

# PYROGARDE MSFD600 Series

## FIRE AND SMOKE DAMPERS

**Galvanized steel sheet construction. In accordance suitable for installation in walls and partitions having 2 hours fire rating.**

**Model: MSFD 611 A (Flange Type)  
Fusible Link and Spring Return Actuator**

### Description

Combination Fire and Smoke dampers MSFD 611, facilitate isolating compartments of Smoke and/or Fire in Ventilation systems. These dampers block the spread of fire and/or smoke through ducts, partition walls or floors.

This high performance fire and smoke damper with actuator offer an effective barrier maintaining integrity in a fire situation and this is combined with low leakage characteristic for smoke management. It is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick or light weight partition walls.



## Standard Construction

### Frame

- Frame material is GI steel sheet 16G, Z-27.
- Frame is a welded construction at corners and protected by antirust zinc rich primer coating.

### Blades

- High quality, '3V' formed GI steel sheet blades 1.5mm thick x 150mm wide.
- Bottom blade width to suit the height of the damper.
- Dampers up to 275mm will be single blade construction.

### Jamb Seals

- Compression type SS grade 304, side seals to allow free movement of blade and ensure low leakage.

### Tip Seals

- Graphite/ silicon rubber blade tip seals are standard.

### Linkages

- Plated or galvanized steel, face Linkage parallel blade operation.

### Bushes

- Fire resistant Brass-Bronze sintered bushes (iolite).

### Jack Shaft

- 12mm diameter plated or galvanized round shaft.

### Blade Axles

- 12mm diameter zinc plated mild steel

### Blade Stop

- 18G (1.2mm) galvanized steel sheet angle.

### Fusible Link

- Standard fusible link 165 deg F (72 deg C)
- Thermo-electric tripping device available upon request.

### Actuator

- Honeywell or Belimo – spring return (UL classified) 24V / 230V actuator as per request.

### Size

- Minimum size - 150mm x 150mm
- Maximum size - 1000mm x 1000mm as single section.
- Larger sizes can be supplied as Multiple sections.
- Each section operates independent.

### Undersized

- ¼" under ordered size unless specified exact or actual size.

### Variants

- A - Flange type (flange on both sides)
- A1 - Flange type (flange and sleeve on opposite sides)

### Note

- FC - FAIL CLOSE - Standard supply
- FO - FAIL OPEN - optional
- RIGHT SIDE ACTUATOR - standard supply
- LEFT SIDE ACTUATOR - optional

