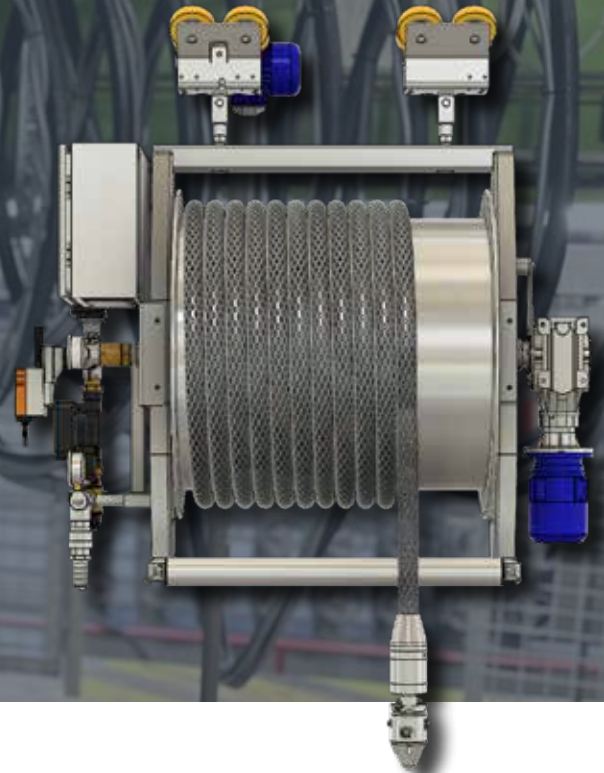


Aerovit SC-Jet Shower Cleaning

*Automatic cleaning for
increased boiler efficiency*



The Aerovit SC-Jet Shower Cleaning system is a cutting-edge, automated cleaning solution designed to maintain peak performance in waste-to-energy incinerators and biomass combustion plants.

By efficiently cleaning the open passes of the boilers, the flue gas temperature is reduced with 50-80°C at the radiation boiler outlet.

The SC-Jet system ensures uninterrupted operation and reduces fouling, which increases boiler efficiency.

Operating at extreme temperatures (600-1250°C), the SC-Jet cleans during full-load operation, minimizing downtime while achieving outstanding results.

Designed for new installations or retrofitting, it requires a minimal number of inlets in the boiler roof and integrates seamlessly with existing setups.

Features:

• **Efficiency Boost**

Increases boiler efficiency by 3-5% through improved heat transfer.

• **Temperature Reduction**

Reduction of flue gas temperature by 50-80°C at the radiation boiler outlet.

• **Concentrated Water Jets**

Reaches over 5 meters to clean surfaces effectively.

• **Automated Control**

PLC-controlled cleaning sequences for consistent and reliable operation.

• **Durable Construction**

Built for low maintenance costs and long-lasting performance.

• **Minimum inlets**

The design of the SC-Jet system reduces the number of inlets to a minimum.

Aerovit SC-Jet Nozzle Head

The Aerovit SC-Jet features a unique rotating nozzle head with six nozzles, delivering concentrated water jets that reach over 5 meters onto heating surfaces to ensure efficient deposit removal.

The laminar water jets maintain their shape and strength over long distances, which ensures minimal turbulence and water dispersion. Upon contact with the hot surfaces, the large water droplets expand instantly by 1,700 times, transitioning from liquid to gaseous form in accordance with the natural laws of physics.

The large droplets penetrate the micro-openings in the fouling and rip off the fouling without requiring additional power or pressure.



Features:

- **Unique nozzle head**

The innovative design delivers precise and effective cleaning. The nozzle head sprays the water more than 5 meters for less water consumption.

- **Low pressure operation**

To prevent the water jets from splitting and remaining intact. The cleaning process is gentle and does not wear down the pipes.

- **No excess water**

The water jets are directed exactly where needed to achieve optimal cleaning. Which also reduces the frequency of cleaning.

- **Explosive vaporization**

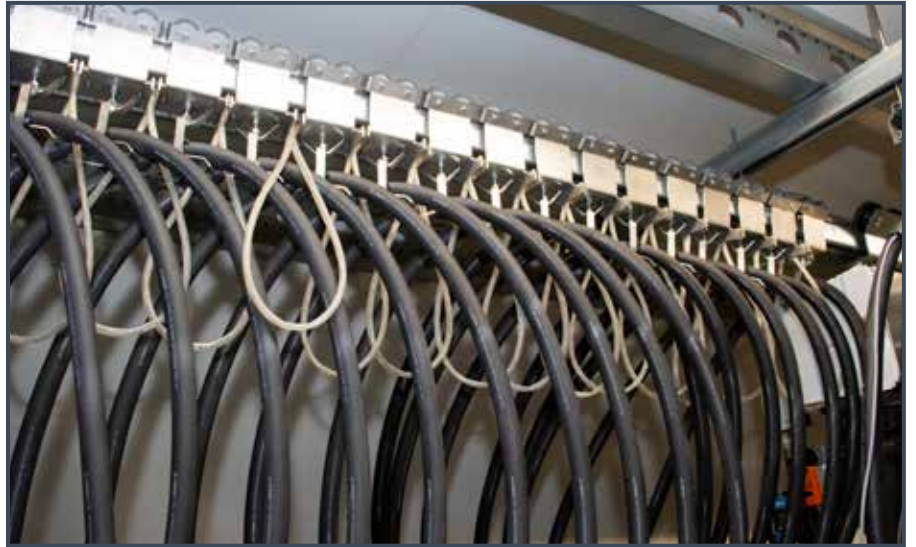
The water instantly evaporates on contact with the hot boiler surfaces, creating a powerful force that removes deposits from the walls.



