



Marine Applications

AF-X Fireblocker



AF-X
The company

Aerosol Fire eXtinguishing

Active since 1999

Started as a Firepro distributor

Expert in the field of aerosol

Based in the Netherlands

Present in 28 countries

Production by Ariane Group

Compound production

- Grinding, Mixing, casting and curing

Storage

- Chemicals
- Explosive materials
- Propellant grains
- Products

Office building

- Administration
- Engineering
- Planning
- Procurement

Inspection, Test and Assembly

- X-ray, US, tensile testing, firing tests
- Cleaning, grid blasting, welding
- Final assembly, clean room



Facilities layout

Origin and development of Aerosol.

Space technology	1984
Military application	1992
Civil application	1999
Aerosol systems	2002
Next generation Aerosol	2015



What is aerosol?



Definition:

Aerosol: A colloidal suspension of particles dispersed in air or gases

Colloids: Particles with diameters of a nanometer.

AF-X Fireblocker condensed aerosol:

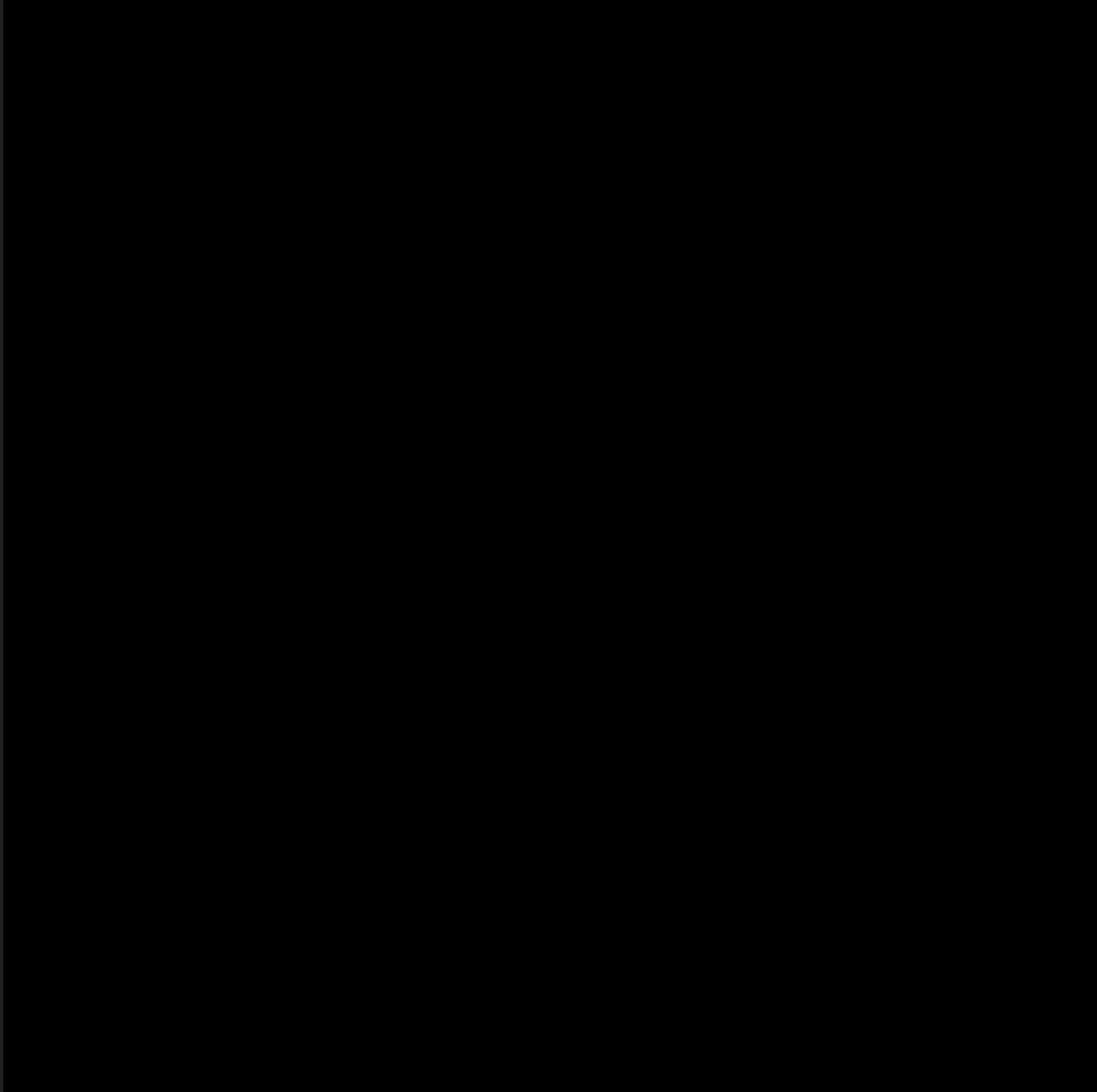
Solid particles of K_2CO_3

0,7 to 1 μm

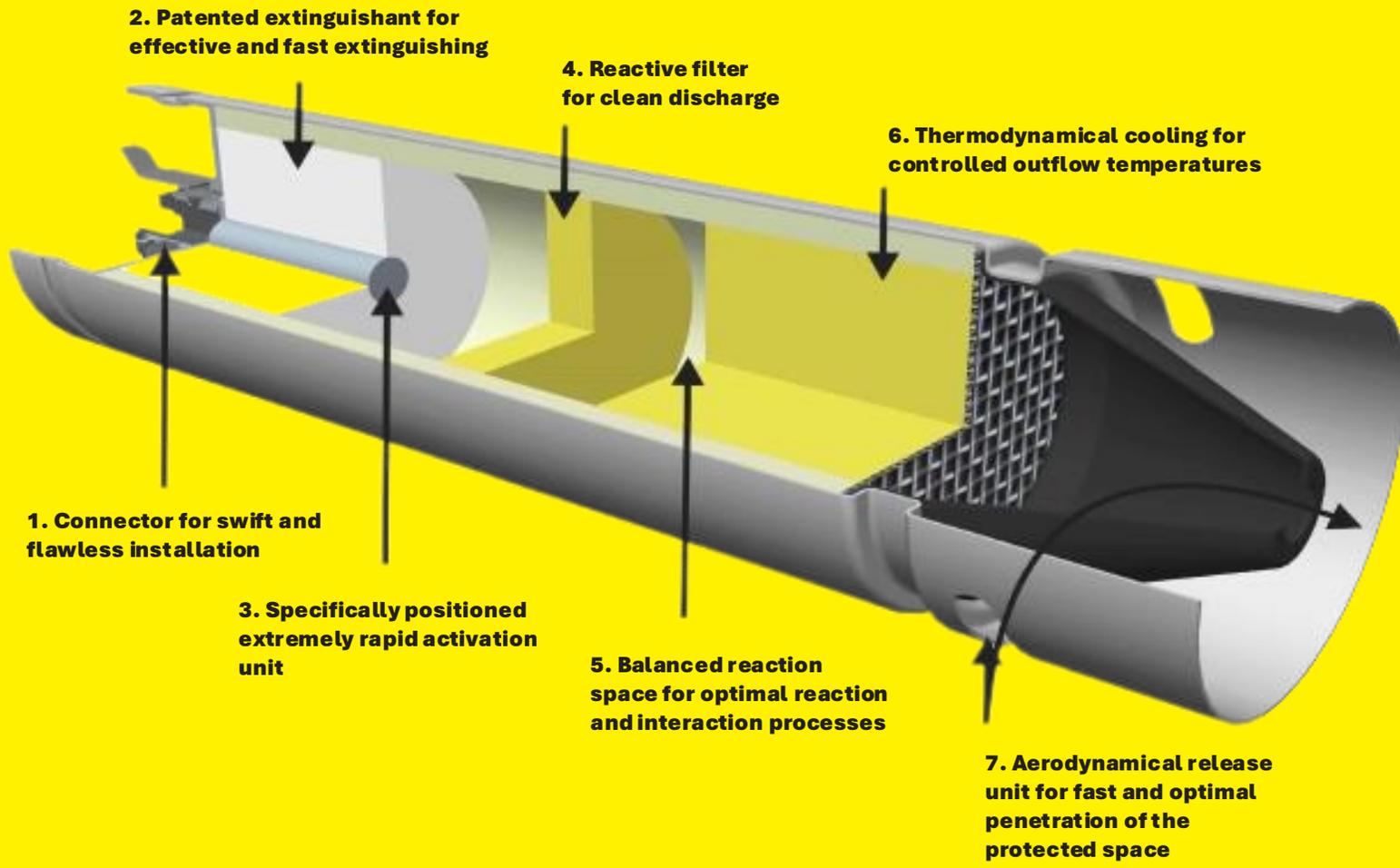
Suspended in a blend of inert gases

primarily N_2 , H_2 and CO

68% gasses and 32% solid particles



**Aerosol presents
itself as a white cloud.**



**Generator
lay-out.**

So what is a fire.



A fire is a chain reaction between:

Heat
Fuel
Oxygen

So break the chain!

Extinguishing is achieved.

By two reactions:

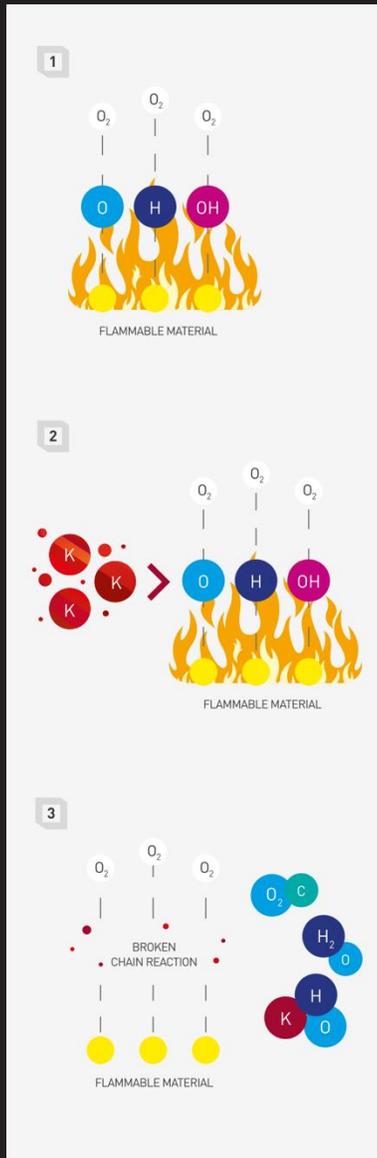
- Physical
- Chemical

Physical

