



# Dampers (FIRE, SMOKE & HVAC) & Louvers

Caring for Human Life & Property





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**AXIS SAFETY ENGINEERING LTD.**





# Introduction

NAFFCO Flow Control provides a complete solution for the HVAC and construction projects, along with the customized system design and supply for the unique projects.

Since its inception, NAFFCO Flow Control has been continuously striving through its research and development to find out the ever changing needs of the market and cater to the same, with the help of its carefully selected principals. The product portfolio offers a wide, unique & exclusive range of innovative, cost effective and eco-friendly products.

We are committed to provide the highest quality products and solutions therefore, we only supply globally recognized and approved products such as UL, FM, Kitemark, LPCB, CE, WRAS, Applus, AMCA and more. The product portfolio ranged from Shield's Steel & HDPE piping systems to the complete robust system for the industrial ventilation and more.

State-of-the-art FM approved HDPE Pipes are manufactured here in the UAE, with its full range. We do supply the fusion machines along with the technicians for on-site operations.

HDPE fittings category include segmented and moulded fittings with an option of custom fittings.

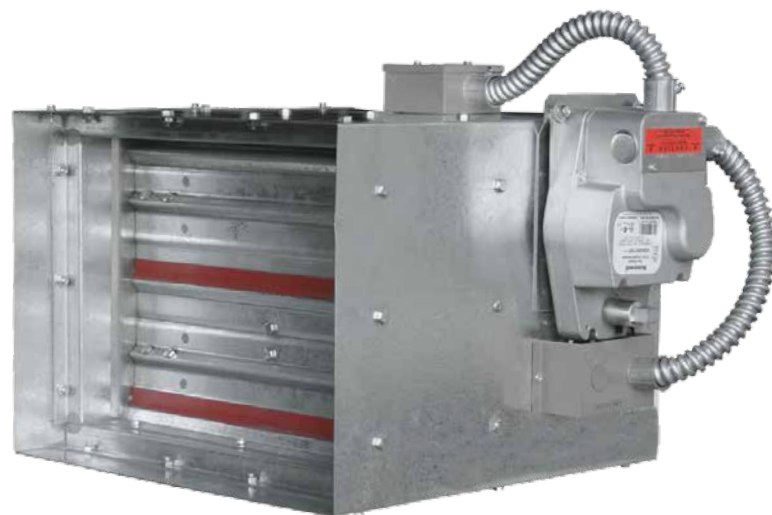
With representation in Middle East and North Africa (MENA) region, we simultaneously works on opportunities to explore new markets.

We believe in total customer satisfaction thus, ensure qualified and well-experienced support team to better understand your concerns and solve them in time.

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# Fire & Smoke Dampers

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## Curtain Fire Damper NFC FD 4000 Series

### Models:

**NFC FD 4000 A: Blades inside air Stream**

**NFC FD 4000 B: Blades Partially inside air Stream**

**NFC FD 4000 C: Blades completely out of air Stream**

The design of modern era building construction projects involves highly complex and sophisticated infrastructure and requires total safety measures and energy efficient. One of the important measures in fire safety is to prevent human loss and project value. NAFFCO Fire Dampers are designed keeping in mind the safety of human life and property. Fire Dampers are required by International Uniform Building Code to maintain the Integrity and fire resistance rating of walls, partitions and floors.

**NFC FD 4000 SERIES**, Curtain type fire dampers are designed to block the spread of fire and smoke through ducts, walls, corridors or floors. These dampers are suitable for installation in walls & ceilings made from concrete, brickwork and gypsum having Fire resistance of 2 hours. Dampers are fitted with standard release 72 °C fusible links (UL listed).

**NFC FD 4000C CURTAIN FIRE DAMPERS** are made in accordance with BS 476 - parts 8 & 20, fire tested as per UL555 standard for safety. The fire endurance test requirements are based on recommendations as per NFPA 90A (Chapter 5.4.1.1 & 5.4.1). NAFFCO Fire Dampers are fire rated for 1.5 hrs and approved by local Civil Defence Authorities. These Fire Dampers with interlocking blades facilitates isolating compartments of fire in ventilation systems.