# PYROGARDE MSFD600 Series

## FIRE AND SMOKE DAMPERS

### Also available

**Model MSFD 611A S:** Construction same as above except that blades are Stainless steel.

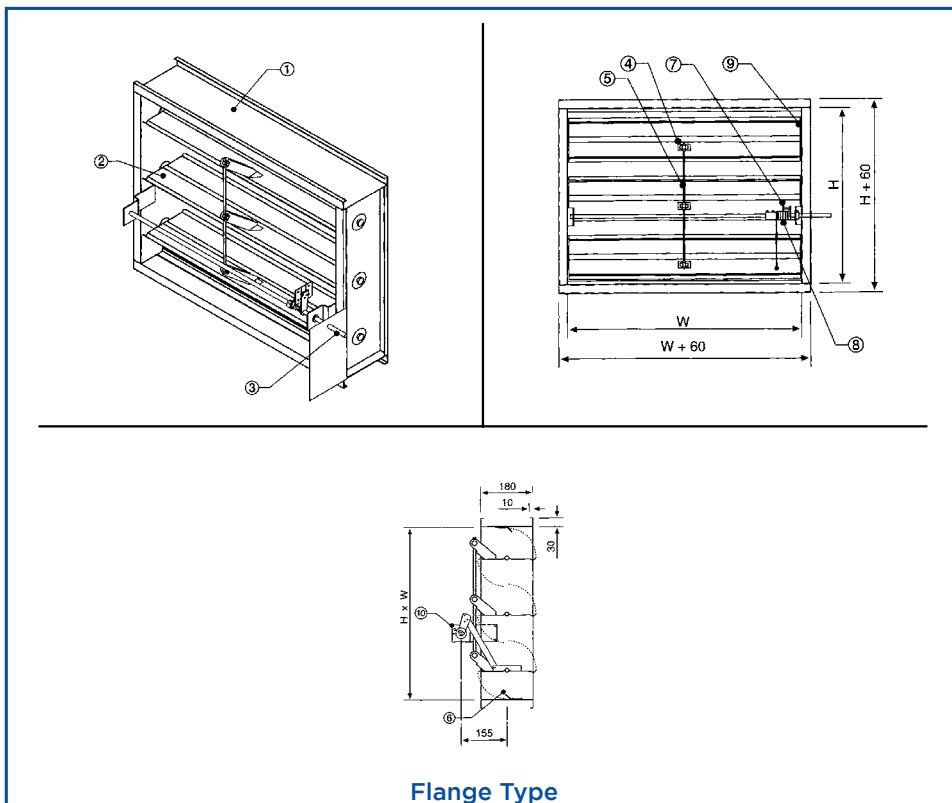
**Model MSFD 612A:** Construction same as above except that blades are double skin GI steel.

**Model MSFD 612A AL:** Construction same as above except that blades are double skin Aluminium aerofoil blades.

**Model MSFD 612A S:** Construction same as above except that blades are double skin SS blades.

See overleaf for product sketches.

### DIMENSIONS (mm)



### SIZES (mm)

W (in mm)	H (in mm)	Number of Blades
200	200	1
250	250	1
300	300	2
350	350	2
400	400	2
450	450	3
500	500	3
550	600	4
600	700	4
650	800	5
700	900	6
750	1000	6
800		
850		
900		
950		
1000		

For other sizes, please contact Geo Global Sales Team.

# PYROGARDE MSFD600 Series

## FIRE AND SMOKE DAMPERS

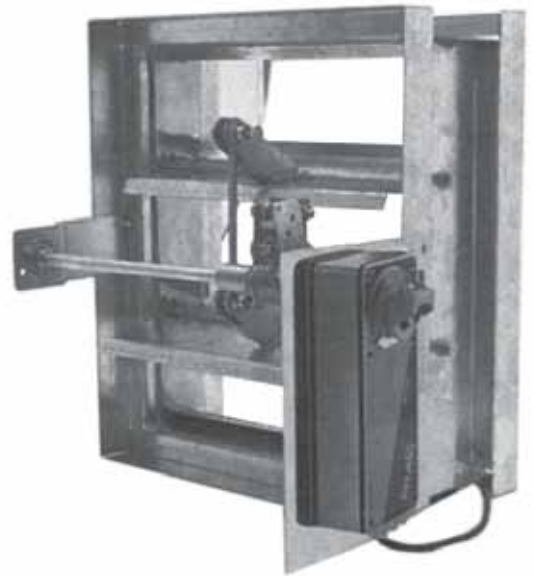
**Galvanized steel sheet construction. In accordance suitable for installation in walls and partitions having 2 hours fire rating.**

**Model: MSFD 611 B (Sleeve Type)  
Fusible Link and Spring Return Actuator**

### Description

Combination Fire and Smoke dampers MSFD 611, facilitate isolating compartments of Smoke and/or Fire in Ventilation systems. These dampers block the spread of fire and/or smoke through ducts, partition walls or floors.

This high performance fire and smoke damper with actuator offer an effective barrier maintaining integrity in a fire situation and this is combined with low leakage characteristic for smoke management. It is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick or light weight partition walls.



## Standard Construction

### Frame

- Frame material is GI steel sheet 16G, Z-27.
- Frame is a welded construction at corners and protected by antirust zinc rich primer coating.

