prana

AIR SOURCE, WATER SOURCE AND BRINE SOURCE HEAT PUMPS OPTIMIZED FOR GEOTHERMAL APPLICATIONS.

FROM THE ENVIRONMENT THE ENERGY TO PROTECT IT

CLIMAVENETA

CLIMAVENETA INTRODUCES PRANA, THE HEAT PUMPS RANGE DEVELOPED IN ORDER TO EMULATE WITH THE HIGHEST SUSTAINABILITY AND EFFICIENCY THE HEATING REQUIREMENTS OF RESIDENTIAL, SMALL AND MEDIUM OFFICE BUILDINGS, EMPLOYING RENEWABLE ENERGY DIRECTLY FROM NATURE, SUCH AS AIR, WATER OR GROUND.

- -50% energy costs
- Ease of installation and integration
- Free domestic hot water production
- Renewable source
- Silent operation
- Profitable investment on your property

prana

GAMMAINDEX2012

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Fresh air unit with active thermodynamic recovery, indoor installation 250 ÷ 600 m³/h

WHY THE HEAT PUMP IS THE BEST SOLUTION FOR COMFORT AND ENVIRONMENT

INSTALLING A HEAT PUMP NOWADAYS IS THE EASIEST AND MOST EFFICIENT WAY TO REDUCE COSTS AND EMISSIONS OF HEATING AND AIR CONDITIONING BY SIMPLY USING FREE ENERGY FROM RENEWABLE RESOURCES SUCH AS AIR, WATER AND GROUND.

- 50% ENERGY COSTS

Prana units are characterized by high efficiency thanks to the capability to take most of the energy for heating, cooling and domestic hot water production, directly from air, water and ground.

They employ the most advanced technologies, like the inverter driven compressors, fans and pumps, and an exclusive control system, designed to ensure highest integration among the components of the system.
This reduces energy cost even by 50% than traditional systems.

- 60% EMISSIONS ON THE AIR

The heat pump provides the right answer to comfort in buildings in terms of heating, cooling and hot water production.

The heat pump takes 75% of the energy directly from the environment, making use of 25% of the power supply.
The low energy consumption assures a 60% reduction of CO_2 emissions than traditional systems.

RENEWABLE SOURCE

Heat pumps use the energy from the sun and employ directly the energy from air, water and ground, with no direct emission and no fossil fuel use.

The heat from the sun is clean and unlimited, making the heat pump the best renewable source according to the RES European directive (Renewable Energy Source).

COMFORT ALL YEAR

Prana is the only answer to the demand for heating, cooling and hot water production in all Seasons.

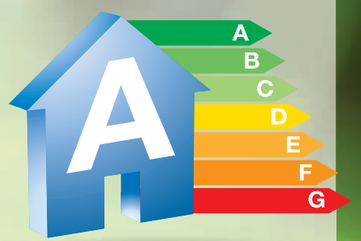
CUTTING-EDGE TECHNOLOGY

The technology has ensured the design of high efficiency heat pumps, which are 50% more efficient than those designed in the last few years. This means a reduction of energy consumption by 50%. The heat pump is today a cutting-edge product that makes use of efficient solutions, such as the Inverter compressor.

Over its 30 years of experience, Climaveneta has been focusing on research and development in order to answer to the high efficiency products, such as Prana.

PROFITABLE INVESTMENT ON YOUR PROPERTY

Compliance with increasingly strict energy consumption and environmental impact regulations, are becoming more and more crucial factors for real estate valuation. Using PRANA in new buildings or in refurbishments is a simple and effective way to unify an improvement of the energy class of the building with an higher quality of comfort, enhancing the present and future value of the property.

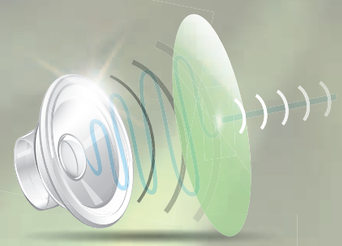


ALL THE ADVANTAGES OF A NEW APPROACH TO HEATING AND COMFORT

ONE SINGLE UNIT FOR ANY HEATING, COOLING AND DOMESTIC HOT WATER REQUIREMENT, WITH COUNTLESS ADVANTAGES FROM ANY POINT OF VIEW:

FREE DOMESTIC HOT WATER PRODUCTION

All units produce domestic hot water. Thanks to the exclusive total heat recovery system, domestic hot water is free in DHW2 models. During the cooling cycle, your system will remove heat and humidity from your home and will transfer this heat to the outdoor air. During the heating cycle, your system will remove heat and humidity from the outdoor air and will transfer this heat to your home. When operating in cooling mode your system will cool fluids (e.g water in the hydronic systems) and then it will transfer the heat to another fluid, air, water or ground. Thanks to heat pump it is possible to avoid heat wastes, using this heat for the production of hot water.



SILENT OPERATION

Optimized in each design and manufacturing choice, silent operation is among the strong points of Prana units.

The adoption, in air source units, of low noise fans with continuous regulation, guarantee minimum noise emission. Compressors are jacked and insulated in order to reduce vibrations. Dedicated acoustic panels for indoor units ensure the lowest noise emissions on the market.

HEATING DOWN TO -20°C

Climaveneta has found the perfect solution for the operation of heat pumps in extreme weather conditions and the installation in harsh climate areas, down to -20°C.

PRANA's selection of the most suitable technological components and compressors ensure an efficient operation of heat pumps, which goes beyond the limits of the traditional units. This without using any other heating solution.

EASE OF INSTALLATION AND COMPLETE RELIABILITY

Prana units are plug & play, ready for installation and equipped with all the components necessary to install them in each system type: from low temperature systems based on radiant floor or fancoils, to more traditional systems with radiators.
Low maintenance thanks to the use of sealed, factory-tested refrigerant circuits.

INTEGRATION AMONG THE COMPONENTS

Reliability is ensured by the installation of cutting-edge components and the introduction of a central control system that coordinates the different components in the system. This eliminates communication inefficiencies and simplifies the installation, reducing the number of checks. All the models can be easily integrated with the existing heating system and with other renewable sources as solar systems, both thermal and photovoltaic.

BEST AIR QUALITY

Comfort would not exist without air renewal in new low-energy houses. Climaveneta has designed a controlled mechanical ventilation unit (SHAOCA) that ensures air renewal and purification inside the buildings. The heating, cooling of outdoor air, together with its purification and humidification is ensured by the use of an integrated cooling circuit and then released in the building. The renewed air is fresh all year long, maintaining a constant and adequate temperature in the ambient.

ENERGY SOURCES

AIR, WATER AND GROUND ARE PRECIOUS THERMAL SOURCES.

THEIR USE IN HEAT PUMPS ENSURES REDUCED ENERGY EXPENSES AND A COMPLETE SUSTAINABLE SYSTEM.

HEAT PUMPS USE A TECHNOLOGY THAT ALLOWS TO MOVE THERMAL ENERGY FROM A SOURCE WITH LOW TEMPERATURE TO A RECEIVER WITH HIGHER TEMPERATURE.

AIR

The use of the energy from the air can be the best solution for the production of domestic hot water, heating and cooling.

The PRANA new generation heat pumps use the energy taken from the air to heat even at low temperatures. High performances are increased by the adoption of Inverter technology (both in the i-NRG and i-KI(R) products).

WATER

Rivers, ponds and also the sea are all important energy sources.

Thanks to the property of water to maintain a constant temperature, Prana water heat pumps ensure the highest performances whilst reducing the energy consumption by 50%.

GROUND

The ground stays at a fairly constant temperature under the surface, so the heat pump can be used throughout the year - even in areas with harsh winters.

The research into the thermal field has lead to the development of heat pumps which are especially designed to adapt to every kind of soil. PRANA is the most innovative solution in this field.

AIR SOLUTIONS

PRANA AIR-WATER HEAT PUMPS TRANSFER THE HEAT FROM THE OUTSIDE AIR TO THE AMBIENT USING WATER AS EXCHANGE FLUID.

AIR SOLUTIONS

i-NRG

Reversible air/water heat pump with DC Inverter compressor, production of hot domestic water and total heat recovery. Indoor and outdoor installation.

AWR DHW2 XE

Reversible air/water heat pump with production of hot domestic water and total heat recovery. Outdoor installation.

i-KI / i-KIR

Air/water reversible or only heating heat pump, with DC Inverter compressor and domestic hot water production. Outdoor installation.

