

### Application

Model HBR-150 is a heavy duty round industrial backdraft damper with a flanged style frame. It allows air to be drawn into a draft relief application or to prevent backflow in an HVAC or a process application.

### Ratings

#### Velocity

Up to 4000 fpm (20.3 m/s)

#### Temperature

Up to 250°F (121°C)

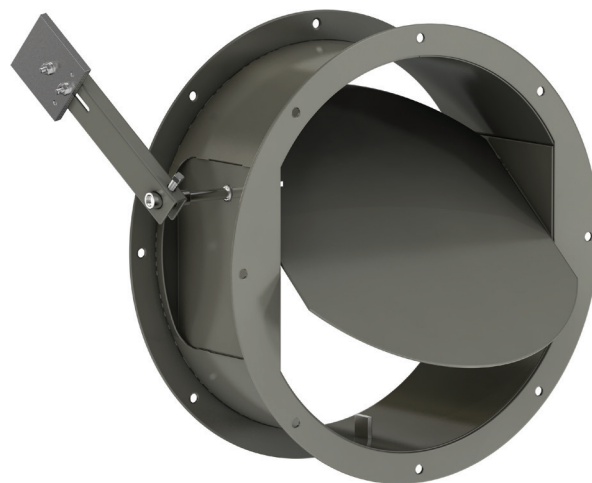
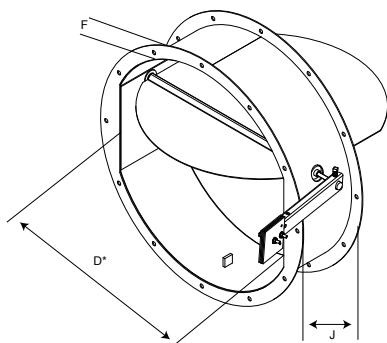
#### Pressure

Up to 6 in. wg (1.5 kPa) - differential pressure

### Construction

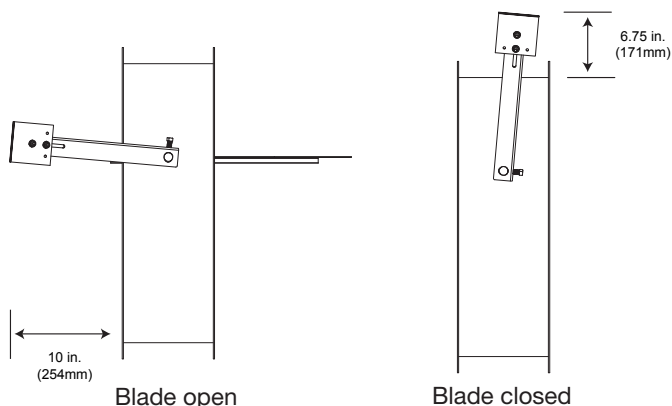
	Standard	Optional
<b>Frame Material</b>	Painted	304SS or 316SS
<b>Frame Type</b>	Flanged channel	-
<b>Blade Material</b>	Painted	304SS or 316SS
<b>Blade Seals</b>	None	EPDM or Silicone
<b>Blade Stop</b>	Pin	Rolled bar
<b>Blade Type</b>	Round	
<b>Axle Bearing</b>	Stainless steel sleeve	External bronze sleeve, External relubricable ball
<b>Axle Material</b>	Plated steel	303SS or 316SS
<b>Airflow</b>	Horizontal	Vertical up, Vertical down
<b>Paint Finishes</b>	Hi Pro Polyester	Mill finish (SS only)
<b>Mounting Holes</b>	None	On centerline, Straddle centerline

Diameter	Minimum Size	Maximum Size
Inches	6	36
mm	154	914



\*Actual inside dimension

Advise air flow direction & counterbalance weight location when ordering



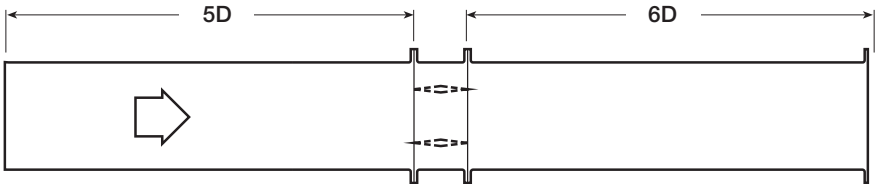
Diameter <i>D</i> Inches (mm)		Frame Depth <i>J</i> Inches (mm)	Frame & Flange Gauge (mm)	Flange Width <i>F</i> Inches (mm)	Axle Diameter Inches (mm)	Blade Thickness Gauge (mm)
Above	Through					
6 (154)	12 (305)	6 (152)	12 (2.7)	1.25 (32)	0.5 (13)	12 (2.7)
12 (305)	20 (508)	8 (203)	12 (2.7)	1.5 (32)	0.75 (19)	10* (3.5)
20 (508)	24 (610)	8 (203)	12 (2.7)	1.5 (32)	0.75 (19)	10* (3.5)
24 (610)	36 (914)	8 (203)	10 (3.5)	2 (51)	0.75 (19)	10* (3.5)

