

STEAM BOILERS

Industrial collection





Product range

- PRN/D & PRN/HD
- SCOTCH/D & SCOTCH/LD
- ARTO/D

Product Benefits

- Low fuel consumption and in general clearly reduced operating costs
- Efficiency over 95% (with an economiser)
- Suitable for many burner types
- Effective thermal insulating materials
- Easy service due to a sufficient number of inspection and access ports
- Long inspection intervals due to low stress design



ARTEMIS

Manufacturing quality

ARTEMIS BOILER INDUSTRY follows a strict program to constantly observe every stage of production. Specialist engineers provide constant project management to fit the customer's individual requirements.

The quality -guarantee system begins by selecting the feedstock and the suppliers. We have great expectations of our carefully chosen suppliers regarding the material's authenticity and certification.

Every stage of production is monitored with ultrasonic tests, X-Rays, penetrating fluids, magnetic fields and ultrasounds. Our welders are subject to constant monitoring.

Every product is certified and bears the original stamp of the inspection organization.

Application field

- Food
- Drinks
- Heating
- Clothes
- Construction materials
- Animal Food
- Sterilization



PRN/D | PRN/HD

Reverse flame tube steam boiler

Structure

The steam boiler consists of a cylindrical vessel with two plain plates on its two ends. Inside the steam boiler is the furnace where the flame develops from the burner (1st flue gas pass). The flue gases are reversed at the end of the furnace (2nd flue gas pass) and they meet the fire tubes through which they are forwarded to the rear flue gas chamber of the steam boiler (3rd flue gas pass) and from there to the chimney.

PRN/D

Steam pressure (bar)	Up to 16
Max. temperature (°C)	204
Steam capacity (kg/h)	80 up to 3.200

PRN/HD

Steam pressure (bar)	Up to 0,5
Max. temperature (°C)	110
Steam capacity (kg/h)	80 up to 3.200

Sophisticated design

- Advanced design guarantees a non- stop supply of steam, ensuring at the same time the less energy loss possible
- Low stress design
- Rapid water circulation accelerates the steam-bubbles movement to the steam space
- Special characteristics for reduced fuel consumption

Construction- Special features

- Construction according to the European Pressure Equipment Directive (P.E.D 97/23)
- Long duration granted by:
 - Wet furnace back.
 - Tube nest projecting from the end plates to protect the weldings from corrosion of condensate.
 - Spacing between smoke tubes and smoke tubes to the furnace are exceeding the demands of EN 12953 in order to avoid accumulation of salt.
 - Gusset stays are always many more than EN 12953 requires and that reduces the stress in the boiler and increases boiler life.



SCOTCH/D | SCOTCH/LD

Three pass flame tube steam boiler

Structure

These boilers have a three flue gas pass layout, the first of which passes through the furnace. Produced flue gases are reversed in the rear wet reverse chamber and return towards the front through the tube nest of the second pass. In the front smoke chamber flue gases are reversed again, enter the tube nest of the third pass and are then collected in the rear box and transferred to the chimney.

SCOTCH/D

Steam pressure (bar)	Up to 16
Max. temperature (°C)	204
Steam capacity (kg/h)	2.500 up to 12.000

SCOTCH/LD

Steam pressure (bar)	Up to 16
Max. temperature (°C)	204
Steam capacity (kg/h)	1.600 up to 3.500

Sophisticated design

- Advanced design guarantees a non- stop supply of steam, ensuring at the same time the less energy loss possible
- Low stress design
- Rich water chamber especially around the furnace to avoid accumulation of salts
- Eccentric position of the furnace which improves the water circulation inside the boiler
- Special characteristics for reduced fuel consumption

Construction- Special features

- Construction according to the European Pressure Equipment Directive (P.E.D 97/23)
- All equipment is pre-assembled and pre-wired
- No flame tubes are put at the lower part of the boiler and that makes maintenance and cleaning easier



ARTO/D

Quick steam generator

Structure

The quick steam generators have a three flue gas pass layout, the first of which passes through the heating tube coil. Produced flue gases are reversed in the fireproof lining and return towards the front through the interval between the internal and external heating coil. In the front smoke chamber flue gases are reversed again, enter the space between the external heating coil and the shell of the generator and are transferred to the chimney.

