



NAFFCO

PASSION TO PROTECT

Kitchen Hood Fire Protection System & Equipment



CERTIFICATE NO:463
(Ref redbooklive.com)



0086



AN INTRODUCTION TO NAFFCO

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 450 passionate engineers and over 3 million square feet of manufacturing facilities. We are currently exporting to over 100 countries worldwide.

Our products have been consistently certified by UL, FM, BSI, LPCB and Global Mark according to the latest International Quality Standard for their strict adherence to ISO 9001 quality management system and certified for ISO 14001 environmental management systems and BS OHSAS 18001 for occupational safety by UL DQS.

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.



KITCHEN FIRE SUPPRESSION SYSTEM

INTRODUCTION

The NAFFCO Kitchen Fire Suppression System is specifically designed for the suppression of fire in commercial kitchen cooking appliances, plenums, hoods and ducts. Each system operates automatically or may be operated manually.

The system uses a liquid chemical as its agent. The agent is a solution of potassium acetate involving:

- The saponification of surface grease (turning it into combustion-resistant soap).
- The cooling effect of water vaporization.
- The inheriting effects of resultant steam formation.
- The interruption of the chemical chain reaction of combustion.

SYSTEM TEMPERATURE LIMITATIONS

The operating temperature limits for system cylinders and the nitrogen cartridge are 0°C minimum and +60°C.



AGENT SPECIFICATION

FETTEX

Fire Extinguishing Agent for cooking oil and fat fires.

DESCRIPTION

FETTEX is a special liquid fire extinguishing agent based on salt for fighting fires involving cooking oil and fat in deep fat fryers and frying appliances.

PROPERTIES

FETTEX reacts with hot, burning cooking oil or fat. When the fire extinguishing substance hits the surface of the fire, the flames immediately subside. An effective fire extinguishing, cooling blanket of foam forms which prevents re-ignition.

SPECIFICATIONS

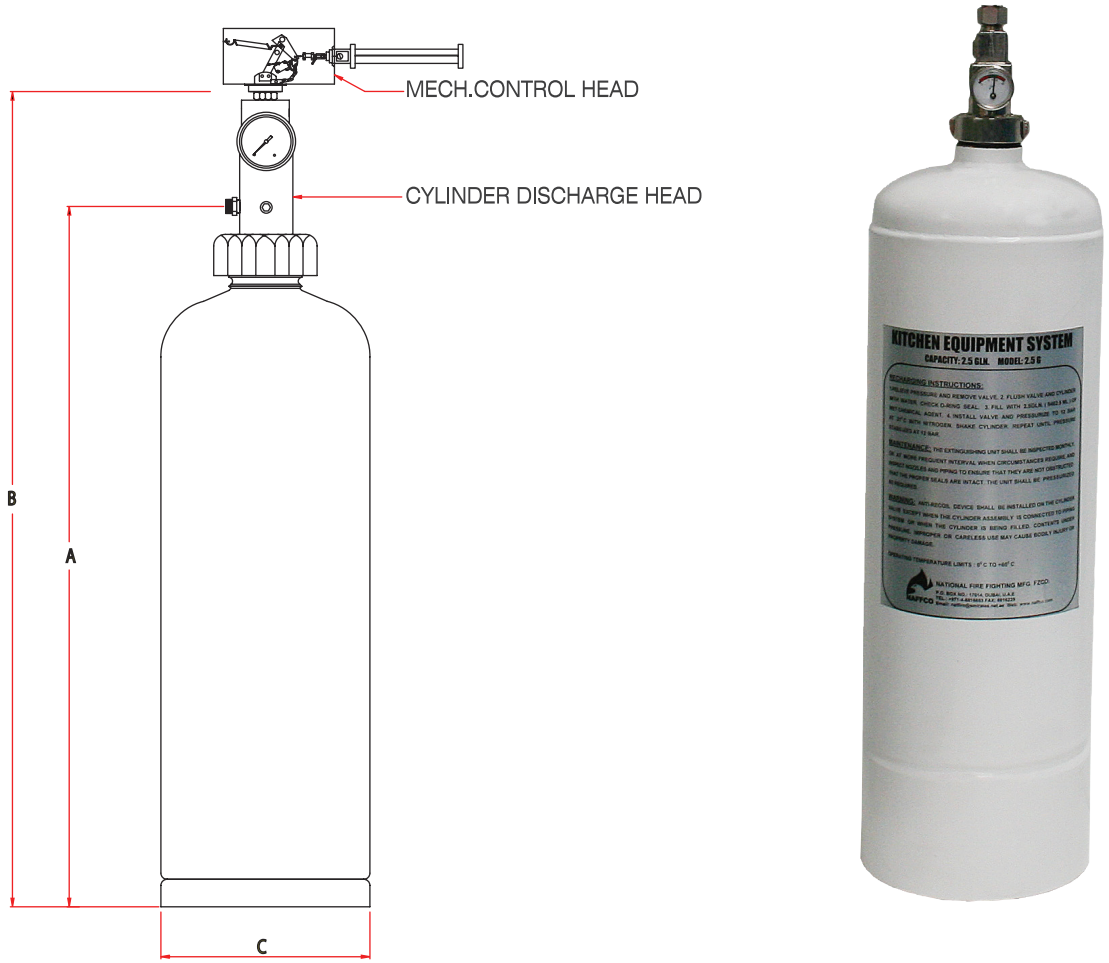
Density	1.28 ± 0.02kg/l
Frost Resistance	<-25°C
pH - value	approx. 8.5
nD20	1.40 ± 0.02
Sediment Content	<0.1%
Viscosity	+20°C 5 ± 0.5mm ² /s -15°C 29 ± 3.0mm ² /s

