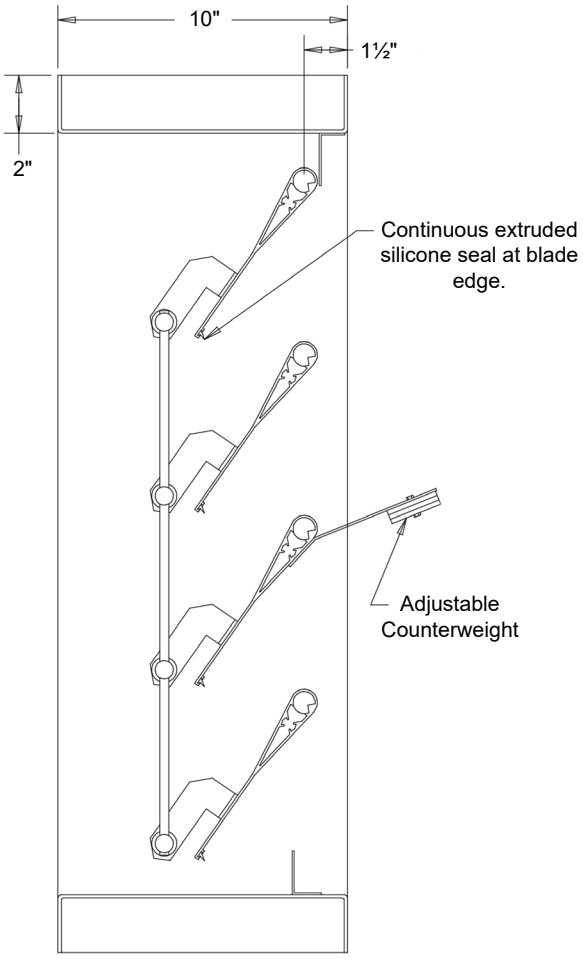
MODEL BID9

Backdraft Damper ▲ 10" Deep ▲ Extruded Aluminum "Tear Drop" Blades ▲ Steel Channel Frame ▲ 190° Max Temperature

STANDARD MATERIALS AND CONSTRUCTION

FRAME: 2" x 10" x 2", 12 GA. galvanized steel formed channel.
BLADES: .080" thick (nominal) extruded aluminum, 6063-T52/T6 alloy, teardrop shape. Groove inserts at blade edges for extruded silicone rubber seals. Blades are approximately 6" on centers.
AXLES: ¾" dia. plated steel positively locked to blade, placed off-center in blade.
SEALS: Extruded silicone rubber off-set leg at blade edges. None at jambs.
LINKAGE: ⅛" thick plated steel bracket with ½" dia. plated steel pivot riding in a celcon sleeve bearing. Linkage rod is 5⁄16" dia. locked to pivot with a ¼ - 20 UNC plated steel set screw.
BEARINGS: Ball bearings pressed into frame.
FINISH: Mill.
TEMP. LIMITS: -30°F to 190°F.
COUNTERWEIGHTS: Adjustable for a full range of opening pressures.



OPTIONS

Finishes - Enamels, epoxies, etc.
Flange Frame

NOTES

1. Nominal deductions will be made to the opening size given.
2. For counterweights, please specify airflow direction (horizontal, vertical up, or vertical down) and whether to the counterweight should assist or resist the damper opening.
3. Approximate shipping weight is 10.0 lbs./sq.ft.

DAMPER SIZES

Min Panel	Max Single Panel
8"W x 8"H I.D.	60"W x 96"H I.D.