AWR MTD1

Reversible air/water heat pump for water heating up to 55°C and domestic hot water production. Outdoor installation.

AWR MTD2 XE

Air/water reversible heat pump for water heating up to 58°C and operating limits down to -15°C external air temperature and domestic hot water production. Outdoor installation.

AW HT

Air/water only heating heat pump, for water heating up to 65°C and operating limits down to -20°C. Outdoor installation.

CUTTING-EDGE TECHNOLOGIES ARE THE RESULT OF CLIMAVENETA'S EXPERIENCE IN PROVIDING COMFORT.

THEY ENSURE EXCELLENT PERFORMANCES AT LOW TEMPERATURES.

Thermal energy in the air is particularly high, even in winter and on cold nights. The heat pump uses this energy to provide heating to generate hot water for domestic use.

The reversible units also provide cooling by absorbing the heat from the inside and releasing it to the outside.

Air source heat pumps do not have additional installation costs because they do not require excavation to install them. Besides, the use of a single system answers all the requirements of the building, making the air source unit the best solution.

RIVERS, PONDS AND GROUNDWATER BELOW THE SURFACE PROVIDE AN IMPORTANT RENEWABLE SOURCE OF ENERGY, THANKS TO THE PROPERTIES OF WATER TO MAINTAIN A STABLE TEMPERATURE ALL THE YEAR ROUND.

WATER SOLUTIONS

THE WATER IS A PRECIOUS ENERGY SOURCE BECAUSE IT ENSURES BETTER PERFORMANCES (COP AND EER) THAN OTHER SOLUTIONS, WITH EXTREMELY LOW COSTS.

The water is a precious energy source because it ensures better performances (COP and EER) than other solutions, with extremely low costs.

In this system the exchange of heat is possible thanks to two wells, one for the water extraction and the other for draining. Simple in design and operation but able to provide a significant number of advantages, these ground water systems are highly efficient, even if they have some prerequisites.

First of all, installers need to observe local laws and regulations on the extraction capacity and the temperature variation of the water that returns to the soil.

The distance between the dewatering and immersion wells should be at least 10-15 m and the characteristics of the water must accurately follow the technical instructions included in the technical bulletins and manuals.

Furthermore, it is extremely important that the amount of water is enough; this can be easily calculated before the system is installed.

WATER SOLUTION

WWR MTD2
Reversible water/water heat pump for water heating up to 55°C and domestic hot water production. Indoor installation.

WWR DHW2
Reversible water/water heat pump domestic hot water production. Indoor installation.

GEO THERMAL SOLUTIONS

GEOTHERMAL HEAT PUMPS USE THE GROUND AS A HEAT SOURCE, BECAUSE EVEN A FEW METERS BELOW THE SURFACE THE GROUND TEMPERATURE IS COSTANT ALL THE YEAR ROUND.

THE HEAT EXTRACTION AND RELEASE FROM THE GROUND CAN BE USED TO HEAT, COOL AND SUPPLY DOMESTIC HOT WATER.
THE EFFICIENCY OF THE SYSTEM IS 4 TIMES HIGHER THAN THE ELECTRICAL ABSORPTION.

GEOTHERMAL SOLUTION

BWR MTD2
Reversible heat pump, geothermal source, for water heating up to 55°C and domestic hot water production. Indoor installation.

BWR DHW2
Reversible heat pump, with domestic hot water production and total heat recovery. Indoor installation.

The exchange of heat is guaranteed by horizontal and vertical loops.
They usually involve a system of polyethylene pipes where a thermal fluid composed of water and glicole flows through them in a closed circuit.

This circulating fluid is an antifreeze solution. Different kinds of loops are available in order to meet the requirements of different plants.

Geothermal loops can be divided as follows:
- Horizontal loops are buried horizontally a few of meters below the surface.
- Vertical loops are inserted vertically into the soil when there are limited spaces.

HORIZONTAL LOOPS

HORIZONTAL LOOPS REQUIRE A GREATER AMOUNT OF LAND SURFACE AREA BUT THEY ARE LESS EXPENSIVE TO INSTALL.

HORIZONTAL LOOPS ARE LAID IN TRENCHES, TYPICALLY AT A DEPTH OF 1 - 1.5 M.

They usually require a land surface area which is 2.5 - 3 times bigger than the area that needs to be cooled.
In summer the requested land surface area could be even bigger. Alternatively, a series of pipes can be buried in a trench. In this case the geothermal exchanger grows in length.

The most used systems are the 'Slinky' exchangers, which have a double loop system with 4 pipes.
They are buried at a depth of 2.5 - 3m. The pipes can be either PP or PE80 when installed on the surface and they have a diameter of DN25, DN32.

The amount of heat that can be extracted ranges from 10 to 15 W/m^2 (indicative values) but they can reach higher values in sandy soils, big amount of water and solar energy. The values depend, even if partially, on the temperature variation of the air.

VERTICAL LOOPS

VERTICAL LOOPS ALLOW THE HEAT PUMP TO USE THE ENERGY FROM A GROUND SOURCE, WHERE THE TEMPERATURE IS CONSTANT THROUGHOUT THE YEAR, WITH GREAT BENEFITS IN TERMS OF COST REDUCTION.

VERTICAL LOOPS ARE GENERALLY CONSIDERED WHEN THE AVAILABLE LAND AREA IS LIMITED.

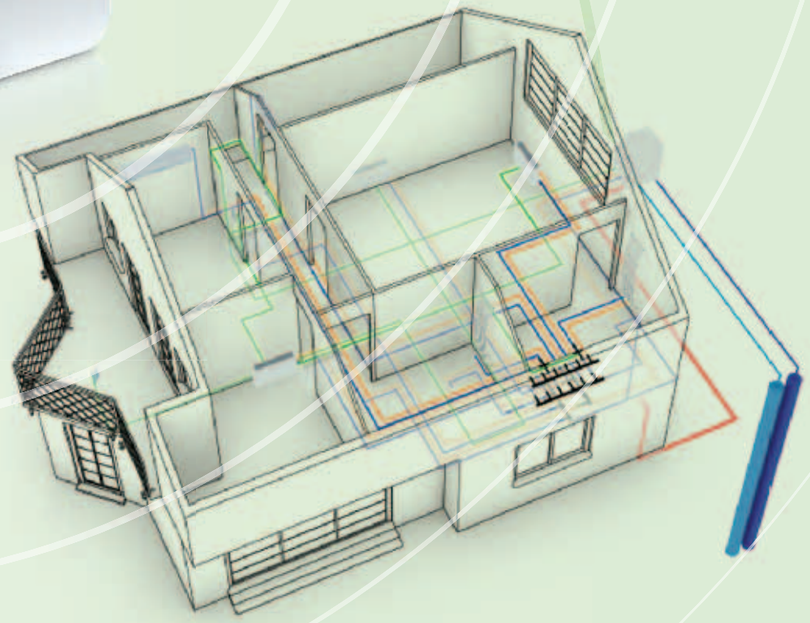
WELLS ARE BORED TO DEPTHS AROUND 100 M IN ORDER TO REDUCE THE PUMPING POWER AND INCREASE THE EFFICIENCY OF THE SYSTEM.

Vertical loops can reach depths around 200m if the tools and machinery are suitable and the staff is highly-skilled.
The loops are double U-shaped in PE 100 with DN32 (the most common) and DN40 diameter.
In order to avoid thermal interference, bore holes are spaced at least 8-10m apart and the number of loops depends on the area and the thermal or cooling power.
Once the loops are installed, the borehole is commonly filled with bentonite grout - and eventually quartz sand, to increase the thermal conductivity.
The thermal performance of the loop and the optimal operation of the system also depends on the grouting.
The appropriate grounding avoids any interference between subsurface water spaces where the loops are installed.
The performance, which is calculated in Watt (W) per meter, usually is 50 W/m (the standard value included in the VDI4640 directive).

nadisystem

THE NEW ELECTRONIC CONTROLLER THAT ENSURES GREATER INTERACTION AMONG THE COMPONENTS OF THE SYSTEM

- Back-lit display complete with remote temperature and humidity probe.
- User-friendly management of the system
- Costumised mangament
- Time bands programming
- Up to 4 heat pump in cascade
- Hot domestic water production
- Better Technical Assistance



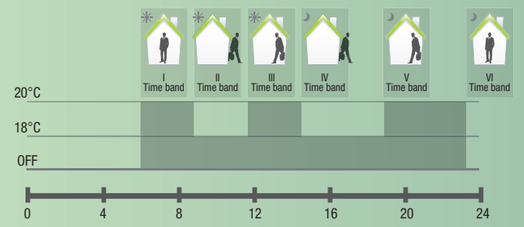
TEMPERATURE CONTROL

NADISYSTEM ensures dynamic control of water outlet temperature according to real needs in the building and the outside air temperature, optimising comfort and reducing wasted energy. The introduction of a single integrated control system for the coordination among the different system components, eliminates inefficiencies in communication, simplifying installation and reducing the number of controllers.

