Manufacturer: JSC «POZHTECHNIKA» Belarus,
210602, Vitebsk, M. Gorky Str., 145, ptc01.com

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OPERATING MANUAL PBAK.634232.016 RE

PORTABLE FOAM FIRE EXTINGUISHERS WITH INTERNAL CARTRIDGE **MIG**

Manufacturer´s warranty	The service life of fire extinguisher	Refilling period – every
4 YEARS	**15 YEARS**	**5 YEARS**

The present manual contains information on the design and operation principle of the portable Foam Fire Extinguishers MIG with internal cartridge and the information on the use of the fire extinguishers.

A sample identification code to order the fire extinguisher: Foam Fire Extinguisher MIG 8 lt-AB-04 with internal cartridge (AFFF) (version with increased corrosion resistance).

1. APPLICATION

1.1 Foam Fire Extinguishers MIG are assigned for the use by the bodies and divisions on emergency situations, protection of the facilities of the national economy, transportation means, as well as for the use in the household conditions as a primary fire extinguishing means for the fire class A (solid smoldering materials), B (combustible liquids).

1.2 The fire extinguishers cannot be used for extinguishing of the combustions of the alkali, alkali-earth metals and other materials that can burn without the supply of the oxygen, and the fires of class C (combustible gases) and E (electrical energized devices).

2. TECHNICAL CHARACTERISTICS

2.1 The technical characteristics are indicated in the table 1

Table 1 - Technical characteristics

Parameter name /Value	Foam Fire Extinguisher-8 lt	Foam Fire Extinguisher-10 lt
1	2	3
1. Firefighting agent volume, lt	$8^{-0,4}$	$10^{-0,5}$
2. Firefighting agent stream length, m, no less than	4,0	
3. Firefighting agent stream duration, s, no less than	30	
4. Fire extinguishing capacity: class A class B	 2A 113B	 3A 183B
5.Operating pressure (design), Mpa at (20±2) °C	1,2±0,1	
6. Operating and storage temperature range, °C	+5 °C...+ 50 °C	
7. Date of the next recharging, years, no more than	5	
8. Service life, years	15	
9. Weight of the fire extinguisher in running order, kg	12,2±1,4	14±1,6
10. Dimensions, mm, not more than: - height - cylinder diameter - cylinder diameter at bracket fixing points	 590 185 180	 670 185 180

1	2	3
11. Safety valve actuation pressure, MPa	2,2-2,6	
12. Internal cartridge gas charging	Nitrogen (N_2) under pressure of 12±0.2 MPa	
* Note - the period for recharging fire extinguishers on vehicles is at least once every two years (clause 9.3)		

3. DELIVERY SET

3.1 The supply scope of the fire extinguishers is specified in the table 2.

Table 2 - Delivery set

Name	OVP- 8, OVP-10	Quan.
fire extinguisher	+	1
sprayer	+	1
operations manual	+	1

3.2 If the fire extinguisher shipped disassembled, the sprayer shall be connected to the fire extinguisher valve (hereinafter referred to as LRD).

4. DESIGN

4.1. Fire extinguisher design is shown in the Figure 1. The Fire extinguisher consists of a body 2 with LRD 1 screwed in its neck (M74x2 thread) with a siphon tube 3. A sprayer with the crossover 4 is connected to the outlet of the LRD.

Also, a high-pressure cylinder with expellant gas 7 is attached to the LRD, designed to create excess pressure in the body (located inside the fire extinguisher body). The foam concentrate is stored separately from the aqueous solution in the MIG cartridge 6. The foaming agent is mixed with an aqueous solution when the fire extinguisher is activated (see sections 5 and 6)

4.2 The Manufacturer reserves the right to make product design changes that have no impact on its basic technical characteristics.

