



NAFFCO
PASSION TO PROTECT



Acplus⁺



SMOKE & FIRE CURTAIN

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Introduction

NAFFCO was founded in Dubai, UAE to become the world's leading producer and supplier of life safety solutions. By recognizing the importance and convenience of having easy access to multiple safety services, we became specialized by offering complete solutions under one roof for all types of high quality firefighting equipment, fire protection systems, fire alarms, addressable emergency systems, security systems, custom-made vehicles such as fire trucks, ambulances, mobile hospitals and airport rescue firefighting vehicles (ARFF).

With the most talented and dedicated employees from around the world, NAFFCO has over 2,000 passionate engineers and over 8.5 million square feet of manufacturing facilities. We are currently exporting to over 100 countries worldwide.

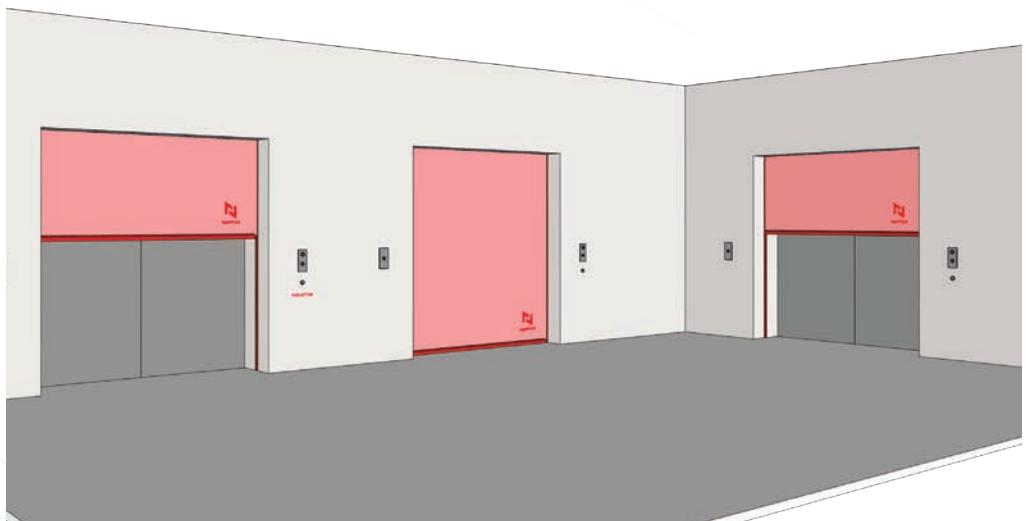
NAFFCO manufactures UL, FM, BSI & Global Mark approved products in our facility in consistent with International Standards UL-DQS, BSI certifies for the Quality Management System against ISO 9001. Our Environmental (ISO 14001) & Occupational Health & Safety (ISO 45001) Management Systems have been certified by UL-DQS. Our Trucks & Vehicles division has been assessed & certified for Quality Management System requirement for Aviation, Space & Defense organization (AS 9100) by UL-DQS.

Our Fire and Smoke curtains are undergoing extensive R&D on regular basis to improve and expand the product line while providing ease of access , longevity and integrity.

Our success is driven by our passion to protect; our vision is to become the world's number one provider of innovative solutions in protecting life, environment and property.



Applications for Fire & Smoke Curtains



Elevator and Elevator Lobbies

Elevator shafts are the common conduits for the spread of fire and smoke which can enshroud the entire building in a short period. Even though elevator doors are fire rated, they do not provide a smoke seal. Fire curtains with smoke seals can be used in this scenario to contain the smoke from spreading into the lobby.

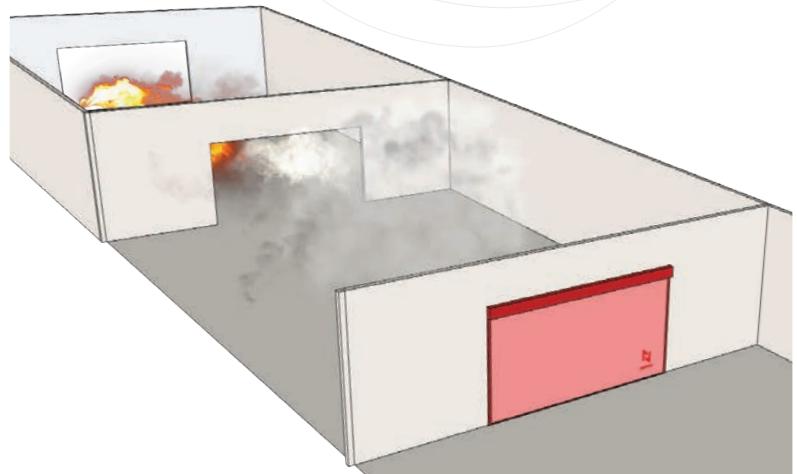


Escalators and staircases

Both escalators and staircases are breaches between floors and can be an easy means for the spread of fire and smoke throughout the building. Using NAFFCO's fire and smoke curtain, the spread can be controlled and directed to provide easy escape for the occupants.

