

FIRE WINNER

Automatic fire extinguisher



wins over fire

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1. Preface, general statements

Most fires can be stopped if reaction to fire is fast enough, which means, in the initial stage of fire. Quick reaction is the most important matter in fire fighting. However, it happens very often that people are not present when a fire outbreaks. In such situations, only automatic fire extinguishers can help.

Classical sprinkler systems fire extinguishers are very expensive, demands regular maintenance and makes extensive collateral damages when operates. Therefore it is very important to protect people, valuable facilities and items with automatic fire extinguisher that provides immediate response and have great extinguishing power along with ecologically features.

Fire Winner automatic fire extinguisher meets all this demands and even more.

• **Easy to place**

Fire Winner automatic fire extinguisher is primarily designed and intended for passive protection of closed spaces: households, offices, storages, cars, caravans, boats, and other vehicles. It is small, light weight and can easily be mounted in a suitable place to provide optimal protection in a case of fire.

• **Reliable automatic activation**

Fire Winner automatic fire extinguisher does not require any preparation for use. When temperature in fire affected area exceeds the temperature in a wanted range from 53° C till 243° C it activates automatically. Self activating mechanism is on and fire extinguishing active liquid agent starts sprinkling the protected area, in a shape of water-mist and extinguishes the fire.

• **Easy and economical to maintain**

Fire Winner automatic fire extinguisher delivers professional extinguishing technology to different areas of use, sometimes on places difficult to access. Only visual periodic maintenance is necessary. Products lifetime and warranty is 10 years from date of production.

• **Safe to use**

Fire Winner automatic fire extinguisher is automatically activated, so fire can be extinguished without any danger to the persons who eventually happen to be in area, which is especially important when extinguishing electric installations and devices.

Fire Winner automatic fire extinguisher heavily eliminates smoke in area of extinguishing, so if there are any persons in the room, they can breathe without problems.

• **Great extinguishing power and wide scope of operation**

Thanks to its extinguishing agent and extinguishing techniques, Fire Winner automatic fire extinguisher, works with great efficiency when extinguishing starting fires, don't give them a chance to develop into large fires.

Fire Winner fire extinguishing liquid agent forming the protecting thin layer at surface of a burning area, which does not allow re-ignition.

Furthermore it has wide scope of operation – it extinguishes fires of classes: A, B, C, D and F, fires on electrical installations and devices and Li-ex (lithium battery) fires. So it is not necessary to purchase different fire extinguishers for different kinds of fires.

• **No collateral damages**

There are no any side effects or significant collateral damages for the persons or for the rooms when Fire Winner automatic fire extinguisher operates.



• **Eco-friend product**

Fire Winner automatic fire extinguisher is an Eco-friend product, which means that it is not toxic or harmful for people, animals, ozone layer or environment, and its content and packaging is easily recyclable and biodegradable. Most of the ingredients are completely natural.

It is suitable for use in natural parks, water intake areas for drinking water, drinking water plants and other nature or water protected areas.

2. Specification

Extinguishing power of Fire Winner automatic fire extinguisher for solid – fire class A (wood, paper, textiles...) and liquid substances – fire class B (gasoline, diesel fuel ...) as well as for flammable gases – fire class C, and metals (fire class D, including Lithium Ion) was widely proved in practice in different situations. Fire classification A, B, C, D and F according to EN2:1992 + A1 2004 and EN3-7:2004 + A1 2007.

Fire Winner automatic fire extinguisher can be used to extinguish fire at live electrical equipment with voltages up to 1000 Volts and Lithium battery fires.

