RCPEA:
28.29.22.110

Kalancha OOO (Ltd.)

ISO 9001:2015

Gas Powder Fire Extinguishing Module "BiZone" MGPP-110-CO_2-30-RKh-ABCE-U2

Specs (TU) 4854-027-13393076-2012

Technical Data Sheet PC 4854-027-13393076-2012

Certificate of Conformity
No. C-RU. PB04.V.01042, with an expiration date of 31.05.2023.

Certificate of Conformity
No. TC C-RU. AT15.V.00829 with an expiration date of 27.12.2021.

Explosion proof mark **1ExdsIICT4x**

2018

1. Basic Information on the Product

1.1 Name of product-Powder Extinguishing Module

MGPP-110-CO_2-30-RKh-ABCE-U2 "BiZone" (hereinafter referred to as "module").

The module is designed for total flooding extinguishing of fire-classes:

- **A** - combustion of solids;
- **B** - combustion of liquid substances;
- **C** - combustion of gaseous substances;
- **E** - combustion of energized electrical equipment.

The module provides total flooding extinguishing of fire classes A, B, C and energized electrical equipment in the enclosures of the volume of:

- V = 900 m3 for Class A fires.
- V = 600 m3 for Class B fires,

The module provides for the extinguishing of the fires of Class A and B at the area of 100 m2.

1.2 The powder supply from the module can be carried out by piping of not more than 100m length with the maximum possible number of 90-degree turns equal to 6. The piping must be made of the steel water pipes 65 × 4 GOST 3262 or 76x4 GOSTs 8732, 8734 and comply with the requirements of **SP5.13130.2009** (Claims 9.2.10, 9.2.11). The piping must be reinforced with brackets in front of each turn and nozzle. Traction force up to 1500Kgm occurs on the nozzle spraying gas-powder extinguishing agent after module's actuation.

1.3 The module is intended for use in explosion hazard zones of class 1 according to GOST R 30852.9-2002 (IEC 60079-10:1995) "Explosion-proof electrical equipment. Part 10. Classification of explosion hazard zone." with the possibility of the occurrence of explosive mixtures of IIC category, T4 group according to GOST R 30852.19 (IEC 60079-20:96) "Explosion- proof electrical equipment. Part 20. Data on fuel gases and fumes related to operation activity of electrical equipment." enclosures and exterior installations according to the marking of explosion GOST R 30852.13 (IEC 60079-14:96) "Explosion-proof electrical equipment. Part 14. Electrical installations in explosion hazard zones (except underground openings)." and other regulatory documents regulating the use of electric equipment in explosive hazard zones.

The module is also intended for the use in explosion hazard zones of enclosures and exterior installations according to Chapter 7.3 "Installations in explosion hazard zones" of the "Electric Installations Construction Rules" (EICR).

Explosion-proof mark - **1ExdsIICT4X**;

The sign "X" in the explosion-proof mark of the module indicates the necessity to meet the special security conditions:

- the module is released with a permanently attached cable;
- Rub and cleaning with dry wiper materials are prohibited while using in explosion hazard zone.

1.4 The module is not intended to extinguish the burning substances that can be incinerated without air access and to extinguish metals, alloys and organometallic compounds.

1.5. Manufacturer: Kalancha OOO (Ltd.), 141300, 22/1, Zheleznodorozhnaja st., Sergiev Posad, Moscow oblast, Russia phone/fax +7 (495) 781-92-48 E-mail: kalancha@kalancha.ru

2. Technical Parameters

2.1 The main technical data are listed in Table 1.

Table 1

Parameter	Value
1. Protected volume, m^3 –class B –class A –Protected area, m^2 classes A and B	 600 900 100
2. Powder tank capacity, l	105±2,5
3. Amount of powder “Phoenix ABC-70” Specs (TU) 2149-005-18215408-00, kg	80±2
4. Total weight of the module (without nozzle), kg, not over	365
5. Mass of used working gas - liquid Carbon dioxide GOST 8050-85, kg, min	32
6. Range of operating temperatures, °C	from -50°C to +50°C
7. Working pressure in powder tank (membrane burst pressure), MPa, max	1.6
8. Duration of powder discharge, s, not over	10
9. Response time, s, not over	1
10. Mass of dry chemical residue after actuation of the module,%, not over	15
11. Parameters of the constant electrical current required to trigger the module (cartridge actuated device): –actuating current, A –electric potential, V –electrical resistance, Ω –impulse duration, max, s	 0.5 9-27 1,5-4,5 0.02
12. Safe current circuit control, A: –within 5 minutes –no time limit	 0.05 0.005
13. Dimensions for transport, mm: –width –height without nozzle –lenght	 630 1740 670
14. Degree of protection according to GOST Standard 14254-96	IP54
15. Climatic modification according to GOST Standard 15150	U2
16. Storage Condition Group	5
17. Service lifetime, years	20
18. Fog variation factor, $\mathbf{k_1}$	1.0

3. Contents of Delivery

- module MGPP-110-CO_2-30-RKh-ABCE-U2 - 1 pce
- technical data sheet - 1 pce
- operation manual - 1 pce per lot

4. Resources, Terms of Service and Storage, Manufacturer's (Vendor) Guarantees

4.1 The manufacturer shall ensure that the module meets the requirements of the technical documentation when the customer complies with the conditions of operation, transportation, storage and installation as set out in the maintenance documents.

