

# Use and Maintenance Technical Manual



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## Automatic ABC Powder Ceiling Devices



**6 Kg**  
**cod. 13069-3**



**12 Kg**  
**cod. 13129-3**

- **CYLINDER**  
 In high-strength alloy steel, external powder painting Red Ral 3000.
- **EXTINGUISHING AGENT**  
 ABC Powder - MAP 20 %.
- **PROPELLANT**  
 Dehumidified air or nitrogen (N<sub>2</sub>).
- **VALVE**  
 Sprinkler M. 30x1.5, with thermosensitive bulb intervention 68°C.
- **USE**  
 A B C fire rating (solid materials, flammable liquids, flammable gas).

*Note: image is for illustrative purpose only, the product purchased can has some difference*

Automatic powder device, temperature range from -30°C to +60°C, certified according to the directive for pressure equipment PED 2014/68/EU.

Quality Product certification guaranteed by Bureau Veritas Italia.

Suitable for use on fire involving electrical voltages up to 1'000 V, at a distance of 1 mt.

APPROVED/CERTIFIED FIRE EXTINGUISHER:



**FIRE RATING :**



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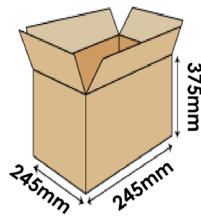
# Automatic ABC Powder Ceiling Devices

## SPECIFICHE TECNICHE

	13069-3	13129-3
FIRE RATING	A B C	
EXTINGUISHING AGENT	ABC Powder - MAP 20 %	
PROPELLANT	Dehumidified air or Nitrogen (N <sub>2</sub> ), 14 bar, 20°C	
TEMPERATURE RANGE	-30°C / +60°C	
NOMINAL CHARGE	6 Kg	12 Kg
FULL WEIGHT	~ 10 Kg	~ 18 Kg
DIMENSIONS	Height 360 +/- 5 mm Diameter 240 +/- 2 mm	Height 360 +/- 5 mm Diameter 360 +/- 2 mm
COVERED AREA	~ 6 mq	~ 12 mq
DISCHARGE TIME	~ 9 secondi	~ 14 secondi
VALVE TIGHTENING TORQUE	Minimo 45 Nm, Massimo 68 Nm	
CYLINDER PRESSURE TEST	PT 27 bar	
CYLINDER VOLUME	7,2 Litri	13,5 Litri
SAFETY DEVICE	Depending on availability of valve (set between 22 - 27 bar)	
CYLINDER MATERIAL	Alloy steel	
EXTERNAL TREATMENT	Sandblast and powder painting, Red Ral 3000 colour	

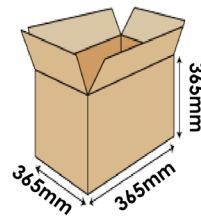
## PACKAGING

(Note: the packaging quantities and measurements are indicative and can be subject at changes)



**6 kg**

Maximum nr. 48 pieces for pallet  
Pallet dimensions 100x120 cm



**12 kg**

Maximum nr. 27 pieces for pallet  
Pallet dimensions 100x120 cm

## TRANSPORT DISPOSAL

Land transport : Exemption for the purposes of ADR disposal 594

Ship Transport : IMDG Code - UN 1044 class 2.2 Fire Extinguishers

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## COMPONENTS AND SPARE PARTS LIST

