QUICK STEAM GENERATORS *INNOSTEAM*

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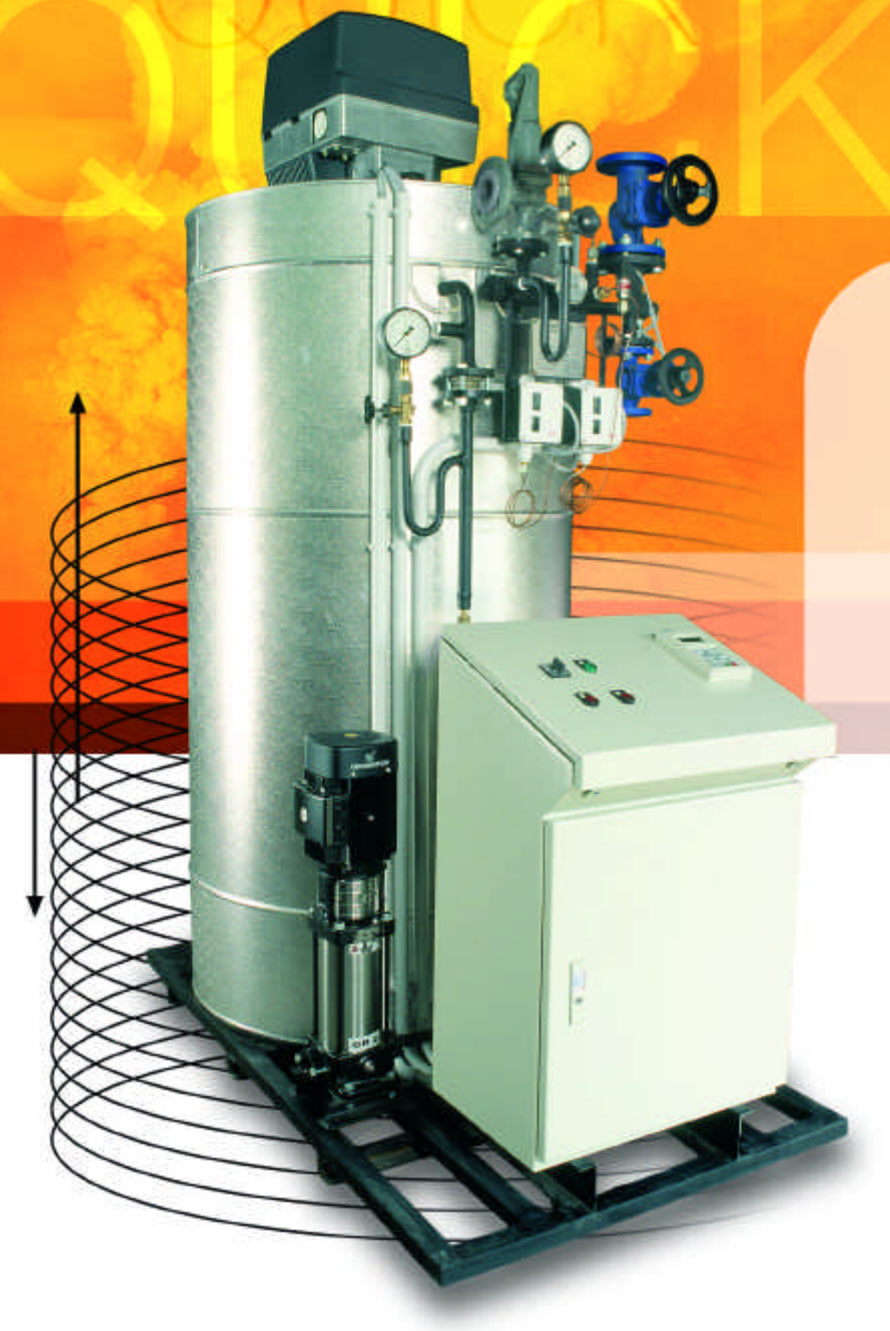


THE CONCEPT

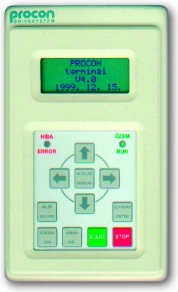
Centrifugal pumps are widely known and due to their considerably lower price and maintenance needs used and preferred over reciprocating pumps in the boiler industry.

