Interna 6

INVERTER HEAT PUMP

thermics

THE COMPANY

Thermics is a small-medium enterprise (SME) with dedicated engineering and production teams. The company's expertise includes both heat engineering and software. The key to our success is teamwork and the appreciation and passion for renewable energy. This makes us a flexible company that adopts the most advanced standards and technologies.

HVAC HIGH TECHNOLOGY

HEAT PUMPS

The heat pumps produced by Thermics companies are among the most advanced and high quality machines in the industry. Particular attention is paid to the software, which is fully designed and created within the company, developed in order to adapt to specific environments with a view to ensuring maximum performance.

THERMAL SOLAR

The technologies used in the solar heating and cooling systems provided by Thermics have been progressively consolidated over the years, and guarantee maximum efficiency and adaptability of installations.
The company owns a number of patents, and all of these meet Solar Key Mark certifications.

INNOVATION IN VENTILATION

- Mechanical ventilation units boasting high-quality engineering with thermodynamic heat recovery and inverter compressors.
- Maximum energy efficiency in domestic and commercial ventilation environments thanks to the total modulation of fans and refrigerator circuits that enable the full energy needs of customers to be met.
- Comprehensive air management and treatment, from renewal to air conditioning to dehumidification, for high living comfort.

Interna 6

Mounting

Innovative Air – Water heat pump suitable for indoor installation. The unit is fitted with a high performance EC centrifugal fan that guarantees low noise. It has been designed to be ducted towards the outside and is fitted with a Twin Rotary inverter compressor. The units have been designed for new buildings and renovations where it is important not to modify the aesthetic appearance of buildings (historic buildings, architectural constraints etc.) and in buildings in which the indoor space is limited.
Main features:

- Energy efficiency A++;
- Twin Rotary Inverter compressor;
- Electronic expansion valve;
- Extremely silent;
- EC centrifugal fan;
- Modulating circulation pump included;
- Motorised diverter valve (not included);
- Extremely robust and resistant to wear.

COOLING CIRCUIT

The cooling circuit is made using components manufactured by leading international companies and according to UNI EN 13134 regarding braze-welding processes. The refrigerant gas used is R410A. The cooling circuit includes: 4-way cycle reverse valve, electronic expansion valve, liquid separator, liquid receiver, inspection valves for inspection and maintenance, safety device according to PED regulations (high pressure pressure switch), pressure transducers to accurately adjust the evaporation and condensation pressure and filters to prevent the thermal expansion valve becoming clogged.

COMPRESSORS

The DC inverter compressors have been specially designed to operate with R410A. They are fitted with a thermal cut-out and are installed on rubber vibration dampers. The compressors are installed in a compartment that is separate from the air flow in order to reduce noise.

AIR SIDE HEAT EXCHANGER

The new fin design increases the heat exchange area, decreases air resistance, reduces the amount of energy used and increases performance. The fins covered with a hydrophilic film and the seamless copper pipes optimise the heat exchange efficiency.

FANS

The fans are centrifugal (Ziehl EC Blue). They are all statically and dynamically balanced in compliance with EN 60335-2-80 (Household and similar electrical appliances). They are characterised by having a modulating air flow 300 - 900 m^3/h and guarantee a useful head for 10 meters of DN250 pipe. The fans are installed on rubber vibration dampers to reduce noise. All the electric motors are brushless. The motors are direct coupled and have an integrated thermal cut-out. The motors all have IP 44 rating.