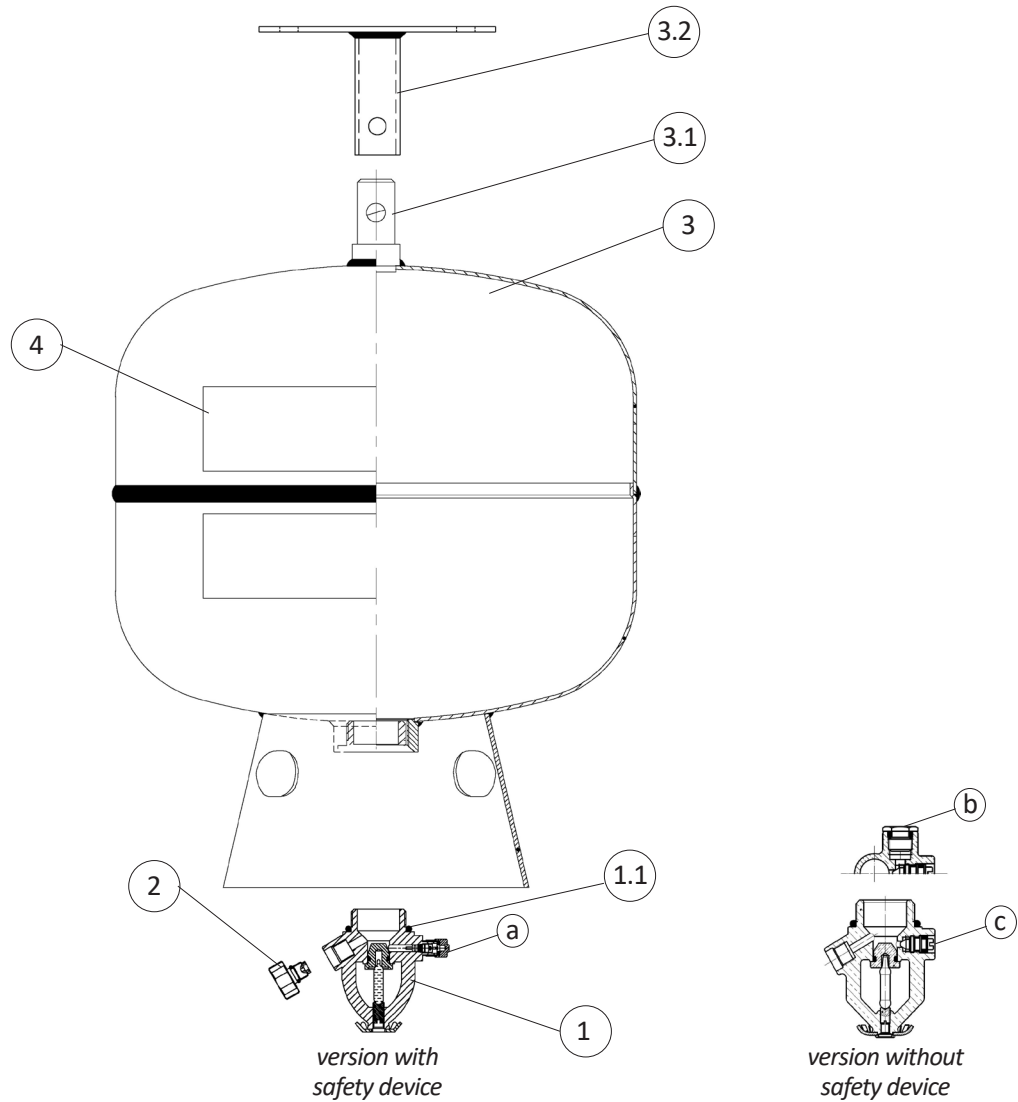


Table 1

NUM.	DESCRIPTION	6 Kg 13069-3		12 Kg 13129-3	
		CODE		CODE	
1	M. 30x1.5 valve, with thermosensitive bulb activated at 68°C	0216			
1.1	O-ring for valve	n.a.			
2	Pressure gauge	0271-1			
3	Cylinder				
3.1	Adapter for bracket	0118-1		0119-1	
3.2	Bracket				
4	Label	0076			

*\*abc is references for maintenance step at pag 7*

*The spare part at number 1 includes already other component 1.1  
The spare part at number 3 includes already other components 3.1 3.2  
"n.a." mean that the component is not available as single spare part*

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## 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, see pag 1 of this document)

### **3) INSTALLATION**

- 1) Place the device at ceiling with the specific bracket supplied.
- 2) The maximum height of installation is 3 m (minimum height 1,5 m).
- 3) Do not expose the device to the atmospheric agents or chemicals agents.
- 4) Do not expose the device to the direct sunlight.
- 5) Verify that the gauge pressure indicator is inside the green area.
- 6) Keep children away from device.

### **4) MODALITY AND PRECAUTIONS FOR THE USE**

- 1) Fix the bracket at the ceiling (screws not included).
- 2) Place the device adapter in the holder seat and tighten securely.
- 3) Do not expose the device to the direct flames.
- 4) This fire extinguisher is a pressurized vessel and must not be pierced, dented or subjected to external damage.
- 5) Do not direct the jet on the people.

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## 5) STEPS AND FREQUENCY RELATED TO MAINTENANCE OPERATIONS (For stored pressure fire extinguishers)

Note: The user have to complies to the national or international rules, if they are more restrictive of the below table

Table 2

Ref.	Periodicity	Step	Operations
5.1	12 Months	Inspection	Check internal pressure using an independent tool
5.2	5 Years	Maintenance	Check the fluidity of extinguishing agent. Check the thread of the valve body and if a non-compliance is detected, replace it.
5.3	10 Years	Hydrotest Cylinder	Check the conservation status and perform the hydraulic test of the cylinder with suitable tool. Is recommended the replacement of the dispensing valve
5.4	*20 Years		Is recommended the replacement of the device

\* If it located in particular environments the timing can be reduced.  
(it is recommended to reduce to 10 years)

N.B. : All the operations must be calculated from the date of placing on the market.  
For the hydraulic test refer to the date stamped on the tank.

