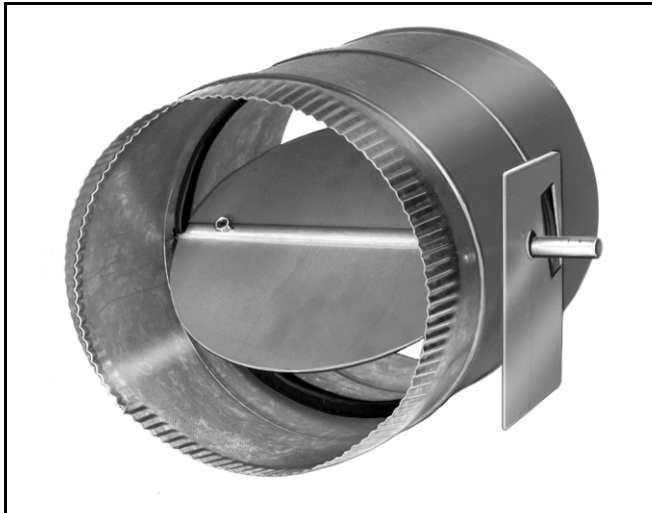


D690 Round Damper

LOW-LEAKAGE, SINGLE-BLADE

PRODUCT DATA



APPLICATION

The D690 Round Damper is used in conventional air handling systems to control airflow in a round duct. The damper is specifically designed to mount to the Honeywell actuators.

FEATURES

- Neoprene and silicone seal for tight closing and low leakage.
- Oilite bearings for long life.
- 90-degree damper travel for a variety of applications.
- Designed to mount to a variety of Honeywell actuators for an economical package.

SPECIFICATIONS

Models: Order D690 Damper model according to diameter. See Table 1.

Dimensions: See Fig. 1.

Construction:

Frame: Sleeve-type, spiral duct, crimped on downstream side.
6 to 10 in. (152 to 254 mm) diameter: 24 gage galvanized steel.

12 to 16 in. (305 to 406 mm) diameter: 22 gage galvanized steel.

Sleeve length: Diameter plus 1 in. (25 mm), minimum length 12 in. (305 mm).

Blade: 16 gage galvanized steel.

Shaft: 1/2 in. (13 mm) diameter, zinc-coated steel.

Extends 3.875 in. (153mm) beyond actuator mounting plate.

Bearings: Flanged bronze oilite, pressed into frame.

Seals: Closed-cell neoprene on frame with silicone rubber bead.

Maximum Approach Velocity:

2500 ft/min (17.8 m/s), max. static pressure 4 in. wc.

Damper Travel: 90 degrees.

Finish: Mill galvanized.

Pressure Drop:

Max. at full open: 0.035 in. wc at 1000 ft/min (5 m/s).

Leakage: 12.5 cfm per sq ft of Damper face at 1 in. wc. Refer to Table 2 for leakage at pressures other than 1 in. wc.

Torque:

Accommodates actuators of up to 44 lb-in. (5 Nm) of torque.

Mounting Plate:

8.5 in. x 9 in. (width x length).

Damper Opening:

Rotate clockwise (cw) to open.

Actuator Mounting:

Attached plate for mounting Honeywell ML6161, ML6171, MN6105, MN7505, Zelix model series, Spyder MicroVAV Actuator.

Temperature Range: 32°F to 130°F (0°C to 54°C).

Shipping Weight: See Table 1.

Accessories:

4074EVK Short Shaft Adapter Kit for use when damper shaft length is less than 1-3/8 in. (35 mm).



Table 1. D690 Diameters, Lengths and Shipping Weights.

Diameter in in. (mm)	Length in in. (mm)	Shipping Weight in lb (kg)
6 (152)	12 (305)	3 (1.4)
8 (203)	12 (305)	4 (1.8)
10 (254)	12 (305)	5 (2.3)
12 (305)	13 (330)	6 (2.7)
14 (356)	15 (381)	8 (3.6)
16 (406)	17 (432)	10 (4.5)

Table 2. D690 Leakage Multipliers.

Static Pressure in in. wc	cfm
1	12.5
2	17.625
3	21.625
4	25

EXAMPLE:

Leakage at 4 in. wc(2.00×12.5) = 25.0 cfm per sq ft

NOTE: The actuator can accommodate the optional field-installed auxiliary switches.