\* with reinforcements

Performance Data

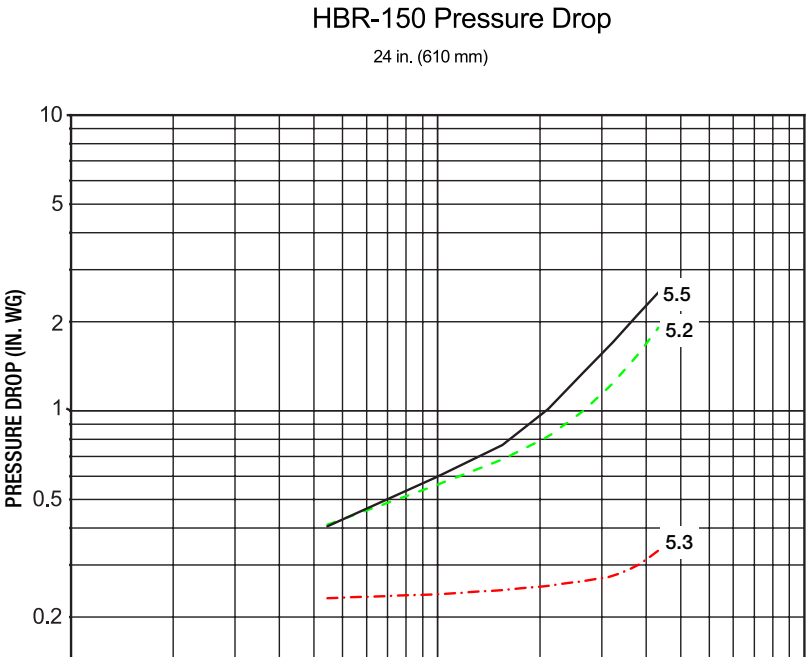
AMCA Test Figure 5.3

Figure 5.3 illustrates a fully ducted damper. This configuration has low pressure drop because entrance and exit losses are minimized by straight duct runs upstream and downstream of the damper.



