



PRODUCT MANUAL

FIRE EXTINGUISHER

**Carbon Dioxide
6.5, 9 & 22.5 Kg Capacity
Trolley Mounted (45 kg also as a non
standard)**

**Kanadia Fyr Fyter Pvt Ltd
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[KANEX FIRE EXTINGUISHER]

Carbon Dioxide –6.5, 9, 22.5 & 45 Kg Capacity

INTRODUCTION

This manual contains product description, installation, operating and inspection for the KANEX Carbon Dioxide (CO₂) type Fire Extinguisher of capacity 6.5, 9, 22.5 & 45 Kg by weight of gas. This model is designed to extinguish 'B' and 'C' type fires involving material like Petro Chemical products, Paints, Resins, Pigment, Varnish, Gases in the compressed form like Oxygen, Acetylene, LPG, CNG and Electrical as well as electronic equipments.

PRODUCT DESCRIPTION

- The principal advantage of KANEX CO₂ (Carbon Dioxide) Fire Extinguisher is that the agent does not leave a residue after use. CO₂ gas extinguishers are characterized by their high performance for fires, as it is non-conductive, clean and safe, ensuring minimal damage to electrical equipment and furnishing.
- Carbon Dioxide gas is of IS 15222:2002, extinguishing agent, colorless, odorless, non-toxic, provide rapid knock down of industrial fire. Carbon Dioxide is retained under its own pressure in a fluid condition at room temperature.
- Gas cylinder of IS 7285:1988, is seamless having test pressure of 250 bar and working pressure of 150 bar at 15° C. The material of cylinder is Manganese Steel DS658 of Fire Red painted and neck thread size is 25.40 mm.
- Filling ratio: Filling Ratio is the ratio of mass of liquefiable gas that is allowed to be filled into the container in view of safety considerations to the mass of water required to fill (water capacity) at 15° C.
- The discharge of the CO₂ gas is Valve controlled. The Valve is made of forged Brass material and of IS 3224:2002 having valve inlet and outlet to meet the cylinder neck threads. The valve is either Squeeze Grip type or Wheel type.
- An aluminum Siphon pipe of IS 738:1994 is fitted to the discharge valve by swivel joint such a way that it remains inside the cylinder. A Wire Braided Hose Pipe (length 1m for 6.5 Kg, 2m for 9 Kg and 5 m for 22.5 & 45 Kg) and non-conductive of electricity Discharge Horn of material Polyethylene are connected to get discharge performance with no freeze burn, with greater directional control of CO₂ gas discharge.



INSTALLATION

Installation of the KANEX Fire Extinguisher requires that the equipment be uncrated , placed in it's proper position and secured in place with caster locks.

One set of accessories is packed with fire extinguisher for use in installation. Please compare your supplied accessories with the following list.

Discharge Horn

Discharge Hose Pipe (length: 1m for 6.5Kg, 2m for 9 Kg and 5m for 22.5 & 45Kg)

Connecting Pipe

PVC Handle

Washer

Trolley (Carrying Handle)

Wheel Carriage

Pair of Wheels

Connecting nut & bolts

To assemble the Fire Extinguisher, fit the trolley mountings that are upper carrying handle and lower wheel carriage with cylinder. Provide the pair of wheel to the wheel carriage. Connect Hose Pipe with valve placing washer between them. The other side of hosepipe is to be connected by Discharge Horn keeping connecting pipe and PVC handle between them. Ensure that the all above accessories are firmly screwed with each other and also with valve.

For installation pick up a convenient distance that shall not be longer than 15 meter from site and such a way that fire extinguisher can be easily driven from that location while required to fight with fire.

OPERATION

- ✓ To be operated the Kanex fire extinguisher is held in an upright position
- ✓ The safety sealing device is removed
- ✓ The locking ring pin is pulled
- ✓ Ensure that the Discharge end is firmly held in the hand
- ✓ The operating wheel of valve is turned anti clock wise direction
- ✓ The discharge should be directed at the base of the flames
- ✓ On fires involving electrical or electronics equipments, discharge should be directed at the source of the flames.