### 5.1) Inspection Steps

1	Remove the fire extinguisher from the bracket and check the fixing stability
2	Check the internal pressure with an independent tool
4	Check the integrity of the thermosensitive bulb
5	Record the inspection activity on the maintenance tag and on the fire protection register

### 5.2) Maintenance Steps

1	Remove the device from the bracket and check the fixing stability. Check the marking label and replace it if damaged
2	Depressurize the device, during the operation keep the sprinkler facing upwards to avoid dust from escaping. Unscrew and remove the dispensing valve
3	Check the fluidity of extinguishing powder, that agglomerates are not present in the cylinder (if powder is suitable, can be reused for recharge the fire extinguisher)
4	Check internally the cylinder that no shows corrosion signs.
5	Recharge the fire extinguisher with extinguishing agent
6	Valve with brass body Check the thread of valve body with suitable tool and if damaged replace with a new valve. For valves without safety device, replacement is recommended in any case. Screw the valve with a tightening torque as shown : min. 45 Nm - max 68 Nm
7	Pressurize the device with dehumidified air or nitrogen (14 bar at 20 °C) and check for leaks
8	Reposition the device in the appropriate seat on the support
9	Record the inspection activity on the maintenance tag and on the fire protection register

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## 5.3) Hydraulic test step




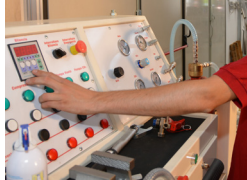

At least every 10 years from the production date the fire extinguisher must be overhauled by a hydraulic pressure test in accordance with the pressure values "PT" stamped on the cylinder.

1	Remove the device from the bracket and check the fixing stability. Check the marking label and replace it if damaged	
2	Depressurize the device, during the operation keep the sprinkler facing upwards to avoid dust from escaping. Unscrew and remove the dispensing valve	
3	Check the fluidity of extinguishing powder, that agglomerates are not present in the cylinder (if powder is suitable, can be reused for recharge the fire extinguisher)	
4	Check internally the cylinder that no shows corrosion signs.	
5	Hydraulic test of the cylinder with suitable tool: maintain hydraulic pressure at "PT" for 30 seconds and proceed with depressurization. Check that the cylinder does not show any deformation, breakage or stability anomalies	
6	Proceed with the cylinder drying with suitable tool	
7	Recharge the fire extinguisher with extinguishing agent	
8	Valve with brass body	Check the thread of valve body with suitable tool and if damaged replace with a new valve. For valves without safety device, replacement is recommended in any case. Screw the valve with a tightening torque as shown : min. 45 Nm - max 68 Nm
9	Pressurize the device with dehumidified air or nitrogen (14 bar at 20 °C) and check for leaks	
10	Reposition the device in the appropriate seat on the support	
11	Record the inspection activity on the maintenance tag and on the fire protection register	

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## Executive details Inspection steps, Maintenance, Hydraulic test

<p><b>1</b> - Remove the fire extinguisher from the bracket; check marking label and replace it if damaged, check stability of the bracket, cleaning, general conditions</p>	<p><b>2</b> - Remove pressure from device (keep sprinkler valve up). Follow this instructions:</p> <ul style="list-style-type: none"> <li>- valve with safety device <i>unscrew and remove protection cap "a" and push in the stem</i></li> <li>- valve without safety device <i>unscrew and remove protection cap "b"; loosen (but nut remove) stem "c"</i></li> </ul> <p>Unscrew and remove the valve</p>
<p><b>3</b> - Check the fluidity of extinguishing powder. If necessary, replace with new powder</p>	 <p><b>4</b> - Perform an internal check of the cylinder with an inspection lamp. Replace the o-ring, clean and grease the parts.</p>
 <p><b>5</b> - Hydraulic cylinder test: maintain hydraulic pressure at "PT" for 30 seconds and proceed with depressurization.</p>	 <p><b>6</b> - Cylinder drying</p>
 <p><b>7</b> - Recharge the fire extinguisher with checked or new extinguishing agent.</p>	<p><b>8</b> - Reinstall the dispensing valve. Perform the operation with suitable torque wrench, making sure you have set the correct tightening torque</p>
<p><b>9</b> - Pressurize the device (with sprinkler valve up). Follow this instructions:</p> <ul style="list-style-type: none"> <li>- valve with safety device <i>unscrew and remove protection cap "a" and the screw the adaptor for pressurization, proceed adding pressure</i></li> <li>- valve without safety device <i>unscrew and remove protection cap "b" and the screw the adaptor for pressurization, proceed adding pressure (stem "c" must be loosen); Screw stem "c" for close passage at the end of pressurization; Screw cap "b".</i></li> </ul> <p>Check for any pressure loss using a "leak detector"</p>	<p><b>10</b> - Replace device on the bracket</p>
	<p><b>11</b> - Record the inspection activity on the maintenance tag and on the fire protection register</p>

Nota : immagini al solo scopo illustrativo

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## 5.4) Twenty-year control

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 competent person. 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 2 at point 5.4).

## 6) SPARE PARTS LIST AND MAINTENANCE TOOLS

### 6.1) Spare parts list

For the spare parts list see the table 1 at pag 3.  
For more details see web site [www.emme-italia.com](http://www.emme-italia.com)

### 6.2) Inspection/Maintenance Tools

For a complete list of recommended tools see web site [www.emme-italia.com](http://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.

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