



Non Return Damper  
Gravity Louver  
Pressure Relief Damper



## Our Product Ranges

### Dampers

- 1 Fire Dampers
- 2 Fire / Smoke Dampers
- 3 Volume Control Dampers
- 4 Motorized Control Dampers
- 5 Pressure Relief Dampers /Non Return Dampers

### Variable Air Volumes

- 6 Pressure Independent VAV
- 7 Constant Air Volume VAV
- 8 By Pass VAV

### Louvers

- 9 Sand Trap Louvers
- 10 Acoustic Louvers
- 11 Stationery Louvers / Architectural Louvers
- 12 Storm Louvers
- 13 Weather Louvers

### Sound Attenuators

- 14 Rectangular Sound Attenuators
- 15 Circular Sound Attenuators
- 16 Crosstalk Attenuators

### Electric Duct Heaters

- 17 Flange & Slip 'n' Type
- 18 Modulating & On/Off Type

### Air Outlets

- 19 Registers & Grilles
- 20 Diffusers (Linear Diffusers, Sq. & Rect. Ceiling Diffusers, Round Diffusers, Jetflow Diffusers)
- 21 Swirl Diffusers & Disc Valves
- 22 Drum Louvers



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## Introduction

**Airwellcare** extruded aluminum Gravity Operated Louver for use in light to medium duty commercial HVAC applications to pass airflow in one direction and to prevent airflow in the opposite direction, suitable for use in fan discharge applications.

Its corrosion resistant extruded aluminum blades that overlap the jambs for maximum weather protection.



**Airwellcare** Gravity Louvers are designed and manufactured in compliance with international standards, to achieve the optimum results, to cater to the requirements of HVAC Industry.

## FEATURES & BENEFITS

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▶ Available Frames in Galvanized Steel, Stainless Steel &amp; Aluminium</li> <li>▶ Powder Coated PEF RAL Finishes, SDF &amp; PVDF 3 Coat and Wooden Finishes</li> <li>▶ Blade Material of Extruded Aluminium, Galvanized or stainless steel.</li> <li>▶ Blades Edges with Neoprene Gaskets to prevent leakage through blades</li> </ul> | <ul style="list-style-type: none"> <li>▶ Blades with Counter Weights to Control the Flow in Low, Medium and High Pressure Applications.</li> <li>▶ Suitable for Wall Exhaust &amp; Duct Application.</li> <li>▶ Opening pressure range between 50 Pa to 300 Pa.</li> <li>▶ Temperature operation range up to +100°C, optionally up to +180°C.</li> <li>▶ Blades with Common Linkages</li> </ul> |
|--|---|

## Model : AHS GL 100

**Airwellcare** Gravity Louvers and its robust combination of Galvanized Steel & Aluminium construction features with remarkable design makes perfect performance in medium and high Velocity and pressure applications.

### Construction Details

#### Casing

1.2mm thick Galvanized steel / Stainless Steel Hat shaped channel.

2.0mm thick. Extruded Aluminium Frame is Optional.

Standard Frames are of 100mm Deep. Above 100mm Deep are Optional.

#### Blades

1.0mm thick High Quality Extruded Aluminium Corrosion Resistant Blade.

0.8mm Thick Galvanized Steel / Stainless Steel Blades are Optional.

#### Blade Orientation

Blades are Horizontal directions.

#### Blade Axle

The Blade Axle is made of 10.0 mm Dia Galvanized Steel.

#### Common Linkage

The blades are linked each other with the help of Linkage Channel for rattle free operation.



#### Bearing / Bush

Nylon Bush will be positioned on the Louver blades & Jambs.

Brass Bearing / Bush is Optional.

#### Finish & Colour

- ▶ Mill Finish
- ▶ Powder Coating PEF-RAL finish
- ▶ Wood Finishes

The following custom based optional coatings are also available upon request.

- ▶ Super-Durable Polyester Powder Coating (SDF)
- ▶ Hyper-Durable Fluorocarbon Polymer Coating (HDF)
- ▶ Polyvinylidene fluoride coating/KYNAR Coating (PVDF/KYNAR)

## Model : AHS NRD 100

**Airwellcare** Non Return Dampers / Pressure Relief Dampers are designed to prevent reverse airflow in horizontal applications with airflow vertically upwards or in vertical exhaust application. The damper is opened by the air pressure differential between two sides and it is closed by help of gravity.