The remote keypad supplied with the unit can be used to freely set the room temperature, humidity, operating mode, domestic hot water production and operating times for each zone. In summer the correct outlet temperature is guaranteed by the calculation of the dew point.

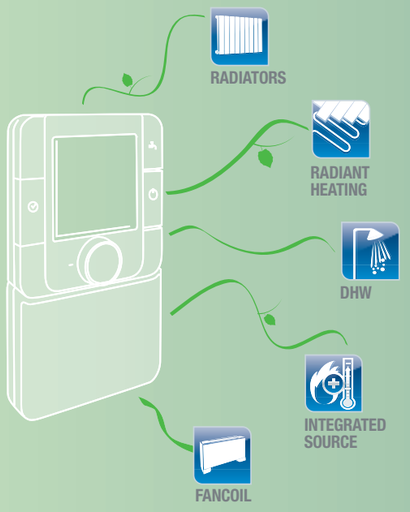
TIME BANDS PROGRAMMING

A timer is available to customise differentiated activation and deactivation for each individual zone of the system, creating an operating profile with up to 6 daily time bands.
The time bands programming ensures to choose different temperatures according to different time.



SMART MANAGEMENT OF THE SOURCES

Nadisystem integrates different energy sources. Energy is only consumed when necessary and the use of energy sources is based on availability, efficiency and cost, giving priority to renewable sources, where available. The supplementary sources are used to meet the building requirements at low outside temperatures by supplementing the heating capacity of the heat pump. System operation can be distinguished as monovalent, all-electric or bivalent. The controller can activate the external source to achieve one of the functions listed above.



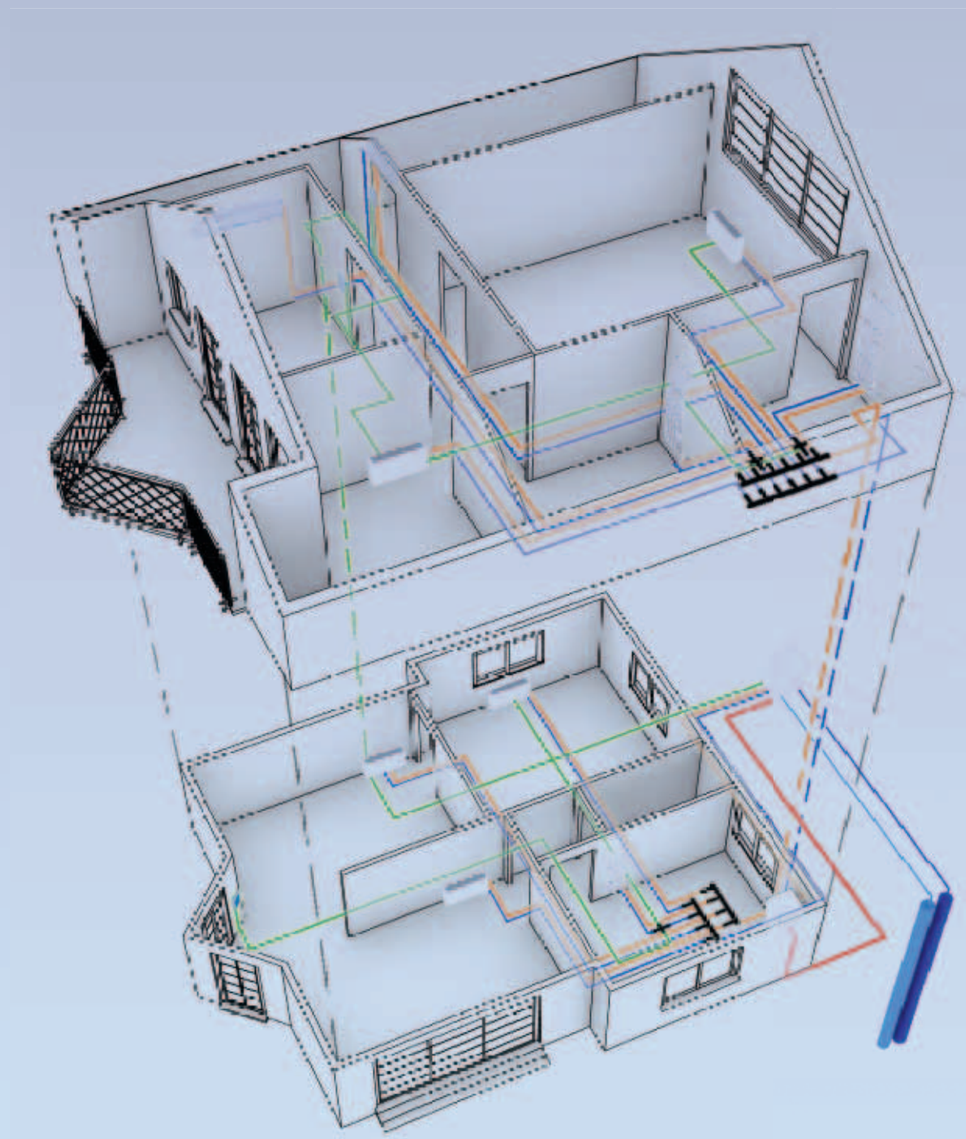
SYSTEM MANAGEMENT

The NADISYSTEM control system for residential applications gives high operating flexibility by controlling the secondary circuits, that is, activating zone pumps and valves depending on the room temperature set on the remote keypad, and by controlling mixing valves to ensure the correct water temperature in radiant systems according to the climate conditions set for each circuit. There are 15 different types of pre-configured systems for quick and easy installation, with the possibility to manage up to 5 remote keypads for controlling thermal load in likewise zones. Moreover, the cascade connection of up to 4 heat pumps ensures fine control over the capacity delivered, without decreasing performance, and more precise system sizing.

THE SOLUTIONS

DIFFERENT TYPES OF UNITS DESIGNED FOR DIFFERENT HEATING AND COOLING REQUIREMENTS.

A WIDE RANGE OF PRODUCTS IS THE BEST CHOICE FOR DIFFERENT TYPES OF PLANTS: HIGH TEMPERATURE UNITS OPTIMIZED FOR HEATING (HT), REVERSIBLE MEDIUM TEMPERATURE UNITS (MTD) AND UNITS WITH TOTAL HEAT RECOVERY FOR THE SUPPLY OF DOMESTIC HOT WATER (DHW).



Prana DHW

Reversible units that use total heat recovery to supply free domestic hot water.

In cooling mode, when the fluid is cooled, the heat rejected from the unit exchanges with another source either from air, water or ground.

The rejected heat is not wasted but recovered to produce domestic hot water.

i-NRG

AWR DHW2 XE

WWR DHW2

BWR DHW2

Prana MTD

Reversible medium temperature units for hot water production up to 60°C and domestic hot water as a priority.

Ideal for heating and cooling using one single unit, they are particulary suitable for radiator systems.

Available in either water source, geothermal or air source models, with operating limits down to -15°C external air temperature.

i-KI / i-KIR

AWR MTD1

AWR MTD2 XE

WWR MTD2

BWR MTD2

Prana HT

High temperature units optimized for heating and domestic hot water supply as priority.

The units assure hot water production up to 65°C and operating limits down to -20°C.

They are the best solution with traditional heating systems such as radiators and they also guarantee good performances if combined with radiator systems.

AW HT

Prana

THE RANGE PRANA 2012

AIR SOURCE SOLUTIONS

Prana air source heat pumps transfer the heat from the external air using water as exchange fluid.

- Simplified installation

i-NRG

Reversible air/water heat pump with DC Inverter compressor, production of hot domestic water and total heat recovery.

i-KI / i-KIR

Air/water reversible or only heating heat pump, with DC Inverter compressor and domestic hot water production.

AWR DHW2 XE

Reversible air/water heat pump with production of hot domestic water and total heat recovery.

