

## BD6 BACKDRAFT DAMPER Extruded Aluminum

### APPLICATION

The BD6 backdraft damper is designed for medium to heavy 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 BD6 conforms with the International Energy Conservation Code (IECC), and ASHRAE 90.1 leakage requirements for non-motorized dampers.

Feature	Standard Construction
<b>Frame</b>	6063T6 extruded aluminum, .125" (3.2) THK, mitered corners
<b>Blades</b>	6063T6 extruded aluminum, .070" (1.8) THK
<b>Blade seals</b>	Ruskiprene™
<b>Bearings</b>	Synthetic (Nylon)
<b>Linkage</b>	1/2" (13) x 1/8" (3) THK. aluminum (exposed)
<b>Finish</b>	Mill

Sizing	Dimensions (W x H)*
<b>Min. size**</b>	12"x 8" (305 x 203)
<b>Max. single section</b>	48"x 52" (1219 x 1321)
<b>Max. assembly</b>	Unlimited

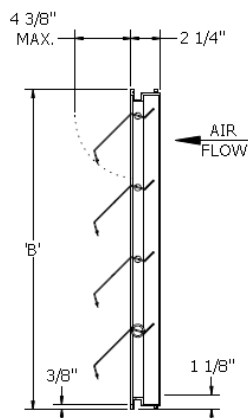
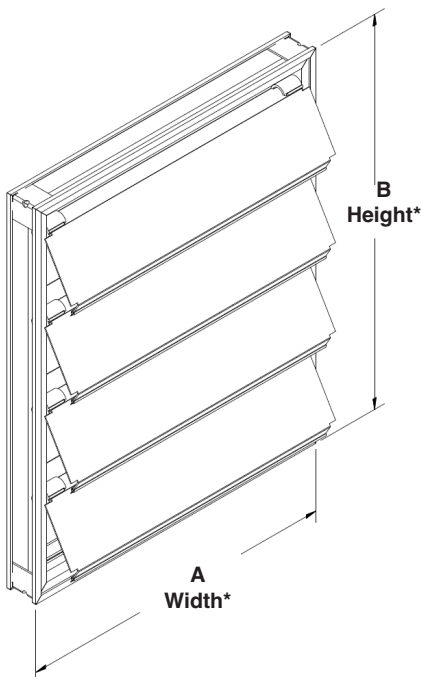
Performance/ Weight	
<b>Max. Velocity</b>	2500 fpm (12.7 m/s)
<b>Temperature limits</b>	-40°F to +200°F (-40°C to 93°C)
<b>Weight</b>	4 lbs. (1.8kg) per ft <sup>2</sup>

Options/ Accessories
Front or Rear Flange
Insect or Birdscreen
Epoxy, Enamel finish
Anodized Finish
Electric Actuator
SPC (Static pressure controller) see page 3

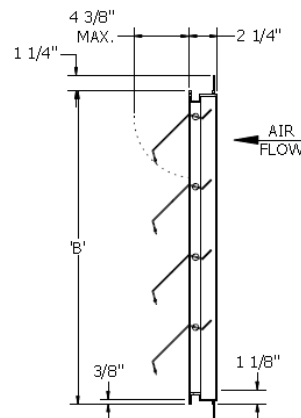


\*Dimensions in parentheses ( ) indicate millimeters.

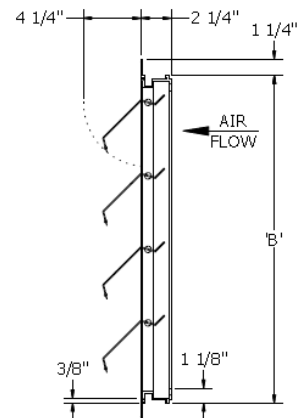
\*\* Sizes below minimum to 6" X 6" (152 X 152) not included in AMCA rating.



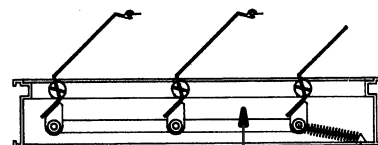
CHANNEL FRAME



REAR FRAME



FRONT FLANGE



HORIZONTAL MOUNT  
(Upward air flow only)

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

# PERFORMANCE DATA



Ruskin Thailand Co. Ltd. certifies model BD6 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 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 intake direction
- Air performance testing conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.5