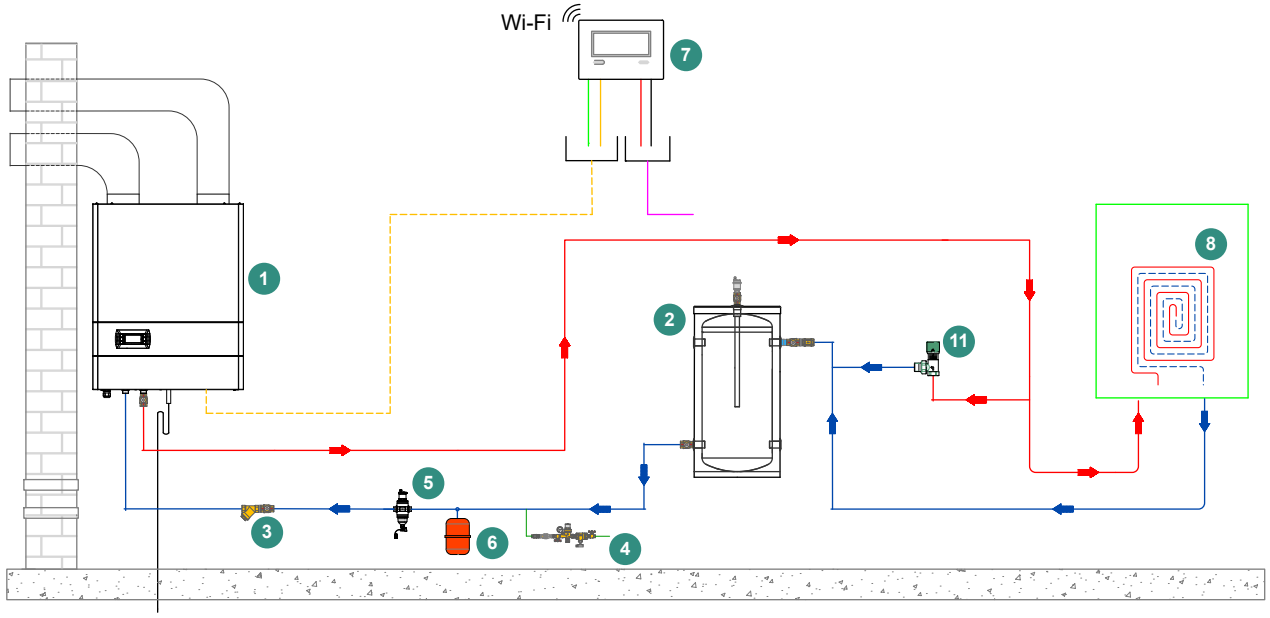
USER SIDE HEAT EXCHANGERS

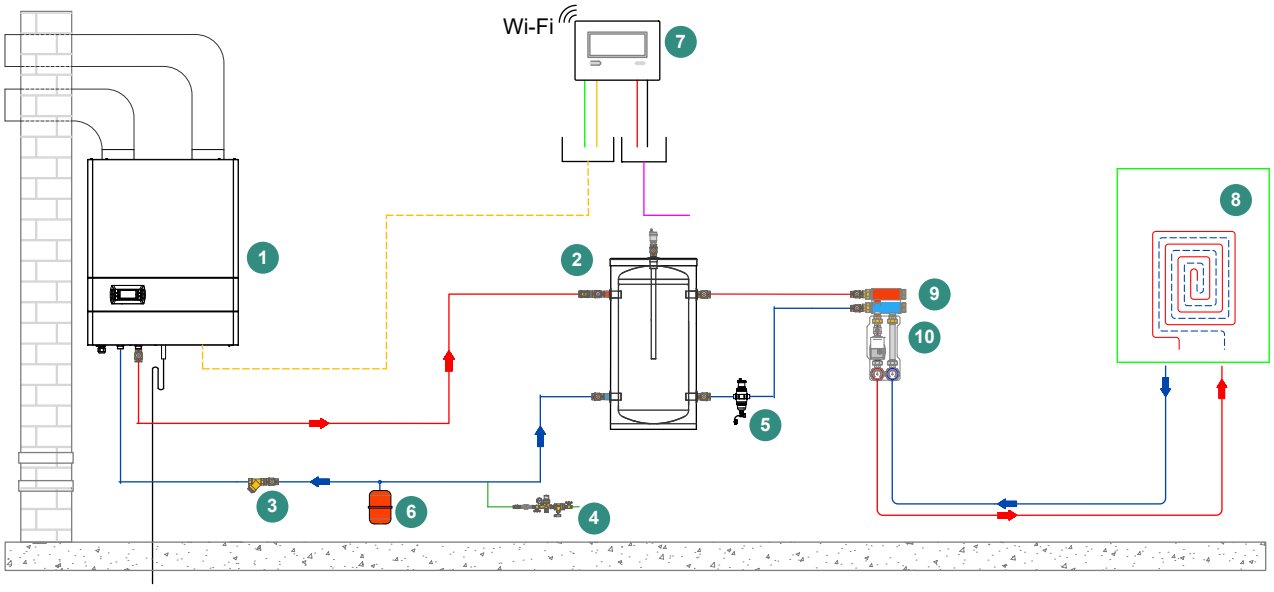
The user side heat exchangers are of the braze-welded plate type and are made from AISI 316 stainless steel and factory insulated using closed cell materials

