RUSKIN

3900 Dr. Greaves Rd. • Kansas City, MO 64030 • (816) 761-7476 • FAX (816) 765-8955

BD2A2 BACKDRAFT DAMPER

Extruded Aluminum

APPLICATION

The BD2A2 backdraft damper is designed for light to medium duty commercial HVAC applications. Vertical mount allows horizontal airflow relief in one direction, but prevents reverse airflow in opposite direction. Air pressure differential opens damper, while gravity closes it. The BD2A2 conforms with the International Energy Conservation Code (IECC), and ASHRAE 90.1 leakage requirements for nonmotorized dampers.

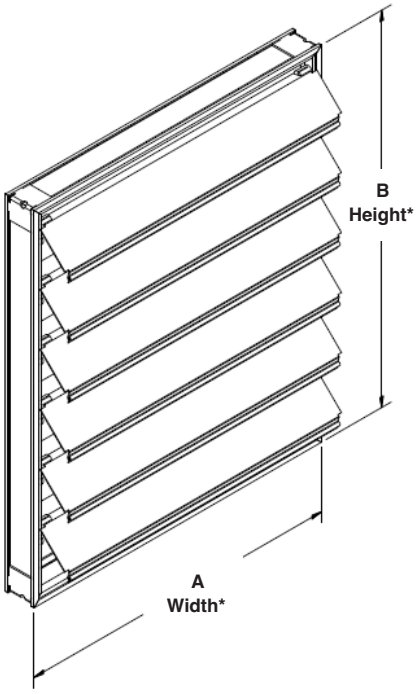
Feature	Standard Construction
Frame	6063T6 extruded aluminum, .090" (2.3) THK, mitered corners
Blades	6063T6 extruded aluminum, .050" (1.2) THK
Blade seals	Ruskiprene™
Bearings	Synthetic (Nylon)
Linkage	1/2" (13) x 1/8" (3) THK. aluminum (concealed)
Finish	Mill

Sizing	Dimensions (W x H)*
Min. size**	12"x 8" (305 x 203)
Max. single section	40"x 48" (1016 x 1219)
Max. assembly	Unlimited

Performance/ Weight	
Max. Velocity	1500 fpm (7.6 m/s)
Temperature limits	-40°F to +200°F (-40°C to 93°C)
Weight	4 lbs. (1.8kg) per ft²

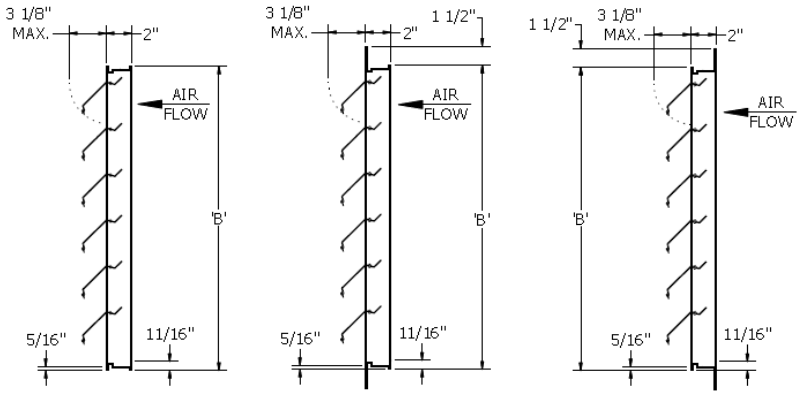
Options/ Accessories
Front or Rear Flange
Insect or Birdscreen
Epoxy, Enamel finish
Anodized Finish
Electric Actuator

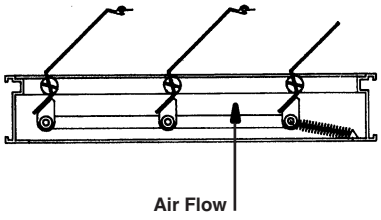
*Dimensions in parentheses ( ) indicate millimeters.
** Smaller sizes are not included in AMCA rating.



*W & H dimensions are supplied with 1/4" (6) deduct standard
A = width B - height

BD2A2 FRAME VARIATIONS





HORIZONTAL MOUNT
(Upward air flow only)

PERFORMANCE DATA

Ruskin Company certifies model BD2A2 is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program (CRP). The AMCA CRP Seal applies to Air Leakage and Air Performance Ratings.

Test Information

- Air Leakage is based on operation between 32ºF and 120ºF (0ºC and 48ºC)
- Tests for air leakage were conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.5, in the intake direction
- Air performance testing conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.5

