

inverter heat pumps



Keep the Power SYSTEM

SCOP $\geq$ 4,82

Inverter inside

A+++

 NATURAL
 REFRIGERANT

**PROPANE
R290**

DESIGNED
AND CERTIFIED
IN THE EU 



HTi20 



INVERTER

Modern heating equipment

HKS LAZAR, a family-owned company, is one of the leading Polish manufacturers of heating devices. The roots of the enterprise, led by the Lazar brothers, trace back to 1937. With a network of over 400 partner firms, their reach spans across the entire country. Additionally, successful exports to most European countries contribute to the company's international character.

The constantly expanding range of products currently includes heat pumps, pellet boilers, heat recovery systems, and accessories for manufactured devices, such as fittings and chimney connections.

The guiding slogan „**MODERN HEATING DEVICES**” is a commitment. The devices produced consistently rank at the forefront in terms of applied technological solutions. As one of the pioneering Polish manufacturers, **HKS LAZAR** introduced innovations such as ceramics in solid fuel boilers, lambda sensors in pellet boilers, innovative condensing pellet boilers, and air-to-water heat pumps with the R290 refrigerant.

Competence, responsibility, and integrity in dealings with partners are fundamental values upheld by all company employees. This forms the basis for building a strong, recognized, and stable brand, **HKS LAZAR** – a producer of modern heating devices.



Modern technologies are also applied in the device manufacturing process. Laser sheet cutting, alphanumeric plastic sheet processing, and robotic welding have become the foundation of production. Meanwhile, a well-equipped powder coating workshop ensures a high quality of paint coatings.



Designed and certified in the EU

Designed and certified in the heart of the European Union, the R290 heat pump from HKS Lazar guarantees quality and reliability.

With more than 30 years of experience in the heating industry, this innovative technology has been built on a wealth of knowledge and master craftsmanship.

As a product of a company with over 80 years of tradition, this heat pump combines the best guarantee with full service support, availability of spare parts, and full manufacturer's responsibility.

Certification in an accredited laboratory within the EU is an additional confirmation of the product's quality, ensuring compliance with the highest standards. Choosing HKS Lazar is an investment in the future.



Awards, honors and nominations



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inverter
heat pumps



HTi20 AIR TO WATER

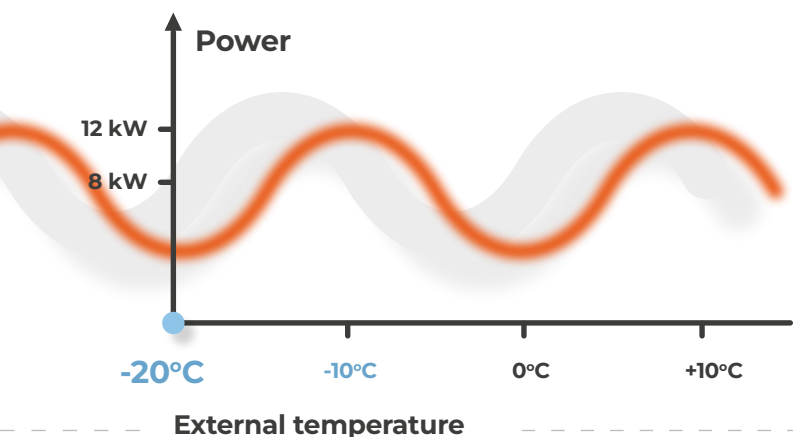
Inverter



Power modulation

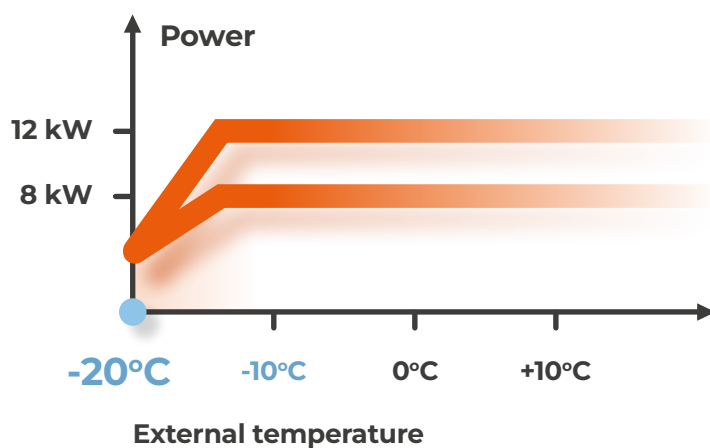
With the inverter technology, power can be modulated to adjust it to the desired demand, contributing to lower energy consumption. The system comes with:

- Higher seasonal efficiency.
- Simpler installation.
- Comfort of use.



Keep 
the **Power**
SYSTEM

 **lazar**



SmartControl 10

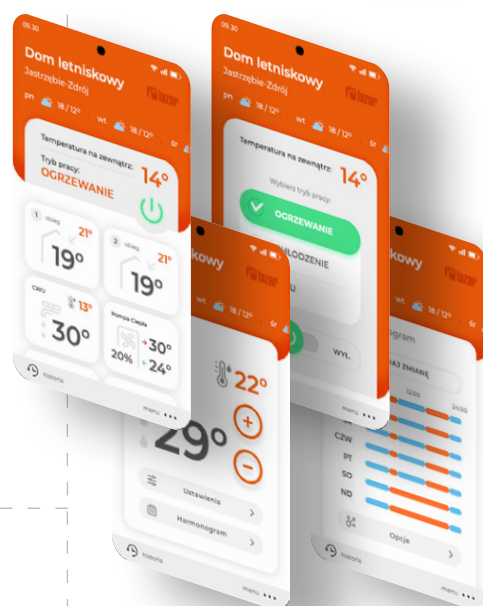
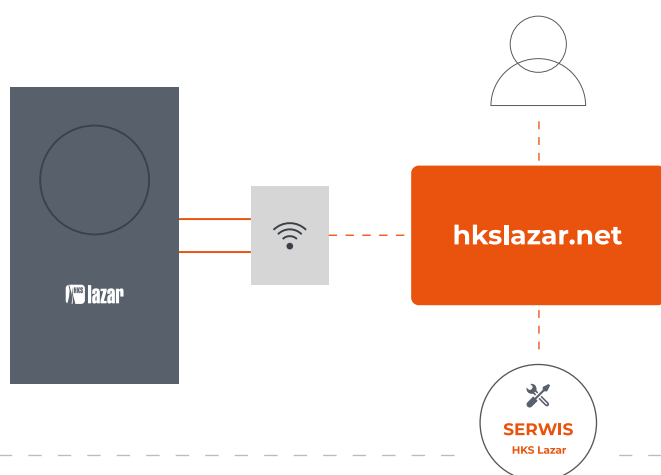


- Dual heating circuits operation
- Room temperature sensors included
- Ability to set heating schedules
- Weather-dependent control
- Separate adjustment of heating curves for each circuit
- Compatibility with emergency power supply, safeguarding against PC freezing
- Control of an additional heat source



