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## UNIMAT hot water boiler UT-M

With the UNIMAT hot water boiler UT-M you can rely on an extremely reliable heat and hot water supply. The highly efficient boiler is the ideal solution for medium and high temperature requirements, such as in central heating plants for local and district heating supply or for commercial and industrial heating and process heat applications in a wide range of industries.



### Technical data of the type UT-M

Heat transfer medium	High-pressure hot water
Design	Three-pass flame tube/smoke tube technology
Output in kW	750 to 19,200
Safety pressure in bar	up to 16
Max. temperature in °C	up to 190
Fuel	Oil, gas, multi-fuel firing Biogas, bio-oil, hydrogen, special fuels

### High level of efficiency for reduced operating costs

When using efficiency components such as a flue gas heat exchanger or condensing heat exchanger you not only optimise the efficiency of your boiler system. You can also save up to 15% on fuel and, at the same time, improve your CO<sub>2</sub> balance sustainably.

- ▶ Effective three-pass design and special thermal insulation concept for minimised radiant heat losses
- ▶ High level of efficiency without flue gas heat exchanger up to 93% or up to 105% with condensing heat exchanger
- ▶ Low-emission combustion thanks to the use of highly developed firing systems and careful matching of the best boiler and burner combination

### User-friendly operating concept

- ▶ Compact control CWC for heating and hot water boiler systems
- ▶ Individually configurable boiler control BCO for complex requirements
- ▶ Ready to connect to automation systems
- ▶ Protected remote access MEC Remote

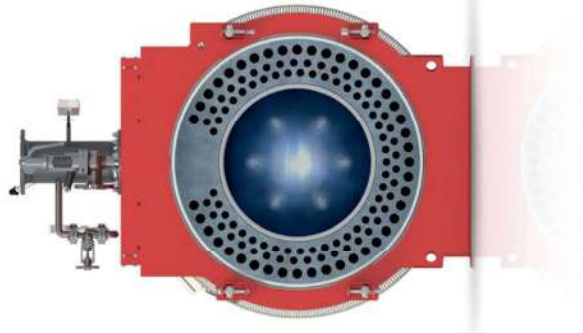
### Quick installation and effective maintenance

- ▶ Compact construction for bringing the boiler into site easily if space is limited
- ▶ Simplified wiring on-site thanks to plug-in connections
- ▶ Smooth commissioning due to pre-parameterised boiler control
- ▶ Easy to maintain thanks to fully hinged boiler front door
- ▶ Smoke gas passes are free of flow components

### Reliable performance and customised equipment

We offer you the high-pressure hot water boiler in various capacities up to 19.2 MW. The heat output can be increased by intelligent cascading of several boilers. Perfectly matched components, such as for fuel supply and return temperature increase, optionally supplement the system.

- ▶ CE certified
- ▶ Comprehensive, series-wide basic equipment
- ▶ Universally applicable with different fuels and multi-fuel firing
- ▶ No minimum burner load specification avoids internal condensation on the flue gas side
- ▶ Approved for low return temperatures from 50 °C
- ▶ High permissible temperature spread up to 50 K
- ▶ Robust, reliable and unsurpassed in its durability





## Design

The inserted flame tube ends in an inner, fully wetback smoke gas reversing chamber, which leads into the first smoke tube pass. The first smoke tube pass and second smoke tube pass are free of flow components. The functional round design ensures optimal pressure resistance. Combustion chamber, water chamber volume, radiant and convection heating surfaces are perfectly dimensioned and matched to each other.

The boiler front door can be fully hinged, optionally opening to the right or left. The entire cross section of the boiler is freely accessible. This ensures simple and easy maintenance, cleaning and inspection. The high-quality mineral wool insulation over the entire boiler

