

# MASTECO

Fire Protection Products



## Sprinkler

### Flush Type

#### Standard Response



MT2010  
74°C / 96°C / 105°C  
165°F / 205°F / 220°F

MFSP  
72°C / 105°C  
162°F / 221°F

#### Quick Response



MT2110  
74°C / 96°C / 105°C  
165°F / 205°F / 220°F

MFQP  
72°C / 105°C  
162°F / 221°F



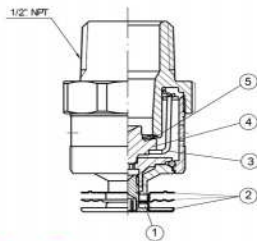
MFQ72-V  
72°C / 162°F



MFQ105-V  
105°C / 221°F

MFQ72-R  
72°C / 162°F

MFQ105-R  
105°C / 221°F



NO.	Part	Material
1	Fuse Metal	Fusible Alloy
2	Heat Collector	Copper
3	Deflector	Stainless Steel
4	Valve Cap	Brass
5	Spring Seat	Ni-Be + PTFE

### Glass Bulb Type

#### Upright



MT2500 Standard Response  
57°C / 68°C / 79°C / 93°C  
135°F / 155°F / 175°F / 200°F

MT2600 Quick Response  
57°C / 68°C / 79°C / 93°C  
135°F / 155°F / 175°F / 200°F

MGS68U  
Standard Response  
68°C (155°F)

MGS93U  
Standard Response  
93°C (200°F)

MGQ68U  
Quick Response  
68°C (155°F)

MGQ93U  
Quick Response  
93°C (200°F)

#### Pendent



MT2510 Standard Response  
57°C / 68°C / 79°C / 93°C  
135°F / 155°F / 175°F / 200°F

MT2610 Quick Response  
57°C / 68°C / 79°C / 93°C  
135°F / 155°F / 175°F / 200°F

MGS68P  
Standard Response  
68°C (155°F)

MGS93P  
Standard Response  
93°C (200°F)

MGQ68P  
Quick Response  
68°C (155°F)

MGQ93P  
Quick Response  
93°C (200°F)

#### Side Wall



Thermo Bulbs

57°C / 135°F	68°C / 155°F	79°C / 175°F	93°C / 200°F
Orange	Red	Yellow	Green

MGS68W  
Standard Response  
68°C (155°F)

MGS93W  
Standard Response  
93°C (200°F)

MGQ68W  
Quick Response  
68°C (155°F)

MGQ93W  
Quick Response  
93°C (200°F)

### Dry Pendent Type



MDFS72  
72°C

MDFS105  
105°C



MDGS68  
68°C



MDFQ72SW  
72°C

MDFQ105SW  
105°C



## Unbraided Type



## Braided Type



## Insulated Type



## Fittings



Side Bracket



Reducer

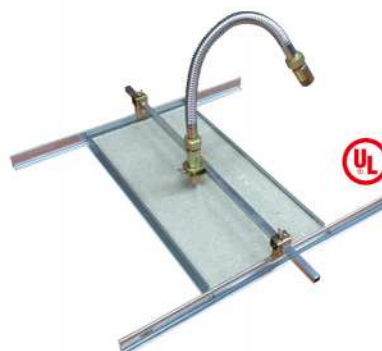
Center Bracket



Nipple



Flexible Hose with Fittings Set



Model	KFI				UL
	D-Type	S-Type	A-Type (Apartment)		MFJ-S
			D-Type	S-Type	
Size (mm)	700 1000, 1200 1500, 1800 2100, 2500 2800, 3100		500, 700 1000, 1200 1500, 1800 2100, 2500 2800, 3100		700 1000 1200 1500 1800
				Customized	

## Alarm Check Valve



Model Name	MWAV-1			
Valve Size	2.5" (DN65)	3" (DN80)	4" (DN100)	6" (DN150)
Working Pressure	200psi (13.79bar)			
Test Pressure	400psi (27.58bar)			
Flange Type	ANSI B16.5 Class 150lbs			
Direction	Vertical			
Weight (Flanged ends)	13.1kg	14.7kg	16.7kg	28.2kg



Available with sight glass, relief valve, and butterfly valve.