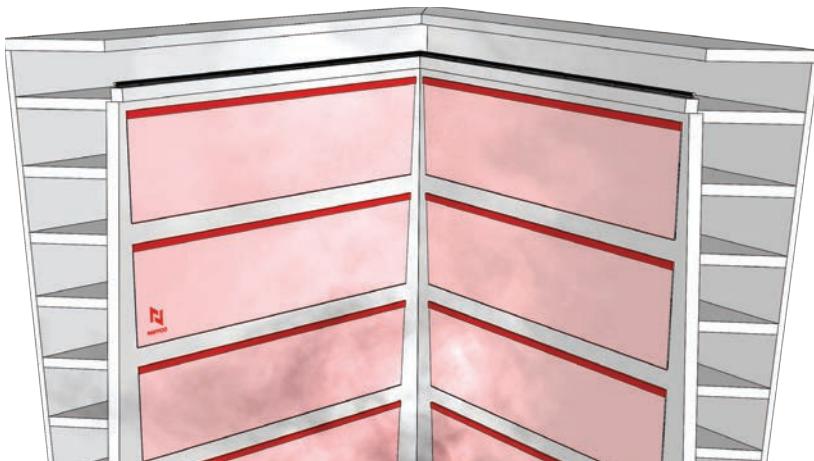
Corridors and Escape routes

Fire curtains and smoke curtains are easily retractable which allows for quick and effective evacuation during emergency situations. Our curtains come with various means of egress that allow for safe evacuation once deployed in the fire scenario.



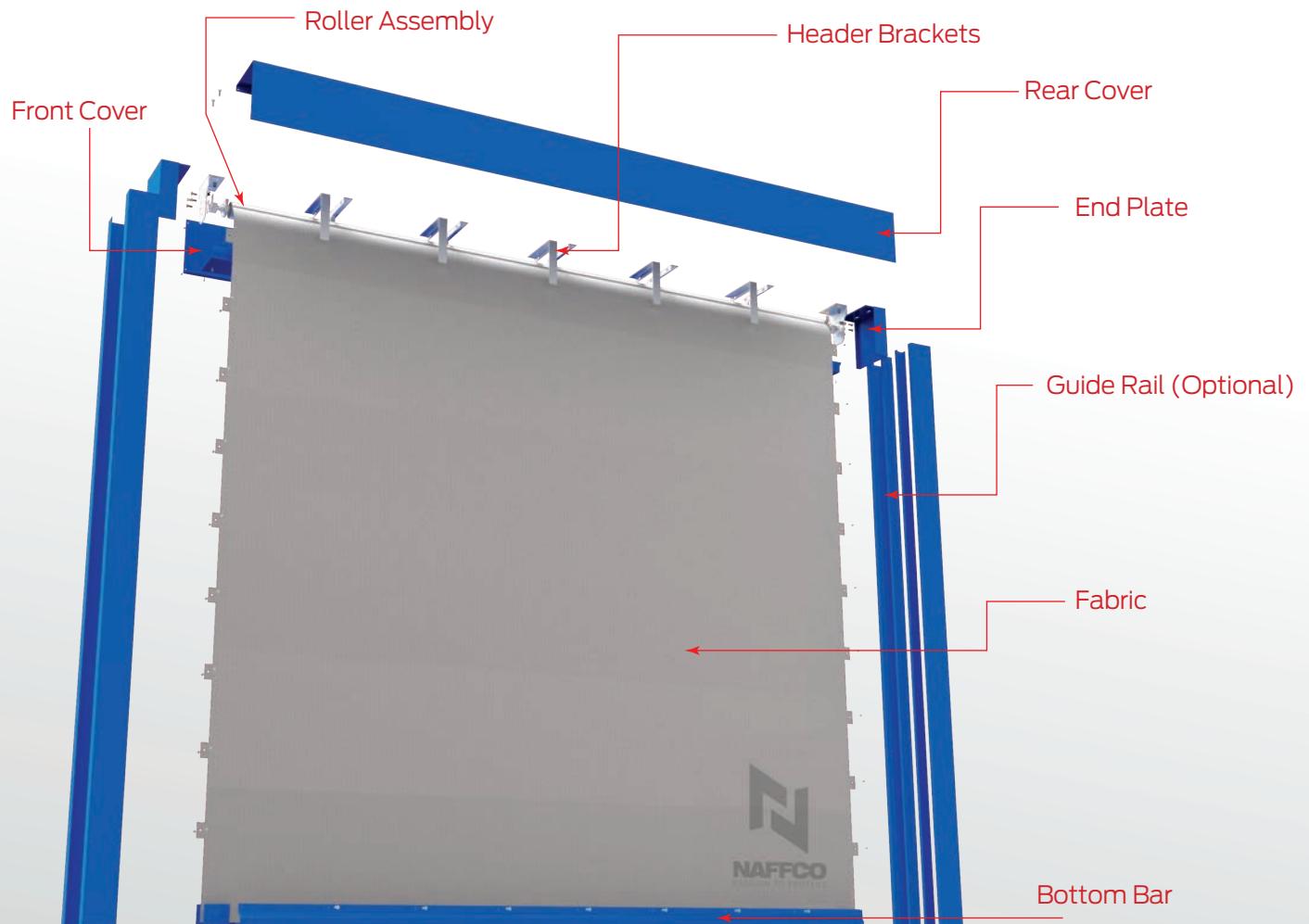
Compartmentation

Preventing the spread of fire and smoke from one zone to another is a crucial element of fire compartmentation strategy. NAFFCO's fire and smoke curtains respectively work as a physical barrier and help to contain the spread of the fire and smoke throughout the building.