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

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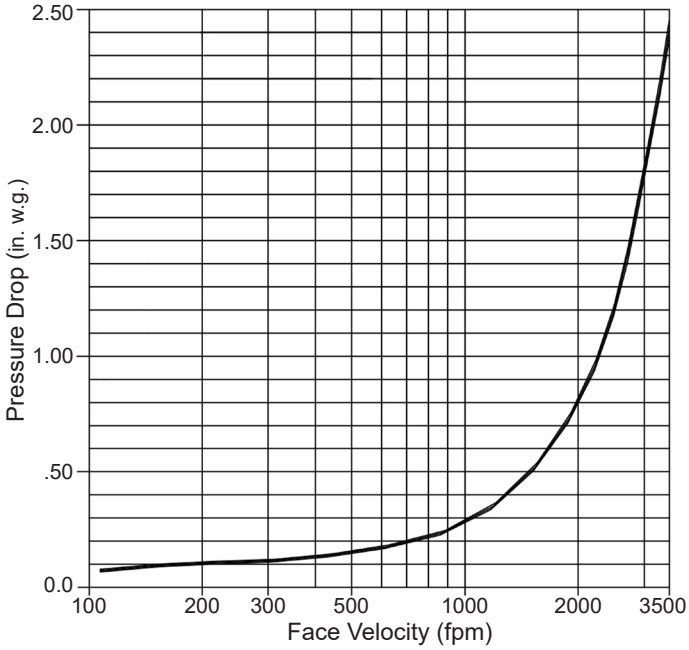
PRESSURE DROP DATA

Velocity vs. Pressure Drop

Damper installed per AMCA Standard 500, Figure 5.4.
(Face mounted to a plenum)

Pressure is correct to .075 lb./cu.ft. air density.

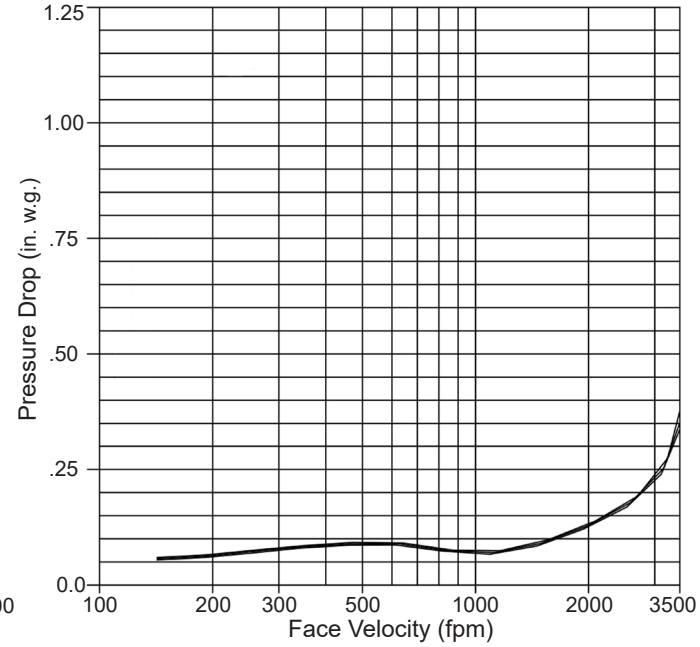
Operational Pressures
Start to Open .02 in. w.g.
Fully Open 1.50 in. w.g.



Damper installed per AMCA Standard 500, Figure 5.3.
(Ductwork installed upstream and downstream of damper.)

Pressure is correct to .075 lb./cu.ft. air density.

Operational Pressures
Start to Open .03 in. w.g.
Fully Open .25 in. w.g.



Typical performance for Model BID9 backdraft damper size tested 42"W x 42"H furnished with counterweight to assist opening.

AIR LEAKAGE DATA

Air leakage quantities shown in the chart are results of tests per AMCA Standard 500 and are 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. Differential Through Closed Damper

Height (in.) \ Width (in.)	12"	18"	24"	30"	36"	42"	48"	54"	60"
12"	8	12	16	20	24	28	32	36	40
24"	16	24	32	40	48	56	64	72	80
36"	24	36	48	60	72	84	96	108	120
48"	32	48	64	80	96	112	128	144	160
60"	40	60	80	100	120	140	160	180	200
72"	48	72	96	120	144	168	192	216	240
84"	56	84	112	140	168	196	224	252	280
96"	64	96	128	160	192	224	256	288	320

Use the multiplier correction chart below for determining leakage values greater than 1 in. w.g. to a maximum 8 in. w.g.

Static Pressure	2	3	4	5*	6	7	8
Multiplier Correction Factor	1.5	1.9	2.3	2.5	2.9	3.0	3.1

* Maximum panel size limit is 60" x 96". For static pressure limits greater than 5 in. w.g. to 8 in. w.g. differential, maximum panel size limit is 48" x 96".

Air leakage ratings are based on AMCA Standard 500 using test set up Figure 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.

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