

Use and Maintenance Manual



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Carbon Dioxide Portable Fire Extinguishers

FILE NAME: EPC_1_ENG

Maintenance periods for efficiency guarantee, methods and subjects accredited for maintenance

1) GENERAL REQUIREMENTS

All Fire Fighting Fire Extinguishers produced by Emme Antincendio must be installed, inspected and maintained in accordance with the following manual and with the rules in force in the country of destination.

All fire extinguishers must be recharged after partial use with original spare parts.

Every ordinary / extraordinary maintenance operation must be carried out using original spare parts and compliant with the declared certified prototype. The described below maintenance operations must be carried out by recognized personnel qualified by the company Emme Antincendio.

Fire extinguishers are classified into two categories that provide for specific construction standards:

- portable fire extinguishers: fire extinguishers designed to be transported and operated by hand, with a mass not exceeding 20 kg under operating conditions. Reference standard: EN 3-7
- wheeled fire extinguishers: wheel fire extinguishers designed to be transported and operated by hand, with a mass greater than 20 kg. Reference standards: EN 1866-1

Moreover, in relation to the extinguishing agent contained in them, they are identified in:

- water based fire extinguishers including foam extinguishers;
- powder fire extinguishers;
- carbon dioxide fire extinguishers;
- clean agent extinguishers

2) REFERENCE RULES

Fire Extinguishers produced by Emme Antincendio are manufactured in compliance with the following rules:

- EN 3-7: 2008 Portable fire extinguishers;
- EN 1866-1: 2008 Wheeled fire extinguishers;
- PED Directive 2014/68/EU pressure equipment;
- MED Directive 2014/90/EU devices for marine use (if marking is shown on technical manual of fire extinguisher)

3) INSTALLATION

- 1) Install the fire extinguisher with the appropriate bracket, with the handle at a maximum recommended height of 110 cm.
- 2) When installed in a vehicle the fire extinguisher must be held in a specific truck bracket.
- 3) Do not expose the fire extinguisher to the atmospheric agents or chemicals agents.
(Note: in these cases protect the fire extinguisher with a special cabinet or protective cover.)
- 4) Do not expose the fire extinguisher to the direct sunlight.
- 5) Keep children away from fire extinguisher.
- 6) For Marine equipment or outdoor installation we recommend the use of cover or box.

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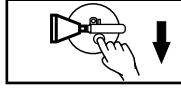
Carbon Dioxide Portable Fire Extinguishers

4) MODALITY AND PRECAUTIONS FOR THE USE

Follow the operating Instructions printed on the main fire extinguisher label.

Generally, the correct steps for use the fire extinguisher are as below:

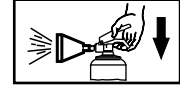
FIRE EXTINGUISHERS
WITHOUT
DISPENSING HOSE



1) REMOVE SAFETY PIN

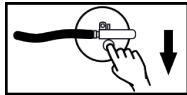


2) AIM AT BASE OF
FIRE



3) SQUEEZE GRIP LEVER

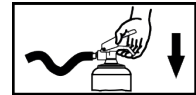
FIRE EXTINGUISHERS
WITH DISPENSING
HOSE



1) REMOVE SAFETY PIN



2) HOLD THE HOSE AND
AIM AT BASE OF FIRE



3) SQUEEZE GRIP LEVER

- Do not through the fire extinguisher on to the direct flames.
- This fire extinguisher is a pressurized vessel and must not be pierced, dented or subjected to external damage.
- Do not direct the jet on the people.

5) STEPS AND FREQUENCY RELATED TO MAINTENANCE OPERATIONS

*NOTE : Check and comply to the dispositions in force in use and destination country.

The subsequent activities in order of time includes already the previous activities.