By absorbing the energy needed for the chemical reaction, it results in a cooling effect.

Chemical

The instable radicals (OH) react with Potassium (K) quicker than the fire-reaction and create a stable potassium hydroxide (KOH).



Aerosol technology is proven to be suitable for fire classes:

A – solid material

B – liquid material

C - gas

E – fire around electricity (<75kv)

F – cooking oil and boiling fats

L – lithium batteries

Always calculated with Class A



Characteristics.



The extinguishing agent, in the correct concentration, has the following qualities:

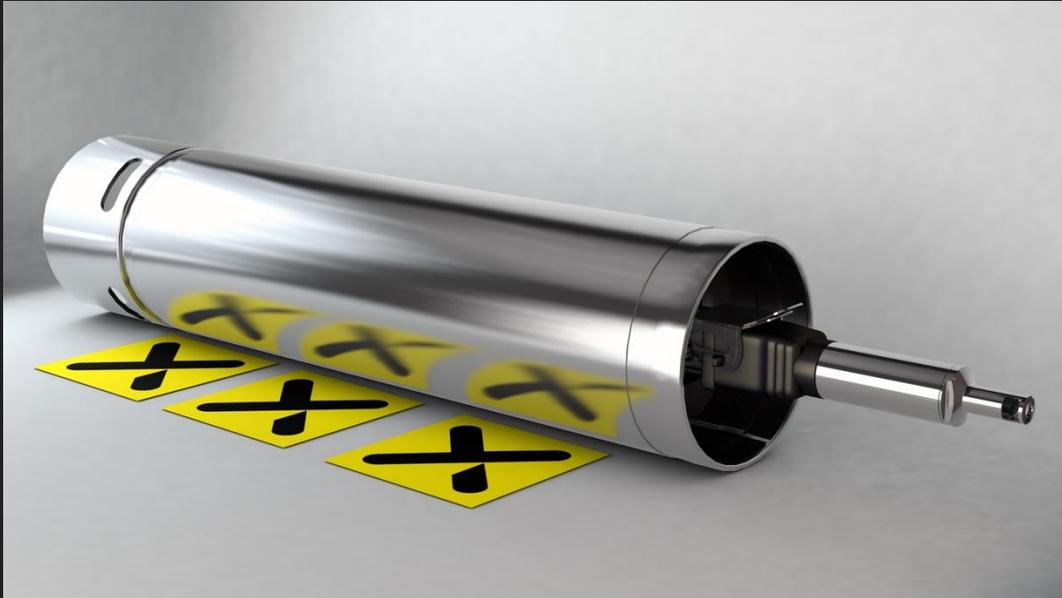
- 1. Harmless for humans and animals**
- 2. Harmless for the environment**
- 3. Harmless for the ozone layer**
- 4. Harmless to materials**
- 5. Does not take away oxygen**