Web application HKSLAZAR.NET

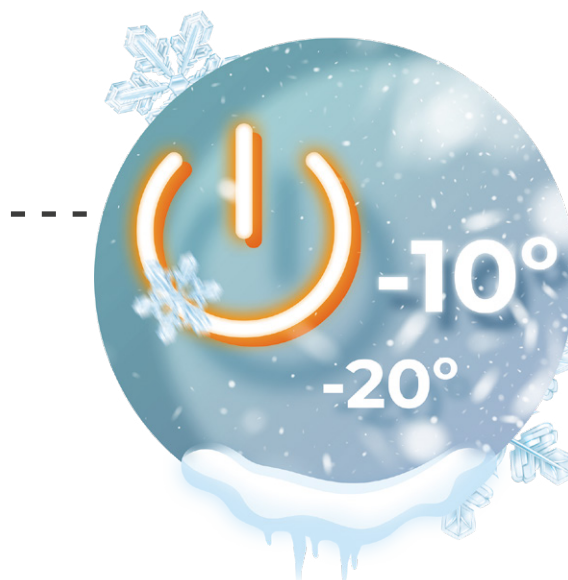
- Integration with a heat pump
- Remote temperature adjustment capability
- Viewing heat pump operating modes
- Remote access to servicing



High power at -10°C. Operation below -20°C

With the Keep the Power System (KP System), the HTi20 pump maintains its nominal power even at very low ambient temperatures. Thanks to this feature, the pump can serve as the primary heat source.

- Primary heat source.
- Lowered bivalent point.
- Energy saving.



inverter heat pumps

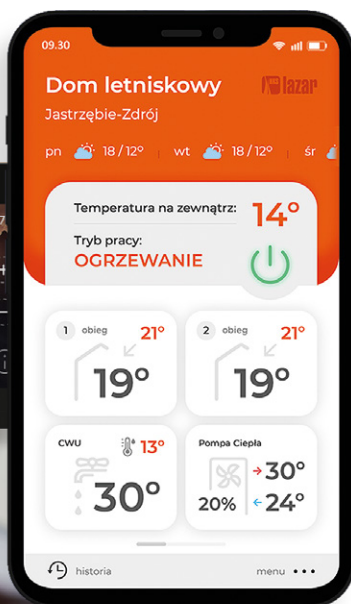


HTi20 AIR TO WATER

Highest quality

High quality is the main pillar of **HKS LAZAR**'s business philosophy in every phase of the product's life cycle: from design, through production, to service coverage.

- Best components.
- Restrictive production control.
- Factory service.



Comfort

Care for full customer satisfaction is one of our priorities.

- Power adapted to the demand.
- Silent operation.
- Maintenance-free heating.
- Cooling as standard.
- Online service.
- Touch display panel.
- Intuitive menu.
- Room temperature sensor as standard.
- Two heating circuits as standards.



Cost-saving

Thanks to its high efficiency, power modulation and simple installation, the HTi20 heat pump is the investment for every project and budget.

- Power adapted to current demand.
- Very high COP coefficient, up to 5.02.
- No registration requirement and no gas emission fees (the heat pump runs on R290 propane).
- Broad operating range (-25°C to +35°C)
- limited demand for additional heat sources.
- Installation without a cooling license.
- Weekly schedules.
- Weather control.
- Simple installation.



Ecology

- Emission-free heating.
- Renewable heat source.
- R290 propane is characterized by zero destructive potential for the ozone layer (ODP=0) and a very low global warming effect (GWP=3).



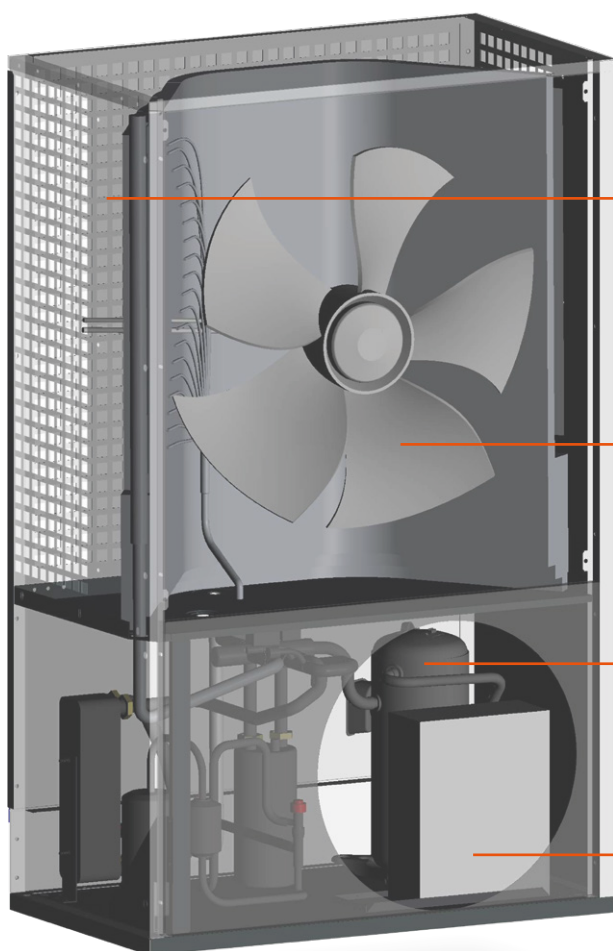
ATMO
Conferences

We regularly attend major global conferences devoted to the development of natural refrigerant technologies.

inverter 

heat pumps

HTi20 AIR TO WATER



Patented evaporator adapted
for operation with **R290** refrigerant

EC fan with smooth rotation
control and low power
consumption

Inverter compressor
with modulated efficiency

INVERTER

DESIGNED
AND CERTIFIED
IN THE EU



Keep 
the **Power**
SYSTEM



Natural refrigerant - R290 PROPANE

Since care for the natural environment is one of **HKS LAZAR**'s priorities, our heat pumps run on R290, a natural cooling medium (propane). This gas is neutral for the ozone layer and is characterized by negligible global warming effect GWP=3 (by comparison, the GWP of the most popular refrigerant, R410A, is 2088). This brings considerable relief to our environment. However, our heat pumps running on R290 offer advantages to the user as well. Replenishing R290 is much cheaper, considering the rapidly growing prices of f-gases in connection with restrictions imposed on their production and use. First and foremost, our heat pumps will not be recalled, which can be the case for pumps running on f-gases (such as R410A).

