Geminox

Geminox ecoefficience®
LESS ENERGY. LESS EMISSIONS. MORE COMFORTABLE.

THRs - gas condensing boiler

Condensing boilers THRs

Modern technology and the environment

Thirty years of research and development, striving for solutions that are energy efficient, environmentally sustainable and of the highest quality, Geminox have developed a range of Condensing Boilers which provide everyday comfort, while still preserving the environment for future generations. A key point in the development of the market leading Geminox Condensing Boiler range is the integration with the latest Siemens LMS controls. These controls allow for seamless integration in the utilization of renewable energy sources such as solar collectors or heat pumps to create the most energy efficient solution available in todays market.

UNIVENTA®
NEW DIMENSION OF THERMAL COMFORT

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State of the art technical design

5 steps to energy efficiency

The first stage occurs in the **re-utilization**[1] of the heat which is a by-product of gas burning process, which in conventional boilers escapes up the chimney to be released to the atmosphere. This additional heat is captured in the condensation process, and is used to preheat the return water from the central heating.

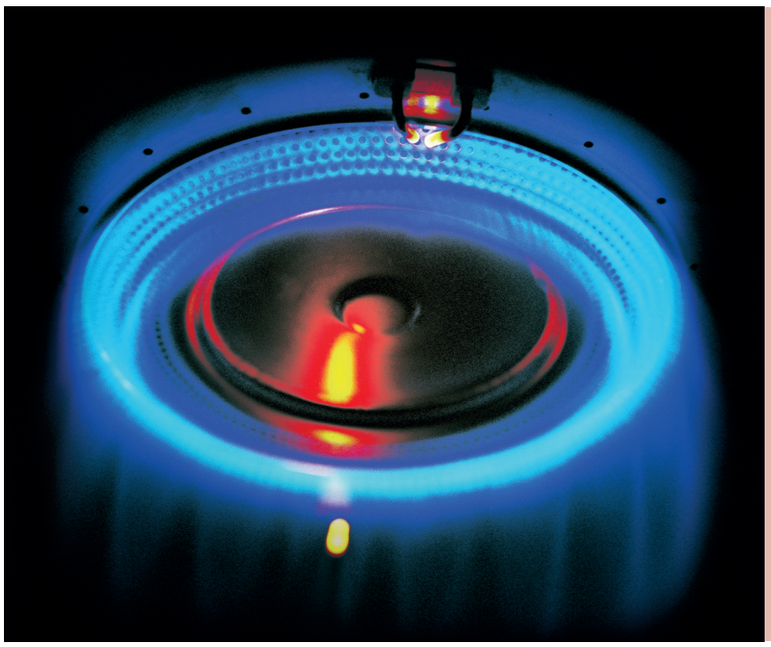
The second step is to **optimize the combustion**[2] process in the entire modulating power range of the boiler. The patented ring burner premixes fuel (natural gas or propane) and air to ensure maximum combustion efficiency with a minimum of impact on our environment.

The third step is the **adaptable Weather-Compensated Control Unit**[3] integrated in the Geminox Boiler's Siemens LMS control system, which prevents unnecessary cooling of the walls of the building, optimizing comfort and increasing the efficiency of the entire heating system. The Siemens LMS controller is capable of expanding the heating system, utilising alternative sources of thermal energy including solar collectors.

The fourth step is the intelligent **energy-efficient variable speed circulating pump**[4].

This feature greatly reduces the temperature of the return water in the transitional period where less heating is required. The greater the difference between the supply water and the return water temperature, the more condensing takes place. The result is further reductions in the overall power consumption of this system.

The fifth, and most important step is the **wide linear modulation of heating capacity**[5] of the Geminox Condensing Boiler. This means the heating output can modulate between 10–100 % of the maximum capacity of the condensing boiler, depending on the heating requirements of the home at any given time, and the ambient weather conditions, eliminating undue cycling of the condensing boiler.



During the period of the year where heating is required, depending on the ambient temperature, the quality of your building's insulation and your particular internal temperature preference, the full capacity of your condensing boiler will not always be required. Also if you are using solar collectors as an additional heat source, then a reduced capacity output is required to satisfy the thermal requirements of your building.

There are massive savings to be made, and energy to be saved by utilizing this technology, in comparison to a traditional boiler. There can be a 90 % reduction in the number of starts per year required by a Geminox Condensing Boiler in comparison to a traditional boiler, which not only results in savings in energy and running costs, as well as lengthening the life cycle of your condensing boiler.

This feature can also assist in the event of extending your home, or installing a swimming pool which you would like to heat. You can plan for these future events and install a Geminox Condensing Boiler thinking of the future, as the variable capacity will modulate for your current requirements, but have enough capacity to cater for your future requirements.

Overview of Geminox Condensing Boilers

THRs C (DC)

THRs M-75H (DC)

THRs M-75V

THRs 1-10C

Boiler has a capacity output range from 0.9 to 9.5 kW, intended for heating of buildings requiring a heating capacity up to 10 kW.

The base model can also be utilized to provide domestic hot water, and for this purpose will require an external domestic hot water storage tank (BS, MS, GBS).

This Condensing Boiler is typically used in low-energy and passive houses and often used in conjunction with alternative energy sources (solar, heat pumps etc).

