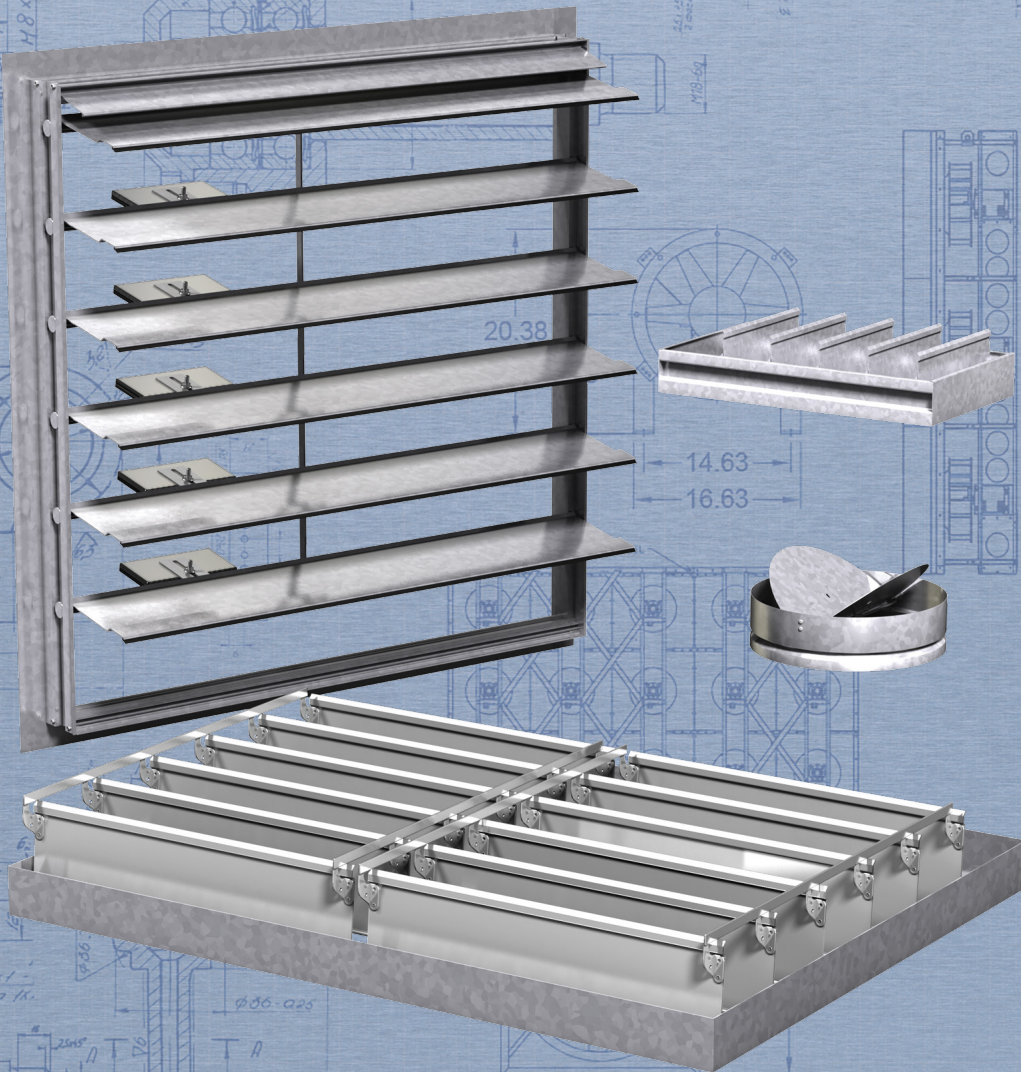


Backdraft & Pressure Relief Dampers

- Backdraft
- Barometric Relief
- Pressure Relief



BUILDING VALUE IN AIR.

 **GREENHECK**
Building Value in Air.

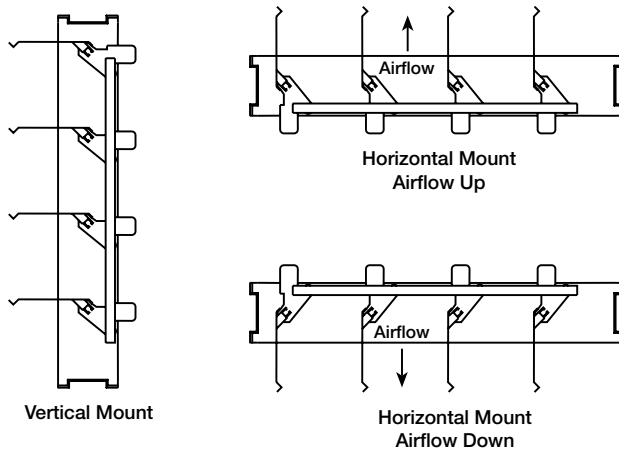
March
2023

Backdraft dampers (also known as gravity dampers) are used in ventilation systems to allow airflow in one direction and prevent airflow in the opposite direction. A relief damper is developed with an elevated and adjustable start-open pressure while providing the backdraft function. The following information is needed when selecting the proper damper application:

- System velocity and back pressure requirements
- Mounting orientation and airflow direction
- Mounting configuration (inserted into duct/opening or flange-mounted)
- Damper operation (gravity or motorized)
- Start-open pressure

Mounting Orientation

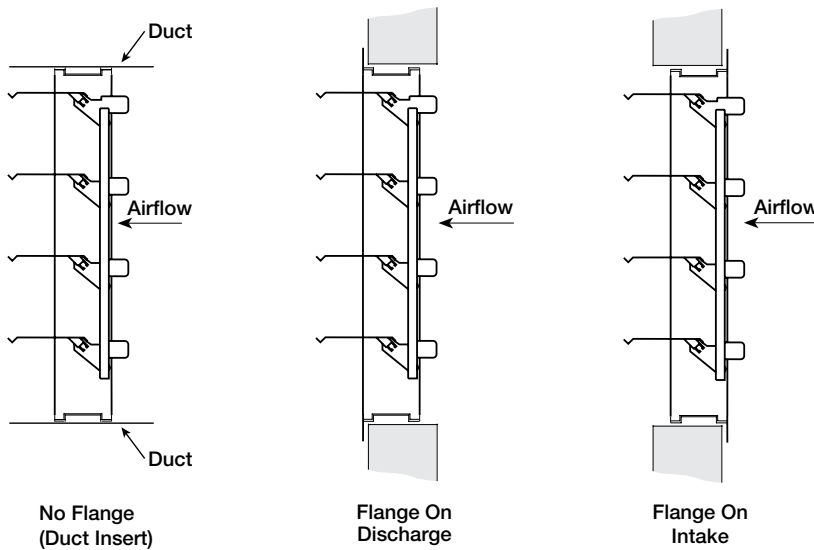
Backdraft dampers are available in vertical or horizontal mount.