AWR MTD1

Reversible air/water heat pump for water heating up to 55°C and domestic hot water production.

AWR MTD2 XE

Air/water reversible heat pump for water heating up to 58°C and operating limits down to -15°C external air temperature and domestic hot water production.

AW HT

Air/water only heating heat pump, for water heating up to 65°C and operating limits down to -20°C.

WATER SOURCE SOLUTIONS

Prana water source heat pumps use water from aquifer.

- Highest energy efficiency

WWR MTD2

Reversible water/water heat pump for water heating up to 55°C and domestic hot water production.

WWR DHW2

Reversible water/water heat pump domestic hot water production.

GEOTHERMAL SOLUTIONS

Prana geothermal heat pumps transfer the heat from the earth through horizontal or vertical probes.

- Highest energy efficiency
- Lowest environmental impact

BWR MTD2

Reversible heat pump, geothermal source, for water heating up to 55°C and domestic hot water production.

BWR DHW2

Reversible heat pump, with domestic hot water production and total heat recovery.

FRESH AIR UNITS

SHAOCA

Unit for air renewal and air purification in buildings

The SHAOCA is a controlled mechanical ventilation system that guarantees air renewal and purification in buildings with an appropriate temperature, using an in-built refrigerant circuit.

The active thermodynamic recovery allows to reduce the air renewal load, providing part of the thermal requirements of the building whilst maintaining total comfort conditions all year round.

HYDRONIC TERMINALS

MHD

Hi-wall type terminal

i-Life

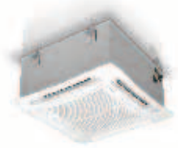
Professional fan-coils with cabinet or built-in version powered by EC Brushless centrifugal fan

a-Life

Fan-coil for professional applications, with cabinet or built-in version

a-Life HP

High head fan-soil for professional application built-in version



CHD

Cassette type terminal

CONTROL SYSTEMS

nadisystem

Device of control and supervision for the interaction among the Prana components. (Nadisystem is included in the correspondingunits).

HydroRelax

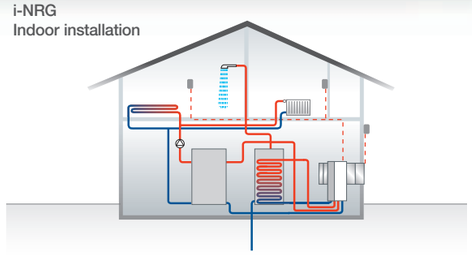
Device of supervision and control

prana i-NRG

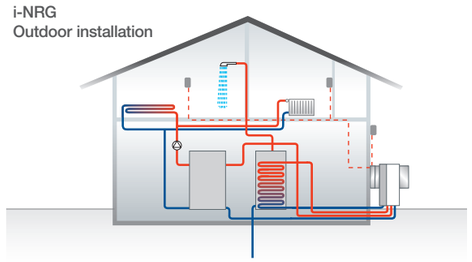
REVERSIBLE HEAT PUMP WITH DC INVERTER COMPRESSOR, HIGH WATER TEMPERATURE, TOTAL HEAT RECOVERY, AIR SOURCE, INDOOR/OUTDOOR INSTALLATION,16,3 KW

INVERTER DRIVEN COMPRESSOR · SCROLL · AXIAL · PLATES · HFC R-410A

i-NRG
Indoor installation



i-NRG
Outdoor installation



nadisystem

Remote key pad with temperature and humidity probe

VERSIONS

i-NRG
Reversible heat pump with inverter compressor, total heat recovery, air source for indoor/outdoor installation.

UNIT DESCRIPTION

The new i-NRG heat pump provides exactly the energy required by the system, perfectly following the real load of the building, thanks to the modulation of the DC inverter fan. One single unit for the highest efficiency, sustainability and huge savings, thanks to the advantages of DC frequency driven fans and circulating pumps (inverter) for both plant and domestic hot water circuits. i-NRG is the new generation heat pump for all year round operation in any operating mode: single cycle (air conditioning, heating, domestic hot water) as well as combined cycle in total heat recovery (domestic hot water together with cooling). Domestic hot water production is guaranteed by the dedicated exchanger for heat recovery: total, for free domestic hot water production, or partial. Domestic hot water is stored in a properly dimensioned storage tank. The unit can be installed indoor or outdoor, thus ensuring complete flexibility.
Extended operating limits for all year, specially in heating:
- Maximum flow temperature 60°C
- Maximum external air temperature 45°C
- Minimum external air temperature -15°C

COMMANDS

Electronic control Nadisystem provides great application flexibility. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiently. The electronic board allows you to manage:
- remote control wired, back-lit display complete with remote temperature and humidity probe.
- outdoor temperature sensor for water plant side modular set point compensation
- a zone of direct heating for radiator, floor heating or fan coil
- a zone with mix valve for floor heating
- electrical heating element for possible integration and anti-legionellosis cycle for cylinder
- boiler or electric heater in substitution or in addition
- the room controller can customise up to six time bands. The presence of the programmable timer allows the creation of an operating profile containing up to 6 time bands.
- up to 4 heat pump in cascade (with N-CM component)
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessorie), up to 5 zone.

The defrost adopts a proprietary self-adaptive logic, which features the monitoring of numerous operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

FEATURES

- Structure and base in hot galvanised epoxy powder coated steel.
- High effcient stainless steel (AISI 316) plate to plate exchanger (at the domestic hot water side), with low pressure drop. It is positioned next after the compressor, it ensures the domestic hot water production. That can work either in full recovery or in part, with the constant optimization of efficiency through logic advanced adjusting controller.
- High efficient plant side plate exchanger of stainless steel AISI 316 with low pressure drop. It meets the supply of both hot or cold water for the facility, regardless of the domestic hot water.
- DC inverter scroll compressor with self-adaptive capacity adjustment. Reduced inrush current due to modulation by an inverter.
- Electronic expansion valve.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area (100% fully quality tested).
- Axial electric fan in continuous current housed in aerodynamic conveyor profile with safety grill.
- Low external air temperature device:
  continuous fan speed regulation with pressure switch.
- The water circuit comes complete with:
  - Variable flow circulator plant side, the curves are selected by control, energy efficiency class A
  - Variable flow circulator domestic hot water side, energy efficiency class A
  - Expansion tank.
  - Safety valve.
  - Pressure switch, system side.
  - Pressure gauge.
  - Manual filling assembly.

Main accessories

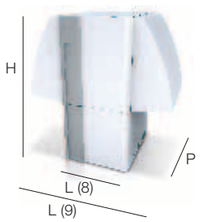
- Wired room terminal with backlit display and temperature and humidity probe
- Extension module for system configuration
- Acoustic insulation casing kit (MANDATORY for outdoor installation)
- Kit of rectangular air ducts and grills for indoor installation
- Electric heater of integration for the heating system
- Electric heater for hot water cylinder, of integration and for anti-legionella
- Cascade management kit
- Serial card RS485 for ModBus
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for DOMH2O kit
- 300,500,1000 litres thermal store for domestic hot water with solar heat exchanger, for kit DOMH2O
- DOMH2O15 e DOMH2O24 kit for domestic hot water with external heat exchanger plate-to-plate and pump

i-NRG			0061m	0061t
Nominal Heating power	(1)	kW	16,3	16,3
Total absorbed power	(2)	kW	4,0	4,0
COP EN 14511			3,91	3,94
Cooling capacity	(3)	kW	19,6	19,7
Total absorbed power	(2)	kW	5,40	5,40
EER EN 14511			3,62	3,66
Cooling capacity with total recovery	(4)	kW	17,9	18
Total absorbed power		kW	4,9	4,9
Recovery heating capacity		kW	22,6	22,6
Compressor type			SCROLL INVERTER DC	SCROLL INVERTER DC
No. Compressors		N.	1	1
Refrigerant			R410A	R410A
No. fans		N.	1	1
Plant side pump type	(5)		i-Ci	i-Ci
Recovery side pump type	(5)		i-Ci	i-Ci
Electrical power supply		V-Ph~Hz	230-1~50	400-3N~50
Sound power	(6)	dB(A)	68	68
Sound pressure level	(7)	dB(A)	52	52
DIMENSION				
L	(8)	mm	750	750
L	(9)	mm	1535	1535
H		mm	1600	1600
P		mm	1050	1050
Operational weight		kg	260	260

Note

I-NRG

(1) Water in-out 30/35°C (plant side), outdoor air temperature 7°C b.s./ 6°C b.u.
(2) Total input is obtained from compressor input and fan input.
(3) Water in-out 23/18°C (plant side), outdoor air temperature 35°C b.s.
(4) Water in-out 23/18°C (plant side), water in-out 45/50°C (total recovery side)
(5) i-Ci= Brushless DC pump
(6) Sound power level according to ISO 9614 and Eurovent 8/1
(7) Average sound pressure level above one reflecting surface (Q=2) at 1 meter from the outside dimensions of the unit.
(8) Indoor installation
(9) Outdoor installation



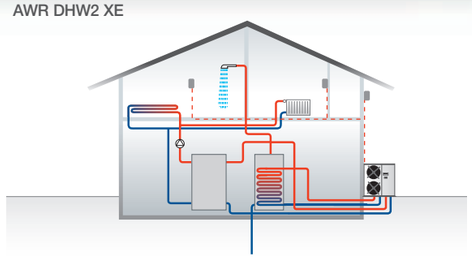
prana AWR DHW2 XE

NEW!