Smoke channeling

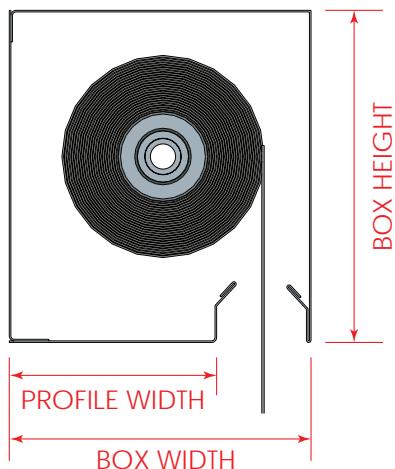
Smoke curtains are extremely ideal for channeling smoke to desired locations where smoke extraction systems can act and direct the smoke outside the premises.



Schematic Representation

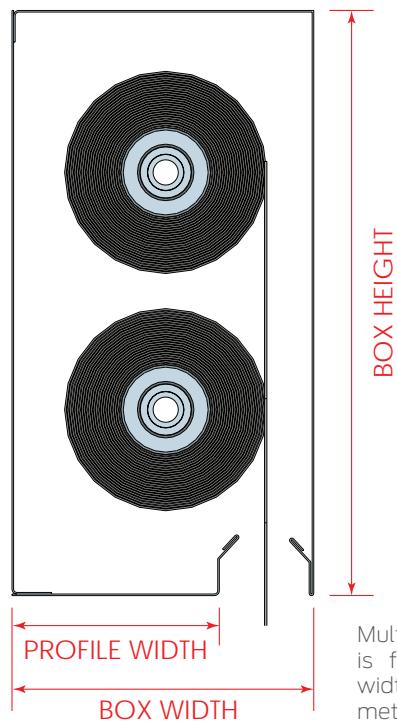
Head box arrangements

Single Barrel Arrangement



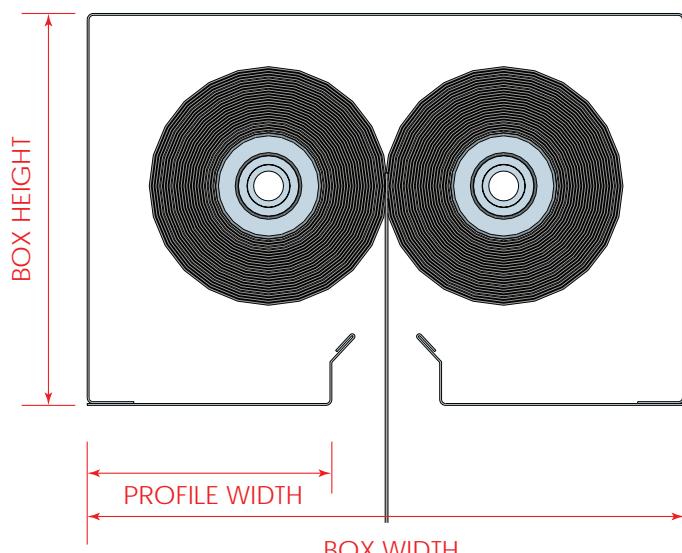
Single roller headbox can be provided for widths upto 6 meters and for heights upto 9 meters, while maintaining small sizes of head box which can be mounted in various methods.

Multi Barrel Up & Down Arrangement



Multiple roller arrangement is for curtains of unlimited widths and for heights upto 6 meters under BSEN standards and upto 10 meters under UL standards.

Multi Barrel Front & Back Arrangement



Multiple roller head boxes are also available in side by side configuration as shown in the figure. These arrangements are preferred for requirements where the height of the box (BH) need to be kept minimal.

Automatic Fire Curtain Single & Multi Barrel

Model: NFC-SB100 & NFC-MB100



Max. Height	Max. Width	E	EI	EW
12 meters	Unlimited	240	-	30

Fire Integrity

- Up to 240 min.



Specifications

Fabric	PU-coated glass fabric, 700 g/m ² , color grey, Non - Flammable according to DIN 4102-1, A2.
Unwind	Controlled Gravity Descend
Windup	24 VDC motor integrated with planetary gear
Installation	Ceiling or wall mounted
System dimensions	System width ≤ 25000 mm Unwinding length ≤ 12000 mm
Head box	GI Sheet 1.2 mm powder-coated
End section	GI Sheet 2.5 mm powder-coated
Classification/Standard	UL 10D
Side guides (SFS)	Steel 2 mm powder-coated, dimensions (Wx D) 50 x 100 mm. The curtain material will be delivered with a restrain system. In this way, it prevents the curtain material being pulled out sideways from the tracks in case of deflection by pressurization (e.g. excess pressure by fire.)

