









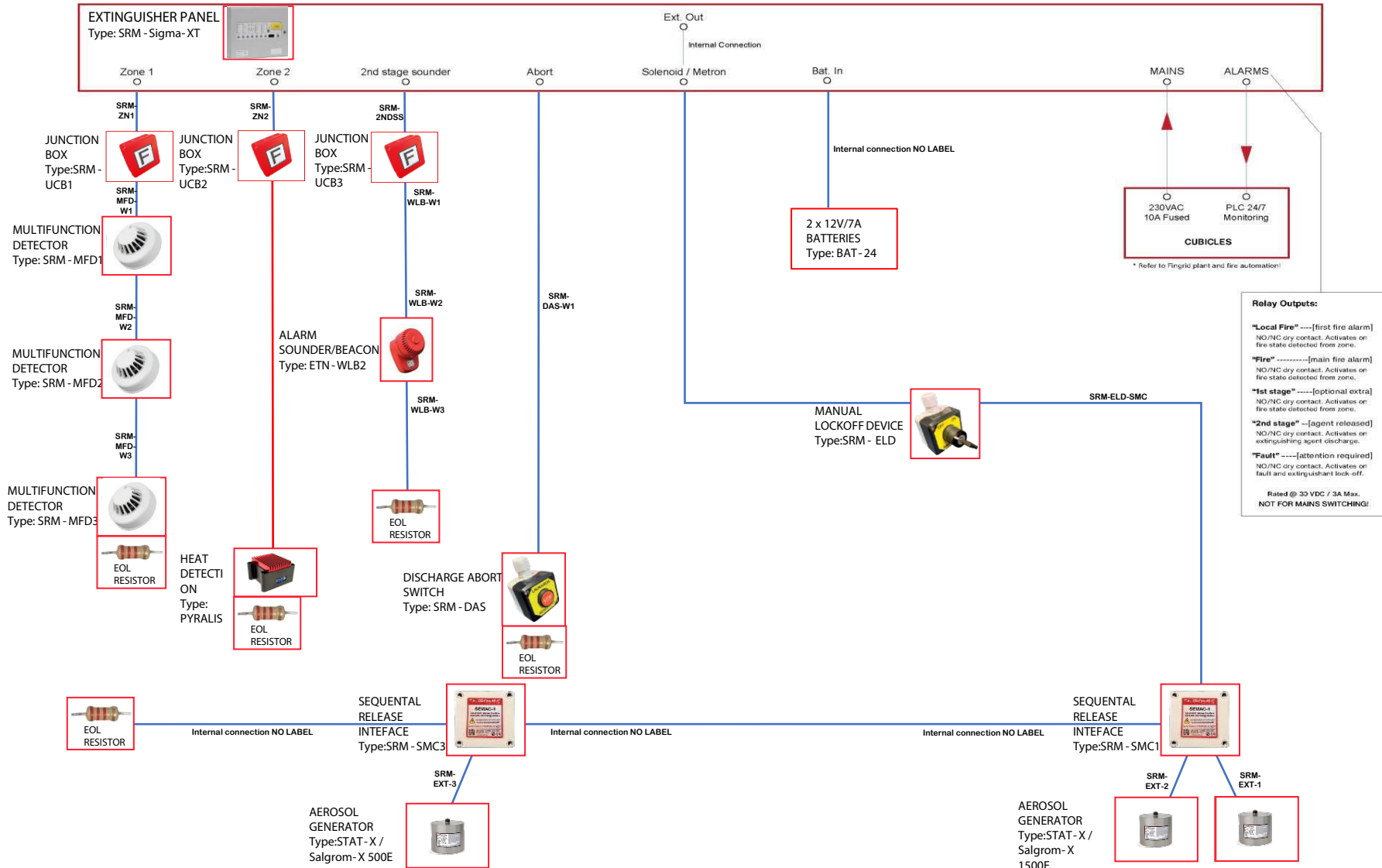













## Components:

-  EXTINGUISHER PANEL (Tag: Sigma)  
Automated fire alarm and extinguish panel with integrated manual discharge switches
-  MULTIFUNCTION DETECTOR (Tag: SRM - MFD1.2.3)  
Multicriterial heat and smoke detector
-  EXTINGUISH SYSTEM JUNCTION BOX (Tag: SRM - UCB1.2.3.4)  
Cabeling junction box
-  DISCHARGE ABORT SWITCH (Tag: SRM - DAS)  
Switch to abort discharge sequense
-  ALARM SOUNDER/BEACON (Tag: ETN - WLB1.2.3)  
Audio/Visual alarm device
-  SEQUENTIAL RELEASE INTEFACE (Tag: SRM - SMC - 1.2.3)  
Extinguisher line monitoring and releasing module
-  MANUAL LOCKOFF DEVICE (Tag: SRM - ELD)  
Extinguisher 'ON/OFF' switch for maintenance and personnel safety
-  HEAT DETECTION CABLE (Tag: SRM - TC)  
Linear, fixed heatlimit detection- thermocable
-  AEROSOL GENERATOR (Type :STAT - X /Salgrom - X)  
Modular aerosolgenerator
-  HEAT DETECTOR AND BACKUP POWER UNIT (PYRALIS)

# Salgrom fire system



## Components:

-  **EXTINGUISHER PANEL (Type: SRM - AFP)**  
Automated fire alarm and extinguish panel with integrated manual discharge switches
-  **EOL RESISTOR**
-  **MULTIFUNCTION DETECTOR (Type : SRM - MFD)**  
Multicriterial heat and smoke detector
-  **DISCHARGE ABORT SWITCH (Type : SRM - DAS)**  
Switch to abort discharge sequense
-  **ALARM SOUNDER/BEACON (Type : ETN - WLB)**  
Audio/Visual alarm device
-  **SEQUENTIAL RELEASE INTEFACE (Type : SRM - SMC)**  
Extinguisher line monitoring and releasing module
-  **MANUAL LOCKOFF DEVICE (Type: SRM - ELD)**  
Extinguisher 'ON/OFF' switch for maintenance and personnel safety
-  **HEAT DETECTION CABLE (Type : SRM - TC105)**  
Linear, fixed heatlimit detection- thermocable
-  **AEROSOL GENERATOR (Type : STAT - X / Salgrom - X)**  
Modular aerosolgenerator
-  **JUNCTION BOX (Type: SRM - UCB)**
-  **HEAT DETECTOR AND BACKUP POWER UNIT (PYRALIS)**

# Salgrom-X®

## FIRE SUPPRESSION SYSTEMS AND UNITS

Salgrom-X Pro-Solid Condensed Aerosol Fire Systems - The Paramount Solution for Critical Infrastructure Industries.