4.2 The specified time in service - 20 years.

4.3 The warranty retention period for module is 2 years from the date of module's adoption by the QCD of the manufacturer.

4.4 The modules are transported in the manufacturer's packaging. All modes of transport are allowed at any distance in accordance with the "Rules for the carriage of goods...", which are in force in the appropriate mode of transport.

4.5 In the transport and storage of the modules, conditions shall be provided to protect them from mechanical damage, heating, precipitation, moisture and aggressive environments.

4.6 The storage of modules is carried out in the covered warehouses at temperatures of (-50°C + 50°C).

4.7 Prior to mounting at the point of operation, the modules shall be stored in conditions that preclude deterioration and damage.

5. Corrosion Proofing

5.1 All parts subject to atmospheric corrosion, treated but without protective coating, are corrosion proved according to GOST 9.014-78.

5.2 Corrosion Proofing information is in table

Date	Designation of the works	Validity period, years	Title, last name, signature

6. Packing Certificate

Gas-powder fire extinguishing module MGPP-110-CO_2-30-RKh-ABCE-U2 "BiZone" factory no. _____ is packed according to the requirements of the current technical documentation.

_____ _____ _____ _____
title personal signature clarification of signature year, date, month

7. Certificate of Acceptance

Gas-powder fire extinguishing module MGPP-110-CO_2-30-RKh-ABCE-U2 "BiZone" factory no. _____ corresponds to Specs (TU) 4854-027-13393076-2012 and is found to be usable.

The total mass of the module _____ kg

Manufactured date _____

Head of QCD _____ _____
personal signature clarification of signature

Seal

8. Movement of the Product During Operation

Date of Installation	Product condition	Date of withdrawal	TSN	TSO	Reason for withdrawal	Signature of the person who performed the installation (withdrawal)

9. Maintenance and Integration of Work on Reports and Instructions

No. of report (instruction)	Summary of work	Target Date	Due Date	Title, last name, signature of Work Responsible Person	Title, last name, signature of test house manager

10. Notes on Exploitation and Storage

10.1 The maintenance and repair work of the modules is permitted by persons studied the present operation manual, which has been trained and certified by the Rostechnadzor authorities for the right to work with vessels working under pressure according to "Regulations on the industrial safety of hazardous production facilities, which use excessively pressurized equipment".

10.2 In the course of the operation of the module during the warranty period, all seals of the manufacturer must be undisturbed.

10.3 Extinguishing powder "Phoenix ABC-70" used in the module is explosion-safe. The high dispersion of powder particles contributes to long-term exposure in the air, in the form of dust, which may cause irritation of the upper respiratory tracts and, with long contact at concentrations exceeding the maximum allowable concentrations, may cause chronic lung disease. Ammophos and silicon dioxide have fibrogenic effect.

The general hazard class of the powder according to GOST 12.1.007-76 is 3.

10.4 Personnel engaged in cleaning powder shall be provided with special clothing, special shoes and personal protective equipment in accordance with GOST 12.4.103-83.10.7 Operation, maintenance, repair of the module should be guided by "Operation Manual 4854-027-13393076-2012 OM as amended no. 2".

10.5 In order to exclude the accumulation of static electricity charges on surfaces of parts with paint coating due to the effects of air or other gas with dust particles, the module is closed on all sides of the galvanized steel plating. The protruding parts are limited to the thickness of the paint coating to 0.2 mm max.

It is necessary to weigh the module to determine the total mass of the module before installing the module on the site, the total mass of the module is indicated in Section 7 of the TDS. The module is weighed on a medium-precision balance with a weighing limit of up to 1000 kg, for example, crane scales KV-1000K-2 (0.5 kg division value), electronic crane scales VEK / 1-500 (0.5 kg division value).

ATTENTION!

