

WATER MIST FIRE SUPPRESSION SYSTEM

Reliable, Powerful, and Sustainable

ABOUT US

Our company is a resident of the Skolkovo Advanced Manufacturing, Nuclear, and Space Technologies Cluster. We develop one-stop-shop solutions and technology for fire safety using water mist. We also manufacture all relevant hardware under the FOGSTREAM trademark.

The FOGSTREAM technology is equivalent to total flooding in terms of the piercing power: the water mist precipitates and cools down the surface, displaces oxygen and prevents ignition. This method of fire control does not cause serious damage to property.

FOGSTREAM is a high-quality Russian-made product compliant with the certification requirements. The system is designed and manufactured at the FOGSTREAM factory using a modern close control equipment and proprietary technologies.



OUR MISSION

01

Make the FOGSTREAM sprinkler system a leader in the field of firefighting, using technological leadership

02

Spur the system introduction as a powerful and sustainable fire safety technology-based product

03

Provide an excellent service and high-quality innovative solutions

04

Invest in new products, technologies, and AI systems on a regular basis

OUR SERVICES

Based on customer needs, our team develops, designs and manufactures FOGSTREAM system with configurations that allow operating at pressures of **60-100 bar**.

Every configuration is modeled and tested in our laboratories **to ensure** high performance in **variety** of scenarios.



WORK BREAKDOWN STRUCTURE

We implement full-cycle solutions. The milestones:



WATER MIST FIRE SUPPRESSION SYSTEM DESIGN

01

- Development of project documentation (Stage «P»)
- Development of engineering documentation (Stage «W»)



MANUFACTURING

02

- Pumping units, control cabinets, and display panels
- Control units, liquid flow detectors
- Fittings
- Sprinkler and water deluge systems
- High-pressure manual barrels and rugged fire cabinets



ASSEMBLY

03

- System setup
- Inspection and commissioning



MAINTENANCE

04

- 24/7 monitoring and helpdesk
- Entire lifecycle maintenance

FOGSTREAM SYSTEM PROS

01

Reduction of water consumption during spraying by **5-10 times**

02

Powerful extinguishing with a **larger** sprinkler coverage area

03

No **additional** water tanks

04

Minimal **material** damage during fire extinguishing, fast **deposition** of combustion products

05

Extinguishing **high-voltage** and **low-current** equipment

06

Good ratio of the weight of **equipment** and pipelines FOGSTREAM

FOGSTREAM SYSTEM PROS

07

Reduction in capital and operating expenses **by 10-15%**

10

Gorgeous and compact design of **all system elements**

08

Economic use of service spaces

11

Easy maintenance and operation

09

Ceiling height increased **by 20 cm**

12

System **integration** with the security core of the facility

TRADITIONAL SYSTEMS OF FIRE EXTINGUISHING VS. FOGSTREAM SYSTEM

MATERIAL	Traditional	FOGSTREAM
PIPELINE AND FITTINGS	DN32-DN100 4 000 kg	DN15-DN50 650 kg
SPRINKLES' WEIGHT	20 kg	15 kg
CONTROL NODE	30 kg	15 kg
WATER WEIGHT IN PIPES	600 kg	60 kg
TOTAL WEIGHT	4 650 kg	740 kg
WATER CONSUMPTION PER 300 M ² AREA	1 400 L/Min	200-400 L/Min
MATERIAL	Steel	Stainless steel