Conveyor system

The conveyor system consists of a rail system, equipped with a conveyor motor controlled by the electrical control system for automatic operation.

The positioning of the cleaning is done 100% automatically with a built-in encoder for a millimeter hose compensation for precise operation.



PLC Controller

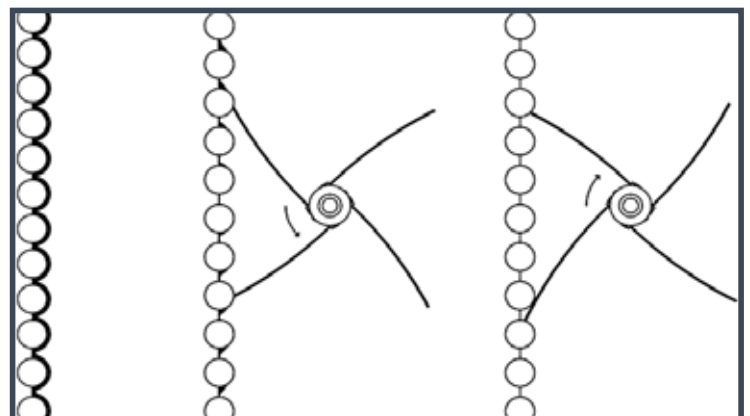
The PLC/VFD is housed within a painted electrical cabinet equipped with an integrated cooling system and temperature monitoring for optimal performance and reliability. The system is configured with Profinet installation and is prepared for a 220-volt UPS supply to ensure uninterrupted operation.

An interactive display provides real-time status updates, allowing operators to monitor the cleaning sequence and verify its accuracy. The system controls critical functions, including the cleaning depth within the boiler, selection of boiler sections to be cleaned, cleaning process speed, and the required water volume.



Patented Cleaning Solution

Aerovit's innovative SC-Jet Shower Cleaning solution is protected by a patent, ensuring its unique and effective cleaning approach. The system utilizes two nozzle heads: one rotating clockwise and the other counterclockwise. This approach ensures optimal and thorough cleaning, effectively targeting hard-to-reach areas, including previously unaddressed shadow areas.



Boiler wall with fouling

Boiler wall cleaned with CCW nozzle head showing "shadow" areas

Boiler wall cleaned with CCW nozzle head AND CW nozzlehead.

How does it work?:

The Aerovit SC-Jet Shower Cleaning system directs 4-6 concentrated water jets through the unique nozzle head over a distance of more than 5 meters to effectively clean the heating surfaces of the boiler during full-load operation of the incinerator.

This system is designed to function at elevated temperatures commonly found in the waste-to-energy plants (ranging from 600 to 1250°C). The operation is fully automated, ensuring seamless and uninterrupted performance.

| Specifications: | |
|-----------------------------|--|
| Cleaning Media: | Water |
| Operation cycle: | Individually set |
| Water pressure: | 1.5-2 bars during operation |
| Water consumption: | 3 m ³ /h at 1.5 bars |
| Water quality: | Free from impurities (<0,2mm) Neutral pH (pH 6,5-7,5) Max. temperature 30°C. |
| Temperature range: | 600-1250°C. |
| Motor power range: | Cleaning system: 0.25 kW Conveyor system: 0.09 kW |
| Power supply: | 400 VAC 500 W |
| Electrical consumption: | <1 kW |
| Air consumption: | <6 liter per activation |
| Cables | Heat resistant Signal: 0.75 mm ² Power: 0,75 mm ² |
| Location/installation: | Boiler roof mounted |
| Installation height: | Minimum 2.6 meters free space above boiler roof |
| Dimensions hose cart: | ø500 mm / ø570 mm with hose |
| Weight of hose cart: | 250 kg. |
| Weight at fixing points: | 135 kg / 115 kg |
| Surrounding temperature: | + 55°C |
| Boiler access: | Stainless steel funnel with gate valve DN100/DN100 |
| Nozzle head injection hole: | 10 cm |
| PLC/VFD: | Siemens S7/ABB |



Scan or click the QR code to watch a short video about Aerovit SC-Jet Shower Cleaning.