Frame Construction

Three types of frame construction are available on all commercial backdraft damper models:

- No flange
- Flange on discharge
- Flange on intake



A commercial backdraft damper is a gravity damper (when nonmotorized) that allows airflow in one direction only. When placed on a propeller fan, for example, it will prevent the wind from causing the fan to run backwards when the power is off. A motorized backdraft damper functions like a control damper.

To assist with opening the damper blades, backdraft dampers may utilize springs, adjustable counterbalance weights, or a motorpack.

- **Spring assist** is a spring attached to the damper that helps in opening or closing the damper blades. The spring is adjustable by using a series of holes in the frame or blade assembly to increase or decrease the tension.
- **Adjustable counterbalance** weights are a more precise means of reducing the pressure that is required to open the damper.
- A **motorpack** is used when it is necessary that the damper opens and closes without having to rely on air velocity or pressure.

Backdraft damper selection begins by determining the damper construction required based on system velocity and static pressure. The BD damper series is used in applications up to 1500 ft/min (7 m/s) and 2 in. wg (0.5 kPa) of static pressure. The WD and GM damper series are used in applications up to 2500 ft/min (12.7 m/s) and 2 in. wg (0.5 kPa) of static pressure. The EM damper series is used in applications up to 3500 ft/min (17.8 m/s) and 10 in. wg (2.5 kPa) of static pressure.

BD, EM, GM, and WD series dampers can be used in applications for:

- Exhaust
- Roof ventilation
- In-duct ventilation
- Air intake
- Sidewall ventilation

BD Series

BD series have a galvanized steel frame with aluminum blades. The dampers are opened by air pressure differential and closed by gravity. They are rated for velocities up to 1500 fpm (7 m/s) and pressures up to 2 in. wg (0.5 kPa). These dampers have AMCA certified pressure drop and leakage performance that comply with ASHRAE 90.1 and IECC leakage requirements for nonmotorized dampers.



BD-100



BD-300 Series

Model	Flange	Mounting Position	Airflow Direction	Spring Assisted	Maximum Velocity fpm (m/s)	Start Open Pressure* in. wg (kPa)	Maximum Back Pressure in. wg (kPa)	AMCA Air Leakage & Air Performance
BD-100	None	H	Vertical Up	Std	1500 (7)	0.01 (0.002)	2 (0.5)	Yes
BD-300	Intake	V	H	N/A	1500 (7)	0.009 (0.002)	2 (0.5)	Yes
BD-320	Discharge	V	H	N/A	1500 (7)	0.009 (0.002)	2 (0.5)	Yes
BD-330	None	V	H	N/A	1500 (7)	0.009 (0.002)	2 (0.5)	Yes

H = Horizontal V = Vertical N/A = Not Available Std = Standard

*Start-open is the pressure at which the damper blades begin to rotate. The blades are not fully open at this point. Damper size and bearing selection may cause start-open pressure to vary from this value.

The WD series backdraft dampers are constructed of a galvanized steel frame and aluminum blades with seals. The dampers are opened by air pressure differential (assisted by springs) and closed by gravity. When motorized, the damper functions like a control damper. WD series dampers are rated for velocities up to 2500 ft/min (12.7 m/s) and pressures up to 2 in. wg (0.5 kPa).

WD-100 Series

WD-100 series dampers are horizontally mounted to allow vertical airflow. The primary application is with roof mounted exhaust fans. Optional motorpack is available.



WD-100 Series

WD-200 Series

WD-200 series dampers are electric motorized backdraft dampers that open when energized and spring return close when de-energized. These dampers can be used for horizontal or vertical mount applications. The primary application is to prevent undesirable reverse airflow when installed with roof or sidewall supply (intake) fans.



WD-200 Series

WD-300 Series

WD-300 series dampers are vertically mounted for horizontal exhaust applications. These dampers are designed to open easily under low velocity conditions. Optional motorpack is available.

WD-400 Series

WD-400 series dampers are nonmotorized and can be mounted vertically (for horizontal intake airflow) or horizontally (for vertical airflow down).

WDR-53/SSWDR-53

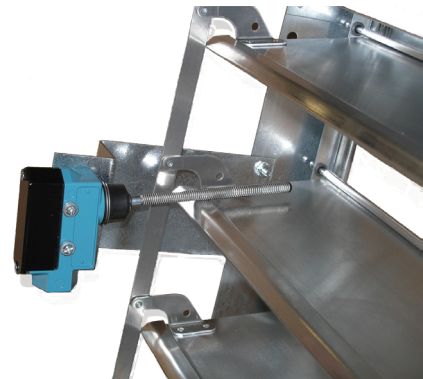
WDR-53 and SSWDR-53 are round backdraft dampers. These models can be mounted horizontally for vertical airflow down or up, or mounted vertically for horizontal airflow. The WDR-53 and SSWDR-53 are rated for velocities up to 2000 ft/min (10.2 m/s) and pressure up to 3 in. wg (0.75 kPa).



WDR-53/SSWDR-53

End Switch Kits

An end switch kit can be used in conjunction with a motorpack. The end switch is wired to a fan and/or to a light serving as an open/closed indicator. When wired to a fan, this will ensure the damper is fully open before the fan starts.



End Switch Kit

Commercial Backdraft WD Series

Model	Flange	Mounting Position	Airflow Direction	Spring Assisted	Motorized	Maximum Velocity fpm (m/s)	Start Open Pressure* in. wg (kPa)	Maximum Back Pressure in. wg (kPa)
WD-100	None	H	Vertical Up	Std	Opt	2500 (12.7)	0.01 (0.002)	1 (0.25)
WD-110	Discharge	H	Vertical Up	Std	Opt	2500 (12.7)	0.01 (0.002)	1 (0.25)
WD-120	Intake	H	Vertical Up	Std	Opt	2500 (12.7)	0.01 (0.002)	1 (0.25)
WD-200	None	H or V	H or V	N/A	Std	2500 (12.7)	0.017 (0.004)	1 (0.25)
WD-210	Motor Side	H or V	H or V	N/A	Std	2500 (12.7)	0.017 (0.004)	1 (0.25)
WD-220	Opposite Motor Side	H or V	H or V	N/A	Std	2500 (12.7)	0.017 (0.004)	1 (0.25)
WD-300	Intake	V	H	N/A	Opt	2500 (12.7)	0.05 (0.012)	2 (0.5)
WD-320	Discharge	V	H	N/A	Opt	2500 (12.7)	0.05 (0.012)	2 (0.5)
WD-330	None	V	H	N/A	Opt	2500 (12.7)	0.05 (0.012)	2 (0.5)
WD-400	None	V	H	N/A	N/A	2500 (12.7)	0.026 (0.006)	2 (0.5)
WD-410	None	H	Vertical Down	N/A	N/A	2500 (12.7)	0.014 (0.003)	2 (0.5)
WD-420	Discharge	V	H	N/A	N/A	2500 (12.7)	0.026 (0.006)	2 (0.5)
WD-430	Intake	V	H	N/A	N/A	2500 (12.7)	0.026 (0.006)	2 (0.5)
WDR-53	None	H or V	H or V	Std	N/A	2000 (10.2)	0.08 (0.020)	3 (0.75)
SSWDR-53	None	H or V	H or V	Std	N/A	2000 (10.2)	0.08 (0.020)	3 (0.75)

H = Horizontal V = Vertical N/A = Not Available Opt = Optional Std = Standard

*Start-open is the pressure at which the damper blades begin to rotate. The blades are not fully open at this point. Damper size and bearing selection may cause start-open pressure to vary from this value.

