



### Powder self-actuating fire-extinguishing PSFE-1(2)

Volume of extinguishing – 8 m<sup>3</sup>



PSFE constitutes a soldered glass flask filled with fire-extinguishing powder with a gas-generating element.

The extinguisher is installed above the place of probable inflammation. Self-actuating occurs when temperature in the zone of installation element rises up to +100°C (PSFE-1) или +200°C (PSFE-2).

PSFE is designed for protection of the small rooms (individual garages of the standard size, trade pavilion, tents, storages) and for the electrical equipment under high voltage.

By PSFE -1 was successfully extinguished fires in one of the manufacturing plant oh the Public Company «GAZ» in Nizhniy Novgorod, in the storage of the fuels and lubricants on the factory of electric locomotives in Rostov-on-Don, on the train of Moscow subway, in the trade containers of the Luberetsy's wholesale market and in Timiryazev's association of the entrepreneurs in Moscow.

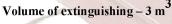
### Powder self-actuating fire-extinguishing

**PSFE-1(1,5;2) «mini»** 

Automatically self-actuates when temperature rises:

- up to  $+100^{\circ}$ C (PSFE-1 «mini»),
- up to +150°C (PSFE-1,5 «mini») или +200°C (PSFE-2 «mini»)

New dimensions and temperatures of self-actuating allow to extend the usage of PSFE for protection of the different small areas and fire hazardous objects.





### Powder fire-extinguishing module «Buran -

0,5>>

Area of extinguishing  $-2 \text{ m}^2$ 



Modules «Buran-0,5» are recommended to use in protection of the lockers with electrical equipment, cable pits, in the areas above suspended ceilings, raised floors, etc.

Nowadays there are «Buran-0,5» based projects for protection of the electrical cabinets with high-voltage equipment in suburban electric trains and in railroad locomotives of the different purpose for Public Company «RZD».

Also, these systems are installed on Moscow monorail transport, in the areas above suspended ceiling in the buildings of CJSC «KB GUTA-BANK» and in many different objects.



#### Powder fire-extinguishing module «Buran -

2,0>>

Modules «Buran-2,0» are designed for fire-extinguishing in the objects with high ambient temperature from -50°C up to +100°C.

These modules are compact and could be installed in tight overall conditions.

Modules are widely used for protection of diesel generators, in fire hazardous rooms of different kind of machines:

- excavators,
- graders,
- wheel loaders,
- slag pot carriages,
- special locomotives of Public Company «RZD»,
- sea crafts and riverboats, etc.

Modules «Buran-2,0( $\kappa$ )» are designed for protection of the cable channels and for areas above the suspended ceilings.

Area of extinguishing  $-10 \text{ m}^2$ Volume of extinguishing  $-15 \text{ m}^3$ 



# Powder fire-extinguishing modules «Buran—2,5-2C»

Area of extinguishing – 7 m<sup>2</sup>
Volume of extinguishing – 18 m<sup>3</sup>





Module «Buran-2,5-2C» can be started by electricity when it is in the automatic fire-extinguishing system, can be started manually by the button or in self-actuating mode.

Self-actuating function is provided by external thermally conductive cord that is ignited in the time of fire and activates module «Buran-2,5-2C».

Time lag in the self-actuating mode for the fire area of  $0.4 \text{ m}^2$ , is not more than 20 seconds.

Thanks to replaceable external thermally conductive cord it is possible to prolong the lifetime of the module in self-actuating mode.

Module «Buran-2,5-2C» due to its original and esthetic form, that reminds of UFO, are used for protection of trade centers, offices, garages and industrial facilities.

Modules organically fit in suspended ceilings in living spaces and in vacation homes.





### Powder fire-extinguishing modules «Buran-8»

#### и «Buran-15 I»

Area of extinguishing:

«Buran-8» - 32 m<sup>2</sup>

«Buran-15 I» - 48 m<sup>2</sup>

Volume of extinguishing:

«Buran-8» - 64 m<sup>3</sup>

«Buran-15 I» - 96 m<sup>3</sup>







«Buran-15 I»

Modules «Buran-8» и «Buran-15 I» are designed for protection of the energy facilities, storages, manufacturing plants and automotive companies.

There are two specification of the module «Buran-8»:

-«Buran-8U» multipurpose with the ceiling mount for the height of the room from 2,5 up to 6 meters. This model is a replacement for «Buran-8SV» and «Buran-8V» that are out of production;

-«Buran-8N» with the wall mount provides the feed of the powder cloud horizontally up to the 8 meters. For this module, the height of the room doesn't take into account.

# Powder fire-extinguishing modules «Buran—15KD (KD10)», «Buran—50KD»

«Buran-15KD (KD10)» and «Buran-50KD» are ranked as short-time action modules.

There are a lot of objects where it is more convenient to use this kind of modules rather than impulse ones. Short-time action modules can be installed outside the protected object and the powder can be delivered into the extinguishing zone by the pipes.

The height of the installation for the module «Buran-15 KD» from 3,5 up to 5,5 meters, for the module «Buran-50KD» from 5,5 up to 14 meters.

Area of extinguishing: «Buran-15KD (KD10)» - 42 m<sup>2</sup> «Buran-50KD» - 75 m<sup>2</sup> Volume of extinguishing: «Buran-15KD (KD10)» - 85 m<sup>3</sup> «Buran-50KD» - 210 m<sup>3</sup>







«Buran-50KD»





# Powder fire-extinguishing modules in explosion-proof modification

In fire hazardous areas «EPOTOS» recommends to use powder fire-extinguishing modules in explosion-proof modification. They successfully protect hundreds of storages with paints and varnishes, spray booths, oil pumping stations, dangerously explosive manufacturing plants and etc.



