Model ES-10

Extruded Backdraft Damper

Horizontal Mount - Vertical Airflow Up

Application

The ES-10 series is a horizontally mounted backdraft damper that is designed to allow vertical airflow up and prevent reverse airflow. The damper is opened by air pressure differential and closed by gravity. Standard models include adjustable internal counterbalance to assist opening.

Ratings

Pressure: Dependent on damper width (see page 3)
Velocity: 2000 fpm (10.2 m/s)
Temperature: 180°F (82°C)

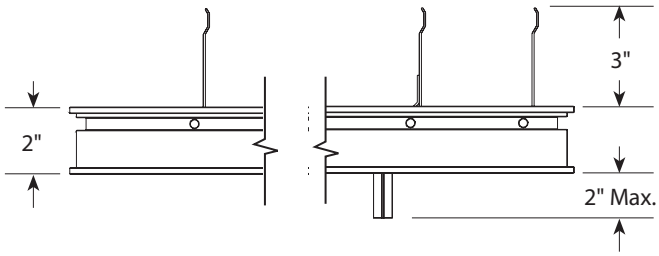
	Standard
Frame Material	6063T5 Extruded Aluminum
Frame Thickness	.063 in. (1.6mm)
Blade Material	6063T5 Extruded Aluminum
Blade Thickness	.050 in. (1.3mm)
Axle Linkage	⅛ in. (3mm) aluminum
Bearings	Synthetic polycarbonate sleeve type
Blade Seals	Vinyl

W x H	Minimum Size	Maximum Single Section Size
Inches	6 x 8 (with weights)	40 x 52
mm	152 x 203 (with weights)	1016 x 1321

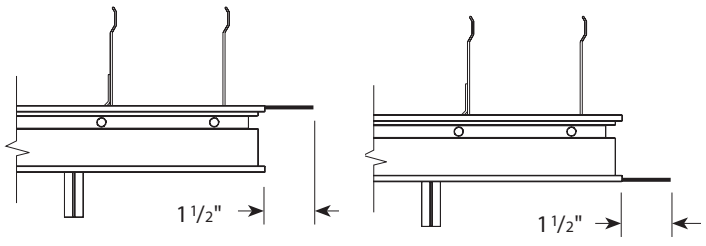
Options and Accessories

- 1½ in. (38mm) flange on discharge: ES-11
- 1½ in. (38mm) flange on intake: ES-12

*W & H dimensions furnished approximately ¼ in. (6mm) undersize.



ES-10
No Flange



ES-11
Flange on Discharge

ES-12
Flange on Intake

Test Information

- Air leakage is based on operation between 32°F and 120°F (0°C and 48°C)
- Tests for air leakage were conducted in accordance with ANSI/AMCA Standard 500-D Figure 5.5, in the backdraft direction
- Air performance testing conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.7B

Air Leakage

Model ES-10 series dampers with a width and height 24 in. (610mm) or greater leak a maximum of:

- 7.6 cfm/ft^2 or less at 1.0 inches w.g.

Model ES-10 series dampers with a width or height less than 24 in. (610mm) leak a maximum of:

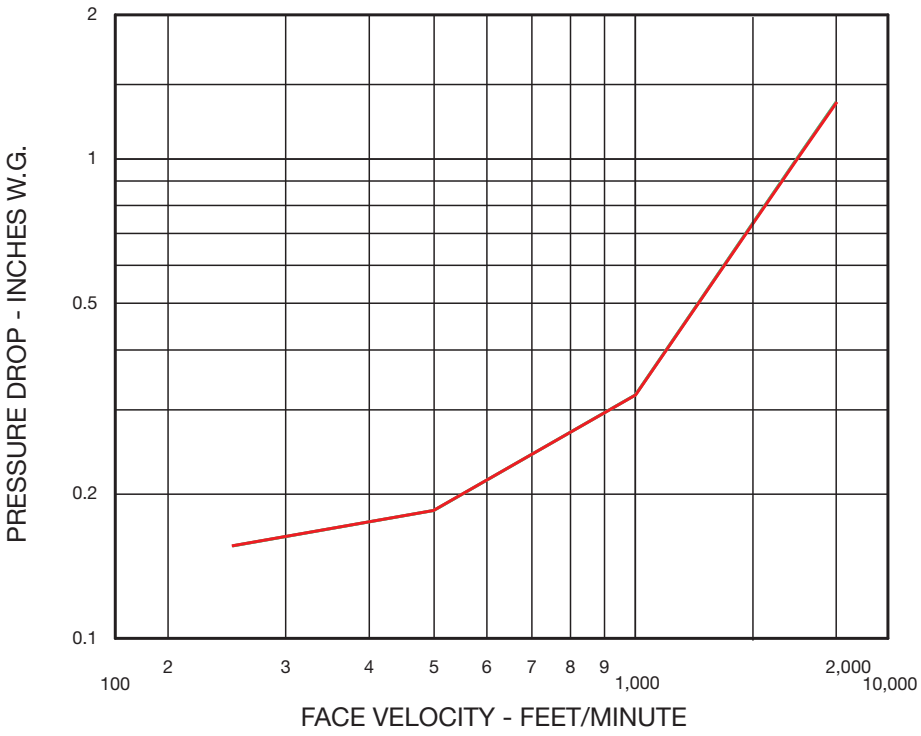
- 28.9 cfm/ft^2 or less at 1.0 inches w.g.

*Note: This model complies with the International Energy Conservation Code (IECC) and ASHRAE 90.1 leakage requirements for non-motorized dampers.

Air Performance

Performance data results from testing a 24 in. x 24 in. damper in accordance with AMCA Standard 500-D using Figure 5.7B. All data has been corrected to represent standard air at 0.075 lb/ft^3 (1.201 kg/m^3).

VELOCITY VS. PRESSURE DROP



Maximum Back Pressure

Damper Width	ΔP in. wg (kPa)
12 in. (305mm)	6 (1.5)
24 in. (610mm)	5 (1.25)
36 in. (914mm)	4 (1)

Specifications

Backdraft dampers meeting the following specifications shall be furnished and installed where shown on plans and/or as described in schedules.

Dampers shall consist of: 6063T5 extruded aluminum channel frame (0.063 in. [1.6mm] thick) with 2 in. (51mm) depth; blades from 0.050 in. (1.3mm) 6063T5 extruded aluminum; synthetic polycarbonate axle bearings; damper shall be equipped with extruded vinyl blade seals; and internal ⅛ in. (3mm) aluminum linkage.

Damper manufacturer's printed application and performance data including pressure, velocity and temperature limitations shall be submitted for approval showing damper suitable for pressures to 6 in. wg (1.5 kPa), velocities to 2000 fpm (10.2m/s) and temperatures to 180°F (82ºC). Testing and ratings to be in accordance with AMCA Standard 500-D.

Basis of design is model ES-10.