 NATURAL
 REFRIGERANT

PROPANE R290

A+++



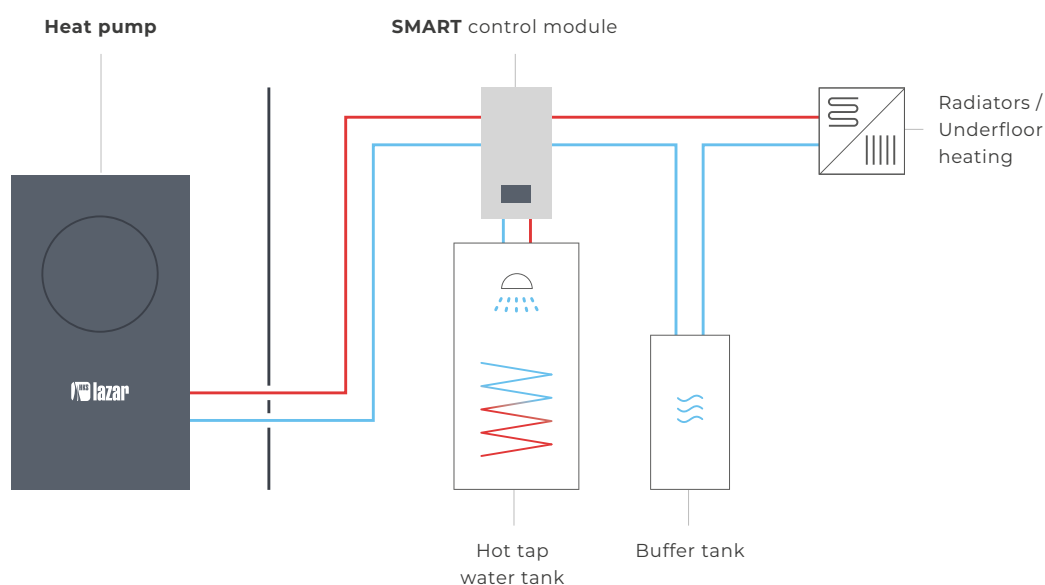
Smart control module



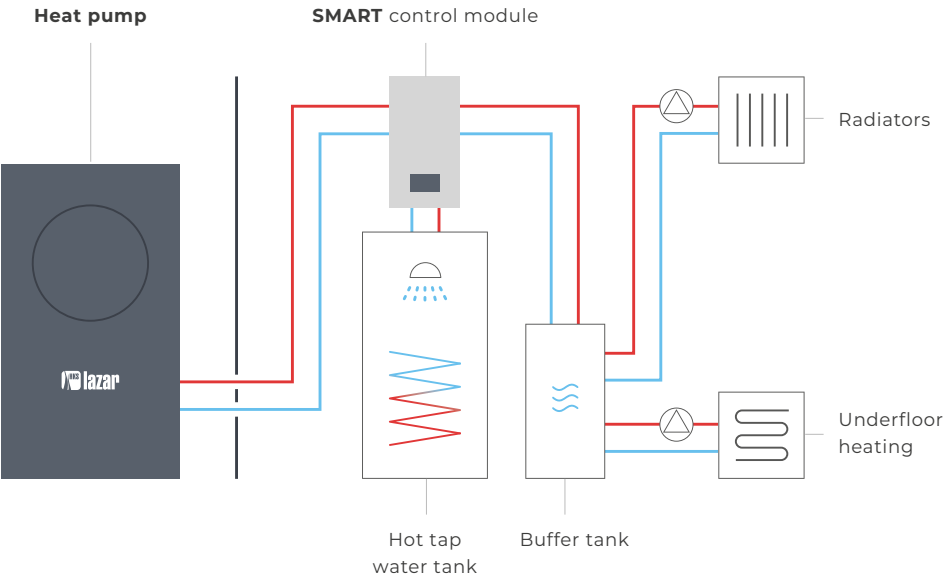
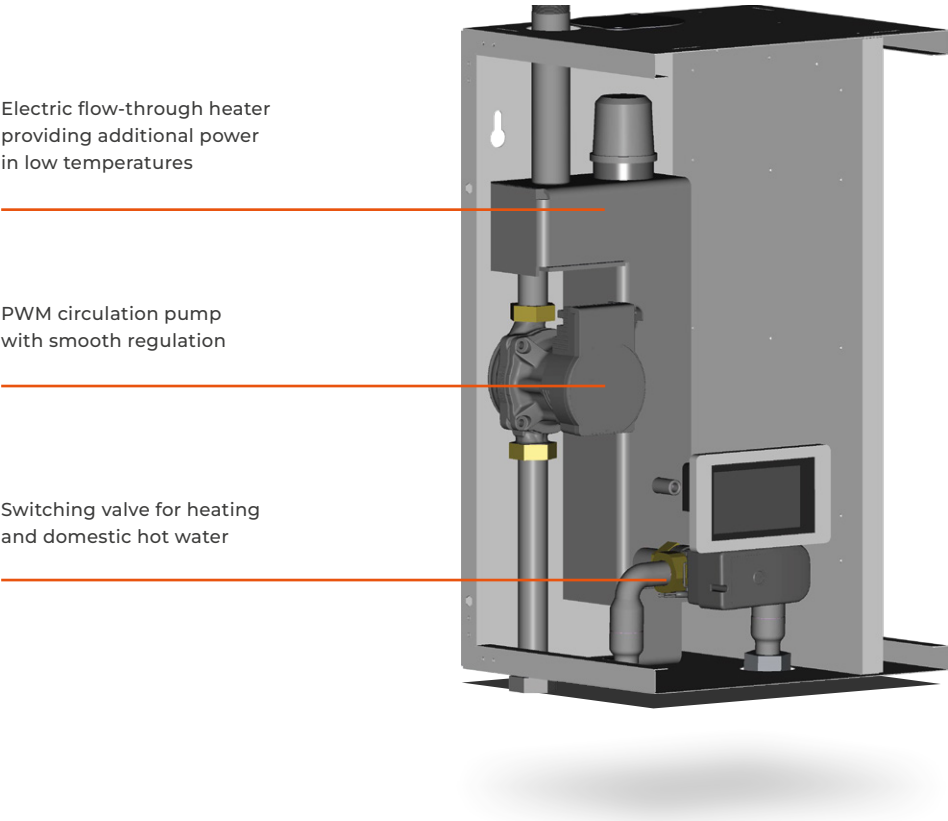
The **SMART** unit contains a controller offering many functions for the user, an electronic installation manual, a supplementary electric heater, a central heating/hot tap water switch valve, and a circulation pump. It is connected with the external unit by means of a communication cable included with the device.

