

CO₂ Gas Fire Suppression
system

ONLINE MONITORING SYSTEM :

How effective is your CO₂ Fire Extinguishing System ?:

Your system may look Normal.

However the loss of gas could affect fire extinguishing efficiency.

What is the method to monitor gas loss?

The Solution is:

“ONLINE MONITORING SYSTEM”

is the best solution to ensure the correct quantities of CO₂ gas.

Introduction:

Online Monitoring System is used in Gas based Fire Extinguishing system like CO₂, FE-13, FM-200, Inert System, NAF S-III System, FE-227 System to monitor weight of the agent in the cylinder to meet NFPA & OISD standard.

Necessity of Online Monitoring System:

Loss in weight of cylinders shall be checked once in 3 months. Refilling should be done if loss in weight is more than 10%.

As per NFPA-12, quantity of gas should be checked at least once in 6 months.

Advantage of Online Monitoring System:

Fire extinguishing efficiency depends on the correct design concentration of extinguishing gas. If the gas loss due to leakage or any other reason, cylinder has to be refilled for designed quantity. It is very obvious, continuous monitoring of the gas weight is required.

This requirement is simply fulfilled by Online Monitoring System.

Without this system, once in 3 months / 6 months each cylinder is to be removed from the cylinder bank and weight is to be measured. After measuring the weight, again cylinders are to be re fixed and re commissioned for proper function.

This is time-consuming process for maintenance department with highly skilled manpower.

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System Description:

The system consists of:

- Online Monitor
- Online Monitor Control Panel

Working Principle:

Each cylinder requires one Online Monitor. The cylinder should be fixed in hanging condition through this Online Monitor.

Depends on type of weight monitor Low weight is indicated. When the weight of the gas is reduced below 10% or 5% (according to the requirement of standard and type of gas system - For CO₂ gas 10%, and FM200 / NAF SIII gas 5%).

The Low weight is indicated, by means of counter weight position or LED indication or Digital display of weight and LED indication.

Online monitor Control Panel provides required supply for online monitoring unit. This panel also supervises the wire connection for open and short condition.

On receipt of Low weight Indication from the cylinder bank, the panel gives Audio and Visual Indication. 2 set of potential free NO and NC contacts are available for remote indication or any other relevant signaling.

The panel works on 230 V AC or 24 V DC from Fire alarm panel. Maximum 20 Nos. of online monitor can be connected with the Control Panel.

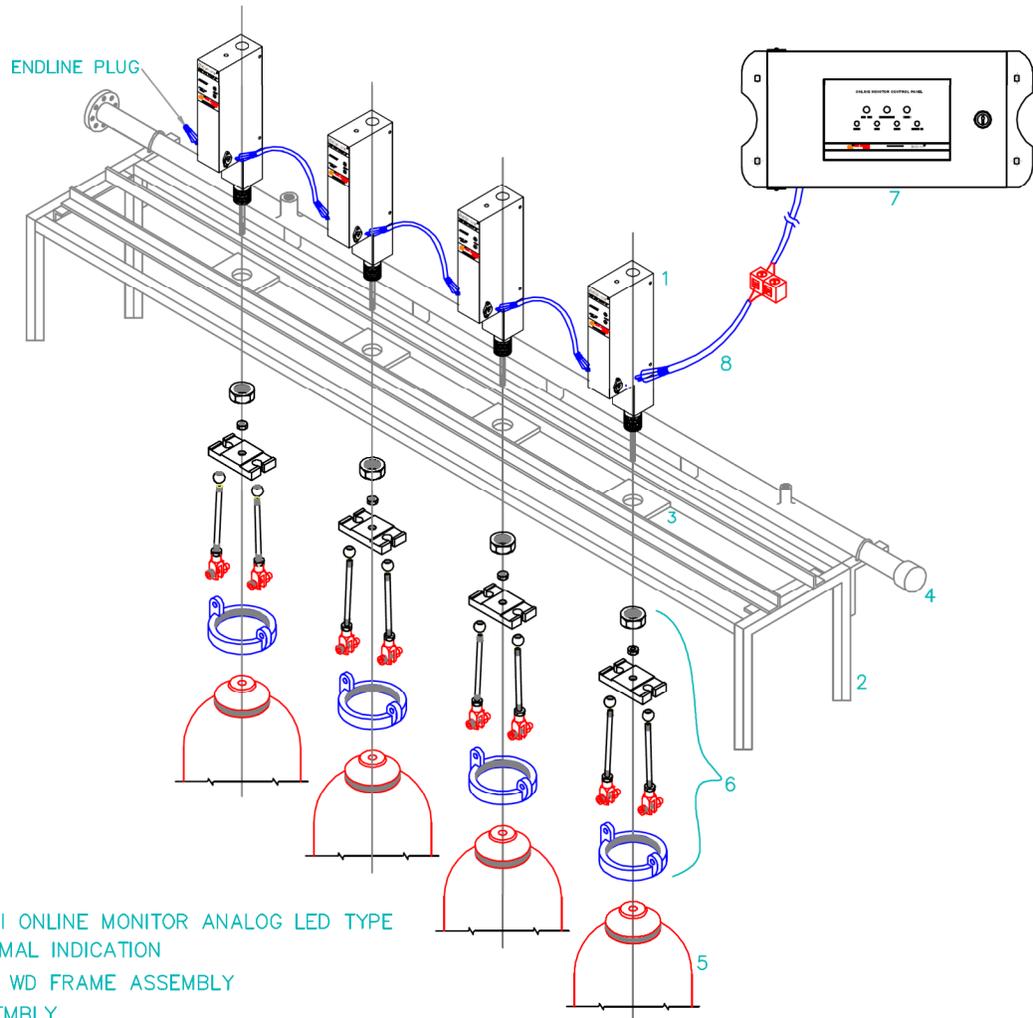
Type of Devices:

There are following type of continuous gas weight monitors are available

- Online Monitor – Mechanical indicator type - working on counter weight principle - position of counter weight will indicate the ‘Low Weight’ (Part No.IH006R)
- Online Monitor with Normal Indication– Analog LED type - working on spring displacement principle. LED will ‘ON’ to indicate ‘Low Weight’ (Part No.IH007 R NI)
- Online Monitor Control Panel
(Part No.IH009R)
- Online Monitor Control panel-2 Area (Part No.IH009R/2A)

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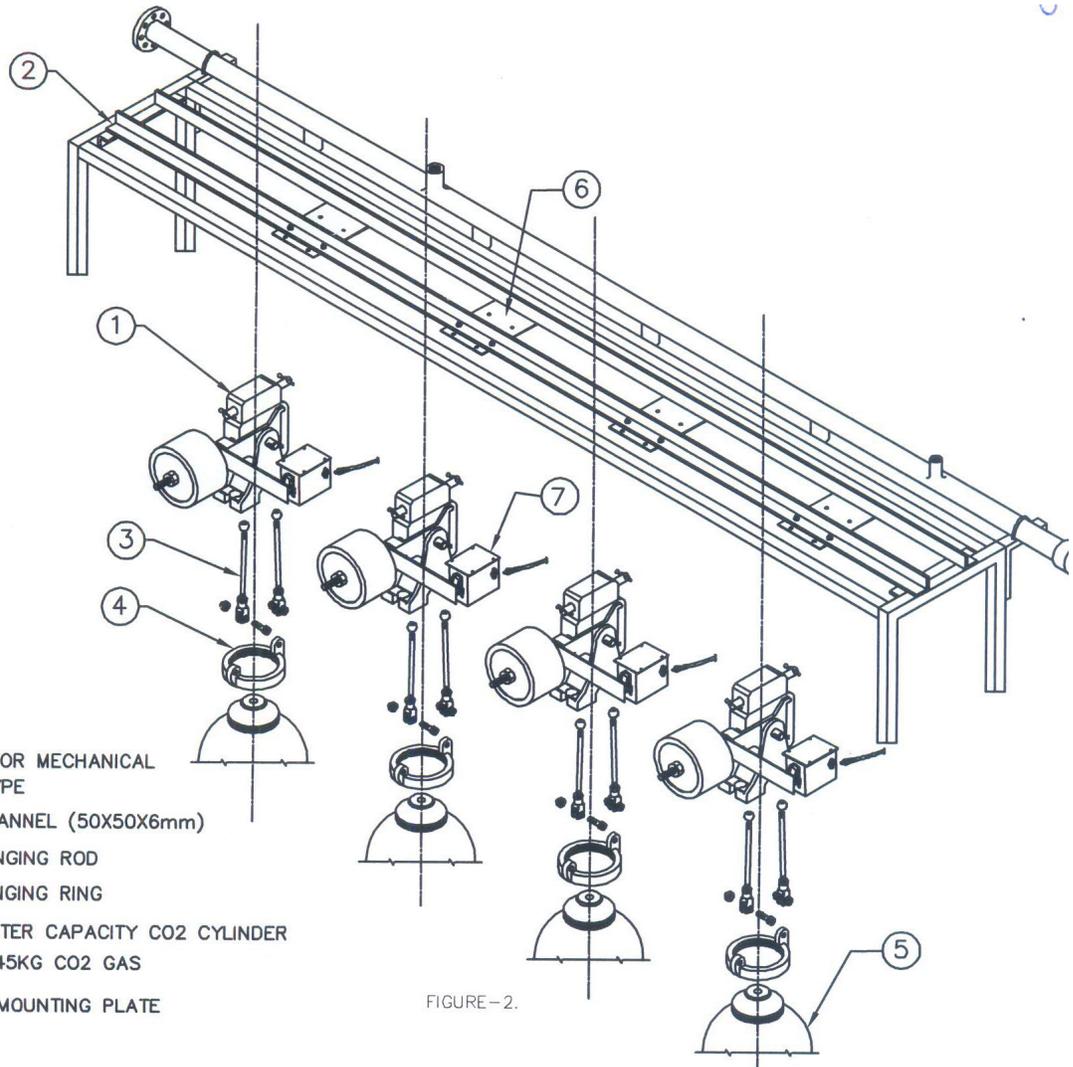
ANALOGUE ONLINE MONITOR ASSEMBLY DETAILS



NOTE: -

- 1 - IH007R-NI ONLINE MONITOR ANALOG LED TYPE WITH NORMAL INDICATION
- 2 - IH030-4S WD FRAME ASSEMBLY
- 3 - RAIL ASSEMBLY
- 4 - MANIFOLD OR HEADER
- 5 - BIH048/* - CO₂ CYLINDER
- 6 - IH006R-P3/P4 CYLINDER COLLAR WITH HANGER ROD ASSEMBLY
- 7 - IH009R ONLINE MONITOR CONTROL PANEL
- 8 - CONNECTING CABLE - 2 WIRE SYSTEM

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NOTE:

- 1 - ONLINE MONITOR MECHANICAL INDICATOR TYPE
- 2 - MOUNTING CHANNEL (50X50X6mm)
- 3 - CYLINDER HANGING ROD
- 4 - CYLINDER HANGING RING
- 5 - 68 LITRES WATER CAPACITY CO₂ CYLINDER FILLED WITH 45KG CO₂ GAS
- 6 - LIMIT SWITCH MOUNTING PLATE
- 7 - LIMIT SWITCH

FIGURE-2.

**MECHANICAL INDICATOR TYPE ONLINE MONITOR ASSEMBLY
 DETAILS**