## Construction Details

### Casing

1.2mm thick Galvanized steel / Stainless Steel Hat shaped channel.

2.0mm thick. Extruded Aluminium Frame is Optional.

Standard Frames are of 100mm Deep. Above 100mm Deep are Optional.

### Blades

1.0mm thick High Quality Extruded Aluminium Corrosion Resistant Blade.

0.8mm Thick Galvanized Steel / Stainless Steel Blades are Optional.

### Blade Orientation

Blades are Horizontal directions.

### Blade Axle

The Blade Axle is made of 10.0 mm Dia Galvanized Steel.

### Common Linkage

The blades are linked each other with the help of Linkage Channel for rattle free operation.



AHS NRD 100

### Bearing / Bush

Nylon Bush will be positioned on the Louver blades & Jambs.

Brass Bearing / Bush is Optional.

### Finish & Colour

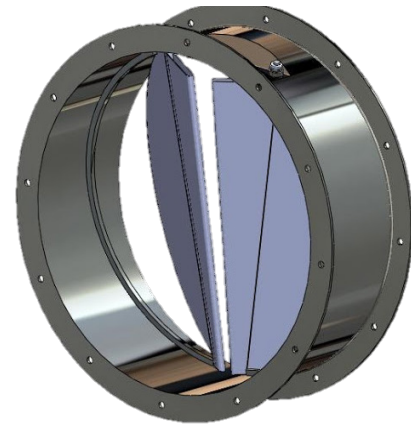
- ▶ Mill Finish
- ▶ Powder Coating PEF-RAL finish
- ▶ Wood Finishes

The following custom based optional coatings are also available upon request.

- ▶ Super-Durable Polyester Powder Coating (SDF)
- ▶ Hyper-Durable Fluorocarbon Polymer Coating (HDF)
- ▶ Polyvinylidene fluoride coating/KYNAR Coating (PVDF/KYNAR)

## Model : AHS NRD HD 300

**Airwellcare Heavy Duty range of Non Return Dampers** use in many industries. The body is a short circular duct with fully welded flanges. These are normally pre-drilled to customer's requirements. The blades are pivoted such that the axis of the blade is inclined into the direction of flow and outwards at the top. In this way, as the blades swing open at the onset of flow, the centre of gravity of the blades rises, and they naturally fall closed when the flow ceases. For vertical upwards flow, stops are provided to prevent over opening. Neoprene blade seals that provide quiet closure as well as extra weather protection.



AHS NRD HD 200

## Construction Details

### Casing

The damper casing is formed from 2.0 mm thick Galvanized sheet steel into a rigid drum, stiffened at either end with flange rings to ensure proper alignment of the blade and shaft.

### Blades

The Butterfly Single Skin blades are formed of 1.20 mm Galvanized sheet steel and close against the stopper rigidly fixed on the casing.

### Spring Closure

Blades are operated with Gravity Flow and returned with the help of Spring.

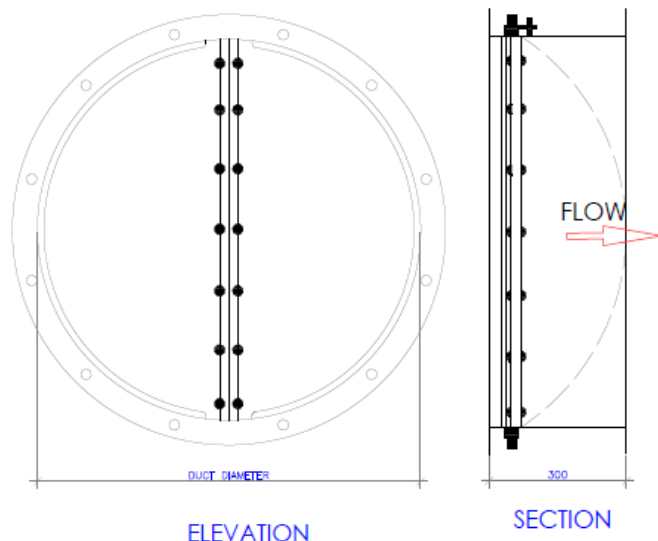
Circular Dampers are available in sizes up to 1000mm Dia.