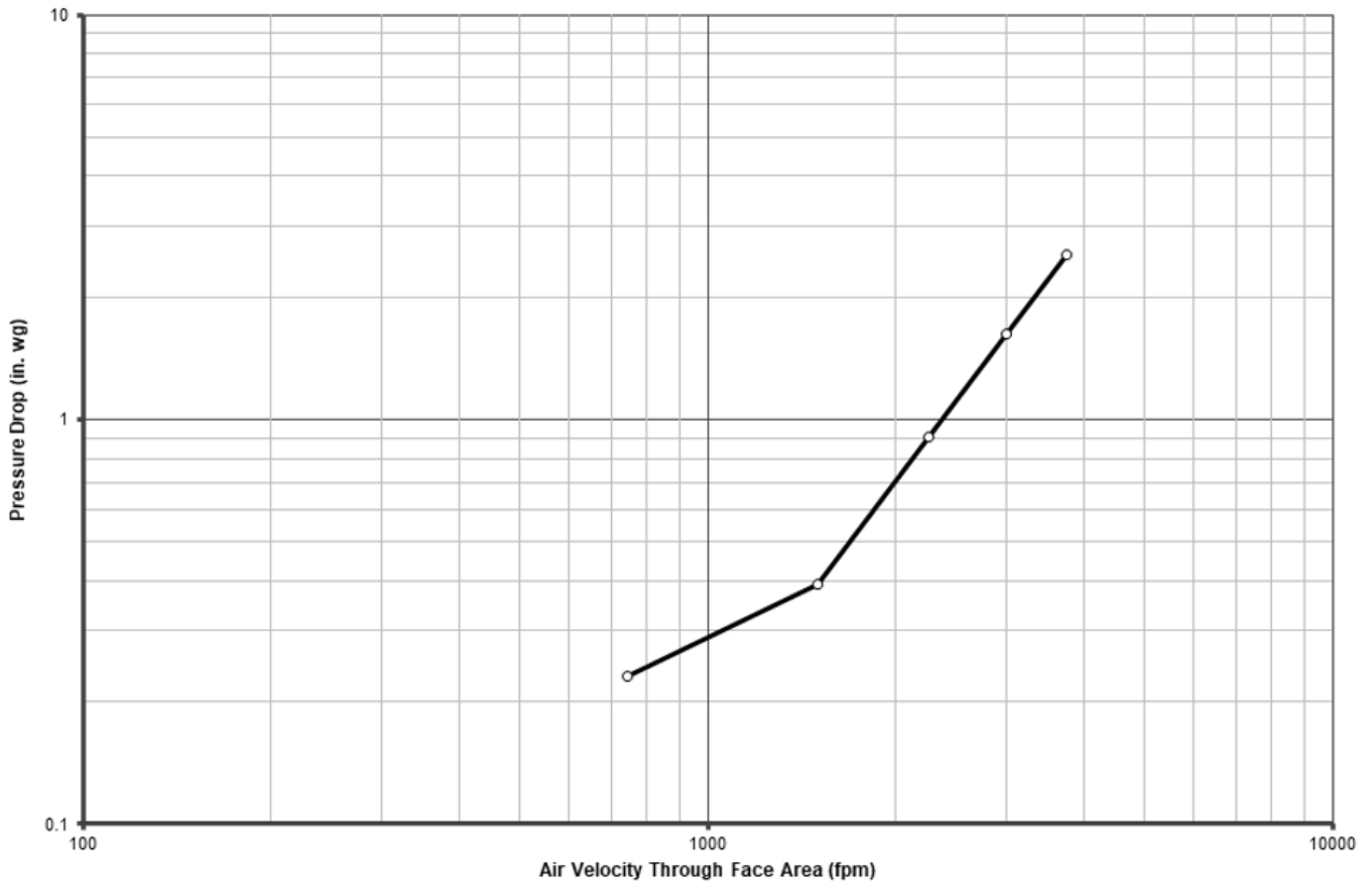
## Air Leakage

- Model BD6 with a width and height 24" (610) or greater leak a maximum of: - **9.8 cfm/ft2 or less at 1" w.g.**
- Model BD6 with a width or height less than 24" (610) leak a maximum of: - **23 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/ft<sup>2</sup> (1.201 kg/m<sup>3</sup>).

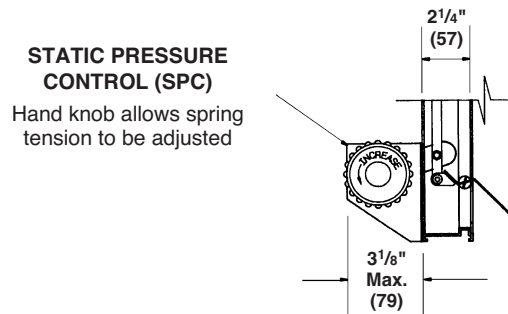
**Pressure Drop**  
24" x 24" (610 x 610) Damper  
**Velocity vs Pressure Drop**



## PERFORMANCE DATA

Damper width	Max. Back Pressure in. wg / (kPa)
48" (1219)	4" w.g. (1.0)
36" (914)	8" w.g. (2.0)
24" (610)	12" w.g. (3.0)
12" (305)	16" w.g. (4.0)

**Optional SPC** (static pressure controller) is designed to maintain static pressures in ranges up to .25" w.g. for dampers up to 17.3 sq. ft. and up to .75" w.g. for dampers up to 6 sq. ft. The SPC is field adjustable. Minimum damper size for SPC option is 12"x12"



**Note:** One SPC per damper section

## SUGGESTED SPECIFICATION

Furnish and install at locations on plans or in accordance with schedules heavy duty backdraft dampers that meet the following minimum construction standards. Frame shall be .125" (3.2) wall thickness 6063T6 extruded aluminum. Frame shall have galvanized steel braces at all corners.

Blades shall be .070" (1.8) wall thickness 6063T6 extruded aluminum. Blade edge seals shall be extruded vinyl mechanically locked into blade edge. Adhesive type seals are unacceptable.

Bearings shall be corrosion resistant long life synthetic for quiet operation. Linkage shall be 1/2" (13) tie bar with stainless steel pivot pins. Damper shall be in all respects equivalent to Ruskin BD6.

**Specifier select** damper shall have SPC field-adjustable static-pressure control to maintain pressures in ranges from .25" w.g. to .75" w.g. Minimum damper size for BD6 with SPC is 12" x 12" (305 x 305).

## 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 BD6 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 damperwidth. Vertical assemblies and higher system pressures may require more bracing.

