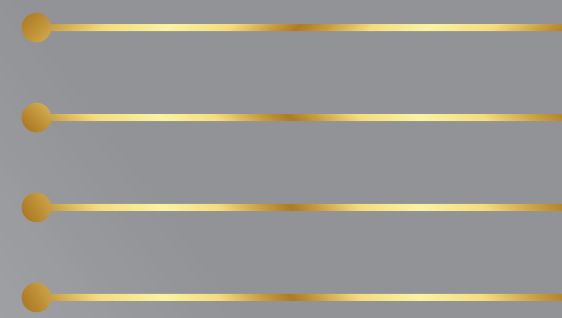


Makkah
For Air Outlets



BACK DRAFT DAMPERS (GSH, BDD, & PRD)

Product Description

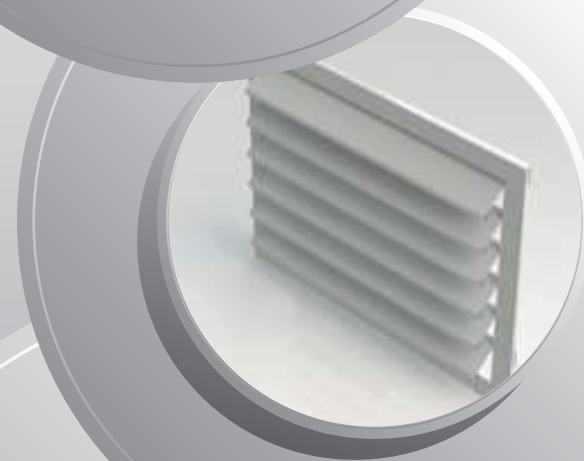
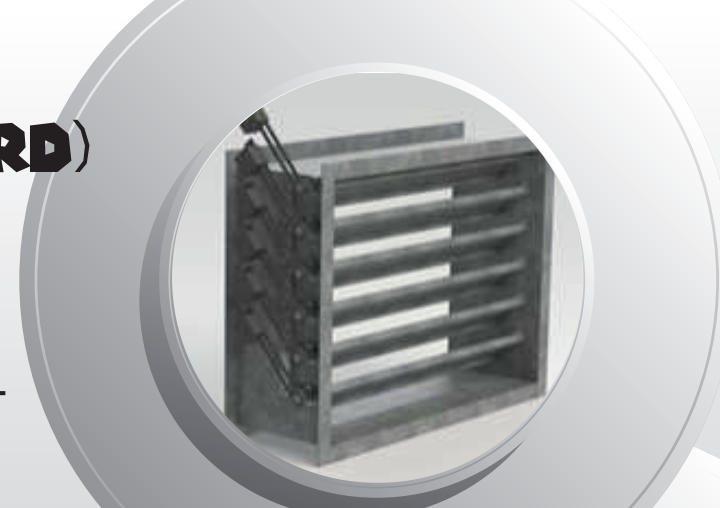
Makkah Back Draft Dampers are nonreturn dampers designed for automatic isolation of individual sections of an air conditioning system, allowing airflow in one direction only.

Makkah has developed three types of Back Draft Dampers as following:

-GSH Light Back Draft Damper (Gravity Shutter) is constructed of extruded Aluminum blades and are rated for velocities up to 2000 fpm (10m/s) and pressure up to 2" WG (500Pa). GSH is used mainly for constant airflow systems.

-BDD Back Draft Damper is constructed of galvanized blades, and rated for velocities up to 2500fpm (12.5m/s) and pressure up to 3" WG (750Pa). BDD has an elevated open pressure than GSH. BDD is mainly used for variable Both GSH and BDD are used in intake and discharge openings in air conditioning airflow systems. The blades open by the airflow, and close by gravity. When installed after a fan, the damper will prevent the wind from causing the fan to run backwards, and will prevent the ingress of rain, dirt or birds into the system when the fan switches off. In a multi fan installation, the damper prevents back draught through the nonoperating fans.

-PRD Pressure Relief Damper is a back draft damper having an adjustable start to open pressure. PRD uses counter weights to finetune the settings of start to open pressure and this is adjustable from 0.25" to 4.0" WG (60to 1000Pa). PRD is rated for velocities up to 5100fpm (25m/s) and pressure up to 13.5" WG (3.5kPa). PRD is to protect HVAC systems and industrial processes by relieving air pressure. It would relieve either an unexpected overpressure (e.g. due to closing doors in a staircase) or a negative pressure (e.g. downstream of a rapidly closing fire damper in a duct).