Commercial Backdraft EM & GM Series

EM Series

EM series dampers have 0.070 inch (1.8 mm) thick blades and a 0.125 inch (3.2 mm) thick frame made of extruded aluminum. These dampers are rated for velocities up to 3500 fpm (17.8 m/s) and pressure up to 10 in. wg (2.5 kPa). EM-30 series comply with ASHRAE 90.1 and IECC leakage requirements for nonmotorized dampers.

Adjustable pressure controller is available for field setting of relief pressure. Paint is available on these models.



EM-30 Series

GM Series

GM series dampers have a galvanized steel frame with extruded aluminum blades. This series is rated for velocities up to 2500 fpm (13 m/s) and pressure up to 4 in. wg (1 kPa).



EM-40 Series



EM-10 Series



EM-30 with adjustable pressure controller

Model	Flange	Frame Material	Blade Material	Counter-balance Weights	Mounting Position	Airflow Direction	Maximum Velocity ft/min. (m/s)	Maximum Back Pressure in. wg (kPa)	Start-Open Pressure* in. wg (kPa)	AMCA Air Leakage & Air Performance
EM-10	None	Extruded Aluminum		Std	H	Vertical Up	3500 (17.8)	10 (2.5)	0.05 (0.01)	N/A
EM-11	Discharge									
EM-12	Intake									
EM-30	None	Extruded Aluminum		Opt	V	Horizontal	3500 (17.8)	10 (2.5)	0.03 (0.007) ¹ 0.01 (0.002) ²	Yes
EM-31	Discharge									
EM-32	Intake									
EM-40	None	Extruded Aluminum		Std	H	Vertical Down	3500 (17.8)	10 (2.5)	0.07 (0.017)	N/A
EM-41	Discharge									
EM-42	Intake									
GM-30	None	Galvanized Steel	Extruded Aluminum	Std	V	Horizontal	2500 (13)	4 (1)	0.03 (0.007) ¹ 0.01 (0.002) ²	N/A
GM-31	Discharge									
GM-32	Intake									

H = Horizontal V = Vertical N/A = Not Available CF = Consult Factory Opt = Optional Std = Standard

¹ = without weights

² = with weights

*Start-open is the pressure at which the damper blades just begin to rotate. The blades are not fully open at this point. Damper size and bearing selection may cause start-open pressure to vary from this value.

Heavy Duty/Industrial Backdraft - HB & HBR Series

Heavy duty/industrial backdraft dampers are designed to prevent backflow at static pressures up to 20 in. wg (5 kPa) and velocities up to 6400 ft/min (32.5 m/s). Counterbalance weights are mounted externally for easy adjustment and balancing in the field.

The HB series dampers are flange frame mounted. Width and height dimensions are to the inside of the frame.

HB and HBR series dampers can be used in applications for:

- Blower outlets
- Branch duct isolation
- Industrial process isolation
- Emergency generator radiator outlets

HBR-050 & HBR-150

- Round frame and blade
- Corrosion resistant
- Optional 304 or 316 stainless steel construction

HB-110

- Corrosion resistant
- Spark B and C resistant
- Optional 304 or 316 stainless steel construction

HB-120 & HB-230

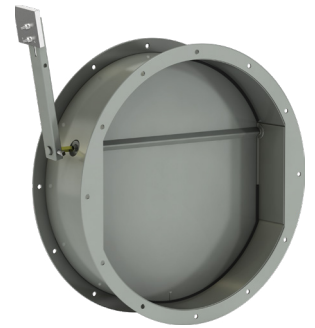
- Optional 304 or 316 stainless steel construction

HB-240

- Spark B and C resistant
- Optional Spark A resistant
- Optional 304 or 316 stainless steel construction (except blades)

HB-330

- Fan Class III
- Optional 304 or 316 stainless steel construction



HBR-050



HB-110



HB-120



HB-330

Model	Material		Counterbalance Weights	Maximum Velocity ft/min. (m/s)	Maximum Back Pressure in. wg (kPa)	Start-Open Pressure* in. wg (kPa)
	Frame	Blade				
HBR-050	Galvanized Steel	Galvanized Steel	Std	3000 (15.2)	6 (1.5)	0.12 (0.03)
HBR-150	Painted Steel	Painted Steel	Std	4000 (20.3)	6 (1.5)	N/A
HB-110	Galvanized Steel	Aluminum Single	Std	3900 (20)	5 (1.2)	0.02 (0.005)
HB-120	Galvanized Steel	Galvanized Steel 2V	Std	5150 (26)	8.5 (2.1)	0.045 (0.011)
HB-230	Galvanized Steel	Galvanized Steel Airfoil	Std	5150 (26)	13.5 (3.4)	0.04 (0.010)
HB-240	Galvanized Steel	Extruded Aluminum Airfoil	Std	5150 (26)	13.5 (3.4)	0.04 (0.010)
HB-330	Galvanized Steel	Galvanized Steel Airfoil	Std	6400 (33)	20 (5)	0.25 (0.06)

Std = Standard

*Start-open is the pressure at which the damper blades just begin to rotate. The blades are not fully open at this point. Damper size and bearing selection may cause start-open pressure to vary from this value.

Note: HB series dampers are flange frame mounted. Width and height dimensions are to the inside of the frame.

Barometric Relief BR and SEBR Series

A barometric relief damper is a backdraft damper with an adjustable start-open pressure. It is used for gravity ventilation and low-velocity systems. Counterbalance weights provide the ability to fine tune start-to-open and full-open operations.

BR series dampers are constructed with a galvanized steel frame and aluminum blades. The SEBR series is constructed of 316 stainless steel for severe or corrosive environments. Vinyl blade seals are used on both series of dampers. These dampers are rated for velocities up to 2000 ft/min (10.2 m/s) and back pressure up to 2 in. wg (0.5 kPa). The start-open pressure is selectable from .05 to .13 in. wg (0.01 kPa to 0.03 kPa).