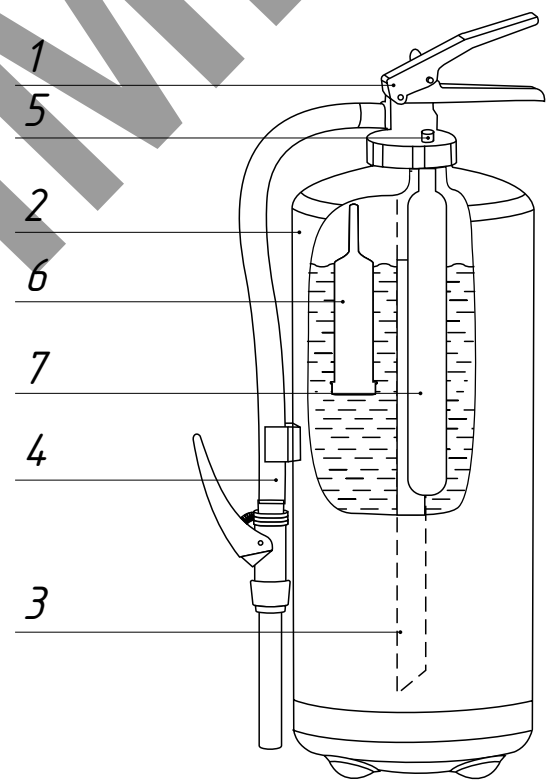

Figure 1

1 – valve, 2 – body,
3 – siphon tube,
4 – sprayer with the crossover,
5 – safety valve,
6 – MIG cartridge with foam concentrate,
7 – cylinder with expellant gas

5. OPERATING PRINCIPLE

5.1 After removing the lock and SHORT-TERM (less than 1 second) pressing the upper handle of the LRD with the hand,

the needle pierces the safety membrane and the propellant gas fills the fire extinguisher body. Not less than 6 seconds after the first pressing, it is necessary to press the upper handle of the LRD again. The LRD opens and the fire extinguishing agent is fed through the siphon tube and the sprayer to the fire under excess pressure. To stop the supply of extinguishing agent, the upper handle of the LRD should be returned to its original position.

6. OPERATIONS PROCEDURE DURING EXTINGUISHING OF A FIRE

6.1 Remove lock.

6.2 Press the top handle of the LRD.

6.3 After at least 6 seconds (during this time the operating pressure reaches its value), point the sprayer at the source of fire, open the crossover on the sprayer by pressing its handle, and start extinguishing.

6.4 Extinguishing of fires in open areas is carried out from the windward side.

6.5 When extinguishing, do not deviate the fire extinguisher from the vertical axis and DO NOT overturn it.

6.6 When extinguishing, direct the agent jet to the base of the flame and, at the same time, move the fire extinguisher in such a way that the entire burning surface is covered with foam and the highest concentration of foam is created in the combustion zone.

6.7 To stop the supply of the fire-extinguishing agent, the upper handle of the LRD should be returned to its original position.

7. SAFETY MEASURES

7.1 Persons working with a firefighting agent when charging fire extinguishers must comply with the safety and personal hygiene requirements set out in the normative instructions for extinguishing agents.

7.2 Premises used for works on the charging with firefighting agent should be equipped with forced-air and exhaust ventilation in accordance with GOST 12.4.021, lighting according to SNB 2.04.05-98 and heating according to SNB 4.02.01-03.

7.3 Do not use extinguishers to extinguish equipment which can cause its malfunction if the agent hits (computers, electronic equipment, etc.).

7.4 DO NOT:

- use fire extinguishers if they have dents, bulges and cracks on the fire extinguisher cylinder or the valve;
- perform any maintenance when the fire extinguisher cylinder is pressurized;
- hit the fire extinguisher;
- direct the firefighting agent stream towards people standing nearby;
- use a sprayer to carry a fire extinguisher.

8. OPERATING PROCEDURE

8.1 Fire extinguisher activation procedure described on the label.

8.2 Fire extinguisher users must be familiar with the rules of operation and use of fire extinguishers.

8.3 Operating temperature range is specified in the Table 1.

8.4 Fire extinguishers must be stored and used in strict compliance with TKP 295-2011, GOST 12.4.009 and GOST-R 59641-2021 standards and technical specifications, “Industrial Safety Rules for hazardous production facilities using equipment operating under excessive pressure” (RF), “Rules for ensuring industrial safety of equipment operating under excessive pressure” (RB) and the instructions of this manual.

8.5 Fire extinguishers must be located on the protected facility in such a way that ensures they are protected from direct sunlight, heat flow, mechanical impact and other adverse factors – vibrations, corrosive media, excess moisture, etc.

8.6 Fire extinguishers must be clearly visible and easily accessible in case of a fire.

8.7 Fire extinguishers must not be installed in locations where temperatures are beyond the temperature range specified on the fire extinguisher (cl.6 Table 1).

8.8 A maintenance log card shall be created for each fire extinguisher installed at the facility (commissioned), with the corresponding entry made therein.