### Blades

- High quality, '3V' formed GI steel sheet blades 1.5mm thick x 150mm wide.
- Bottom blade width to suit the height of the damper.
- Dampers up to 275mm will be single blade construction.

### Jamb Seals

- Compression type SS grade 304, side seals to allow free movement of blade and ensure low leakage.

### Tip Seals

- Graphite/ silicon rubber blade tip seals are standard.

### Linkages

- Plated or galvanized steel, face Linkage parallel blade operation.

### Bushes

- Fire resistant Brass-Bronze sintered bushes (iolite).

### Jack Shaft

- 12mm diameter plated or galvanized round shaft.

### Blades Axles

- 12mm diameter zinc plated mild steel.

### Blade Stop

- 18G (1.2mm) galvanized steel sheet angle.

### Fusible Link

- Standard fusible link 165 deg F (72 deg C) UL Listed.
- Thermo-electric tripping device available upon request.

### Actuator

- Honeywell or Belimo - spring return (UL classified) 24V / 230V actuator as per request.

### Size

- Minimum size - 150mm x 150mm
- Maximum size - 1000mm x 1000mm as single section.
- Larger sizes can be supplied as Multiple sections.
- Each section operates independent.

### Undersized

- ¼" under ordered size unless specified exact or actual size.

### Variants

- B - Standard HAT Shape

### Note

- FC - FAIL CLOSE - Standard supply
- FO - FAIL OPEN - optional
- RIGHT SIDE ACTUATOR - standard supply
- LEFT SIDE ACTUATOR - optional

# PYROGARDE MSFD600 Series

## FIRE AND SMOKE DAMPERS

### Also available

**Model MSFD 611B S:** Construction same as above except that blades are Stainless steel.

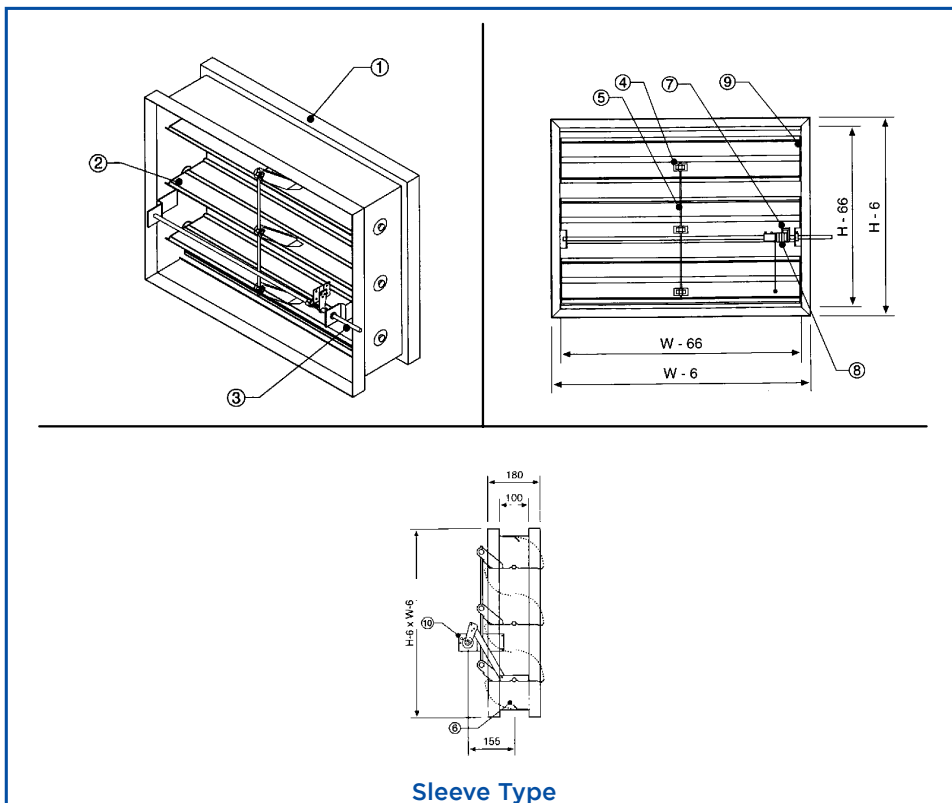
**Model MSFD 612B:** Construction same as above except that blades are double skin GI steel.