The Smart module includes:

- **SmartControl 10** heat pump controller
- Internet module
- Electric supplementary heater
- PWM main pump
- Heating and DHW switching valve



Smart control module



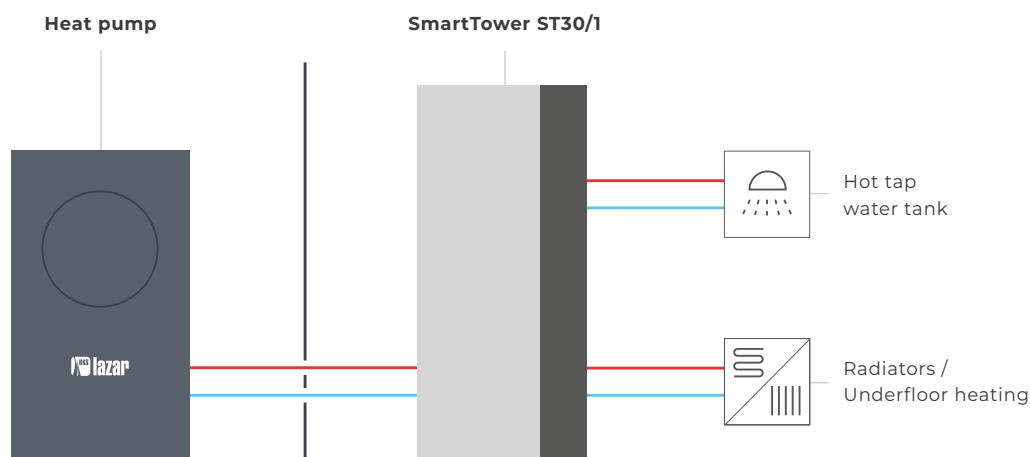
SmartTower 30



The **SmartTower** external unit is a complete boiler room, all in a single housing, which creates more space in the actual boiler room and saves installation time. SmartTower 30 can be expanded with an additional heating circuit with a mixing valve (option ST2).

The SmartTower30 module includes:

- **SmartControl 10** heat pump controller
- Internet module
- Hygienic hot water storage tank with a capacity of 190l
- Buffer tank with a capacity of 30l
- Electric supplementary heater
- Heating water filter with magnetizer
- Diaphragm vessels for heating and DHW
- Safety valves for heating and DHW
- Heating and DHW switching valve
- PWM main pump
- Direct circulation pump
- Differential-relief valve
- Additional circulation pump (ST2 option)
- Mixing valve for additional circulation (ST2 option)



SmartTower 30



Diaphragm vessels for 18l heating installation and 8l DHW installation

Buffer tank with a capacity of 30l in a serial arrangement, improving heat pump operation and providing defrosting energy, equipped with safety valve, air vent, and pressure gauge

Electric flow-through heater providing additional power in low temperatures

Hygienic hot water storage tank with a capacity of 190l. Domestic water is heated in a stainless steel coil, stainless steel ensures clean water free from Legionella bacteria

Heating and DHW switching valve

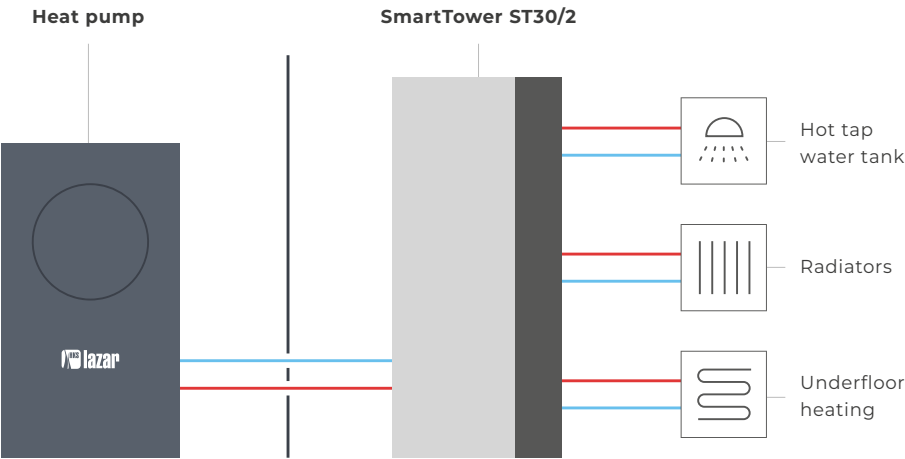
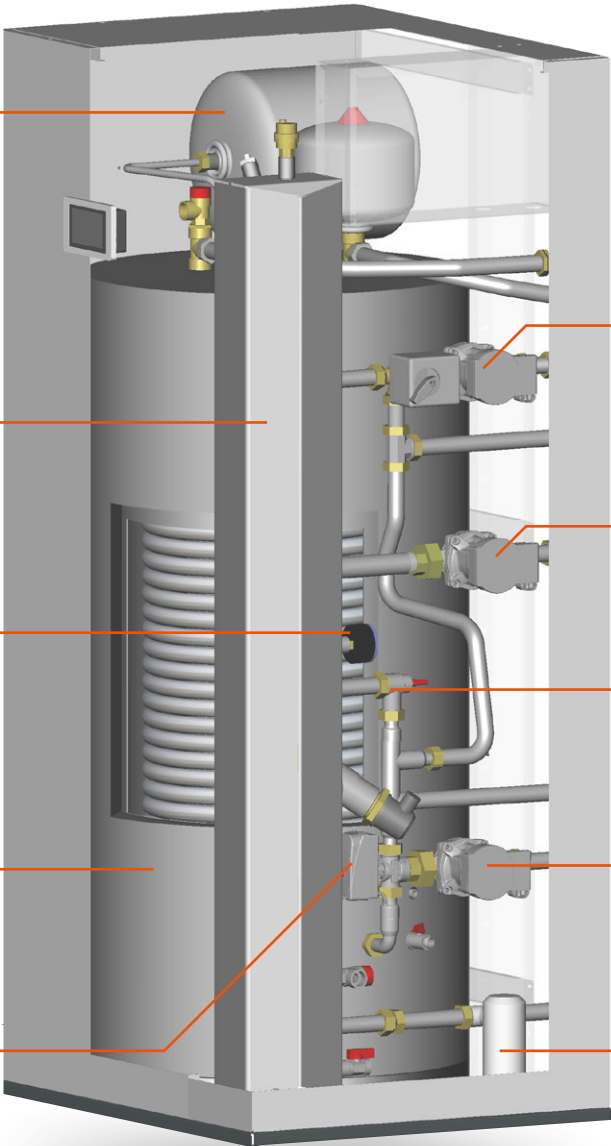
Second heating circuit with a mixing valve and circulation pump, ideal for underfloor heating (ST2 option)

First direct heating circuit with a circulation pump, can cooperate with radiator or underfloor heating

Differential-relief valve, ensures flow and limits maximum differential pressure in the system

PWM circulation pump with smooth regulation

Magnetic filter, removes and captures impurities and metal particles from the installation

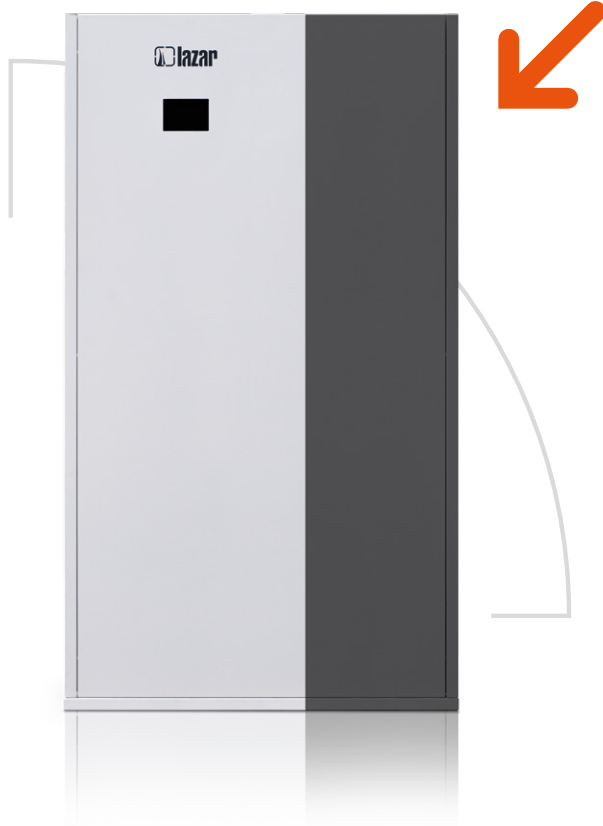


SmartTower ST30/2

The diagram is for reference only.