Model Name	M-WAV								
Valve Size	2.5" (DN65)	3" (DN80)	4" (DN100)	5" (DN125)	6" (DN150)				
Working Pressure	1,4MPa (14bar)								
Test Pressure	2,1MPa (21bar)								
Connection Type*	FF	GG	FF	GG	FF	GG	FF	FF	GG
Direction	Vertical								
Weight	12kg	6kg	13kg	7kg	17kg	9kg	23kg	30kg	22kg

\*Connection Type

FF = Flanged Ends with KS B 1511 FF 10K / GG = Grooved Ends with KS B 1507



## Deluge Valve



Model Name	MDV-1				
Valve Size	3" (DN80)	4" (DN100)	6" (DN150)	8" (DN200)	10" (DN250)
Working Pressure	250psi (17,24bar)				
Test Pressure	500psi (34,5bar)				
Connection Type	Flanged Ends (ANSI, KS/JIS) Grooved Ends (AWWA, KS/JIS)				
Direction	Vertical Horizontal				
Weight (Flanged ends)	21,4kg	31,0kg	47,3kg	75,8kg	104,7kg

## Pre-Action Valve



Model Name	MPAV-1			
Valve Size	3" (DN80)	4" (DN100)	5" (DN125)	6" (DN150)
Working Pressure	1,4MPa (14bar)			
Test Pressure	2,1MPa (21bar)			
Flange Type	KS B 1511 FF 10K			
Direction	Vertical			
Weight	23kg	27kg	36kg	44kg

## Clean Agent Fire Suppression System

FM-200 (HFC-227ea) Piston Flow System (25bar)



FM-200 (HFC-227ea) Easy Flow System (25bar)



FM-200 (HFC-227ea) Piston Flow System (25bar)

Flow Calculation Software by JENSEN HUGHES  
FM-200 is a trademark of Chemours Chemical Corporation.

Part No.		Nominal Capacity (L)		Agent Cylinder Valve (mm)	Weight of Agent (kg)	N <sub>2</sub> Driver Pressure (bar)
Agent Cylinder	N <sub>2</sub> Driver	Agent Cylinder	N <sub>2</sub> Driver			
MFC-P50	N68-60	63.0	68.0	40	31.2 – 60.6	60
MFC-P75	N68-70	89.0	68.0	40	44.1 – 85.6	70
MFC-P100	N68-80	115.4	68.0	50	57.2 – 111.0	80
MFC-P150	N68-80	175.0	68.0	50	86.7 – 168.3	80

FM-200 (HFC-227ea) Easy Flow System (25bar)

Flow Calculation Software by JENSEN HUGHES  
FM-200 is a trademark of Chemours Chemical Corporation.

Part No.	Nominal Capacity (L)	Agent Cylinder Valve (mm)	Weight of Agent (kg)
MFC-23	27.0	40	13.3 – 23.6
MFC-34	40.0	40	19.90 – 38.4
MFC-50	63.0	40	31.2 – 60.6
MFC-75	89.0	40	44.1 – 85.6
MFC-100	115.4	50	57.2 – 111.0
MFC-150	175.0	50	86.7 – 168.3



## High Flow System (42bar)



### MG227 (FM-200 / HFC-227ea)

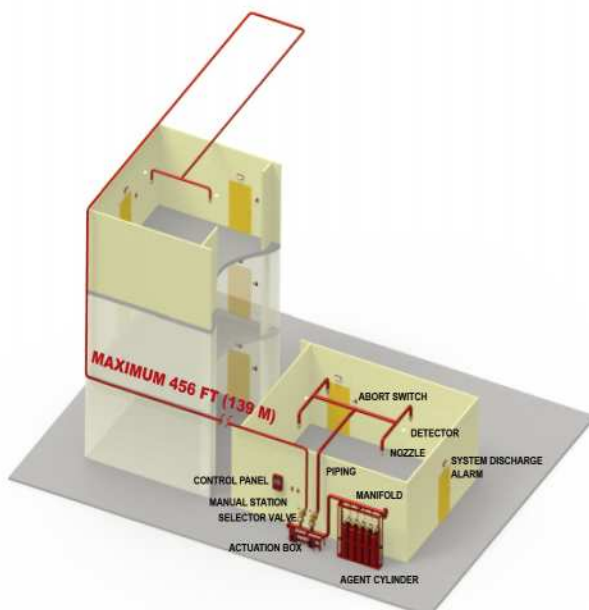
- 82.5L, 127L, & 140L
- Flow Calculation Software by JENSEN HUGHES

### MG125 (HFC-125)

- 68L & 127L
- Flow Calculation Software by JENSEN HUGHES

### MG5112 (NOVEC 1230 / FK5-1-12)

- 82.5L & 140L
- Flow Calculation Software by JENSEN HUGHES



## APPLICATIONS

- Oil & gas facilities
- Chemical laboratories
- Clean rooms
- Control rooms
- Computer rooms
- Telecommunication centers
- Records and data archives
- Testing / imaging equipment
- Electric utility facilities
- Media storage
- Military vehicles
- Art / historical collections
- Flammable liquid storage
- Offshore drilling rigs
- Robotic equipment
- Textile manufacturing