With our high-performance extinguishing solutions, you get modern and complete protection for machines, facilities and equipment, as well as production and service processes, which are key to your organization's business or mission-critical operations.





# Salgrom-X<sup>®</sup>

## > Condensed Aerosol Fire Suppression Systems

Salgrom-X Pro-Condensed aerosol extinguishing units are modular, non-pressurized and self-contained fully scalable fire suppression systems delivering a potassium carbonate and nitrogen based condensed aerosol agent into a fire zone within seconds from the discharge. The system is proven to be extremely effective in use across a wide range of applications and is especially efficient where there is a need to protect critical areas and high value premises and technical enclosures.

The system is engineered for professional fire protection in technical and special risk applications where high performance operational properties and economic efficiency is desired. Flexible choice of operation modes covers electrical automatic, electrical manual, thermal automatic and mechanical manual configurations with desired system control and fire detection technologies, including Salgrom-Sense IoT monitoring. Combining science and economics, Salgrom-X is the most advanced fire-suppression method and extinguishing automation platform for protecting crucial infrastructure industries.

## > Extinguishing Performance and Compliance

Optimized agent discharge rate and physical characteristics provides extremely fast fire suppression efficiency with better coverage for larger hazard areas, further having ability to quickly suppress shielded and obstructed hi-load fires. Lowest extinguishing density tested to suppress Class A fire in volume protection is less than 60g./m<sup>3</sup>. Typical design concentrations with Salgrom-X system are 55 to 97g./m<sup>3</sup>. with 30% safety factor. This means less overpressure, cleaner result in discharge, less post-cleaning, and enhanced personnel safety. The systems can also be used successfully for Class D battery and power pack fires originating from lead-acid, lithium-Ion, and nickel-cadmium materials, being very effective on open lithium fires in energy storage cells.