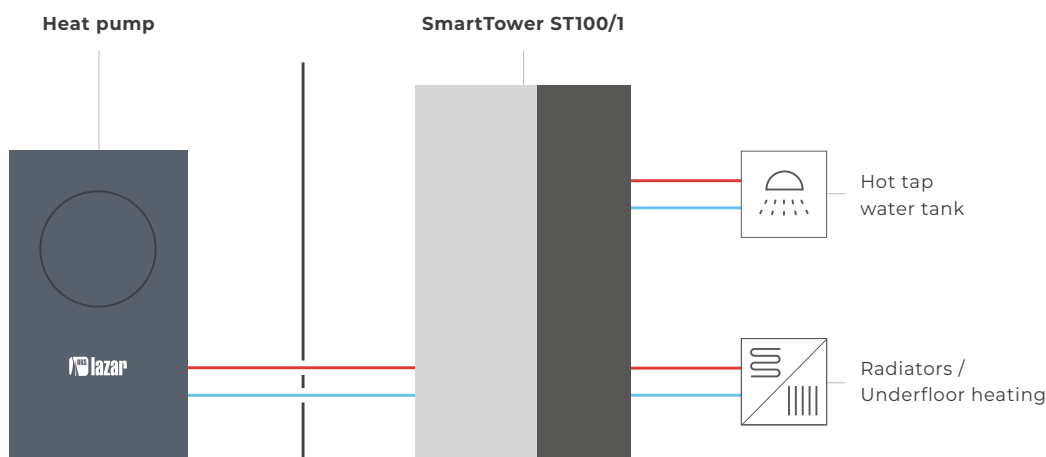
SmartTower 100



The **SmartTower 100** indoor unit is a complete boiler room in a single housing, saving space in the boiler room and reducing installation time. The SmartTower 100 can be expanded with an additional heating circuit with a mixing valve (ST2 option).

The SmartTower100 module includes:

- **SmartControl 10** heat pump controller
- Internet module
- Hygienic hot water storage tank with a capacity of 190l
- Buffer tank with a capacity of 100l
- Electric supplementary heater
- Heating water filter with magnetizer
- Diaphragm vessels for heating and DHW
- Safety valves for heating and DHW
- Heating and DHW switching valve
- PWM main pump
- Direct circulation pump
- Additional circulation pump (ST2 option)
- Mixing valve for additional circulation (ST2 option)



SmartTower 100



Diaphragm vessels for 18l heating system and 8l DHW installation

Electric flow-through heater providing additional power in low temperatures

Buffer tank with a capacity of 100l in a parallel arrangement, improves heat pump operation and provides energy for defrosting, equipped with a safety valve, air vent and pressure gauge

Hygienic hot water storage tank with a capacity of 190l. Domestic water is heated in a stainless steel coil, stainless steel ensures clean water free from Legionella bacteria

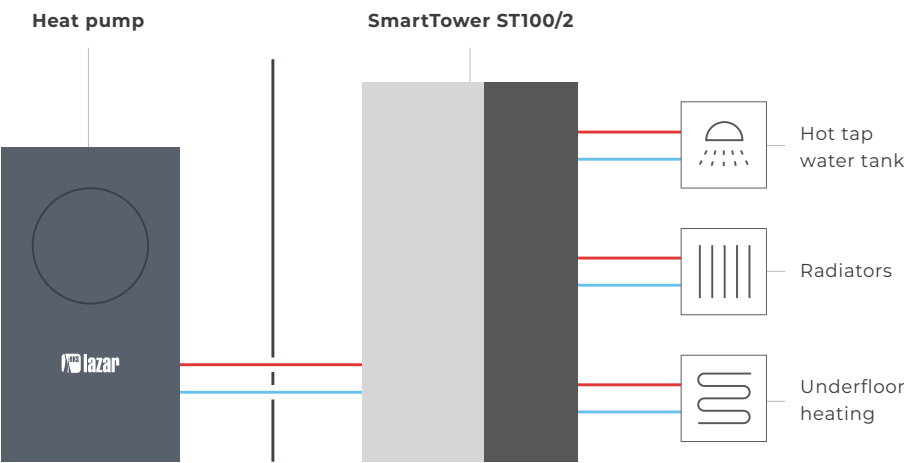
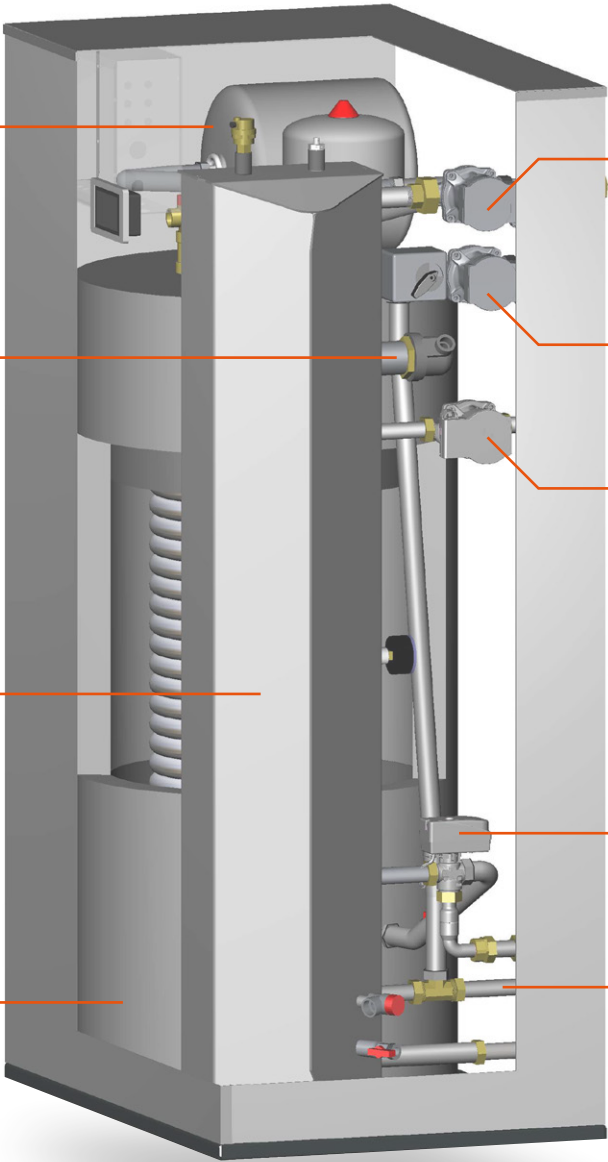
First direct heating circuit with a circulation pump, can cooperate with radiator or underfloor heating

Second heating circuit with a mixing valve and circulation pump, ideal for underfloor heating (ST2 option)

PWM circulation pump with smooth regulation

Heating and DHW switching valve

Magnetic filter, removes and captures impurities and metal particles from the installation



SmartTower ST100/2

The diagram is for reference only.