Advantages.

- **Simple installation**
- **Compact / light weight**
- **No pressure**
- **Room integrity**
- **Certified**
- **Cost efficient**
- **Low maintenance**
- **Applicable for lithium-ion**



Advantages vs other Aerosols.



- **Easier installation with the inbuild connector**
- **Lower outflow temperatures**
- **Less aerosol**
- **Better toxic levels**
- **Better price**
- **Made in Holland**
- **Easy maintenance**
- **100% stainless steel**

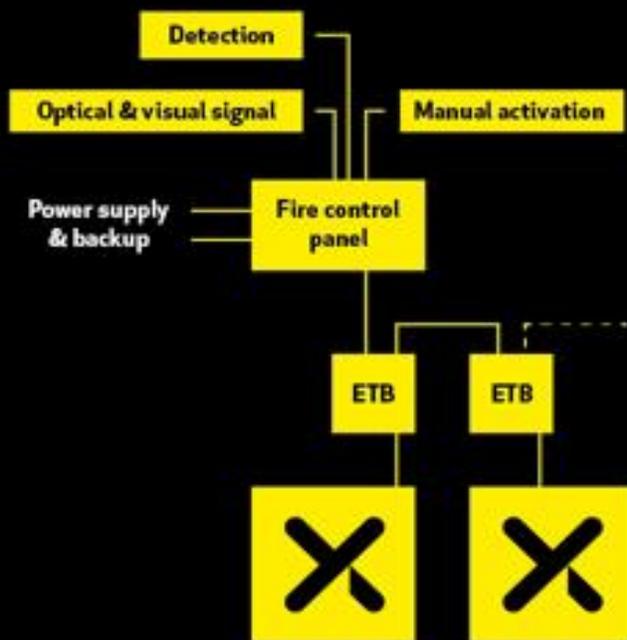
Different vessels, different systems

All systems are modular and selected to optimize the specific needs to ensure the required safety.



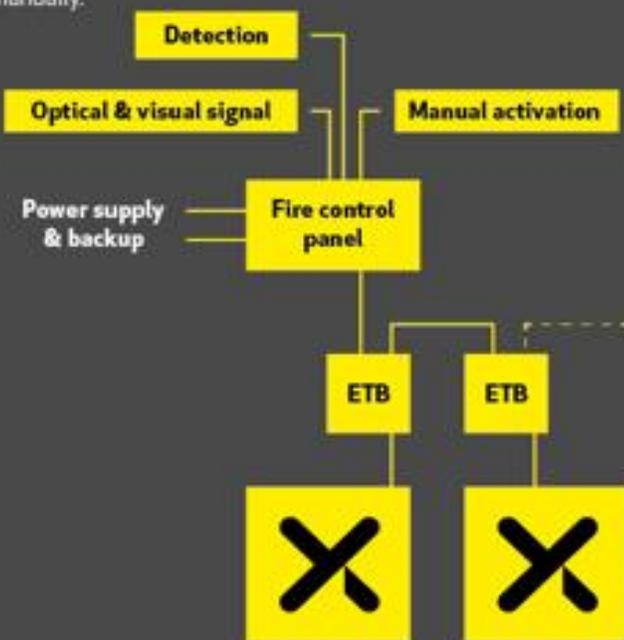
Fully automatic systems

The system will detect and start extinguishing automatically.