BR and SEBR series dampers can be used in applications for:

- Gravity hood intake and exhaust
- Stairwell pressurization
- Room pressurization
- Ductwork outlets



BR-30 Series



BR-10 Series

Model	Flange	Material		Mounting Position	Airflow Direction	Maximum Velocity ft/min. (m/s)	Maximum Back Pressure in. wg (kPa)	Start-Open Pressure* in. wg (kPa)
		Frame	Blade					
BR-10	None	Galvanized Steel	Aluminum	H	Vertical Up	2000 (10.2)	2 (0.5)	0.05 - 0.30 (0.012-0.075)
BR-11	Discharge			H	Vertical Up			
BR-12	Intake			H	Vertical Up			
BR-30	None			V	H	2000 (10.2)	2 (0.5)	0.05 - 0.30 (0.012-0.075)
BR-31	Discharge			V	H			
BR-32	Intake			V	H			
BR-40	None			H	Vertical Down	2000 (10.2)	2 (0.5)	0.05 - 0.30 (0.012-0.075)
BR-41	Discharge			H	Vertical Down			
BR-42	Intake			H	Vertical Down			
SEBR-10	None			316 Stainless Steel	316 Stainless Steel	H	Vertical Up	2000 (10.2)
SEBR-11	Discharge	H	Vertical Up					
SEBR-12	Intake	H	Vertical Up					
SEBR-30	None	V	H			2000 (10.2)	2 (0.5)	0.05 - 0.30 (0.012-0.075)
SEBR-31	Discharge	V	H					
SEBR-32	Intake	V	H					
SEBR-40	None	H	Vertical Down			2000 (10.2)	2 (0.5)	0.05 - 0.30 (0.012-0.075)
SEBR-41	Discharge	H	Vertical Down					
SEBR-42	Intake	H	Vertical Down					

H = Horizontal V = Vertical

*Start-open is the pressure at which the damper blades just begin to open. The blades are not fully open at this point. Damper size and bearing selection may cause start-open pressure to vary from this value.

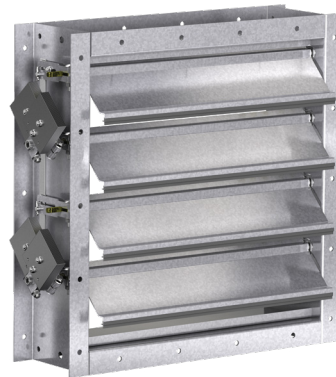
Heavy Duty/Industrial Pressure Relief - HPR Series

A pressure relief damper is a backdraft damper that has an adjustable start-open pressure capable of maintaining a relatively constant pressure at various airflows and closes upon a decrease in differential pressure. Pressure relief dampers do not immediately open fully upon reaching their start-open pressure. HPR series dampers maintain tight leakage to approximately 60% of the start-open pressure and have a relatively flat flow control, somewhat above the start-open pressure. Counterbalance weights are mounted externally for easy adjustment and balancing in the field. This backdraft damper is designed to handle velocities up to 6400 ft/min. (32.5 m/s).

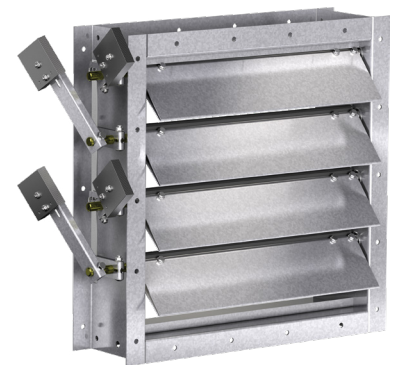
HPR series dampers can be used in applications for:

- Fume exhaust
- Duct/plenum protection

Additional material and coating selections are available in aluminum and stainless steel for corrosive or clean room applications.



HPR-120



HPR-230



HPR-330

Note: HPR series dampers are flange frame mounted. Width and height dimensions are to the inside of the frame.

Model	Material		Counterbalance Weights	Maximum Velocity ft/min. (m/s)	Maximum Back Pressure in. wg (kPa)	Relief Pressure* in. wg (kPa)
	Frame	Blade				
HPR-120	Galvanized Steel	Galvanized Steel 2V	Std	5150 (26)	5-8.5 (1.2-2)	0.10-1 (0.02-0.25)
HPR-230	Galvanized Steel	Galvanized Steel Airfoil	Std	5150 (26)	6-13.5 (1.5-3.4)	0.25-4 (0.06-1)
HPR-330	Galvanized Steel	Galvanized Steel Airfoil	Std	6400 (33)	13.5-20 (3.4-5)	0.50-6 (0.12-1.5)

Std = Standard*

*Relief pressure is the pressure at which the damper blades just begin to rotate. The blades are not fully open at this point. Damper size and bearing selection may cause start-open pressure to vary from this value.

Two common energy code standards that pertain to backdraft dampers are:

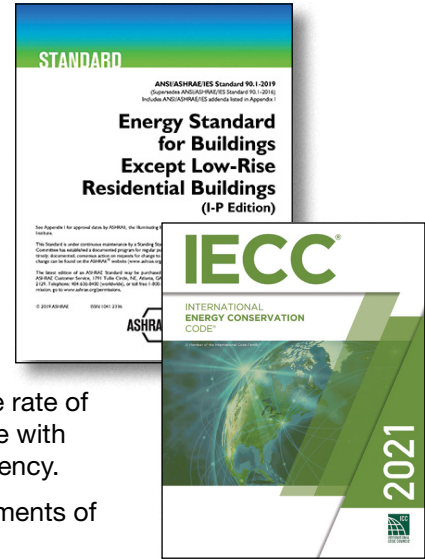
- ASHRAE Standard 90.1 - Energy Standard for Buildings except Low-Rise Residential Buildings
- IECC - International Energy Conservation Code

Here's the list of primary requirements for dampers based on each standard:

ASHRAE Standard 90.1 (2019 edition) states that maximum damper leakage at 1 in. wg for a nonmotorized damper is 20 cfm/ft². Dampers smaller than 24 inches in either dimension may have leakage of 40 cfm/ft².

IECC (2021 edition) states that gravity (nonmotorized) dampers shall have an air leakage rating not greater than 20 cfm/ft² where not less than 24 inches in either dimension and 40 cfm/ft² where less than 24 inches in either direction. The rate of air leakage shall be determined at 1 inch water gauge when tested in accordance with AMCA 500D for such purpose. The dampers shall be labeled by an approved agency.

Greenheck's BD, EM-10, and EM-30 series backdraft dampers meet the requirements of ASHRAE and IECC.



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 5.7B in the intake direction. Air performance testing was conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.7B.

Model	Maximum Leakage cfm/sq. ft	Pressure in. wg
BD-100	39	1

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 was conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.5.