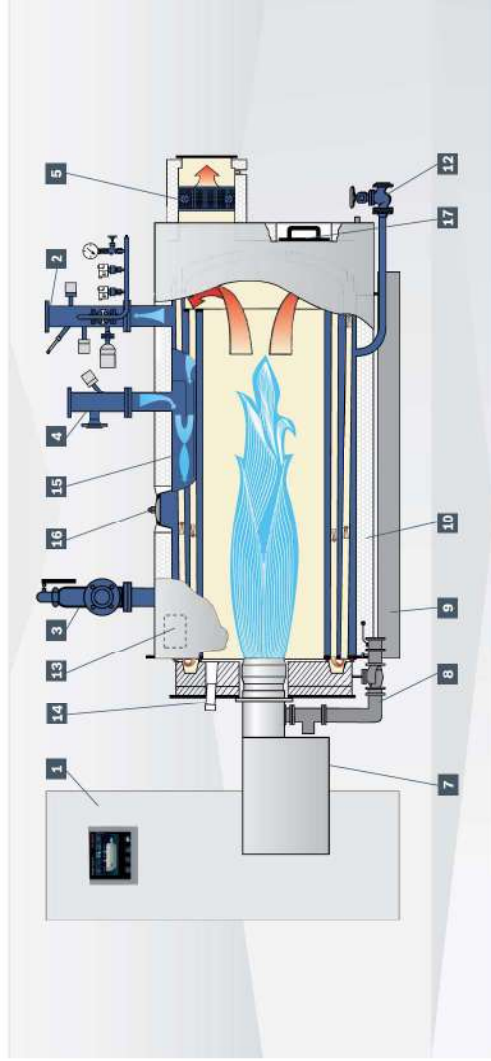
body, combined with the special insulating materials in the front door, keep radiant heat losses at a low level. In contrast to the classic refractory lining, the Bosch insulation composite has superior insulation values. Another benefit is that this insulation composite is designed to last the entire boiler lifetime when operated correctly. The hot water boiler can already be fitted with an integrated flue gas heat exchanger or condensing heat exchanger in the factory on request.

The certification in accordance with European pressure equipment directive ensures a high operating and safety temperature level up to a maximum of 190 °C.

## Equipment

The hot water boiler UT-M is offered as a complete boiler system including equipment\*. The basic equipment includes the boiler pressure vessel, the control and safety components, the burner unit, the flue gas heat exchanger or condensing heat exchanger, a terminal box and the control cabinet including the compact control CWC or boiler control

BCO for complex requirements. The sensors, actuators and country-specific safety devices are already wired and combined in the terminal box. Pre-assembled, plug-in and codecable bundles simplify the connection between the boiler control cabinet and the terminal box during installation.



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| <ul style="list-style-type: none"> <li>▶ 1 Control cabinet with compact hot water boiler control CWC or boiler control BCO</li> <li>▶ 2 Supply flow adapter piece with temperature limiter</li> <li>▶ 3 temperature monitor</li> <li>▶ 4 temperature controller</li> <li>▶ 5 level limiter</li> <li>▶ 6 pressure indicator</li> <li>▶ 7 manostat tube shut-off valve</li> <li>▶ 8 Full-lift safety valve</li> <li>▶ 9 Return flow adapter piece</li> <li>▶ 10 temperature monitor</li> <li>▶ 11 connection for safety expansion line</li> </ul> | <ul style="list-style-type: none"> <li>▶ 12 Flue gas heat exchanger ECO – alternatively the flue gas connection can also be realised lateral or upwards</li> <li>▶ 13 Burner</li> <li>▶ 14 Gas regulation module</li> <li>▶ 15 Base frame</li> <li>▶ 16 Insulation with protective shell</li> <li>▶ 17 Drain shut-off valve, maintenance-free</li> <li>▶ 18 Terminal box</li> <li>▶ 19 Sight hole</li> <li>▶ 20 Injector device for inner temperature boosting</li> <li>▶ 21 Inspection opening, water side</li> <li>▶ 22 Inspection opening, flue gas side</li> </ul> |
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Gas regulation module GRM

## Compatible products

- ▶ Water treatment module WTM
- ▶ Flue gas heat exchanger ECO
- ▶ Flue gas heat exchanger ECO for condensing use
- ▶ Supply/Return flow adapter piece SP/RP
- ▶ Return flow temperature safeguard RTS
- ▶ Gas regulation module GRM
- ▶ Oil circulation module OCM
- ▶ Oil supply module OSM
- ▶ Controls for optimising combustion
- ▶ Compact hot water boiler control CWC
- ▶ Boiler control BCO
- ▶ System control SCO
- ▶ Remote access MEC Remote
- ▶ Digital efficiency assistant MEC Optimize

For further information please see our brochure 'Boiler and efficiency components'.

\*The equipment level is variable and can be freely configured to customer requirements.