The boiler is also available in dual-circuit DC versions.

This Geminox Condensing Boiler is a World Leader in capacity output modulation range (10–100 %).

THRs 2-17C

Boiler with a power range from 2.3 to 16.9 kW is intended for heating buildings requiring a heating capacity up to 17 kW.

The base model can also be utilized to provide domestic hot water, and for this purpose will require an external domestic hot water storage tank (BS, MS, GBS). The boiler is specifically designed for use in modern newly constructed buildings, and is capable due to its very low minimum capacity output to ensure the optimal thermal performance without undue heating and energy-intensive cycling.

The boiler is also available in dual-circuit DC versions.

This provides a standard efficiency in the range of 106–109 % when modulating through its entire range. The result is 25 to 40 % energy savings compared to conventional boilers.

THRs 5-25C

Boiler with a power range from 4.8 to 23.9 kW is intended for heating buildings requiring a heating capacity from 17 to 24 kW.

The base model can also be utilized to provide domestic hot water, and for this purpose will require an external domestic hot water storage tank (BS, MS, GBS).

The boiler is also available in dual-circuit DC versions.

THRs 2-17M-75V
THRs 2-17M-75H

Boiler with a power range from 2.3 to 16.9 kW is intended for heating buildings requiring a heating capacity up to 17 kW.

Hot water is locked in an integrated stainless steel tank with a capacity of 75 liters, which provides domestic hot water for one bathroom including a shower or bath.

The boiler due to its compact size, and elegant design, can be positioned inside the building and is usually used in apartments and smaller new family homes, which due to its optimal capacity output range and suitably designed domestic hot water tank becomes an ideal solution.

Boiler THRs 2-17M-75H is also offered in dual-circuit the DC version.

Geminox Condensing boilers THRs DC

Ideal solution for modern homes and buildings

In a category of its own is the unique, highly efficient Geminox THRS DC range. The THRS name is derived from the French term “Trés Haut Rendement” which translates to “Very High Efficiency”. In conjunction with the latest Siemens LMS Control Unit, DC stands for Double Circuit which means this DC range has the capability of having two separate heatings circuits of differing temperatures.

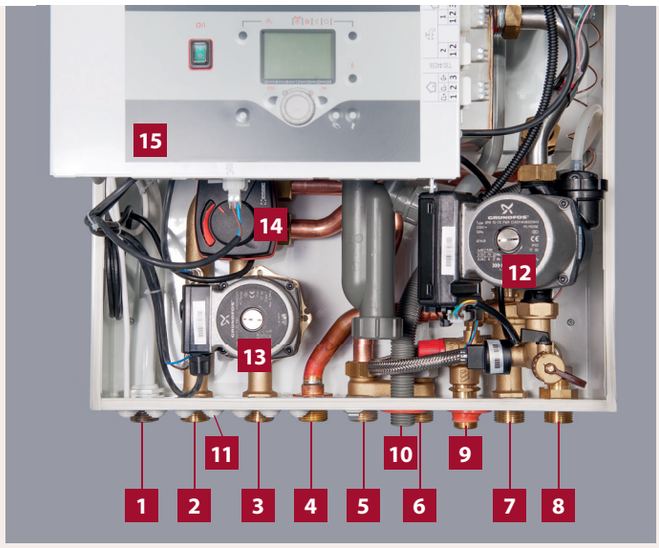
This product has been developed with many years of studying the requirements of the heating market combined with Geminox‘s rigorous technical research and development and ongoing customer evaluation to develop this product which successfully meets all the requirements of modern living in a family home.

Its uses include:

- Direct Heating Circuit (usually radiators)
- Mixed heating circuit (usually floor heating)
- Domestic Hot Water for 1 to 2 bathrooms with circulation
- Management of Solar Domestic Hot Water and the option of heating the home as well as a swimming pool.

Appliance layout for THRs DC

1. Gas supply
2. Output mixed HC 2 (floor heating)
3. Return mixed HC 2 (floor heating)
4. Return heating HW
5. Output heating HW
6. Output HC 1(radiators)
7. Return HC 1 (radiators)
8. Expansion tank connection
9. Safety valve
10. Condensing water
11. Elec. cabling
12. HC1/HW modulating pump class A
13. Modulating pump HC2
14. Three way valve with actuator
15. Control unit Siemens LMS with Clip-in module



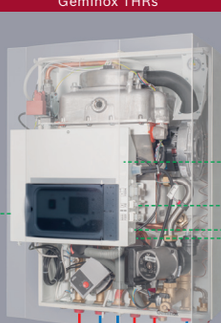
Gemelios

solar solution for new build homes

Solar Collector

Multifunctional room unit QAA75/78

Condensing boiler Geminox THRs



Outdoor temperature sensor QAC34

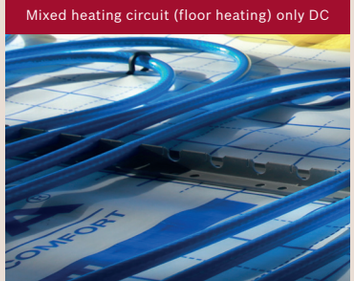
Solar Tank

Pump Group

Drain Back Cooling Tank (for DF)

Expansion Tank

Mixed heating circuit (floor heating) only DC



Direct heating circuit (radiators)