Traditionally, quick steam generators are operated with reciprocating pumps and are equipped with a 2-stage burner and water flow control, which regulates a more or less smooth steam output by switching between these two stages according to steam usage. Therefore the control and the regulating elements are subject to much greater wear. Regular maintenance of comparatively high cost is a common thing when operating such a generator.

Through the usage of our in-house developed PLC controlled Boiler Management Unit (BMU) we were able to change an essential part of these wearing appliances, namely the reciprocating pump with the above-described cheaper and more reliable centrifugal pump. The results of the BMU are not only measurable in direct costs, but also in the more precise customizability of the steam quality and water content of the produced steam, which can be less than 5%.

MAIN ADVANTAGES

Compact make - equipped with all appliances needed for operation
High quality steam output - able to produce "dry" steam (less than 5% water content)
Fast heating up (up to 3 minutes) - securing a short starting time
Space saving - manufactured in vertical construction mode
Small working weight & integrated socle - enables fast & easy installation at every site
Does not require a special burner - generators are compatible with most products of quality burner manufacturers
BMU (Boiler Management Unit) - integrated PLC driven monitoring and controlling system
Easy to operate - through the help of the liquid crystal display (LCD) of the BMU
Information displayed in text-format (not through pictograms)
Maintenance friendly construction - easily removable heating coil
Electronic safety system - prevents firing without water



BMU - BOILER MANAGEMENT UNIT

The BMU is a PLC driven control unit, which regulates and monitors the operation of the steam generator. Parameters can be freely programmed. Data input and statistical queries can be made through the terminal on the control panel, which is capable of displaying real-time information.

