



# MELTON

PROTECTION SOLUTIONS

TECHNICAL  
CATALOGUE...



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# ABOUT US



**MELTON** Protection Solutions is one of the leading manufacturers and suppliers of firefighting equipment fire pumps, fire suppression systems and many of fire protection products. We are specialized in supply, installation and maintenance of a huge variety of fire protection equipment. Our products save people and property from the dangers of fire.

With over 20 years of experience, our company has grown, developed and has worked with major, high profile clients. You can rely on our integrity, honesty and punctuality.

Whether for Industrial plants, power providers, logistics centers, office and administration buildings, transport stations or data center, **MELTON** provides tailored solutions wherever there is a fire threat.

Fire protection systems require regular servicing to run at optimum performance and effectively combat fire. Our service teams will regularly test and audit your systems to ensure it meets all required standards.

Operating from our factory in Cairo, we are conveniently situated to provide a nationwide service. Wherever you are and whatever you need, you can guarantee our highly trained, fully experienced team will have the skills necessary to fulfil your every requirement. Melton Protection Solutions is the smart choice when early fire detection and suppression needs are required. 





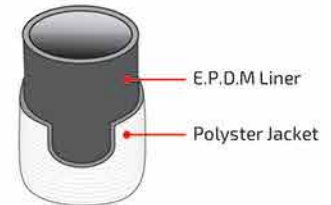
- **Fire Fighting Equipment**



## UL Listed Single Jacket Fire Hose

Melton UL LISTED Single Fire Hoses is constructed with an EPDM liner adhered to the woven polyester reinforcing jacket.

Melton Fire Hose is conforming to BS 6391:2009 Type 1, UL219, prEN1924 EN 14540 (2004).



### ► Construction

- Single Jacket
- Jacket is made up of 100% polyester
- Specific quality synthetic rubber as internal lining to withstand heat and polluted water

### ► Lengths

- 50 feet (15.24 meters)
- 75 feet (22.86 meters)
- 100 feet (30.48 meters)

### ► Couplings

- Instantaneous Aluminium - coupling
- Brass Pin Lug Coupling



### ► Features

- Seawater resistant.
- Weather-Resistant.
- Heat and abrasion resistant.
- Ageing and ozone resistant.
- Minimum friction loss because of very smooth inner lining.
- Light and Flexible.
- Minimum maintenance.
- Temperature Range: -40°C up to 100°C.





**UL Listed Single Jacket Fire Hose**



► **Specifications**

Model Number	Diameter (inch)	Service Test Pressure (psi)	Burst Pressure (psi)	Standard Compliance
FE-SJ115-001	1-1/2	250	750	UL 19, Ex26861
FE-SJ215-002	2-1/2	250	750	UL 19, EX26861

Melton Protection Solution features a new technology in hose binding by **EXPANSION RING**.

## Fire Hose Rack Assembly

Melton hose rack assembly specifically designed for interior firefighting use in building & plants. Melton Hose rack assembly is the combination of 6 components: angle hose valve, fire hose, pin rack, rack nipple, hose coupling and nozzle.

The swinging rack with movable pins features an easy and fast release mechanism for fire suppression operation.