CYLINDERS

DESCRIPTION

Each cylinder is pressurized with nitrogen or air to 10 bar at ambient temperature. Each cylinder is painted white color. The available cylinder sizes are:

- 2-½ Gallon.
- 4 Gallon
- 6 Gallon.



SPECIFICATIONS

Part No.	Cylinder Size	Charged Weight	Diameter C	Height to Center of Discharge Port A	Overall Height B	Overall Height with Mechanical Actuator	Overall Height with Pneumatic Control Head
		(Kg.)	(mm)	(mm)	(mm)	(Inches)	(Inches)
NFK-002	2½ Gal.	25	184	543	690	33 5/8"	25 1/8"
NFK-003	4 Gal.	33	184	902	865	47 3/4"	39 1/4"
NFK-005	6 Gal.	45	273	883	670	47"	38 1/2"

CYLINDER BRACKETS

DESCRIPTION

Strap type:

- Has “L” shaped bracket, which is fixed to flat surface. lock down strap, Which is provided on the bracket, holds the cylinder firmly.
- Suitable for cylinders up to 6 Gallons capacity.

Wall Mounting Bracket Type.

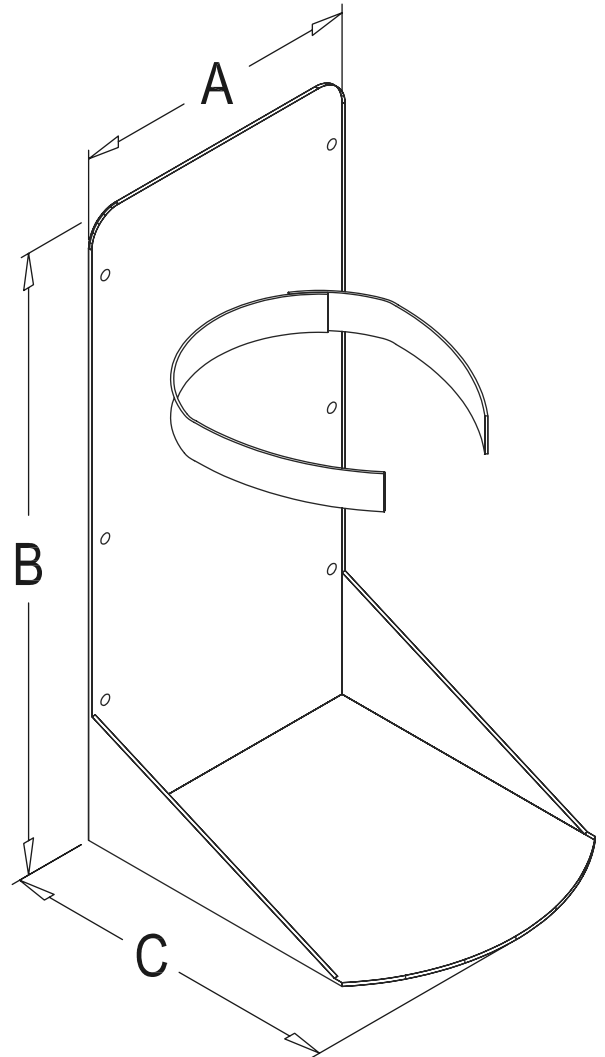
Available upon request.

DESCRIPTION:

To Hold the agent cylinder safe and secured.



STRAP TYPE



SPECIFICATIONS

Part No.	Cylinder Size	Width A	Height B	Depth C	Distance between Vertical Holes
		(mm)	(mm)	(mm)	(mm)
NFK-007	2 ½ Gal.	225	510	225	150
NFK-009	4 Gal.	225	690	225	150
NFK-010	6 Gal.	275	675	275	150

MECHANICAL CONTROL BOX

APPLICATION

To actuate discharge of single cylinder to discharge.(for any size of cylinder).