There are two methods of directing the discharge to adopt the better extinguishment

- a) The most commonly used method of agent application on contained flammable liquid fires is to start at the near edge and direct the discharge in a slow, side-to-side sweeping motion, gradually progressing toward the back of the fire.
- b) The other method is called 'Over head application '. The discharge horn is directed in a dagger or downward position (at an angle of 45 degrees) toward the center of the burning area.



Generally, for spills fire, the side-to-side sweeping motion could give better results.

The discharge should be applied to the burning surface even after the flames are extinguished to allow added time for cooling and to prevent possible reflash.

PRINCIPALS OF OPERATION

The Carbon Dioxide agent extinguishes by diluting the surrounding atmosphere with an inert gas so that oxygen levels are kept below the percentage required for combustion. The agent is self-expelling and in its vapor and solid phase.

The minimum discharge time for hand portable capacity 6.5, 9, 22.5 & 45 Kg gas varies from 10 to 20, 15 to 36 & 20 to 60 seconds respectively. The discharge jet range of the discharge stream is approximately 2 ft to 8 ft.

INSPECTION AND RECHARGING

The owner or the designated agent or occupant of a property in which fire extinguishers are located shall be responsible for inspection and recharging.

INSPECTION:

Fire Extinguisher shall be inspected when initially placed in service and then after at approximately 30-day intervals. The inspection should be in following point of view.

- Safety Seals not broken or missing
- Fullness determining by weighing
- Visually damage, corrosion, leakage or clogged discharge connection
- Condition of horn, Hose Pipe, trolley mountings, mobility and fire extinguisher itself.

RECHARGING:

It is important to reenergize the Fire Extinguisher as soon as possible to eliminate the potential of recombustion or fire. Each fire extinguisher shall have a tag or label securely attached that indicates the month and year recharging was performed and that identifies the person performing the service.

Inspect monthly clean discharge fittings and weight. If weight is found 10% less than stamped weights, embossed in cylinder, send the fire extinguisher for refilling to Kandia Fyr Fyter Pvt Ltd.



Extinguisher Parts
[Carbon Dioxide (Capacity 6.5 Kg)]

| INDEX | PART No. | DESCRIPTION | MOC | QTY. | UNIT |
|-------|-----------|-----------------|----------------|------|------|
| 01 | C6.5-0100 | Body | Steel | 01 | No. |
| 02 | C6.5-0200 | Control Valve | Brass | 01 | No. |
| 03 | C6.5-0300 | Siphon Tube | Aluminum | 01 | No. |
| 04 | C6.5-0400 | Carrying Handle | M.S. | 01 | No. |
| 05 | C6.5-0401 | Wheel carriage | M.S. | 01 | No. |
| 06 | C6.5-0402 | Wheel | Solid Rubber | 02 | No. |
| 07 | C6.5-0403 | Wheel Washer | M.S. | 02 | No. |
| 08 | C6.5-0404 | Cotter Pin | M.S. | 02 | No. |
| 09 | C6.5-0405 | Nut & bolts | M.S. | 04 | No. |
| 10 | C6.5-0500 | Discharge Hose | Rubber braided | 01 | No. |
| 11 | C6.5-0501 | Connecting Pipe | M.S. | 01 | No. |
| 12 | C6.5-0502 | Plastic Handle | Poly ethylene | 01 | No. |
| 13 | C6.5-0503 | Discharge Horn | Poly ethylene | 01 | No. |
| 14 | C6.5-0504 | Washer | Plastic | 01 | No. |