Table 1

| | Step | Periodicity | Reference | Type of Activity |
|-----|-------------------------|-------------------------|--|---|
| 5.1 | Visual inspection | 1 Year | From commissioning date | Visual inspection |
| 5.2 | Maintenance | Not expected | - | - |
| 5.3 | Maintenance and testing | 10 Years | From date marked on cylinder | Hydraulic test of cylinder and replace valve |
| 5.4 | Life Time | 20 Years ⁽¹⁾ | From manufacturing date indicated on declaration of conformity | Is recommended to replace the fire extinguisher |

Note:

(1) Life time : If fire extinguisher is located in particular environments the time can be reduced.
(Is recommended 10 years)

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5.1) Visual inspection: (does not require the intervention of a specialized technician)

* Comply with national provisions and regulations

| | |
|---|--|
| 1 | Remove the extinguisher from the support and check the condition of the fastening support. Check the condition of the marking label, replace if necessary. |
| 2 | Check the status of nominal charge by weighing . Before this operation, remove the accessories from the extinguisher (hose, horn etc.). Then use as references: - the tare weight of cylinder (indicated on the marking in the body of cylinder) - the weight of dispensing valve (indicated on the marking in the body of valve) |
| 3 | Check the status of safety seal and safety pin. |
| 4 | Check that discharge devices (hose, horn) are without damage signs or obstruction, if necessary check the correct internal passage with compressed air or replace them. |
| 5 | Reinstall the accessories. |
| 6 | Record the inspection activity on the maintenance tag and on the fire protection register. |

5.2) Maintenance

Not Expected






5.3) Maintenance and testing

At least every 10 years from the production date marked on the cylinder, this one must be overhauled by an hydraulic pressure test in accordance with the pressure values "PT" stamped on the cylinder.

NOTE: - This procedure must be carried out by qualified staff, in certified laboratories.

- The dispensing valve must be replaced with a new one.

Executive details Maintenance and testing

| | | | |
|---|--|--|---|
|  | Remove the extinguisher from the bracket and check: stability of the fastening support, cleaning and general conditions. Check the marking label and replace it if damaged. |  | Check the nominal charge by weighing the cylinder. Before this operation, remove the accessories from the extinguisher (hose, horn etc.). Then use as references: - the tare weight indicated on the marking on the body of the extinguisher; - the weight indicated in the body of the dispensing valve. |
|  | Check safety pin and safety seal. Replace if necessary. |  | Check that discharge devices (hose, horn) are without damage signs or obstruction, if necessary check the correct internal passage with compressed air or replace them. |
| Reinstall the relative accessories (horn, hose, ecc...). | |  | Record the activity on the maintenance tag and on the maintenance register |

Note : images are for illustrative purpose only

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5.4) End Life Time

At End of life, fire extinguishers must be disposed in accordance with local waste management rules. Before disposal or disassembly, the fire extinguisher MUST BE DEPRESSURIZED by a qualified technician. Fire extinguishers should always be disposed of through an approved disposal company and in accordance with applicable local and national codes.

* If the fire extinguisher is located in particular environments, the "life time" timing can be reduced (see table 1 at point 5.4)

6) SPARE PARTS LIST AND MAINTENANCE TOOLS

6.1) Spare parts list

For the list of spare parts and component, check the technical manual of specific product. For more details visit web site www.emme-italia.com

6.2) Maintenance Tools

For a complete list of recommended tools see web site www.emme-italia.com. It is recommended to use instruments with controlled calibration and periodically verified (at least every 12 months) with certified sample instrument.

Table 2 Tightening Torques

Use the below table as reference for the correct torque of valve and accessories, for installation and maintenance activity. Use only compliant and calibrated torque wrench.

*Check on the specific technical manual of fire extinguisher the valve and cylinder type

| Valve type | Cylinder type | Torque | |
|----------------------------|----------------|---------|---------|
| | | Minimum | Maximum |
| M.25x2, brass body, CPF | Steel alloy | 95 Nm | 130 Nm |
| M.25x2, brass body, CPF | Aluminum alloy | 95 Nm | 130 Nm |
| M.25x2, brass body, LEVIAN | Steel alloy | 60 Nm | 75 Nm |

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