NFC FD 4000B



NFC FD 4000C



## Curtain Fire Damper NFC FD 4000 Series

### Models:

**NFC FD 4000 A: Blades inside air stream**

**NFC FD 4000 B: Blades partially inside air stream**

**NFC FD 4000 C: Blades completely out of air stream**



## MODEL: NFC FD 4000C

(Blades completely out of air stream)

### STANDARD CONSTRUCTION

- **FRAME:** Frame is welded construction of GI sheet 1.2mm (18G) z-27
- **BLADE:** High quality roll formed GI blades 0.8mm thick ribbed for extra strength. Blades Interlocked
- **FUSIBLE LINK:** Standard Fusible Link fuses at 72°C (165°F) UL Listed
- **SPRINGS:** Constant Force Coil Springs of stainless steel
- **RAMP BRACKET:** Ramp Bracket to hold spring and for positive latching
- **FIRE RATING:** 1.5 hour firerated - V/H
- **FINISH:** Galvanized Mill Finish.

### OPTIONAL:

- **SLEEVE:** GI Steel as per NFPA Table 3.4.6.3
- **FUSIBLE LINK:** Other rating of 95°C (202°F), 124°C (260°F)
- **RETAINING ANGLE:** Minimum 40mm x 40mm x 1.6mm thick
- **INSTALLATION FRAME:** HVAC or as Required
- **MICRO SWITCH:** For BMS open-close indication
- **INDICATOR:** Externally mounted open, close visible
- **MATERIAL:** Can be stainless steel if specified.

### AVAILABLE OPTIONS

- **NFC FD 4000 A** - Blades inside air stream
- **NFC FD 4000 B** - Blades partially inside air stream
- **NFC FD 4110 C (o/v)** - Circular oval spigot
- **NFC FD 4003 C** - Firerated 3 hrs Dynamic V/H.



**NOTE:** Standard construction is same as mentioned above.

# Motorized Combination Fire & Smoke Damper Model: NFC MFSD 4710

These Dampers are designed to block spread of fire & Smoke through ducts, walls and ceilings. Very efficient for use in Engineered Smoke Extraction System.



Motorized Combination  
Fire & Smoke Dampers  
(MFSD)

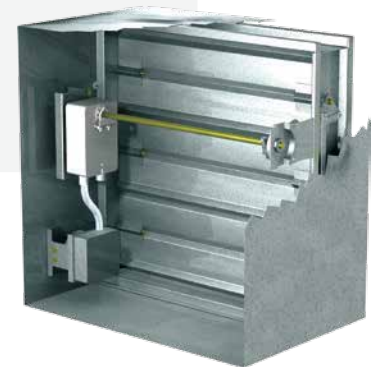
## SALIENT FEATURES

- Thermoelectric resetting device & spring return actuator
- Designed and Manufactured as per BS 476 – parts 8 & 20
- In accordance with UL555 & UL555S for Fire & Smoke Safety. Meets NFPA 90A
- Fire rating of 1.5/3 hrs with smoke leakage class I/II/III
- Isolates compartments of Fire in Ventilation Systems
- High performance Fire & Smoke isolating damper
- Can be used as Smoke Damper for Smoke Extraction System.

## MODEL: NFC MFSD 4710

### STANDARD CONSTRUCTION

- **FRAME:** Frame material is GI steel sheet 16G, G 90
- **BLADES:** High quality, '3V' formed GI blades 1.5mm thick
- **JAMB SEALS:** Compression type. SS Side jamb seals for free movement of blades
- **LINKAGES:** Electroplated or GI steel. Opposed blade operation
- **BUSHES:** Brass/Bronze sintered bushes (iolite)
- **JACK SHAFT:** 12.5mm or 1/2" diameter Zinc Electro-plated shaft
- **BLADE AXLES:** 12mm zinc electroplated or GI stub axles
- **BLADE STOP:** 18G (1.2mm) GI sheet formed angle
- **TIP SEALS:** Graphite/Silicon rubber blade tip seals standard
- **TRD:** Thermoelectric Tripping Device, 165°F (72°C) UL Listed
- **RATING:** Fire Rated for 1.5 or 3 hrs. & Smoke Leakage class I/II/III at 250°F or 350°F
- **ACTUATOR:** UL Listed spring return with 24V/230V AC Supply
- **SIZE:** Min. 6"x 8". Max. single section 36" X 36". Larger sizes in multi-section
- **UNDERSIZED:** Standard fabrication 1/4" undersized from the order size or specify exact size
- **SLEEVE:** Standard 270mm or 400mm, as required
- **VARIANTS:**
  - NFC MFSD 4710 S - Frame and blades in SS material
  - NFC - MFSD 4720 - Blade double wall 20G (1.0 mm) GI AEROFOIL..