Fire containment systems prevent the spreading of smoke from one zone to another. NAFFCO curtain comprises of flexible heat resistant fabric with fire integrity up to 240mins.* The tube contains a DC electric motor which holds the curtain retracted at ceiling level at all times and deploys upon the receipt of fire alarm signal. The bottom bar ensures safe and controlled descent of the curtain with gravity fail safe.

System tested to

- EN 1634-1
- UL10D
- UL10D S
- UL1784
- BS476 part 6 & 7**

Product Complies

- Certifire
- UL

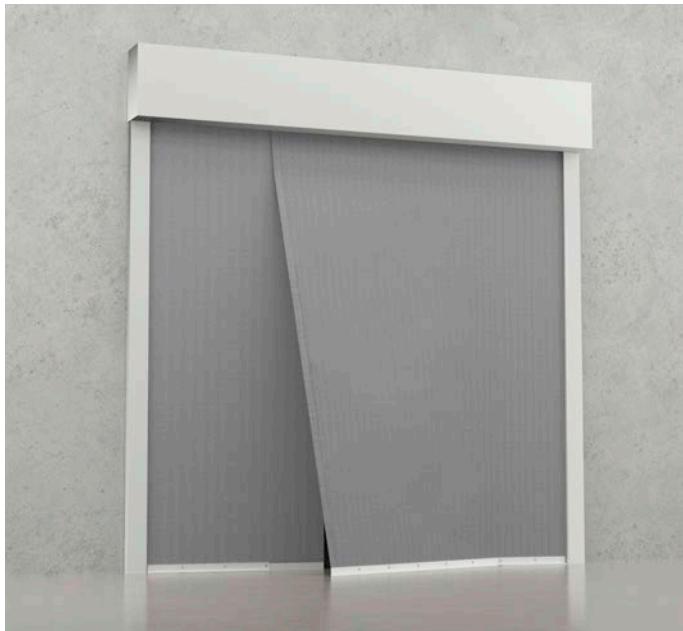
*NF-WRGF0667/120

**Fabric tested.



Automatic Egress Fire Curtain

Model: NFC-SB100 & NFC-MB100 (Optional Egress Door)



FIRE RATED SMOKE RATED VERTICAL ACTING

Max. Height	Max. Width	E	EI	EW
6 meters	Unlimited	120	-	30

Fire Integrity

- Up to 120 min.



Specifications

Fabric	PU-coated glass fabric, 700 g/m ² , color grey, Non - Flammable according to DIN 4102-1, A2.
Unwind	Controlled Gravity Descend
Windup	24 VDC motor integrated with planetary gear
Installation	Ceiling or wall mounted
System dimensions	System width ≤ 25000 mm Unwinding length ≤ 12000 mm
Head box	GI Sheet 1.2 mm powder-coated
End section	GI Sheet 2.5 mm powder-coated
Classification/Standard	EN 1634-1
Side guides (SFS)	Steel 2 mm powder-coated, dimensions (Wx D) 50 x 100 mm. The curtain material will be delivered with a restrain system. In this way, it prevents the curtain material being pulled out sideways from the tracks in case of deflection by pressurization (e.g. excess pressure by fire.)

Fire containment systems prevent the spreading of smoke from one zone to another. NAFFCO curtain comprises of flexible heat resistant fabric with fire integrity up to 120mins.* The tube contains a DC electric motor which holds the curtain retracted at ceiling level at all times and deploys upon the receipt of fire alarm signal. The bottom bar ensures safe and controlled descent of the curtain with gravity fail safe.

By utilizing an egress door that allows individuals to pass without retracting the curtain. NAFFCO automatic egress fire curtains provide fire separation without impeding the transit of occupants exiting the area.

Egress curtain can be used in elevator lobbies, cross corridors and various passage ways and escape routes.

System tested to

- EN 1634-1
- BS476 part 6 & 7**

Product Complies

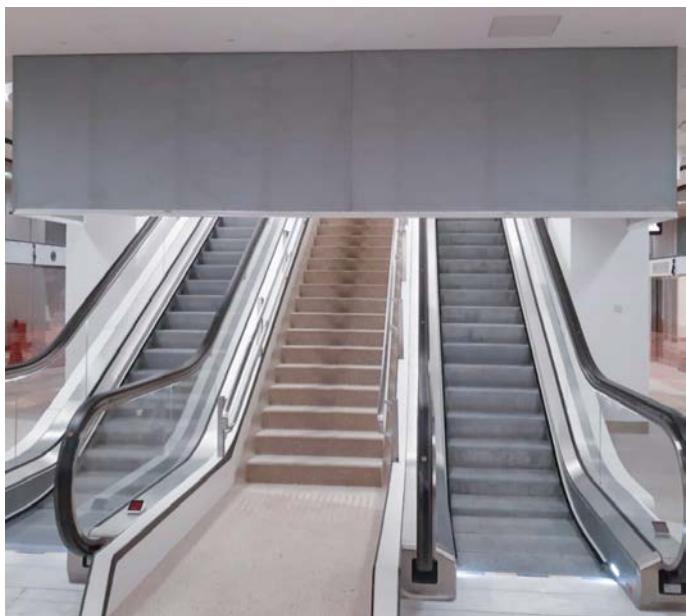
- Certifire

*Egress
**Fabric tested.



