

BC 09



BETEC CAD.

Pressure Relief Dampers



PRD-GAB-12B

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.



Globally Recognized. Industry Respected.

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Pressure Relief Damper

BETEC CAD. manufactures Pressure Relief Damper or Non- return damper or gravity-operated damper, counter balancing damper, Self-balancing or Backdraft damper.

These damper open or close for intake or discharge or pressure relief vents in central HVAC applications. As the room pressure increases, the blades of the pressure relief damper automatically opens by relieving the excess pressure in the room and when pressure drops back to normal blades close by gravity or counter weight or spring.



Pressure Relief Damper

Standard Types and Models					
Item	Series	Model	Material		Application
			Frame	Blade	
Pressure Relief Damper Non Return Damper	B-10	PRD-GAB-11/12 NRD-GAB-11/12	G*/A/S	G/A*/S	Air Intake & Exhaust Stairwell pressurization In-duct ventilation
Counter Balance Damper	B-20	CBD-GAB-21/22	G*/A/S	G/A*/S	Fume exhaust Gravity hood intake and exhaust Room pressurization
Back Draft Damper	B-30	BDD-GAB-21/22	G*/A/S	G/A*/S	Blower outlets Branch duct isolation Emergency generator radiator outlets

Material Details

- All types and models of Pressure Relief dampers are available in Galvanized Steel, Stainless Steel & Aluminium according to the design and application.

Sheet Metal Galvanized Steel (GI)

Zinc coating Z-22 to Z-27 as per **ASTM-A653** Standards.

Sheet Metal Aluminium (AL)

Aluminium Sheet as per Alloy **A1100** Standards.
Extruded aluminium as per Alloy **6063 A** Standards.

Sheet Metal Stainless Steel (SS)

Stainless steel **304 / 316L**.

Applications:

GI Construction :For **HVAC** commercial,Residential etc.

AL Construction:For Hospitals,Labs,Green Building etc.

SS Construction:For Offshore, Oil & Gas etc.

The respective alphabet indicates the type of material.

G - Galvanized steel (**GI**)

S - Stainless steel (**SS**)

A - Aluminum (**AL**)

Alphabet indicates the type of installation.

A - Wall Mounted.

B - Duct Mounted

C - Flush Mounted.

BETEC CAD. Pressure Relief Dampers are manufactured for low leakage operation as per standard DW 142 Class C and confirmed to International Standards NFPA 90 A and UL 181 for erosion.

Note:

* Indicates **BETEC CAD's** Standard Construction.

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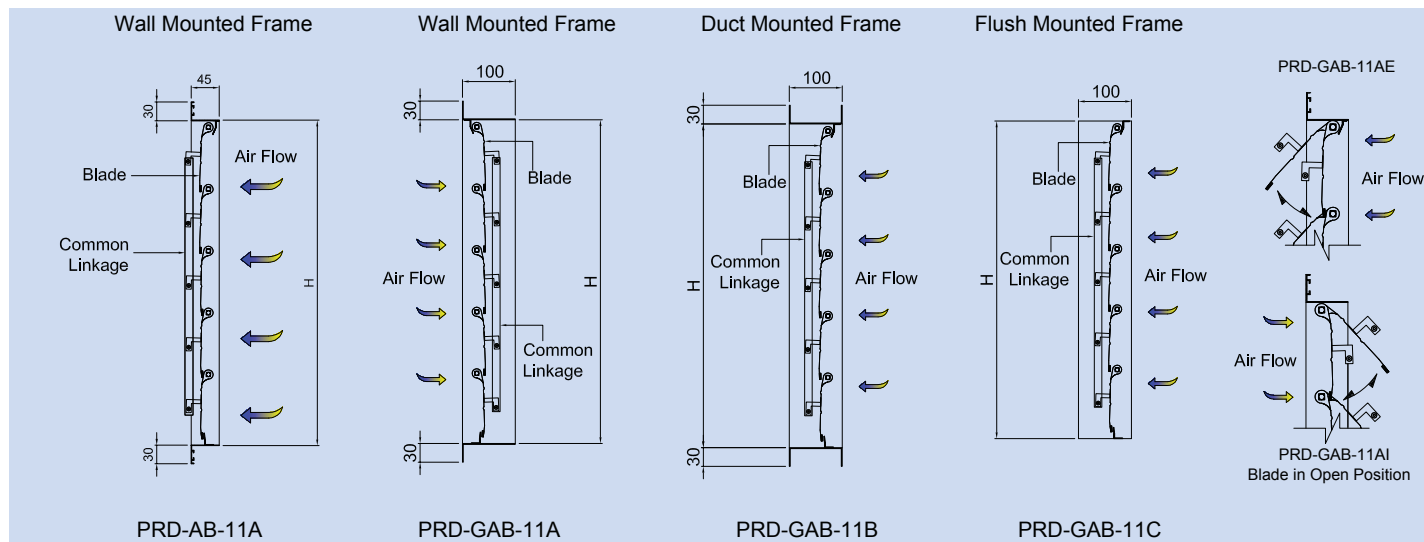


