Defao® SERIES...

Electrical Fire

Prevent before it spreads...

IH 601LC Series...

Simple to Install & Maintenance

DETECT & EXTINGUISH FIRE AT ORIGIN IN EARLY STAGE

ELECTRICAL & ELECTRONICS PANEL PROTECTION

UPS PROTECTION at **Agni Controls, chennai** (Unit-3, Vyasarpadi)

CABLE TRAY PROTECTION

GENERATOR ENCLOSURE PROTECTION

AGNI CONTROLS CHENNAI

30 Years 1985 - 2015

Defao® SERIES...

Detection & Extinguishing System

INTRODUCTION:

- *70-80% of the Fires are caused by Electrical equipment, Distribution panel, Cable galleries, Terminal Board, Cable joints, Power source like battery, Heater & Transformer.*
- *Fire starts as small but grow and spread faster depends on risk area using available flammable materials.*
- *There may be limitation to fight the fire manually with Portable Extinguisher. Suitable size of extinguishing cylinder with Fire Detec tube for automatic Fire Detection & Extinguishing will be one of the possible solution.*

ABOUT DEFAO SERIES..

Defao series.. Products are installed to detect and extinguish the fire right at the source.

- Detection is achieved by Fire Detection Tube which runs in the protected area continuously (Acting as heat detector). Extinguishing agent is discharged through Fire Detection Tube itself.
- Fire Detection Tube extinguishing agent can be CO_2. Depending on the application N2 gas can also be used. Refer Part No. IH602 LC series... & IH602 series Detection & Extinguishing N2 system.

DETECTION METHOD:

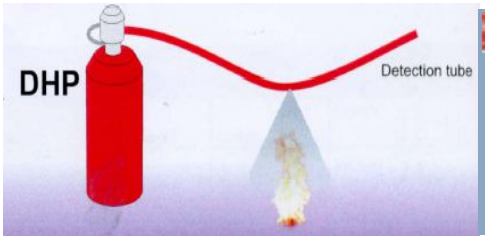
- Fire Detection Tube is made of a high tech polymer, which is temperature sensitive, bursting at the hottest spot.
- Fire Detection Tube is laid in the risk area continuously.
- The tube is pressurized by CO_2. When temperature increases, the tube will burst at 100 to 120 Deg°C depends on the rate of rise of temperature during the fire, tube will act as nozzle and discharge CO_2 gas at point of Fire source.

IH 601LC Series...
Detection & Extinguishing system

FIRE EXTINGUISHING METHOD:

DETECT AND DISCHARGE METHOD:

Extinguishing agent (CO_2) is directly discharged through burst tube which acts as nozzle.



ADVANTAGE :

1. No external power is required to Detect & Extinguish
2. Easy installation & Maintenance
3. Cost Effective Solution

PART SELECTION:

SL. NO	PART NO.	PART DESCRIPTION	SELECT
01.	IH601LC/DD -CO_2/4	Defao series.. Fire Detection Tube and 4 KG CO2 Extinguishing system	
02.	IH601LC/DD -CO_2/9	Defao series.. Fire Detection Tube and 9 KG CO2 Extinguishing system	✓
03.	IH601LC/DD -CO_2/22	Defao series.. Fire Detection Tube and 22 KG CO2 Extinguishing system	
04.	IH601LC/DD -CO_2/33	Defao series.. Fire Detection Tube and 33 KG CO2 Extinguishing system	
05.	IH601LC/DD -CO_2/45	Defao series.. Fire Detection Tube and 45 KG CO2 Extinguishing system	

SUGGESTED APPLICATION:

- Cable & Cable tray root
- Electrical & Electronics panels
- UPS Cabinet
- Generator Cabinet
- Compressor
- Air Handling Room

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Defao® SERIES...