## Pre-Engineered Clean Agent Fire Suppression System (Package System)

Agent Type	HFC-227ea			HFC-125			
Weight	190kg	230kg	265kg	165kg	190kg	230kg	265kg
Protected Area	74.16m <sup>3</sup>	111.24m <sup>3</sup>	148.32m <sup>3</sup>	38.52m <sup>3</sup>	77.05m <sup>3</sup>	115.57m <sup>3</sup>	154.09m <sup>3</sup>
Dimension	500mm x 500mm x 1900mm						
Power	AC 220V 60Hz						
Fire Alarm	Siren & Sound Alarm						
Color	Ivory (ED003K)						
Cabinet Material	KSD3503 1.6t						
Temp.	-10℃ ~ 40℃						

①



Heat detector

②



Smoke detector

③

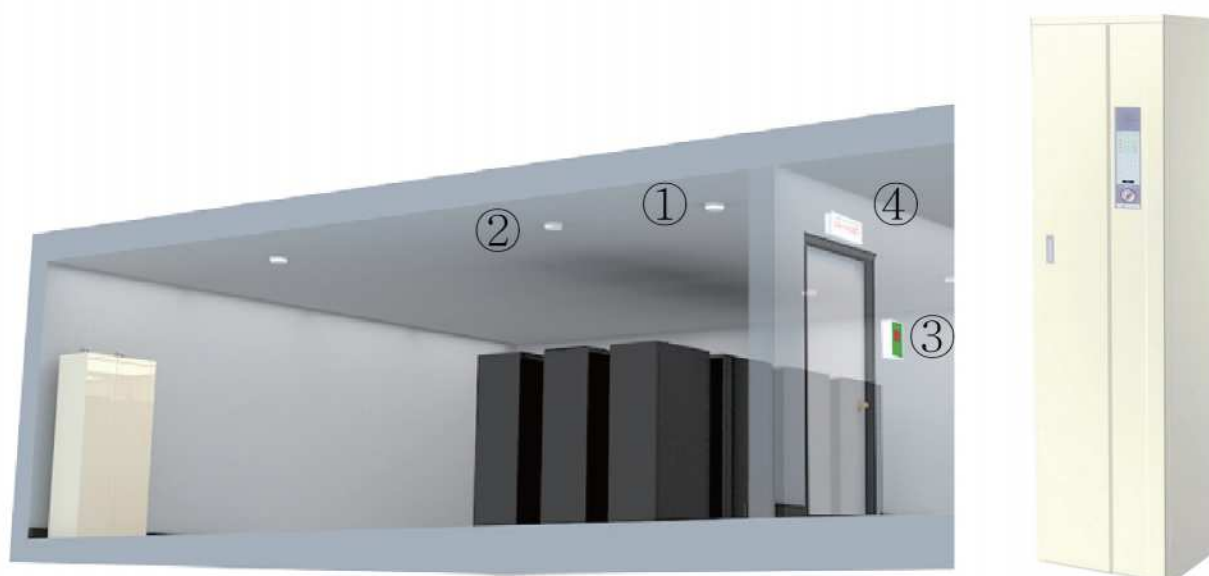


Manual station

④



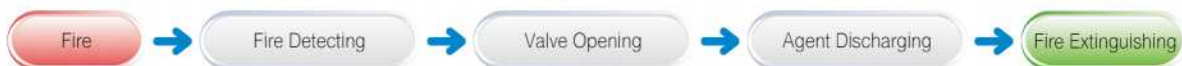
Discharge indicator



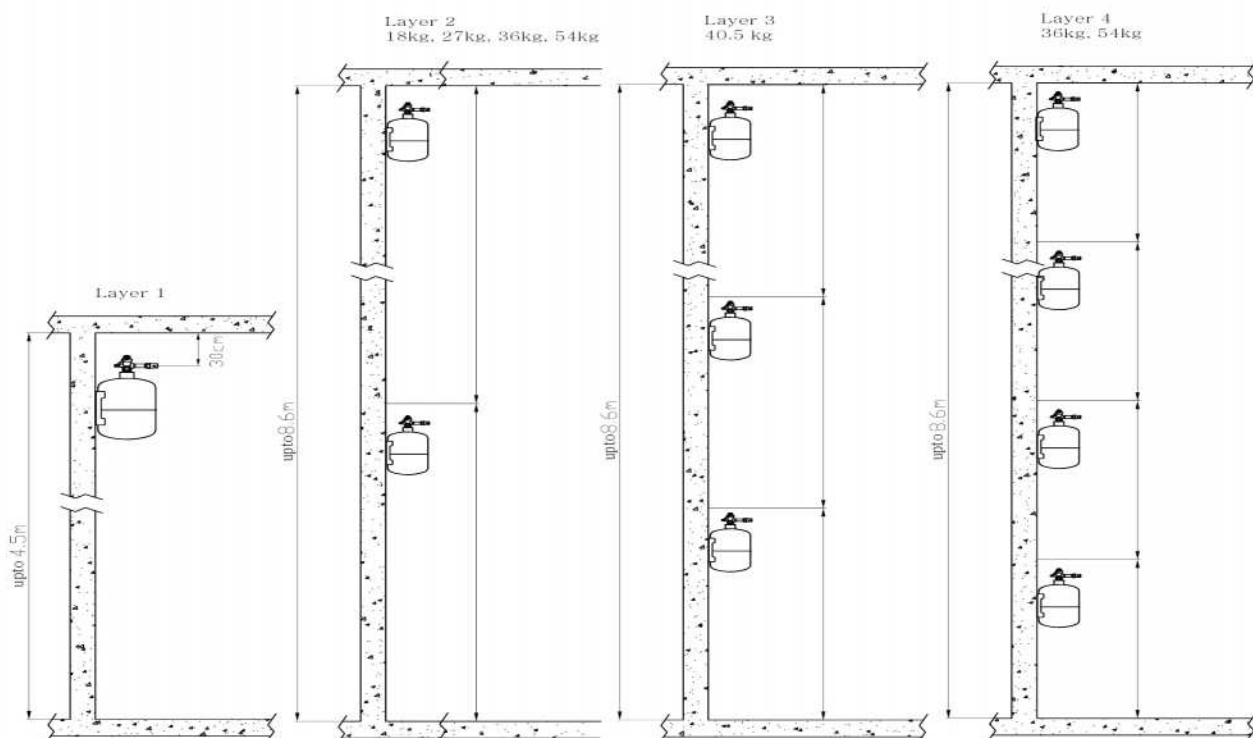


## Automatic Fire Extinguisher

- Agent : HFC-125
- Detector : 68°C QR Glass Bulb Sprinkler
- Valve Material : Brass
- Pressurized Gas : N<sub>2</sub> 25 bar (20°C)
- Cylinder Material : Chromium Molybdenum Steel



Size		9kg	13.5kg	18kg	27kg	36kg	40.5kg	54kg
Layer		1	1	1 and 2	1 and 2	1, 2 and 4	1 and 3	1, 2 and 4
Cylinder		9kg×1	13.5kg×1	9kg×2	13.5kg×2	9kg×4	13.5kg×3	13.5kg×4