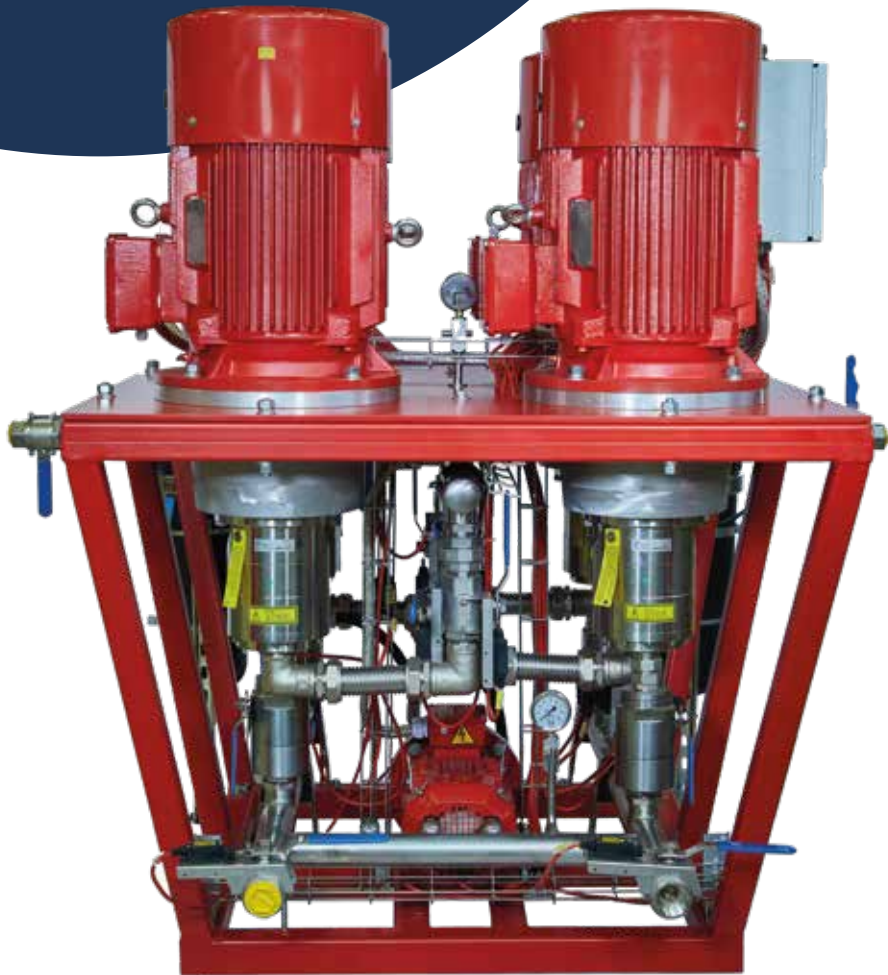
FOGSTREAM SYSTEMS OPERATING FEATURES

Main components of the water mist fire suppression system:

- Automated fire extinguishing system with a high-pressure water mist sprinklers with the **main and backup pumps** installed on a single support platform
- Switchgear **with manual and electric** drive for water supply
- Special **sprinkler** or **deluge** heads
- **Pipelines** and special fittings
- High-pressure **manual barrels** with hose coil assembly
- **Rugged** fire hose cabinets

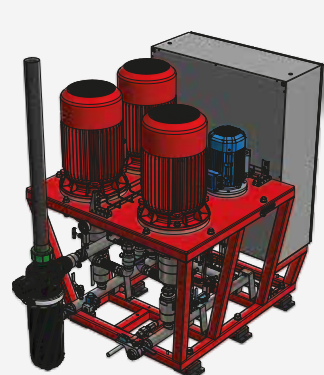


Efficiency of the system components and technical parameters at various operating pressures are determined by conducting test examinations on specially designed test benches, test chambers and field test for extinguishing fire of various classes

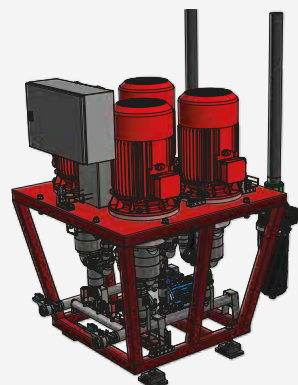


- **High-pressure** and **power-efficient** automatic pump room is a modular frame structure assembled into a single unit depending on the calculated design number of pumping units.
- **Automatic** pumping unit run by **specially designed** automation system; it takes into account and controls almost every water supply and consumption parameter.
- Design based on **modern** solutions for 3D modeling and visualization; it takes into account **technical aspects** (minimum weight, strength, vibration resistance, functionality, etc.), as well as **aspects of style** and **aesthetics**.
- Design based on the production technology, prototyping and preparation for bulk production. Such a basic principle and the unification of structural elements minimizes the cost of production and assembly of the pumping unit.

