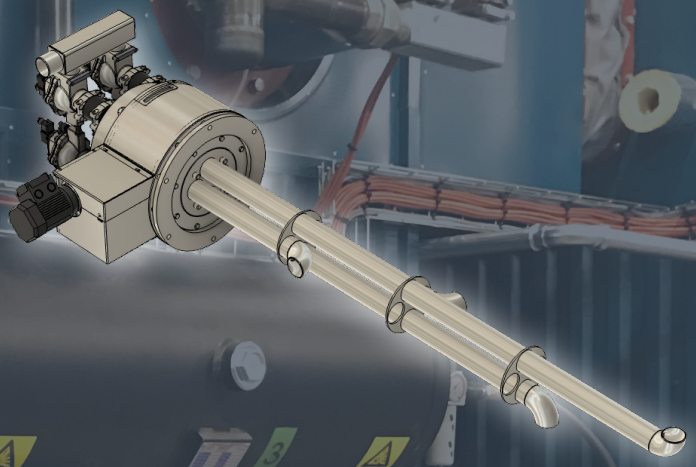
AEROVIT

Aerovit ShockClean 360

Cleaning with shock waves

High impact 360° cleaning in hard to access areas in watertube boilers, evaporators and economizers.



The Aerovit ShockClean 360 is an advanced boiler cleaning solution based on the Aerovit ShockClean System.

The Aerovit ShockClean 360 is designed specifically for boilers with limited installation space. This cleaning solution incorporates four synchronized Aerovit A40 valves to deliver powerful 360° cleaning coverage.

By releasing high-compressed air in a split second the ShockClean 360 generates a shock wave, that removes ash and soot between boiler tube sections before it settles.

The rotating functionality ensures thoroughly cleaning of hard to access areas, significantly reducing the need for manual intervention.

The Aerovit ShockClean 360 operates during normal boiler conditions and requires no shutdowns, maintaining consistent cleanliness and optimal heat transfer efficiency throughout the boiler.

Features:

- **Rotating 360° high impact cleaning**
  Ensures full cleaning coverage in narrrow and hard to acccess areas.
- **Increased boiler efficiency and output**
  Enhances heat transfer and boosts boiler performance.
- **Reduce downtime and maintenance**
  Less need for manual cleaning or unplanned shutdowns.
- **Reduce fuel consumption per produced MW**
  Optimizes use of fuel for energy production.
- **Energy savings and reduce CO_2 emissions**
  Supports sustainability by lowering fuel consumption.
- **Compact installatoin**
  Requires minimal installation space.

The impact of soot buildup in water tube boilers

Soot accumulation in water tube boilers significantly reduces heat transfer efficiency by acting as an insulating layer on tube surfaces. This results in higher fuel consumption, increased flue gas temperatures and uneven thermal distribution.

Soot and ash will buildup continously and lead to reduced output, increased operational costs, and unscheduled shutdowns for manual cleaning or repair.

Keeping the boiler clean is important to maintain optimal boiler performance and reliability.

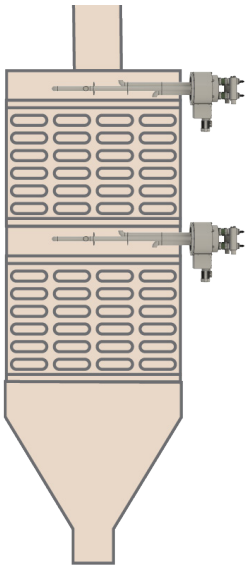
Application

The Aerovit ShockClean 360 is installed between the boiler tube sections.