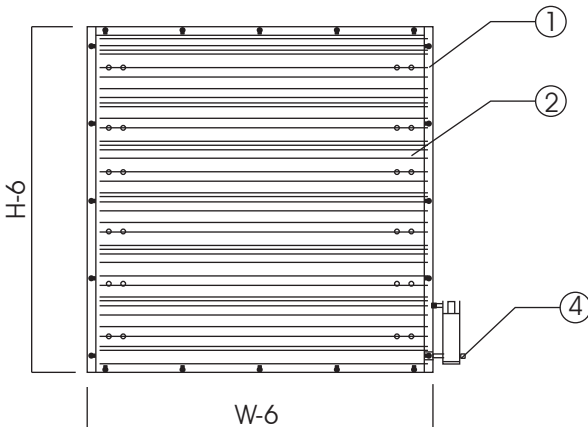
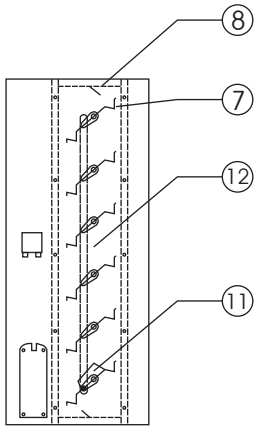
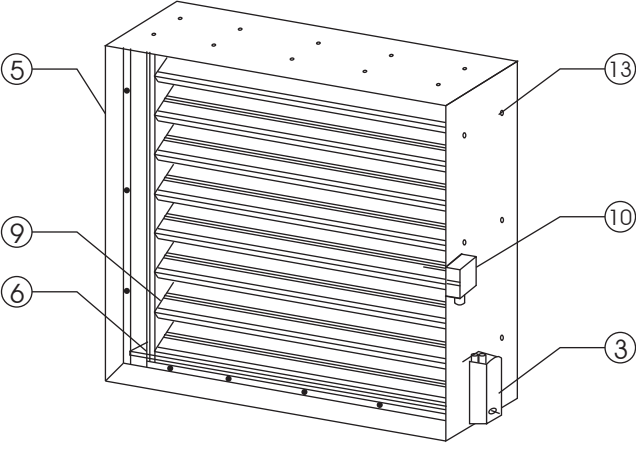
MFSD with actuator  
mounted inside



Multi frame MFSD

## MOTORISED Combination FIRE & SMOKE DAMPER

## DIMENSIONS (mm)

 <p>FRONT VIEW</p>	 <p>SECTIONAL VIEW</p>
 <p>ISOMETRIC VIEW</p>	<p><b>DESCRIPTION</b></p> <ol style="list-style-type: none"> <li>1. CASING G.I - 1.5MM</li> <li>2. 3V- GROOVE BLADES G.I - 1.5MM</li> <li>3. SPRING RETURN ACTUATOR</li> <li>4. JACK SHAFT</li> <li>5. SLEEVE</li> <li>6. BRASS BRUSH</li> <li>7. SILICON RUBBER TIP SEAL</li> <li>8. BLADE STOPPER</li> <li>9. SIDE SEAL</li> <li>10. THERMOELECTRIC RESETTABLE TRIPPING DEVICE</li> <li>11. JACK SHAFT LEVER</li> <li>12. SIDE LINKAGE</li> <li>13. BOLTS AND NUTS</li> </ol>

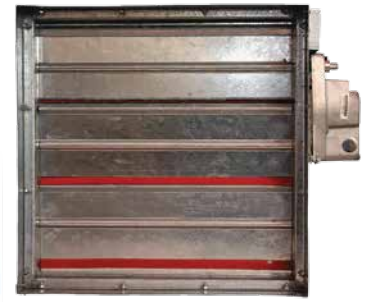




## Motorized Smoke Damper

### Model: NFC MSD 4610

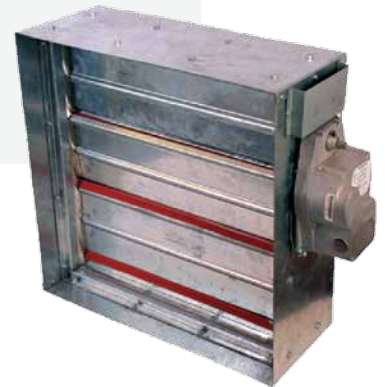
The Motorized Smoke Dampers are designed to block spread of Smoke through ducts & also extraction of smoke through shafts.



