ADROIT FIRE

Hafex Aerosol Fire Extinguishing

Suitable for:

- Electrical cabinets
- Electrical rooms
- Plant rooms
- Archives
- Control rooms
- Mining facilities
- Substations
- Factories
- Production Machinery
- Engine rooms
- Wind turbines
- Petrochemical plants
- Power plants
- Warehouses
- Marine

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Aerosol Fire Extinguishing

In the 1990s, the use of aerosol fire extinguishers started to spread due to the need for alternative fire extinguishing agents which could replace Halon gaseous fire extinguishers.

The aerosol fire extinguishers are one of the most preferred fire extinguishers, because they have

- high fire extinguishing efficiency,
- their structure is simple, convenient and modular,
- they do not need a pressurised and sealed container,
- they contain fire extinguisher chemicals in solid tablets with long service life,
- they are easy to install and maintain,
- Ozone Hazard Potential (ODP) and Global Warming Potential (GWP) are zero,
- they are harmless to the environment,
- they have a good price-performance ratio in comparison to other gaseous fire extinguishers.

How do Condensed Aerosols Extinguish Fire?

The aerosol fire extinguishers chemically and physically interrupt the fire by breaking the chemical reaction chain that sustains the fire and absorbing free radicals such as hydrogen and hydroxyl radicals which are important for the fire to sustain. This is done by attracting these radicals to the high surface area of the aerosol particles. The aerosol particles in the aerosol fire extinguisher don't significantly decrease the oxygen level in the environment, hence they can be safely used in areas where people or other living things are present without posing a risk to them. Additionally, these aerosol extinguishers are also non-toxic, which makes them suitable to be used in enclosed spaces where people may be present.

When an aerosol fire extinguisher is activated, the tablets inside the extinguisher generates a dense fog composed of particles as small as 2 microns by the result of oxidation reduction reaction.

In addition to this, HAFEX" aerosol fog also provides physical suppression by producing a large amount of nitrogen and cooling the environment.

The small size of the aerosol particles ensures that the fire extinguishing process is successful by completely filling the volume without requiring pipes or pressured nozzles unlike traditional extinguishers that are pressurized and sealed.

Advantages of Aerosol Fire Extinguishing Systems

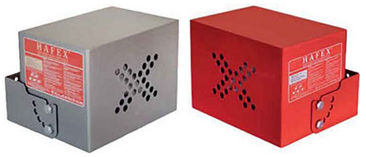
- No need to use pipes or nozzles. When the system is activated, the HAFEX aerosol will fill the entire closed volume and extinguish the fire.
- Easy to install and mount.
- Can be used without maintenance for 15 years.
- Can be activated directly by an electrical signal or mechanically by thermobulb activator.
- Robust and compact body structure takes up a small space.
- No toxic or corrosive effect. it does not harm the environment and living things.
- HAFEX[tt] Aerosols do not leave any residue or sediment after activation.
- it can be easily integrated with the existing fire detection and control system.
- it does not require filling, maintenance and calibration. Therefore, annual operating costs are zero.
- Since suppression takes place within seconds, secondary damages remains minimal.
- According to the EPA, it is one of the least extinguishing agents that can be officially used instead of Halon gases.
- O.D.P. (Ozone depletion potential) = O
- G.W.P. (Global warming potential) = O
- G.H.E(Green house effect)= O
- The ratio of extinguisher weight to extinguishing capacity is very low in comparison to the other fire extinguishing agents.

Which Types of Fires does Aerosol Extinguish?

The aerosol fire extinguishers are used effectively in the following fire classes in a closed environment:

- Class A Fires: Fires of solid organic materials such as wood, coal, paper, grass, textile products, plastics and similar products.
- Class B Fires: Fires of liquid combustible materials such as gasoline, diesel oil, fuel oil, mineral oils, paint, varnish, thinner, alcohol, acetone, glue.
- Class C Fires: Fires of combustible gases such as LPG (liquefied petroleum gas), propane, natural gas, methane, hydrogen, acetylene and fires of gaseous material liquefied under pressure.
- Fires in electrical and electronic equipment, transformers, electrical distribution systems and panels, computer and data processing system cabinets, telecommunication devices.