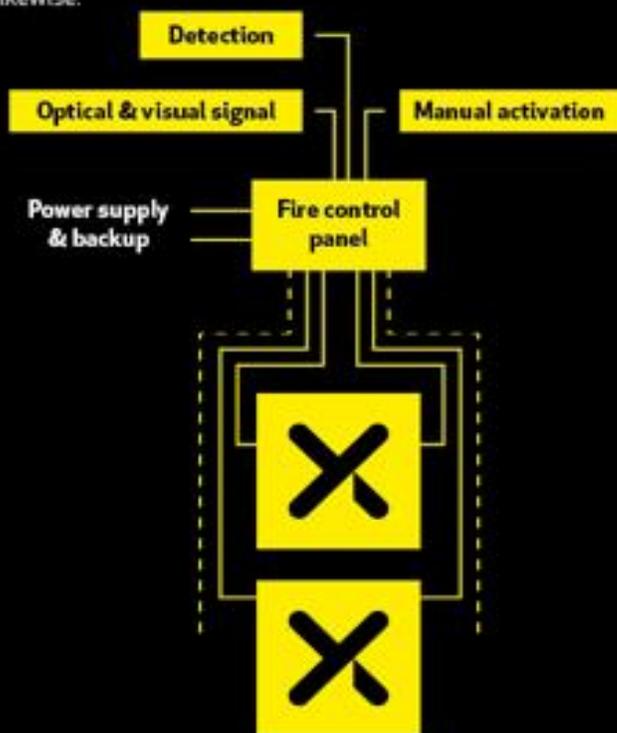
Manually activated

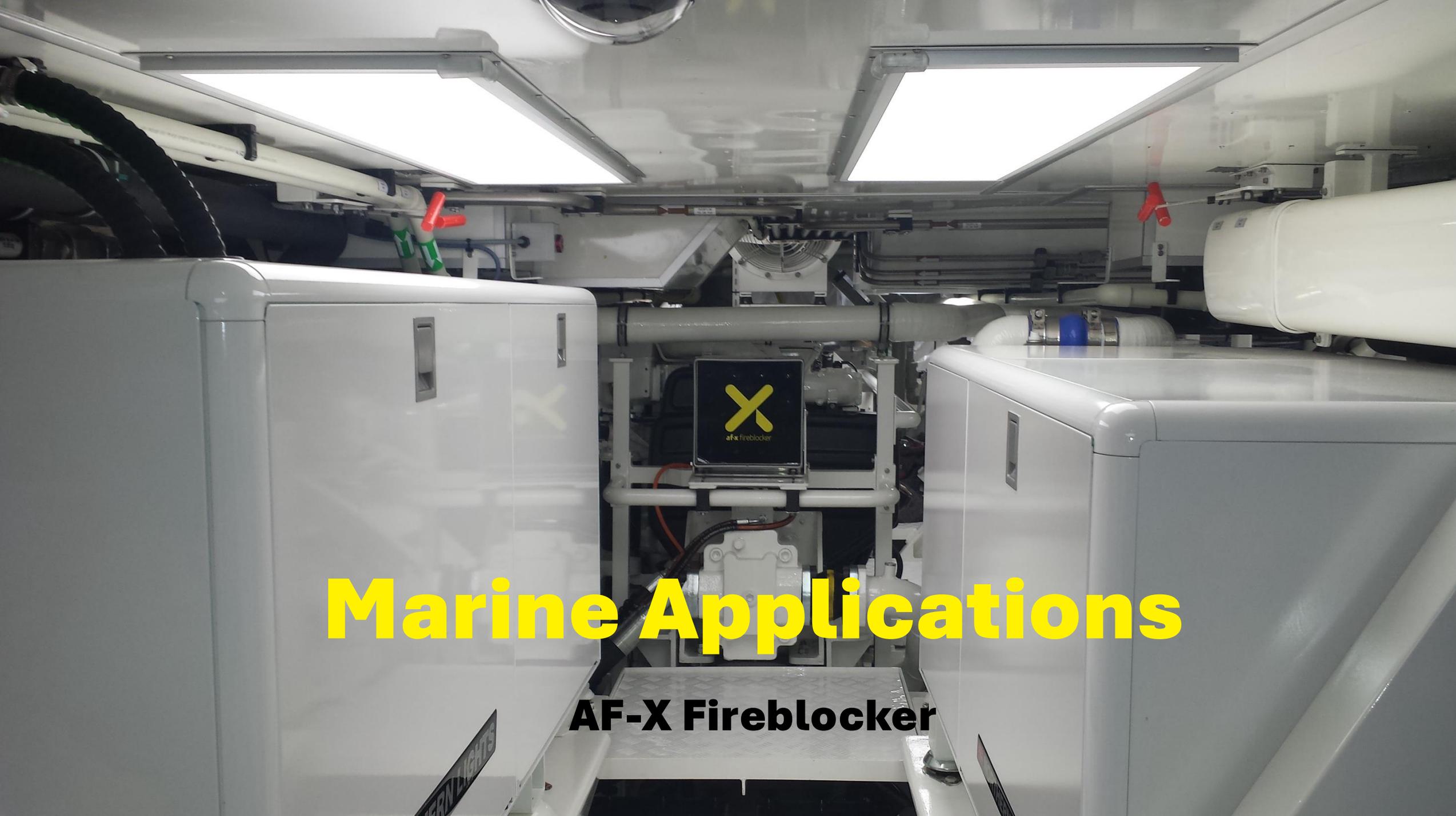
The system can detect but extinguishing will be done manually.



