

19" Cabinet gaseous fire suppression system

Fire prevention for server protection cabinets

Application:

- server cabinets
- network cabinets
- telecommunication cabinets

Advantages:

- self-assembly possible
- compact design – only 3 HU
- easy to maintain
- easy to operate
- easy recovery after release
- solution for most of all cabinets
- possible to protect several cabinets with only one fire suppression system
- aerosol ist electrically non – conductive

Options:

- SNMP alarm
- possibility to install more smoke detectors and extinguishing generators to increase the size of the save area
- generator-kits for easy restart after release



installation example



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Function:

Two smoke detectors control the automatic release of the gaseous fire suppression system. If one of the smoke detectors identify smoke, the system goes into pre-alarm status, showed by LED. If the second fire detector identify smoke, the system changes to main-alarm status and the extinguishing system starts to float the area with aerosol. During a short period of time, the aerosol stay inside the cabinet and will extinguish the fire immediately.

Afterwards the cabinet can be opened and the aerosol can dissipate easily, for example through an open window. Aerosol is non-toxic for humans and do not cause organic build-up. It is possible to change easily the aerosol generators, after resetting the system.

After the new generators are active, the whole system is ready to start.

An additional door switch can deactivate the system, when the door is open.

Funktional principle of aerosol:

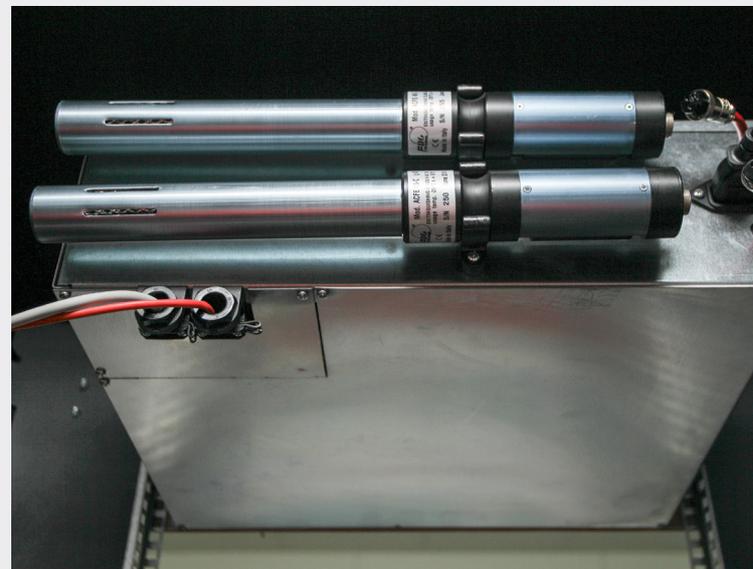
Aerosol is electrically non-conductive, so electrical equipment will not be damaged because of aerosol.

An aerosol is defined as a system of solid or liquid particles suspended in a gaseous medium. The extinguishing action of the aerosol works by interrupting the self-sustained chemical reaction of the fire. Due to its special chemical composition, the aerosol is capable of extinguishing fires even if it is not sprayed directly on the fire; it works by flooding the environment. Another important feature of aerosol extinguishers is the slow decaying process in the environment (the substance tends to stratify), which allows it to maintain enough inertia to prevent reignition of the fire.

Aerosol extinguishers are completely environmentally friendly and do not deplete the ozone layer.



Front view in detail



Rear view with extinguisher

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Differences between AEROSOL and NOVEC extinguishing-systems:

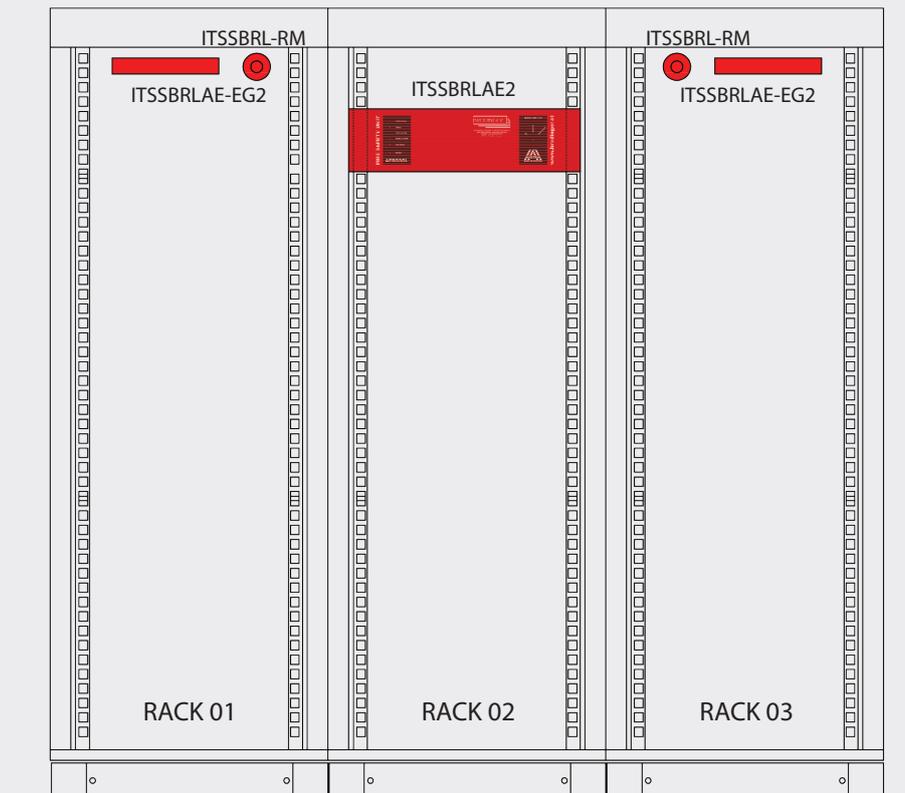
	Aerosol	Novec
extinguishing agent inside pressure tank	NO	YES
flap in case of overpressure necessary	NO	YES
F-Gas containing product	NO	NO
EN Certificate	YES	YES
GWP (Global warming potential)	0	1
ODP (Ozone depletion potential)	0	0
ALT (Atmospheric lifetime)	irrelevant	5 days
Conducting	NO	NO
Extinguisher cylinder in operation area	YES	NO
toxic	NO	NO
save area grouted during release	YES	YES
period of warranted function	20 years	n/s
corrosivity	NO	NO
change of oxygene contend	NO	NO
re-filling station necessary	NO	YES
extinguishing agent can easily be changed	YES	NO
floric acid grows out of extinguishing process	NO	YES
Server data storage test	YES	n/s
Extinguishing class	A, B, C	A, B

* Can be modified project-specifically

** Can be harmful

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Server rack solution for 3 Cabinets

Article Table

Artikel Item	description
ITSSBRLAE1	19inch aerosol fire suppression system for server racks, 2 smoke detectors for 0,5 - 1 m ³ volume
ITSSBRLAE2	19inch aerosol fire suppression system for server racks, 2 smoke detectors for 1 - 2 m ³ volume
ITSSBRLAE1-K	generator-kit for easy recovery after tripping, matching item ITSSBRLAE1
ITSSBRLAE2-K	generator-kit for easy recovery after tripping, matching item ITSSBRLAE2
ITSSBRLAE-EG1	connectable aerosol generator for additional 1 m ³ extinguishing volume
ITSSBRLAE-EG2	connectable aerosol generator for additional 2 m ³ extinguishing volume
ITSSBRLAE-WEB	IP-WEB SNMP monitoring with early fire detection and email alert
ITSSBRL-RM	connectable optical smoke detector with 2 m cable