OPERATING PRINCIPLE:

Any one of the following three actions will actuate the cylinder through Mechanical Control Box:

- Has "L" shaped bracket, which is fixed to flat.
- Pull pin removal from the control box..
- Pull pin removal from the remote manual release.

ADDITIONAL FEATURES:

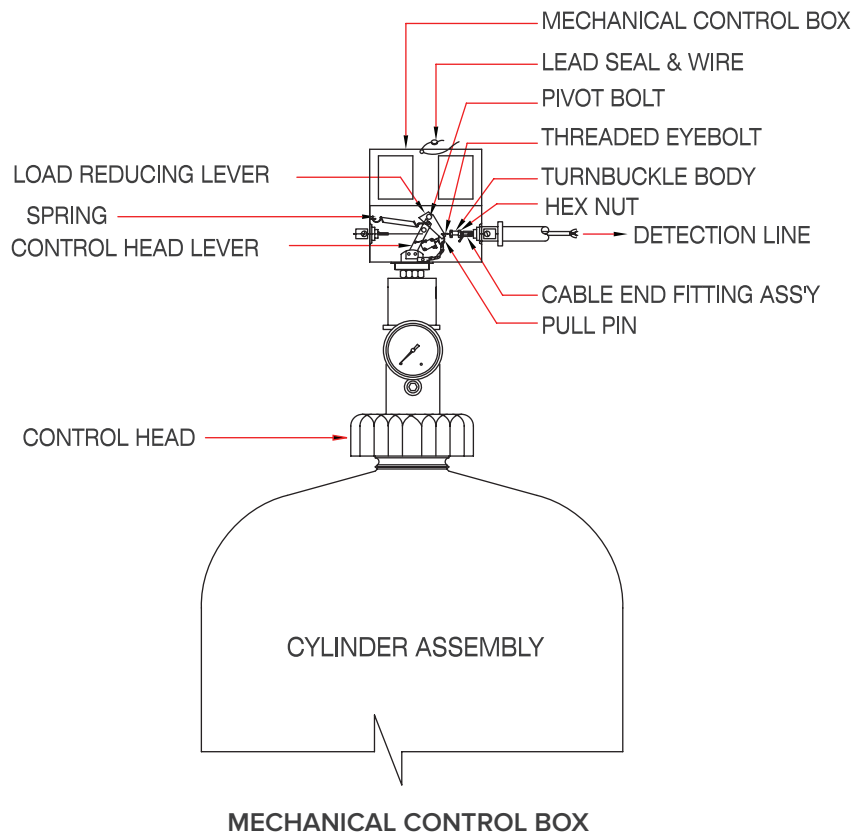
Mechanical Control Box can also be used to actuate mechanical gas valve and single (SPDT) or double (DPDT) pole Micro switches, if they are installed in the system.

ACCESSORIES

For initial set-up and maintenance of the Mechanical Control Box, a special cocking tool is required.