Regulated according IMO 1270

To comply with IMO standards the system will be installed likewise.





Marine Applications

AF-X Fireblocker

Fire fighting at the source.



- **Easy installation**
- **Quick detection**
- **Thermal activation**
- **Rapid Extinguishing**
- **Less damage**
- **Less downtime**
- **Less costs**



AF-X Fireblocker system.



- **Easy installation**
- **No structural adjustments**
- **Low maintenance**
- **Own power supply**
- **LHDT 68 up to 180 degrees**

af·x fireblocker | faster than fire.

Sailing yachts.



af-x fireblocker | faster than fire.

Service and tugboats (engine rooms).



zeeverkeer

© Eddy Decorte



Shipping.



af·x fireblocker | faster than fire.

Special applications



af-x fireblocker | faster than fire.

X | af-x fireblocker

The Amsterdam Fire Department has taken delivery of its new firefighting vessel: the Jan van der Heyde IV.

C-Job Naval Architects provided the concept design for the 17.6-metre vessel. Damen Shipyards Hardinxveld executed detailed design, engineering and vessel construction.

Innovation

The new vessel marks the continuance of the Amsterdam Fire Department's tradition of naming its firefighting boats after the founder of the current firefighting method, organisation and technology – Mr Jan van der Heyde. In fact, the first vessel to take the name was a floating steam injection vessel that dates back to the 1870s.

AF-X Fireblocker

It was of course a must to equip the vessel itself with state-of-the-art fire protection. The fire department therefore decided to use an aerosol system. After evaluation of 3 different aerosol brands, the aerosol of choice was AF-X Fireblocker, thanks to the system's effectiveness and size.

Weight and space savings, as well as cost savings made the choice for AF-X Fireblocker an obvious one. The AF-X Fireblocker distinguishes itself from the competition with a 30% more effective aerosol and ease of installation thanks to its built-in connector, thus saving time and money.

The AF-X Fireblocker can be activated manually on the AF-X Systems IMO panel placed at the entrance of the engine room.



Size does matter

Because the Amsterdam canals are quite shallow, size and a compact design in combination with space saving elements such as the extinguishing system were important for this custom-made vessel.

Technical data of the Jan van der Heyde

- Length: 17,58 meters
- Max. speed: 15 km/h
- Engine Power: 2x 368 kW
- Volume engine room: 66m³
- 2x AF-X Fireblocker BM
- Manual activation with a AF-X Marine Panel



**What part
of no
don't you
understand?**

No flame

No fire

No damage

No victims