Mounting

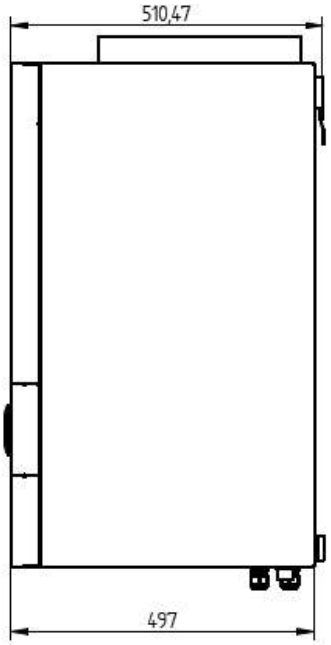
Ref.	Description
1	Interna 6
2	Hot/Cold storage
3	Y-strainer return HEAT PUMP
4	Filling unit
5	Optional magnetic dirt separator
6	Optional system expansion vessel
7	EASY-TOUCH display
8	Low-temperature radiant system
9	Collector for booster
10	Direct system booster unit
11	Differential bypass

DIGITAL OUTPUTS	
230V DIGITAL OUTPUT	
ANALOGUE/DIGITAL INPUT	
CONNECTION VIA BUS REG	
POWER SUPPLY 12 VDC	
CONNECTION VIA MODBUS RTU	
CONNECTION VIA OPENTHERM	





INTERNA 6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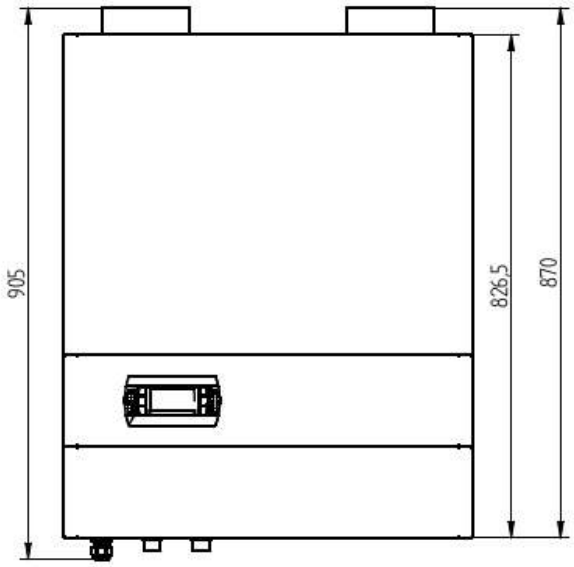
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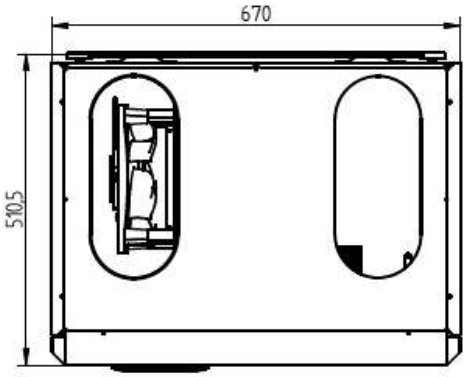
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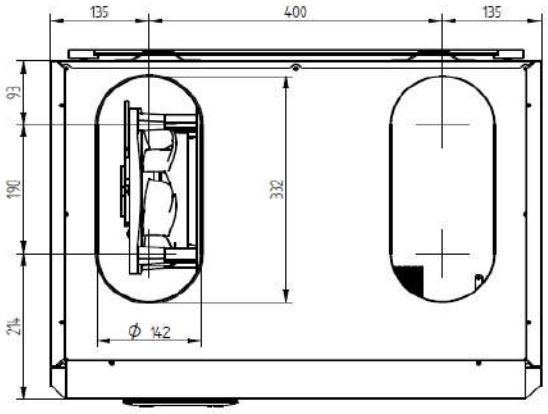
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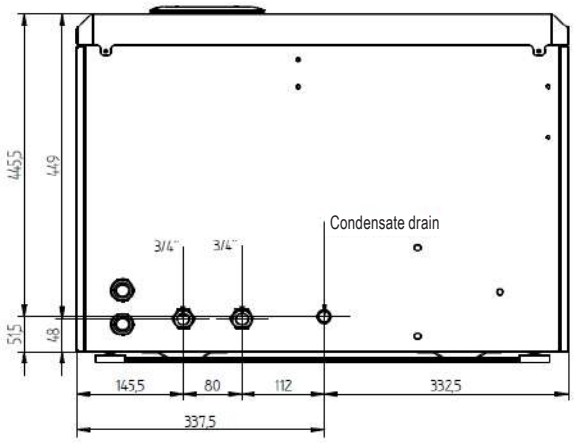
445,5
449
Condensate drain
3/4"
3/4"
51,5
48
145,5
80
112
332,5
337,5