Automatic Fire & Smoke Curtain Single & Multi Barrel

Model: NSC-SB-60 & NSC-MB-60



Max. Height	Max. Width	D	DH
10 meters	Unlimited	180	30

Fire Integrity

- Up to 180 min.



Specifications

Fabric	PU-coated glass fabric, 455 g/m ² , color grey, Non - Flammable.
Unwind	Controlled Gravity Descend
Windup	24 VDC motor integrated with planetary gear
Installation	Ceiling or wall mounted
System dimensions	System width ≤ 25000 mm Unwinding length ≤ 10000 mm
Head box	GI Sheet 1.2 mm powder-coated
End section	GI Sheet 2.5 mm powder-coated
Classification/Standard	EN 12101 / UL 1784
Side guides (SFS)(Optional)	Steel 2 mm powder-coated, dimensions (Wx D) 50 x 100 mm. The curtain material will be delivered with a restrain system. In this way, it prevents the curtain material being pulled out sideways from the tracks in case of deflection by pressurization (e.g. excess pressure by fire.)

Smoke containment systems prevent the spreading of smoke from one zone to another. NAFFCO curtain comprises of flexible heat resistant fabric with fire integrity up to 120mins.* The tube contains a DC electric motor which holds the curtain retracted at ceiling level at all times and deploys upon the receipt of fire alarm signal. The bottom bar ensures safe and controlled descent of the curtain with gravity fail safe.

System tested to

- BS EN 12101-1 Annex B (Reliability, Response Time and Material Durability)
- BS EN 12101-1 Annex C (Air Leakage Test)
- BS EN 12101-1 Annex D (Fire Resistance Test)
- Fabric tested to BS 476 Pt 6 and Pt 7, EN 13501-1
- BS 8524-1:2013 Severe Duty Impact Test (with Side Guides)

Product Complies

- Applus+

*NF-RGF0455/60



Automatic Melodeon Fire Curtain

Model: MELODEON



System tested to

- UL10D
- NFPA 252
- BS 476 part 6 & Part 7 (Fabric)

Compliance

- NFPA 80
- UL

Fire Integrity

- Up to 240 min.



NAFFCO Melodeon Fire Curtain systems prevents the spreading of fire from one area to another. The Curtain assembly comprises fire-rated fiberglass fabric uniquely folded into a compact head box that is typically installed above the ceiling with a finished bottom tray. This makes the system virtually invisible until activated. The curtain descents at a controlled speed upon receipt of signal from a fire alarm and provides fire integrity for up to four hours*.

We are constantly developing and enhancing our fire curtains to ensure compliance with the latest standards and regulations.

Advantages

- An ideal solution for buildings with large open spaces.
- Lightweight & Compact design, low head room requirements.
- Unlimited width, custom sizes and layouts.
- Manufactured with intricacy using advanced machinery.
- Meeting Bespoke requirements.
- Do not require any columns or corner posts
- Guaranteed Gravity Fail Safe (no power needed).

Applications

Elevator Halls, Atriums, Escalators, and Other void areas.

*NF-WRGF0667/120



Static Smoke Curtain

Draft Curtain



NAFFCO Static Smoke Curtains are a reliable solution for offering smoke protection in commercial and industrial buildings. Draft curtains, which are secured to structural steel, ensure that smoke and hot gases emitted during fire remain buoyant within the smoke zone, in accordance with smoke management strategies.

We are constantly developing and enhancing our static smoke curtains to ensure compliance with the latest standards and regulations.

Fabric tested to

- BS 476 Pt6
- BS 476 Pt7
- DIN 61101-1
- DN EN 1773
- DIN EN ISO 5084 / DIN EN ISO 2286-3
- DIN EN 12127
- DIN EN 1049-2
- DIN EN ISO 2060
- DIN EN ISO 137
- ISO 4606

Compliance

- NFPA 92
- NFPA 204
- NFPA 13

Fire Integrity

- Up to 120 min.



Advantages

▪ Design Solution

NAFFCO provides tailored solution to meet all shapes and requirements.

▪ Light Weight

Our Fabric are light in weight, therefore significantly reduced load on structure and provides ease of installation even at higher elevations.

▪ Maintenance

Our static smoke curtain require little to no maintenance due to their simple design and installation methods.

▪ Width and Drops

Static smoke curtains designed to cover unlimited widths and heights.

Applications

Warehouses, Storage Units, Aircraft Hangars, Hypermarkets / Shopping Facilities.

Applus⁺



FABRIC DATA SHEET

NF-RGF0455/60

Specification

NF-RGF0455/60 is our lightest woven glass fabric coated with fire retardant aluminum-pigmented polyurethane on both sides.

NF-RGF0455/60 provide high temperature resistance and reflectivity, which provides a heat-reflecting surface along with other properties to manufacture smoke curtains, fire curtains & Barriers.

