GEMTEX®

GEM541™

GEM541™ Engineered Fire Suppression systems are designed for total flooding in accordance with NFPA 2001 “Standard on Clean Agent Fire Extinguishing Systems”. It consist of inert gas extinguishing agent: IG-541 (52% Nitrogen, 40% Argon, 8% Carbon Dioxide).

Inert gas is pressurized and stored in seamless cylinders assembly which hold at 200bar/300 bar at 15°C (2900psi/4351psi at 59°F). GEM541™ systems are ideal for total flooding applications to suppress Class A, B and C hazards. The main extinguishing mechanism of inert gas is by lowering the oxygen content below the level that supports combustion.

Inert Gas Suppression Agent

GEM541™ agent has a slightly higher density than air, upon discharge it completely fills the enclosure and tends to remain in its middle and bottom area. It is suitable for places where there is a risk of fire in any part of the enclosure, especially towards the lower part of the room and on the protected equipment. Likewise, it can achieve great heights and distances due to its high storage pressure.

BENEFIT

- Natural gas present in the atmosphere
- Zero Ozone Depletion Potential
- Electrically non-conductive
- No greenhouse effect
- No decomposition products

01

Discharge Nozzle

Discharge nozzles are designed to discharge GEM541™ agent from the cylinders upon activation. Nozzles are available in 180˚ and 360˚. The system design determines the type of nozzles suitable for proper flow rate and distribution pattern.

***FM tested*

02

Pneumatic Actuator

Pneumatic actuator is designed to be used and installed with for pneumatically actuation. The pneumatic actuator features a pneumatically driven piston that used to depress the valve core and opening the valve.

***FM tested*

03

Pneumatic Manual Actuator

Pneumatic Manual actuator is designed to be used and installed with solenoid valve for mechanically or pneumatically actuation

***FM tested*

04

Manual Actuator

The manual actuator is designed to be used and installed with solenoid valve for mechanically actuation. Safety pin is provided with every actuator to prevent accidental discharge. Manual actuator features retractable pin which reset when level back to original position.

***FM tested*

05

Valve Assembly

Valve operates by means of pressure differential piston. The valves incorporated with the features to enable it to be connected with manual and pneumatic actuator for actuation purpose. There are 2 types of valves; Discharge valve and Solenoid discharge valve.

***FM tested*

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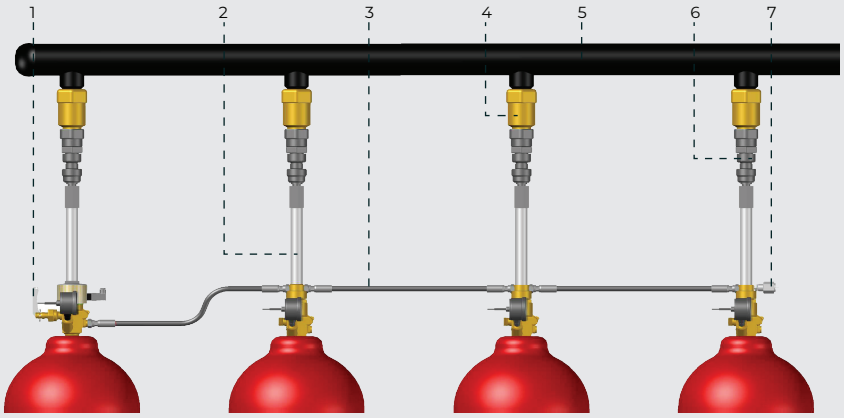
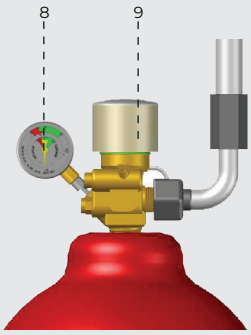
CYLINDER ASSEMBLY

The cylinder assembly comprises of a cylinder factory fitted with a valve, filled with IG-541 and pressurized to 200 Bar/300 Bar at 15°C (2900psi/4351psi at 59°F). Cylinders are available in 80L/140L. All these cylinders are manufactured in accordance with ISO-9809 and TPED tested.

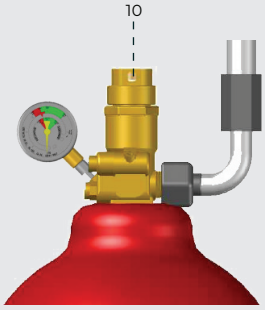
Typical Installation Diagram



Master and Slave Cylinder Front View



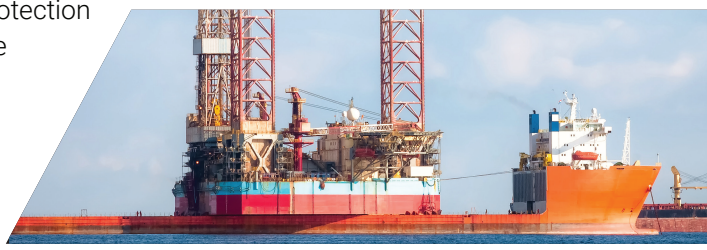
Master Side View

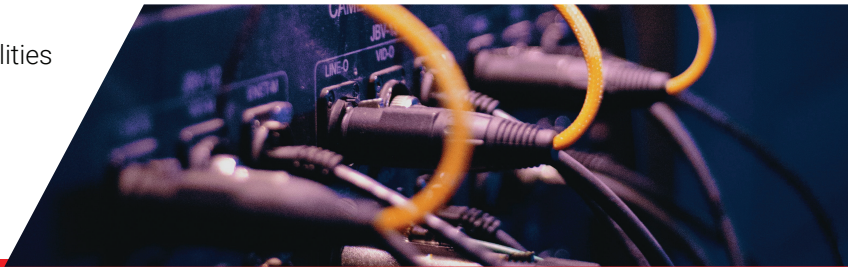


Slave Side View

1. Manual Actuator
2. Discharge Hose
3. Actuation Hose
4. Constant Pressure Regulator
5. Manifold
6. Check Valve
7. Bleed Valve
8. Pressure Gauge
9. Discharge Valve with built-in Solenoid actuator
10. Pneumatic Actuator

Features & Applications





Features

- Effective against Class A, B, and C fires
- Colourless, odourless, and non-contaminating gaseous fire protection
- Protect critical assets and processes without causing damage
- Little to no post-discharge clean-up
- Safe to use in occupied areas

Applications

- Computer suites & data centres
- Gas turbine enclosure
- Offshore oil & gas exploration and production facilities
- Telecommunication centres
- Power generation
- Marine
- Museum, archives & data storage

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