[Carbon Dioxide (Capacity 9 Kg)]

| INDEX | PART No. | DESCRIPTION | MOC | QTY. | UNIT |
|-------|----------|-----------------|----------------|------|------|
| 01 | C9-0100 | Body | Steel | 01 | No. |
| 02 | C9-0200 | Control Valve | Brass | 01 | No. |
| 03 | C9-0300 | Siphon Tube | Aluminum | 01 | No. |
| 04 | C9-0400 | Carrying Handle | M.S. | 01 | No. |
| 05 | C9-0401 | Wheel carriage | M.S. | 01 | No. |
| 06 | C9-0402 | Wheel | Solid Rubber | 02 | No. |
| 07 | C9-0403 | Wheel Washer | M.S. | 02 | No. |
| 08 | C9-0404 | Cotter Pin | M.S. | 02 | No. |
| 09 | C9-0405 | Nut & bolts | M.S. | 04 | No. |
| 10 | C9-0500 | Discharge Hose | Rubber braided | 01 | No. |
| 11 | C9-0501 | Connecting Pipe | M.S. | 01 | No. |
| 12 | C9-0502 | Plastic Handle | Poly ethylene | 01 | No. |
| 13 | C9-0503 | Discharge Horn | Poly ethylene | 01 | No. |
| 14 | C9-0504 | Washer | Plastic | 01 | No. |

[Carbon Dioxide (Capacity 22.5 Kg)]

| INDEX | PART No. | DESCRIPTION | MOC | QTY. | UNIT |
|-------|------------|-----------------|----------------|------|------|
| 01 | C22.5-0100 | Body | Steel | 01 | No. |
| 02 | C22.5-0200 | Control Valve | Brass | 01 | No. |
| 03 | C22.5-0300 | Siphon Tube | Aluminum | 01 | No. |
| 04 | C22.5-0400 | Carrying Handle | M.S. | 01 | No. |
| 05 | C22.5-0401 | Wheel carriage | M.S. | 01 | No. |
| 06 | C22.5-0402 | Wheel | Solid Rubber | 02 | No. |
| 07 | C22.5-0403 | Wheel Washer | M.S. | 02 | No. |
| 08 | C22.5-0404 | Cotter Pin | M.S. | 02 | No. |
| 09 | C22.5-0405 | Nut & bolts | M.S. | 04 | No. |
| 10 | C22.5-0500 | Discharge Hose | Rubber braided | 01 | No. |
| 11 | C22.5-0501 | Connecting Pipe | M.S. | 01 | No. |
| 12 | C22.5-0502 | Plastic Handle | Poly ethylene | 01 | No. |
| 13 | C22.5-0503 | Discharge Horn | Poly ethylene | 01 | No. |
| 14 | C22.5-0504 | Washer | Plastic | 01 | No. |



[Carbon Dioxide (Capacity 45 Kg)]

| INDEX | PART No. | DESCRIPTION | MOC | QTY. | UNIT |
|--------------|-----------------|--------------------|----------------|-------------|-------------|
| 01 | C45-0100 | Body | Steel | 01 | No. |
| 02 | C45-0200 | Control Valve | Brass | 01 | No. |
| 03 | C45-0300 | Siphon Tube | Aluminum | 01 | No. |
| 04 | C45-0400 | Carrying Handle | M.S. | 01 | No. |
| 05 | C45-0401 | Wheel carriage | M.S. | 01 | No. |
| 06 | C45-0402 | Wheel | Solid Rubber | 02 | No. |
| 07 | C45-0403 | Wheel Washer | M.S. | 02 | No. |
| 08 | C45-0404 | Cotter Pin | M.S. | 02 | No. |
| 09 | C45-0405 | Nut & bolts | M.S. | 04 | No. |
| 10 | C45-0500 | Discharge Hose | Rubber braided | 01 | No. |
| 11 | C45-0501 | Connecting Pipe | M.S. | 01 | No. |
| 12 | C45-0502 | Plastic Handle | Poly ethylene | 01 | No. |
| 13 | C45-0503 | Discharge Horn | Poly ethylene | 01 | No. |
| 14 | C45-0504 | Washer | Plastic | 01 | No. |