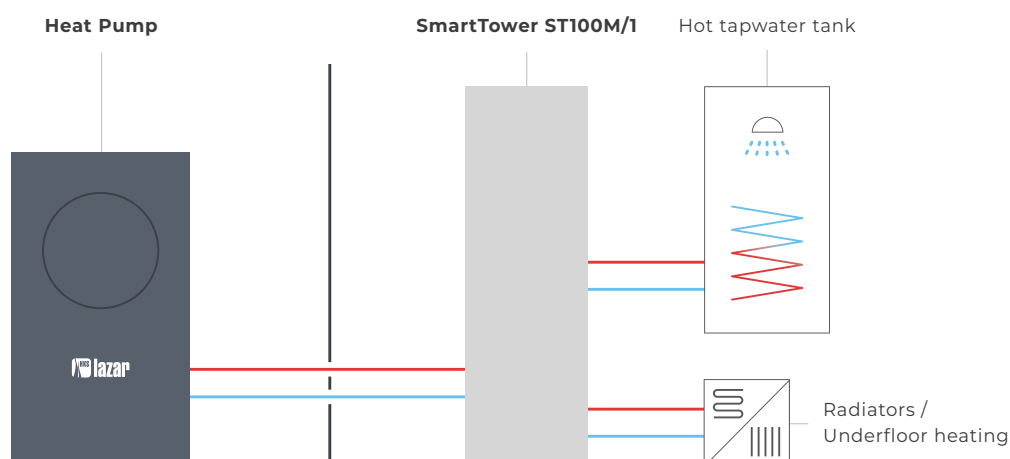
SmartTower 100M



The **SmartTower 100M** indoor unit is a complete boiler room enclosed within a single casing. Its compact size facilitates transportation to hard-to-reach spaces. There is an option to connect a domestic hot water storage tank of any capacity. The SmartTower100M can also be expanded with a heating circuit featuring a mixing valve (option ST100M2).

The SmartTower100M module includes:

- **SmartControl 10** heat pump controller
- Internet module
- 100-liter buffer tank
- Auxiliary electric heater
- Heating water filter with a magnetizer
- Safety valve for heating systems
- CO/DHW switching valve
- Main PWM pump
- Direct circuit pump
- Additional circuit pump (option ST2)
- Mixing valve for the additional circuit (option ST2)



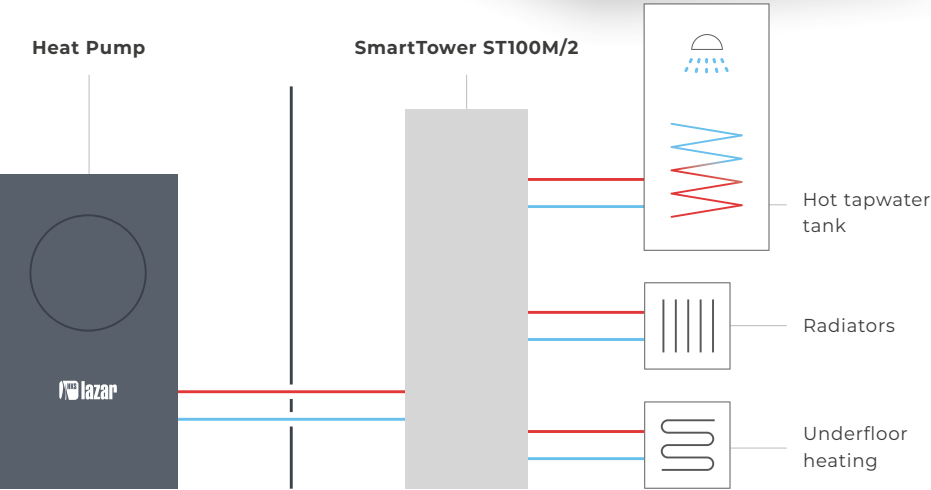
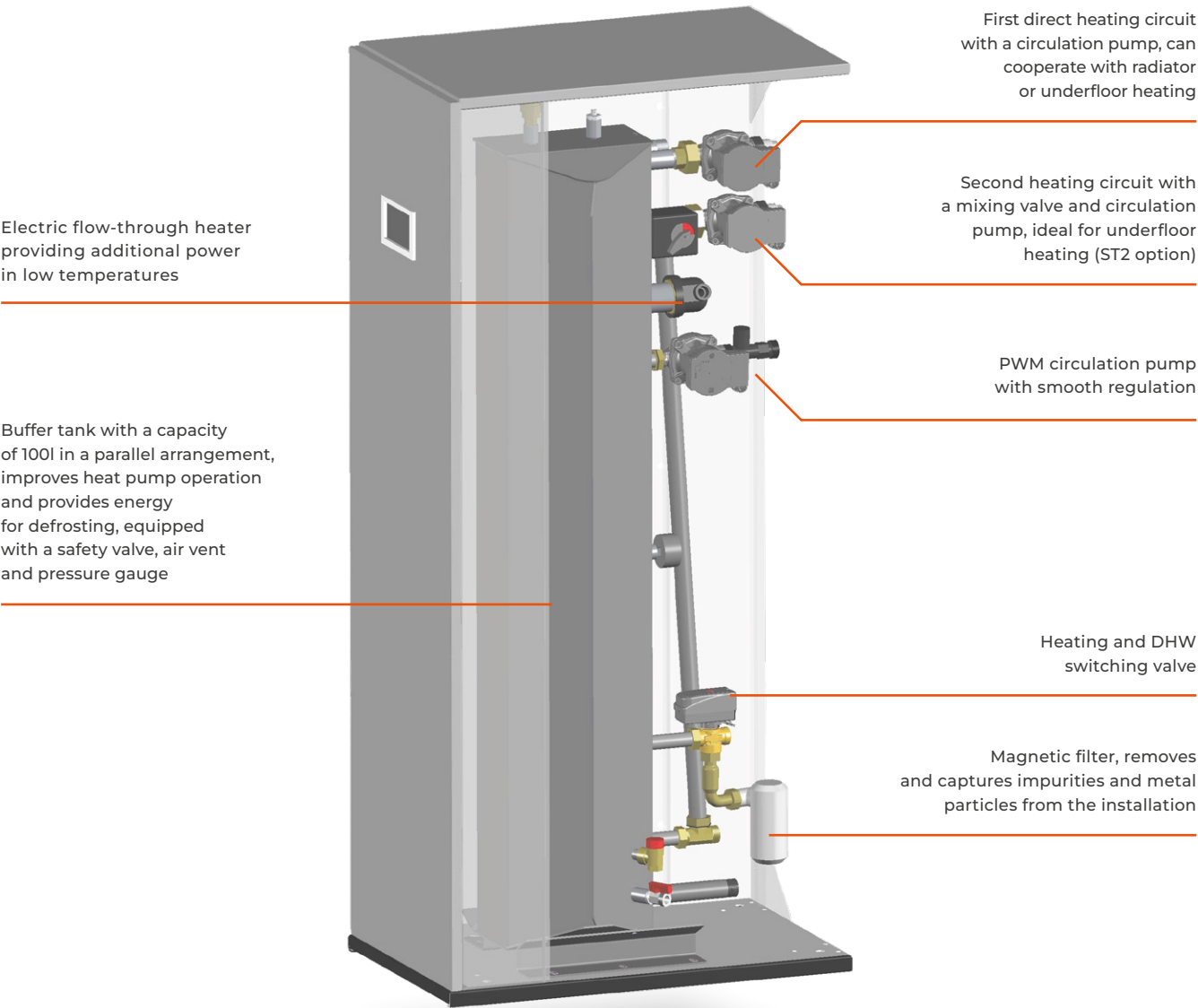
SmartTower ST100M/1