Weight		19,2kg×1	27kg×1	19.2kg×2	27kg×2	19,2kg×4	27kg×3	27kg×4
Max. Height		4.5m		8.6m				
HFC-125 Amount	Class A & C	0.56 kg/m³						
	Class B	0.75 kg/m³						
Design Conc. (%)		Class A & C : 9.94			Class B : 12.87			



# FireSafe – Automatic Fire Extinguisher



# FireSafe – Automatic Fire Extinguisher

- Automatically detects and suppresses fire – Closer to where a fire can start
- Easy installation directly inside
- No electricity required
- Protecting thousands of installations all over the world
- **UL listed** fire detection tube

Product Type	Sprinkler Type	Tube Type		Pipe Type
Filling Agent	HFC–227ea			
Test Level*	Class 3	Class 4	Class 3	Class 2
Protected Area	2.4m³	4.62m³	2.4m³	1.2m³
Max. Height	2m	2.5m	2m	1.5m
Class of Fire	A, B, C			
Volume	4.2L			0.93L
Capacity	3kg			1kg
Working Pressure	1MPa (10bar)			
Total Weight	5.3kg	5.1kg (Tube & Bracket not Included)		2.45kg (Pipe & Bracket not included)
Detection	Sprinkler	Detection Tube		Sprinkler
Working Temperature	72°C	108°C	200°C	105°C
Additional Component	–	Tube End Pressure Switch	–	–