NFK - 011

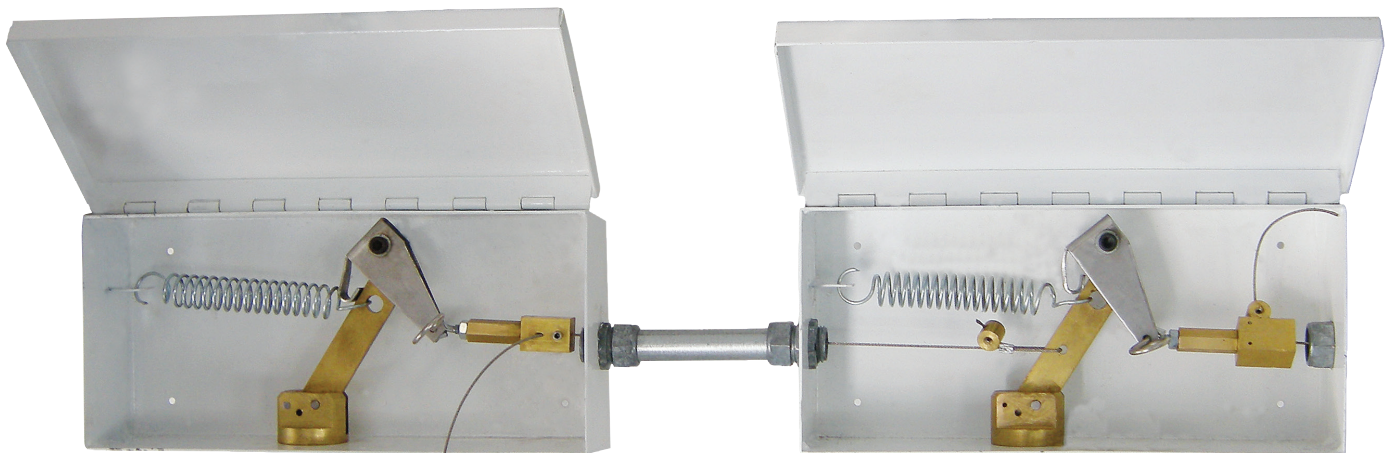


TANDEM CONTROL BOX

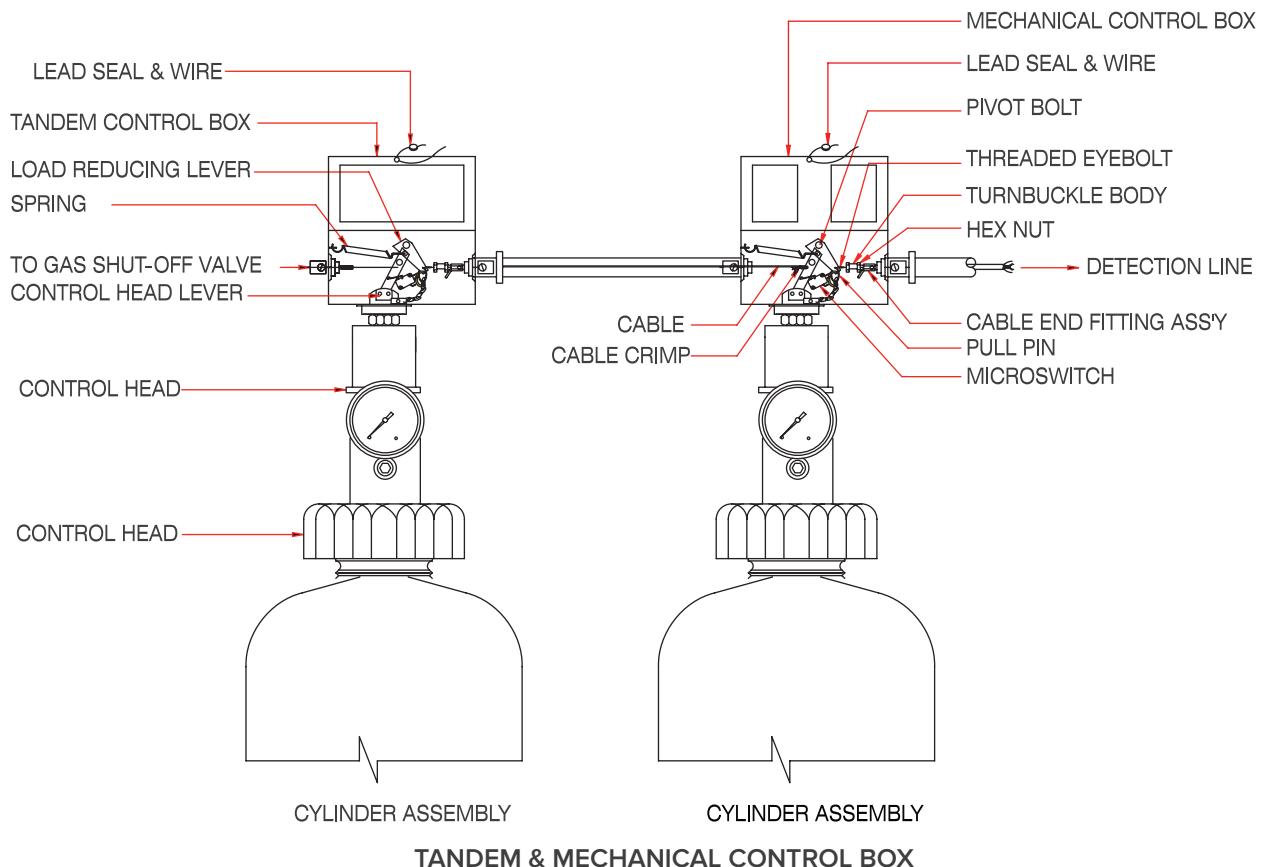
DESCRIPTION:

For multiple cylinder installations, one mechanical control box and two tandem control box can simultaneously discharge three NAFFCO cylinders regardless of cylinder size. All control boxes are connected to one detection system. System discharge occurs when: (a) a fusible link operates, (b) the pull pin in the mechanical control box connected to the detection cable is removed, or (c)

the remote manual control is operated. Each control box provided with SPDT or DPDT switches to operated electrical circuits, and the tandem control box can operate a mechanical gas valve. The cover of the tandem control box is closed with a screw fastener. Each control box may be separated by a maximum of 15 feet of detection cable and 25 corner pulleys.



