

Use and Maintenance Manual



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Water Based Wheeled Fire Extinguishers – Auxiliary Pressure

FILE NAME: CSA_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 (only for products bearing the relative MED certification mark, check the manual of specific model)

3) INSTALLATION

- 1) Install the fire extinguisher in spacious areas, without obstacles.
- 2) Do not expose the fire extinguisher to the atmospheric agent or chemical agent.
(In this case protect the fire extinguisher with suitable cover)
- 3) Do not expose the fire extinguisher to the direct sunlight.
- 4) Keep children away from fire extinguisher.
- 5) For Marine equipment or outdoor installation we recommend use of cover.

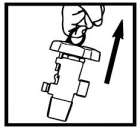
File name	Type of document	Fire Extinguisher Model	Date	Rele.	Check	Rev.	Pag.
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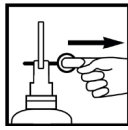
4) MODALITY AND PRECAUTIONS FOR THE USE

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

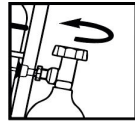
Generally, the correct steps for use the fire extinguisher are as below:



or



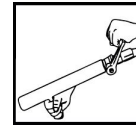
- 1) UNROLL THE HOSE
- 2) REMOVE SAFETY PIN



or



- 3) OPEN THE VALVE
- 3) LOWER THE LEVER



or



- 4) HOLD THE LANCE, AIM AT BASE OF FIRE AND ACTIVATE THE 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	Periodic Check	1 Year	From commissioning date	Pressure check
5.2	Revision	5 Years	From manufacturing date indicated on declaration of conformity	Replace the extinguishing agent, check status of cylinder and cap.
5.3	Hydrostatic Test	10 Years	From date marked on cylinder	Hydraulic test of cylinder, replace the valve/cap, hydraulic test or replacement of pressurization cylinder ⁽¹⁾
5.4	Life Time	20 Years ⁽²⁾	From manufacturing date indicated on declaration of conformity	Is recommended to replace the fire extinguisher

Note:

(1) Replacement of valve/cap: only for valves/caps with safety device.

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

5.1) Periodic Check

1	Check the stability and the correct wheel handling. Check the condition of the marking label, replace if necessary.
2	Check the charge of pressurization cylinder. CO₂ propellant : be sure that cylinder weight is as required, so remove the cylinder and check using as reference the tare marked on cylinder + weight valve + propellant charge indicated in specific technical manual of product. N₂ propellant : be sure that pressure of cylinder is as required, so remove the cylinder and check with suitable pressure reducer.
3	Check the status of safety seal and safety pin of pressurization cylinder (if applicable).
4	Check that discharge devices (hose, lance) are without damage signs or obstruction, if necessary remove devices and check the correct internal passage with compressed air.
5	Record the inspection activity on the maintenance tag and on the fire protection register

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5.2) Revision

1	Check the stability and the correct wheel handling. Check the condition of the marking label, replace if necessary.
2	Screw off and remove the closing cap of extinguishing agent cylinder
3	Discharge the fire extinguisher, comply at rules for a correct disposal
4	Check internally the cylinder and make sure that are no signs of corrosion.
5	Check that discharge devices (hose, lance) are without damage signs or obstruction, if necessary remove devices and check the correct internal passage with compressed air.
6	Refill the fire extinguisher with new extinguishing agent, as indicated in technical manual of specific product.
7	Check the weight of pressurization cylinder. Use as reference the indication in table 5.1 at point 2.
8	Check the status of closing cap of extinguishing agent cylinder, if necessary replace with a new one. Screw back the cap with a tightening torque as indicated at page 4 – table 2.
9	Check the status of safety seal and safety pin of pressurization cylinder (if applicable). Reinsert the dispensing devices (hose, lance).
10	Record the inspection activity on the maintenance tag and on the fire protection register

5.3) Hydrostatic Test

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

1	Check the stability and the correct wheel handling. Check the condition of the marking label, replace if necessary.
2	Screw off and remove the closing cap of extinguishing agent cylinder
3	Discharge the fire extinguisher, comply at rules for a correct disposal
4	Check internally the cylinder and make sure that are no signs of corrosion.
5	Hydraulic test with special machinery: keep the hydraulic pressure at the "PT" value for 30 seconds and proceed with depressoerization. Check the cylinder general condition.
6	Proceed with rinsing/removal of any residuals.
7	Check that discharge devices (hose, lance) are without damage signs or obstruction, if necessary remove devices and check the correct internal passage with compressed air.
8	Refill the fire extinguisher with new extinguishing agent, as indicated in technical manual of specific product.
9	Also the pressurization cylinder must be subjected at hydrostatic test, but this operation is carried out by a certified laboratory. The alternative is replace with a new cylinder. In this step replace the dispensing valve with a new one (this is request only for valves/caps equipped with safety device). Refill so as indicated on technical manual of specific product.
10	Replace the closing cap of cylinder contains extinguishing agent, with a new one. (this is request only for valves/caps equipped with safety device). Screw back both with a tightening torque as indicated at page 4 – table 2.
11	Be sure that safety seal and safety pin of pressurization cylinder (if applicable) are suitable and correctly installed. Reinsert the dispensing devices (hose, lance).
12	Record the inspection activity on the maintenance tag and on the fire protection register

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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) Inspection/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

Reference	Valve Type	Cylinder Type	Torque	
			Min.	Max.
Extinguishing	Cap 2"-F, brass body	Stainless Steel	60 Nm	70 Nm
Propellant	M25x2, brass body (CPF)	Steel Alloy - Thread M25x2	95 Nm	130 Nm
	W28.8, brass body (CPF) (held with teflon or similar)	Steel Alloy - Thread W28.8	200 Nm	300 Nm
	W28.8, brass body (LEVIAN) (held with teflon or similar)	Steel Alloy - Thread W28.8	110 Nm	170 Nm

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