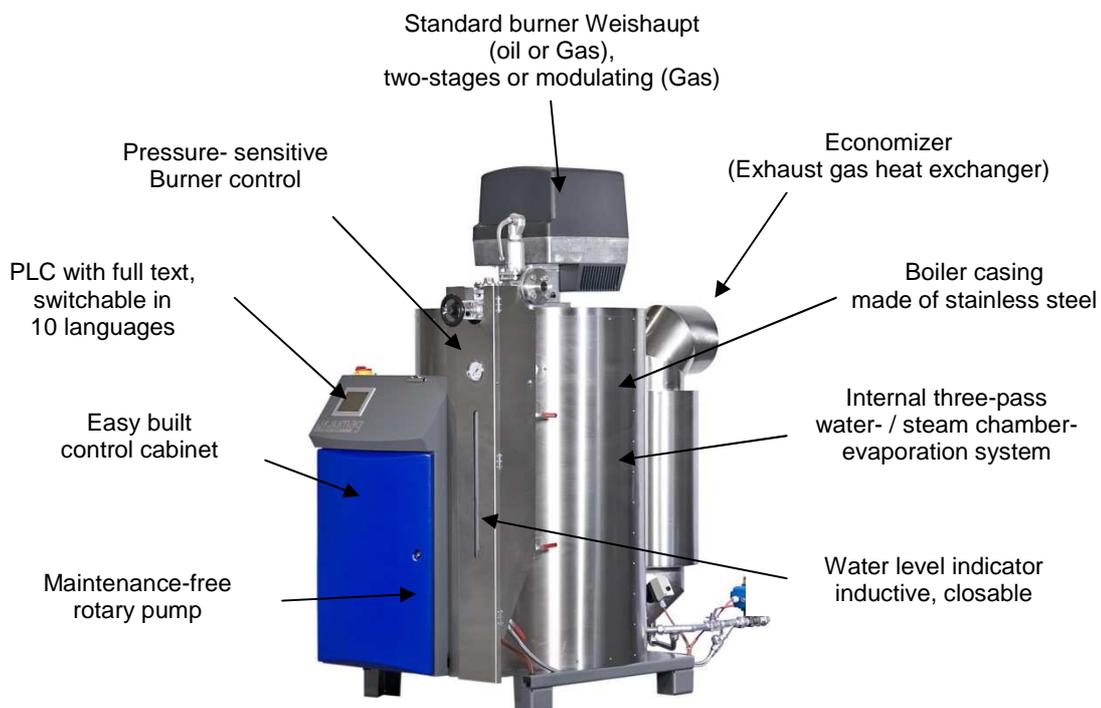


JUMAG Dampferzeuger – Our advantages

- **High quality standards**, achieved by using quality parts accessible on the market for example of Ebara – Grundfos - Weishaupt – Danfoss – Siemens – Klöckner Moeller – ARI
- **High fuel efficiency**, due to utilisation of exhaust gas energy efficiency up to 97%
- **Robustness** => our vaporization system contains in the boiler wall material thickness of 6 – 8 mm. No evaporator coil!
- **High operational reliability** due to a simple and compact overall construction (few wearing parts and electronic components)
- **Easy operation** – switch on only, in the evening blow down and switch off, start-up procedure not complicated.
- **Top steam quality**. Few water entrainment thanks to the carefully designed construction (Water space and steam chamber).
- **Self-monitoring** via a PLC-Control System (Programmable Logic Controller) and sensor technologies
- **Touch screen panel** for an easy, menu-guided handling, language selectable
- **Spare parts guarantee of 20 years**; you can still get spare parts today for the boiler Jumag of the construction year 1980
- **Free of supervision – Approval and TÜV** in Germany and a lot of neighbouring countries
- **Boiler sequence circuit** for the management of multiple boilers
- **Certificate** for EC-Type examination. Certificate of Conformity and CE-Marking



In detail it means that:

1. JUMAG Boilers are, in contrast to most other manufacturers, serially equipped with Weishaupt standard burners. Not only the high quality but also the worldwide extended networks allow our customers to avoid high service costs. Nearly each heating installer is able to carry out a burner's maintenance.
2. Jumag boilers are operated with maintenance-free rotary pump, however the tubular boilers are operated normally with piston pumps or expensive special pumps. These pumps have cuffs and valves, which are also more prone to wear – contrary to a maintenance-free centrifugal pump.
3. Thanks to a low water-steam speed, Jumag boilers, is subject to more limited wear than a tubular boiler.
4. The steam is substantially dryer in Jumag boilers, compared to tubular boilers thanks to the existing water/steam chamber. It does lead due to the limited water content in steam to less wear in fittings and pipes.
5. Piston pumps, as a general rule, shall not be run over a feed water temperature of 80°C, special pumps as triplex pumps shall not be run under 90°C. The rotary pumps selected by Jumag Steam Boilers can be used for temperatures between 10°C and 120°C.
6. Jumag boilers will be put into operation with manual control by simply pressing the start button, tubular boilers, however, are approached in the circuit. Only after reaching a certain temperature, the steam valve will be opened, warmer steam flows in the cold pipes and fitting.
7. To avoid temperature increases of the boiler, a lot of manufacturers allow the fan of the burner to continue running when the energy supply has been switched off, which leads to considerable heat losses. JUMAG Steam Boilers store this energy, as burners with a running fan will not be used.
8. With the use of the exhaust gas heat exchanger, the heat energy is recovered from the exhaust gas and the boiler feed water preheated. Also with a temperature of the condensate of 90°C, a big quantity of energy will be collected from the exhaust gas temperature of approximately 190°C through the so-called Economizer. The efficiency increases by 97%, at the same time the exhaust gas temperature decreases at most of 155°C.
9. With a second, downstream Economizer, the exhaust gas temperature will reach 60°C. This one can be connected with flexibility for the heating of external process water or additionally from the feed water of the boiler.
10. If the firing system has to be changed later for example from oil to gas, only the burner has to be replaced in JUMAG's boilers. It is also possible by dual fuel firing.
11. A lot of valuable information is accessible on the Touch Panel thanks to the innovative self-explanatory PLC control with full text. You receive useful information (Reason / Clearance / Help) in case of potentially occurring troubles, which are saved with exact date and time and which can be accessed.
12. The full text display of our new control is provided in more than seven languages (German-English-Spanish-French-Turkish-Danish-Flemish-Slovenian) and will be complemented in case of need. The languages can be chose by simply switching.
13. Jumag boilers meet the requirements laid down by the EU directive 73 / 23 / EU and are for the operator, freely of TÜV supervision, approval and registration (in Germany).
14. The control cabinet of a JUMAG boiler is easily built up and equipped with few electrical components. Those are exclusively quality parts of Siemens, Klöckner-Moeller, Fanal and Weidmüller.

15. The point 13. applies also to multiple units' boilers. Two Jumag boilers connected in parallel perform up to 1.120 kg/h, three up to 1.680 kg/h and four boilers connected in parallel up to 2.240 kg/h. Bigger capacities have been already realized.
16. The main reason for the planning and the operation of a multiple units' boiler against a single large boiler is the redundancy. If the single large boiler shall fail because of a malfunction, no steam will be provided. In the case of a double unit, by contrast 50 % of the total steam output remains available.
17. Also the single boiler within the scope of multiple units' boiler can be operated in a needs-oriented way and therewith in an economically way. Depending of the steam output, the non-necessary boilers will be inactive and will be connected again to the steam net if needed. A boiler operator is not necessary.
18. For a multiple units' boiler argue in favor lower installation regulations also. About this matter, please contact your local responsible master chimney sweep for the district.



Did we convince you also of the advantages of our Jumag boiler? In that case, we will be pleased to take your order. You can secure yourself **for a long-term, a reliable, robust and extremely economic steam supply.**

For any further information, we stay at your disposal.

**With best regards,
Your Jumag Steam Boiler Team**

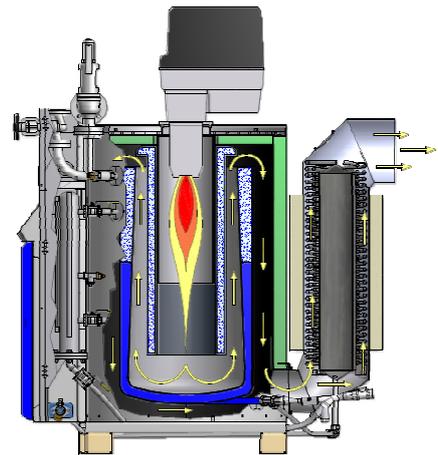


Abb.: Jumag quick steam boiler Type DG 560 (Evaporation system)