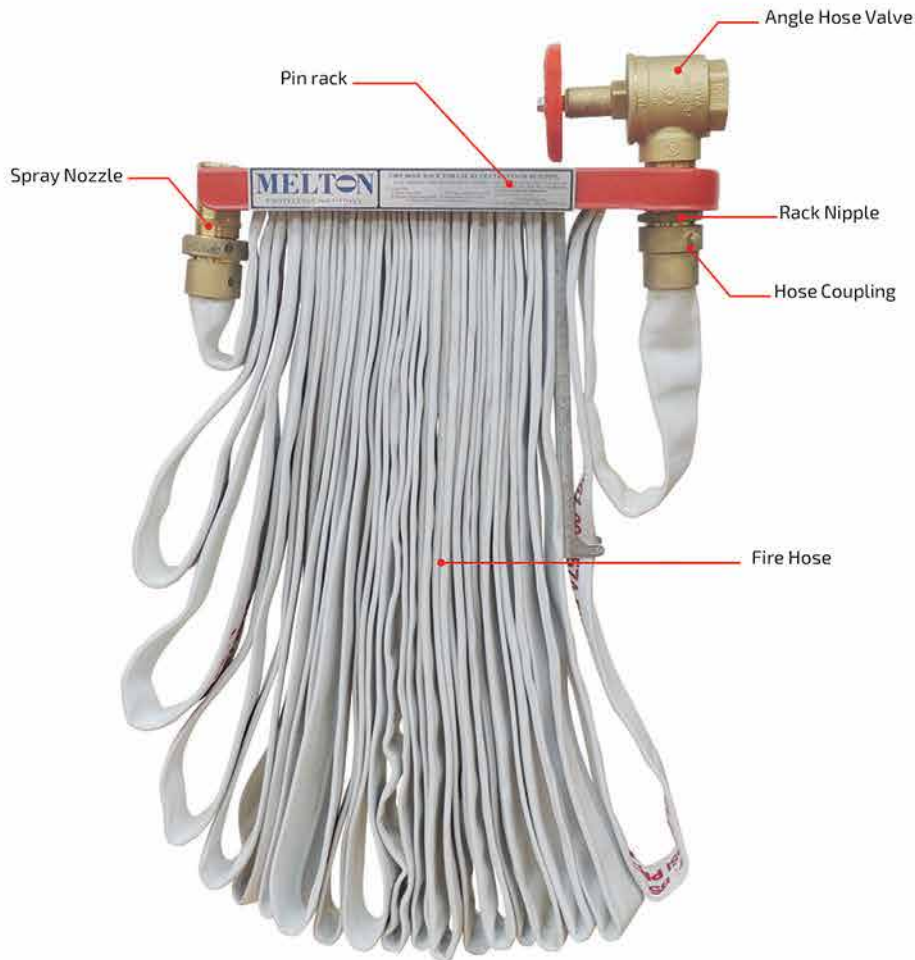
Melton Hose rack assembly is in accordance with NFPA standard Class II service, with most parts are UL Listed/ FM Approved.

### ► Features

Hose Rack Frame material made of mild steel, Red (RAL 3000) painted.

Automatic release mechanism for individual operation, allows water to flow through the hose after removal of hose.

Hose Lengths are 50, 75, 100 ft.



### ► Specifications

Model Number	Diameter (inch)	Service Test Pressure (psi)	Burst Pressure (psi)	Standard Compliance
FE -SJ-HR115-003	1-1/2	250	500	NFPA 14
FE -SJ-HR215-004	2-1/2	250	500	NFPA 14

**Fire Hose Storage Reel**

This swinging arm type hose storage reel is designed to accommodate up to 30 m of 1 ½" and 2 ½" fire hose. Stores collapsible hose on drum to avoid damage from kinking for a long hose life.

► **Features**

- Heavy duty Solid steel construction.
- Mounting Hardware.
- Compact size-smaller reel hub to allow more hose storage.
- Sides are open to allow hose to dry faster.
- Red (RaL 3000) finish coating.

► **How To Roll Hose On Reel**

- 1 Lay the hose straight and flat on the ground.
- 2 Hose is then double rolled from the center of length.
- 3 Start Rolling the hose on the reel, beginning from the folded end that does not contain the couplings.
- 4 Attach female coupling to water source and male coupling with the nozzle.
- 5 Hose is Instantly ready for action when completely removed, and valve is opened.



Model	Type	Hose Length	Hose Size
FE-MSR2.5-005	Manual	50-100 feet	2.5
FE-ASR2.5-006	Automatic	50-100 feet	2.5
FE-MSR1.5-007	Manual	50-100 feet	1.5
FE-ASR1.5-008	Automatic	50-100 feet	1.5

Melton Storage reel are available with automatic mechanism for one-person operation.



## Fire Hose Reel

Melton Protection Solution fire hose reels suitable for use in fixed firefighting systems.

Fire hose reels are located to provide a reasonably accessible and controlled supply of water to combat a potential fire risk.

The length of a fully extended fire hose is 30 meters with a diameter of 25mm (outside diameter).



A control nozzle attached to the end of the hose enables the operator to control the direction and flow of water to the fire.

All fire hose reels come with a unique ball valve shut-off device, a plastic or solid brass hose reel nozzle and mounting mechanism.

The semi-rigid reel hoses are manufactured in accordance with BSEN 694 standard.



### ► Features

- ▶ Side plates red (RAL3000) finishing.
- ▶ Threaded Inlet connection
- ▶ Outlet connection for hose can be rotated for left and right direction
- ▶ Waterways made from non-ferrous metals which ensure corrosion free\*
- ▶ Maximum working pressure 12bar, test pressure 18bar (EN671-1)
- ▶ Side plates available in stainless steel

Model Number	Mounting	Working Pressure (bar)	Test Pressure (bar)	Standard
FE -HR25-009	Cabinet mounting	12	18	BSEN671-1
FE-HR25-010	Wall mounting	12	18	BSEN671-1

**Fire Cabinet**

Melton Protection Solution manufactures a range of surface, Trimless, Semi-recessed and recessed mounted fire cabinets. Fire cabinets are generally fabricated from carbon steel material coated with (RAL 3000) corrosion resistant coating. Electro-galvanised steel, aluminium or stainless steel are available upon request.