REVERSIBLE HEAT PUMP, TOTAL HEAT RECOVERY, AIR SOURCE FOR OUTDOOR INSTALLATION 7,6 ÷ 31,5 KW

SCROLL · AXIAL · PLATES · HFC R-407C

AWR DHW2 XE



VERSIONS

AWR DHW2 XE
Reversible air/water heat pump with production of hot domestic water and total heat recovery.

AWR DHW2 XE - SL
Reversible air/water heat pump with production of hot domestic water and total heat recovery. Super-low noise version.

UNIT DESCRIPTION

PRANA DHW is the new HIGH EFFICIENCY heat pump for all year round operation in any operating mode: single cycle (air conditioning, heating, domestic hot water) as well as combined cycle in total heat recovery (domestic hot water together with cooling). Energy efficiency is higher during the summer cycle, when the production of hot water is free, thanks to the full recovery of the heat. During the combined use, the DHW exchanger uses the temperature of the discharged gases to get inside the accumulation sanitary water as high as 65° C. The advanced electronic regulation developed by Climaveneta ensures the highest operational flexibility, fast working condition and a significant increase in the overall COP, which go hand in hand with electricity and space reduction. Advantages, combined with the possibility of completely eliminating the traditional boiler, making the PRANA DHW heat pumps the ideal solution for energy saving applications in residential, hotel and the service sector.

nadisystem

Remote key pad with temperature and humidity probe

COMMANDS

The Nadisystem electronic control provides great application flexibility. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimising comfort in the room and increasing the energy efficiency. The electronic board allows you to manage:

- wired remote control with back-lit display and with remote temperature and humidity probe.
- outdoor temperature sensor for water plant side modular set point compensation
- a zone of direct heating for radiator, floor heating or fan coil
- a zone with mix valve for floor heating
- electrical heating element for possible integration and anti-legionella cycle for cylinder
- boiler or electric heater in substitution or in addition
- the room controller can customise up to six time bands. The presence of the programmable timer allows the creation of an operating profile containing up to 6 time bands.
- up to 4 heat pump in cascade (with N-CM component)
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessorie), up to 5 zone.

The defrost adopts a proprietary self-adaptive logic, which features the monitoring of numerous operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

FEATURES

- Structure and base in hot galvanised epoxy powder coated steel.
- Stainless steel (AISI 316) high efficient and low pressure drop plate to plate exchanger (at the domestic hot water side). It is positioned next after the compressor and it ensures the domestic hot water production. This can work either in full or in partial recovery, with the constant optimisation of efficiency through advanced logic of the controller
- Stainless steel AISI 316 plant side exchangers, which ensure high efficiency and low pressure drop and they meet the supply of both hot and cold water of the building, regardless of the domestic hot water production
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection.
- Finned coils made with copper pipes and aluminium fins with large exchange surface area (100% fully quality tested)
- Axial electric fans, external rotor,6-pole electric motor fitted with thermal protection, housed in aerodynamic conveyor profile with safety grill
- Low external air temperature device: continuous fan speed regulation with pressure switch
- Coil protection grille
- Soft starter for 230V units /ms and 400V units /ts
- The water circuit comes complete with:
  - Plant side variable flow circulator, the curves are selected by control, energy efficiency class A
  - Variable flow circulator domestic (hot water side), energy efficiency class A
  - Plant side differential pressure swich
  - Expansion tank
  - Safety valve
  - Manual filling assembly
  - Pressure gauge
  - Air vent valve

Main accessories

- Wired room terminal with backlit display and temperature and humidity probe
- Extension module for system configuration
- Electric heater of integration for the heating system
- Electric heater for hot water cylinder, of integration and for anti-legionella
- Serial card RS485 for ModBus
- Cascade management kit
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for use with the DOMH2O kit
- 300,500,1000 litres thermal store for domestic hot water with solar heat exchanger, for use with DOMH2O kit
- DOMH2015 e DOMH2024 kit for domestic hot water with external heat exchanger plate-to-plate and pump

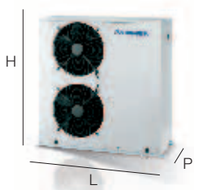
AWR DHW2 XE			0021m	0025m	0041m	0021ms	0025ms	0041ms	0025t	0041t	0065t	0101t	0025ts	0041ts	0065ts	0101ts
Nominal Heating power	(1)	kW	7,60	9,00	12,8	7,60	9,00	12,8	8,90	12,6	20,4	31,5	8,90	12,6	20,4	31,5
Total absorbed power	(2)	kW	1,80	2,20	3,10	1,80	2,20	3,10	2,10	3,00	4,80	7,60	2,10	3,00	4,80	7,60
COP			4,22	4,09	4,13	4,22	4,09	4,13	4,24	4,20	4,25	4,14	4,24	4,20	4,25	4,14
COP EN14511			4,10	4,11	4,17	4,10	4,11	4,17	4,14	4,22	4,17	4,14	4,14	4,22	4,17	4,14
Cooling capacity	(3)	kW	8,20	9,70	13,9	8,20	9,70	13,9	9,70	13,9	21,9	32,5	9,70	13,9	21,9	32,5
Total absorbed power	(2)	kW	2,20	2,60	3,70	2,20	2,60	3,70	2,50	3,70	5,90	8,80	2,50	3,70	5,90	8,80
EER			3,73	3,73	3,76	3,73	3,73	3,76	3,88	3,76	3,71	3,69	3,88	3,76	3,71	3,69
EER EN14511			3,81	3,83	3,83	3,81	3,83	3,83	3,89	3,89	3,84	3,81	3,89	3,89	3,84	3,81
Cooling capacity with total recovery	(4)	kW	6,80	8,20	12,1	6,80	8,20	12,1	8,20	12,1	19,7	28,8	8,20	12,1	19,7	28,8
Total absorbed power		kW	2,30	2,70	3,90	2,30	2,70	3,90	2,70	3,80	5,50	8,20	2,70	3,80	5,50	8,20
Recovery heating capacity		kW	9,00	10,8	15,7	9,00	10,8	15,7	10,7	15,7	24,8	36,5	10,7	15,7	24,8	36,5
Heating capacity	(5)		7,30	8,70	12,5	7,30	8,70	12,5	8,60	12,3	19,8	30,6	8,60	12,3	19,8	30,6
Total absorbed power	(2)	kW	2,30	2,70	3,80	2,30	2,70	3,80	2,60	3,70	6,00	9,30	2,60	3,70	6,00	9,30
COP			3,17	3,22	3,29	3,17	3,22	3,29	3,31	3,32	3,30	3,29	3,31	3,32	3,30	3,29
Cooling capacity	(6)	kW	5,80	6,90	10	5,80	6,90	10	6,90	9,90	15,7	23,5	6,90	9,90	15,7	23,5
Total absorbed power	(2)	kW	2,20	2,60	3,60	2,20	2,60	3,60	2,50	3,50	5,40	8,30	2,50	3,50	5,40	8,30
EER			2,64	2,65	2,78	2,64	2,65	2,78	2,76	2,83	2,91	2,83	2,76	2,83	2,91	2,83
Compressor type			SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
No. Compressors		N.	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Refrigerant			R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C
No. fans		N.	2	2	2	2	2	2	2	2	1	2	2	2	1	2
Plant side pump type	(7)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci
Recovery side pump type	(7)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci
Electrical power supply		V-Ph~Hz	230-1~50	230-1~50	230-1~50	230-1~50	230-1~50	230-1~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	61	76	114	27	34	45	40	50	101	118	22	28	56	65
Sound power	(8)	dB(A)	69	70	71	69	70	71	70	71	76	78	70	71	76	78
Sound pressure level	(9)	dB(A)	54	55	55	54	55	55	55	55	60	62	55	55	60	62
DIMENSION																
L		mm	1250	1250	1700	1250	1250	1700	1250	1700	1700	1700	1250	1700	1700	1700
H		mm	1125	1125	1200	1125	1125	1200	1125	1200	1700	1700	1125	1200	1700	1700
P		mm	420	420	650	420	420	650	420	650	650	650	420	650	650	650
Operational weight		kg	165	165	295	165	165	295	165	295	348	390	165	295	348	390