\*Test Level

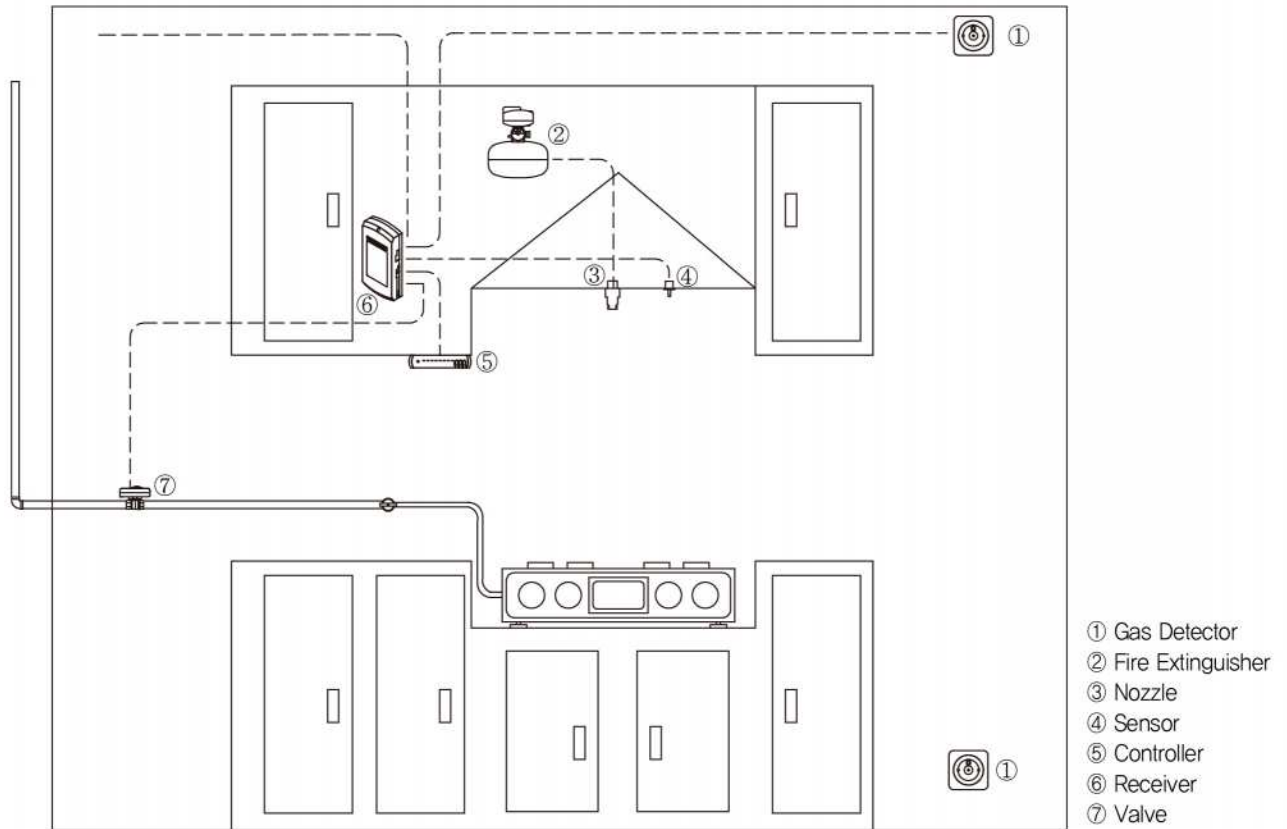
Class 2= W (900mm) x D (900mm) x H (1500mm)

Class 3= W (1200mm) x D (1200mm) x H (2000mm)

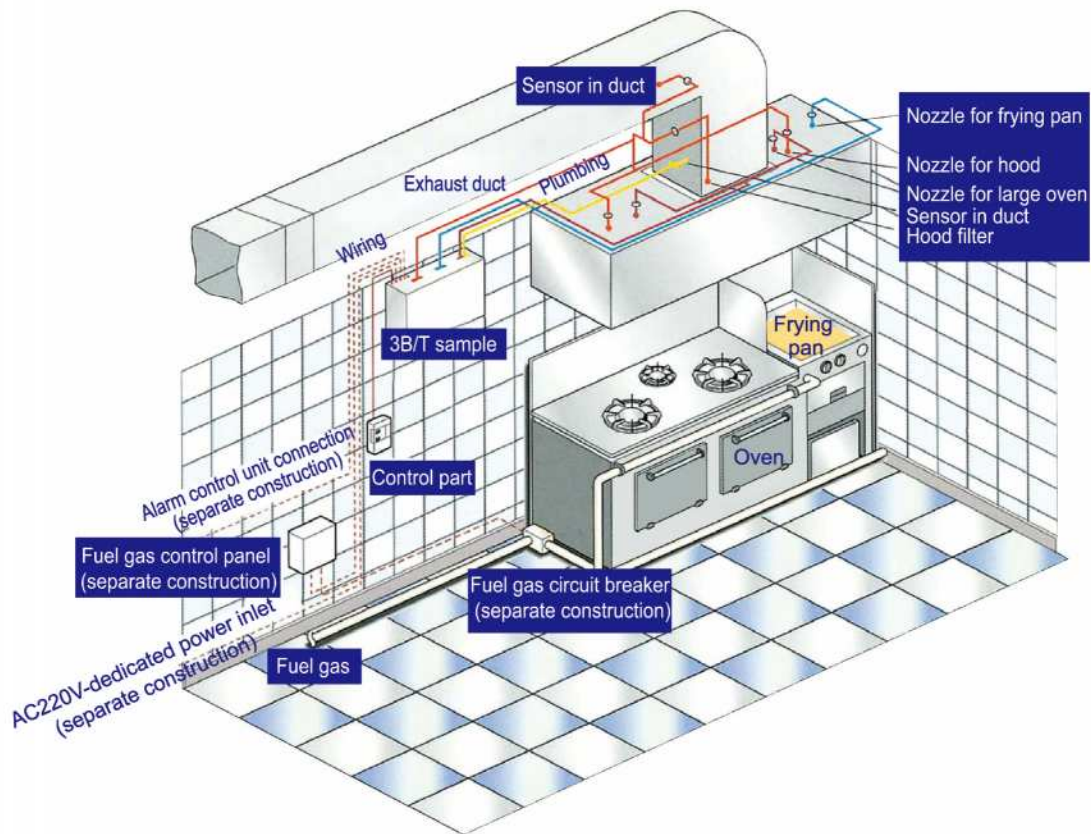
Class 4= W (1500mm) x D (1500mm) x H (2500mm)