The diagram is for reference only.

— Hot water circuit

— Cold water circuit

SmartTower 100M



SmartTower ST100M/2

The diagram is for reference only.

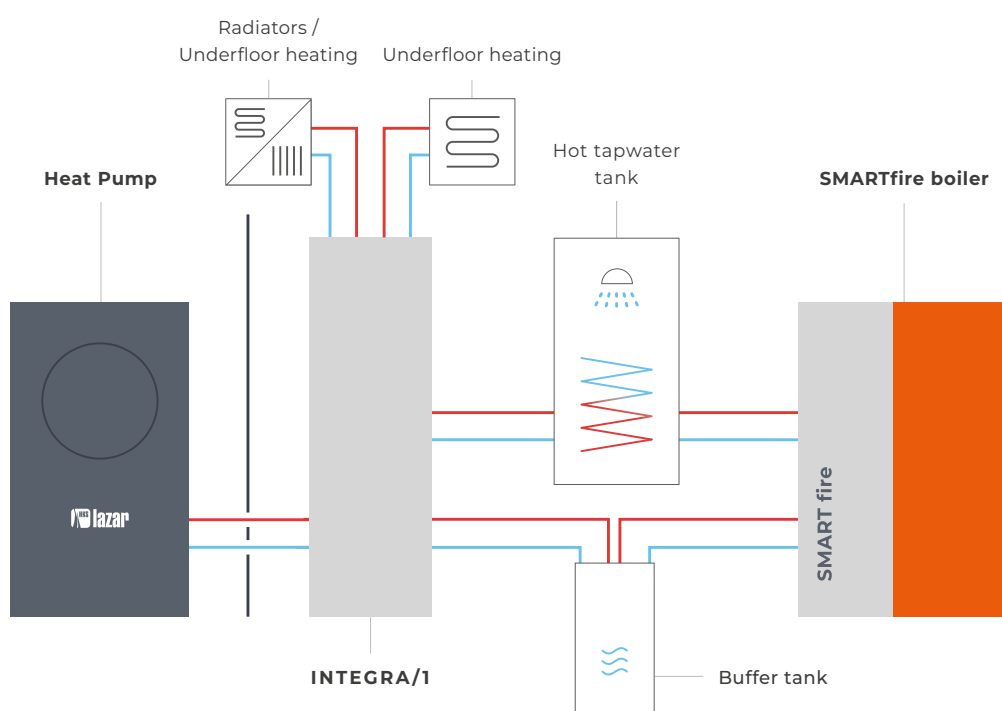




The **INTEGRA** indoor unit is a compact boiler room enclosed within a single casing. It enables efficient collaboration between the HTi20 heat pump and boilers, such as SmartFire.

The INTEGRA module includes:

- **SmartControl 10** heat pump controller
- Internet module
- Multifunctional distributor
- Auxiliary electric heater
- Heating water filter with a magnetizer
- Safety valve for heating (CO)
- CO/DHW switching valve
- Main PWM pump
- Direct circuit pump
- Mixing valve for the direct circuit
- Additional circuit pump (option I2)
- Mixing valve for the additional circuit (option I2)



Multifunctional distributor integrating the heating system.

Electric flow heater providing additional power at low temperatures.

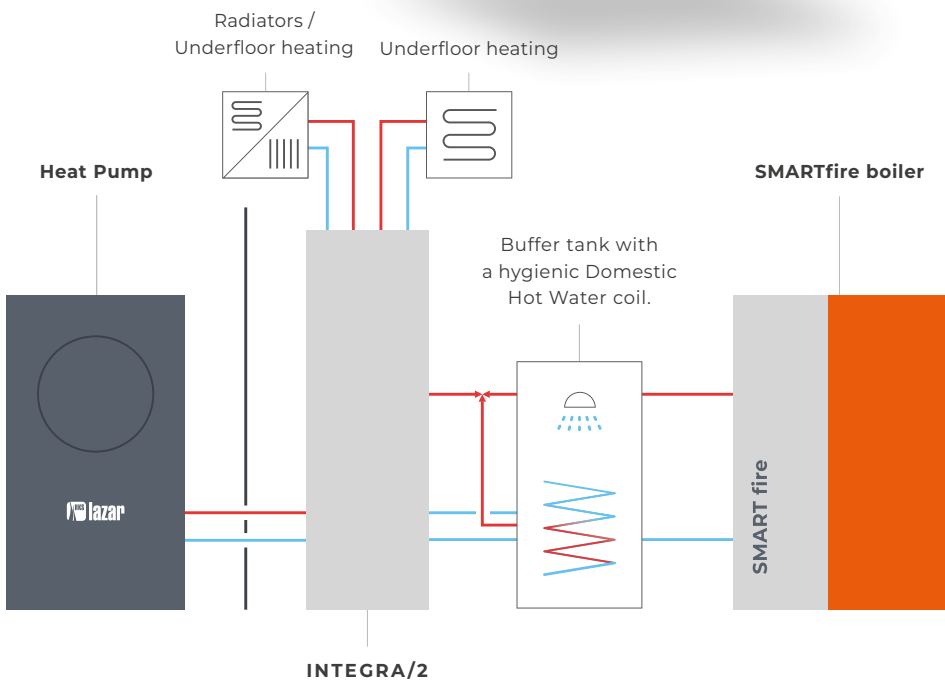
First heating circuit with a circulation pump and mixing valve; can work with radiator heating or underfloor heating.

Second heating circuit with a circulation pump and mixing valve; ideal for underfloor heating systems (option I2).