Pressure Relief Damper / Non Return Damper

B-10 Series

Model: PRD/NRD-GAB-11/12; Blade Width: 1 – Up to 100 mm; 2 – Up to 150 mm

Type : A - Wall Mounted (I - Internal ; E - External) ; B - Duct Mounted ; C - Flush Mounted



Standard Construction

Frame

0.9 mm (20 gauge) roll formed galvanized steel channel.

Blade

0.7 mm (22 gauge) roll formed aluminium.

Bushes

6 mm Ø Nylon.

Shaft

6 mm Ø Galvanized Steel.

Gasket

1.5 mm thick, 7 mm wide foam gasket.

Linkage

Common galvanized steel linkage.

Finish

Galvanized mill finish.

Mounting

Vertical.

Optional Fittings:

Limit Switches

Remote indication for damper open or close.

Brass Bushes

6 mm Ø bushes for heavy duty applications.

Transitions

Neck adaptor for round duct connections.

Counter Weight

For easy adjustment and balancing in the field.

Finish

Available with Powder coating , please specify color.

Note :

Please contact **BETEC CAD.** for customized design & additional information.

B-10 Series Model Details				
Model	Frame		Blade	
	Material	Thickness	Material	Thickness
PRD/NRD-GB-11/12A/B/C	GI	0.9 mm	GI	0.7 mm
PRD/NRD-GAB-11/12A/B/C	GI	0.9* mm	AL	0.7* mm
PRD/NRD-SB-11/12A/B/C	SS	0.9 mm	SS	0.7 mm
PRD/NRD-AB-11/12A/B/C	AL	0.9 mm	AL	0.7 mm

Alphabet indicates the type of installation

A - Wall Mounted.

B - Duct Mounted

C - Flush Mounted.

Optional Construction Details

Frame : Thickness up to 3 mm

Frame Depth : Up to 150 mm for Aluminium

Up to 150 mm for Galvanized/SS

Blade : Thickness up to 1.5 mm

Frame and Blade Material : Stainless Steel (304/316L)

Any Combination of W x H									
PRD/NRD-GAB-11/12									
Width in Inchs	4"	6"	10"	12"	16"	18"	24"	30"	32"
Height in inches	4"	6"	10"	12"	16"	18"	24"	30"	32"

Note:

Maximum single module construction - 800 mm x 800 mm

Multiple module available with mullion.

