

ISO 9001:2015

SWASTIK SYNERGY ENGINEERING PVT. LTD.

TOTAL SOLUTION PROVIDERS FOR FIRE PREVENTION & FIRE FIGHTING NEEDS.

SYNERGY[®] PLUS

CLEAN AGENT FIRE EXTINGUISHING SYSTEM



www.swastiksynergy.com



COMPANY PROFILE

SWASTIK SYNERGY ENGINEERING PVT. LTD. (SSEPL) is one of the leading Manufacturer and supplier of Fire Fighting Appliances, Equipment & Systems.

SSEPL's manufacturing and warehousing facility is located at Khopoli near Mumbai and it consists of all the necessary and sophisticated plant & machinery to manufacture automatic fire suppression system. Its Head Office is Located at Santacruz.

SSEPL is approved by CCOE (PESO) for filling and storing of Clean Agent Gases. SSEPL is registered as a MSME Unit and has adopted ISO 9001:2015 and ISO 45001:2018.

SSEPL Specializes in following products

- **UL** - CO2 Fire Extinguishing System
- **UL** - Kitchen Fire Extinguishing System
- **VDS** - Inert Fire Suppression System
- **LPCB** - SYNERGY Firessense Direct Low Pressure System
- **UL** - Clean Agent Fire Extinguishing System

FK-5-1-12 GAS DESCRIPTION

Clean Agent fire Suppression system uses FK-5-1-12 (SYNERGY 1230) which acts as a solution to all the above mentioned risks of fire.

Most materials such as steel, aluminium, stainless steel, brass, as well as plastics, rubber and electronic components are not affected by exposure to FK-5-1-12 (SYNERGY 1230). This agent is also environmentally friendly, having an ozone depletion potential (ODP) of 0.00.

SYSTEM FEATURES



Environment Friendly

Most materials such as steel, aluminium, stainless steel, brass, as well as plastics, rubber and electronic components are not affected by exposure to FK-5-1-12 (SYNERGY 1230). This agent is also environmentally friendly, having an ozone depletion potential (ODP) of 0.00.



Minimum Downtime

FK-5-1-12 (SYNERGY 1230) leaves no residue thereby minimizing after fire clean up, along with keeping expensive downtime to a minimum.

SYSTEM FEATURES

Residue-Free

FK-5-1-12 (SYNERGY 1230) is clean and leaves no residue, thereby minimizing after fire clean up.


UL Certified

International Standard – Clean Agent fire Suppression is manufactured to the highest global and national standard like Underwriters Laboratories.

TECHNICAL DETAILS OF GASES

Characteristic	Units	Value
Molecular Mass	–	316.04
Boiling Point at 1.013 Bar (Absolute)	°C	49
Freezing Point	°C	-108.0
Critical Temperature	°C	168.66
Critical Pressure	Bar	18.646
Critical Volume	cm ³ /mol	494.5
Critical Density	kg/m ³	639.1
Vapor Pressure at 20°C	bar abs ^a	0.3260
Liquid Density at 20°C	g/ml	1.616
Density of the Saturated Vapor at 20°C	kg/m ³	4,330.5
Specific Volume of the Superheated Steam at 1.013 Bar and 20°C	m ³ /kg	0.0719
Heat of Evaporation at the Boiling Point	kJ/kg	88.0
Chemical Formula	CF ₃ CF ₂ C(O)CF(CF ₃) ₂	
Chemical Name	Dodecafluoro-2-methylpentan-3-one	

^a 1 bar = 0.1 MPa = 10⁵ Pa; 1 MPa = 1 N/mm²

COMPONENTS



Cylinder Valve Assembly



Cylinder Valve (Discharge)



Electric Actuator



Manual Actuator



Pneumatic and Manual Actuator



Non Return Valve



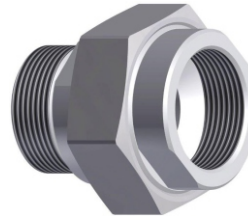
Pilot Hose



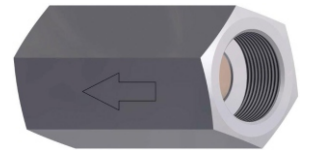
Adaptor for Pilot Hose



Discharge Hose



Adaptor for Discharge Hose



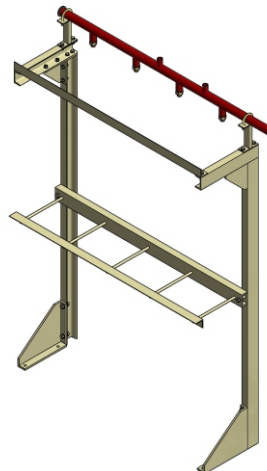
Check Valve



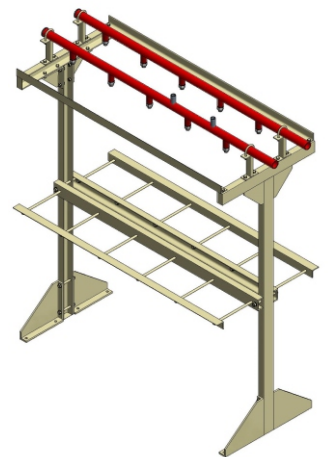
Pressure Gauge



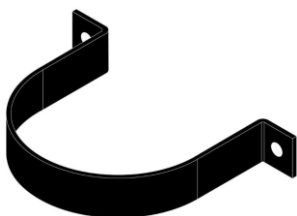
Cylinder Manifold



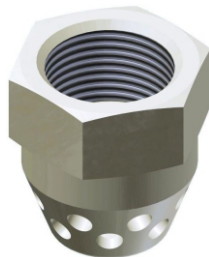
Single Row Cylinder Frame Unit



Double Row Cylinder Frame Unit



Cylinder Bracket



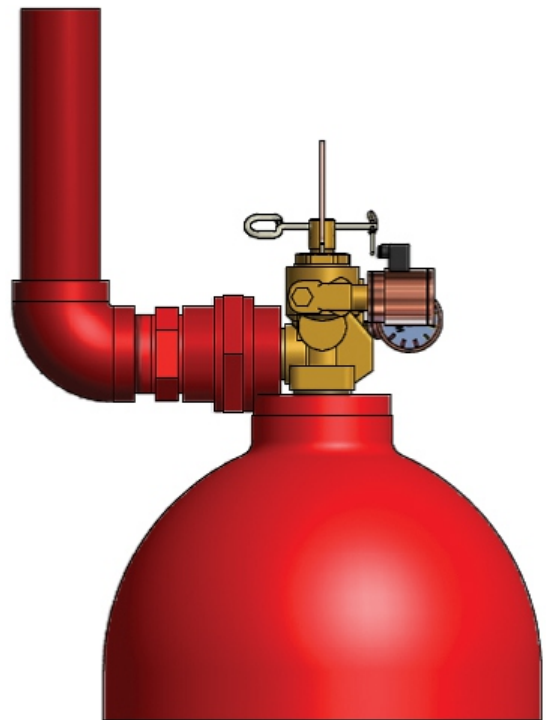
Discharge Nozzle

AGENT STORAGE CONTAINER ASSEMBLY

Part No.	Nominal Volume	
	ltrs.	lb
791001	34	75
791002	40	88
791003	46.7	103
791004	50	110
791005	60	132
791006	68	150
791007	80	176
791008	100	220
791009	120	265
791010	140	309
791011	150	331
791012	160	353
791013	180	397
791014	200	441



Installation



Single Installation Container



Data Centre



Server Rooms



Medical Facilities



Industrial Control Rooms



Marine Vessels



IT Systems / Software



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