# Automatic Fire Extinguisher



## Commercial Automatic Fire Extinguisher



Manual Operation Box



Fire Extinguishing Cylinder Case (2B/T) – Outside



Fire Extinguishing Cylinder Case (2B/T) – Inside



Nozzle



Fire Extinguishing Cylinder Case (3B/T) – Outside



Fire Extinguishing Cylinder Case (3B/T) – Inside

## Fire Extinguisher



Filling Agent	ABC Dry Powder	HCFC-123		HFC-236fa	Loaded Stream
Capacity (Kg)	3.3kg	2.5kg	3.0kg	3.0kg	3.0kg
Type	Stored Pressure				
Class of Fire	A, B, C				A, B, K
Working Pressure	0.9MPa (9bar)			0.6MPa (6bar)	0.9MPa (9bar)
Total Weight	5.05kg	4.4kg	5.5kg	5.5kg	5.9kg
Diameter	141mm	109mm	114mm	114mm	120mm
Overall Height	429mm	423mm	515mm	515mm	505mm
Discharging Range	4m	2m			3m
Discharging Time	10sec.	11sec.			67sec.
Operating Valve	Squeeze Grip Type				
	Discharge Hose & Nozzle	Nozzle	Discharge Hose & Nozzle		

### ○ F-500 EA Fire Extinguisher



#### Product Features

- Stainless steel 2.5-gallon (9.46L) extinguisher
- Includes wall mounting bracket and user instructions
- Rechargeable, using standard air compressor
- Dimensions : 9" x 24.5" x 7" (23cm x 63cm x 18cm)

#### Nozzle Options

- Smooth Bore – Single, straight stream for penetration
- Water Mist Wand – Fog mist for broadest coverage with limited fuel disturbance