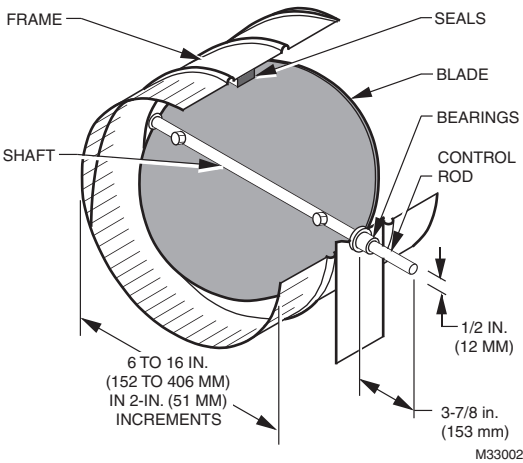


Fig. 1. D690 Dimensions.

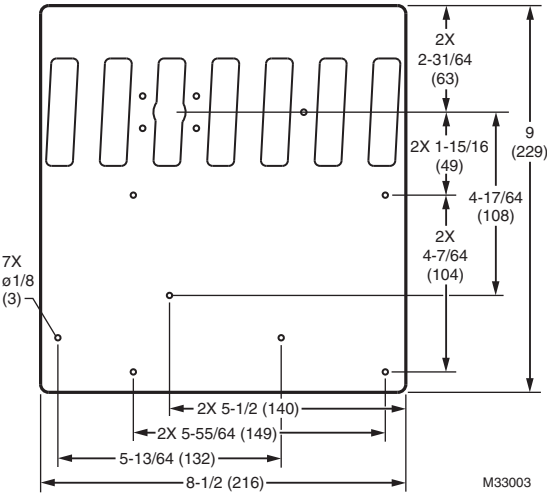


Fig. 2. D690 Actuator Mounting Plate Dimensions, in inches (mm).

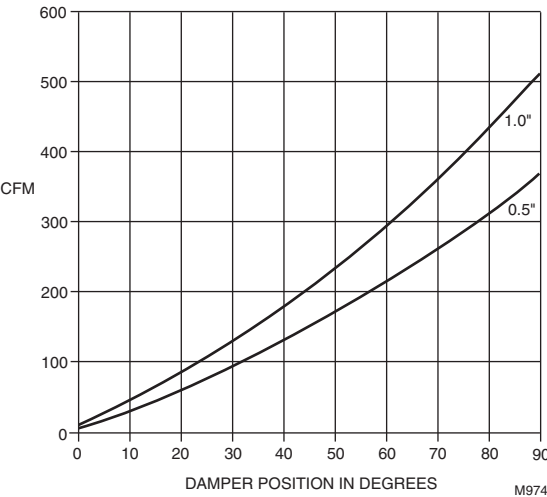


Fig. 3. 6-inch D690 flowrate vs. damper position.

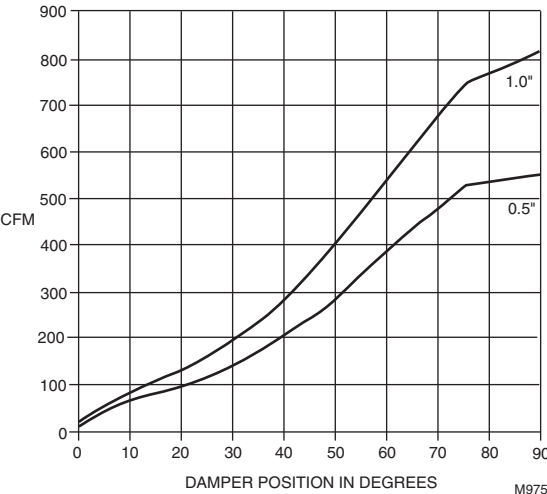


Fig. 4. 8-inch D690 flowrate vs. damper position.