NFK - 012



NOZZLES

DESCRIPTION:

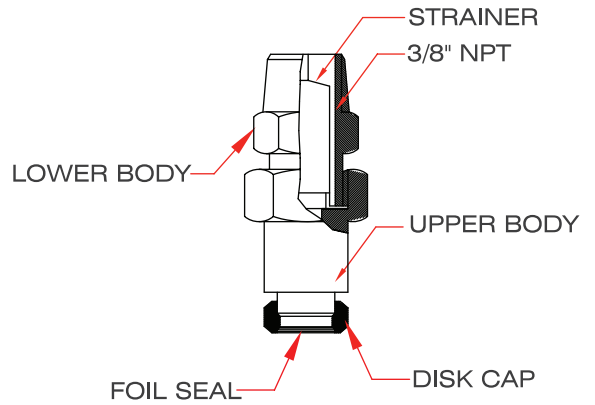
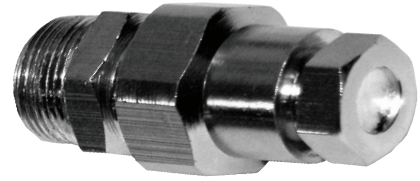
Five types of nozzles are available for all type of application. Each nozzle has 3/8" NPT male thread as a connecting end. All nozzles are of brass with chrome-plated finish.

SPECIFICATIONS

Nozzle	Part No.	Flow No.
ADP-NOZZLE	NFK-013	1
GRW-NOZZLE	NFK-014	1
R-NOZZLE	NFK-015	1
PLENUM-NOZZLE	NFK-016	2
DM-NOZZLE	NFK-017	3

ADDITIONAL FEATURES

- An integral pure tin-bursting disk is provided with each nozzle to prevent contamination and grease build up. The cooling effect of water vaporization.
- Stainless steel internal strainer is provided with each nozzle.
- Part number and nozzle type is marked on the body of each nozzle for easy identification.
- All nozzle have swivel capability (with optional adaptor)



DISCHARGE NOZZLE

REMOTE MANUAL ACTUATORS

DESCRIPTION:

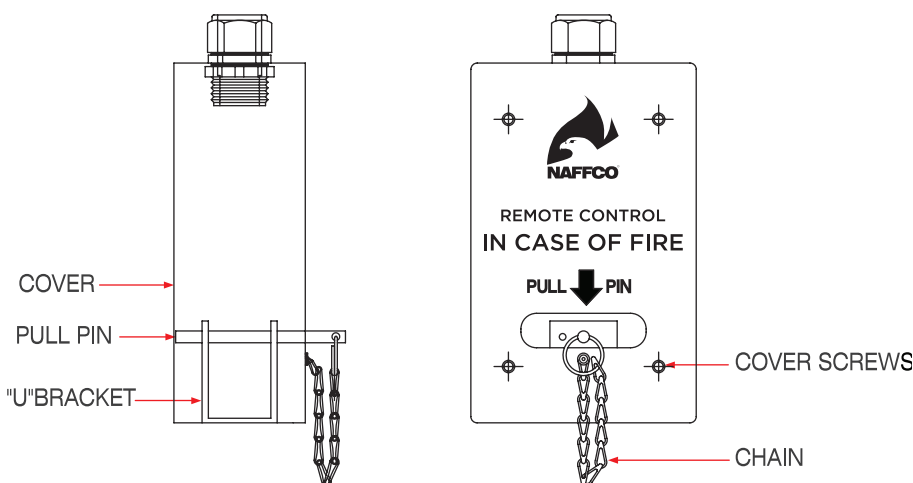
- Can be installed vertical/up or /down position.
- Can be used in- line or end-of-line.
- Stainless steel construction.
- Easy to operate.
- Provided with clear instruction plate.
- Recessed type can be used with metal or wood wall studding.

APPLICATION:

To actuate the cylinder head from remote place to discharge, by manual operation.

MODELS:

- Two models to suit the installation type:
 - Surface Mounted Type
 - Recessed Mounted Type



*Note: When installed in-line, three way pulley must be used.