Model	Maximum Leakage cfm/sq. ft		Pressure in. wg
	Width and height 24 in. or greater	Width or height less than 24 in.	
BD-300, 320, 330	N/A	39	1
EM-30, 31, 32	8.9	35	1

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 backdraft direction. Air performance testing was conducted in accordance with ANSI/AMCA Standard 500-D, Figure 5.7B.

Model	Maximum Leakage cfm/sq. ft		Pressure in. wg
	Width and height 24 in. or greater	Width or height less than 24 in.	
EM-10, 11, 12	12.3	27.5	1

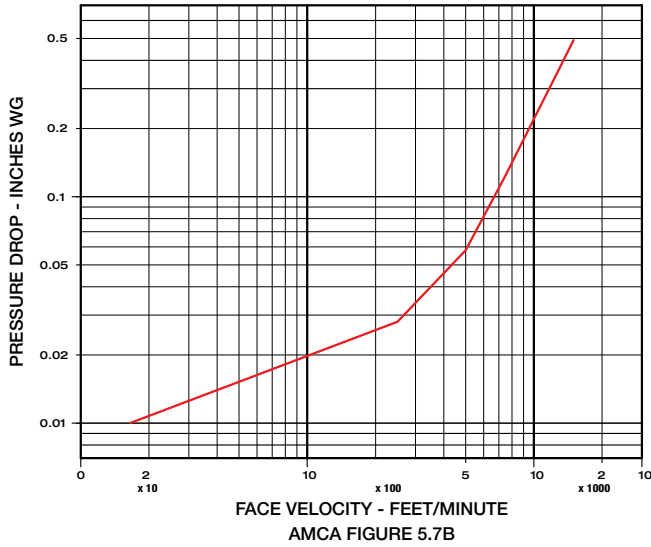


<https://www.amca.org/certified-listed/products.html?c=1033&t=9#damper>

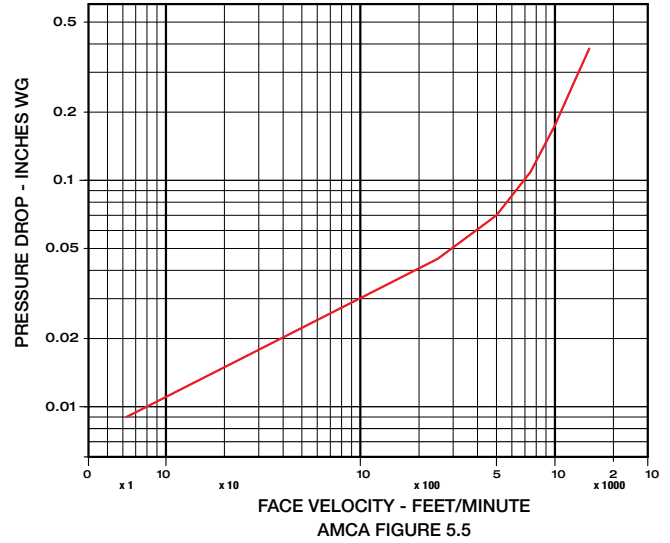


Greenheck Fan Corporation certifies that the models BD-100, BD-300, BD-320, BD-330, EM-10, EM-11, EM-12, EM-30, EM-31, and EM-32 shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance Ratings.

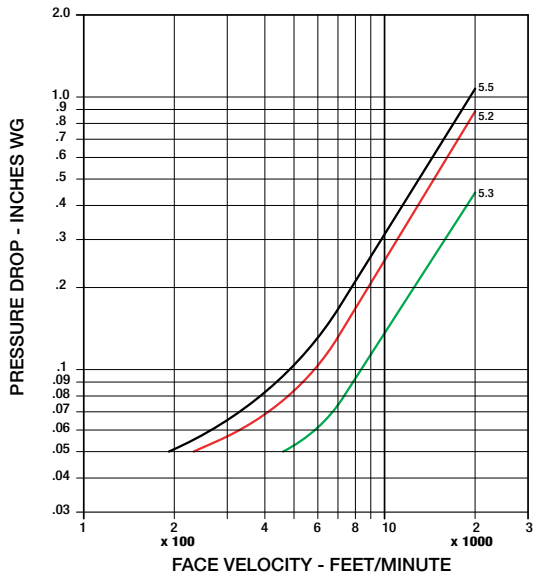
BD-100 18 in. x 18 in.



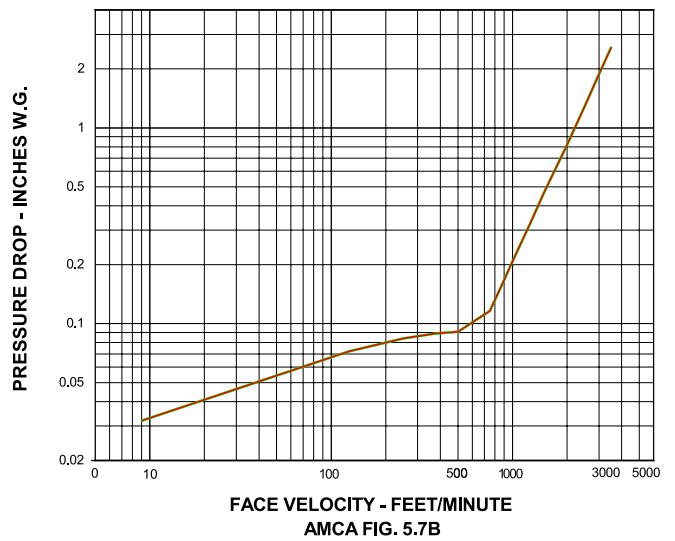
BD-300 Series 18 in. x 18 in.



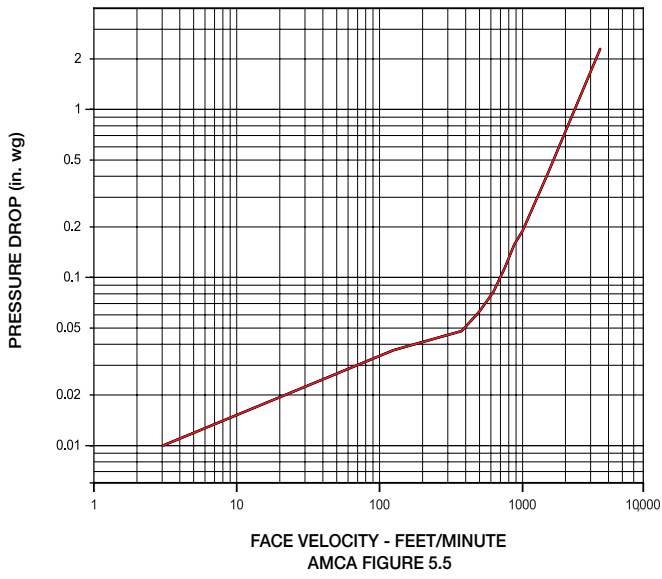
BR and SEBR Series 36 in. x 36 in.