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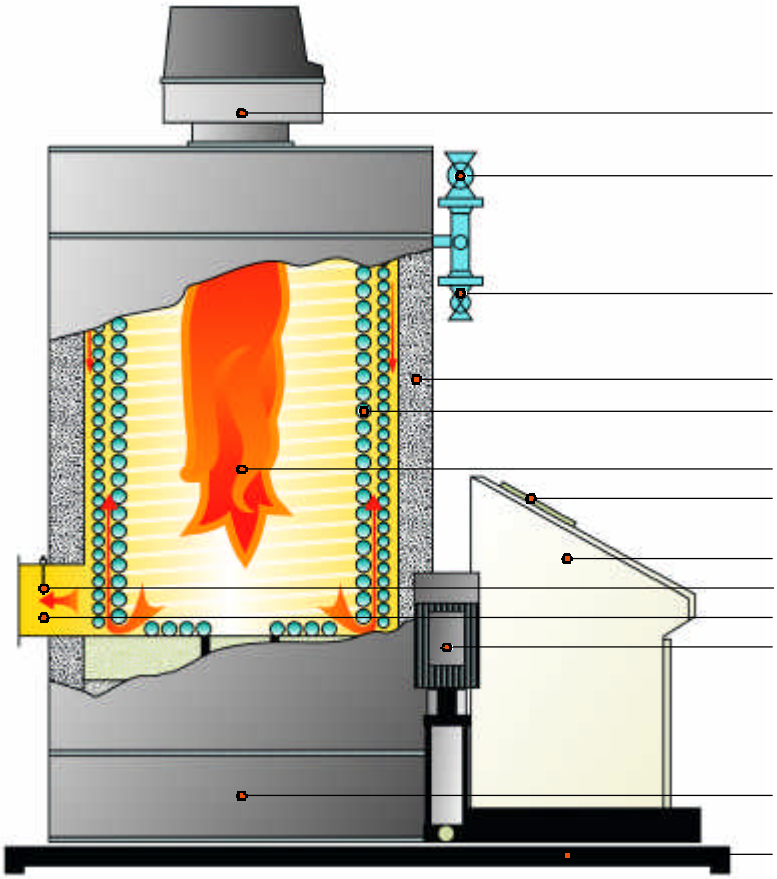
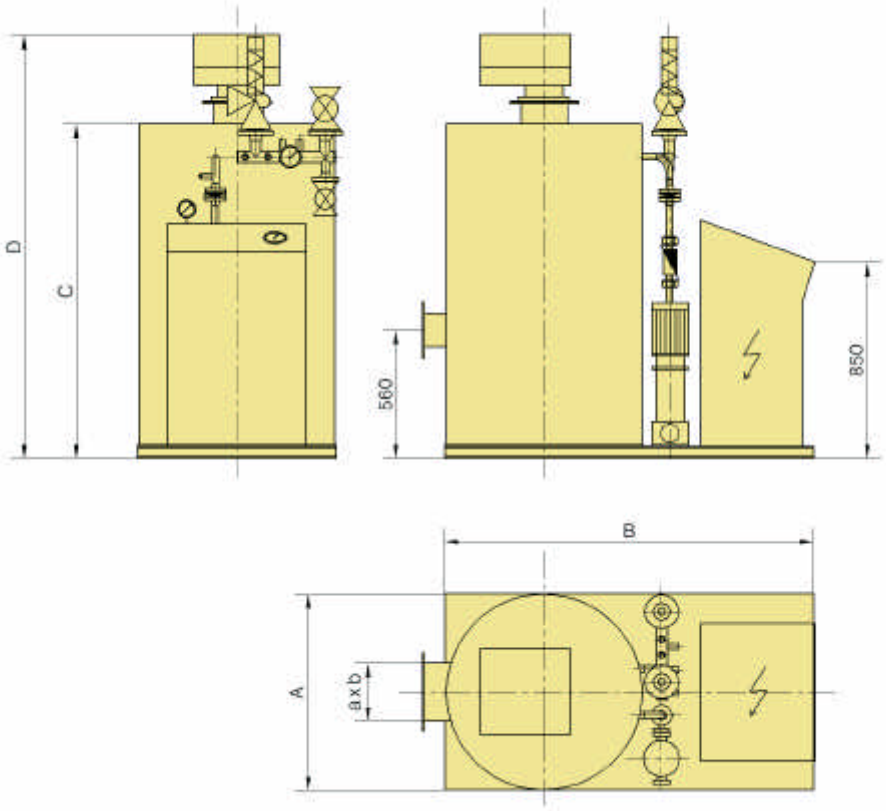


COMMONLY USED FOR ALL TECHNOLOGIES WHERE MIDDLE PRESSURED SATURATED STEAM IS NEEDED, SUCH AS:

- industrial ironing systems
- textile cleaning / purification
- vulcanization
- sterilization
- food - industry
- canning - industry
- steam baths



TECHNICAL PARAMETERS

INNOSTEAM

TYPE		IS-150	IS-230	IS-500	IS-600
Steam output	*(kg/h)*	150	230	500	600
Heat output	*(kW)*	110	170	350	420
Electricity usage	*(kW)*	1.2 - 2.2	1.4 - 2.4	1.2 - 3.4	2.9 - 3.9
Operation pressure	*(MPa)*	0.3 - 1.2			
Steam temperature	*(°C)*	max. 220			
Type of fuel		gas, LFO			

PHYSICAL DIMENSIONS

A	*(mm)*	800	900	1000	1000
B	*(mm)*	1500	1600	1700	1700
C	*(mm)*	1400	1400	1900	2200
D*	*(mm)*	1900	2200	2600	3200
Empty weight	*(kg)*	800	900	1200	1500
Feed flange		DN20	DN20	DN25	DN25
Steam flange		DN32	DN40	DN50	DN50
Flue gas flange	*(mm)*	150 x 250	150 x 250	150 x 400	150 x 400

*with **Weishaupt** burner

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