

Application

Model ABD-Z2 has an integral automatic balancing damper (ABD) that can toggle between two pressure independent cfm setpoints by way of an electric actuator (included). The low-point setpoint maintains a constant minimum ventilation rate, while the high-flow setpoint provides boosted on-demand ventilation. The ABD-Z2 is ideal for helping achieve the requirements of ASHRAE 62.2 for acceptable indoor air quality.

The ABD is designed to maintain a constant airflow volume in HVAC applications. The damper blade is calibrated to automatically adjust to changing pressures.

Optional return/exhaust grille is available.

Ratings

Pressure

0.2 in. wg (.05 kPa) to 2.0 in. wg (.50 kPa)

Volume

25 cfm (.012 m³/s) to 275 cfm (.130 m³/s)

Temperature

25° F (-4°C) to 150° F (65°C)

UL Classified

Classified by UL to UL 2043 for heat and visible smoke release (UL File R39668)



Optional grille shown.

Construction

Construction	Standard
Plenum Box	Steel
Actuator	24V or 120V with auxiliary switches
ABD Construction	
Blade Material	Reinforced UL 94 thermoplastic resins
Frame Material	Reinforced UL 94 thermoplastic resins
Bearings	Hydraulic blade dampener
Outer Seal	Removable rubber gasket
Spring	Stainless steel leaf type
Anti-Microbial Agent	Steri-Balance™ infused into plastic
Adapter	Quick-connect adapter ring included



See complete marking on product.

UL 2043 Classification
R39668

Building Types

- Apartments and Condos
- Education Building and Dormitories
- Hospital and Clinics
- Hotels and Motels
- Nursing Homes and Assisted Living

Plenum Box by Diameter

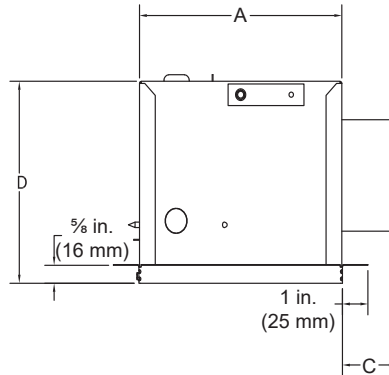
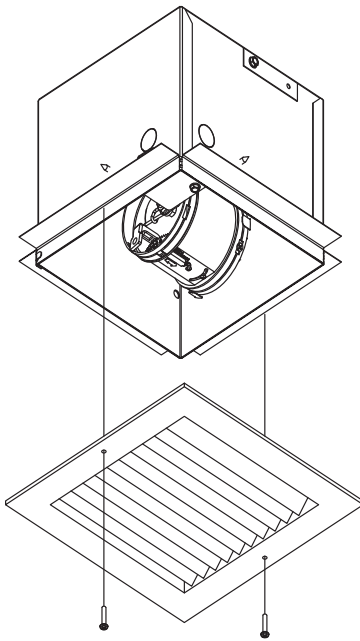
Diameter	Grille Box Sleeve Size in Inches (mm)
4 in (102mm)	8 x 8 x 7 (203 x 203 x 178)
6 in (152mm)	10 x 10 x 8½ (254 x 254 x 216)

Airflow Range by Size

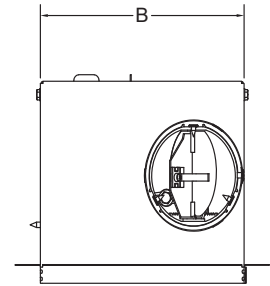
ABD Diameter	Individual Set Points	Airflow Range (CFM)*
4 in (102mm)	20	25 to 130 (.012 to .061 m³/s)
6 in (152mm)	24	50 to 275 (.024 to .130 m³/s)

* Note: Airflow range determined through +/- 10% of average airflow over the pressure range.

Dimensional Drawings - Intake Mount



4 in. (102 mm) with 8 in. x 8 in.
(203 mm x 203 mm) plenum
shown



Size (in inches)	A	B	C	D
4 in.	8	8	2 ⁵ / ₃₂	7
6 in.	10	10	2 ⁵ / ₃₂	8 ¹ / ₂

Setpoints

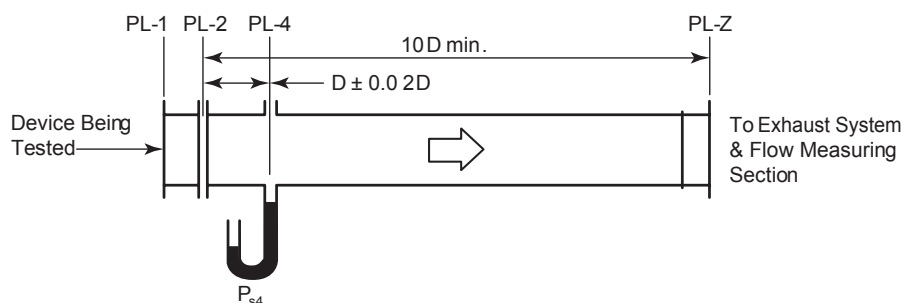
		Available Max/Min CFM Set Points for ABD-Z2 4 inch																	
		Minimum CFM Setpoint																	
Maximum CFM Setpoint		25	30	33	35	40	45	48	50	55	60	68	75	80	85	90	95	100	105
	30																		
	33	X																	
	35	X	X																
	40	X	X	X															
	45	X	X	X	X														
	48	X	X	X	X	X													
	50	X	X	X	X	X	X												
	55	X	X	X	X	X	X	X											
	60	X	X	X	X	X	X	X	X										
	68	X	X	X	X	X	X	X	X	X									
	75	X	X	X	X	X	X	X	X	X	X								
	80	X	X	X	X	X	X	X	X	X	X	X							
	85	X	X	X	X	X	X	X	X	X	X	X	X	X					
	90	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
	95	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
	100	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
	105	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	115	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	125	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		X = Adjustment with linkage in primary position X = Adjustment with linkage in alternate position																	

See instruction manual for alternate linkage set-up.