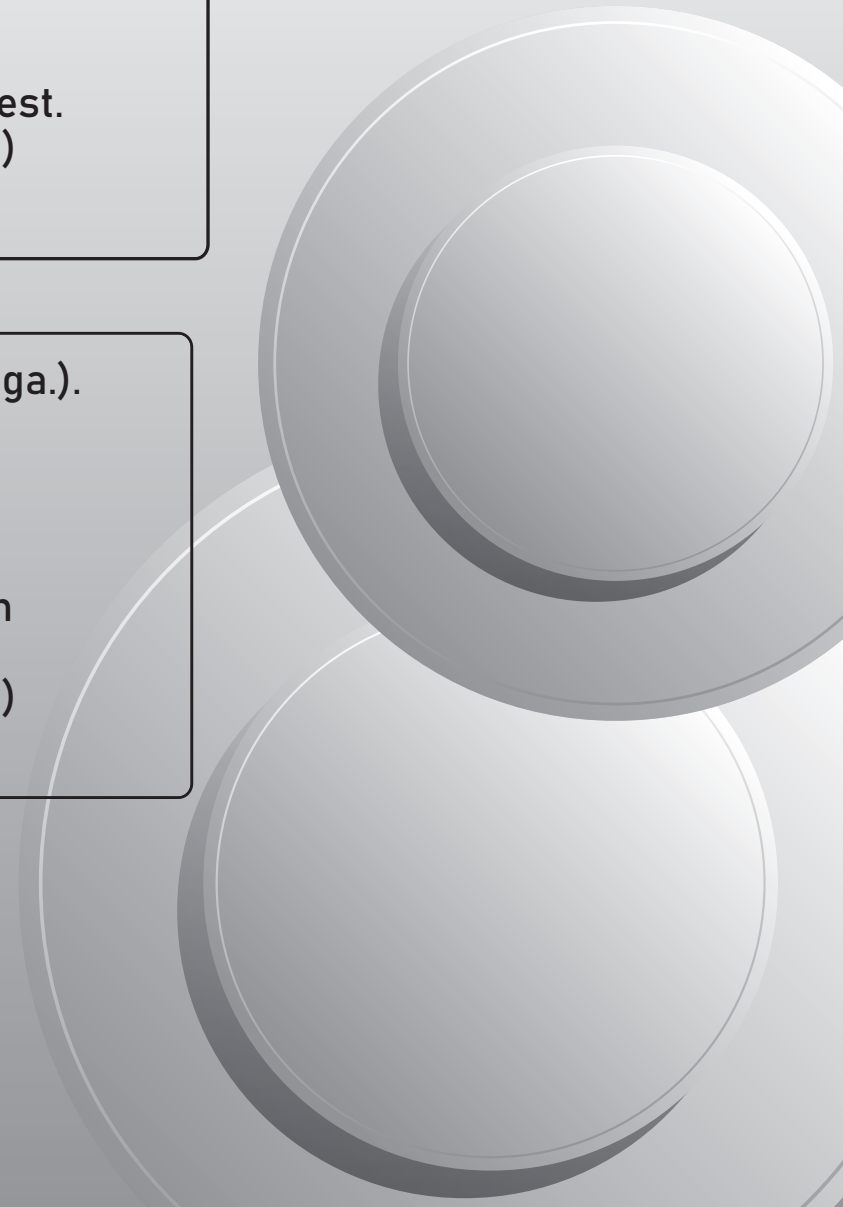


GSH Construction and Characteristics

- Frame of extruded aluminum for GSHW (wall mounted) and of galvanized steel hat channel 100mm×15mm×1mm (4in.×5/8in.×20ga.) for GSH-D (Duct mounted).
- Blades of Extruded Aluminum
- Blade Seals of sponge (optionally rubber).
- Linkage: None
- Finish of polyester powder coated (RAL 9016). Other colors on request.
- Maximum Single Section Size: 1200mm W × 2400mm H (48in. × 96in.)
- Minimum Size: 150mm W × 150mm H (6in. × 6in.)