Melton Cabinets are designed to accommodate firefighting equipment. The cabinets are designed in accordance with BSEN 671-1 standard.

The quality of workmanship and finishes are carefully planned and executed from the initial stage of preparing the material, fabrication, up to the surface preparation and finishing.

The standard finishes of the carbon steel, electro-galvanised steel and aluminum cabinets are "Red" RAL 3000 coated or electrostatic coating. Stainless steel Type 304 and 316 grade cabinets come with mirror finishes. Other finishes available on request.





## Fire Cabinet

### ► Features

- Compact and elegant Design.
  - Quality finishes.
  - Easy and fast installation with minimum labour required.
- As an O.E.M., we are able to offer complete flexibility in the layout of our hydrants. According to specifications, we can furnish any combination of the following:
- Cabinet Material.
  - Locking mechanism is either Key Handle or round cam latch.
  - Cabinet door shall include viewing panel (Clear Glass or wired glass).



**Fire Cabinet**

Proper cabinet selection depends on contents, mounting style, and door style. To select a cabinet, follow the steps below:

- STEP 1** WHAT WILL THE CABINET CONTAIN: FIRE HOSE REEL, FIRE HOSE STORAGE REEL, FIRE HOSE RACK, FIRE EXTINGUISHER, FIRE DEPARTMENT VALVE?
- STEP 2** CHOOSE THE MOUNTING STYLE: RECESSED, TRIMLESS, SEMI-RECESSED, OR SURFACE
- STEP 3** CHOOSE THE CABINET MATERIAL: STEEL, ALUMINUM, STAINLESS STEEL, BRASS, OR BRONZE
- STEP 4** CHOOSE THE DOOR STYLE: FULL GLASS, VERTICAL DUO PANEL, FLUSH SOLID METAL
- STEP 5** SELECT CONTENTS: FIRE HOSE REEL, FIRE HOSE STORAGE REEL, FIRE HOSE RACK, FIRE EXTINGUISHER, FIRE DEPARTMENT VALVE?



► Cabinet Model

FE

S

S.. Single  
D.. Double

CS

CS.. Carbon Steel  
ES.. Electro - Galvanised Steel  
AL.. Aluminum  
SS.. Stainless Steel

S

S.. Surface  
SR.. Semi Recessed  
R.. Recessed  
T.. Trimless

RH

R.H.. Right hand  
LH.. Left Hand



## Wet Stand Post Fire Hydrant

Fire Hydrants are an essential part of any firefighting system, enabling the distribution of large volumes of water quickly across site.

Melton Protection Solutions manufactures a wet stand post fire hydrant. Hydrant stand posts provide the means to connect hydrant (landing) valves onto the fire water mains.

Hydrant Stand Posts are fitted using welded/ flanged joints onto the fire water main horizontal pipes, while the Hydrant valves are fitted onto outlet ports of the hydrant. Pumper Connection allows direct coupling of Hydrant supply to Pump Inlet of Fire Tender.

Hydrant stand posts are constructed from ASTM A105 (ASME SA 105), welded with inlet connection ANSI 16.5 #150 R.F. flanges.

Hydrant stand posts are Painted outside with flame Red Color (RAL 3000), and inside with zinc based paint



Model	Description	Inlet	Outlet	Working Pressure (psi)	Test Pressure (psi)
MSP-TW-11	Two Way Hydrant Stand Post	4" or 6" Flanged	2 x 2 1/2" (threaded or flanged) (flanged pumper connection optional)	275	450
MSP-FW-12	Four Way Hydrant Stand Post	6" Flanged	4 x 2 1/2" (threaded or flanged) (flanged pumper connection optional)	275	450

► As an O.E.M., we are able to offer complete flexibility in the layout of our hydrants. According to specifications, we can furnish any combination of the following:

- Header inlet size and type.
- Number of outlets.
- Size of outlets.
- Position / orientation of outlets.
- Flanged / threaded / symmetrical connections.





- **Fire Fighting Pump**







**Melton Protection Solutions – Trusted Partner**

Melton is designing & manufacturing pumps with the most advance technology available in accordance with NFPA20 to obtain the highest levels of efficiency and quality.

Melton End Suction Pumps, properly installed and given reasonable care and maintenance, will perform satisfactory for a long period of time.

MT- Series are specifically designed to significantly reduce fire pump space requirements. Available with either an electric motor or diesel engine driver.