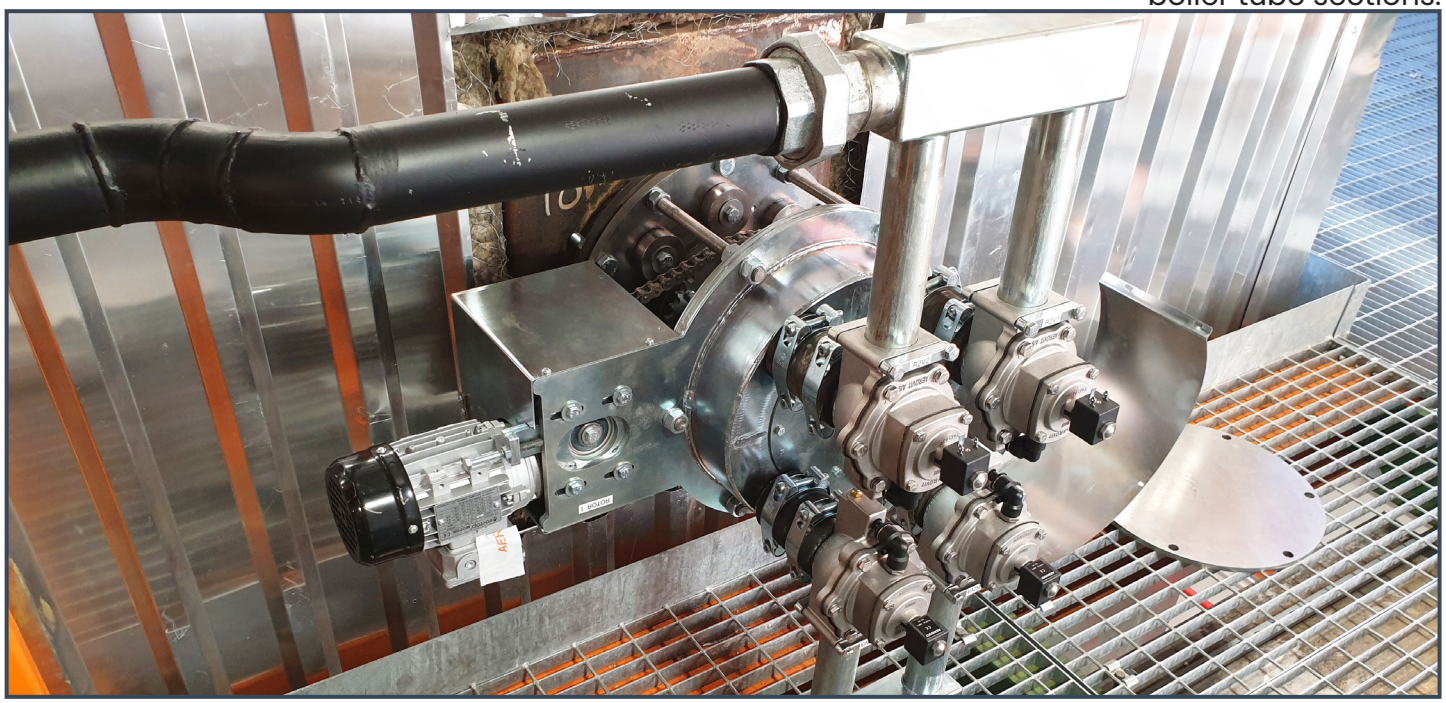
The temperature of the flue gas should be kept at a constant level. This is ensured by activating the Aerovit ShockClean 360 according to fuel and boiler design.

The soot and ash in the boiler should be dry and removable. If the deposits tend to be sticky or melting, the cleaning effect may be reduced.

Maximum length of the rotating pipe unit is 2,5m. The distance between the tube banks is recommended to be min 600mm. A 290mm inlet hole is needed for flanging the Aerovit ShockClean 360 to the heat exchanger.



Installed between boiler tube sections.



How does the Aerovit ShockClean 360 work?

The Aerovit ShockClean 360 utilizes powerful shock waves of high-compressed air to remove ash and soot between boiler tube sections.

In a split second, a large volume of high-compressed air is discharged through the Aerovit A40 valves, generating a powerful shock wave for effective 360° cleaning inside water tube boilers, economizers, or evaporators.

How is it constructed?

The Aerovit ShockClean 360 is constructed based on 4 Aerovit A40 valves. The solution is connected to a 150 liter compressed air receiver and is controlled by a PLC, which manages cleaning cycles and valve activations.

The lance inside the boiler can be constructed in various steel types to accomodate the boiler requirements and temperature.

The PLC can be customized to control a various number of Aerovit ShockClean 360.

Specifications:	
Cleaning Media:	Air
Voltage:	24VDC
Ambient temperature:	-10°C/50°C
Recommended working pressure:	8-9 bar
Sound power level:	<80 dBA
Compliancy:	ATEX compliant (Option)
Weight:	App. 100 kg.
Dimensions:	Depends on the project. But the maximum lenght of the rotating pipe unit is 2,5 meter.
PLC Siemens S7 power input:	230V
Location/installation:	Depending on application.
Cleaning cycle:	120 min. = 10,8 Nm3 compressed air.
Operating temperature:	<700°C (Flue gas inside the boiler)