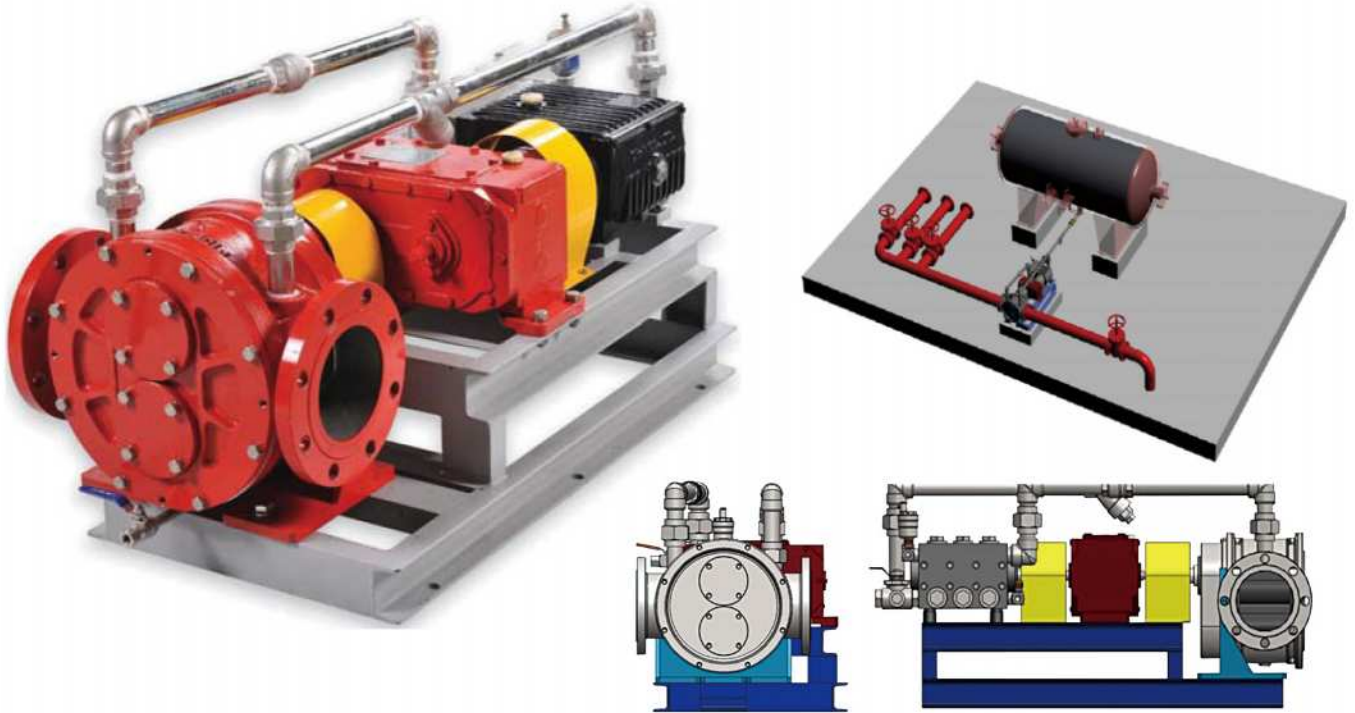
Smooth Bore Nozzle



Water Mist Wand



## FoamSafe – Foam Proportioner



### Product Features

- Water driven foam proportioner. No electricity required.
- Incorporating stainless steel for added durability.
- Keeping exact proportioning rate as set.
- Easy to install, operate and maintain.
- No time limit firefighting application with an atmospheric tank.
- The 3-way valve switch as foam releasing mode and flushing mode.

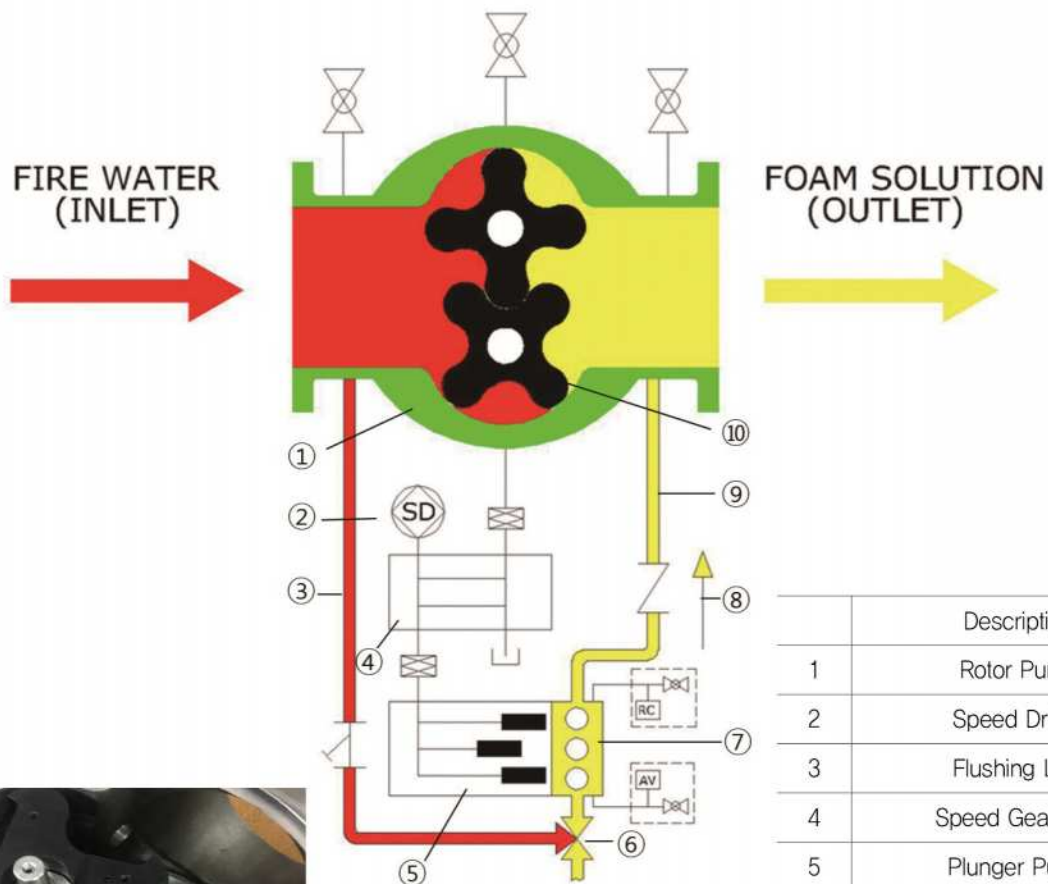
### Materials

- |  |                                     |
|--|-------------------------------------|
| ○ Rotor Pump : Stainless Steel             | ○ 3-Way Valve : Stainless Steel     |
| ○ Plunger Pump : Brass                     | ○ Piping : Stainless Steel          |
| ○ Gear Box : Carbon Steel                  | ○ Frame & Base Plate : Carbon Steel |
| ○ Strainer & Check Valve : Stainless Steel |                                     |