Electrical data	Supply Starting current	A	230V/1/50Hz Inverter
Cooling (A35/W18)	Cooling capacity Power input EER	kW kW W/W	8.05 1.52 5.29
Cooling (A35/W18)	Cooling capacity Power input EER	kW kW W/W	5.62 1.54 3.64
Heating (A7/W35)	Heat output Power input C.O.P.	kW kW W/W	6.16 1.34 4.59
Heating (A7/W35)	Heat output Power input C.O.P.	kW kW W/W	5.99 1.65 3.62
Compressor	Type Number Rated load current	 A	Rotary DC Inverter 1 Inverter
Fan motor	Type Number Air flow rate	 m³/h	Radial – EC 1 300 to 900
Refrigerant	Type Coolant load	 kg	R32 0.75
Hydraulic circuit	Rated heating flow rate at ΔT 5°C Minimum heating flow rate at ΔT 7°C Load loss Water connections	m³/h m³/h kPa inches	0.7 0.5 6 G ¾"
Noise	Sound pressure at 5 m	dB(A)	42
Dimensions and weight	Unit dimensions (L×H×D) Net weight	mm kg	655 x 753 x 502 75
Product code	INTERNA 06 inverter heat pump		8T11062M30101

(7) Acoustic tests performed in accordance with EN 12102

Code	Description
8T06084M20103	**Interna 6 kW PRO 4T MB - INV - 230V - OUT - AX - RAL9010**

110% SUPER BONUS ("trainante", i.e. primary improvements)

65% ECO BONUS

50% BONUS CASA (HOME BONUS)

CONTO TERMICO

Accessories

Code	Description
8TCR02050.01	CAREL remote control display
8TCM00120	Y-strainer, brass DN25
6TST00045	Magnetic dirt separator
8TSI01200.01	Activation of REMOTE BRAIN monitoring system
8TCR90130	REMOTE BRAIN T-Service monitoring for 5 years

Tax deduction

All versions of **Interna 6** benefit from tax deduction in accordance with applicable legislation.

Inverter heat pumps

Remote display

Wired remote control, with display that allows you to view and modify the main operating parameters of the unit, which simplifies and improves heat pump management.

HP1 - Gold system expansion module

Expansion module that connects as a BUS accessory to the existing control unit and allows important and innovative additional functions to be added that are useful for more complex systems:

- **DPAC**: a 0-10V input that regulates the power used by the heat pump according to the instantaneous availability of the solar energy system. This is an extremely innovative logic developed by Thermics. When the heat pump is set to "ECO" mode, it operates according to the availability of energy and its wide modulation range means that it will avoid drawing electricity from other sources.
- **MIX1**: available for the management of a general system mixed unit with 0-10V signal
- **INFO SEASON**: an outlet that alerts the rest of the season change system!
- **HEAT TRANSF**: a setting that specifies the logics used for heat transfer through a plate exchanger or a secondary transfer boiler
- **HYBRID**: relay activation of heating integration using a second source both on the DHW side and on the heating side

Remote brain

- Remote Brain is a simple and inexpensive system for monitoring residential installations that allows you to switch on THERMICS heat pumps, control their respective temperatures, monitor their operation and to provide the heating comfort requirements of the home directly from any device, both inside and outside the home. This innovative system means that all the main terminal units for HVAC and the production of domestic hot water are constantly monitored, to enable the heat pump to be used in the most efficient way and to obtain maximum savings in terms of energy and cost.
- The information is transmitted locally using Wireless technology to Tablets, Smartphones and PCs directly from the ADSL router, which uploads it to a data collection CLOUD. This means that the data is always up to date and can be used at any time and on any device, wherever you are. The system also allows you to report heat pump malfunctions, meaning that trained technicians can take the appropriate action quickly. They will immediately know the reason for the malfunction and be able to restore correct operation of the heat pump rapidly.
- Remote Brain has an annual charge for maintaining the service and its functions (see t-Service).

tService

tService is the service dedicated to service centres to be used together with the Remote Brain monitoring system. tService makes carrying out maintenance faster and more effective with a ready-to-use remote control solution specifically designed for service centres. Functions available with tService:

- Reading and writing variables in real time
- Data logging with frequencies up to 5 seconds
- Alarm management with e-mail notification
- Reports and graphs, using up to 300 variables
- Programmable SW update checks

Warranty extension

Today, product quality and energy savings are the discriminating factors when choosing a heat pump. To make your investment last over time and deliver maximum reliability, it is recommended that you have the heat pump serviced regularly, just as you service a car. This will allow your installation to be correctly maintained and to save on bills.
To take advantage of the warranty extension, for up to a maximum of 5 years (2 by default + 3 service years) you have to subscribe and pay an initial fee, within 1 month from the initial start-up, for a scheduled maintenance contract provided by the THERMICS ENERGIE SRL authorized technical assistance service.
*see the specific document for the terms of the warranty extension

BSG CALDAIE A GAS

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