Aerosol extinguishing system units protect conventional and specially designed projects with complete integration versatility for custom applications in compliance with international standards such as: SFS-EN 15276, ISO 15779, NFPA 2010, UL 2775 and CEN/TR 15276. The systems are tested to conform or exceed NATO/Stanag-4370, DEFTAN and Mil-Spec 810 requirements including the most stringent industrial and aerospace standards.

Today, the standardization of aerosol systems is most up to date in the business. The Salgrom-X system is certified by QAS according to Standard - ISO 9001:2015 and listed by the USA Environmental Protection Agency as a total flooding system for use in normally occupied and unoccupied areas under its Significant New Alternatives Policy (SNAP) program.

> **Manufactured, Assembled, and Inspected in USA, with additional AGAP Quality Control in Finland.**

## > The Difference Arises From Detail, Technology and Experience

Salgrom-X fire suppression systems are engineered with toughest performance, useability, safety, and durability features in mind and as such are designed to meet the individual requirements of the room, zone, machine, plant, or process being protected. The concept is fully modular, providing the customer with an individually tailored system package to offer extremely high fire-fighting performance and integration flexibility - including special applications where conventional systems simply cannot perform. In addition to this, a fail-safe mechanism is embedded in the core of the system technology, which means that fire system will not lose its functionality under any circumstances, ever.

With successful operation on throughout the mission-critical industries, our range of solutions and services in these sectors are relied on to be second-to-none. While being a strategic partner in automated fire safety for a multitude of customer organisations, today, two of third Finnish public corporations in addition to a wide array of Fortune 500 companies are benefiting aerosol fire suppression systems delivered by Salgrom Technologies.

## Technical Advancements and Special Characteristics in Brief

Stainless steel super alloy seamless construction for maximum dependability and trouble free from material issues. Epoxy insulated and interference immune ignitor circuit eliminates accidental activation concerns.

Hermetically sealed explosion and fireproof structure to maintain the internal integrity of all components within the unit.

Suitable for extremely aggressive environments with resistance to vibration, chock, corrosion as well as impacts and acceleration up to 300g, further offering unmatched ruggedness in harsh operational conditions, including elevated temperature, high humidity, hazardous areas, and EX environments.

High-Solid purity densification used in solid extinguishing compound making it immune to gamma radiation and accepted for use in nuclear material facilities.

Environmentally safe with zero global warming potential, minimized carbon footprint and negligible atmospheric lifetime.

Approved and listed by EPA, further accepted suitable also for use in occupied areas due to very low human inhalation toxicity and elevated personnel safety margin. Aerosols do not contain CFCs, HFCs or PFCs, chlorine, bromide, or sulphur fluoride, nor do they form toxic halogen acids or hydrogen fluorides when in contact with hot surfaces or fire.

Simplified retrofitting to existing objects without interruption of customers operations, while minimizing (50% less) compatibility and integration complications regardless the application. Rapid recommissioning and reactivation of the equipment should the need arise after system operation.

Second-to-none extinguishing efficiency to agent mass ratio allows you to benefit weight and space savings up to 80% compared to traditional systems.

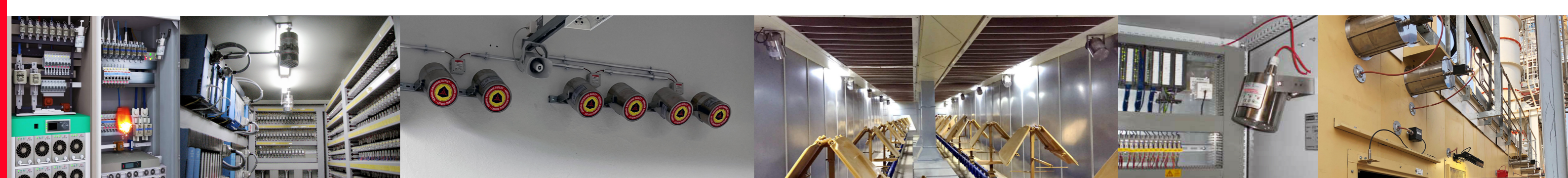
Allowed to deliver by any cargo form maximizes shipping flexibility and transportation cargo cost efficiency.