AWR DHW2 XE SL			0065t	0101t	0065ts	0101ts
Nominal Heating power	(1)	kW	19,4	29,3	19,4	29,3
Total absorbed power	(2)	kW	4,70	7,10	4,70	7,10
COP			4,13	4,13	4,13	4,13
COP EN14511			4,11	4,16	4,11	4,16
Cooling capacity	(3)	kW	20,9	31,4	20,9	31,4
Total absorbed power	(2)	kW	5,60	8,40	5,60	8,40
EER			3,73	3,74	3,73	3,74
EER EN14511			3,84	3,82	3,84	3,82
Cooling capacity with total recovery	(4)	kW	19,2	28,8	19,2	28,8
Total absorbed power		kW	5,20	7,70	5,20	7,70
Recovery heating capacity		kW	24,1	36	24,1	36
Heating capacity	(5)		19	28,8	19	28,8
Total absorbed power	(2)	kW	5,90	8,80	5,90	8,80
COP			3,22	3,27	3,22	3,27
Cooling capacity	(6)	kW	15,1	22,8	15,1	22,8
Total absorbed power	(2)	kW	5,10	7,80	5,10	7,80
EER			2,96	2,92	2,96	2,92
Compressor type			SCROLL	SCROLL	SCROLL	SCROLL
No. Compressors		N.	1	1	1	1
Refrigerant			R407C	R407C	R407C	R407C
No. fans		N.	2	3	2	3
Plant side pump type	(7)		Ci	Ci	Ci	Ci
Recovery side pump type	(7)		Ci	Ci	Ci	Ci
Electrical power supply		V-Ph~Hz	400-3N~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	101	118	56	65
Sound power	(8)	dB(A)	73	74	73	74
Sound pressure level	(9)	dB(A)	57	58	57	58
DIMENSION						
L		mm	1700	1700	1700	1700
H		mm	1700	1700	1700	1700
P		mm	650	650	650	650
Operational weight		kg	348	390	348	390

Note

AWR DHW2 XE

(1) Water in-out 30/35°C (plant side), outdoor air temperature 7°C b.s./ 6°C b.u.
(2) Total input is obtained from compressor input and fan input.
(3) Water in-out 23/18°C (plant side), outdoor air temperature 35°C b.s.
(4) Water in-out 23/18°C (plant side), water in-out 45/50°C (total recovery side)
(5) Water in-out 40/45°C (plant side), outdoor air temperature 7°C b.s./ 6°C b.u.
(6) Water in-out 12/7°C (plant side), outdoor air temperature 35°C b.s.
(7) Ci=Circulator; Ce=Centrifugal
(8) Sound power level according to ISO 9614 and Eurovent 8/1
(9) Average sound pressure level above one reflecting surface (Q=2) at 1 meter from the outside dimensions of the unit.

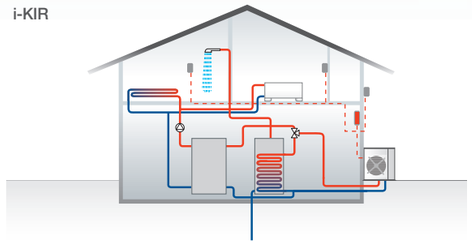


prana i-KI / i-KIR

REVERSIBLE OR HEATING ONLY HEAT PUMP WITH DC INVERTER COMPRESSOR, AIR SOURCE, OUTDOOR INSTALLATION, 9,55 KW

EUROVENT CERTIFIED PERFORMANCE · INVERTER DRIVEN COMPRESSOR · AXIAL · PLATES · HFC R-410A

i-KI
i-KIR



VERSIONS

i-KI
Air cooled heating only heat pump, with axial fans, for heating water up to 60°C and operating limit down to -20°C outoor air temperature. Domestic hot water production.

i-KIR
Air cooled reversible heat pump, with axial fans, for heating water up to 60°C and operating limit down to -20°C outoor air temperature. Domestic hot water production.

UNIT DESCRIPTION

Climaveneta's system is based on an packaged external units with integrated hydronic module and by an internal unit with the electronic regulation. i-KI and i-KIR heat pumps provide for heating, cooling and domestic hot water production. Particular care is taken for winter mode, that thanks to inverter technology is guaranteed beyond traditional units working limits, with domestic hot water production at 60°C at -20°external air.

i-KI and i-KIR untis can be coupled with traditional systems or radiant panels, guaranteeing always very high energy efficiency. Intallation is strongly simplified thanks to the integrated hydronic module.

nadisystem

Remote key pad with temperature and humidity probe

COMMANDS

NADISYSTEM Electronic control Nadisystem provides great application flexibility. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiency. The electronic board allows you to manage:
- remote control wired, back-lit display complete with remote temperature and humidity probe.
- outdoor temperature sensor for water plant side modular set point compensation
- a zone of direct heating for radiator, floor heating or fan coil
- a zone with mix valve for floor heating
- electrical heating element for possible integration and anti-legionellosis cycle for cylinder
- boiler or electric heater in substitution or in addition
- the room controller can customise up to six time bands. The presence of the programmable timer allows the creation of an operating profile containing up to 6 time bands.
- up to 4 heat pump in cascade (with N-CM component)
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessorie), up to 5 zone.

The defrost adopts a proprietary self-adaptive logic, which features the monitoring of numerous operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

FEATURES

- Wired remote control, back-lit display complete with remote temperature and humidity probe
- External air probe for weather compensation
- Internal module complete with electronic board and relay connection strip.
- Structure and base in hot galvanised epoxy powder coated steel.
- High efficiency and low pressure drop stainless steel (AISI 316) water exchangers complete with closed cell insulation with vapour barrier,antifreeze heating element and differencial pressure switch
- Hermetic scroll DC brushless inverter driven compressors, equipped with the crankcase heater and thermal protection
- Electronic expansion valve
- Finned coils made with copper pipes and aluminium fins with large exchange surface area
- Axial electric fan EC in continuous current housed in aerodynamic conveyor profile with safety grill and low external air temperature device: continuous fan speed regulation with pressure switch
- Condensate collecting tray
- The water circuit comes complete with:
  - Water circulator for all models.
  - Expansion tank, 8 liters.
  - Safety valve.
  - Manual filling assembly.
  - Air vent valve.

Main accessories

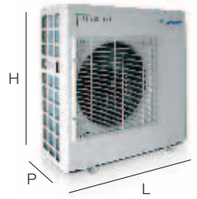
- Wired room terminal with backlit display, with temperature and humidity probe
- Extension module for system configuration
- Three-way valve for domestic hot water
- Electric heater of integration for the heating system
- Electric heater for hot water cylinder, of integration and for anti-legionella
- Cascade management kit
- Serial card RS485 for ModBus
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for the DOMH2O kit
- 300,500,1000 litres thermal store for domestic hot water with solar heat exchanger, for DOMH2O kit
- DOMH2015 e DOMH2024 kit for domestic hot water, with external heat exchanger plate-to-plate and pump

Modello			i-KI 0031m MTD	i-KIR 0031m MTD
Nominal Heating power	(1)	kW	9,55	9,55
Total absorbed power	(2)	kW	2,31	2,31
COP			4,13	4,13
COP EN14511			4,02	4,02
Cooling capacity	(3)	kW		7,02
Total absorbed power	(2)	kW		2,15
EER				3,27
EER EN 14511				3,22
Heating capacity	(4)	kW	9,00	9,00
Total absorbed power	(2)	kW	2,87	2,87
COP Eurovent			3,13	3,13
Cooling capacity	(5)	kW		4,91
Total absorbed power	(2)	kW		1,96
EER Eurovent				2,51
Compressor type			Rotativo DC Inverter	
No. Compressors		N.	1	
Refrigerant			R410A	
No. fans		N.	1	1
Plant side pump type	(6)		Ci	Ci
Electrical power supply		V-Ph~Hz	230-1~50	230-1~50
Sound power	(7)	dB(A)	64	64
Sound pressure level	(8)	dB(A)	50	50
DIMENSION				
L		mm	850	850
H		mm	882	882
P		mm	330	330
Operational weight		kg	85	85