Detection & Extinguishing System

Installation & Maintenance Procedure

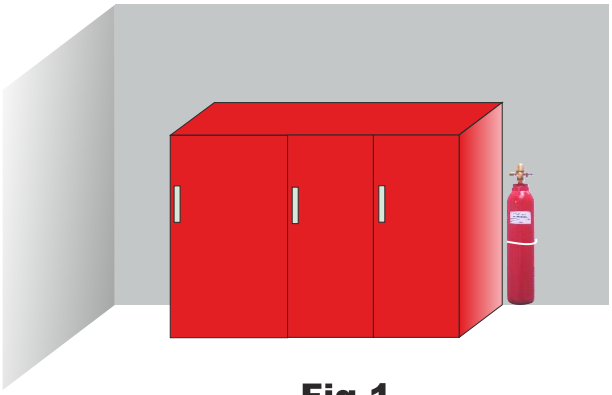


Fig.1

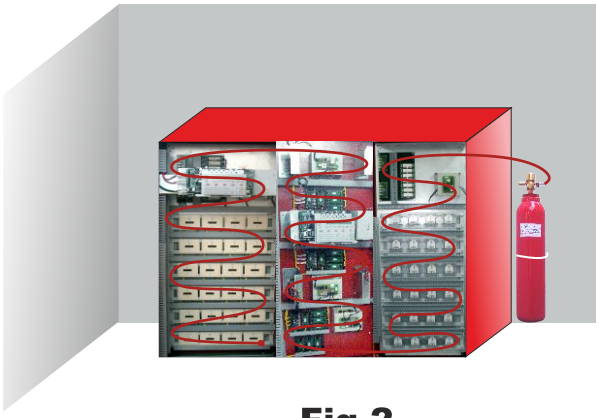


Fig.2

I. UNPACKING AND HANDLING :

1. Defao kit is packed in Wooden box
2. Identify and Remove top part of wooden box
3. Check Packing list and read installation manual carefully
4. Cylinder with Co2 gas is packed with protection cap.
5. Cylinder valve is in closed condition
6. Donot remove protection cap while fixing cylinder
7. Handle and store detection tube without any physical damage
8. Cylinder protection cap can be remove while fixing detection tube with cylinder valve. (Ensure cylinder valve is closed condition)

II. INSTALLATION :

STEP 1. Clamp CO2 cylinder nearer to panel. Refer fig. 1

STEP 2: Run Fire Detection Tube in Zig Zag manner and Connect End line fittings with the Fire Detection Tube. Refer fig.2

STEP3: Fix the Fire Detection tube in the cylinder valve. Refer fig.3

STEP 4. Open the Ball valve slowly to fill CO2 in the detection tube. The pressure gauge fitted in the valve will show pressure between 15-20 bar.

STEP 5. The Ball valve position should be kept in Open condition for Discharge Mode and Closed condition for Maintenance Mode.Refer Fig.4.

III. OPERATION :

1. If fire occurs, the detection tube will burst and it will act as nozzle and discharge CO_2 gas at the point of Fire source. Refer Fig:5

2. After CO_2 discharge, the fire is suppressed. Refer Fig: 6

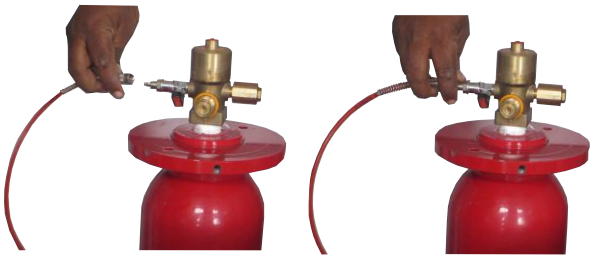
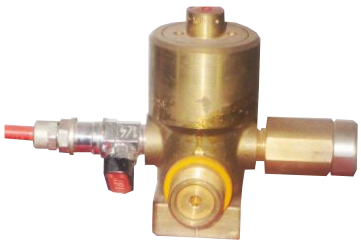