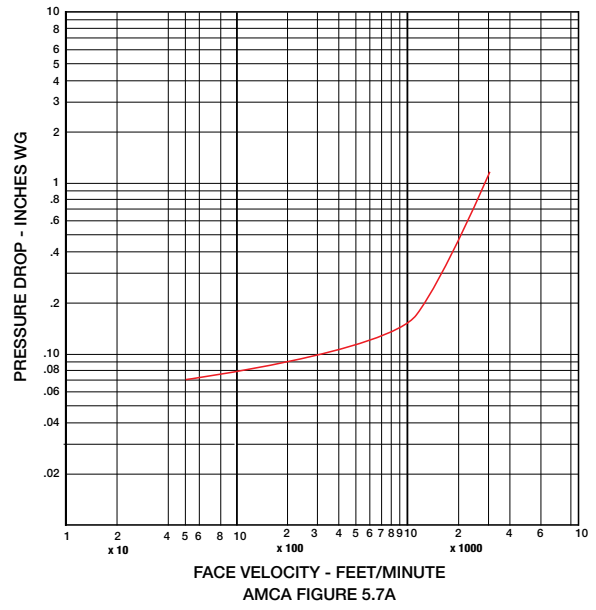
EM-10 Series 24 in. x 24 in.



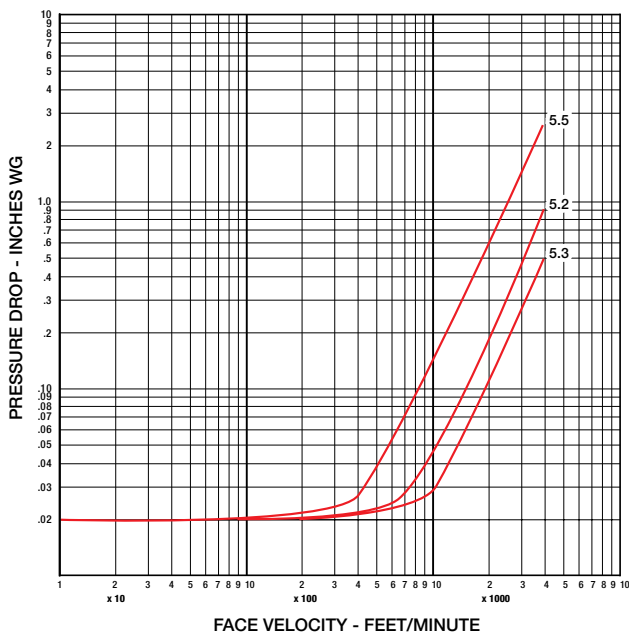
EM-30 Series 24 in. x 24 in.



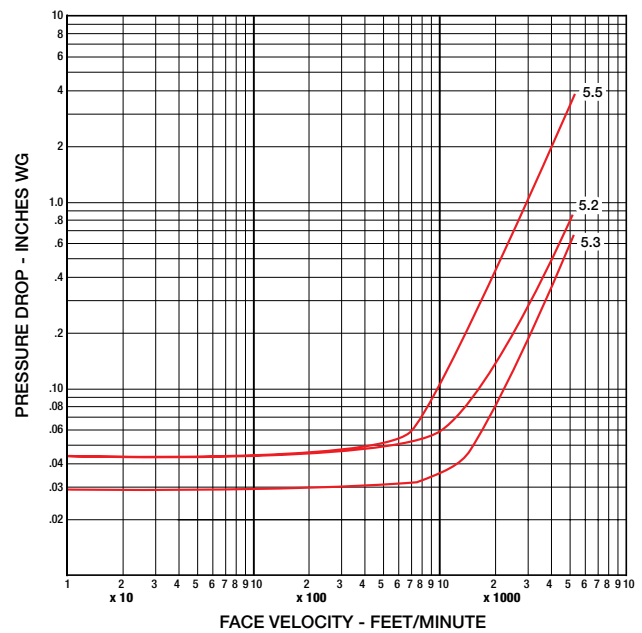
EM-40 Series 36 in. x 36 in.



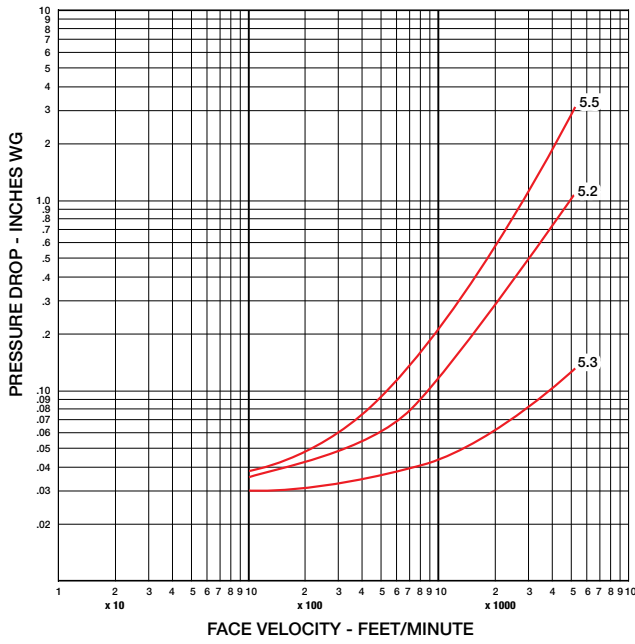
HB-110 36 in. x 36 in.



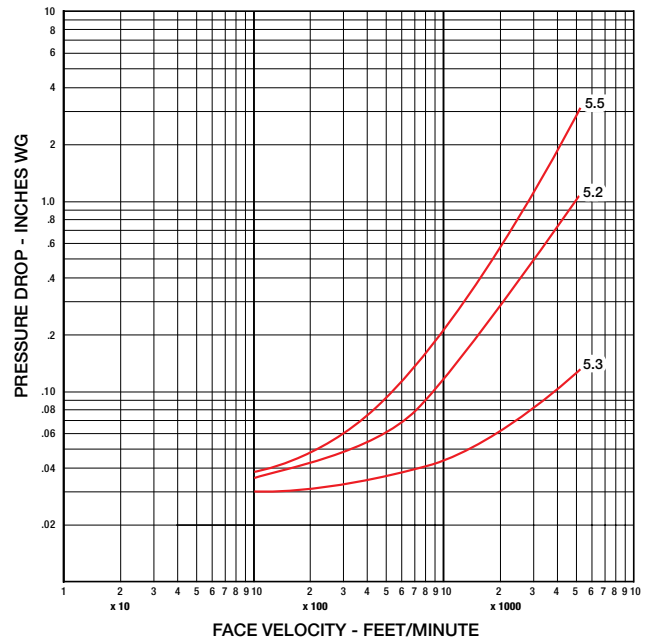
HB-120 36 in. x 36 in.