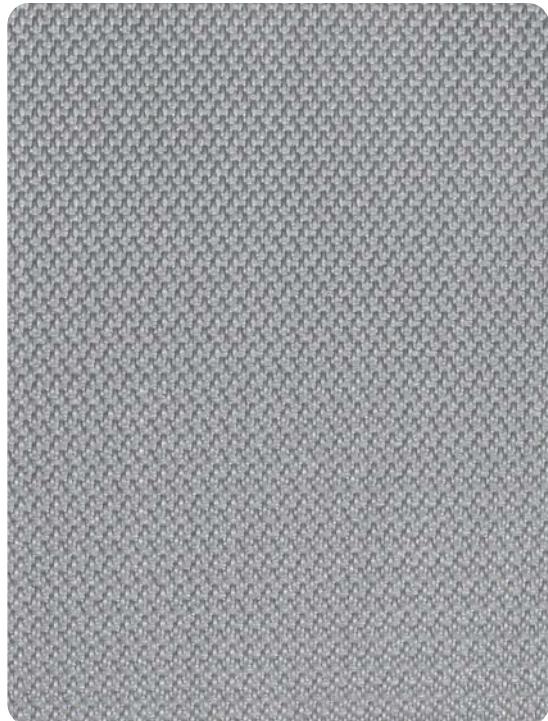
Fabric Reaction to Fire

BS EN 13501-1:2007+A1:2009 A2,S1,D0

BS EN 1201-1+A1

BS EN 1631-1

BS EN 1634-3:2004



Fabric Data

Character	Unit	Value	Tolerance	Test Standard
Finished Fabric				
Weight	g/m ²	455	±5%	
Thickness	mm	0.4	±5%	
Coating Weight	g/m ²	40	±10%	
Coating Application		Both Side		
Base Fabric				
Weight	g/m ²	415	±5%	
Weave Pattern		2x2 Broken Twill		
Thread Count Warp	per CM	18	±5%	
Thread Count Weft	per CM	11	±5%	
Yarn Count Warp	Tex	EC9 136		
Yarn Count Weft	Tex	EC9 136		
Standard Color		Grey		
Reaction to Fire		CLASS 0		See above
Application Temp.		Up to 600°C		
Tensile Strength Warp	N/cm	1080		
Tensile Strength Weft	N/cm	640		

FABRIC DATA SHEET

NF-WRGF0667/120

Specification

NF-WRGF0667/120 is a high performance heavyweight stainless steel wire reinforced woven glass fabric coated with fire retardant aluminum-pigmented polyurethane on both sides. Fabrics are tested to BS476 –6 & BS 476 -7 for fire propagation and flame spread index respectively and rated to CLASS 0 rating.

NF-WRGF0667/120 provide high temperature resistance and reflectivity, which provides a heat-reflecting surface along with other properties to manufacture smoke curtains, fire curtains & Barriers