Motorized Smoke Damper

### SALIENT FEATURES

- Spring Return Actuator. Can take signal from FACP through smoke detector
- Designed and Manufactured as per BS 476 - parts 8 & 20
- In accordance with UL555S standard for Fire Safety. Meets NFPA 90A
- Smoke leakage class I/II/III
- Isolates compartments of Smoke in Ventilation systems
- Suitable for installation in sheet metal ductwork.



Motorized Smoke Damper

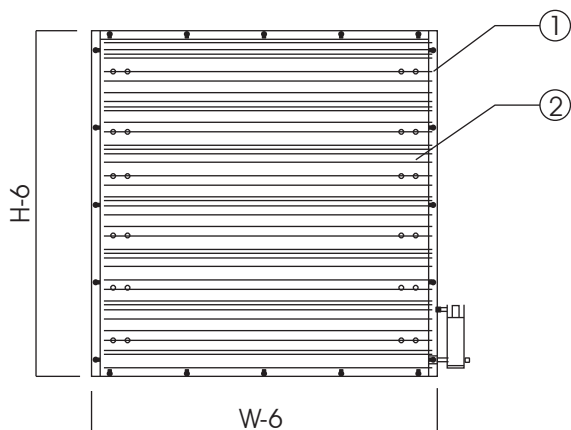
## MODEL: NFC MSD 4610

### STANDARD CONSTRUCTION

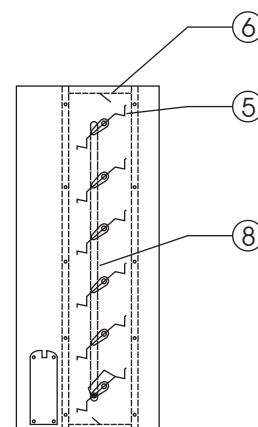
- **FRAME:** Frame material is GI steel sheet 16G, G-90
- **BLADES:** High quality, '3V' formed GI blades 1.5mm thick
- **JAMB SEALS:** Compression type SS. Side jamb seals for free movement of blades
- **LINKAGES:** Electroplated or GI steel. Opposed blade operation
- **BUSHES:** Brass / Bronze sintered bushes (iolite)
- **JACK SHAFT:** 12.5mm or 1/2" diameter Zinc Electro-plated shaft
- **BLADE AXLES:** 12mm zinc electroplated or GI studs
- **BLADE STOP:** 18G (1.2mm) galvanized steel sheet angle
- **ACTUATOR:** UL Listed spring return with 24V/230V AC Supply
- **RATING:** UL listed with smoke leakage class I at 250°F or 350°F
- **SIZE:** Min. 150mm x 150mm max. single section 914mm x 914mm. Larger sizes in multi-section
- **UNDERSIZED:** 1/4" under ordered size unless specified exact size
- **SLEEVE:** Standard 200mm, 250mm or big size as required
- **VARIANTS:** NFC MSD 4610 S - Frame & blade in SS material  
 NFC MSD 4620 - Class II @ 250°F or 350°F.

## MOTORISED SMOKE DAMPER

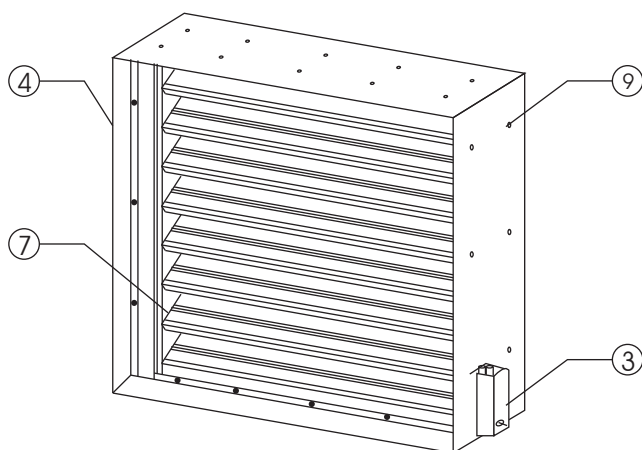
## DIMENSIONS (mm)



FRONT VIEW



SECTIONAL VIEW



ISOMETRIC VIEW

## DESCRIPTION

1. CASING G.I - 1.5MM
2. 3V- GROOVE BLADES G.I - 1.5MM
3. SPRING RETURN ACTUATOR
4. SLEEVE - 200 mm
5. SILICON RUBBER TIP SEAL
6. BLADE STOPPER
7. SIDE SEAL
8. SIDE LINKAGE
9. BOLTS AND NUTS





Fusible Link & Spring  
Return Actuator

## Motorized Fire Damper Model: NFC MFD 4810

The Motorized Fire dampers are designed to control spread of fire through ducts, walls, floors and ceilings.

