Condensed Aerosol Fire Suppression Systems
Salgromatic ARMORON has introduced and brought to the market the most advanced systems and solutions in high-security condensed aerosol fire suppression. Salgromatic AeroMAG and SalgroMAG series modular aerosol units and systems offer totally new possibilities for easy, contemporary and future-proof fire protection in several different applications. Salgromatic aerosol extinguishants allow to secure easily even the most difficult objects, areas and building premises, which are not appropriate or possible to protect with traditional firefighting techniques and systems.

Salgromatic ARMORON technologies and implementation model allow that they are more favorable at price level, require considerably less space and are easier to design, install and maintain than conventional gas extinguishing systems. Above all, the systems provide an excellent fire extinguishing ability, absolute operational reliability and enhanced user friendliness. Lower design, purchase and implementation costs, ease of maintenance and a long life cycle of Salgromatic significantly increases the cost-effectiveness and the overall economy compared to traditional fire protection systems.

Salgromatic aerosol extinguishants are non-pressurized, hermetically sealed and virtually maintenance free units, which are designed to withstand and operate in extreme conditions (-60...+80°C) in all environments. AeroMAG and SalgroMAG units are available in many different sizes and designs depending on the application and selection also covers tossable and portable extinguishers and systems.

Salgromatic ARMORON aerosol fire extinguishing systems detect a fire rapidly, transmits an fire alarm forward if required and carries out the fire suppression either manually, semi-automatically or fully automatically through suitable fire detection and control system. Systems can also be triggered with non-electric actuation devices, in which case they do not require any external power for operation.

WITH SALGROMATIC FIRE SUPPRESSION SYSTEM THE FIRE IS EXTINGUISHED WITHIN A SECONDS, WHICH MEANS LESS DAMAGE, LOWER REPAIR COSTS, MORE TIME TO RESCUE, AS WELL AS SHORTER PERIODS OF DOWNTIME AND OPERATION INTERRUPTIONS, WHILE SECURING YOUR BUSINESS IMAGE.
Efficient, Accurate and Reliable Fire Suppression...

- PROTECTS business continuity, reliability, company image, critical material and infra
- SECURES production and services, machinery, equipment, facilities, people and assets
- LIMITS damages, allows time and facilitates rescue operations in case of emergency
- MINIMIZES operation interruptions, down-time and repair costs in case of fire hazard
- IMPROVES safety technological lead, competitive advantage and operational reliability
- FACILITATES risk management and lowers the likelihood of business interruption losses
- SAVES in overall costs of fire safety while bringing added and extra value of security
- LIBERATES resources when knowing that the fatal fire risks for business are managed

Salgromatic AeroMAG and SalgroMAG extinguishants produces aerosol, which is a gaseous mixture of nitrogen, carbon dioxide, water vapor and microscopic small potassium carbonate particles and it suppress the fire chemically by breaking the chain reaction and physically by cooling the fire. The aerosol has an excellent extinguishing ability for several different fire types and the effective quantity needed compared for example to gas agents (Halon 1301) is about 4 times less and up to 40 times less compared to inert gases. Salgromatic aerosol fire suppression does not deplete oxygen and the oxygen concentration remains at the level of 17-20%.

Salgromatic AeroMAG and SalgroMAG extinguishants brings significant benefits for you and your company:

- **PROTECTS** business continuity, reliability, company image, critical material and infra
- **SECURES** production and services, machinery, equipment, facilities, people and assets
- **LIMITS** damages, allows time and facilitates rescue operations in case of emergency
- **MINIMIZES** operation interruptions, down-time and repair costs in case of fire hazard
- **IMPROVES** safety technological lead, competitive advantage and operational reliability
- **FACILITATES** risk management and lowers the likelihood of business interruption losses
- **SAVES** in overall costs of fire safety while bringing added and extra value of security
- **LIBERATES** resources when knowing that the fatal fire risks for business are managed

**Chain Reaction:**
- **Heat**
- **Oxygen**
- **Fuel**

**FIRE TECHNICAL CLASSIFICATION AND SUITABILITY:**

| CLASS A | Combustible Solid Materials Full Suitability |
| CLASS B | Flammable Liquids Full Suitability |
| CLASS C | Flammable Gases Full Suitability |
| CLASS D | Combustible and Reactive Metals Limited Suitability |
| CLASS E | Electrically Energized Fires Full Suitability |
| CLASS F | Fats, Cooking Oils and Greases Full Suitability |