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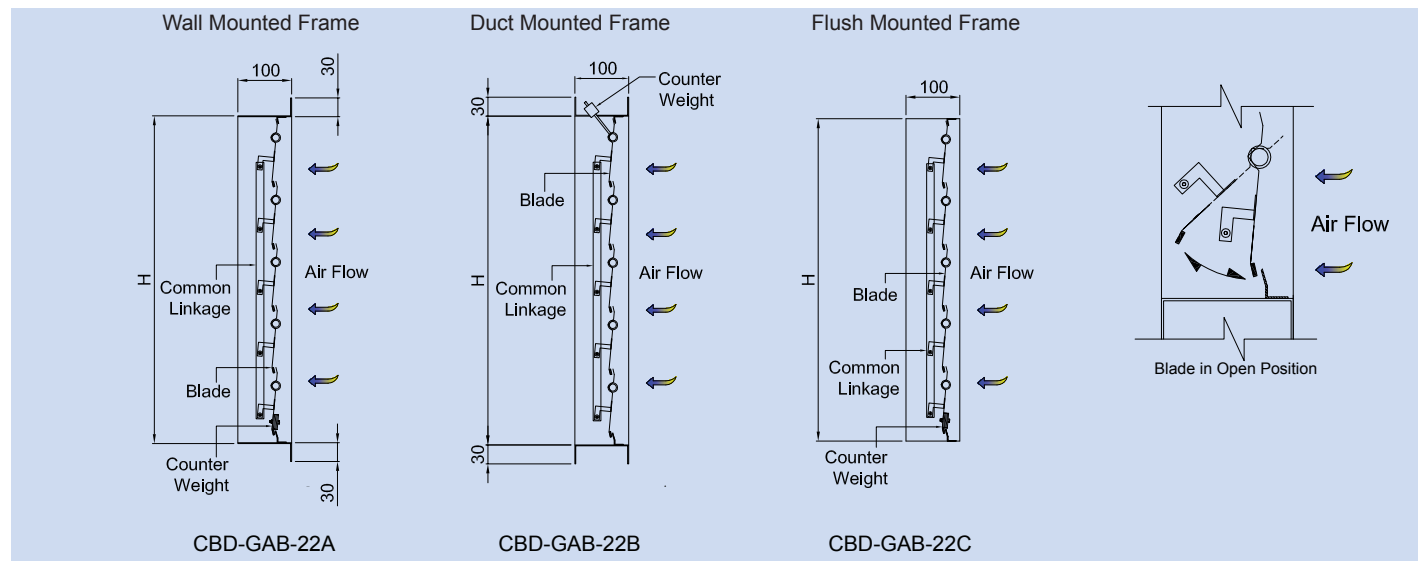


Counter Balancing Damper - CBD

B-20 Series

Model: CBD-GAB-21/22; Blade Width: 1 – Up to 100 mm ; 2 – Up to 150 mm

Type : A - Wall Mounted; B - Duct Mounted; C - Flush Mounted



Standard Construction

Frame

0.9 mm (20 gauge) roll formed galvanized steel channel.

Blade

0.9 mm (20 gauge) roll formed aluminium.

Bushes

12 mm Ø Nylon.

Shaft

12 mm Ø Galvanized Steel.

Gasket

1.5 mm thick, 7 mm wide foam gasket.

Linkage

Common galvanized steel linkage.

Counter Weight

For easy adjustment and balancing in the field.

Finish

Galvanized Mill finish.

Mounting

Vertical.

Optional Fittings:

Limit Switches

Remote indication for damper open or close.

Brass Bushes

12 mm Ø bushes for heavy duty applications.

Transitions

Neck adaptor for round duct connections.

Finish

Available with Powder coating , please specify color.

Note :

Please contact **BETEC CAD.** for customized design & additional information.

B-20 Series Model Details

Model	Frame		Blade	
	Material	Thickness	Material	Thickness
CBD-GB-21/22 A/B/C	GI	0.9 mm	GI	0.9 mm
CBD-GAB-21/22 A/B/C	GI	0.9* mm	AL	0.9* mm
CBD-SB-21/22 A/B/C	SS	0.9 mm	SS	0.9 mm
CBD-AB-21/22 A/B/C	AL	0.9 mm	AL	0.9 mm

Alphabet indicates the type of installation

A - Wall Mouted.