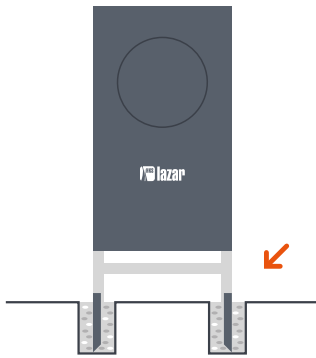
PWM circulation pump with variable speed control.

Switching valve for heating and domestic hot water.

Magnetic filter that removes and captures contaminants and fine metal particles from the system.



Equipment additional

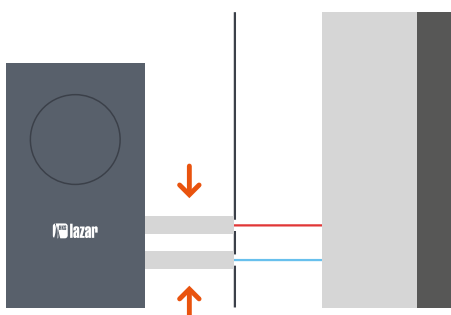


Ground mounting stand

Sturdy stand made of galvanized steel allows for durable ground installation.



Height-adjustable feet for installation on solid substrate



Set of 1-inch flexible connections

Flexible stainless steel connections, 750-1000 mm in length, with rubber insulation.





Inverter technology

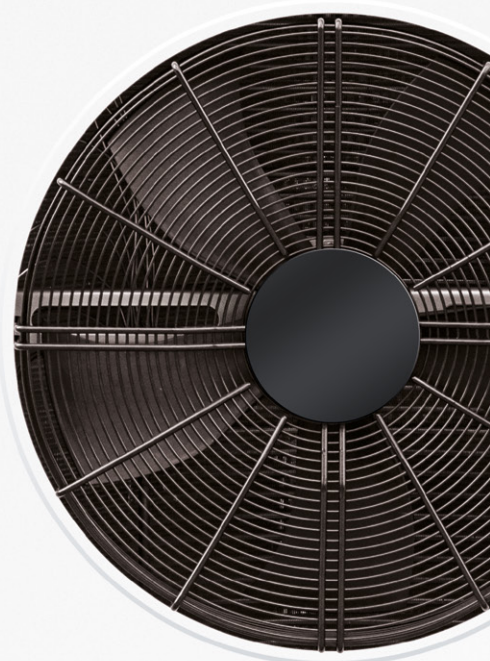
Thanks to step-less power modulation, it is adjusted to match the current demand, which guarantees high seasonal performance.

A+++

The future of heating
is today!

Keep
the Power
SYSTEM

● NATURAL
● REFRIGERANT
**PROPANE
R290**



inverter heat pumps

A+++

→ **HTi20** AIR TO WATER



Aesthetic housing

Different pattern designs to suit every architectural style.

Simple installation

Inverter technology and ready-made hydraulic units simplify installation.

Keep the Power System (KP System)

Our proprietary technology maintains nominal power even at low ambient temperature.

Cooling as standard

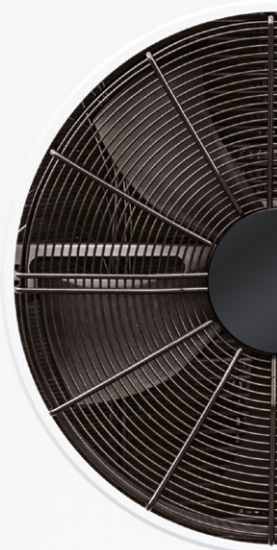
HTi20 pump with a cooling function.

Hydraulic units

Complete hydraulic units which reduce the installation time.

Internet connection as standard

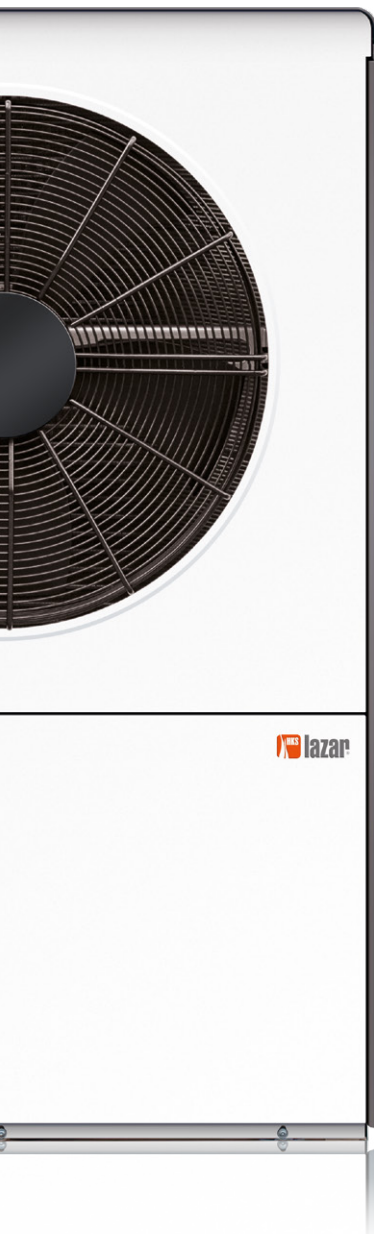
Cooperation with a UPS device





Product data sheet

Precautions to be taken during assembly, installation or maintenance of the heat pump. All requirements stated in the service manual for the device must be observed during assembly, installation and maintenance.



Maximum power
Power range A7/W35
Power range A-7/W35
Rated thermal output (Prated)*
Power / COP as per PN 14511 A7W35
SCOP temperate climate 35/55
Seasonal space heating energy efficiency for the temperate climate, low/medium-temperature applications
External temperature range
Maximum supply temperature
Cooling power / EER A35/W7
Refrigerant / quantity
Power supply
Weight
Dimensions
Hydraulic connection
Performance for the temperate climate [η_s] for the temperate climate, low/medium-temperature applications
 Q_{he} temperate climate low/medium-temperature applications

L_{WA} PN-EN 12102-1 (A7W55)

HTi20

8 kW	12 kW	16 kW
2,5 – 12 kW	4 – 14 kW	4 – 16 kW
2,5 – 8 kW	4 – 12 kW	4 – 14 kW
6 kW	8 kW	11 kW
4,36 / 4,84	4,031 / 5,02	8,048 / 4,91
4,82 / 3,51	4,49 / 3,31	4,68 / 3,69

A+++ / A++

- 25 do 35 °C
60 °C

4,15 kW / 2,86	5,1 kW / 2,71	7,5 kW / 3,61
R290 / 1,2 kg		R290 / 1,55kg
1 x 230 V lub 3 x 400 V	1 x 230 V lub 3 x 400 V	3 x 400 V
130 kg		207 kg
928 x 526 x 1440 mm		955 x 745 x 2055 mm
G1		G 5/4
189,9% / 137,2%	176,6% / 129,4%	184% / 144%
2640 kWh / 3349 kWh	3627 kWh / 3485 kWh	4757 kWh / 5793 kWh
54 dB	55 dB	57 dB

HTi20 AIR TO WATER



*The Prated rated heat output refers to a supply temperature of 35 °C.



HT20

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inverter heat pumps

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