**TECHNICAL SPECIFICATION (Product Specific):**

<table>
<thead>
<tr>
<th>Model / Type</th>
<th>Agent Mass</th>
<th>Suppression Capacity</th>
<th>Model / Type</th>
<th>Agent Mass</th>
<th>Suppression Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMAG-0.50</td>
<td>0.50g</td>
<td>≤ 1.8m³</td>
<td>SMAG-10</td>
<td>10.00g</td>
<td>≤ 22.0m³</td>
</tr>
<tr>
<td>SMAG-1.00</td>
<td>1.00g</td>
<td>≤ 3.3m³</td>
<td>SMAG-14</td>
<td>14.00g</td>
<td>≤ 31.0m³</td>
</tr>
<tr>
<td>SMAG-2.50</td>
<td>2.50g</td>
<td>≤ 5.9m³</td>
<td>SMAG-25</td>
<td>25.00g</td>
<td>≤ 62.0m³</td>
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<tr>
<td>SMAG-5.00</td>
<td>5.00g</td>
<td>≤ 11.5m³</td>
<td>SMAG-30</td>
<td>30.00g</td>
<td>≤ 78.0m³</td>
</tr>
<tr>
<td>SMAG-10</td>
<td>10.00g</td>
<td>≤ 22.0m³</td>
<td>SMAG-35</td>
<td>35.00g</td>
<td>≤ 95.0m³</td>
</tr>
<tr>
<td>SMAG-15</td>
<td>15.00g</td>
<td>≤ 27.0m³</td>
<td>SMAG-40</td>
<td>40.00g</td>
<td>≤ 112.0m³</td>
</tr>
<tr>
<td>SMAG-20</td>
<td>20.00g</td>
<td>≤ 32.0m³</td>
<td>SMAG-45</td>
<td>45.00g</td>
<td>≤ 129.0m³</td>
</tr>
<tr>
<td>SMAG-25</td>
<td>25.00g</td>
<td>≤ 37.0m³</td>
<td>SMAG-50</td>
<td>50.00g</td>
<td>≤ 146.0m³</td>
</tr>
<tr>
<td>SMAG-30</td>
<td>30.00g</td>
<td>≤ 42.0m³</td>
<td>SMAG-55</td>
<td>55.00g</td>
<td>≤ 163.0m³</td>
</tr>
<tr>
<td>SMAG-35</td>
<td>35.00g</td>
<td>≤ 47.0m³</td>
<td>SMAG-60</td>
<td>60.00g</td>
<td>≤ 180.0m³</td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATION (General):**

<table>
<thead>
<tr>
<th>Material</th>
<th>Protection Classes</th>
<th>Environmental Classification</th>
<th>Actex Designation</th>
<th>Vibration Resistance</th>
<th>Shock Resistance</th>
<th>Temperature Range</th>
<th>Humidity Range</th>
<th>Corrosion Resistance</th>
<th>Extinguishing Mechanism</th>
<th>Service Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Mgl / Steel Fa37 / Stainless Steel</td>
<td>IP 55 &amp; IP 65 / R 10</td>
<td>Hazardous (D)P=0, GWP=0, ALT=0</td>
<td>8.1G Ex de IEI T4</td>
<td>5 g ≤ 50...250kHz</td>
<td>10 g ≤ 15000 impacts</td>
<td>10...70°C (+110°C)</td>
<td>0...99%</td>
<td>Exceeds UL 1058</td>
<td>Chemical and Physical</td>
<td>10 - 20 years (typical)</td>
</tr>
</tbody>
</table>

**Certification:**

- VdS, SP, Gost, FGU Vniipo
- CE
- ISO 9001
- UL 2775
- GOST R 53280-4
- GA 499.1
- CEN/TC 191
- STANAG 4370
- 96/577/EC
- 2004/108/EC
- 89/106/EEC
- 89/106/EEC
- CEN/TR 15276
- 96/577/EC
- 96/577/EC
- 96/577/EC
- FK (SBF) 128
- GOST R 53284
- ISO 1379
- UL 2775
- GOST R 53285-4
- CEN/TC 191
- STANAG 4370
- 96/577/EC
- ISO 9001
- CE

**Connector Type:**

- 4-pin, Military Type MIL-C-5015 / “Flying leads”

**Service Life:**

- 10 - 20 years (typical)

**Transport Classification:**

- II 1G Exi de IIB T4 (from applicable parts)