### SALIENT FEATURES

- Fusible link or Thermoelectric tripping devise (TRD) with spring return actuator
- Designed and Manufactured as per BS 476 - parts 8 & 20
- In accordance with UL555 standard for Fire Safety. Meets NFPA 90A
- Fire rating of 1.5/3 hrs; Static and Dynamic
- Isolates compartments of Fire in Ventilation system
- Block the spread of fire through ducts, partition walls or floors.

### MODEL: NFC FD 4810

### STANDARD CONSTRUCTION

- **FRAME:** Frame material is GI steel sheet 16G, G-90
- **BLADES:** High quality, '3V' formed GI blades 1.5mm thick
- **JAMB SEALS:** Compression type. SS Side jamb seals for free movement of blades
- **LINKAGES:** Electroplated or GI steel. Opposed blade operation
- **BUSHES:** Brass/Bronze sintered bushes (iolite)
- **JACK SHAFT:** 12.5mm or ½" diameter Zinc Electro-plated shaft
- **BLADE AXLES:** 12mm zinc electroplated or GI studs
- **BLADE STOP:** 18G (1.2mm) galvanized steel formed angle
- **FUSIBLE LINK:** Standard fusible link 165°F (72°C) UL Listed or Thermoelectric Tripping Device (TRD)
- **ACTUATOR:** UL Listed spring return with 24V/230V actuator
- **SIZE:** Min. 150mm x 150mm. Larger sizes in multi-section 36" X 36" single section
- **UNDERSIZED:** ¼" under ordered size unless specified exact
- **VARIANTS:** NFC MFD 4810 S - Frame & blade in SS material  
NFC MFD 4820 - Blade double wall 20G (1 mm) GI AEROFOIL.



MFD without sleeves



TRD & Spring Return Actuator



## Access Door

### Model: NFC AD 4025

Access doors are designed to provide access to Fire dampers, Volume control dampers and Filters etc. in Ventilation system.



## ACCESS DOOR

Duct Access door allows easy and convenient access while providing a secure, positive seal when closed. The NFC AD 4000 series models offer quality, access doors with double skin construction in accordance with SMACNA requirements and quick simple installation. Access doors provide easy mounting and positive closure. All models are available in a wide variety of sizes to suit any specific application.

### MODEL: NFC AD 4025

#### STANDARD CONSTRUCTION

Double walled 24 Gauge (0.7mm), Galvanized steel sheet door panel for strength Frame construction in 22 Gauge (0.9mm)

- 1" (25mm) thick Fibre glass wool insulation for reduced noise and heat transfer
- Notched knock-over tabs.
- Progressive action, zinc plated cam-locks for positive closure
- Synthetic gasket for positive seal.

#### AVAILABLE OPTIONS

- 1-1/2" (40mm) thick fibreglass wool insulation
- Or 2" (50mm) thick fibreglass wool insulation.



Access door with handles & cam lock

### MODEL: NFC AD 4025 H

- Continuous hinge on one edge
- One Cam-lock on opposite edge (centrally) sizes up to 350mm
- Two Cam-locks on opposite edge on larger sizes.