Available Max/Min CFM Set Points for ABD-Z2 6 inch																				
Minimum CFM Setpoint																				
Maximum CFM Setpoint		50	60	65	70	75	80	85	90	98	105	113	120	135	143	150	160	170	180	193
	65	X																		
	70	X	X																	
	75	X	X	X																
	80	X	X	X	X															
	85	X	X	X	X	X														
	90	X	X	X	X	X	X													
	98	X	X	X	X	X	X	X												
	105	X	X	X	X	X	X	X	X											
	113	X	X	X	X	X	X	X	X	X										
	120	X	X	X	X	X	X	X	X	X	X									
	135	X	X	X	X	X	X	X	X	X	X	X								
	143	X	X	X	X	X	X	X	X	X	X	X	X							
	150	X	X	X	X	X	X	X	X	X	X	X	X	X						
	160	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
	170	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
180	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
193	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
205	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
217	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
228	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
240		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
260			X	X							X	X	X	X	X	X				
X = Adjustment with linkage in primary position X = Adjusment with linkage in allternate position																				

See instruction manual for alternate linkage set-up.

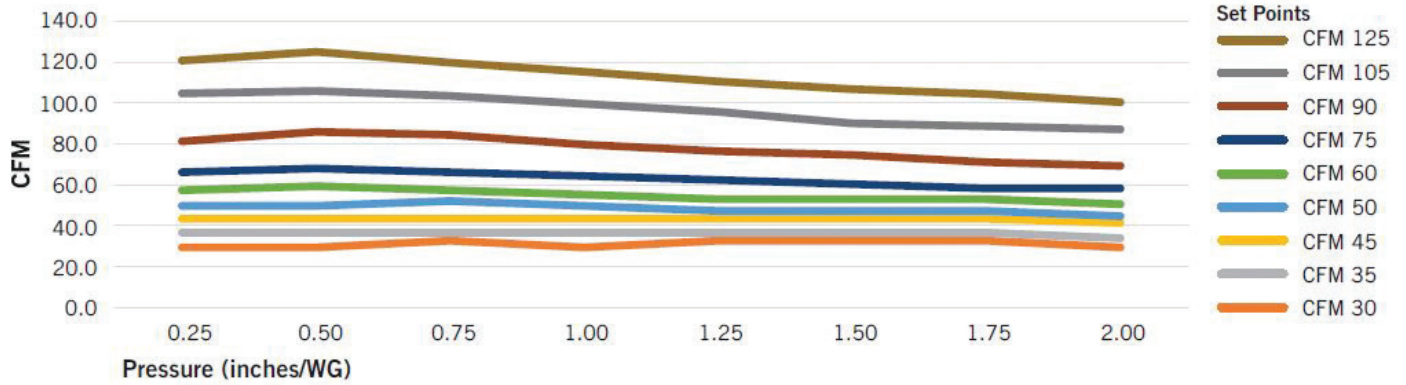
Performance Data - Tested to AMCA Figure 5.1



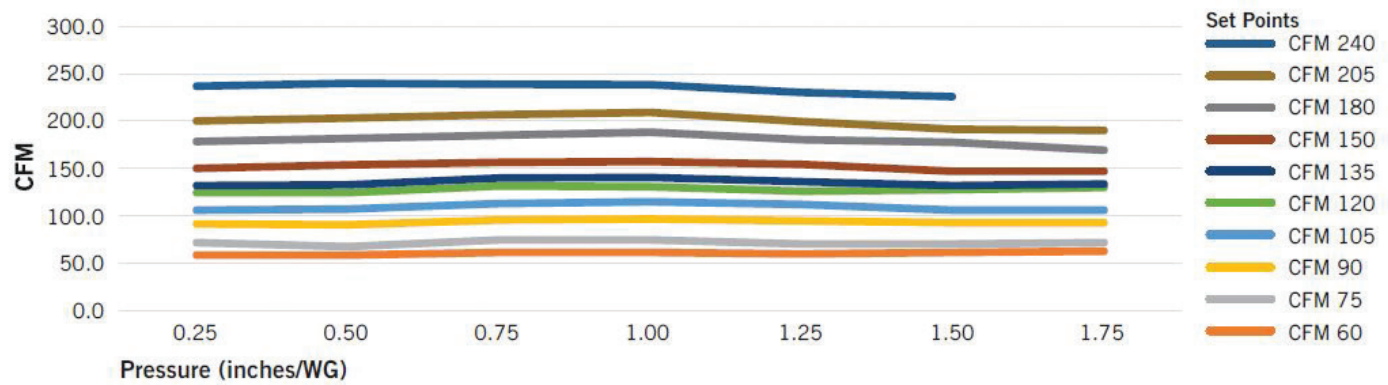
Performance Data

Automatic Balancing Damper

Model ABD-4 inch



Model ABD-6 inch



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