B - Duct Mounted

C - Flush Mounted.

Optional Construction Details

Frame : Thickness up to 3 mm

Frame Depth : Up to 150 mm.

Blade : Thickness up to 1.5 mm

Frame and Blade Material : Stainless Steel (304/316L)

Any Combination of W x H									
CBD-GAB-21/22									
Width in Inchs	4"	8"	12"	16"	20"	24"	32"	36"	40"
Height in inches	4"	8"	12"	16"	20"	24"	32"	36"	40"

Note:

Maximum single module construction - 1 meter x 1 meter
Multiple module available with mullion.

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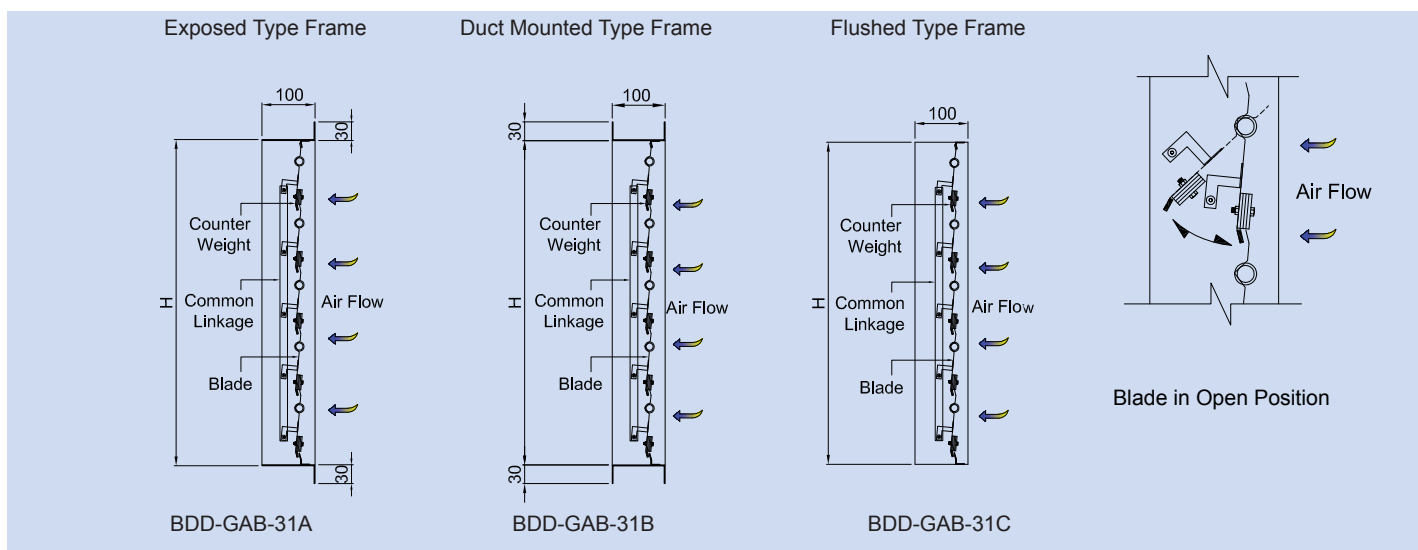


Back Draft Dampers - BDD

B-30 Series

Model: BDD-GAB-31/32; **Blade Width :** 1 – Up to 100mm; 2 – Up to 150mm

Type : A - Wall mounted ; B - Duct Mounted; C - Flush Mounted



Standard Construction

Frame

0.9 mm (20 gauge) roll formed galvanized steel channel.

Blade

0.9 mm (20 gauge) roll formed aluminium

Bushes

12 mm Ø Nylon

Shaft

12 mm Ø Galvanized Steel.

Gasket

1.5 mm thick, 7 mm wide foam gasket.

Linkage

Common Galvanized Steel linkage.

Finish

Galvanized Mill finish.

Mounting

Vertical.

Optional Fittings:

Limit Switches

Remote indication for damper open or close.