PUMPING UNITS

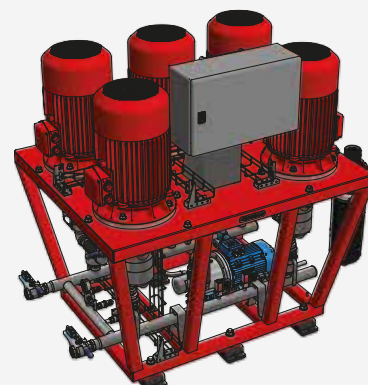


Auto setup of high-pressure water mist fire extinguishing sprinklers FOGSTREAM®PRO (2+1)

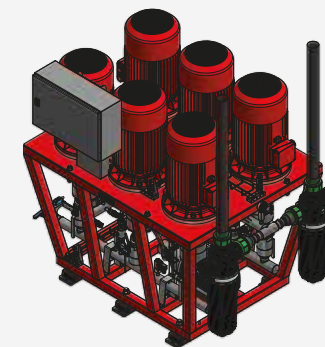


Auto setup of high-pressure water mist fire extinguishing sprinklers FOGSTREAM®PRO (3+1)

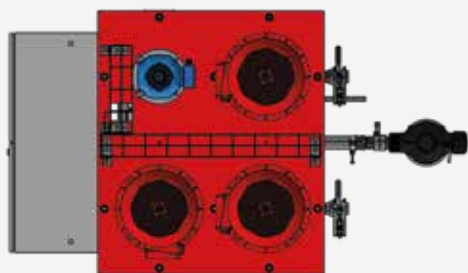
AUTOMATIC WATER MIST PUMPING FIRE EXTINGUISHING UNITS



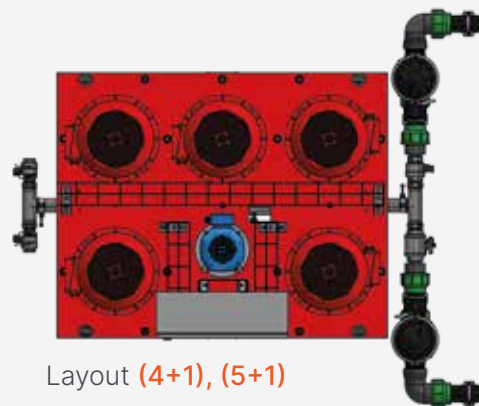
Auto setup of high-pressure water mist fire extinguishing sprinklers FOGSTREAM®PRO (4+1)



Auto setup of high-pressure water mist fire extinguishing sprinklers FOGSTREAM®PRO (5+1)



Layout (2+1), (3+1)



Layout (4+1), (5+1)

Depending on the designed solution, the auto setup can be furnished with unlimited number of pumping units.

WATER MIST FIRE SUPPRESSION SYSTEM MANAGEMENT



CENTRAL DISPLAY PANEL

It is a **fully functional** and multi-circuit intelligent, addressable and network fire extinguishing **control panel** designed for commercial, industrial and high-tech facilities.



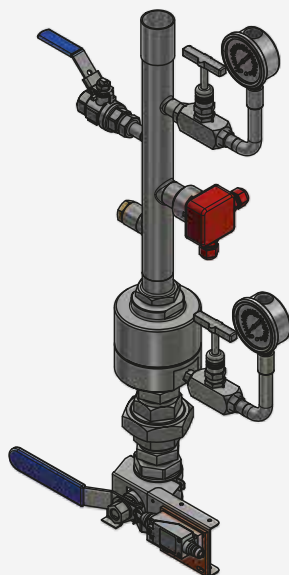
CONTROL CABINET

Equipped with **interactive display**, which shows information about the station nodes and setup parameters.

The functional logic circuit of the control cabinet based on the developed controller performs an **inspection** of the integration and operation of communication lines for **actuating** devices.

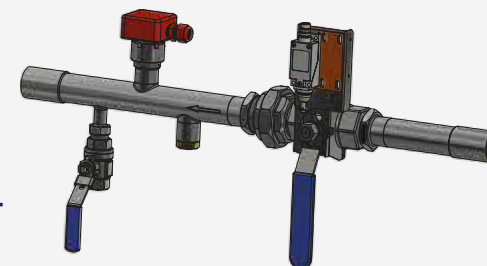
ALARM CONTROL NODES

SPRINKLER CONTROL UNIT



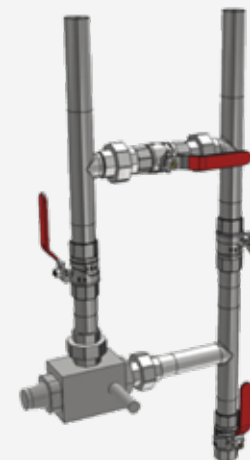
Control unit for automatic fire extinguishing setup is designed for use in water extinguishing systems and installed on the pipeline. This ensures the fire extinguishing agent flow from the sprinkler toward one of securable objects.