**Model MSFD 612B AL:** Construction same as above except that blades are double skin Aluminium aerofoil blades.

**Model MSFD 612B S:** Construction same as above except that blades are double skin SS blades.

See overleaf for product sketches.

### DIMENSIONS (mm)



### SIZES (mm)

W (in mm)	H (in mm)	Number of Blades
200	200	1
250	250	1
300	300	1
350	350	2
400	400	2
450	450	2
500	500	3
550	600	3
600	700	4
650	800	4
700	900	5
750	1000	6
800		6
850		7
900		
950		
1000		

For other sizes, please contact Geo Global Sales Team.

# PYROGARDE MSFD600 Series

## FIRE AND SMOKE DAMPERS

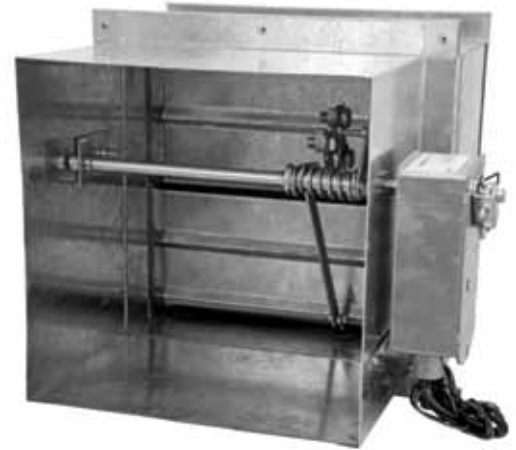
**Galvanized steel sheet construction. '3V' single skin blades. In accordance with UL555 & UL555S suitable for installation in walls and partitions having 2 hours fire rating.**

**Model: MSFD 611C (Spigot)  
Fusible Link and Spring Return Actuator  
(Spigot type - Rectangle, Round, Oval)**

### Description

Combination Fire and Smoke dampers MSFD 611, facilitate isolating compartments of Smoke and/or Fire in Ventilation systems. These dampers block the spread of fire and/or smoke through ducts, partition walls or floors.

This high performance fire and smoke damper with actuator offer an effective barrier maintaining integrity in a fire situation and this is combined with low leakage characteristic for smoke management. It is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick or light weight partition walls.



## Standard Construction

### Frame

- Frame material is GI steel sheet 16G, Z-27.
- Frame is a welded construction at corners and protected by antirust zinc rich primer coating.

### Blades

- High quality, '3V' formed GI steel sheet blades 1.5mm thick x 150mm wide.
- Bottom blade width to suit the height of the damper.
- Dampers up to 275mm will be single blade construction.

### Jamb Seals

- Compression type SS grade 304, side seals to allow free movement of blade and ensure low leakage.

### Tip Seals

- Graphite/ silicon rubber blade tip seals are standard.

### Linkages

- Plated or galvanized steel, face Linkage parallel blade operation.

### Bushes

- Fire resistant Brass-Bronze sintered bushes (iolite).

### Jack Shaft

- 12mm diameter plated or galvanized round shaft.

### Blades Axles

- 12mm diameter zinc plated mild steel.

### Blade Stop

- 18G (1.2mm) galvanized steel sheet angle.

### Fusible Link

- Standard fusible link 165 deg F (72 deg C) UL Listed.
- Thermo-electric tripping device available upon request.

### Actuator

- Honeywell or Belimo - spring return (UL classified) 24V / 230V actuator as per request.

### Size

- Minimum size - 150mm x 150mm
- Maximum size - 1000mm x 1000mm as single section.
- Larger sizes can be supplied as Multiple sections.
- Each section operates independent.