BDD Construction and Characteristics

- Frame of galvanized steel hat channel 125mm×mm×mm (5in.×7/8in.×16ga.). Optionally with One side flange for wall mounting.
- Blades of galvanized steel
- Blade Seals of sponge (optionally rubber).
- Linkage: side linkage (optionally face linkage)
- Finish of MF or polyester powder coated (RAL 9016). Other colors on request.
- Maximum Single Section Size: 1200mm W × 2400mm H (48in. × 96in.)
- Minimum Size: 150mm W × 150mm H (6in. × 6in.)



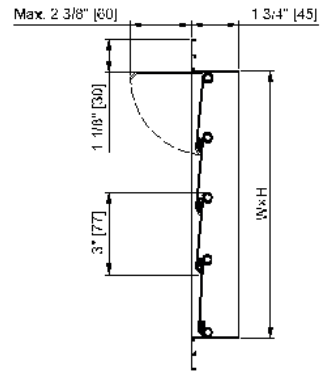
PRD Construction and Characteristics

- Frame of galvanized steel channel 150mm×25mm×1.5mm (6in.×1in.×16ga.)
- Blades of Airfoil shape, 1-U shape or -2-V shape 1mm (20ga.) galvanized steel
- Blade Seals of rubber.
- Axles of plated steel rod.
- Linkage: Side linkage (optionally face linkage)
- Pressure Set of Adjustable arms and weights.
- Finish of Mill galvanized.
- Pressure Relief range 60Pa (0.25in. wg) to 1000Pa (4.0in. wg)
- Back Pressure range 1500—3500Pa (6.0-13.5in. wg)
- Velocity range 20—25m/s 3900-5100fpm)
- Temperature range -40°C (40°F) to 120°C (250°F)
- Size Limitations:
 - Maximum Single Section Size: 1200mm W × 2400mm H (48in. × 96in.)
 - Maximum Double Section Size: 2400mm W×2400mm H (96in. × 96in.)
 - Minimum Size: Single blade 150mm W × 150mm H (6in. × 6in.)

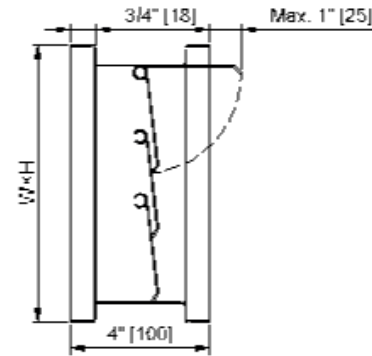


Dimensions

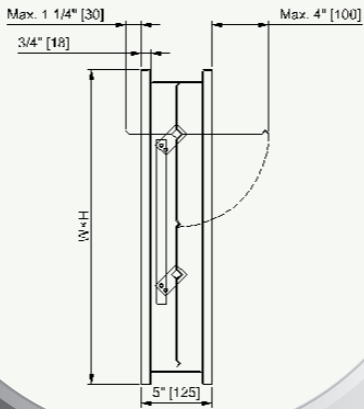
GSH-W (Wall Mounted)



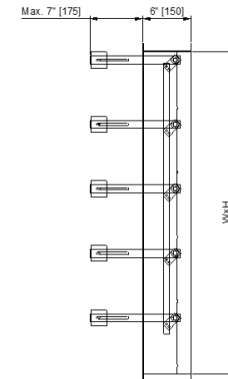
GSH-D (Duct Mounted)



BDD



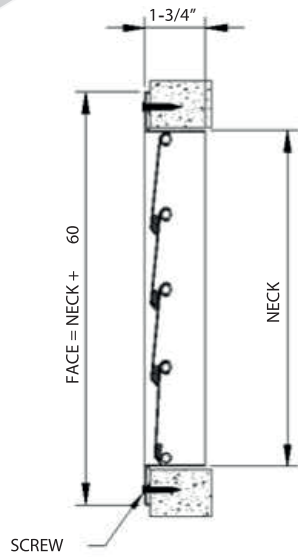
PRD



Note:
W and H are furnished 5 mm less than nominal size except for PRD which is exact to nominal size.

Installation

Wall Mounted
GSH - W



Unit 1 in Operation
Unit 2 in-Stand by

Duct Mounted
GSH - D