LIQUID FLOW CONTROL UNIT



The liquid fluid flow control unit is designed to work in automatic modular fire extinguishing installations, of aggregate type, for water flow control and formation control commands using dry magnetically controlled contacts to external circuits.

DELUGE CONTROL UNIT



The deluge control unit is a closed valve opened by a signal from a detection system fire (fire alarm) installed in the same areas as deluge sprinklers. The valve opens both automatically and manually. When the valve is actuated, as the pressure drops in the system, the pumping unit starts, water enters into the pipeline system and sprayed through deluge heads that are grouped by sections. All section heads will be activated then.

SPRINKLER DEVICES

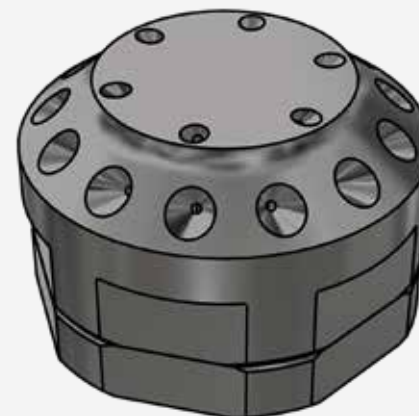
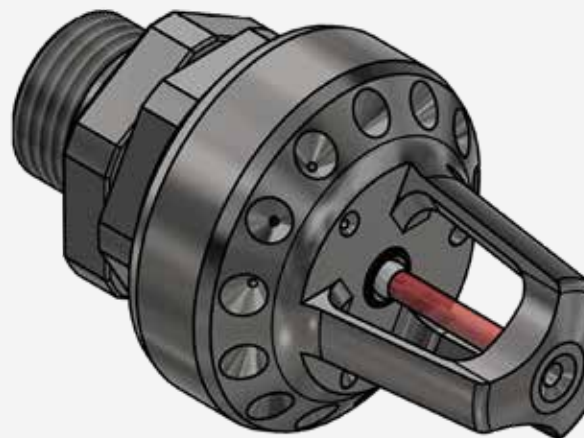
SPRINKLER HEADS AND DELUGE HEADS

Depending on the functional affiliation of buildings, structures and other facilities, a wide range of high-efficiency sprinkler heads and deluge heads was designed.

Features:

- Operating pressure: 6.0-10.0 MPa
- Water consumption: 11.6 to 64 l/min
- Irrigated area: 12-40 m²

Any sprinklers color is available
at customer's request



PIPELINES



STAINLESS STEEL PIPELINES

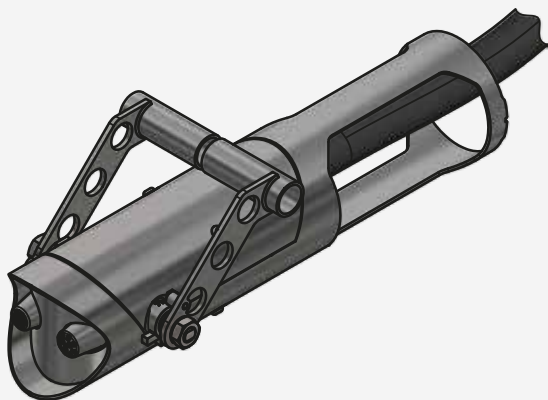
FOGSTREAM stainless steel pipes (diameter 15 to 60 mm) are made in compliance with the Russian National Standard 11068-81 «Electric-welded Pipes made of Corrosion-resistant Steel. Specifications».



