

Compact Heat Pumps

Heat pump series from 5 to 500 kW

WATERKOTTE energy saving control with integrated consumption and efficiency measurement.

Optionally available with telemonitoring and remote control.



. . . with benefits based on the longest experience. . .



Together with skilled WATERKOTTE installation partners near you, we offer benefits based on the longest experience in this field, together with extended warranty!

Building heating • Building cooling • Hot water production • Pr

Why use renewable energy?

- + Nowhere is renewable energy more economical than in building services.
- + The total costs of our systems are significantly lower than those of remote heating or of any other fuel – including gas and oil.
- + Another advantage is the high supply guarantee and decoupling from continuous cost increases of all fuels.
- + Using a heat pump will also increase the value of your property.
- + ... and in the summer you return energy to the source, i.e. you can cool your house virtually at no cost.

Benefit from our experience

Together with our system partners (installers) we have both the widest and longest experience in this field. This goes back to the pioneer work of Klemens Oskar Waterkotte, who powered his house exclusively with renewable energy as early as 1969.

Technological leadership

Today, the WATERKOTTE Group is the only single source supplier of this technology, making it superior to any other solution for heating, hot water and cooling – both from an economic (lowest overall costs) and ecological (minimum environmental pollution, maximum preservation of resources) point of view.

Ai1QE series – heating system

Performance range: 7 to 18 kW

Complete hot water heating system with integrated central process water supply, consisting of heat generator (heat pump), heat source system, heating technology with changeover for hot water provision, indirect hot water provision and natural cooling. Integrated consumption and efficiency measurement (not included in air/water series), scroll compressor, standing intermediate tank, 250 l capacity, complete electrical system (connection external case, on top) and control system, frame enclosure with removable, heat and sound insulated enclosure on all sides, dimensions: W=705, H=1870, D=733 mm.

Ai1QL series (heating system –air/water)

Performance range: 8 to 20 kW

Same design as Ai1QE, additional outside module: Heat source outside air. Dimensions of outside module: W=943, H=1350, D=330 mm.

DS 5023 series – central unit

Performance range: 5 to 25 kW

Compressor: Scroll, compact device in soundproof housing, ready-to-connect with hermetic scroll compressor, temporary electrical heater 3 x 2 kW, with control and safety thermostat (as start-up aid for initial operation). Including the entire heating technology: Expansion vessel, filling pressure gauge, safety valve, deaerator, air diverter, housing for heating circulation pump, coated with plastic on the inside, metal cladding can be removed without undoing the pipe connections, insulation of structure-born noise by means of double chassis construction, dimensions: W=700, H=1000, D=552 mm.

DS 5050T series – compact device

Performance range: 23 to 50 kW

Power regulation: 50 % / 100 % compressor: Tandem scroll, ready-to-connect with hermetic scroll compressor, metal cladding can be removed without undoing the pipe connections, insulation of structure-born noise by means of double chassis construction, electronic starting current damping (1 per compressor), 5 coupling relays (max. 10 A, 1 x 230 V) for following loads: heat source pump, heat pump, warm water pump, dimensions: W=750, H=1300, D=500 mm



Ai1QE / Ai1QL



DS 5023



DS 5050T

Process cooling • Concrete core activation • Heat recovery

Control

All devices are equipped with a standard central control and communicate with the WATERKOTTE building management technology.

All controls can be cascaded (when there is more than one heat pump) and have a standard bus protocol, thus allowing communication with an extended control program. These extensions include room heating systems and the control of probe fields (parallel operation of several geothermal energy probes).

Optionally, the controls can be equipped with remote control systems. This provides the option of remote control technology, including visualization at the highest level of technology.

Seamless product range:

- + Building management technology
- + Geothermal energy probes, probe fields
- + Control for automatic probe field optimisation
- + Heat source supply technology
- + Ready-to-connect heat pump heating unit
- + Compact heat pumps – unit power up to 500 kW
- + Heat transfer ENEX-Floor, ENEX-Ceiling
- + Ventilation with heat recovery
- + Hot water supply, central or distributed
- + Room temperature control
- + Heater control with and without remote control
- + System for thermal supply of swimming pools

DS 5051 series – compact device

Performance range: 19 to 52 kW

Compressor: Scroll, compact device, ready-to-connect with hermetic scroll compressors, metal cladding can be removed without undoing the pipe connections, insulation of structure-born noise through double chassis construction, inside housing walls have soundproof lining and are safely and permanently protected by powder-coating and stove enamel finish, dimensions: W=900, H=1000, D=552 mm.

DS 5110 series – compact device

Performance range 49 to 108 kW

Compact device in soundproof housing, ready-to-connect, compressor: Two hermetic scroll compressors, power regulation: 50 / 100 %, metal cladding can be removed without undoing the pipe connections, insulation of structure-born noise through double chassis construction, dimensions: W=1100, H=1300, D=850 mm.

DS 5240 series – compact device

Performance range: 91 to 230 kW

Soundproof housing, ready-to-connect, metal cladding can be removed without undoing the pipe connections, insulation of structure-born noise through double chassis construction, dimensions: W=1400, H=1565, D=850 mm.

Design with semi-hermetic reciprocating piston compressor

Power regulation: 75 % / 100 %

Design with rotary screw compressor

Power regulation 66 % / 100 %.

DS 6500 series

Performance range: 191 to 491 kW

Compact device in open construction, ready-to-connect, with all-round protective frame, compressor, semi-hermetic rotary screw compressor, power regulation 75 / 100 %, electronic motor protection, with thermal monitoring via PTC sensors, operating limit for R407C: B-5/W50 or W5/W55 (when power regulation is 75 %, the operating limit is reduced by ca. 10 °C).

dimensions: W=2300, H=1827, D=930 mm.





Advantages of using WATERKOTTE heat pumps in large-scale projects:

- + Device with heating, cooling and hot water function
- + Possibility of passive use of "cold" stored underground (in case of geothermal probe systems)
- + Excellent performance factor during active cooling via the heat pump, since condensation heat can be abducted from the ground, thus providing a significantly lower temperature level than with conventional dry coolers
- + An optimised hydraulic system can be provided for each project (upon request)
- + The extensive control functions can be illustrated with the WATERKOTTE control system.
- + Two-step adjustment of power output of heat pumps is possible (50 / 100 %, 66 / 100 % or 75 / 100 %)
- + Remote visualisation is possible on all heat pumps
- + Very low maintenance costs
- + No chimney, no gas outlet, and no oil tank required
- + Possible CO₂ savings are between 60 to 70 % in comparison to gas or oil-fired boilers in connection with a standard cooling device
- + Short amortisation period
- + Independence from oil and gas prices
- + More than 40 years experience

For more information



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