### Technical Specifications

Model	Flow Rate (lpm)		Mixing Ratio (%)	Water Connection (ANSI 150# Flange)	Foam Connection
	Min	Max			
FoamSafe – 5	200	500	1/3/6	2" RF	1/2" Thread
FoamSafe – 10	300	1,000	1/3/6	3" RF	3/4" Thread
FoamSafe – 16	400	1,600	1/3/6	4" RF	1" Thread
FoamSafe – 25	400	2,500	1/3/6	5" RF	1" Thread
FoamSafe – 40	500	4,000	1/3/6	6" RF	1-1/4" Thread
FoamSafe – 60	1,200	6,000	1/3/6	8" RF	1-1/2" Thread
FoamSafe – 80	1,200	8,000	1/3/6	10" RF	1-1/2" Flange
FoamSafe – 100	1,500	10,000	1/3/6	12" RF	2" Flange



	Description
1	Rotor Pump
2	Speed Driver
3	Flushing Line
4	Speed Gear Box
5	Plunger Pump
6	3-Way Valve
7	Plunger Pump Head
8	Strong Check Valve
9	Foam Injection Line
10	Rotor Lobe





# F-500 Encapsulator Agent

## Surface Tension Reduction

- Spreading and penetration (spreading coefficient)
- Smaller droplet size (increased surface area)

## Rapid and Permanent Heat Reduction

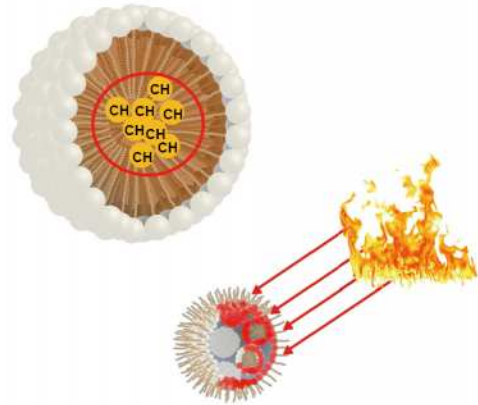
- 1200°F to 127°F in seconds
- Absorbs many times more kcal/hr than plain water
- Provides burn-back resistance

## Encapsulation

- Forms a "chemical cocoon" around liquid and vapor
- Renders materials nonflammable ("Locked Up")

## Interruption of the Free Radical Coalescence

- F-500 high molecular weight molecule absorbs free radical energy
- F-500 inhibits coalescence of free radicals
  - Reduction of toxic smoke & soot
  - Improves visibility
  - Improves air quality



## APPLICATIONS

- **Power Companies**
  - ESS (Energy Storage System)
  - Lithium-Ion Batteries
  - Magnesium batteries
  - Coal Handling Systems (PRB Coal)
  - Turbine / Generator / Boiler / Transformer
- **Petro-Chemical**
  - Class B Spill Control
  - Tank Degassing and Cleaning
  - Pipeline Cleaning and Devaporization
  - Soil Washing
- **Rubber Tire Industry (Fixed Systems and Hand Line)**
  - Production Lines and Areas
  - Warehouse Storage
  - Scrap Pile Storage
- **Structural Firefighting**
  - House Fires
  - Commercial Buildings and Warehouses
- **Vehicle Fire**
  - Vehicle Fuels
    - Gasoline
    - Diesel
    - Ethanol-Blended Fuels (E85, E10)
  - Magnesium Components
  - Rubber Tires / Plastics
  - Dumpster Fires
- **Industrial Fire**
  - Steel, Foundries and Metal Fabricators
  - Oil & Gas Exploration (Refineries)
  - Industrial Warehouse
    - Flammable Liquid Rack Storage (3D Class B)
    - Paper & Plastics
    - Rubber Tire Storage
  - Silos & Bunkers (Combustible Dusts)
    - Coal, Bio-Mass, Grain, Saw Dust, Wood Chips
  - Transformers

# Foam Concentrate

Aqueous Film Forming Foam 

Alcohol Resistant Aqueous Film Forming Foam 

Foam Concentrates are approved and conforms to various International Standards such as UL 162, FM 5130, EN 1568, ISO 7203, ICAO, IMO, KFI etc.









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