Extended service life up to 15 years with lifetime expectancy up to over 20 years minimizes the life-cycle attention resulting the lowest total cost of ownership.

Streamlined design-installation methodology and engineering flexibility increases productivity, minimizes design flaws and ensures super-fast quoting and project run through time.

No materials or systems componentry has been designed or manufactured in low-cost production countries.

Salgrom is the First 3rd party inspected and approved automated aerosol fire-fighting system in Scandinavia and is the most significant operator in the Nordics.



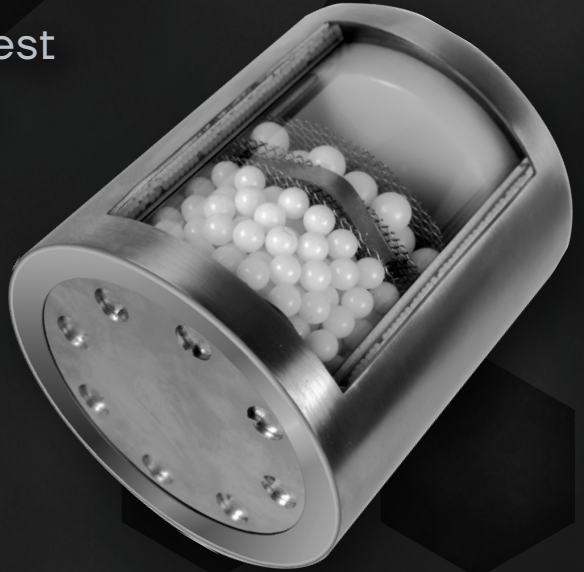


# Gain significant and immediate benefits with modern and fully automated Salgrom-X fire protection system.

Our high-performance and fully scalable fire systems are the safest in the industry in every aspect and can be quickly adapted to the special requirements of almost any object to be protected.

### ESSENTIAL BENEFITS TO YOUR ORGANIZATION

- PROTECTS:** > the continuance of business activities, company's image and its vital infrastructure.
- SAFEQUARDS:** > production and service processes, machines, equipment, premises, people and property.
- LIMITS:** > fire damages, gives extra time and facilitates rescue operations in emergency situation.
- MINIMIZES:** > operational failures, supply interference, downtime, and repair costs in case of fire.
- IMPROVES:** > safety lead, competitive advantage, and operational reliability of the organization.
- FACILITATES:** > business risk management and lowers the possibility of severe interruption damages.
- SAVES:** > on the costs of active fire protection while bringing substantial added security value.
- RELEASES:** > organization resources when disastrous fire hazards for operations are under control.
- ENABLES:** > conducting of sustainability and gaining green and responsibility value company policies.
- ENSURES:** > worry less tomorrow when you already have the most flexible and future-proof solution.





# Compared to any other fire fighting method – The Salgrom-X is unparalleled in operational reliability and versatility.

## SAVE COSTS AND LABOR OVER TRADITIONAL SYSTEMS

- > No piping, hoses, valves, solenoids, gauges, scales, or nozzles
- > No floor space requirements, bottlenecks, or cylinder rooms
- > No difficult handling of heavy gas cylinders and cylinder banks
- > No tests or requirements under pressure equipment regulations
- > No excessive pressure build up during the release or associated risks
- > No mandatory room integrity tests or pressure relief componentry
- > No leakage issues or negative climatic or environmental effects
- > No structural changes or special arrangements needed in the works
- > No complex or expensive service, testing and maintenance tasks
- > No equivalent security risks as with many gas suppression agents
- > No interruption of operation during installation and maintenance
- > No complex logistical arrangements on shipping and transportation
- > No unexpected life-cycle costs or gas cylinder pressure test costs



International Conformity to:



SFS-EN 15276 | UL 2775 | NFPA 2010 | MIL-SPEC STD801 | STANAG 4370





### Product Description

Salgrom-X Pro-Condensed aerosol generators are modular, non-pressurized and self-contained fire suppression units delivering a potassium carbonate and nitrogen based condensed aerosol agent into a fire zone within seconds from the discharge. The aerosol formation is based on non-toxic and non-reactive solid compound, which remains unchanged until it is activated. The unit has axial aerosol outflow and an ejector-type discharge arrangement. The system is engineered for professional fire protection in technical and special risk applications where high performance operational properties and economic efficiency is desired. Recommended for use in conjunction with Salgrom specified actuation, detection and control technologies.



Model	Factory Code (P/N)	Aerosol Mass (g)	Protection Capacity (Max.V with 42,3 g/m3)	Weight (kg / lb)	Total Length (mm / in)	Diameter (mm / in)	Discharge Time (sec)	Safety Clearances (mm / in)
SRM-X G30	11700	30	0.7	0.4 / 0.8	86 / 3.7	51 / 2.0	7.0	0.25 m/9.8"
SRM-X G60	11705	60	1.4	0.5 / 1.1	129 / 5.0	51 / 2.0	10.0	0.35 m/13.8"
SRM-X GM60	11600	60	1.4	0.5 / 1.2	153 / 6.0	51 / 2.0	10.0	0.35 m/13.8"
SRM-X G100	11740	100	5.9	0.9 / 2.0	136 / 5.3	76 / 3.0	12.0	0.46 m/18.1"
SRM-X G250	11710	250	5.9	2.5 / 5.6	154 / 6.1	127 / 5.0	12.0	0.75 m/29.5"
SRM-X G500	11690	500	11.8	3.4 / 7.6	205 / 8.1	127 / 5.0	23.0	1.27 m/50.0"
SRM-X G1000	11770	1000	23.6	7.1 / 15.7	192 / 7.5	203 / 8.0	16.0	2.00 m/78.7"
SRM-X G1500	11800	1500	35.5	8.6 / 19.0	230 / 9.0	203 / 8.0	23.0	2.30 m/90.6"
SRM-X G2500	11850	2500	59.1	11.3 / 24.9	293 / 11.5	203 / 8.0	36.0	2.70 m/106.3"

#### Additional Notes:

Please note that the weights and length dimensions that are listed above for the Salgrom-X extinguishing units are based on the entire length of the generators including the 3/4" threaded connector coupling and cable entry. Weights listed are median values with range of +/-10% for 2"/3" diameter models and +/-5% for 5"/8" diameter models. Discharge times listed are approximate median values with range of +/-5%. Initiation current is 0.5 amp when wired in parallel and 1.0 amp when wired in series. The releasing circuit pulse duration for the ignitor is 50 milliseconds. Supervisory current on the release circuit shall not exceed 50mA.

#### Transportation Classification:

For transporting by public highway, rail, marine vessel, or cargo aircraft only: Special Permit DOT-SP 20600 and BAM D/BAM 1857/19 authorizes transport as: UN3268 Safety Devices 9. For shipment by air (cargo or passenger): International Air Transport Association (IATA) regulations authorize transport as: UN0432 Articles pyrotechnic 1.4S.

#### Minimum Application Densities:

Class A Hazards: 74,6 g/m3 (w/ 30% Safety factor: 97,0 g/m3)  
 Class B Hazards: 42,3 g/m3 (w/ 30% Safety factor: 55,0 g/m3)  
 Battery Material Fires: 74,6 g/m3 (w/ 30% Safety Factor: 97,0 g/m3)  
 Electrically Energized Fires: 42,3 g/m3 (w/ 30% Safety Factor: 55,0 g/m3)

#### Shipping Limitations:

Ground: Placards required for any shipment > 1001 lb as UN0432 1.4S  
 Max Net Quantity / package – Cargo Air 100 kg (220 lb)  
 Max Net Quantity / package – Passenger Air 25 kg (55 lb)

#### Operation/Storage Parameters:

Temperature -40° C to +54° C (-40° F to 130° F)  
 Relative Humidity up to 98% at +35° C (+95° F)