### Undersize

- ¼" under ordered size unless specified exact or actual size.

### Variants

- CSQ - SQUARE / RECTANGULAR Spigot
- CR - ROUND Spigot
- CO - OVAL Spigot

### Note:

- FC - FAIL CLOSE - Standard supply
- FO - FAIL OPEN - optional
- RIGHT SIDE ACTUATOR - standard supply
- LEFT SIDE ACTUATOR - optional

# PYROGARDE MSFD600 Series

## FIRE AND SMOKE DAMPERS

### Also available

**Model MSFD 611C S:** Construction same as above except that blades are Stainless steel.

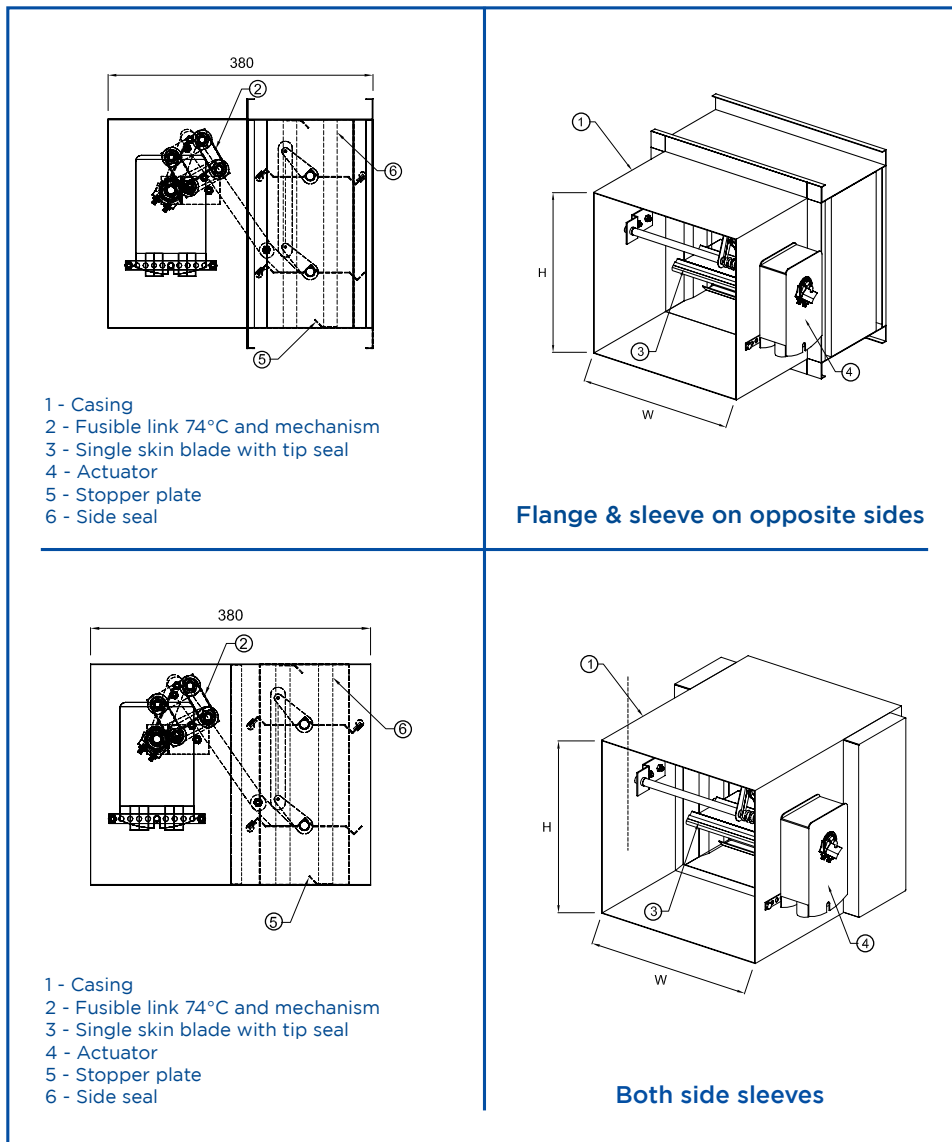
**Model MSFD 612C:** Construction same as above except that blades are double skin GI steel.