**▶ Melton Facility – Manufacturing, Testing and Performance Tests**

Melton has established a testing facility in compliance with NFPA 20 to accurately inspect and test each pump showing Total Head, Brake Horsepower, Flow, RPM and Efficiency at the shutoff and rated capacity reaching end of curve for each pump.

All pumps are hydrostatically tested @ 250 psi to ensure no rupture or leakage.

**▶ Melton Design services and Upgrades**

Melton applications engineers possess the systems and specifications knowledge along with real world experience to develop safe, reliable systems and system upgrades to meet client needs.

- ▶ Start-up and commissioning.
- ▶ On-Site maintenance and repair.
- ▶ Pump installations upgrades.
- ▶ Hydraulic and Electrical Assessments.
- ▶ Training.

► **Complete Package**

Whether you select a completely housed Skid Package or a base mounted package, Melton assures that all the system is meeting all applicable codes and is hydrostatically tested. Melton will deliver a skid Package to your side for a simple hook-up to water and electricity.

► **Controllers**

To ensure total compatibility of equipment, controllers are manufactured or sourced by Melton. These can be Direct-On-Line, Star-Delta, Auto-Transformer, Soft Start, etc. Diesel controllers can be supplied for 12V or 24V DC electric, air or hydraulic cranking. Controllers can be supplied free standing or mounted on the baseplate, completely wired and connected into the pump set package. Remote alarm panels can also be supplied.



► **Features**

- Standard Fitted pump construction.
- Stainless steel shaft.
- Packing Gland-Immersion Graphite.
- Ductile iron Casing – Heavy Duty Power Frame.
- Bronze Impeller.
- Casing Design such that no air release is required.
- BPO (Back Pull Out) permits for easy removal without disconnecting suction and discharge pipes.
- Top Centerline discharge.
- Capacity 50 - 1000 USGPM.
- Head 55 – 227 psi (40 – 160 MTR).

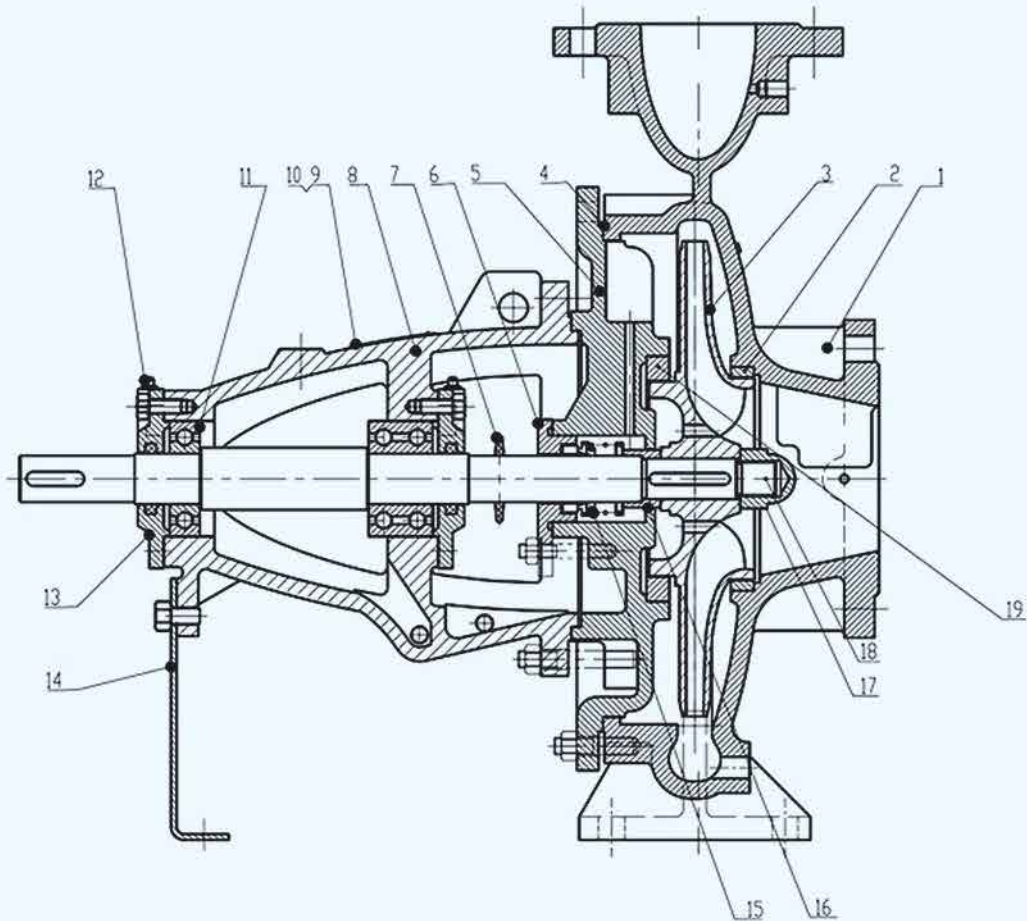
► **Applications**

Melton pumps can be found in most types of installation:

- Oil and Gas on shore and off shore platforms.
- Hospitals.
- Airports.
- Manufacturing and Chemical industry.
- Power Industry.
- Pharmaceutical Facilities.
- Schools/Colleges.
- Warehouses.
- Marine applications.
- Fire-work industries.
- Petrochemical industries and Gas plants.



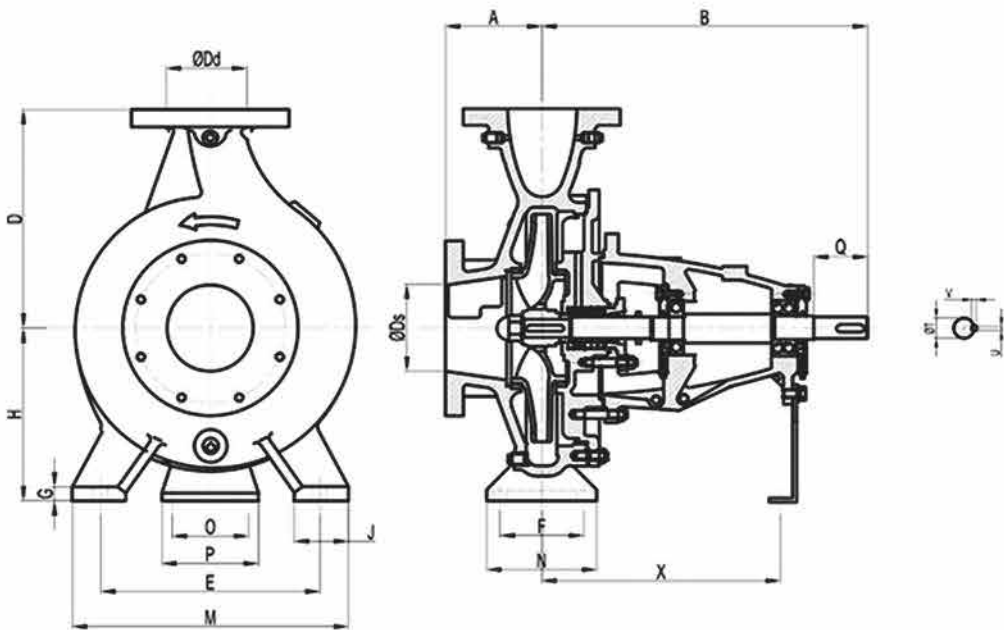
## Sectional View



#	Part Name	Material
1	Casing	Cast Iron
2	Wear Ring	Bronze
3	Impeller	Bronze
4	Gasket	SH paper
5	Cover	Ductile Iron
6	Packing Gland	Immersion Graphite
7	Deflector	Rubber
8	Bracket 35	Cast Iron
9	Name Plate	Stainless steel
10	Rivet	-

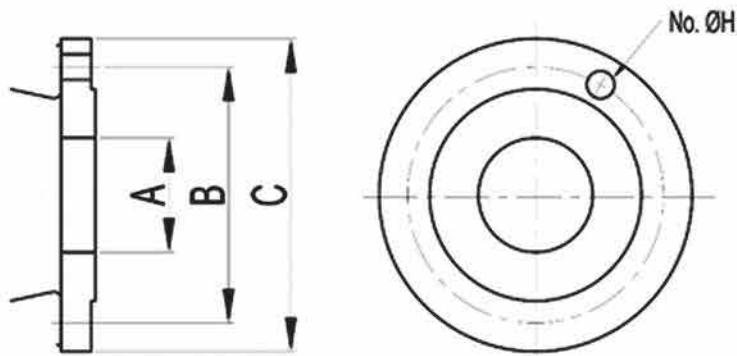
#	Part Name	Material
11	Bearing	SKF/NSK
12	Oil Cup	Bronze
13	Bearing Cover	Cast Iron
14	Stay	Q235(A)
15	Mechanical Seal	-
16	Shaft Sleeve	Bronze
17	Impeller Nut	Bronze
18	Shaft	Stainless Steel
19	Wear Ring	Bronze