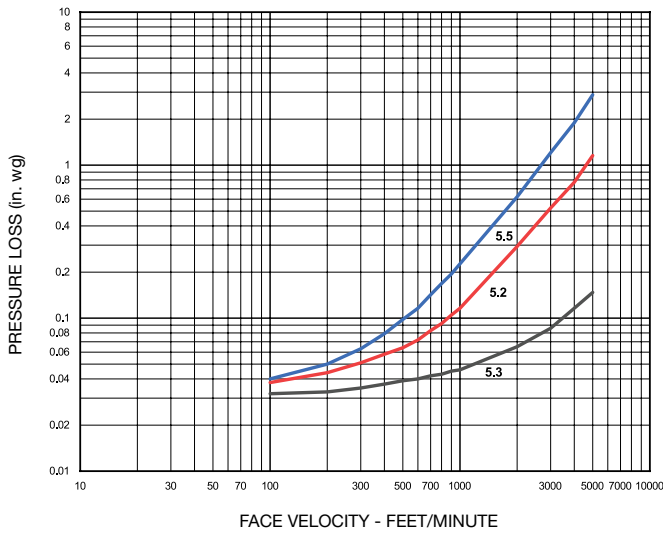
HB-230
36 in. x 36 in.



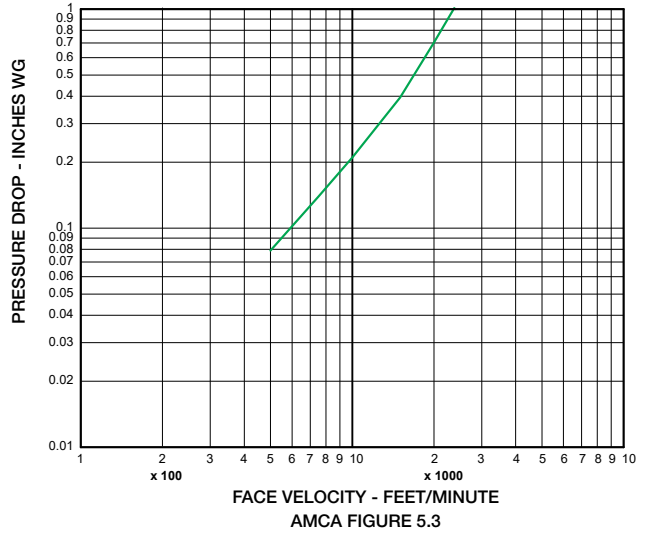
HB-240
36 in. x 36 in.



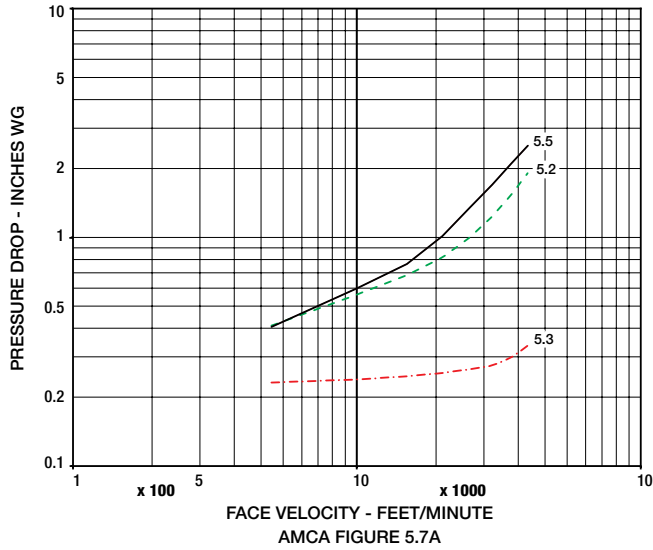
HB-330
36 in. x 36 in.



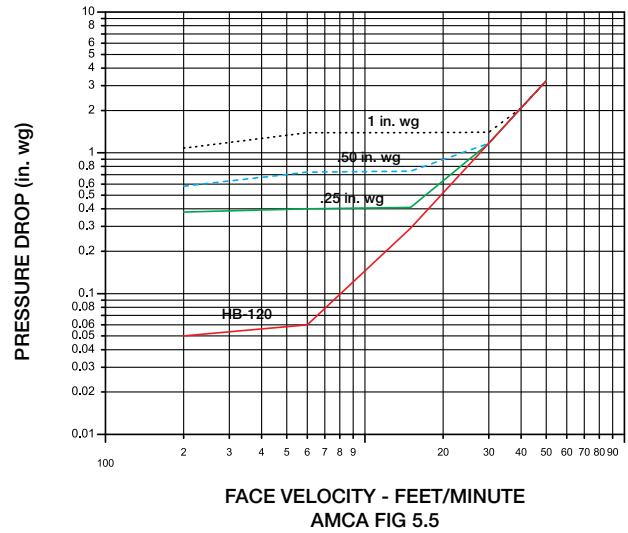
HBR-050
24 in.



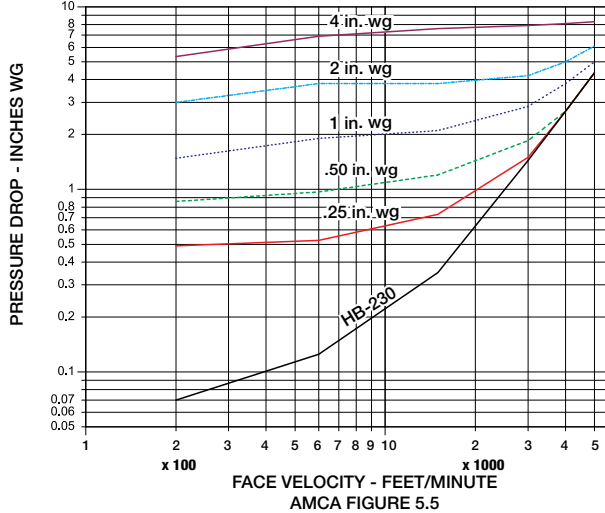
HBR-150 24 in.



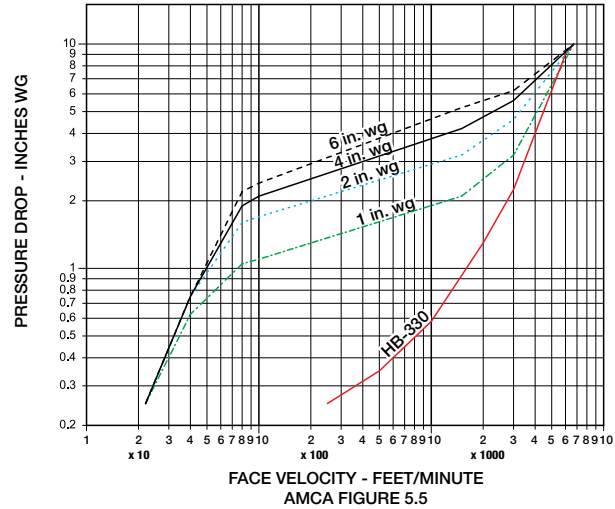
HPR-120 24 in. x 24 in.



