

**Backdraft Damper ▲ 4" Deep ▲ Single Thickness Blades ▲ Galvanized Steel ▲ -35°F to 180°F Temperature**

**STANDARD MATERIALS AND CONSTRUCTION**

- FRAME:** 16 GA. galvanized steel, hat-shaped channel frame.
- BLADES:** 16 GA. galvanized steel, approximately 8" on centers.
- SHAFTS:** ½" dia. plated steel stub 6" long, mono-bolted to blade.
- BLADE SEALS:** ¾" thick polyurethane foam.
- BEARINGS:** Oil impregnated sintered bronze, flanged sleeve.
- LINKAGE:** ¼" thick plated steel bracket with ½" dia. steel pivot in a celcon sleeve bearing. Linkage rod is 5/16" dia. aluminum, locked to pivot with ¼ - 20 UNC plated steel set screw.
  
- FINISH:** Mill.
- TEMP. LIMITS:** -30°F to +180°F

**OPTIONS**

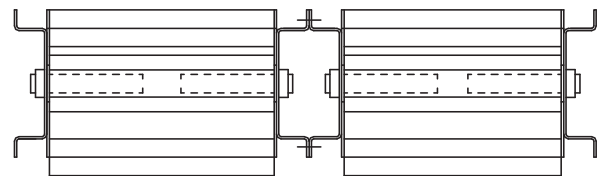
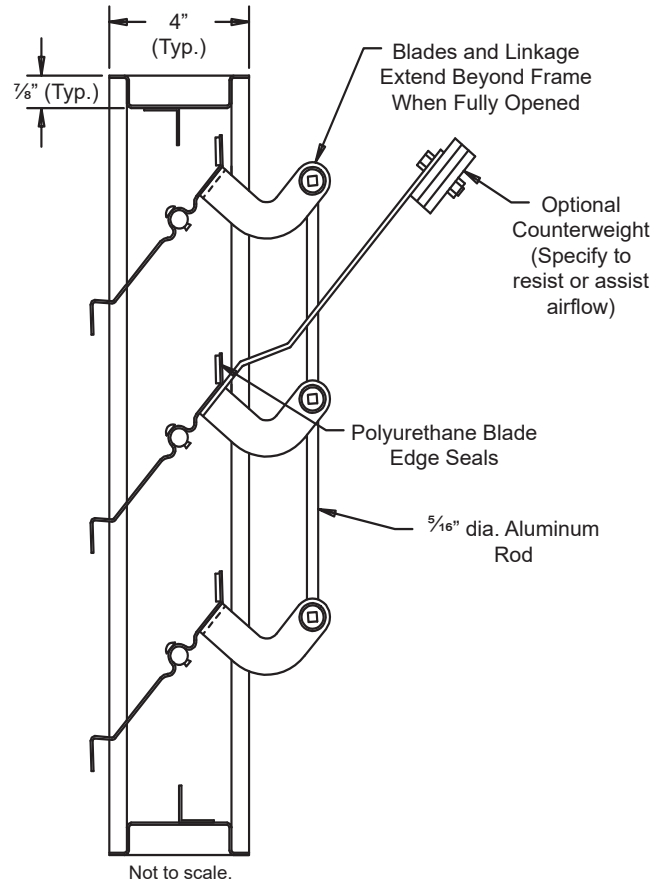
- Materials: Stainless steel and galvanized steel of other gauges (up to 10 GA.)
- Bearings: nylon, ball, sintered, or stainless steel.
- Jamb Seals: polyurethane or neoprene.
- Aluminum blades and shafts.
- Neoprene blade edge seals.
- Shafts up to 1" diameter.
- Stainless steel shafts or linkage.
- Adjustable counterweights to assist or resist opening.
- Adjustable counterweights for external application on extended shaft.

**NOTES**

1. ¼" nominal deduction will be made to the opening size given.
2. When a non-symmetrical frame cross section is specified (example: flange frame) specify the flange/airflow orientation - horizontal, vertical-up, or vertical-down.
3. Approximate damper weight is 6½ lbs./sq.ft.

**DAMPER SIZES**

Min Panel	Max Single Panel
8"W x 11"H	48"W x 72"H



Mullion Detail (typ)

Top View

Item #	Qty	Width	Height	Width	Height	Mullion	Counter Balance	Air Flow (Direction)			Union Made	
		Opening Size		Damper Size								
<b>Arch. / Eng.:</b>						<b>EDR:</b>	<b>ECN:</b>	<b>Job:</b>				
<b>Contractor:</b>												
<b>Project:</b>						<b>Date:</b>	<b>DWN:</b>	<b>DWG:</b>				