THE MAINTENANCE OF THE MODULES, THE REFILLING OF THE GAS CYLINDER AND THE POWDERED TANK, THE ASSEMBLY AND THE DISASSEMBLY OF THE MODULE SHALL BE CARRIED OUT ONLY BY ORGANIZATIONS HAVING PERMISSION FROM THE MANUFACTURER OF THE MODULE AND A LICENSE OF EMERCOM OF RUSSIA TO THIS ACTIVITY, APPROPRIATE EQUIPMENT AND TRAINED PERSONNEL,

USING THE PARTS AND EXTINGUISHING POWDER RECOMMENDED BY THE MODULE MANUFACTURER.

11. Reclamation and Disposal

11.1 Module should be disposed in accordance with the requirements set by the consumer.

11.2 Waste disposal of extinguishing powder is carried out according to claims 4.6.1, 4.6.5, 4.6.6 SP 9.13130.2009 and instructions on "Reclamation and regeneration of extinguishing" VNIIPO, Moscow, 1988, p. 25.

12. Module Refilling Information

Factory no. _____

Sl. No.	Date of refill	Mass of carbon dioxide	Mass extinguishing powder and its mark	Signature of persons Responsible for filling	Seal of refilling organization
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

The addresses of the service centers of OOO "Kalancha" are listed below.

OOO "Vektor-servis"
Tel./Fax: +7 (3823) 54-66-00, 54-11-07, +7 (913) 821-79-85
636018, Tomsk Oblast, Seversk, Trudovaya st., 1/1, building 4

LO OOO "Pozhpromkomplekt"
Tel./Fax +7 (4872) 355-222
300012, Tula, Smidovich st., 4

OOO SMU "Rubezh-SV"
www.smu-rubeg.ru
E-mail: rubeg@smu-rubeg.ru Tel./Fax: +7 (4872) 24-50-03
300013, Tula, Boldina st., 47

OOO "SvjazStrojKomplekt"
www.cckomplect.ru
E-mail: info@cck-rzm.ru Tel./Fax: +7 (4912) 24-51-71
390000, Ryazan, Radischeva st., 59

Voronezh Oblast Department "VDPO"
www.vdpo-vrn.ru
E-mail: vdpo-vrn@mail.ru
Tel./Fax: +7 (4732) 41-22-43, 41-22-39
394026, Voronezh
45 Strelkovoi divizii st., 228

OOO "Kamchatflotservis"
www.kamfs.ru
E-mail:kamfs@kamfs.ru
Tel./Fax:+7 (4152) 41-30-07, 41-30-09, 41-30-56
683000, Kamchatsky Krai, Petropavlovsk-Kamchatsky, Ozernovskaja kosa st., 11

OOO "Firma "Rosavtomatik"
E-mail: rosavtomatik@mail.ru Skype: rosavtomatik
Tel./Fax: +7 (863) 277-82-80, 277-81-78
344064, Rostov-on-Don, Vavilova st., 68/2

TOO "Batys-energon"
www.batys-energon.kz
E-mail: energon@mail.ru
Tel./Fax: +7 (7112) 21-81-21, 21-06-61
Republic of Kazakhstan, Western Kazakh oblast, 090003, Ural'sk, Litejnaya st., 1

OOO "Severavtomatika"
www.severavtomatika.ru
E-mail: severavtomatika@mail.ru
Tel./Fax: +7 (3462) 55-05-95, 72-32-73, +7 (902) 629-93-32
628401, Khanty-Mansiysk Autonomous District - Yugra, Surgut, Inzhenernaya st., 18

OOO "Baltijskaya Pozharnaya Kompaniya"
Tel./Fax: +7 (812) 327-97-65, +7 (821) 331-20-26
196084 St. Petersburg, ul. Zastavskaya, d.7, Business center "MEGA-Park", office 304

VDPO Tatar Republic Department
www.tatarstan.vdpo.ru E-mail: dpo_rt@mail.ru
Tel./Fax: +7 (843) 278-74-36, 278-74-66
420054, Republic of Tatarstan, Kazan, 2-ya Tihoreckaja st., 12

OOO "Bezopasnost' zhiznedeyatel'nosti"
E-mail: bgd-269@mail.ru
+7 (83177) 6-25-43
607061, Nizhny Novgorod oblast, Vyksa, Zhilkooperatsii st., 88

Information about service centers can also be found on the website: **www.kalancha.ru**