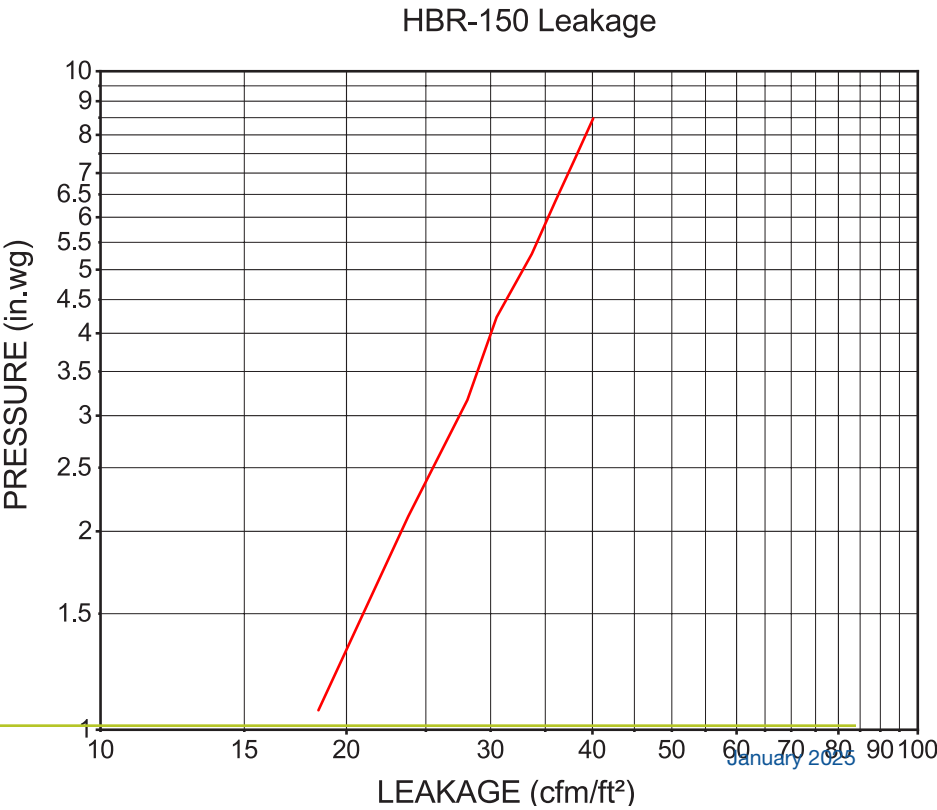
Pressure Drop Data

This pressure drop data was conducted in accordance with AMCA Standard 500-D using Test Figure 5.3. All data has been corrected to represent standard air at a density of 0.075 lb./ft<sup>3</sup> (1.2 kg/m<sup>3</sup>). Actual pressure drop found in any HVAC system is a combination of many factors. This pressure drop information along with an analysis of other system influences should be used to estimate actual pressure losses for a damper installed in a given HVAC system.



Leakage Data

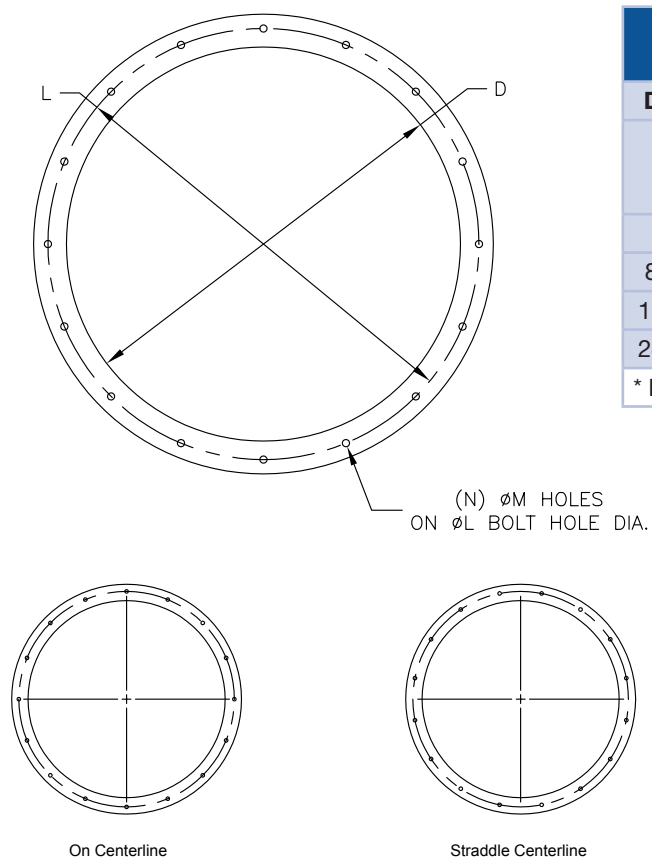
Damper leakage (with blade fully closed) varies based on the type of blade stops and low leakage seals applied. Model HBR-150 is available with no seals. Leakage testing was conducted in accordance with AMCA Standard 500-D and is expressed as cfm/ft<sup>2</sup> of damper face area. All data has been corrected to represent standard air at a density of 0.075 lb./ft<sup>3</sup> (1.2 kg/m<sup>3</sup>).



## Mounting Holes

## Round Industrial Backdraft Damper

The recommended bolt hole pattern is shown in the table below. Customer must specify bolt holes that are parallel to the axle centerline or that straddle the axle centerline as shown in the diagrams below. The factory can also provide bolt hole sizes and patterns other than those shown.



**Recommended Bolt Hole Pattern**  
(Bolt Holes Parallel to Axle Centerline)

Diameter Inches (mm)		Number of Holes	Mounting Hole Diameter in. (mm) N	Bolt Circle Diameter L	Degrees Between Holes
Above	Through				
4 (102)	8 (203)	4	$\frac{3}{8}$ (9.5)	*	90
8.001 (203)	18 (457)	8	$\frac{7}{16}$ (11)	*	45
18.001 (457)	24 (610)	12	$\frac{7}{16}$ (11)	*	30
24.001 (610)	36 (914)	16	$\frac{7}{16}$ (11)	*	22 ½

\* Bolt Circle Diameter = Damper Diameter + Flange Height +  $\frac{1}{4}$  in. (6mm)

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