**Atex (EX) Designation:**

- IP 55 & IP 65 / IK 10

**Shock Resistance:**

- 10 g > 13000 impacts

**Vibration Resistance:**

- 5 g ≤ 50...250kHz

**Temperature Range:**

- 10...70°C (+110°C)

**Humidity Range:**

- 0...99%

**Corrosion Resistance:**

- Exceeds UL 1058

**Extinguishing Mechanism:**

- Chemical and Physical

**Service Life:**

- 10 - 20 Years (typical)
100% Modular Design - Versatility and Possibilities

Salgromatic offers the simplest as well as the most extensive range of system entities and configurations, where you can find the right options for your fire safety needs in the exact scope you want. As its simplest, our extinguishing solution consists of a single automatic fire extinguisher or multiple units, which are controlled with the desired actuation technique. Salgromatic system entities are designed to adapt the user’s needs and desires, and all systems can be implemented with central control electronics when the system has virtually unlimited possibilities for management and it can be integrated to all monitoring, alarm and control systems as well as building and plant automation and management.

- Salgromatic systems can utilize of all known fire detection technologies and they can be equipped to work with intelligent smoke, heat and combination detectors, linear and laser heat sensing, mechanical sensors, as well as with special detectors such as aspirating smoke detection systems, line thermal detection, flame, spark and ATEX detectors, and any high-tech detection intended for special risk protection in demanding sites.

- Salgromatic system entities only utilizes the condition stressed components from the industry leading manufacturers, tested and certified by recognized neutral organizations. The individual wishes of the customer are always taken into consider in all technology selections. Salgromatic range covers technical fire-fighting related and the highest reliability and functionality demands meeting fire detection and system technologies, which are compliant with the applicable directives, regulations and fire safety standards.
Salgromatic Adapts and Offers Extensive Advantages

We have combined our innovative design solutions to advanced technologies, which eliminates the problems associated with conventional fire protection systems and same time bringing the most diverse advantages and the widest applicability on the market. This ensures that future requirements for extinguishing equipment are already combined today in all Salgromatic extinguishing systems and fire protection solutions.

EXPEDITED AND FUTURE PROOF

SALGROMATIC extinguishing systems are designed precisely to meet the requirements of protected space, industry standards and customer’s wishes. Various operational and environmental conditions and factors as well as the type of fire and fire load are always taken into account in extinguishing agent dimensioning and in component selections. This will ensure accurate suitability, efficiency, reliability and safety of your fire protection system in all fire situations. Future-proof and without compromise.

ENVIRONMENTAL FRIENDLY AND SAFE

SALGROMATIC systems are 100% environmentally friendly and compliant to sustainable development principles. (ODP=0, GWP=0, ALT=0). Salgromatic systems do not pollute the environment and do not cause any additional damage when operating. Salgromatic systems increases personnel safety as they do not present significant risk to humans. Salgromatic is medically examined and fire tested by the widest applicability on the market. This ensures that future requirements for extinguishing equipment are already combined today in all Salgromatic extinguishing systems and fire protection solutions.

ALWAYS ONLINE AND READY FOR OPERATION

SALGROMATIC fire system supervises 24/7 and if necessary, notifies forward immediately about possible hazardous situation. Thereby time is obtained to intervene the situation, in which case the actual fire may not have time to ignite. However, if the fire breaks, the system is always first at the site and ready to carry out the extinguishing immediately. If desired, Salgromatic fire system also enables a possibility for twin and multi-stage fire extinguishing in case of fire re-ignition is a likely risk.

EASY CUSTOMIZATION AND EXTENSIBILITY

SALGROMATIC modular design and simple system structure enable that fire system is easy to upgrade and expand in the future according to your needs. The fire suppression capacity of the system can be easily increased or decreased to correspond the possible changes in protected facility and, if necessary, the whole system can be removed, re-installed and re-configured to completely another location or application. Salgromatic extinguishing system is never tied to a place or circumstances and it can always be easily altered or updated in the future.

LIFECYCLE AND MAINTENANCE COSTS FOR THE PERIOD OF 10 YEARS

The table shows average operation and maintenance costs for a 10-year period with several different extinguishing techniques. The default is a medium-sized room protection system.

Simplicity of the system brings savings in installation and maintenance and since they are not subject to the pressure equipment regulations they do not require any related inspections. Salgromatic is cost-effective and convenient solution from the design and implementation all the way through ownership and maintenance.

