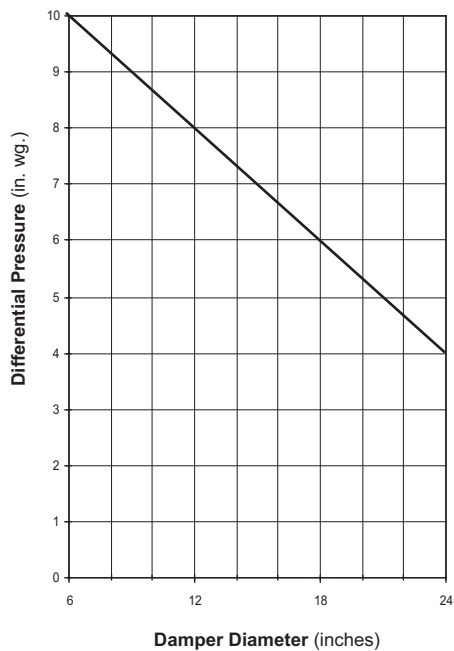


Side View
*Damper dimensions furnished approximately 1/8" (3) undersize.

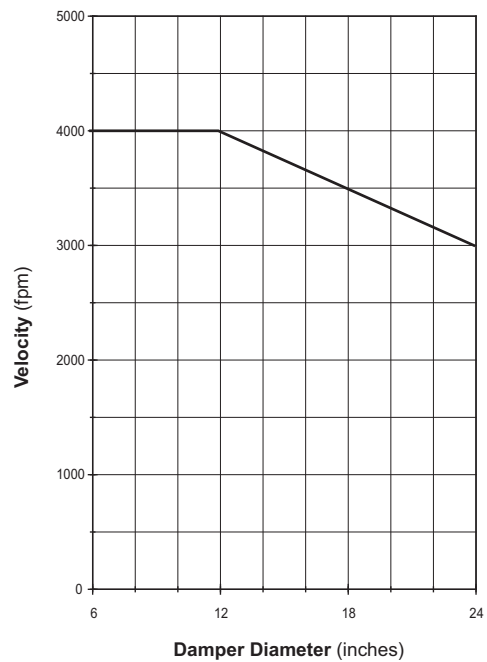
Sensor Options
Room Sensor (Left, Std.) and
Duct Sensor (Right, Opt.)

Airflow Performance Data

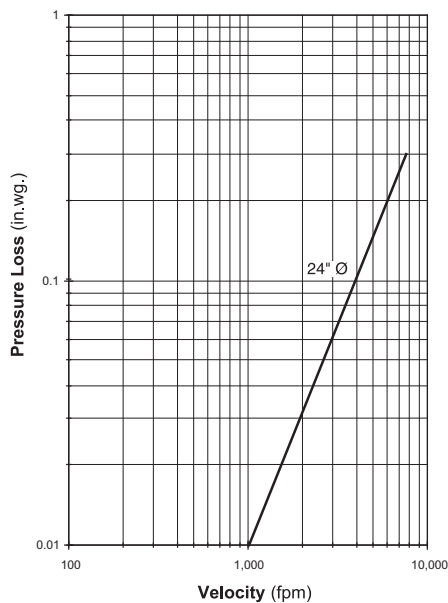
Pressure Limitations



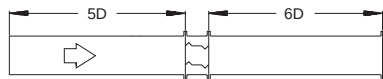
Velocity Limitations



Pressure Loss vs. Velocity



Pressure drop testing was performed in accordance with AMCA Standard 500-D. 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.



Ducted Inlet and Outlet

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

Control Dampers AC25RCO₂(2/2) May 2022