November 2017 MODEL BAL Page 1 Backdraft Damper • 2" Deep • Single Thickness Blades • Light Duty • Extruded Aluminum Standard Construction and Materials 2" **FRAME:** .080" thk. (nominal) extruded aluminum channel, 5%" x 2" x 5%". (Typ.) BLADE: .032" thk. (nominal) aluminum, formed over a 3/16" dia. steel rod. 2³/₄" SEALS: Polyurethane foam at blade edges, none at jambs. BEARINGS: Bronze Oilite. (Typ.) LINKAGE: Aluminum chevron bracket with aluminum linkage bar. FINISH: Mill. Options Flange Frame Formed Aluminum No Blade to Blade Linkage Blades .032" Thick Bird or Insect Screen Adjustable Counterbalance 0 0 (Specify to Assist or Resist Opening, Linkage Must be Used) Notes Polyurethane Foam on Blade 1. Nominal deductions will be made to the opening size given. Edges. 1/8" Thick for Quiet 2. Specify air flow as horizontal, vertical up, or vertical down. Operation Damper Sizes ³/16" dia. Steel axel shaft in Min Panel Max Single Panel Bronze Oilite bearings 0 8"W x 8"H 48"W x 72"H 12-GA Aluminum Brackets are Riveted to the Blade. A .030" Aluminum Bar (U-Formed) Interconnects the Blades (Add "Linkage" to Number). Extruded Aluminum Frame .080" Thick Fully Open Damper Profile Optional: Adjustable Not to scale. Counterbalance with Variable Counterweights for Calibration. Blade Linkage Required. 45° Partially Open 1 %16' Frame Option 2 Frame Option 1 Flange Frame **Channel Frame** 2" or 4" Deep, .080" Thick 4" or 6" Deep, .080" Thick **Clearance Dimensions** Width Height Width Height Air Flow Item # Qty Mullion **Counter Balance** (Direction) Damper Size **Opening Size** Union Made Arch. / Eng.: EDR: ECN: Job: Contractor: DWN: DWG: Project: Date:

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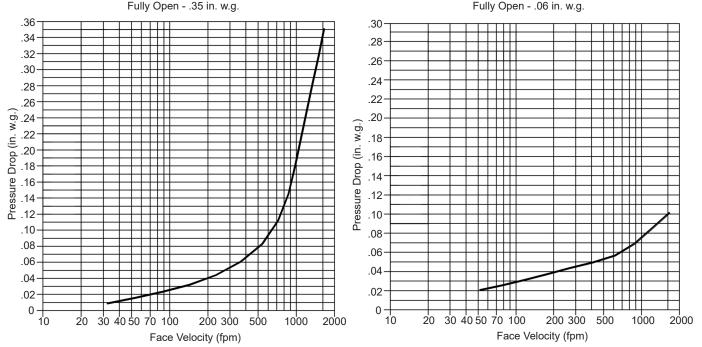
Backdraft Damper • 2" Deep • Single Thickness Blades • Light Duty • Extruded Aluminum

Pressure Drop Data

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

<u>Without Ductwork</u> Dampers installed per AMCA 500 Fig. 5.4 (Face Mounted to a Plenum) Pressure is Corrected to .075 lb./cu.ft. Air Density Operational Pressure Start to Open - .01 in. w.g. Fully Open - .35 in. w.g.

<u>With Ductwork</u> Dampers 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 Pressure Start to Open - .01 in. w.g.



Air Leakage Data

Air leakage quantities shown in the chart are results of tests per AMCA standard 500 and are shown at .10 in. w.g. differential pressure and corrected to .075 lbs/cu.ft. air density.

Total CFM Air Leakage at .10" Static Pressure Differential Through Closed Damper									
Width (in.)									

		12"	18"	24"	30"	36"	42"	48"				
	12"	6.6	9.9	13.2	16.5	19.8	23.1	26.4				
Height (in.)	24"	13.2	19.8	26.4	33.0	39.6	46.2	52.8				
	36"	19.8	29.7	39.6	49.5	59.4	69.3	79.2				
	48"	26.4	39.6	52.8	66.0	79.2	92.4	105.6				
	60"	33.0	49.5	66.0	82.5	99.0	115.5	132.0				
	72"	39.6	59.4	79.2	99.0	118.8	138.6	158.4				

For determining leakage values greater than .10 in. w.g. to a maximum 2 in. w.g. use the multiplier correction chart below.

Static Pressure	.2	.3	.4	.5	1.0	1.5	2.0
Multiplier Correction Factor	1.07	1.12	1.19	1.24	1.66	1.92	2.10

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.