**Model MSFD 612C AL:** Construction same as above except that blades are double skin Aluminium aerofoil blades.

**Model MSFD 612C S:** Construction same as above except that blades are double skin SS blades.

See overleaf for product sketches.

### DIMENSIONS (mm)



**Galvanized steel sheet construction. '3V' single skin blades. In accordance with UL555 & UL555S suitable for installation in walls and partitions having 2 hours fire rating.**

**Model: MSFD 651  
Thermo-electric Tripping device and Spring Return Actuator**

Motorized fire and smoke dampers MSFD 651 facilitate isolating compartments of Fire in Ventilation systems. These dampers block the spread of fire and smoke through ducts, partition walls or floors. This high performance fire and smoke damper with actuator ensures lowest resistance to airflow in HVAC systems with velocity to 2000 fpm (10.2 m/sec) and 4" w.g (1000Pa) and is suitable for airflow in either direction.



## Standard Construction

### Frame

- Frame material is GI steel sheet 16G, 108mm deep, Z-27.
- Frame is a welded construction at corners and protected by antirust zinc rich primer coating.

### Blades

- High quality, '3V' formed GI steel sheet blades 1.5mm thick x 150mm wide.
- Bottom blade width to suit the height of the damper.
- Dampers up to 275mm will be single blade construction.

### Jamb Seals

- Compression type SS grade 304, side seals to allow free movement of blade and ensure low leakage.

### Tip Seals

- High temperature resistant extruded silicone rubber blade edge seals to block leakage of smoke thru dampers. (Graphite tip seals are optional)

### Linkages

- Plated or galvanized steel, opposed blade operation. Linkage concealed inside the frame.

### Bushes

- Fire resistant Brass-Bronze sintered bushes (iolite).

### Sleeve

- 1.2mm thick GI steel sheet, 400mm wide bolted or spot welded to frame.

### Jack Shaft

- 12mm x 12mm plated or galvanized shaft, extending 114mm (4 1/2") for actuator mounting.

### Blade Axles

- 12mm diameter zinc plated mild steel rod.

### Blade Stop

- 18G (1.2mm) galvanized steel sheet angle.

### TRD

- Thermal Reset Device 165 deg F (72 deg C) UL Listed.

### Actuator

- Honeywell or Belimo (UL classified) actuator

### Size

- Minimum size - 200mm x 150mm
- Maximum size - 914mm x 914mm as single section.
- Larger sizes can be supplied as Multiple sections.
- Each section operates independent.

### Undersized

- 1/4" under ordered size unless specified exact or actual size.

### Optional

- Material: Available in Stainless steel grade 304
- Sleeves: GI sleeves of suitable thickness as per NFPA table 3-4.6.3 can be factory mounted secured to frame cover by equally spaced 6-8mm bolt nuts on all four sides.
- Standard sleeve 300mm depth x 20G
- Thermal Reset Device: 212° F, 250° F, 350° F available as optional.
- Retaining Angles: Minimum 40mm x 40mm x 1.6mm available on request.
- Limit Switches: For BMS remote operation, open-close indication.
- Indicator: Externally mounted open-close operation.

