



Application

The HBTR-151 is an isolation damper designed for isolation and decontamination applications. The damper has bubble tight leakage performance per AMCA 500-D up to 10 in. wg (2.5 kPa). The damper frame is flanged for easy mounting and the blade seal is mechanically fastened to the blade.

Ratings

Velocity

3900 fpm (19.8 m/s)

Pressure

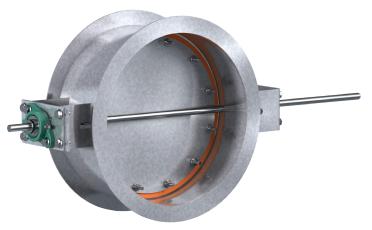
10 in. wg (2.4 kPa) - differential pressure

Leakage

Bubble tight per AMCA 500-D

Temperature

-40 to 250°F (-40 to 121°C)



*Actual Inside Dimension

Construction

	Standard	Optional		
Frame Depth (C)	See chart on page 2			
Frame Material	Painted	304SS, 316SS		
Frame Type	Flanged Channel			
Frame Thickness	See chart on page 2			
Flange Width (D)	See chart on page 2			
Blade Material	Painted	304SS, 316SS		
Blade Seals	Silicone rubber, field removable			
Blade Thickness	see chart on page 2			
Blade Type	Round butterfly			
Blade Stop	Pinstop			
Axle Diameter	see chart on page 2			
Bearings	Relubricable ball, outboard mounting			
Axle Material*	Plated steel	303SS, 316SS		
Axle Seals	Double gland stuffing box			
Paint Finishes	Hi Pro Polyester	Industrial Epoxy, Mill finish (304SS or 316SS)		
Mounting Holes	None	On Centerline, Straddle Centerline		

^{*} Axle materials may change to 316SS as required for proper operation.

Size Limitations

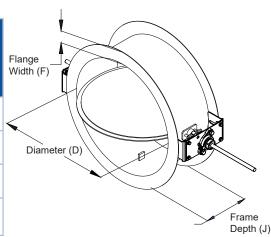
WxH	Minimum Size	Maximum Size
Inches	4	36
mm	102	914

Options:

- · Mounting holes in flanges
- Actuators
- · Limit switches
- Special construction

Dimensions

Diameter (D)		Frame F	Frame	Flange	Axle	Blade
Inches (mm)			&	Width F	Diameter	Thickness
Above	Through	Inches (mm)	Flange gauge (mm)	Inches (mm)	Inches (mm)	gauge (mm)
4	12	6	12	1.5	0.5	12
(102)	(305)	(152)	(2.7)	(38)	(13)	(2.7)
12	24	8	12	1.5	0.75	12
(305)	(610)	(203)	(2.7)	(38)	(19)	(2.7)
24	28	8	10	2	0.75	12
(610)	(711)	(203)	(3.5)	(51)	(19)	(2.7)
28	36	8	10	2	1	12
(711)	(914)	(203)	(3.5)	(51)	(25)	(2.7)



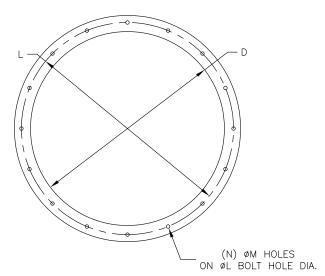
Mounting Holes

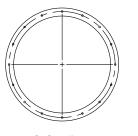
Standard - Does not include mounting holes

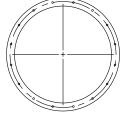
Optional - Bolt holes in both flanges

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

Greenheck Recommended Bolt Hole Pattern (Bolt Holes Parallel to Axle Centerline)						
Diameter Inches (mm)		Number of	Mounting Hole	Bolt Circle Diameter	Degrees Between	
Above	Through	Holes	Diameter in. (mm) N	L	Holes	
4 (102)	8 (203)	4	³ / ₈ (9.5)	*	90	
8.001 (203)	18 (457)	8	7/ ₁₆ (11)	*	45	
18.001 (457)	24 (610)	12	⁷ / ₁₆ (11)	*	30	
24.001 (610)	36 (914)	16	⁷ / ₁₆ (11)	*	22½	
* Bolt Circle Diameter = Damper Diameter + Flange Height + 1/4 in. (6mm)						







On Centerline

Straddle Centerline

Performance Data

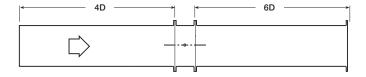
Pressure Drop Data

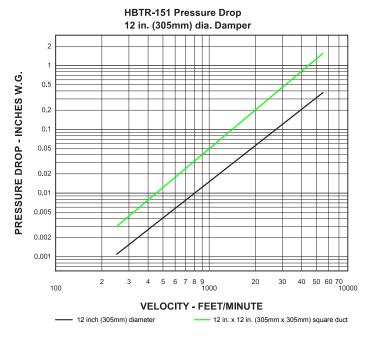
This pressure drop data was conducted in accordance with AMCA 500-D using Test Figure 5.3. All data has been corrected to represent standard air at a density of 0.075 lb/ft³ (1.2 kg/m³).

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.

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.



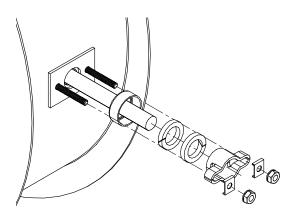


Leakage

Every HBTR-151 is leakage tested at 10 in. wg (2.5 KPa) in accordance with AMCA 500-D before it leaves the factory. Greenheck does not ship a HBTR-151 unless it meets the requirements of the standard.

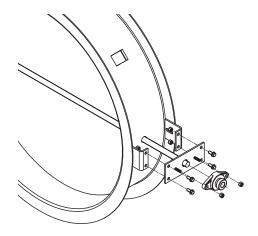
Axle Seal Detail

The double gland axle seal is mounted externally for easy access and provides bubble tight performance.



Bearing Detail

The ball bearings are mounted outboard for easy access. The bearing comes with a grease fitting, allowing for easy lubrication (axle seals included but not shown in bearing detail).





INSTALLATION



TRI-FOLD



SUPPLEMENTAL INFORMATION



CATALOG



SELECTION GUIDE



PRODUCT INFO



DAMPER SELECTION
GUIDE



SPECIFICATIONS



WARRANTY