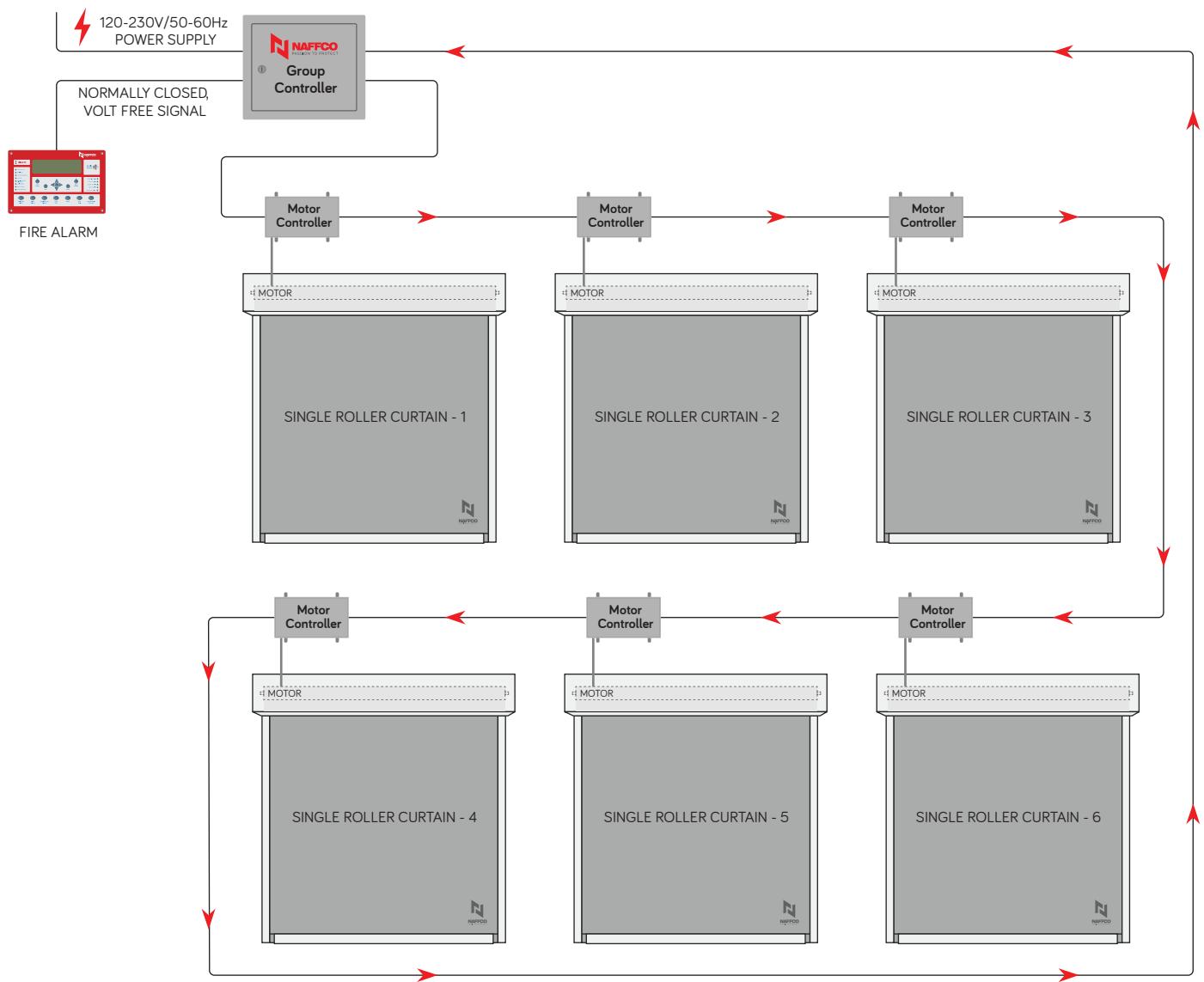


Fabric Data

Character	Unit	Value	Tolerance	Test Standard
Finished Fabric				
Weight	g/m ²	700	±5%	
Thickness	mm	0.7	±5%	
Coating Weight	g/m ²	50	±10%	
Coating Application	Both Side			
Base Fabric				
Weight	g/m ²	640	±5%	
Weave Pattern	8H Satin			
Thread Count Warp	per CM	16	±5%	
Thread Count Weft	per CM	15	±5%	
Yarn Count Warp	Tex	EC9 68/2 V4A		
Yarn Count Weft	Tex	EC9 68/2 V4A		
Standard Color	Grey			
Reaction to Fire	CLASS 0			
Application Temp.	Up to 1100°C			
Tensile Strength Warp	N/cm	930		
Tensile Strength Weft	N/cm	640		

Basic Wiring Layout

Every Motor requires a control unit to operate whether it is for deploying the curtain or to retract it to its resting positions. The Motor controllers are connected to the group controller. Maximum of 6 no. of 20 Watt motors can be connected to the group controller or 3 no. of 40 watt motors can be connected.



Control Systems - Generic Arrangement

UL Listed Fire & Smoke Curtain Controller

**SECURITY
SIGNALING**



LISTED
S35507
TYPE: F



Product Overview

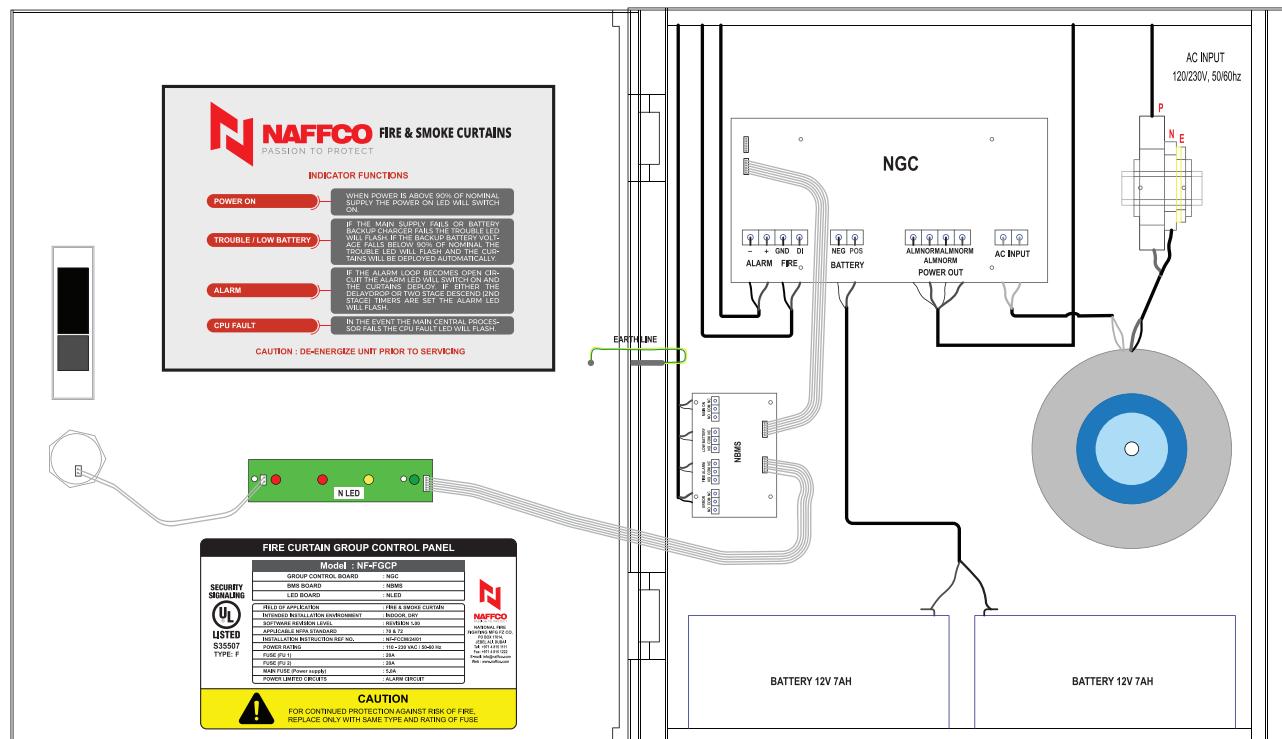
NAFFCO's UL Listed Fire & Smoke Curtain Controller is a vital safety device engineered to efficiently manage the deployment and retraction of UL-listed fire and smoke curtains in response to fire alarm signals. This controller ensures optimal safety and compliance in commercial and industrial environments, providing essential protection against smoke and fire hazards.