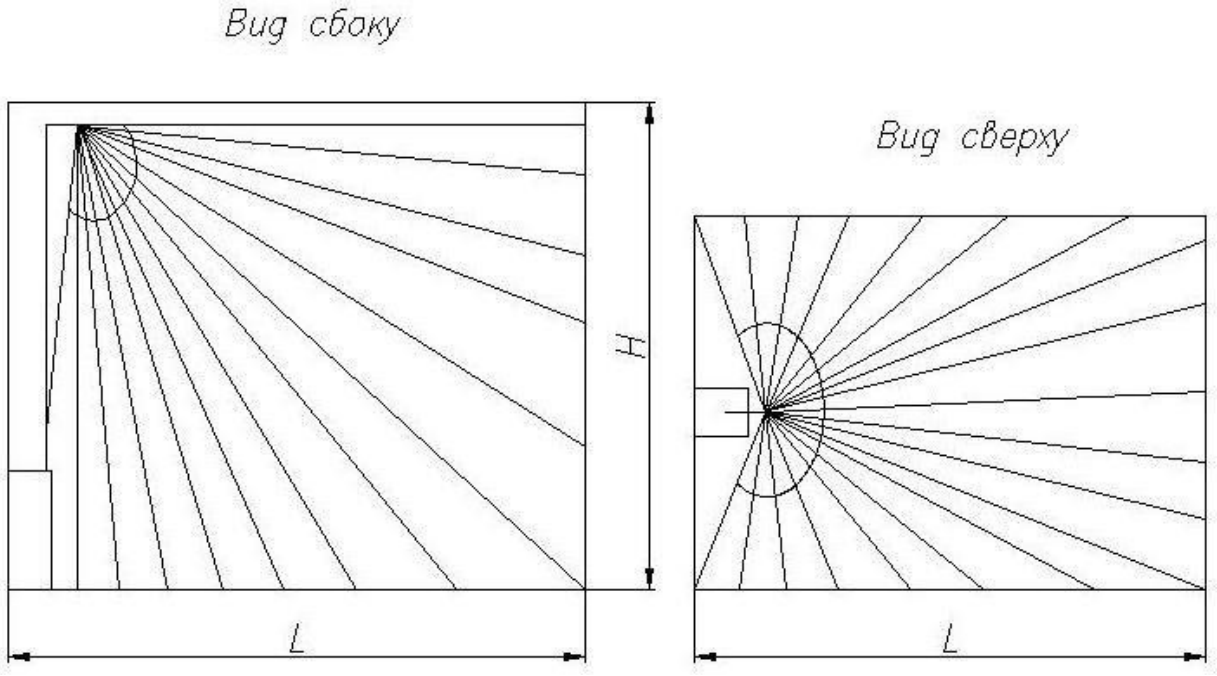
Information on cylinders

1	Factory number of cylinder		
2	Working pressure, kgf/cm2	200	200
3	Test pressure, kgf/cm2	300	300
4	Empty cylinder mass, kg		
5	Filled cylinder mass, kg		
6	5. Date (month and year) of manufacturing kg		
7	5. Date (month and year) of next inspection kg		
8	Cylinder manufacturer		

13. Special Notes

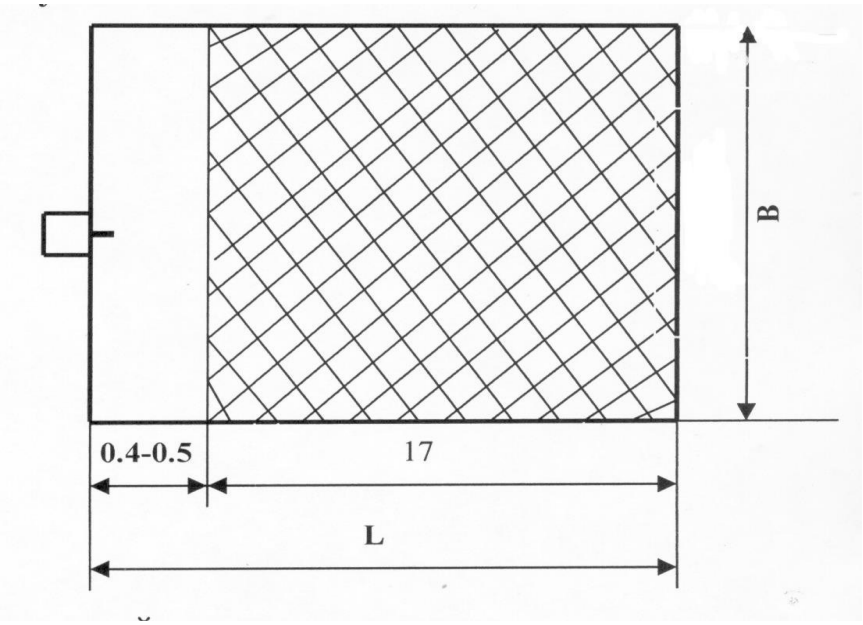
Side view

Top view



H≤8m, B≤10m, L≤18m

Figure 1. Total flooding fire extinguishing agent spray chart



The distance from the nozzle to the perimeter of the protected area shall be 0.4-0.5 m.
Nozzle location height ≤ 3.9 m.