Brass Bushes

12 mm Ø bushes for heavy duty applications.

Transitions

Neck adaptor for round duct connections.

Finish

Available with Powder coating , please specify color.

Note :

Please contact **BETEC CAD.** for customized design & additional information.

B- 30 Series Model Details				
Model	Frame		Blade	
	Material	Thickness	Material	Thickness
BDD-GB-31/32A/B/C	GI	0.9 mm	GI	0.7 mm
BDD-GAB-31/32A/B/C	GI	0.9* mm	A L	0.9* mm
BDD-SB-31/32A/B/C	SS	0.9 mm	SS	0.7 mm
BDD-AB-31/32A/B/C	AL	0.9 mm	A L	0.9 mm

Alphabet indicates the type of installation

A - Wall Mouted.

B - Duct Mounted

C - Flush Mounted.

Optional Construction Details

Frame : Thickness up to 3 mm

Frame Depth : Up to 150 mm.

Blade : Thickness up to 1.5 mm

Frame and Blade Material : Stainless Steel (304/316L)

Any Combination of W x H									
BDD-GAB-31/32									
Width in Inchs	4"	8"	12"	16"	20"	24"	32"	36"	40"
Height in inches	4"	8"	12"	16"	20"	24"	32"	36"	40"

Note:

Maximum single module construction - 1 meter x 1 meter

Multiple module available with mullion.

Engineering and Performance Data - PRD/CBD/BDD

B-10/20/30 Series

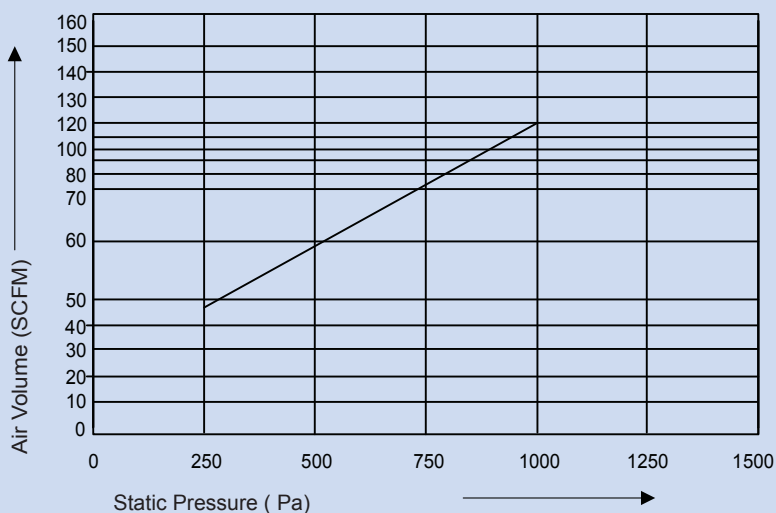
Quick selection Table				
Frame		Blade		Start to Open Pressure in. w.g
Material	Thickness (mm)	Material	Thickness (mm)	
GI	0.9	AL	0.7	0.03
GI	0.9	GI	0.7	0.08
SS	0.9	SS	0.7	0.08
AL	0.9	AL	0.7	0.03
GI	0.9	AL	0.9	0.04
GI	0.9	GI	0.9	0.1
SS	0.9	SS	0.9	0.1
AL	0.9	AL	0.9	0.04

Note: Damper size may cause start-open pressure to vary from above mentioned values.

For specific start to open pressure and counter balance weight, please contact **BETEC CAD**.