### Note

- FC - FAIL CLOSE - Standard supply
- FO - FAIL OPEN - optional
- RIGHT SIDE ACTUATOR - standard supply
- LEFT SIDE ACTUATOR - optional

# PYROGARDE MSFD600 Series

## MOTORIZED FIRE AND SMOKE DAMPERS

### Also available

**Model MSFD 651 S:** Construction same as above except that blades are Stainless steel.

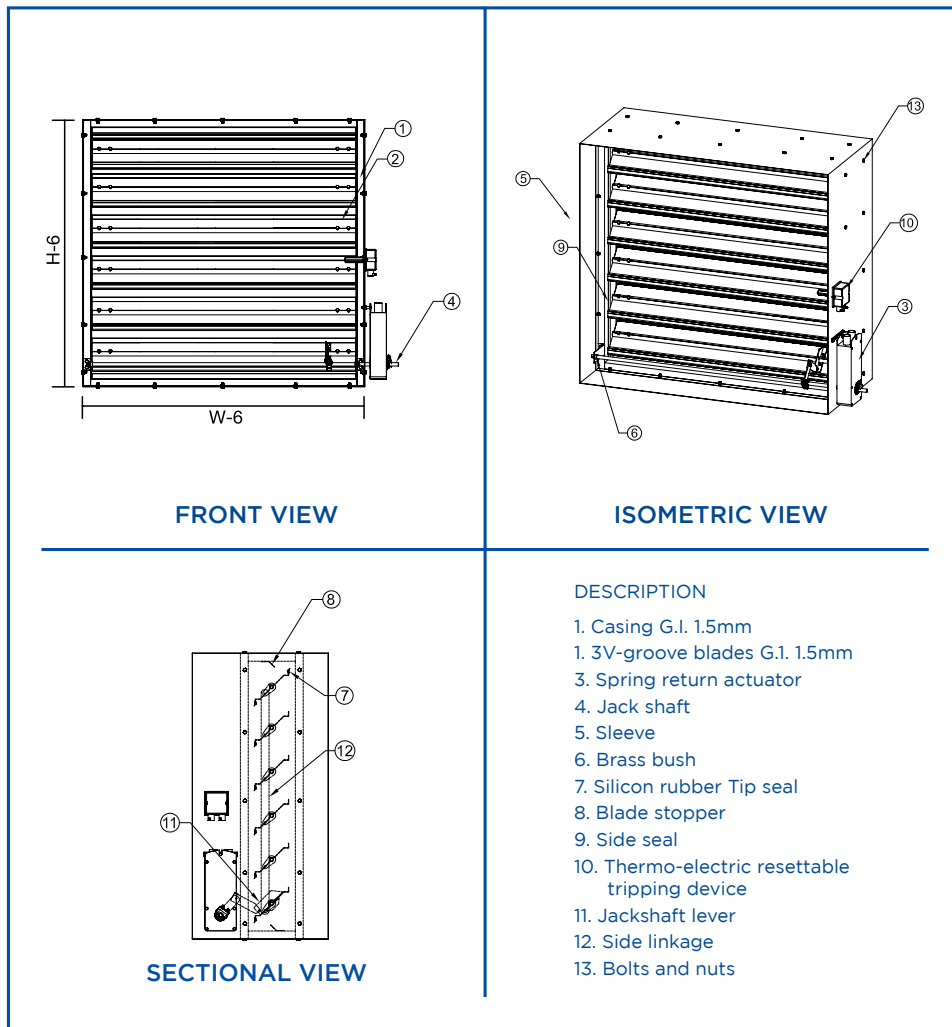
**Model MSFD 652:** Construction same as above except that blades are double skin GI steel.

**Model MSFD 652 AL:** Construction same as above except that blades are double skin Aluminium aerofoil blades.

**Model MSFD 652 S:** Construction same as above except that blades are double skin SS blades.

See overleaf for product sketches.