FITTINGS

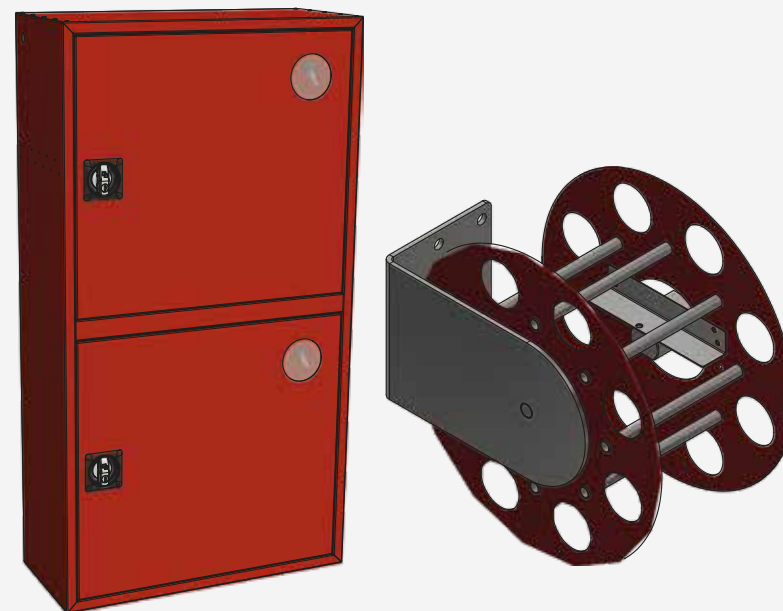
Piping parts, welded fittings, welded and bent FOGSTREAM items manufactured under Specifications 24.20.40-009-20421270-2018. Parts are made of corrosion-resistant steel with a fitted diameter of up to 60 mm and a working pressure of up to 10.0 MPa (100 kg/cm²). For the fire-fighting piping system, the whole range of fittings has been manufactured: tees, crosses, bends, adapter plugs, etc.

INTERNAL FIRE WATER PIPE



MANUAL HIGH-PRESSURE BARRELS

Low-cost manual high pressure hose reels designed for extinguishing fires of classes A, B, and E. They have two water supply modes: spray jet and solid jet.



RUGGED FIRE HOSE CABINETS

Fire hose cabinets for one or two hose reels have a reinforced design. They are equipped with two fire extinguishers. At customer's request, fire cabinets can be made built-in or mounted, as well as made in any RAL color.

IN-HOUSE PRODUCTION

All components of the FOGSTREAM system, such as automatic pumping units, control cabinets, control units, assemblies of liquid flow signaling devices, sprinkler and deluge sprinklers, and high-pressure manual barrels are produced and tested at the FOGSTREAM factory by a professional team.

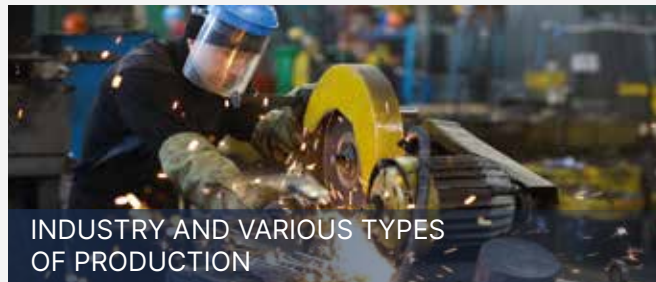
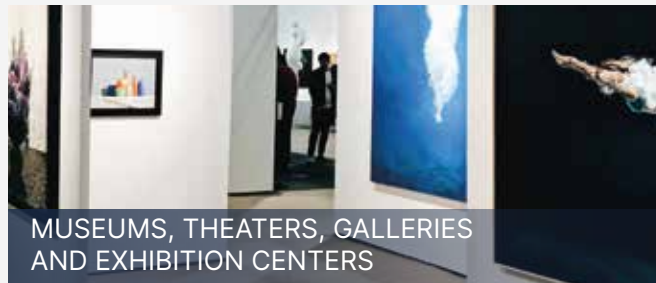
FOGSTREAM is able to operate focusing on precision, using modern CNC machines, laser machines and welding semiautomatic devices. Piping parts, manifolds and other elements of the units are made of stainless steel using our own innovative technology. Highly qualified teams are responsible for assembly, testing and product quality control.

Our company constantly improves production performance through the use of new technologies. In addition, we continue to improve the products to remain industry leaders. National and international quality standards are met in our production.



COVERAGE

Versatile, water-saving, safe and highly effective fire protection for all user scenarios.



QUALITY LEVELS

FOGSTREAM equipment meets the requirements of technical regulations in Russia and in the Eurasian Economic Union. It is duly certified:



PATENTS



HEADQUARTERS

121205, 42 Bolshoi Boulevard, Building 1, Floor 2,
Offices 728;729, Skolkovo Innovation Center,
Moscow, Russian Federation

+7 (495) 785 11 32
info@fog-stream.com



PRODUCTION

1B Vokzalnaya St., Selyatino settlement,
Naro-Fominsk Municipal District, Moscow region

+7 (495) 785 11 32
info@fog-stream.com

FOGSTREAM



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OF **YOUR SAFETY**

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