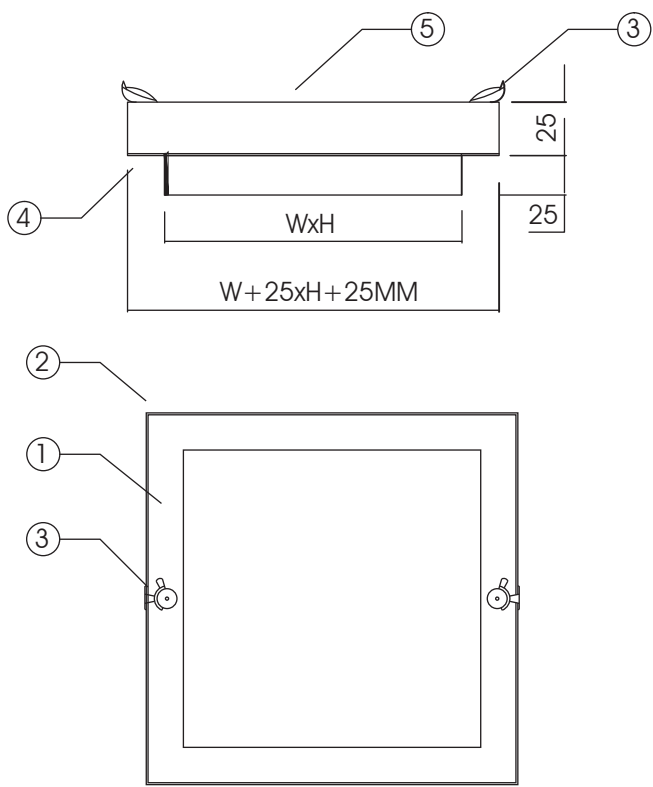
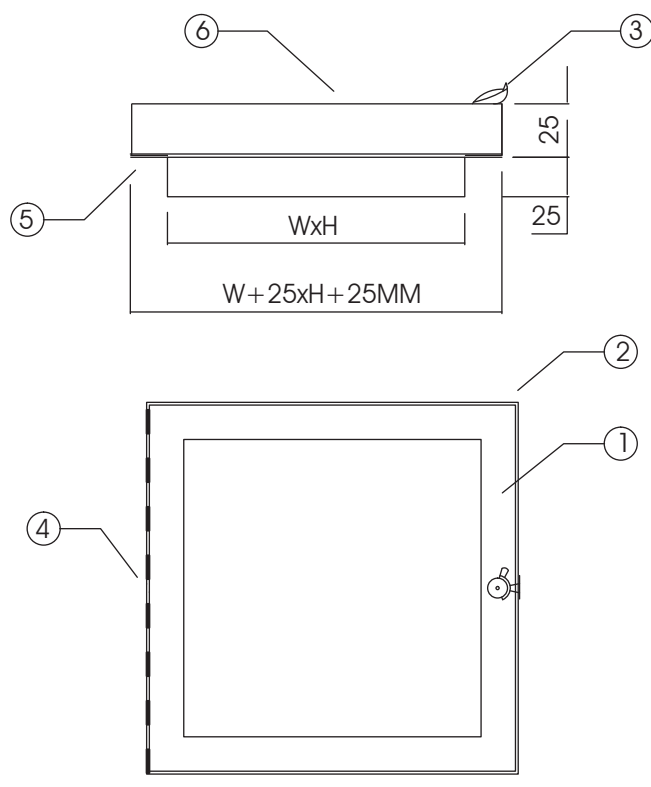
Access door with continuous hinges & cam lock

### MODEL: NFC AD 4025 RH

- Butt hinged on one edge
- One Cam-lock on opposite edge centrally placed for sizes up to 350mm
- Two Cam-locks on opposite edge on larger sizes.

## ACCESS DOOR

## DIMENSIONS (mm)

	
<p><b>ACCESS DOOR - NFC AD 4025</b></p> <p><b>DESCRIPTION</b></p> <ol style="list-style-type: none"> <li>1. DOOR PANEL</li> <li>2. FRAME</li> <li>3. SELF TIGHTENING CAM LOCKS</li> <li>4. 12MM WIDE GASKET</li> <li>5. MINERAL WOOL INSULATION</li> </ol>	<p><b>ACCESS DOOR - NFC AD 4025H</b></p> <p><b>DESCRIPTION</b></p> <ol style="list-style-type: none"> <li>1. DOOR PANEL</li> <li>2. FRAME</li> <li>3. SELF TIGHTENING CAM LOCKS</li> <li>4. CONTINUOUS HINGED</li> <li>5. 12MM WIDE GASKET</li> <li>6. MINERAL WOOL INSULATION</li> </ol>

## AVAILABLE SIZES (MM)

W x H	HOLE SIZES*
200 x 150	200 x 150
200 x 200	200 x 200
300 x 300	300 x 300
600 x 600	600 x 600

**\*NOTE:** Holes in ductwork must be cut in accordance with sizes above.

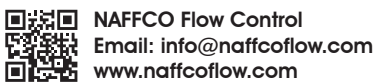
In line with NAFFCO Flow Control policy for continuous product development, NAFFCO Flow Control has the right to change specifications without prior notice.



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FLOW CONTROL



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