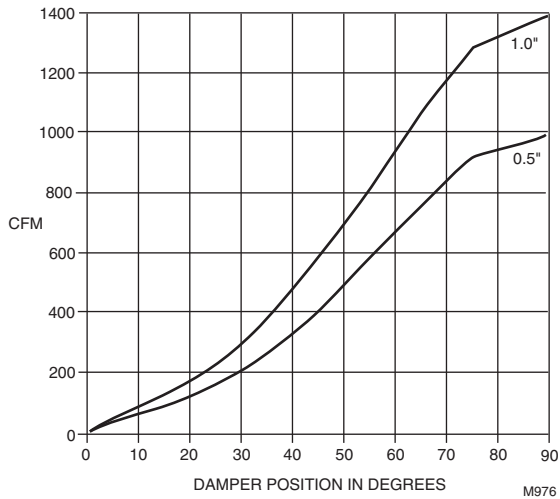


Fig. 5. 10-inch D690 flowrate vs. damper position, in inches (mm).

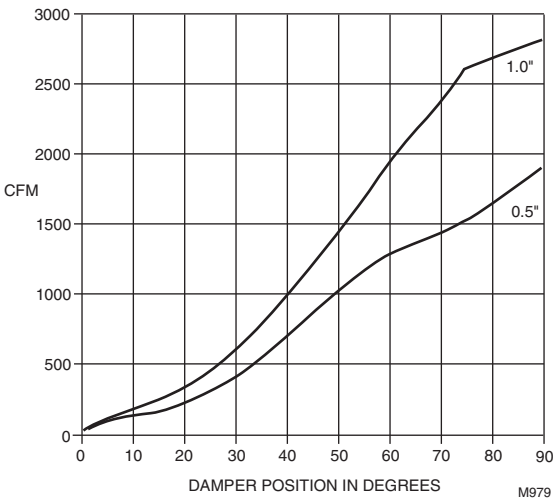


Fig. 8. 16-inch D690 flowrate vs. damper position.

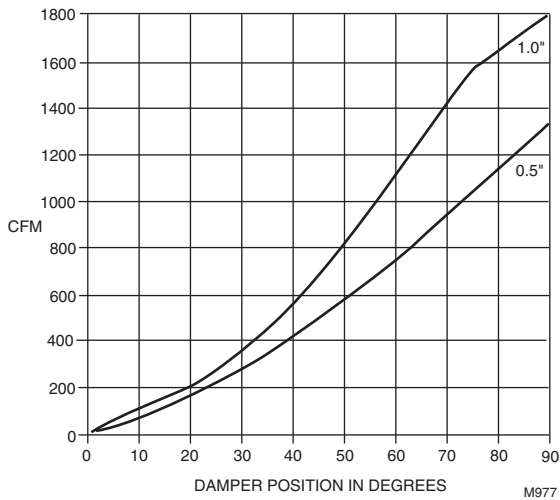


Fig. 6. 12-inch D690 flowrate vs. damper position.

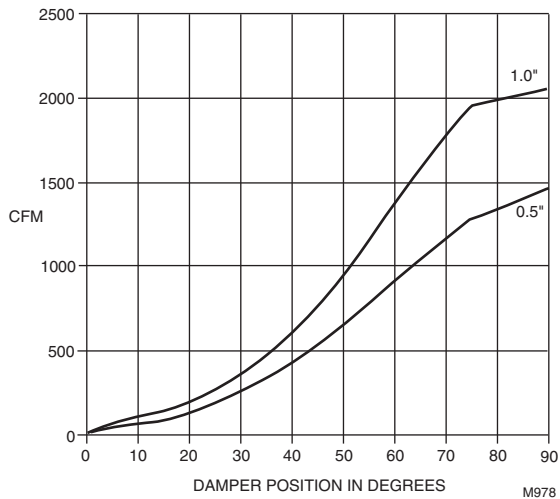


Fig. 7. 14-inch D690 flowrate vs. damper position.