Full Compatibility and Connectivity

SALGROMATIC fire extinguishing systems and fire protection solutions can be connected to virtually all building and factory management systems, and they can control and manage, if necessary, other external equipment such as machine controls, emergency stops of various equipment, fire dampers and air ventilation. Salgromatic systems can be set to transmit an fire alarm and system fault signals as well as status information to building and process automation, fire alarm center or other monitoring facility. The systems can also be equipped with a wireless data transfer and may be added with variety of operating devices as well as control and alarm equipment according to the needs and requirements.

Compact, Durable and Overall Economic

Salgromatic is the most compact extinguishing system on the market and it allows to achieve significant space and cost savings, because it does not necessarily require any floor space and does not require structural changes to the protected spaces, objects nor areas. Salgromatic is a perfect solution for most retrofit applications, since it does not necessarily have to be taken into consider in the building or plant designs and it can be installed without that company’s activities and operations are disturbed at all.

High Technical Performance and Reliability

Salgromatic equipment performs reliably in all conditions and operating environments.

Low Maintenance and Low Service

Salgromatic equipment requires less maintenance and service than any other traditional system.

No Risks of Manual Fire-Fighting

Salgromatic automatic fire suppression eliminates the risks and dangers related to manual fire-fighting.

Compliant, Approved and Fire Tested

Salgromatic is tested and approved by numerous recognized authorities and test institutions.

Durable Design and Long Lifecycle

Salgromatic is designed for harsh environments and system lifespan can be up to 25-30 years.
Virtually Unlimited Range of Uses

Salgromatic ARMORON aerosol fire systems can be configured to suit direct to source, local application and total flooding protections as well as to individual special fire protections in almost any imaginable applications.

Typical Application Areas

- Technical Rooms and Premises of Buildings
- Paint, Explosive, Chemical and ATEX Facilities
- Storages, Libraries, Terminals and Hangars
- Material Conveyors and Filtering Systems
- Galleries, Museums, Archives and Churches
- Substations, Base Stations and Masts
- Power, Equipment and Material Containers
- Heating Plants and Pumping Stations
- Generators, Transformers and Switchgear
- Electrical, Control, Data and Telecom Cabinets
- Industrial Processes, Machines and Equipment
- Electrical, Automation and Monitoring Rooms
- Cable Cellars, Cable Ducts, Gaps and Channels
- Industrial Compressors and Milling Machines
- Escalators and Elevator Machine Rooms
- Airport, Military and Port Equipment
- Wind Turbines, Oil Platforms and Refineries
- Buses, Cars, Trucks and Heavy Machinery
- Water Vehicles, Boats, Ships and Vessels
- Trains, Subways and Traffic Control Systems
High-quality, modern and sustainable development compliant automatic fire extinguishing system is worth investing for your company, now and well into the future.

Salgromatic is a Finnish fire system manufacturer and a forerunning company specializing in contemporary and modular fire suppression technologies. We develop and produce fire protection solutions and related expert, installation and life-cycle services globally for corporations and organizations from all size classes on variety of markets. Our client base consists of many industry leading companies, public institutions and well-known brands, however, we serve equally to small and medium-size enterprises, entrepreneurs and private clients as well. We are flexible and trustworthy partner to our every customer.

EXPLORE MORE ABOUT OUR AUTOMATIC FIRE EXTINGUISHING SOLUTIONS AND REFERENCES AT www.salgromatic.com

DID YOU KNOW THIS?

Salgromatic fire extinguishing solutions represents the industry’s forerunning environmental and climate thinking enabling the individual and responsible optimization of corporate business security according to the principles of 100% green and sustainable development, since they have totally Zero impact on the environment, climate and nature.

Salgrom Technologies ja Salgromatic Fire Systems are engaged to Society’s Commitment to Sustainable Development “The Finland We Want by 2050” and are building a carbon-neutral corporate fire safety and global society in association with UN’s the 2030 Agenda for Sustainable Development. The idea is simple - concrete actions and measurable results.

Follow our progress!
www.commitment2050.fi

Salgromatic, -MAG, -AeroMAG, -SalgroMAG, -DPS, ArmorOn, StormEx, ‘Your Key to Smart Protection’, ‘100% Green Fire Extinguishing Technology’, ‘It Saves Businesses - It Saves Jobs – It Saves Lives’, ‘Fire Protection Reinvented’, ‘Total Fire Knock-Down Ability at Any Site’, and their logotypes as well as possible translations are registered or unregistered trademarks, slogans and product/trade names of Salgromatic Fire Systems and Salgrom Technologies Inc. or their affiliates and associate companies, whether they are used in connection with the ™ or ® markings.

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