Note

i-KI / i-KIR

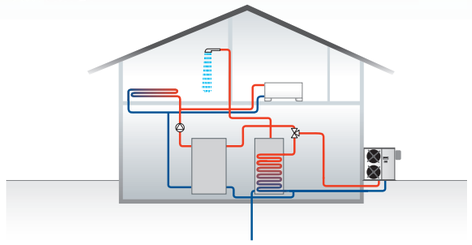
(1) System water temperature 30/35°C, outside air temperature 7°C DB/ 6°C WB
(2) Total power consumption calculated by adding compressor and fan power consumption.
(3) System water temperature 23/18°C, outside air temperature 35°C DB
(4) System water temperature 40/45°C, outside air temperature 7°C DB/ 6°C WB
(5) System water temperature 12/7°C, outside air temperature 35°C DB
(6) Ci=Circulating pump
(7) Sound power in accordance with ISO 9614 and Eurovent 8/1
(8) Average sound pressure on reflecting surface (Q=2) at a distance of 1 metre from the outside of the unit.



prana AWR MTD1

REVERSIBLE HEAT PUMP, AIR SOURCE FOR OUTDOOR INSTALLATION 6,9 ÷ 17,4 KW

AWR MTD1



VERSIONS

AWR MTD1
Reversible air/water heat pump for water heating up to 55°C and domestic hot water production.

UNIT DESCRIPTION

Heat pumps AWR-MTD1 are reversible outdoor units with axial fans, hermetic scroll compressors and Full Floating technology. Full Floating is advanced electronics which has been developed by CLIMAVENETA in order to meet the needs of typical residential small size and small/medium tertiary sector, thanks to the accumulation. Another advantage that, together with the hydraulic module components it make extremely simple the installation of heat pump: simply by connecting the unit to water plant and electricity so that it can be put into operation.

COMMANDS

The new generation electronic controller allows to manage the heat pump by using the Full Floating technology, designed by Climaveneta for improving the system´s efficiency for the fans (Floating Fans), for the circulating pump (Floating Flow) and finally for the working temperature (Floating Setpoint). This also allows to achieve all the following benefits: chiller operation even with larger operating limits, improvement of efficiency in both standard and extreme conditions, much lower operating noise in part load conditions, lower installation time, lower time for system set-up, broader operating limits, faster transient after defrosts.
The electronic menu allows to manage:
- domestic hot water production by external three-way valve (accessory)
- a zone of direct heating
- outdoor temperature sensor for water plant side modular set point compensation
- electrical heating element for possible integration and anti-legionella cycle for cylinder
- boiler or electric heater management

FEATURES

- Structure and base in hot galvanised epoxy powder coated steel.
- High efficiency and low pressure drop stainless steel (AISI 316) water exchangers complete with closed-cell insulation with vapour barrier,antifreeze heating element and differencial pressure switch
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection
- Finned coils made with copper pipes and aluminium fins with large exchange surface area (100% fully quality tested)
- Axial electric fans, external rotor, 6-pole electric motor with a fitted with thermal protection, housed in aerodynamic conveyor profile with safety grill
- Low external air temperature device: continuous fan speed regulation with pressure switch
- Condensate collecting tray
- Coil protection grille
- Soft starter for 230V/1/50Hz units (ms)
- The water circuit comes complete with:
  - Variable flow circulator for all models
  - Water side differential pressure switch.
  - Expansion tank.
  - Safety valve.
  - Manual filling assembly.
  - Pressure gauge.
  - Air vent valve.
  - Control with foolproof device accessible from the outside.

Main accessories

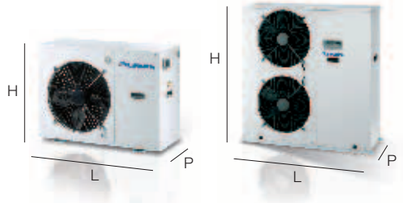
- Three-way valve for domestic hot water
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for use with the DOMH2O kit
- 300,500,1000 litres thermal store for domestic hot water with solar heat exchanger, for use with kit DOMH2O
- Kit boiler control
- DOMH2O15 e DOMH2O24 kit for domestic hot water with external heat exchanger plate-to-plate and pump
- 1,2,3 kw single-phase electric heater kit
- External buffer tank and hydronic connecting kit
- Removable metal mesh water filter kit
- Rubber anti-vibration mounting kit
- HSW11 Remote keyboard

AWR MTD1			0021ms	0031ms	0041ms	0051ms	0041t	0051t	0061t
Nominal Heating power	(1)	kW	6,90	10,2	12,9	13,4	13	15,2	17,4
Total absorbed power	(2)	kW	1,70	2,60	3,40	3,20	3,50	3,90	4,10
COP Eurovent		*	3,95	3,94	3,82	4,14	3,77	3,88	4,27
Cooling capacity	(3)	kW	6,80	10,3	12,9	13,9	13,4	15,9	18,4
Total absorbed power	(2)	kW	2	3,40	4,10	4	4,20	4,60	5,40
EER Eurovent		*	3,40	2,98	3,06	3,37	3,20	3,25	3,38
Heating capacity	(4)	kW	6,80	10,1	12,7	13,1	13	14,6	17
Total absorbed power	(2)	kW	2,20	3,30	4,20	4	4,40	4,70	5
COP Eurovent		*	3,09	3,06	3,02	3,27	2,95	3,11	3,40
Cooling capacity	(5)	kW	5,10	7,80	9,90	10,5	10,3	11,9	13,9
Total absorbed power	(2)	kW	2	3,30	3,90	3,80	4	4,50	5
EER Eurovent		*	2,55	2,36	2,54	2,76	2,58	2,64	2,78
ESEER			3,15	2,98	3,06	3,37	3,20	3,25	3,38
Compressor type			SCROLL						
No. Compressors		N.	1						
Refrigerant			R410A						
No. fans		N.	1	1	2	2	2	2	2
Plant side pump type	(6)		Ci	Ci	Ci	Ci	Ci	Ci	Ci
Electrical power supply		V-Ph~Hz	230-1~50	230-1~50	230-1~50	230-1~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	27	44	45	45	64	64	74
Sound power	(7)	dB(A)	66	66	69	69	69	69	69
Sound pressure level	(8)	dB(A)	52	52	54	54	54	54	54
DIMENSION									
L		mm	900	900	900	900	900	900	900
H		mm	640	940	1240	1240	1240	1240	1390
P		mm	370	370	370	370	370	370	420
Operational weight		kg	95	115	140	160	140	160	170

Note

AWR MTD 1

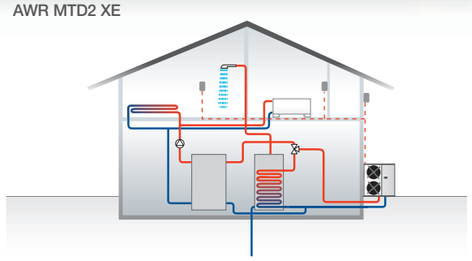
(1) Water in-out 30/35°C (plant side), outdoor air temperature 7°C b.s./ 6°C b.u.
(2) Total input is obtained from compressor input and fan input.
(3) Water in-out 23/18°C (plant side), outdoor air temperature 35°C b.s.
(4) Water in-out 40/45°C (plant side), outdoor air temperature 7°C b.s./ 6°C b.u.
(5) Water in-out 12/7°C (plant side), outdoor air temperature 35°C b.s.
(6) Ci=Circulator; Ce=Centrifugal
(7) Sound power level according to ISO 9614 and Eurovent 8/1
(8) Average sound pressure level above one reflecting surface (Q=2) at 1 meter from the outside dimensions of the unit.



prana AWR MTD2 XE

NEW!

AWR MTD2 XE



VERSIONS

AWR MTD2 XE
Air/water reversible heat pump for water heating up to 58°C and operating limits down to -15°C external air temperature and domestic hot water production.

AWR MTD2 XE/H
Air/water reversible heat pump for water heating up to 58°C and operating limits down to -15°C external air temperature and domestic hot water production. Integrated electric heater.