ARTO/D

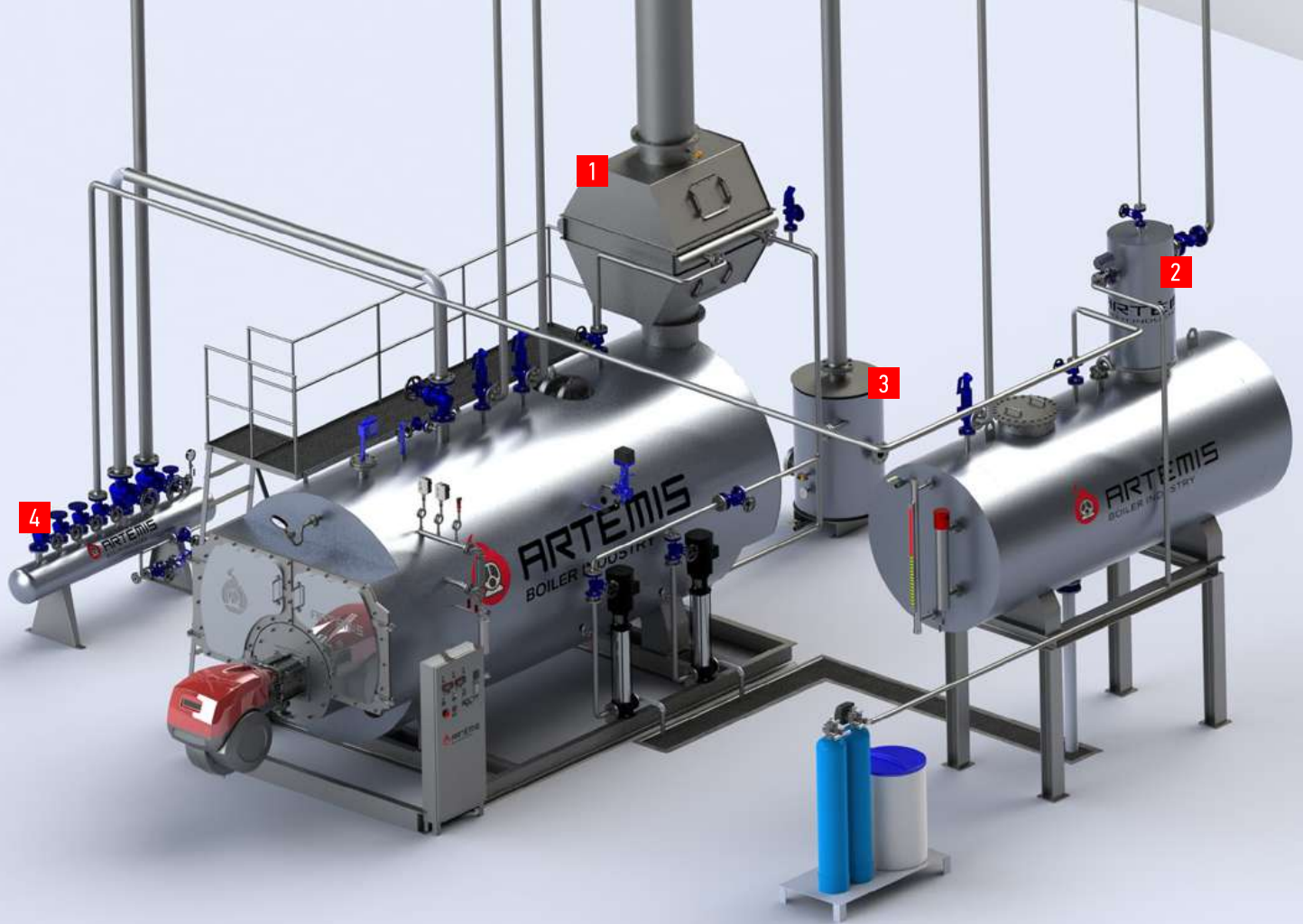
Steam pressure (bar)	Up to 25
Max. temperature (°C)	226
Steam capacity (kg/h)	500 up to 4.000

Sophisticated design

- Continuous operation or intermittent rapid steam demand
- Only a few minutes from cold start to service availability
- Low thermal load of the combustion chamber
- Low water content that reduces heat losses and functioning costs

Construction- Special features

- Construction according to the European Pressure Equipment Directive (P.E.D 97/23)
- Monobloc, with burner, control panel and all the devices against water shortage and overheating as well as for the feed water quantity control
- The special heating tube coil ensures a "cool" furnace
- A three piston feed water pump with suction boost provides the necessary quantity of feed water for the generator



Boiler house equipment

Extra boiler components

1 Flue gas heat exchanger (Economizer)

Waste gases have a temperature that usually exceeds 250 °C. This heat potential can be regained by preheating the inlet feed water of the boiler. The temperature of the gases can be reduced below 120 °C, which will increase the efficiency of the boiler 5-7 %.

ARTEMIS economizers are pre-mounted to the flue gas chamber, which make them easily removable.

3 Blow down vessel

The blow down vessel collects the drainage of one or more steam boilers and decreases the high temperature of this water to the desired level (app. 45 °C). The system is fully equipped with automatic control and electrical panel.

2 Feed water tanks for partial and full deaeration

Soft raw water and condensate are guided to a stainless steel Deaeration Dom with riddled discs. There corrosive gases such as O₂ and CO₂ are extracted from the feed water to the atmosphere.

The feed water tank is made from steel or stainless steel and has all the necessary equipment for its operation as well as a control panel.

4 Steam distributors

Steam distributor together with all necessary equipment (steam valves, condensate discharge system) delivered insulated with its own support.

Designed according to the needs of each customer.

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