Model: B-10 /20 / 30 Series

System Static Pressure Vs. Air Leakage



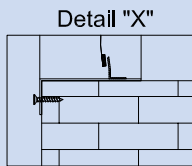
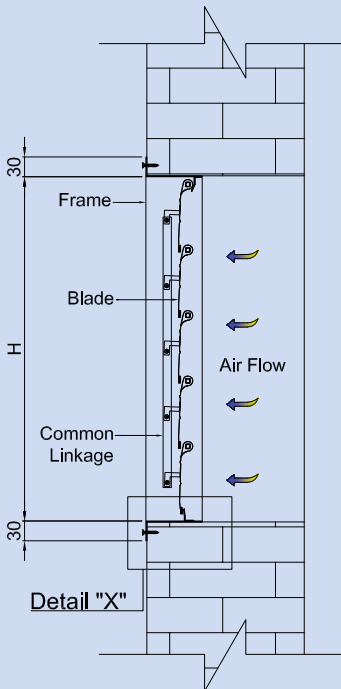
- Leakage data is based on pressure relief dampers blades in 100% closed position.
- Dampers Construction based on International standards for leakage DW 142 Class C.

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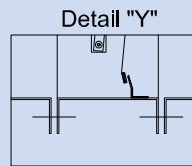
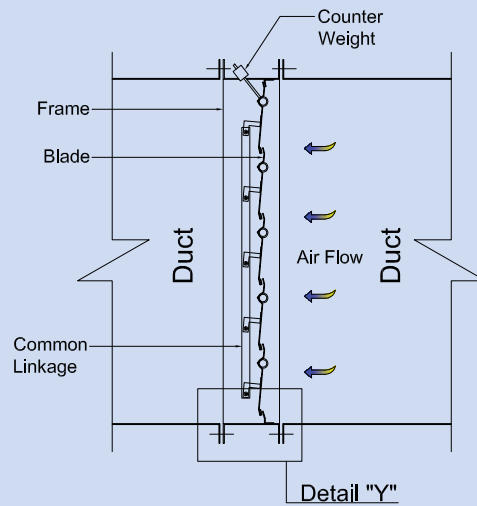


Pressure Relief Dampers

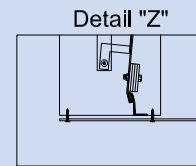
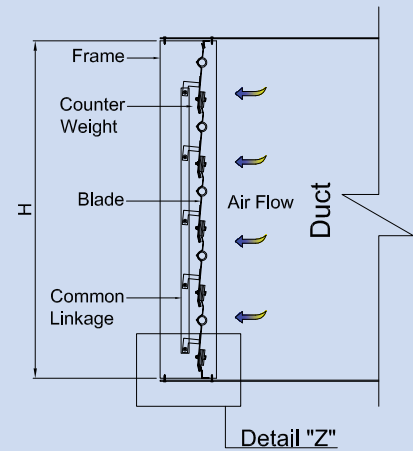
Installation Details



Wall Mounting Installation



Duct Mounting Installation



Flush Mounting Installation

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Ordering Data

PRD/ NRD - CBD - BDD	Pressure Relief Damper						
<div>↑</div>	G	Galvanized Steel					
	S	Stainless Steel					
	A	Aluminium					
	<div>↑</div>	G	Galvanized Steel				
		A	Aluminium				
		S	Stainless Steel				
	<div>↑</div>	<div>↑</div>	B	BETEC CAD.			
			<div>↑</div>	10	Pressure Relief Damper / Non Return Damper		
				20	Counter Balancing Damper		
		30		Backdraft Damper			
<div>↑</div>		<div>↑</div>	1	Up to 100 mm			
			2	Up to 150 mm			
			<div>↑</div>	A	Wall Mounted		
	B			Duct Mounted			
C	Flush Mounted						
PRD / NRD / CBD / BDD	X	X	B	X	X	X	PRD-GB-11A
	Frame Material	Blade Material		Series	Blade Type	Blade Operation	

Note :

- For blade type, add Series to blade type.
For example: PRD-GB-(10+1=11) A => PRD-GB-11A.
- If frame and blade material is same, use single alphabet.
Example : PRD-GB-11A where G = Galvanized frame and blade.
PRD-GAB-11A where G = Galvanized frame.
A = Aluminium blade.

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Pressure Relief Dampers

Special Notes:

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Pressure Relief Dampers

Special Notes:

[illegible]

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