## Dimensions



#	Model	$D_s$	$D_d$	A	B	D	E	F	G	H	J	M	N	O	P	X	Q	T	U	V
1	MT50-32H	65	50	125	470	280	280	95	18	225	65	345	125	110	140	342	80	32	10	8
2	MT80-26H	100	80	125	470	280	315	120	18	200	80	400	160	110	140	342	80	32	10	8
3	MT80-32H	100	80	125	470	315	315	120	18	250	80	400	160	110	140	342	80	32	10	8
4	MT100-26H	125	100	125	470	280	315	120	18	225	80	400	160	110	140	342	80	32	10	8

Unit: mm



#	Model	Suction Flange				Discharge Flange			
		A	B	C	No. xH	A	B	C	No. xH
1	MT50-32H	65	100	175	4 x 18	50	90	15	4 x 18
2	MT80-26H	80	155	225	4 x 18	80	125	190	4 x 18
3	MT80-32H	100	155	230	4 x 18	80	125	190	4 x 18
4	MT100-26H	120	185	255	4 x 20	100	155	225	4 x 18

Unit: mm





- **Fire Suppression Systems**





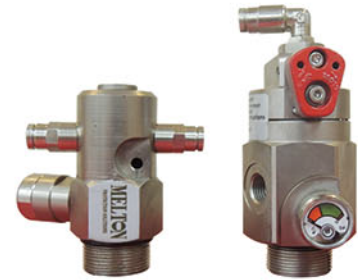
### Automatic fire tube suppression systems

Unattended small short circuits are the main cause of most Major Fires. Fire in Server Racks or electrical panels are generally caused by short circuit or small sparks but as they are not attended they lead to serious hazard to life and property leading to personnel injuries, property damage, loss of productivity and precious time.

Introducing Fire Tube extinguishing system a product of Melton Protection Solution which is a very simple but most effective solution to fight small fires or short circuits.

Fire Tube extinguishing system is a self-activating suppression system. If a flame –up occurs, the heat of the fire causes the pressurized detection tube to burst.

Fire tube system consist of Detection Tube and Storage container fitted with automatic valve assembly



**Melton utilizes UL Listed Fire detection tube to ensure flexibility, durability and precise temperature sensitivity, allowing to react quickly when the heat from a fire present.**

Fire Tube system is of two type:

① Direct Type

In the Direct system at the time of fire the detection tube connected to the cylinder assembly itself burst at the hottest spot forming a small nozzle & from this nozzle the extinguishing agent is released and instantly floods the entire cabinet area, the fire is quickly suppressed.

② Indirect Type

In the Indirect system, detection tube detects the fire and actuates the system valve and the extinguishing agent is discharged through steel pipes and the entire area is flooded through nozzles attached to the pipes.





## HFC227ea Fire Suppression System

### ► Introduction

Melton Protection Solutions manufacturing HFC 227ea Fire extinguishing systems which designed for total flooding in accordance with National Fire Protection Association (NFPA) 2001, Standard for Clean Agent Extinguishing Systems. These systems have been tested to UL 2166, Standard for Halocarbon Clean Agent Extinguishing System Units.

HFC227ea is colorless, odorless and electrically nonconductive. It suppresses fire by a combination of chemical and physical mechanisms without affecting the available oxygen, the primary extinguishing mechanism is heat absorption, with a secondary chemical contribution from the thermal decomposition of agent in the flame. This allows personnel to see and breathe, permitting them to leave the fire area safely. Although HFC-227ea is considered nontoxic to humans in concentrations necessary to extinguish most fires, certain safety considerations should be observed when applying and handling the agent.



## HFC227ea Fire Suppression System

Typical areas that can be protected by HFC227ea system are as follows:

(As for example, the list below is by no mean complete)

- Telecommunication facilities
- Museums and libraries
- Marine vessels
- Electronic Data Processing
- Clean Rooms
- Telephone Exchanges
- Electrical Transformer Rooms
- Flammable Liquid Stores
- Control Rooms
- LV/HV Switchgear Rooms
- Studios
- Bank Vaults
- Test Laboratories

Each system consists of the following:

### HFC227ea Storage Components

Storage components consist of a container which contains agent fitted with a valve and internal syphon tube, and the cylinder bracket, which holds the cylinder assembly securely in place.

### HFC227ea Distribution Components

Distribution components consist of pipe, pipe fittings, pipe supports and the discharge nozzles used to introduce the agent into a protected hazard.

### System Actuation Components

HFC227ea system can be actuated using electrical actuator, manual actuator or pneumatic actuator.

### Supplementary Components

Supplemental components such as low pressure switch and manifold check valve.