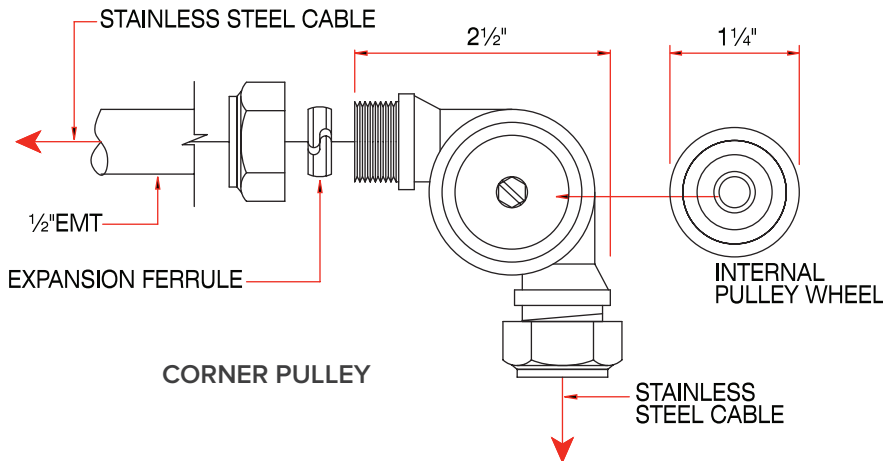
CORNER PULLEY

DESCRIPTION:

- Can be installed in high or low temperature applications.
- Can be used in and out exhaust hood.
- Provided with stainless steel ball-bearing corner pulley for friction free movement.
- Compression conduit connections are used, which causes no cable interference, allowing friction free operation.

APPLICATION:

Used for every change in direction in detection line, gas valve and remote pull station line.



NFK - 019

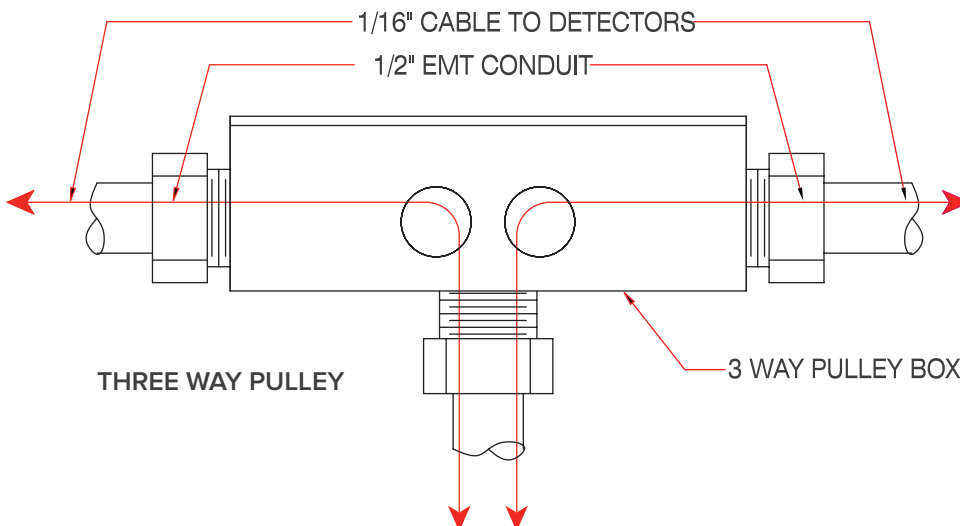
THREE-WAY PULLEY

DESCRIPTION:

- Can be installed in low temperature applications.
- Can be installed only outside the exhaust hood.
- May be installed as shown or with bill outlet facing left or right
- Compression conduit connections are used, which causes no cable interference, allowing friction free operation.

APPLICATION:

Used for cable travel in two directions at the same time, in remote pull station line.



NFK - 020

DETECTOR

DESCRIPTION:

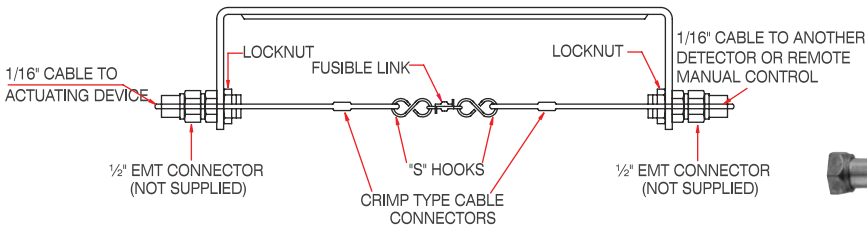
The detector consists of a 11 3/4 " long plated steel bracket, 360°F fusible link, two nickel-plated cable crimps and two "S" shaped hooks to connect the fusible links to the detection cable.

- Can be used with either quartzoid or metallic links.
- Can be easily mounted in plenum and duct area.
- Detectors are placed over each protected appliance and in ducts or duct openings
- There is no limitations on the number of detectors that can be installed in a single system.

- For extra support reinforced stiffener ridge is provided in the center.
- Detector bracket is made of rolled steel with chrome-plated finish.

DESCRIPTION:

Used to detect the fire hazard the thereby actuate the system cylinders by suitable means.