### Blade Axle

The Blade Axle is made of 12.0 mm Dia Round Galvanized Steel Rod. Stainless Steel 304 & 316 L are optional.

### Flanges

Round Flanges Welded secured to the frame with ISO Standard hole sizes as per Custom requirements.



## Model : AHS NRD 200 C

**Airwellcare Circular** Non Return Dampers are designed to prevent reverse airflow in horizontal applications with airflow vertically upwards or in vertical exhaust application. Designed for use in AC, Dryer vent, Exhaust, extractor or range hoods, Heating systems, fans, vents and other residential, commercial and industrial HVAC



## Construction Details

### Casing

1.0 mm thick. Galvanized Steel Casing.

Stainless Steel & Aluminium Casing are optional.

### Blades

The Butterfly Single Skin blades are formed of 0.70 mm Thick. Aluminium

Smooth-running spring and an internal foam strip to keep the blades from rattling and can be installed horizontally or vertically.

Galvanized Steel Blades are Optional.



### Spring Closure

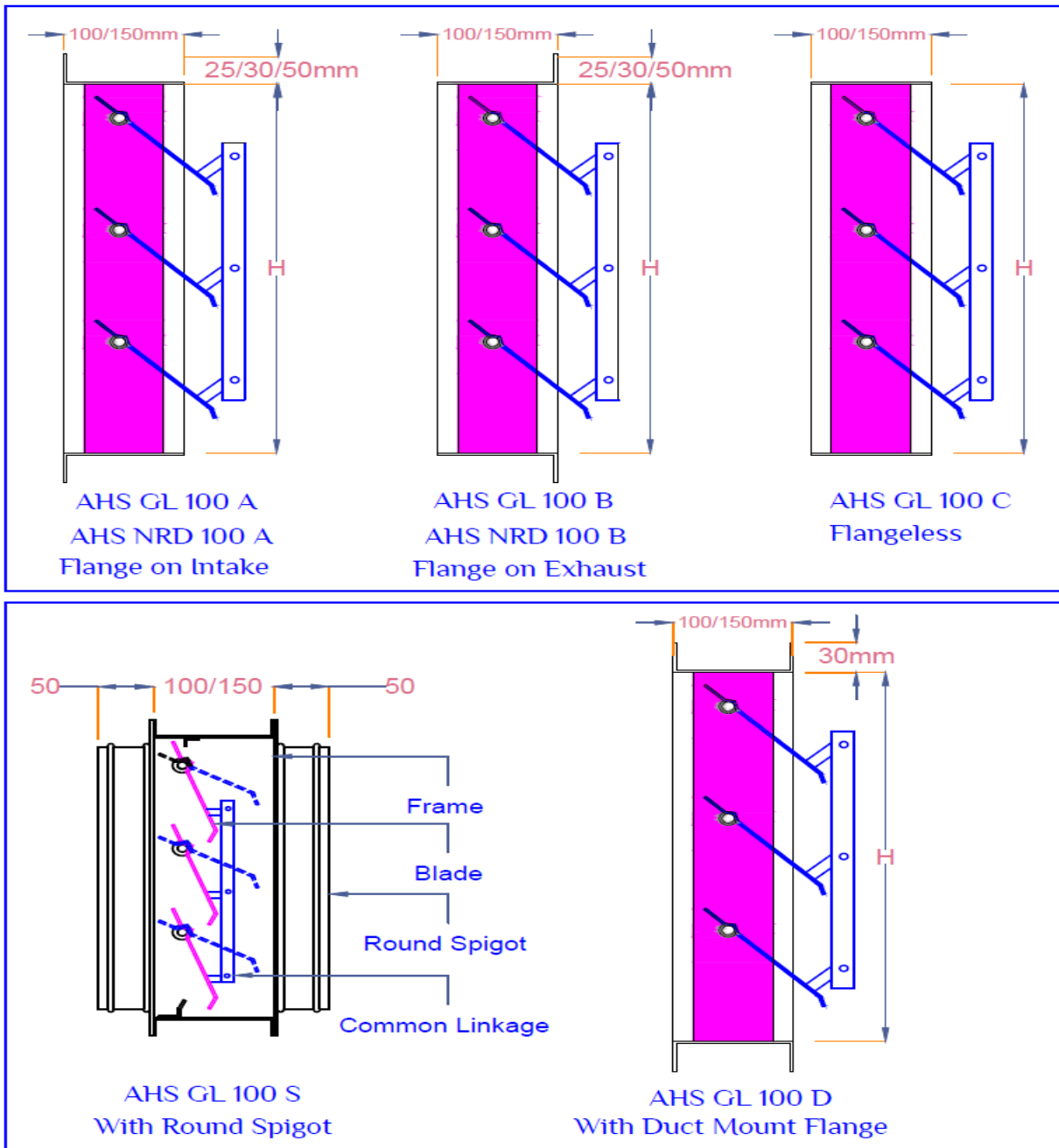
Blades are operated with Gravity flow and returned with the help of Spring.