### Condensed aerosol fireextinguishing

Condensed aerosol fire-extinguishing generators of the trademarks «Doping»® и «TOR»® are volumetric fire-extinguishing devices.

They are most effective for the extinguishing «B» - class fires (liquid combustible substances), «A2» - class fires (solid and imperishable materials).

Also, these generators can be used for extinguishing cables and electrical equipment under high voltage.

# Condensed aerosol fire-extinguishing generators «Doping–2.02»

«Doping-2.02» — is the smallest self-actuating fireextinguisher in the product range. It is used for protection household electronics, electrical cabinets, safe deposits and

«Doping-2.02» — is installed in electrical cabinets of the houses, vacation homes. It protects electrical equipment on the Moscow monorail transportation system.

Volume of extinguishing - 0,2 m<sup>3</sup>





## **Condensed aerosol fire-extinguishing generators**

### **«Doping»** ®

Volume of extinguishing: «Doping 1P.100 – 1,25 m3 «Doping 2P.400 – 5,0 m3 «Doping 2.160π – 2,0 m3 «Doping 2P.200 – 2,5 m3 Aerosol fire-extinguishing generators «Doping»® were designed according to the regulations of Russian Ministry of Transportation, Russian Ministry of Defense and ROSTEST, in order to meet the requirements for the equipment for cars. Aerosol fire extinguishing generators are functional in the temperature up to +125°C.

Models vary in size, protection volume and in the way jet of the extinguishing aerosol exits the module (axially or radially).

Wide range of «Doping»® models allows you to choose automatic extinguishing device for any kind of fire hazardous objects with a lot of equipment in tight spaces. For example, in electrical cabinets, control lockers, cable channels, engine and luggage compartments, fuel tanks and heaters and etc.



## Condensed aerosol fire-extinguishing generators «TOR-3500»

They are most effective for the extinguishing «B» - class fires (liquid combustible substances), «A2»-class fires (solid and imperishable materials). Also, these generators can be used for extinguishing cables and electrical equipment under high voltage up to 140 KW.

«TOR-3500» – is the only aerosol fire-extinguishing generator that proved experimentally that in electrical rooms in extinguishing concentration aerosol and its interaction with the standard isolators do not lead to the formation of the holes in the air gaps and on the isolation surfaces under the high voltage up to 140 KW. Research was provided by electrotechnical lab of the Mgitinsky's distance electric power supply – branch of the Public Company «RZD».

Main purposes:

- Fire-extinguishing in container diesel-generators plant;
- Fire-extinguishing in electrical transformer substation;
- Fire-extinguishing in cable channels, cable cellar and etc.

Volume of extinguishing - 160 m<sup>3</sup>







### New product line of the condensed aerosol fireextinguishing generators «TOR-1000», «TOR-1400», «TOR-2800»

Volume of extinguishing:

«TOR-1000» - 45 m<sup>3</sup>

«TOR-1400» - 63 m<sup>3</sup>

«TOR-2800» - 127 m<sup>3</sup>

The main advantage of these line is radial jet aerosol exit. It helps to cool aerosol quicker and allows to use these modules in the tight spaces with a lot of technical equipment.







«TOR-1400»

## Condensed aerosol fire-extinguishing generators «TOR–2800(OP)»

Condensed aerosol fire-extinguishing generators «TOR-2800(OP)» is mobile (could be thrown).

It is designed for fire-extinguishing in manufacturing plants, offices, on railroad transportation, in cars, on sea crafts and riverboats. Also, it can be used in electrical rooms with cables, electrical equipment under voltage up to 35 KW.

It is recommended to be used as primary means of fire extinguishing by the fire-protection team and other persons that are properly instructed how to use these generators.

Throwing should be done to the free space flatwise so the aerosol would exit the module from the nozzels without let or hindrance.

Condensed aerosol fire-extinguishing generators «TOR-2800(OP)» cannot be used for fire-extinguishing in open areas.

Volume of extinguishing - 115 m<sup>3</sup>







### Condensed aerosol fire-extinguishing generators «TOR-1500», «TOR-3000»

Volume of extinguishing: «TOR-1500» - 34 m $^3$ «TOR-3000» - 68 m $^3$ 



They are most effective for the extinguishing «B»-class fires (liquid combustible substances), «A2»-class fires (solid and imperishable materials). Also, these generators can be used for extinguishing cables and electrical equipment under high voltage.

Compared with similar products, generators «TOR»:

- 1. Are ranked as the "cold" gas generators. Temperature of the aerosol jet on the exit does not exceed 250 °C.
- 2. Are less toxic for people, low extinguishing concentration (not more than 0,06 kg/m3.
  - 3. Improved performance:
- Climatic modification OM (for sea) placing category 5 according to the GOST 15150-69;
- Operation temperature from  $-50^{\circ}$ C up to  $+70^{\circ}$ C (can be short-time, up to 8 hours, increasing in temperature up to  $+125^{\circ}$ C).
  - 4. Life time 12 years in increased operational loads.

## Water mist fire-extinguishing module «Buran–15TRV»

Area of extinguishing - up to 19,6 m<sup>2</sup>

Water mist module «Buran-15TRV» is used for extinguishing «A» - and «B» - class fires. Also, it can extinguish fire in electrical equipment under the high voltage (up to 1000V).

Modules «Buran-15TRV» are designed for fire-extinguishing in the objects with high ambient temperature from -40°C  $\mu$ 0 +95°C .

Lifetime – 10 years.

Main purposes:

- Fire-extinguishing in the crowded areas with a lot of people (nightclubs, for example);
  - Archives, museums, book storages, libraries;
  - Trade centers and offices;
  - Manufacturing plants and storages.