FUSIBLE LINK DETECTOR

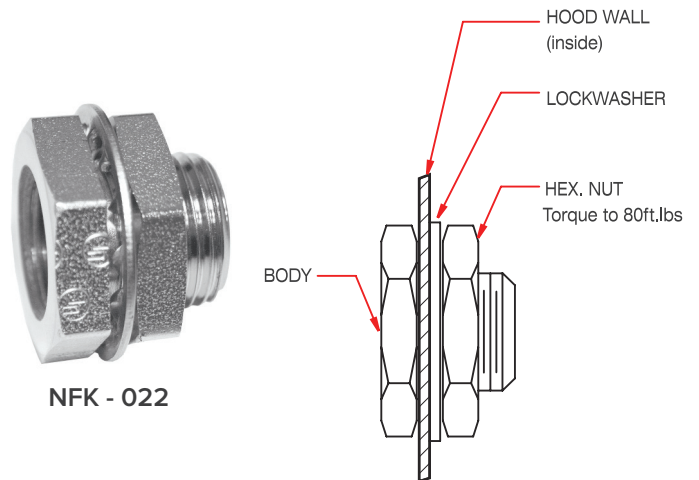


NFK - 021

LIQUID SEAL DEVICE

DESCRIPTION:

- Available for 3/4 " 1/2" and 3/4 " pipe sizes.
- Liquid seal device has got on system operation.
- Every penetration needs its own liquid seal device.
- With every control head two liquid seal devices shall be provided.
- For additional requirement order separately.
- Liquid seal device is made up of brass with chrome-plated for pleasing appearance.
- Any number of liquid seal device can be used in a system.



NFK - 022

LIQUID SEAL DEVICE

**Note: for smaller size piping, pipe bushings may be used.*

FUSIBLE LINK

DESCRIPTION:

- The temperature rating of the fusible link is 360°F or 182°C.
- Can be dated for the easy verification of last link replacement date.
- Compact design size facilitates less airflow interruption and minimizes grease collection in hood.
- Minimum load rating of 3 lbs.
- Maximum load rating 45 lbs.

APPLICATION:

Installed in the detection line to detect the fire hazard.



FUSIBLE LINK DETECTOR
TEMP. RATING (182°C)

MICRO SWITCHES

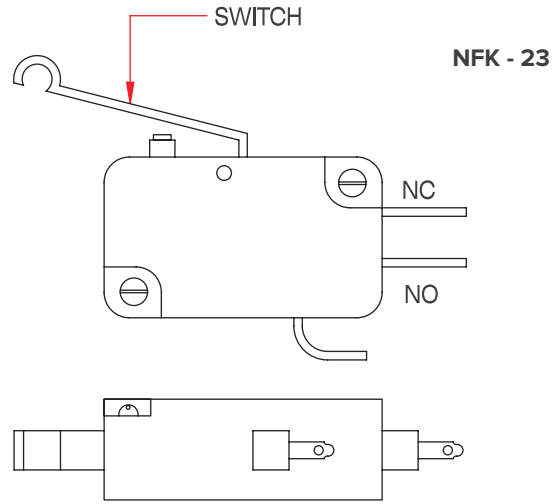
DESCRIPTION:

- Micro switch is available in two models ,i.e. single switch kit and Two-switch kit.
- Single switch kit provides a micro switch rated at 11 amps-125/250 VAC.
- Two switch kit includes a micro switch rated at 11amps -125/250 VAC; ½ amp -125VDC and a amps-125/250 VAC; ½ amp – 125VDC micro switch that are actuated simultaneously.
- Switch kits consist of one or two micro switches, an electrical wiring connector for each micro switch, a mounting bracket and mounting hardware.
- Up to two micro switches may be installed in any control box. When more contacts are required, an optional pressure switch may be installed in the discharge piping.

APPLICATION:

Used to open or close electrical circuits in order to:

- Trip a magnetic contactor to turn off an electrically operated cooking appliance.
- Operate an electric gas valve.



MICRO SWITCHES

**Note: When electrical appliances have a higher amp rating than the switches, a magnetic contactor, shunt trip panel or relay device must be used. These appliances cannot be wired directly to the micro switch.*

PRESSURE SWITCH

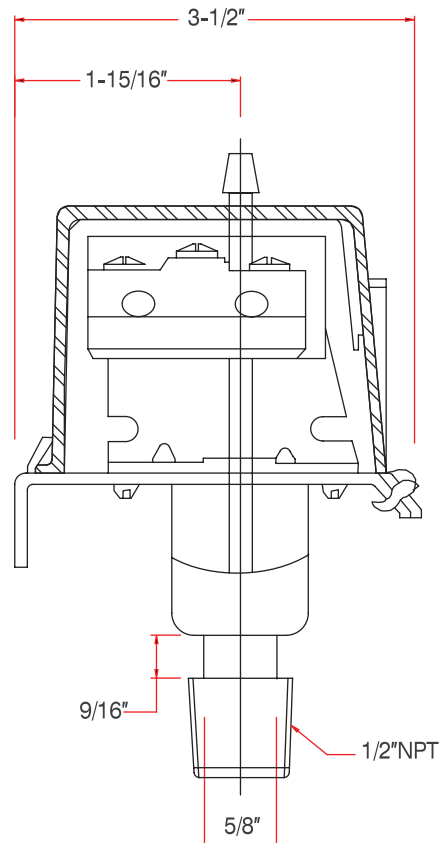
DESCRIPTION:

- Available ratings are 15 amps -115/230 VAC; 5 amps AT 28 VDC; ½ amp at 125 VDC and ¼ amp at 250 VDC.
- Can be used in any size of NAFFCO system.
- Shall be installed in distribution piping on 12" riser.

APPLICATION:

Used in place of SPDT micro switch to open or close electrical circuits in order to:

- Sound and alarm.
- Trip a magnetic contactor to turn off an electrically operated cooking appliance.
- Operate and electric gas valve.
- Shut –off an exhaust fan.



PRESSURE SWITCH

**Note: When electrical appliances have a higher amp rating than the switches, a magnetic contactor, shunt trip panel or relay device must be used. These appliances cannot be wired directly to the micro switch.*

FIRE BLANKET

DESCRIPTION:

Fire blankets are made of fire resistance glass fiber fabric with silicone coating. It is primarily intended for extinguishing cooking oil fires in the kitchen.

NAFFCO fire blanket is the most effective emergency tool to have in the kitchen for smothering grease fires or any other cooking-related fire that might break out in the kitchen.

APPLICATION:

NAFFCO Fire Blanket is a simple and convenient fire-control instrument outfitted for enterprises, stores, vessels, autos and civil building, and especially useful in household kitchens, hotels, recreations facilities and gas stations to block the spreading fire and fire and provide shield for the safe evacuation.

FEATURES:

NAFFCO's Fire Blankets are Electrical resistant not less than 1MΩ to ensure that event of use where live electrical equipment is concerned, the potential for an electrical shock is minimized.

NAFFCO's Fire Blankets can be released and can be covered on the flame in LESS THAN FIVE SECONDS.

STANDRED COMPLIANCE:

NAFFCO's Fire Blankets confirms to the requirements of BS EN 1869:1997



NFB 1.2



NFB 2.1



NFB 1.4

SPECIFICATIONS

Model	NFB 1.2	NFB 4.4	NFB 1.4	NFB 4.6	NFB 2.1	NFB 6.6
Size	1.1m X 1.1m	1.2m x 1.2m		1.2m x 1.8m		1.8m x 1.8m
Material	Fiberglass with Silicone coating					
Weight	340g/m ²	480g/m ²	340g/m ²	480g/m ²	340g/m ²	480g/m ²
Temperature	550°C					
Packing	Covered in Nylon Bags and Packed in Flat Hard PVC RED Pack					

*Kitemark & LPCB approved datasheets available upon request

WET CHEMICAL FIRE EXTINGUISHERS

Fire extinguishing agent have different reaction to sources of fire making the choice of a fire extinguisher dependent on the application and effectiveness in minimizing fire damage.

NAFFCO wet chemical extinguishers are ideal for class F fires, involving cooking oils and fats.it is extremely effective as the wet chemical rapidly knocks the flames out, cools the burning oil and chemically reacts to form a soap-like solution, sealing the surface and preventing re- ignition.

FEATURES:

- Kitemark & LPCB Approved.
- Capable of extinguishing a cooking oil fat fire.
- Wet chemical process seals the surface of burning oil to prevent re-ignition.
- Special hose flexible joint for ease of operation.

NAFFCO chemical extinguishers are easy to use producing a gentle but highly effective spray. The gentle application helps prevent hot oil splashing onto the user. An added benefit is that it that is also suitable for freely burning materials (CLASS A)such as wood paper and fabrics.



NKE - 2

NKE - 3

NKE - 6

SPECIFICATIONS (STORED PRESSURE TYPE)

Model	NKE2*	NKE3*/NKE3	NKE6
Capacity	2 Liters	3 Liters	6 Liters
Fire Rating	5F	8A 25F	13A 75F
Extinguisher Weight	4.4 Kg.	7.2 Kg	12.5 Kg
Working Pressure	10 Bar	10 Bar	10 Bar
Discharge Duration	40-45 Sec	30 - 35 Sec	50 - 55 Sec
Discharge Range	1 Mtr	1 Mtr	1 Mtr
Operating Temperature	+5°C to +60°C	+5°C to +60°C	+5°C to +60°C
Manufacturing Standard	BS EN3	BS EN3	BS EN3

*Only LPCB Approved



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