HPR-230 24 in. x 24 in.



HPR-330 24 in. x 24 in.



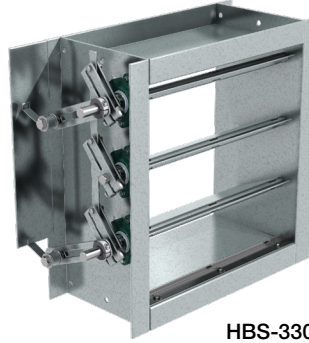
WDR-53/SSWDR-53

Ducted Inlet/Ducted Outlet			
Velocity (fpm)	6 in.	12 in.	24 in.
	Pressure (in. wg)		
500	0.233	0.070	0.045
1000	0.321	0.135	0.132
1500	0.444	0.228	0.252
2000	0.601	0.392	0.448

Free Inlet/Ducted Outlet			
Velocity (fpm)	6 in.	12 in.	24 in.
	Pressure (in. wg)		
500	0.236	0.072	0.049
1000	0.317	0.105	0.136
1500	0.414	0.205	0.274
2000	0.549	0.350	0.484

Blast Dampers - HBS Series

Blast dampers are designed to protect against blasts and instantaneous pressure changes. External clevis type linkage and external-mount relubricable ball bearings are standard. Models HBS-330/430 will close in the same direction as normal flow and HBS-331/431 will close in the opposite direction as normal flow.



HBS-330/430

Tornado Dampers - HTOD Series

Tornado dampers are designed to protect against tornadoes and instantaneous pressure changes. External clevis type linkage and external-mount relubricable ball bearings are standard. Model HTOD-330 will close in the same direction as normal flow and HTOD-331 will close in the opposite direction as normal flow.



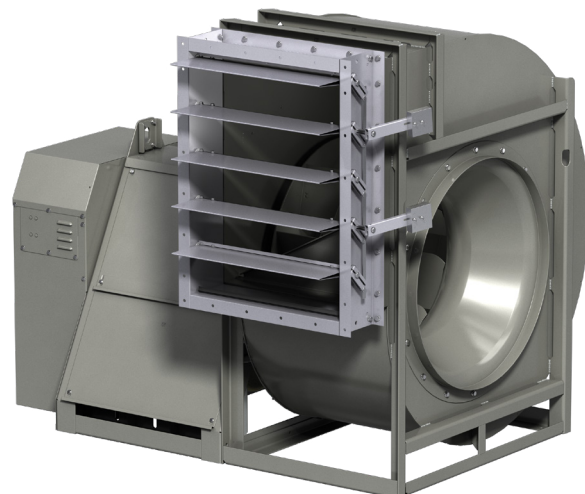
HTOD-330

	HBS-330	HBS-331	HBS-430	HBS-431	HTOD-330	HTOD-331
Maximum Pressure	160 in. wg (5.77 psi)	160 in. wg (5.77 psi)	415 in. wg (15 psi)	415 in. wg (15 psi)	83 in. wg (3 psi)	83 in. wg (3 psi)
Maximum Velocity fpm (m/s)	6400 (32.5)	6400 (32.5)	4000 (20.3)	4000 (20.3)	6400 (32.5)	6400 (32.5)
Minimum Temperature °F (°C)	-40° (-40°)	-40° (-40°)	-40° (-40°)	-40° (-40°)	-40° (-40°)	40° (-40°)
Maximum Temperature °F (°C)	250° (121°)	250° (121°)	250° (121°)	250° (121°)	250° (121°)	250° (121°)
Pressure Rise or Decrease	—	—	—	—	3 psi/seconds	3 psi/seconds

Fan Accessory

Industrial Backdraft Dampers

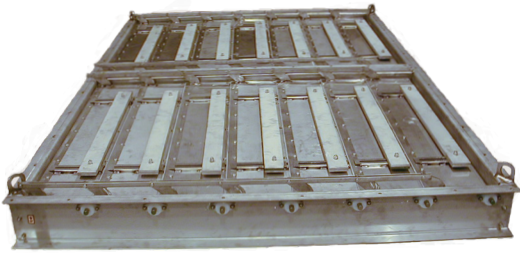
Industrial backdraft dampers are used on blower outlets for automatic isolation which allows air to pass in one direction and restrict flow in the opposite direction. Each damper is factory adjusted for its intended flow direction. Multiple nested counterbalance arms and weights are positioned to reduce load on bearings and linkage. Industrial backdraft dampers are recommended for low temperatures and clean air applications.



HB-230

Special Applications

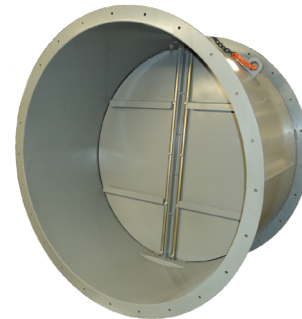
Greenheck's experienced staff will work to develop custom products to meet the needs of specific applications.



This HPR-330 was specifically designed for a tunnel sewage system in Singapore. The customer required a large pressure relief damper to vent-off excessive gasses upward due to rapid storm water influx. The design used blade weights to provide the initial 2 in. wg (0.5 kPa) relief pressure and movable weights to extend start-open pressure to 6.3 in. wg (1.6 kPa). The HPR-330 was constructed of 316 stainless steel.



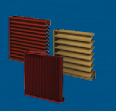
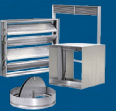
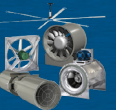
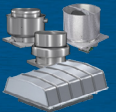
This backdraft damper was designed to prevent backflow to the customer's 48 in. diameter axial fan. To meet the customer's needs, the damper was designed to a special two-bladed vertical blade unit that can withstand 10 in. wg (2.5 kPa) of pressure and velocity over 5900 ft/min (30 m/s). The damper was constructed of carbon steel with a highly protective paint finish.



Backdraft dampers are used on sidewall propeller fans, sidewall exhaust fans, and centrifugal utility fans for exhaust or supply applications. These dampers can be used alone or in conjunction with a wall housing or wall collar.



WD series installed on sidewall propeller fan with a filtered supply wall housing.



Our Commitment

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

Product warranties can be found online at Greenheck.com, either on the specific product page or in the literature section of the website at Greenheck.com/Resources/Library/Literature.