### DIMENSIONS (mm)





# PYROGARDE MSFD600 Series

## MOTORIZED SMOKE DAMPERS

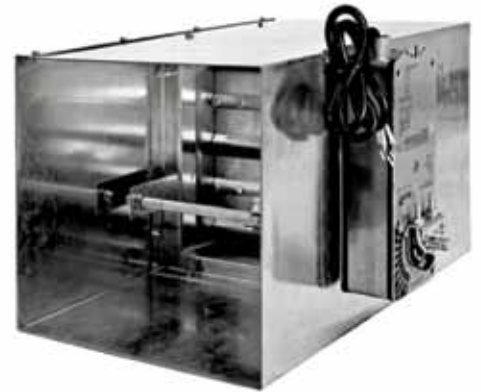
**Galvanized steel sheet construction. In accordance with UL555S suitable for installation in walls and partitions having leakage class II.**

**Model: MSD 671**

### Description

Motorized smoke dampers MSD 671 facilitate isolating compartments of smoke in the event of fire in Ventilation systems. These dampers block the spread of smoke through openings in walls, through ducts and floors. Smoke dampers are also alternatively applied as passageway for smoke extraction through shafts of the buildings with smoke extraction fans installed at specified places in the building/roof. In the event of fire, with smoke extraction system, staircase, corridors should remain free for safe exit of people. With the help of extraction fans, an airflow and pressure is created such that poisonous smoke is extracted through shafts.

This high performance smoke damper with actuator ensures lowest resistance to airflow in HVAC systems with velocity to 2000 fpm (10.2 m/sec) and 4" w.g (1000Pa) and is suitable for airflow and leakage in either direction.



## Standard Construction

### Frame

- Frame material is GI steel sheet 16G (1.5mm), 108mm deep, Z-27.
- Frame is a welded construction at corners and protected by antirust zinc rich primer coating.

### Blades

- High quality, '3V' formed GI steel sheet blades 1.5mm thick x 150mm wide.
- Bottom blade width to suit the height of the damper.
- Dampers up to 275mm will be single blade construction.

### Jamb Seals

- Compression type SS grade 304, side seals to allow free movement of blade and ensure low leakage.

### Linkages

- Plated or galvanized steel, opposed blade operation. Linkage concealed inside the frame.
- Drive blade has 1" to 5" (125mm) extendable shaft to mount actuator

### Bushes

- Fire resistant Brass-Bronze sintered bushes (iolite).

### Blade Axles

- 12mm diameter zinc plated mild steel rod.

### Tip Seals

- High temperature resistant extruded silicone rubber blade edge seals to block leakage of smoke thru dampers.

### Blade Stop

- 18G (1.2mm) galvanized steel sheet angle.

### Actuator

- Honeywell or Belimo (UL classified) actuator

### Size

- Minimum size - 150mm x 150mm
- Maximum size - 914mm x 914mm as single section.
- Larger sizes can be supplied as Multiple sections.
- Each section operates independent.

### Undersized

- ¼" under ordered size unless specified exact or actual size.

### Optional

- Material: Available in Stainless steel, Aluminium as requested.
- Sleeves: GI sleeves of suitable thickness as per NFPA table 3-4.6.3 can be factory mounted secured to frame cover by equally spaced 6-8mm bolt nuts on all four sides.
- Standard sleeve 300mm depth x 20G
- Retaining Angles: Minimum 40mm x 40mm x 1.6mm available on request.
- Limit Switches: For BMS remote operation, open-close indication.
- Indicator: Externally mounted open-close operation.

### Note

- FC - FAIL CLOSE - Standard supply
- FO - FAIL OPEN - optional
- RIGHT SIDE ACTUATOR - standard supply
- LEFT SIDE ACTUATOR - optional

# PYROGARDE MSFD600 Series

## MOTORIZED SMOKE DAMPERS

### Also available

**Model MSD 671 S:** Construction same as above except that blades are Stainless steel.

**Model MSD 672:** Construction same as above except that blades are double skin GI steel. 150mm / 165mm wide, double skin 20G (1.0mm), aerofoil shape, equivalent 14G (2.0mm).

**Model MSD 672 AL:** Construction same as above except that blades are extruded Aluminium profile. 150mm double skin 12G (>2mm) aerofoil shape blades.

**Model MSD 672 S:** Construction same as above except that blades are double skin SS blades.

See overleaf for product sketches.

### DIMENSIONS (mm)