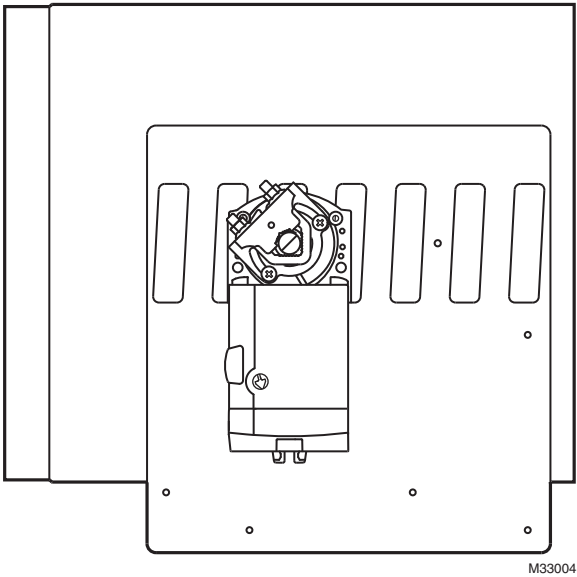


Fig. 9. D690 w MN6105.

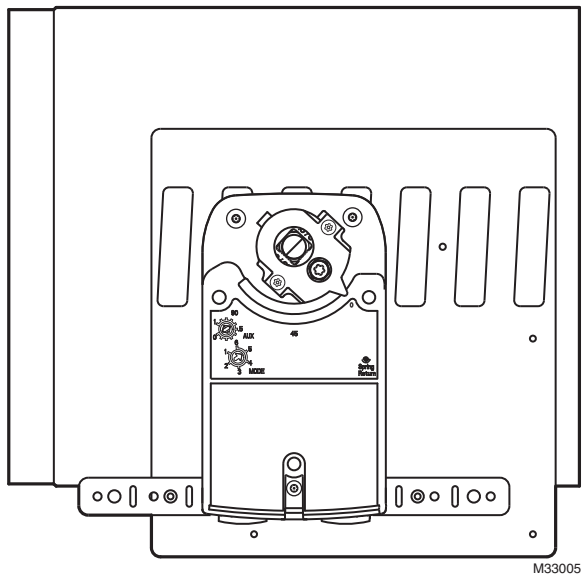


Fig. 10. D690 w MS7505.

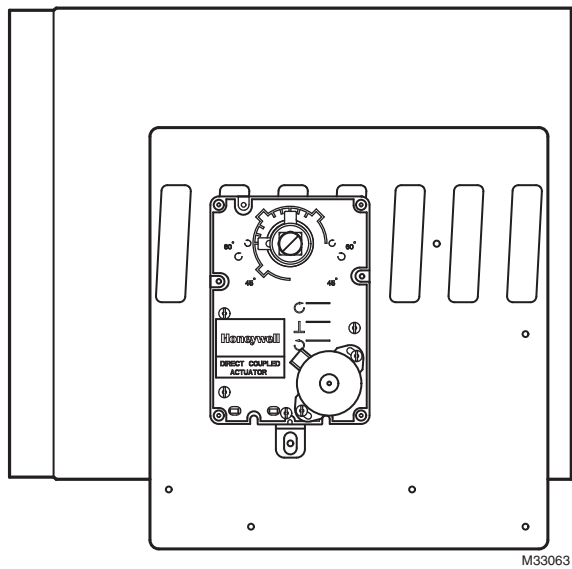


Fig. 12. D690 w ML6161

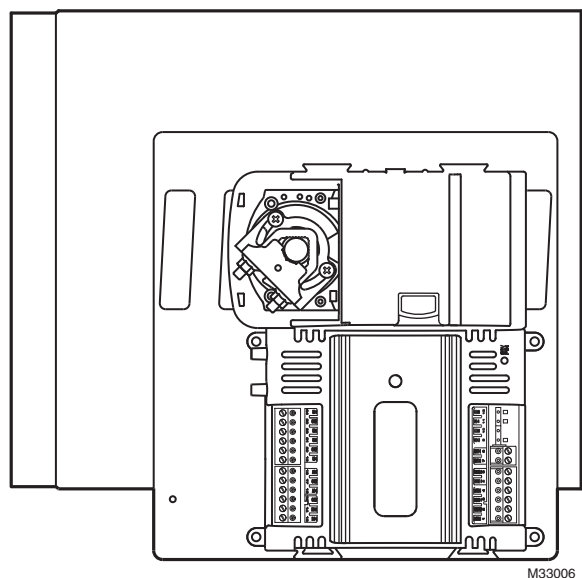


Fig. 11. D690 w Spyder Micro VAV

Automation and Control Solutions

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