3. Technical Data

Diameter:	_____	200 mm
Height:	_____	181 mm
Weight approx.:	_____	3000 g
Total volume:	_____	1800 ml
Volume (net):	_____	1500 ml
Discharging time:	_____	approx 75 sec
Propellant gas	_____	Nitrogen
Container material:	_____	metal body
Extinguishing agent:	_____	Fire extinguishing liquid agent Fire Winner
Extinguishing fire classes:	___	A, B, C, D (Lithium Ion) and F
Protected area:	_____	up to 25 m ³ closed space per unit depending of fire protection demands
Storage Temperature:	_____	-20 °C to 70 °C
Minimum durability:	_____	10 years
Production date:	_____	imprinted on metal body

4. Description of function

Extinguishing agent is released when control glass ampoule bursts, fire extinguishing active liquid agent starts sprinkling, covers the protected area, and extinguishes the fire. Participation of operator is not needed.

5. Mode of functioning

Active fire extinguishing agent is water based liquid agent enriched by chemical compounds which removes or blocks the 3 basic fire triangle elements: heat – oxygen – fuel. Fire Winner active liquid saponified the burning fuel, so reignite becomes impossible.

Fire Winner fire fighting mechanisms activates and removes the 3 basic fire triangle elements (Heat – Oxygen – Fuel):

- Fire Winner liquid droplets evaporations process removes heat.
- Fire Winner Inert Steam creating lack of oxygen supply to fuel but in same time the oxygen is still present around for people (operators).
- Fire Winner liquid agent saponifies the burning fuel (surface protecting film is created) and does not allow free radicals and gases to become airborne and bond with oxygen in air.

Detailed description of the action:

A. Rapid cooling down effect – here the liquid droplets cools burning material by rapidly absorbing heat from burning material, turns to inert steam and evaporates.

B. Inert steam – it bounds free burning radicals and toxic gases with Fire Winner Inert Steam, so if there are any persons in the area, they can breathe without problems. That way creates an operator friendly environment, which is especially important effect.

C. Adiabatic cooling process – demonstrate unique effective process which is cooling the air by evaporation of Fire Winner liquid agent. Evaporation is the process by which Fire Winner liquid agent is quickly converted form liquid form to its vaporized form, transferring its liquid mass to the atmosphere and removing heated air away from burning materials. During Fire Winner liquid solutions droplets evaporations, three simultaneous processes are going on:

- Transfer of heat to the Fire Winner liquid droplet surface.
- Transfer of liquid mass from the Fire Winner droplet surface.
- Fire Winner droplets liquid mass with heat becomes airborne steam (effect name: Latent heat of evaporation, which we meet every day in nature: sun-rain-sun).

D. Saponification-Foaming process – Fire Winner liquid agent posses strong controlled chemical and mechanical processes of forming the protecting thin layer at surface of a burning fuel, which does not aloud re-ignition. Fire Winner liquid agent, through mechanical dispersion, mixes large amount of inner gases with liquid, and by the agitation of liquid and inner chemical compounds creates a type of foam similar to the agitation of seawater (Ocean foam) derived from surface to offshore breakdown. Fire Winner liquid agent chemical compounds act as surfactants to lower the surface tension between two liquids, to create protecting thin layer and prevent re-ignition of fuel.

6. Thermal activation

Fire Winner automatic fire extinguisher will be activated by a thermal glass bulb. The bulb can be in a temperature range from 53 °C to 243 °C which depends off the kind of fire protection. By activation comes the special liquid as a kind of water-mist out of the sprinkler head . After activation can it be refilled. Only needs a new thermal glass bulb

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7. Operation

Fire Winner automatic fire extinguisher does not require any preparation for use. When fire starts and mechanism activating glass ampoule bursts, fire extinguishing active liquid agent covers the protected area, and put out the fire. Participation of operator is not needed.

8. Storage

Fire Winner automatic fire extinguisher should be stored at a temperature between -20°C and $+70^{\circ}\text{C}$. It should be protected against direct sunbeams.

The fire extinguisher should be stored at a dry place, easy to access.

9. Maintenance

Special maintenance or surveillance is not required. Only small periodical visual inspection of unit should be done. The minimal product lifetime is ten years from the date of production.

10. Execution and delivery

Fire Winner automatic fire extinguisher is designed and delivered in a simple 3 kg metal body for mounting of unit close to high fire risk place.



10
years

Certificate of Warranty



Fire Delete

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