Fig.3

OPEN CONDITION
DISCHARGE MODE



CLOSED CONDITION
MAINTENANCE MODE

Fig.4

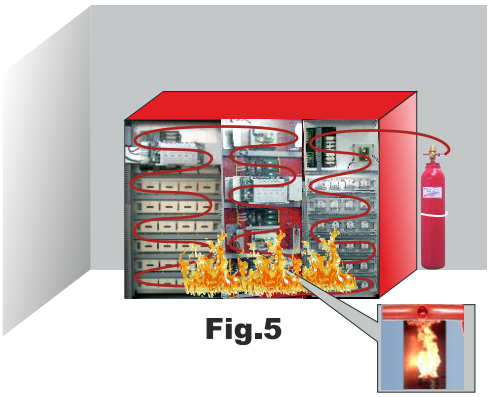


Fig.5

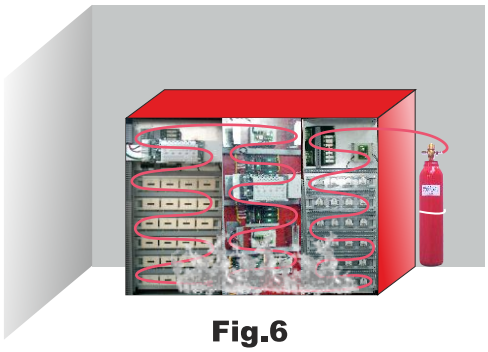


Fig.6

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Fig.7

FIRE DETECTION TUBE DETECTED FIRE

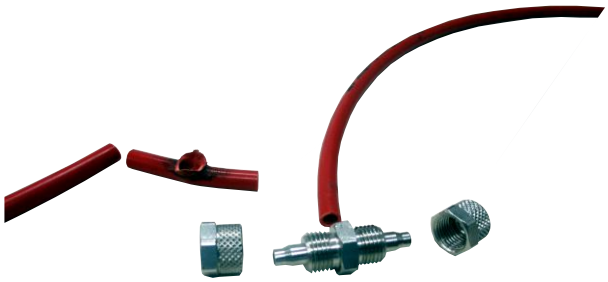

Fig.8

CUT BURST PART OF FIRE DETECTION TUBE

Fig.8.1 Fig.8.2

FIRE DETECTION TUBE JOINING FITTINGS

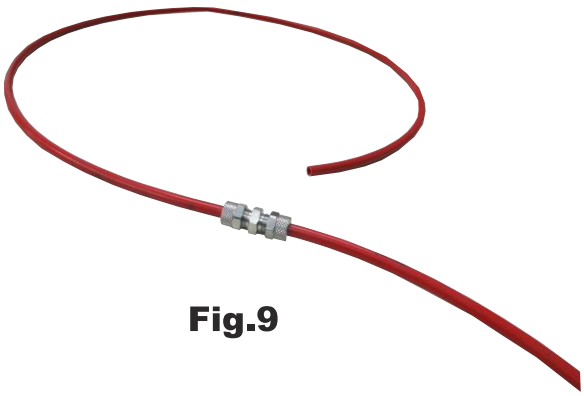

Fig.9

JOIN FIRE DETECTION TUBE WITH FITTINGS - NOW TUBE IS READY FOR DETECTION

IV. REFITTING OF DETECTION TUBE:

1. Cut the bursted part of Detection tube. Refer Fig.7

2. Join the bursted tube or damaged parts using fittings Refer Fig. 8 & 9

V. REFILLING:

Remove the Fire detection tube from Valve and send the cylinder to refill. Refer Fig.10

Fig.10

VI. RE-INSTALLATION AFTER REFILLING:

Fix the Fire detection tube with cylinder valve. Refer Fig.11

Fig.11

Now the Cylinder is ready for Fire detection. Then repeat the procedure from step-1 to step-4 under for re-installation. *(Refer-II. INSTALLATION)*

Fig.12

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