### HFC227ea Fire Suppression System

#### ► Cylinder Assembly

The agent is stored as a liquid inside welded steel cylinder and super-pressurized with dry nitrogen to a pressure of 360 psi (25 bar) @ 21°C.

The cylinder assembly consists of a container fitted with a valve and internal syphon tube.

The agent system cylinders are available in the following capacities: 8, 16, 32, 106 and 147 Li, all agent cylinders are UL recognized.

The storage container is labeled with identification label indicating the filling data.



## HFC227ea Fire Suppression System

### ► Actuation Components

#### Electrical Actuator

The electric actuator is attached directly to the top of the valve. The actuator requires 24 v dc to operate. The electrical actuator provides a solution with fast response.

Provision is made for the connection of a manual actuator to the top of the electrical actuator.

The actuator features a rod which stays at "up" position until a signal from the agent release control panel push the rod to "down" position that depresses the Schrader check valve allowing the pressure from the top of the piston in the cylinder valve to be vented, thereby discharging the cylinder.

Following system actuation, the actuation rod of the electrical actuator must be manually reset by pushing pin up until it reaches to "up" position.



#### Manual Actuator

The manual actuator is attached to the top of the electric actuator to provide a means to manually open the cylinder valve.

The manual actuator body is manufactured from Brass, Stainless steel safety clip and PVC knob.

To actuate the extinguishing system, the safety clip should be removed and the knob to be depressed which forces the actuator rod to depress the Schrader check valve allowing the pressure from the top of the piston in the cylinder valve to be vented, thereby discharging the cylinder.



**HFC227ea Fire Suppression System****Pneumatic Actuator**

The pneumatic actuator is attached directly to the top of the valve assembly.

The actuator features a rod that depresses the Schrader check valve allowing the pressure from the top of the piston in the cylinder valve to be vented, thereby discharging the cylinder.

The pneumatic pressure required to operate the pneumatic actuator is obtained from the master cylinder via pneumatic flexible hose.

A maximum of five pneumatic actuators are allowed for manifold applications.

**Pneumatic Actuator Accessories**

The Pneumatic actuation components utilized to connect master cylinder to slave cylinders.

It consists of flexible pilot hose, male adaptor, male tee, and male elbow.

The Flexible Pilot Hose is constructed from Teflon lined Stainless Steel wire braided, and connection are constructed from Zinc Mild Steel.

The Male Adaptor connects flexible pilot hose to the 1-inch and 2-inch valve assemblies.

The Male Tee used when connecting actuation line from one slave to another.

The Male Elbow is used on last slave cylinder.





## HFC227ea Fire Suppression System

### ► Distribution Components

Flexible discharge hoses are used to connect cylinder assemblies to the system or the manifold in multiple cylinder arrangement.

These hoses extend the discharge outlet, facilitate attachment of discharge piping, also enables cylinders to be disconnected for maintenance or recharge without dismantling other container connections.

The hose is constructed from high tensile steel wire braided covered with black, oil and environment resistant synthetic rubber to EN 853 1SN.

The hose connections are constructed from galvanized mild steel.



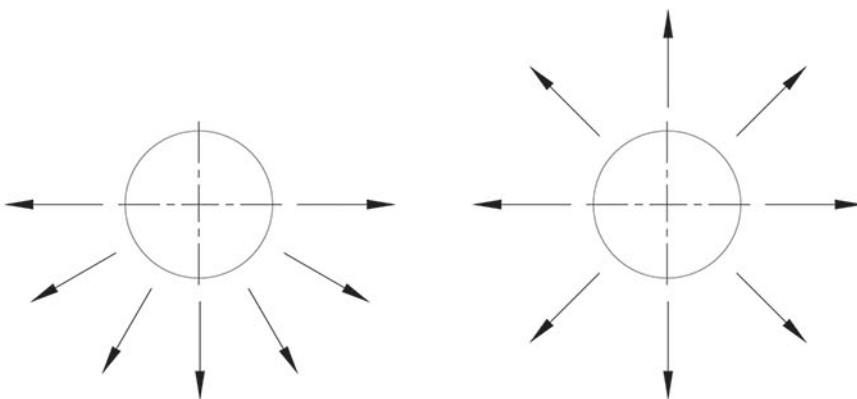
Discharge Nozzles are used to distribute the HFC227ea to the protected area.

The Discharge Nozzles are available in two configurations, 360° Central Pattern (8 Ports), and 180° Sidewall Pattern (7 Ports).

360° Central Discharge Pattern nozzle to be installed in the center of the enclosure.

180° Sidewall Discharge Pattern to be installed adjacent to the center of wall.