### Finish & Colour

- ▶ Mill Finish



## MODEL REFERENCE



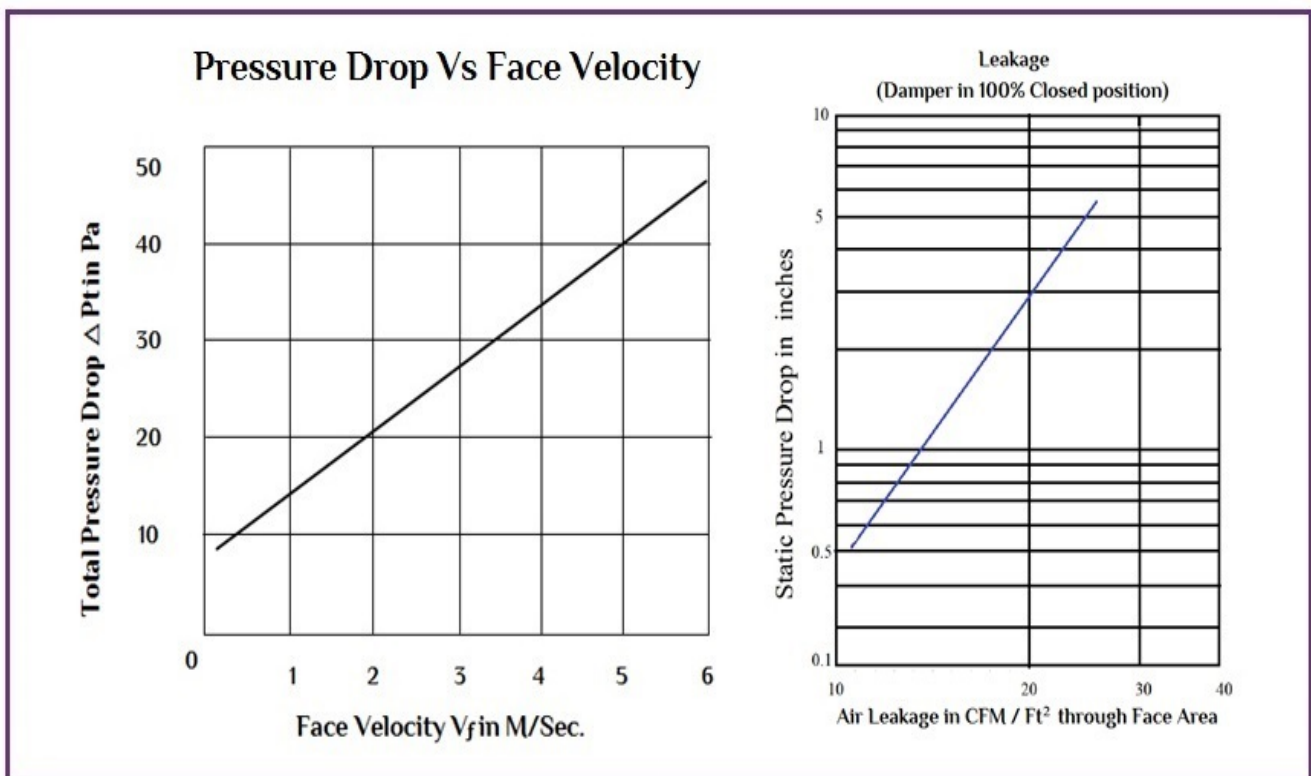
Minimum Single Module Size (Width x Height)	Maximum Single Module Size (Width x Height)	Maximum Multiple Module Size
300 x 300mm	1200 x 1200mm	Customers Option

Gravity Louvers larger than the maximum single module sizes are fabricated in multiple section assemblies. These assemblies consists of sections of equal size.