Specification

Model	Group Controller: NF-FGCP Motor Controller: NF-FMC
Certification	UL Listed (S35507)
Compliance Standard	UL 864
Power Supply	120-230 VAC / 50-60 Hz
Maximum Motor Control Capacity	Up to 6 motors (20W each) - (Model: NFGR42/40) Up to 3 motors (40W each) - (Model: NFGR53/30)
Battery Backup	Up to 12 hours (12V / 7Ah x 2 set).
Integration	Compatible with Building Management System (BMS) via optional integration board (Model: NBMS).
Stage Delays	Features a 2-stage delay with adjustable closing delay for controlled operations.
Manual Test Keys	For manual operation and testing of the system.
Override Function	Optional override features for manual curtain operation.

Key Features

- **Main Control Unit (NF-FGCP):**
 - Centralized management for fire and smoke curtain deployment and retraction.
 - Direct interface with fire alarm systems for prompt emergency response.
- **Motor Control Unit (NF-FMC):**
 - Individual control for each motor, allowing precise management of curtain movements.
 - Effectively manages controlled gravity fail for enhanced safety and reliability.
- **Integration with BMS:**
 - Optional BMS board for enhanced facility management, providing real-time monitoring and control capabilities.
- **Operational Mechanism:**
 - Curtains remain retracted, secured by low-voltage power supplied to the motors.
 - Automatic deployment is initiated upon fire alarm activation.
- **Fire Alarm Signal Input:**
 - Equipped with dual normally closed, volt-free contacts for reliable and secure signal reception, ensuring rapid response.
- **Safety Features:**
 - **Battery backup:**
 - Prevents unintended deployment of curtains, ensuring emergency readiness without false activations.
 - **Override Function (Optional):**
 - Allows manual operation of the curtain through a push button for emergency exit purposes.
 - **Stage Delay:**
 - Equipped with a 2-stage delay function to ensure safe exit during emergencies.
 - **Delay Closing:**
 - Includes a built-in delay activation feature to prevent unintended closing due to false alarms.
 - **Warning Light & Sounder (Optional):**
 - Provision for external warning light and sounder to alert when the curtain is deployed.
 - **Light Curtain (Optional):**
 - Provision for a light curtain to prevent accidental collisions during curtain deployment.



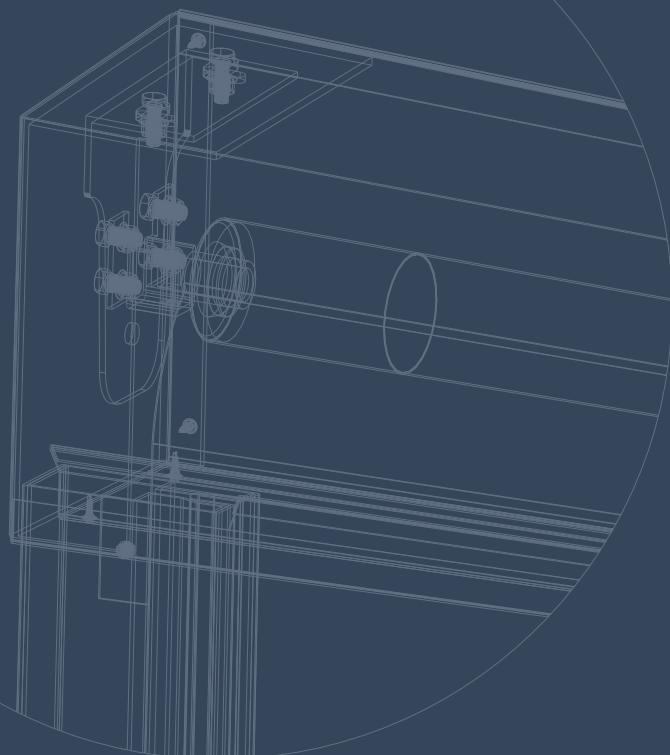
Certifications & Approvals



Certifications & Approvals



smoke & fire
curtain



FOR ANY ASSISTANCE, PLEASE CONTACT

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* We reserve the right to change or modify specification without prior notice.

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