HFX11OO

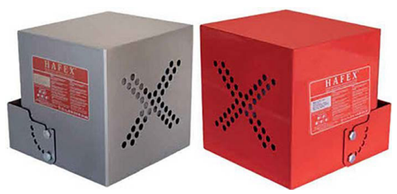


Model	HFX-1100
Compound	K (Potassium Nitrate Based)
Gross Weight	10300 gr. ±%3
Compound Weight	1100 gr.
Dimensions (mm)	210 (W) x 287 (L) x 200 (H)
Discharge Time	13-16 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

HFX2200

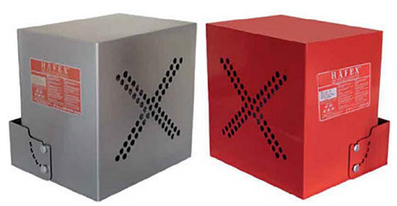
Model	HFX-2200
Compound	K (Potassium Nitrate Based)
Gross Weight	17600 gr. ±%3
Compound Weight	2200 gr.
Dimensions (mm)	287 (W) x 287 (L) x 240 (H)
Discharge Time	14-17 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

HFX3400



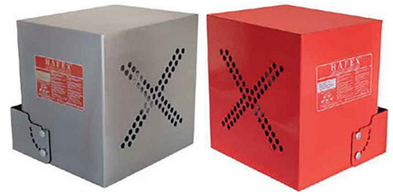
Model	HFX-3400
Compound	K (Potassium Nitrate Based)
Gross Weight	20400 gr ±%3
Compound Weight	3400 gr
Dimensions (mm)	287 (W) x 287 (L) x 264 (H)
Discharge Time	14-17 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C, F

HFX4500



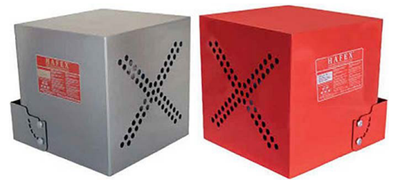
Model	HFX-4500
Compound	K (Potassium Nitrate Based)
Gross Weight	28600 gr. ±%3
Compound Weight	4500 gr.
Dimensions (mm)	361 (W) x 361 (L) x 268 (H)
Discharge Time	15-18 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B, C (Electrical Equipment) EN2:A. B.C. F

HFX6000



Model	HFX-6000
Compound	K (Potassium Nitrate Based)
Gross Weight	33000 gr. ±%3
Compound Weight	6000 gr.
Dimensions (mm)	361 (W) x 361 (L) x 302 (H)
Discharge Time	16-19 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

HFX7600



Model	HFX-7600
Compound	K (Potassium Nitrate Based)
Gross Weight	39800 gr. ±%3
Compound Weight	7600 gr.
Dimensions (mm)	361 (W) x 361 (L) x 350 (H)
Discharge Time	17-20 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

HFX20

Model	HFX-20
Compound	K (Potassium Nitrate Based)
Gross Weight	500 gr. ±%2
Compound Weight	20 gr
Dimensions (mm)	50 (W) x 50 (L) x 93 (H)
Discharge Time	3-5Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

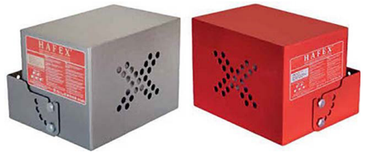
HFX5O

Model	HFX-50
Compound	K (Potassium Nitrate Based)
Gross Weight	700 gr. ±%2
Compound Weight	50 gr.
Dimensions (mm)	50 (W) x 50 (L) x 130 (H)
Discharge Time	3-5Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

HFX1OO

Model	HFX-100
Compound	K (Potassium Nitrate Based)
Gross Weight	1330 gr ±%4
Compound Weight	100 gr.
Dimensions (mm)	80 (W) x 80 (L) x 113 (H)
Discharge Time	4-6 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

HFX11OOS

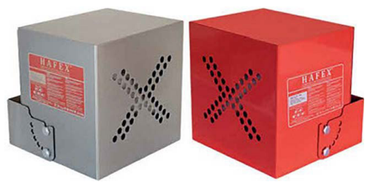


Model	HFX-1100 S
Compound	S (Strontium Nitrate Based)
Gross Weight	10000 gr. ±%3
Compound Weight	1100 gr
Dimensions (mm)	210 (W) x 287 (L) x 200 (H)
Discharge Time	16-19 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B, C. F