## Engineering Guidelines

### Face Velocity & Pressure Drop Curve

MODEL : AHS NRD 100 A/B/C & MODEL : AHS GL 100 A/B/C

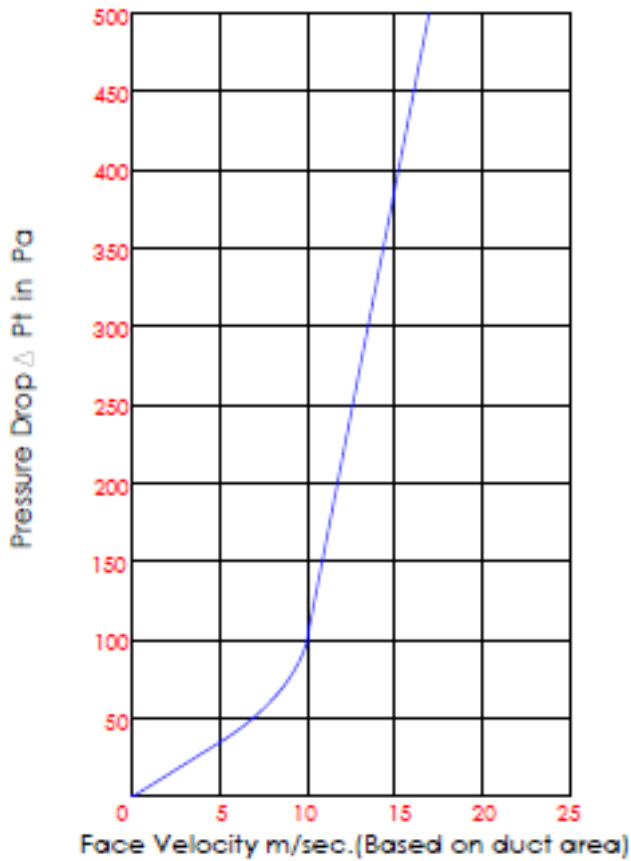


## Engineering Guidelines

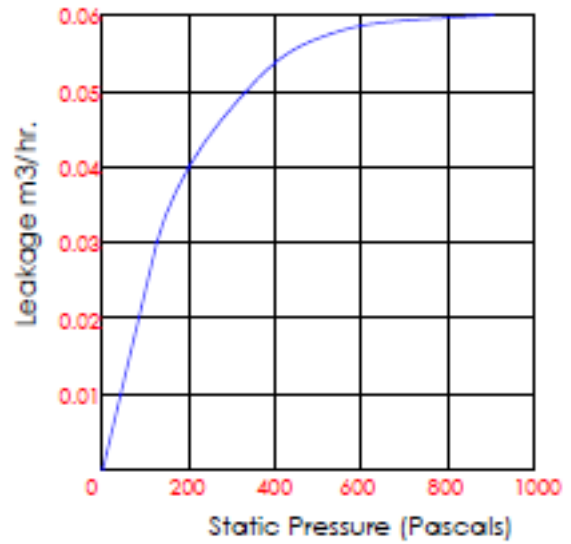
### Face Velocity & Pressure Drop Curve

MODEL : AHS NRD HD 300

Open Pressure Drop Characteristic Curve

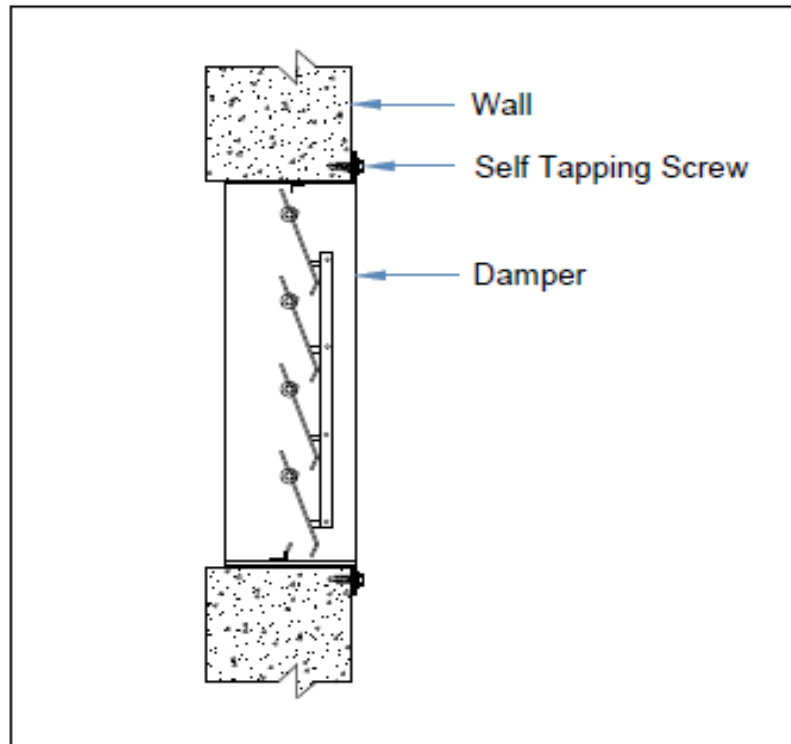


Leakage Characteristic Curve

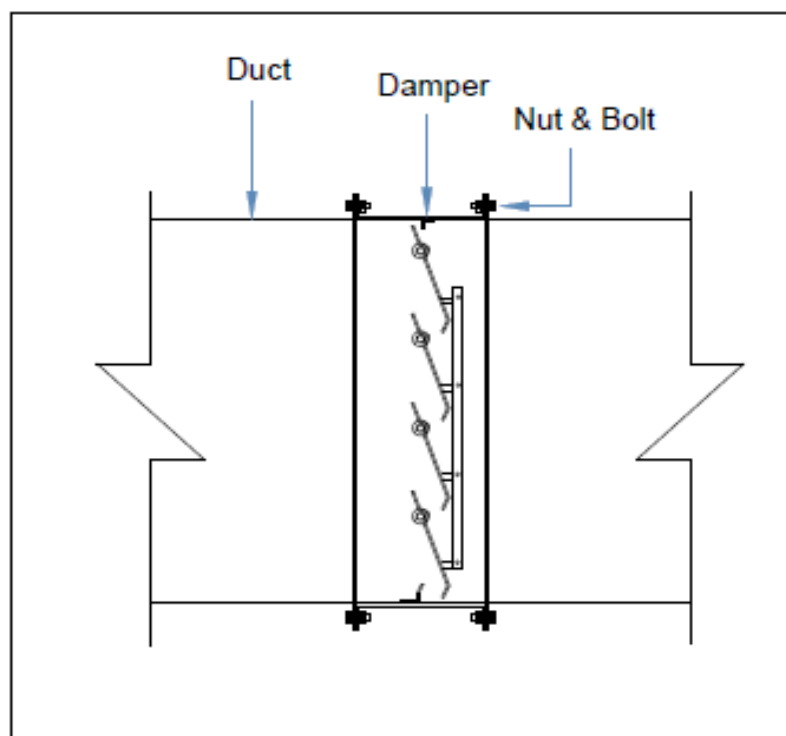


## Installation Details

### Wall Mounting Installation



### Duct Mounting Installation



## Material Storage, Operation and Maintenance

### Handling

Gravity Louvers (GL), Backdraft Dampers (BDD), Non Return Dampers (NRD) / Pressure Relief Dampers (PRD) have to be carefully handled during loading / off-loading which will be the first step required for successful operation and performance. These dampers must be handled with care to prevent bending or twisting of frames, blades, linkage control parts and counter balance weights.

### Maintenance

Gravity Louvers (GL), Backdraft Dampers (BDD), Non Return Dampers (NRD) / Pressure Relief Dampers (PRD) have to be carefully handled during loading / off-loading which will be the first step required for successful operation and performance. These dampers must be handled with care to prevent bending or twisting of frames, blades, linkage control parts and counter balance weights.

### Installation

In all cases, these dampers must be installed squarely, without twisting or bending of frames, blades or linkages. Devices must not interfere with damper operation.

### Troubleshoot

Clean and lubricate, concealed channel linkage may require complete removal of damper  
Check the following steps if NRD/PRD/BDD does not close appropriately.

1. Adjust Counter Balance weights (if applicable).
2. If step 1 fails, remove counter balance weights.
3. If step 2 fails, remove the counter balance brackets.
4. To achieve pressurization of room, adjust with the balancing weights accordingly.



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