The Nozzles are performance tested to ensure that the agent is properly distributed throughout the protected area.



**HFC227ea Fire Suppression System****► Supplementary Components**

Manifold Check Valves are used in multiple cylinder arrangement, where master and slave cylinders share a common manifold.

The manifold check valve prevents back flow from the manifold during discharge, should a container have been removed for weighting or servicing.



A low pressure switch continuously monitors the pressure inside the cylinder. If there is a leakage, and cylinder pressure drops to 20 bar (290 psi) or below, it will send a signal to the control panel that the cylinder has lost pressure. The low pressure switch is available in two types: normally open (N.O.) and normally close (N.C.).



# MELTON

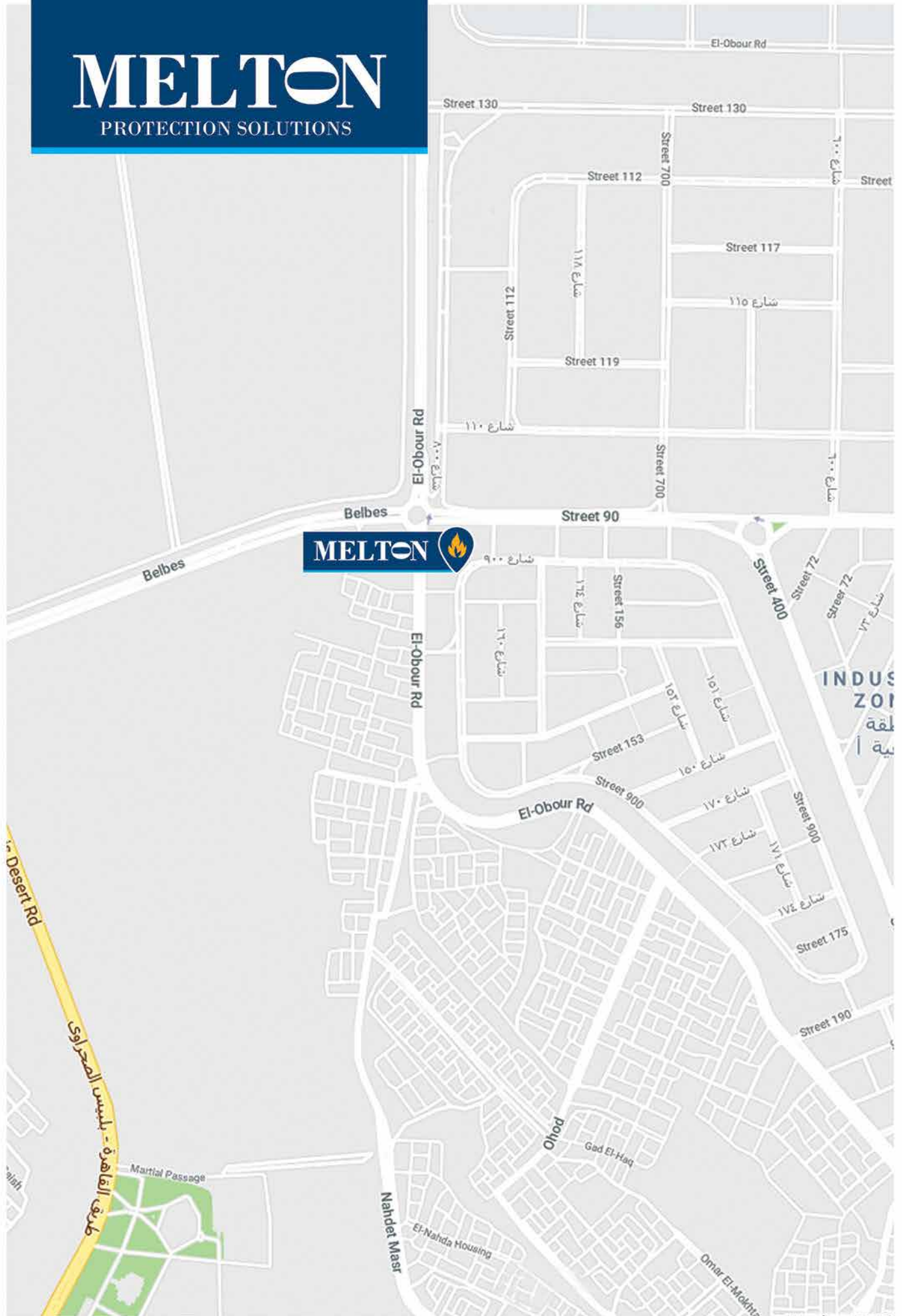
PROTECTION SOLUTIONS





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