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**PRESSURE DROP DATA**

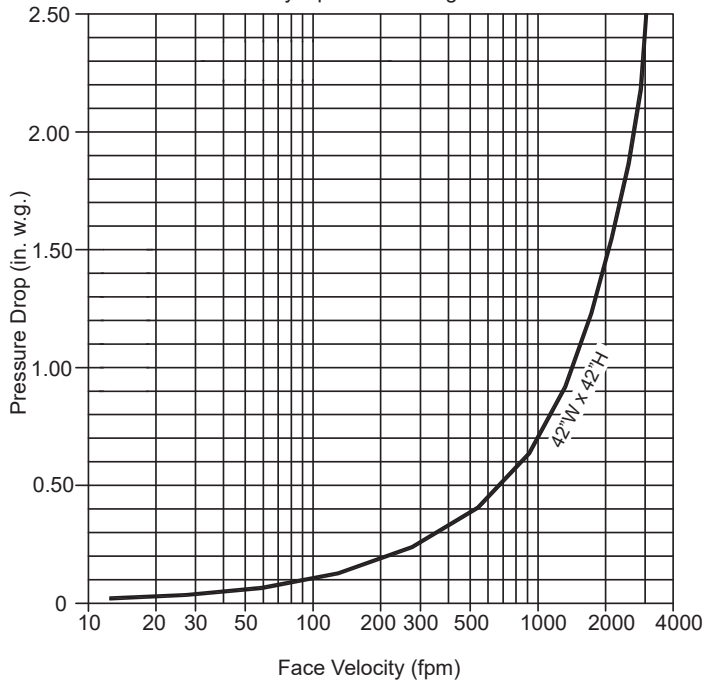
Typical performance for model BS66 backdraft damper. Size tested 42"W x 42"H, furnished with counterweight to assist opening.

Face Velocity vs. Pressure Drop

Without Ductwork

Damper installed per AMCA 500 Fig. 5.4 (Face Mounted to a Plenum). Pressure is corrected to .075 lb./cu.ft air density.

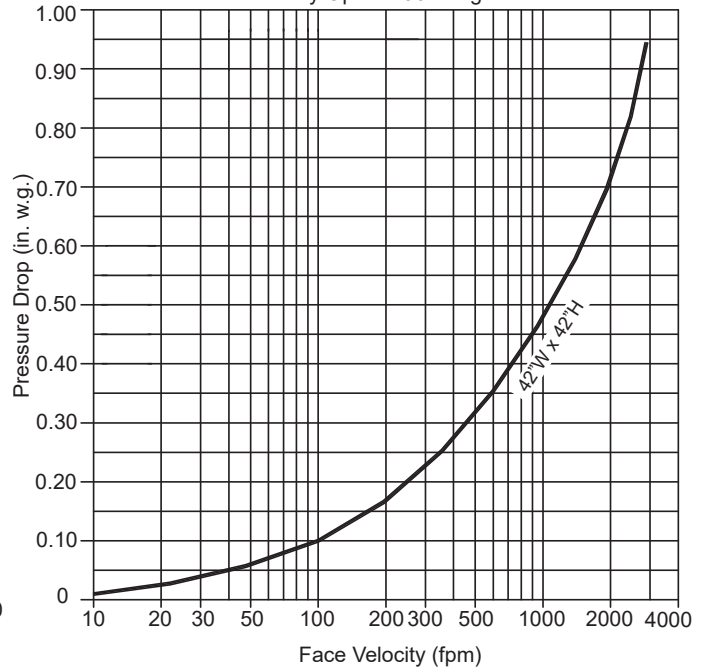
Operational Pressures  
Start to Open - .01 in.wg  
Fully Open - 2.5 in.wg



With Ductwork

Damper installed per AMCA 500 Fig. 5.3 (Ductwork installed upstream and downstream of damper). Pressure is corrected to .075 lb./cu.ft. air density.

Operational Pressures  
Start to Open - .01 in.wg  
Fully Open - .96 in.wg



**AIR LEAKAGE DATA**

Air leakage quantities shown in the chart are results of tests per AMCA Standard 500 and shown at 1 in. w.g. differential pressure and corrected to .075 lb./cu.ft. air density.

Total CFM Air Leakage at 1 in. w.g. Static Pressure Differential Through Closed Damper.

		Width (in.)						
		12"	18"	24"	30"	36"	42"	48"
Height (in.)	12"	8.3	12.5	16.6	20.8	24.9	29.0	33.2
	24"	16.6	24.9	33.2	41.5	49.8	58.1	66.4
	36"	24.9	37.4	49.8	62.3	74.7	87.2	99.6
	48"	33.2	49.8	66.4	83.0	99.6	116.2	132.8
	60"	41.5	62.3	83.0	103.8	124.5	145.3	166.0
	72"	49.8	74.7	99.6	124.5	149.4	174.3	199.2

Use the multiplier correction chart below for determining leakage values greater than 1 in. w.g. to a maximum 4 in. w.g.

Static Pressure (in.)	2"	3"	4"
Multiple Correction Factor	1.22	1.63	1.99

Air leakage ratings are based on AMCA Standard 500 using test set up Fig. 5.4 with damper in the closed position without the aid of a counterweight or other mechanical means to provide closing torque, for a size 42"W x 42"H damper with blade and jamb seals.