Each fire extinguisher shall be assigned a serial number, which is to be marked on the extinguisher itself. A corresponding entry regarding the commissioning of the extinguisher shall be made in the Fire Protection Systems Operation Logbook of the facility.

8.9 Fire extinguishers must undergo regular maintenance inspections.

8.10 Regular inspection is necessary to check the condition of fire extinguishers, to control installation locations and that the fire extinguishers are properly secured, that they can be easily approached, and that operating instructions for fire extinguishers positioned correctly and legible.

8.11 Inspections and condition assessments of fire extinguishers shall be carried out by licensed organizations or certified individual contractors authorized to perform such work under applicable law. These inspections must be conducted at least once a year.

8.12 Inspections shall include a visual check and verification for any leakage of the propellant gas. All findings and actions taken must be documented in the fire protection system maintenance log.

Fire extinguishers must be decommissioned and sent to specialized organizations for maintenance (repairs, recharging) in case any of the following irregularities have been found: dents, chips or deep cracks on the cylinder or the valve of the fire extinguisher; considerable damage done to protective and paint-and-lacquer coating; absence of clear and understandable labeling; absence of stamps for fire extinguishing cylinder reexamination; absence of a seal or pin; unsatisfactory condition of the firefighting agent sprayer: signs of mechanical damage, corrosion, welding burr or other factors preventing firefighting agent from being released from the fire extinguisher freely; any firefighting agent leak.

8.13 In facilities of high fire risk (A-class rooms) or in case fire extinguishers are subject to such adverse factors as close to limit values (less than +5°C or more than +40 °C), air humidity over 90% (at 25°C), corrosive media (for 04

edition), vibrations, etc., fire extinguishers must be inspected and checked for firefighting agent leaks at least once every 6 months.

9. RECHARGING

9.1 Fire extinguishers must be recharged after they have been completely or partially used, in case visual inspection revealed any irregularities (see paragraph 8.12).

9.2 Fire extinguishers must be recharged at least once every 5 years after manufacturing date.

9.3 Fire extinguishers subject to adverse climatic and (or) physical conditions (8.13) must be recharged every two years.

9.4 The fire extinguishers must be charged with firefighting agent specified in clause 13.

The foam concentrate must be stored inside the fire extinguisher as a cartridge.

The fire-extinguishing agent used in case of performance of work in accordance with the Register requirements shall be approved by the Register and shall be safe for humans.

9.5 The expellant gas cylinders must be recharged or replaced once every five years. Cylinders must comply with the requirements of GOST R 51057, FNP «Industrial safety rules for hazardous production facilities that use equipment operating under excessive pressure».

9.6 It is necessary to carry out at least once every 5 years:

- hydraulic and pneumatic tests of the body and parts of the fire extinguisher;
- replacement of an aqueous solution (fill in with distilled water);
- propellant gas cylinders must be recharged or replaced.
- inspection of the MIG foam cartridge for damage, membrane integrity and the presence of the agent (if there are defects, the MIG cartridge must be replaced)

9.7 At least once every 10 years, replace the MIG foam cartridge.

9.8 An appropriate entry regarding the recharging of the fire extinguisher shall be made in the Fire Protection Systems Operation Logbook of the facility.

WARNING! Fire extinguishers must be repaired and recharged only in specialized organizations with all necessary licenses and permits and only in accordance with the technical documentation of the Manufacturer.

10. TRANSPORTATION AND STORAGE

10.1 Transportation and storage procedure must correspond to operating conditions and requirements of GOST 15150. Fire extinguishers packed in accordance with the requirements of technical specifications and design documentation can be transported by all means of transport in accordance with the rules approved in the prescribed manner.

10.2 Fire extinguishers must be protected during transportation and storage against mechanical damage, heating over 50 °C, direct sunlight, atmospheric precipitation, moisture and corrosive media. Temperature range is specified in the item 6 of Table 1.