HFX200

Model	HFX-200
Compound	K (Potassium Nitrate Based)
Gross Weight	1760 gr. ±%4
Compound Weight	200 gr.
Dimensions (mm)	80 (W) X 80 (L) x 147 (H)
Discharge Time	4-6 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN2:A. B.C. F

HFX2200S

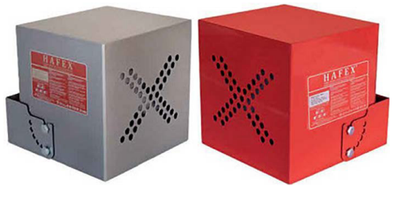


Model	HFX-2200 S
Compound	S (Strontium Nitrate Based)
Gross Weight	16800 gr. ±%3
Compound Weight	2200 gr
Dimensions (mm)	287 (W) x 287 (L) x 240 (H)
Discharge Time	20-23 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2:A. B,C, F

HFX500

Model	HFX-500
Compound	K (Potassium Nitrate Based)
Gross Weight	3980 gr ±%3
Compound Weight	500 gr
Dimensions (mm)	100 (W) x 100 (L) x 243 (H)
Discharge Time	5-7Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B, C, F

HFX3400S



Model	HFX-3400 S
Compound	S (Strontium Nitrate Based)
Gross Weight	19600 gr. ±%3
Compound Weight	3400 gr.
Dimensions (mm)	287 (W) x 287 (L) X 264 (H)
Discharge Time	25-28 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

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HFX20S

Model	HFX-20 S
Compound	S (Strontium Nitrate Based)
Gross Weight	495 gr. ±%2
Compound Weight	20 gr.
Dimensions (mm)	50 (W) X 50 (L) x 93 (H)
Discharge Time	4-6 Seconds
Activation Method	Electrical, Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B, C (Electrical Equipment) EN 2: A. B. C. F

HFX200S

Model	HFX-200 S
Compound	S (Strontium Nitrate Ba sed)
Gross Weight	1730 gr. ±%4
Compound Weight	200 gr.
Dimensions (mm)	80 (W) x 80 (L) x 147 (H)
Discharge Time	5-7Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

HFX5OS

Model	HFX-50S
Compound	S (Strontium Nitrate Based)
Gross Weight	695 gr. ±%2
Compound Weight	50 gr
Dimensions (mm)	50 (W) X 50 (L) x 130 (H)
Discharge Time	4-6 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B, C (Electrical Equipment) EN 2: A. B, C. F

HFX5OOS

Model	HFX-500 S
Compound	S (Strontium Nitrate Based)
Gross Weight	3930 gr. ±%3
Compound Weight	500 gr.
Dimensions (mm)	100 (W) x 100 (L) X 243 (H)
Discharge Time	6-8 Seconds
Activation Method	Electrical. Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B. C (Electrical Equipment) EN 2: A. B. C. F

HFX1OOS

Model	HFX-100 S
Compound	S (Strontium Nitrate Based)
Gross Weight	1300 gr. ±%4
Compound Weight	100 gr.
Dimensions (mm)	80 (W) x80 (L) x113 (H)
Discharge Time	5-7Seconds
Activation Method	Electrical, Thermal (Optional)
Suitable Fire Classes	NFPA 10: A. B, C (Electrical Equipment) EN 2: A. B, C. F

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Thermobulb Activation

The Hafex unit can be activated very simply by a thermo bulb which measures the temperature in the space and triggers the unit at a pre defined temperature. This set up requires no wires or alarm system so installation is extremely simple.

HAFEX thermo-bulb activators (HFXTBA) are suitable for use in small volumes such as electric cabinets, battery compartments, diesel generators, engines, electronic equipment or fuse compartments of vehicles. It does not require electrical energy or a fire control panel to activate the aerosol fire extinguishing generator and it is designed to meet the most basic level of protection. Depending on the characteristics of the environment, the appropriate activation temperature threshold (68 ° C, 79 °C, 93 °C or 141 °C) can be selected.

There are three different versions of HAFEX thermo-bulb activators (Short, Mid and Long version) that can be used with HAFEX condensed aerosol fire extinguishing generators.

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CLEVER FIRE SOLUTIONS

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