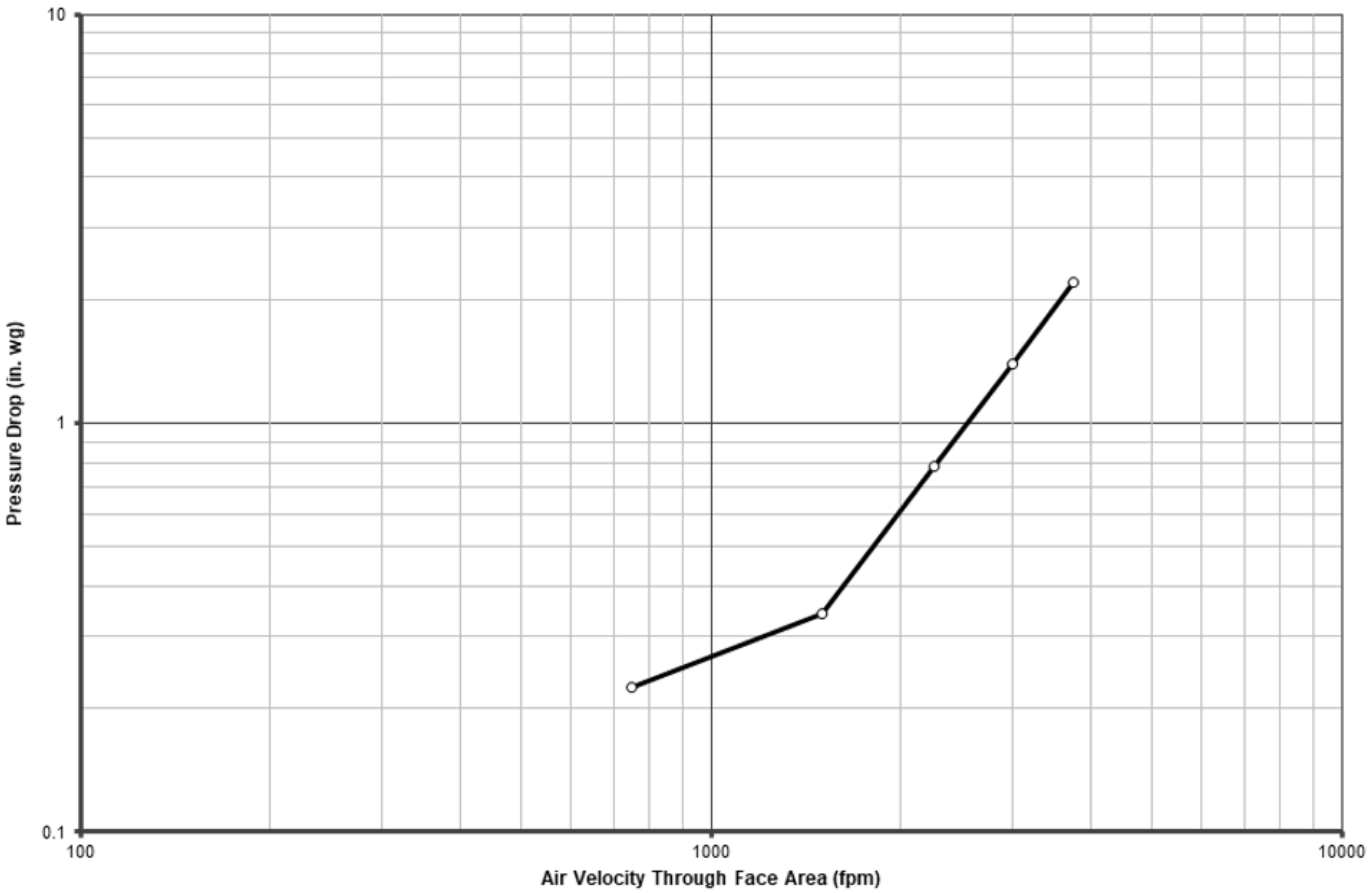
Air Leakage

- Model BD2A2 with a width and height 24" (610) or greater leak a maximum of: **- 7.7 cfm/ft2 or less at 1" w.g.**
- Model BD2A2 with a width or height less than 24" (610) leak a maximum of: **- 31.4 cfm/ft2 or less at 1" w.g.**

Air Performance

Performance data results from testing a 24" x 24" damper in accordance with AMCA Standard 500-D using Figure 5.5. All data has been corrected to represent standard air at 0.075 lb/ft2 (1.201 kg/m3).

Pressure Drop
24" x 24" (610 x 610) Damper
Velocity vs Pressure Drop



PERFORMANCE DATA

Damper width	Max. Back Pressure in. wg / (kPa)
40" (1016)	3" w.g. (.75)
36" (914)	4" w.g. (1.0)
24" (610)	5" w.g. (1.2)
12" (305)	6" w.g. (1.5)

SUGGESTED SPECIFICATION

Furnish and install at locations on plans or in accordance with schedules backdraft dampers that meet the following minimum construction standards: Frame shall be .090" (2.3) 6063T6 ex - truded aluminum wall thickness with mitered corners. Blades shall be .050" (1.3) 6063T6 extruded aluminum with Ruskiprene edge seals.

Blade edge seals shall be mechanically locked into blade edge; adhesive type seals are unacceptable. Bearings shall be corrosion resistant synthetic and linkage shall be concealed in frame for low pressure drop and noise. Damper shall be, in all respects, equivalent to Ruskin model BD2A2.

INSTALLATION GUIDELINES

1. When used in fan discharge applications, damper should be located at least one-half the fan diameter away from the fan.
2. For proper operation, damper must be installed square and free from racking.
3. Bracing of multiple section assemblies: The BD2A2 is intended to be self supporting only in the largest single section size.

Multiple section damper assemblies may require bracing to support the weight of the assembly and to hold against system pressure. Ruskin recommends appropriate bracing to support the weight of the assembly and to hold against system pressure. Ruskin recommends appropriate bracing to support the damper horizontally at least once for every 8 feet of damper width. Vertical assemblies and higher system pressures may require more bracing.

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