11. SAMPLE MAINTENANCE DOCUMENTATION

11.1 Table 3 (recommended) — Fire Extinguisher Maintenance Log Card Format

1. Serial number assigned to the extinguisher		6. Manufacturer's serial number	
2. Date of placement of the extinguisher at the protected site		7. Date of manufacture	
3. Location of the extinguisher installation		8. Date of next scheduled recharge	
4. Type and model of the extinguisher		9. Service life of the extinguisher	
5. Manufacturer of the extinguisher		10. Responsible person and signature	

11.2 Table 4 (recommended) — Fire Protection Systems Operation Logbook Format for Maintenance and Servicing of Fire Extinguishers

Serial number and model of the extinguisher		Date of extinguisher recharge	
Date of testing, recharging, or repair; organization performing the maintenance or repair		Brand (concentration) of the extinguishing agent used	
		Inspection results after recharging	
Results of inspection and pressure testing		Date of next scheduled recharge	
Date of next scheduled test		Position, surname, initials, and signature of the responsible person	

12. CERTIFICATION INFORMATION

12.1 Certification information is specified in Table 5, 6.

Table 5 – Certification information

Fire Extinguisher	The Authority issuing the certificate: OS "Pozhtest" FGU VNIIPO EMERCOM of Russia, Balashikha
Foam Fire Extinguisher MIG 8 lt with internal cartridge Foam Fire Extinguisher MIG 10 lt with internal cartridge	№ ЕАЭС RU C-BY.ЧС13.В.00379/21 Certificate of Conformity (valid until 26.11.2026)

Table 6 – Certification information

Fire Extinguisher	The Authority issuing the certificate: Russian Maritime Register of Shipping, Osipovichi
Foam Fire Extinguisher MIG 10 lt with internal cartridge	STO № 20.00074.125 Type Approval Certificate (valid until 26.08.2025)

13. CERTIFICATE OF ACCEPTANCE

Fire Extinguisher corresponds to ТУ BY 300376711.047-2014 and TR EAEU 043/2017, have the stamp of acceptance and are marked as ready for service. The month and year of manufacture are indicated on the label located at the top of the case.

Firefighting agent (stored in MIG cartridge)

Fire extinguisher number:

Release date:

Date of sale _____ Stamp of acceptance _____

14. MANUFACTURER WARRANTY

14.1 Fire extinguisher warranty period shall be 36 months after selling date but no more than 48 months after manufacturing date.

14.2 The Manufacturer guarantees that any faults found by the consumer during the warranty period shall be corrected no later than one month after the Manufacturer is notified of said fault.

14.3 The Manufacturer guarantees that the fire extinguisher corresponds to ТУ BY 300376711.047-2014 and TR EAEU 043/2017 provided that the user complies with the operation, transportation, and storage rules.

14.4 The Manufacturer shall not be liable in the following case:

- non-compliance with rules of operation by the extinguisher owner;
- factory seal is missing;
- presence of mechanical damages;
- decorative and protective coverings damages;

14.5 Expiry of the Fire extinguisher recharge date is not a warranty case.

15. RECYCLING

15.1 At the end of their service life, fire extinguishers must be recycled.

15.2 Disposal of fire extinguishers is carried out by enterprises that have got special certification and have an appropriate license to carry out such work (points for the maintenance of fire extinguishers).

MANUFACTURER'S CERTIFICATE (MC)
OF PRODUCT COMPLIANCE WITH THE RS REQUIREMENTS

ПБАК.634232.016МС

Place of survey: **Vitebsk, Republic of Belarus**

Manufacturer: **JSC «Pozhtechnika»**

This is to certify that the products listed below have been manufactured, surveyed and tested in accordance with rules of Russian Maritime Register of Shipping.

Product: **Portable cartridge-operated foam fire extinguishers see item 13**

Test information: **test report №.УОТК00000000_____ (Acceptance testing of products)**

Serial№: **see item 13**
Date of Manufacture: **see item 13**

Technical specification: **ТУ BY 300376711.047-2014 (am.2); General arrangement drawings: ПБАК.634232.016 СБ, ПБАК.635164.059 СБ; Operation manual: ПБАК.634232.016 РЭ; Testing program – were approved by RS letter №125-318-2-176534 of 22.07.2020**

The product complies: **PP.5.1.9 of Part VI of Rules for the Classification and Construction of Sea-Going Ships (2020); s.4.3 of Part IV of Rules for the Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships (2020); ps.2.1, 3.1.1Chapter 4 of International Code for Fire Safety Systems (Resolution MSC.98(73)); Improved Guidelines for Marine Portable Fire Extinguishers (Resolution A.951(23)); Technical Regulation Concerning the Safety of Sea Transport Items**

Type Approval Certificate: **20.00074.125**

Validity Type Approval Certificate: **26.08.2020 – 26.08.2025**

RS brand: **not required**

The items is labeled with a conformity mark:

This Certificate is issued on the basis of the Manufacturer's quality control system certificate **№ 23.44.01.00057.125 (01.11.2023-23.10.2025)**

On behalf of Manufactured: **see item 13**