UNIT DESCRIPTION

Heat pumps AWR-MTD2-XE reversible units are able to provide heating, cooling and domestic hot water. Particular attention was paid to the winter, thanks to special technological devices is guaranteed beyond the normal limits of traditional units. Prana AWR-MTD2-XE can be combined with traditional systems or radiant panels, ensuring a high energy efficiency. All units are certified in accordance with the Class A classification Eurovent energy in heating. This makes them particularly suitable for use radiant installations. The installation is greatly simplified through the integration of the hydraulic group simply by connecting the unit to water plant and electricity so that it can be put into operation.

nadisystem

Remote key pad with temperature and humidity probe

COMMANDS

Electronic control Nadisystem provides great application flexibility. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiency. The electronic board allows you to manage:
- remote control wired, back-lit display complete with remote temperature and humidity probe.
- outdoor temperature sensor for water plant side modular set point compensation
- a zone of direct heating for radiator, floor heating or fan coil
- domestic hot water production by external three-way valve (accessory)
- electrical heating element for possible integration and anti-legionella cycle for cylinder
- boiler or electric heater in substitution or in addition
- the room controller can customise up to six time bands. The presence of the programmable timer allows the creation of an operating profile containing up to 6 time bands.
- up to 4 heat pump in cascade (with N-CM component)
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessorie), up to 5 zone.

The defrost adopts a proprietary self-adaptive logic, which features the monitoring of numerous operational parameters. This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

FEATURES

- Structure and base in hot galvanised epoxy powder coated steel.
- High efficiency and low pressure drop stainless steel (AISI 316) water exchangers complete with closed-cell insulation with vapour barrier,antifreeze heating element and differencial pressure switch
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection
- Finned coils made with copper pipes and aluminium fins with large exchange surface area (100% fully quality tested)
- Axial electric fans, external rotor, 6-pole electric motor fitted with thermal protection, housed in aerodynamic conveyor profile with safety grill
- Low external air temperature device: continuous fan speed regulation with pressure switch
- Electrical modulating resistance antifreeze to the base located between wing and base exchanger to improve and facilitate the flow of water during defrosting
- Condensate collecting tray (models 0011÷0051)
- Coil protection grille
- Soft starter for 230V/1/50Hz units (ms)
- Phase sequence control relay for three phase models
- The water circuit comes complete with:
  - Variable flow circulator for all models.
  - Water side differential pressure switch.
  - Expansion tank.
  - Safety valve.
  - Manual filling assembly.
  - Pressure gauge.
  - Air vent valve.

Main accessories

- Wired room terminal with backlit display, with temperature and humidity probe
- Extension module for system configuration
- Three-way valve for domestic hot water
- Electric heater of integration for the heating system
- Electric heater for hot water cylinder, of integration and for anti-legionella
- Cascade management kit
- Serial card RS485 for ModBus
- External buffer tank and hydronic connecting kit
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for use with kit DOMH2O
- 300,500,1000 litres thermal store for domestic hot water with solar heat exchanger, for use with kit DOMH2O
- DOMH2O15 e DOMH2O24 kit for domestic hot water with external heat exchanger plate-to-plate and pump

HIGH EFFICIENCY REVERSIBLE HEAT PUMP, AIR SOURCE FOR OUTDOOR INSTALLATION 6,3 ÷ 25,1 kW

EUROVENT CERTIFIED PERFORMANCE · A ENERGY CLASS · SCROLL · AXIAL · P PLATES · HFC R-410A

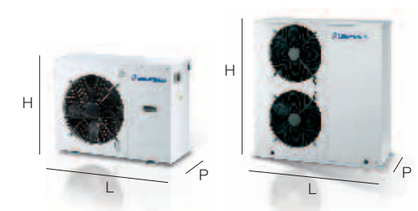
AWR MTD2 XE			0011ms	0025ms	0031ms	0041ms	0031t	0041t	0051t	0061t	0091t
Nominal Heating power	(1)	kW	6,30	7,40	11,2	14	10,9	14	15,9	17,9	25,1
Total absorbed power	(2)	kW	1,50	1,80	2,60	3,30	2,60	3,30	3,80	4,20	6
COP Eurovent			4,20	4,11	4,31	4,24	4,19	4,24	4,18	4,26	4,18
COP EN14511			4,13	4,15	4,22	4,16	4,15	4,15	4,11	4,25	4,19
Cooling capacity	(3)	kW	7,20	8,30	12,3	15,7	11,7	15,8	17,7	20,2	29,2
Total absorbed power	(2)	kW	1,90	2,20	3,30	4,10	3,10	4,20	4,70	5,30	7,80
EER Eurovent			3,79	3,77	3,73	3,83	3,77	3,76	3,77	3,81	3,74
EER EN14511			3,82	3,82	3,81	3,84	3,84	3,81	3,81	3,81	3,85
Heating capacity	(4)		6,10	7,30	10,8	13,6	10,6	13,8	15,4	17,5	24,6
Total absorbed power	(2)	kW	1,90	2,30	3,30	4,10	3,20	4,30	4,60	5,20	7,40
COP Eurovent			3,21	3,17	3,27	3,32	3,31	3,21	3,35	3,37	3,32
Cooling capacity	(5)	kW	5,20	6,30	9,20	11,7	8,60	11,9	13,2	15,2	22,1
Total absorbed power	(2)	kW	1,70	2,20	3,10	4	3	4	4,60	5	7,20
EER Eurovent			3,06	2,86	2,97	2,93	2,87	2,98	2,87	3,04	3,07
ESEER			3,62	3,63	3,52	3,46	3,42	3,65	3,24	3,55	3,57
Compressor type			SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
No. Compressors		N.	1	1	1	1	1	1	1	1	1
Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
No. fans		N.	1	1	2	2	2	2	2	2	3
Plant side pump type	(6)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci
Electrical power supply		V-Ph~Hz	230-1~50	230-1~50	230-1~50	230-1~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	27	30	45	45	48	64	64	75	111
Sound power	(7)	dB(A)	69	69	71	71	71	71	71	72	74
Sound pressure level	(8)	dB(A)	54	54	56	56	56	56	56	57	58
DIMENSION											
L		mm	900	900	900	900	900	900	900	1550	1550
H		mm	1240	1240	1240	1390	1240	1390	1390	1200	1700
P		mm	420	420	420	420	420	420	420	450	450
Operational weight		kg	145	150	155	170	155	170	180	250	335

AWR MTD2 XE/H			0011ms	0025ms	0031ms	0041ms	0031t	0041t	0051t	0061t	0091t
Nominal Heating power	(1)	kW	6,30	7,40	11,2	14	10,9	14	15,9	17,9	25,1
Total absorbed power	(2)	kW	1,50	1,80	2,60	3,30	2,60	3,30	3,80	4,20	6
COP Eurovent			4,20	4,11	4,31	4,24	4,19	4,24	4,18	4,26	4,18
COP EN14511			4,13	4,15	4,22	4,16	4,15	4,15	4,11	4,25	4,19
Cooling capacity	(3)	kW	7,20	8,30	12,3	15,7	11,7	15,8	17,7	20,2	29,2
Total absorbed power	(2)	kW	1,90	2,20	3,30	4,10	3,10	4,20	4,70	5,30	7,80
EER Eurovent			3,79	3,77	3,73	3,83	3,77	3,76	3,77	3,81	3,74
EER EN14511			3,82	3,82	3,81	3,84	3,84	3,81	3,81	3,81	3,85
Heating capacity	(4)		6,10	7,30	10,8	13,6	10,6	13,8	15,4	17,5	24,6
Total absorbed power	(2)	kW	1,90	2,30	3,30	4,10	3,20	4,30	4,60	5,20	7,40
COP Eurovent			3,21	3,17	3,27	3,32	3,31	3,21	3,35	3,37	3,32
Cooling capacity	(5)	kW	5,20	6,30	9,20	11,7	8,60	11,9	13,2	15,2	22,1
Total absorbed power	(2)	kW	1,70	2,20	3,10	4	3	4	4,60	5	7,20
EER Eurovent			3,06	2,86	2,97	2,93	2,87	2,98	2,87	3,04	3,07
ESEER			3,62	3,63	3,52	3,46	3,42	3,65	3,24	3,55	3,57
Compressor type			SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
No. Compressors		N.	1	1	1	1	1	1	1	1	1
Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
No. fans		N.	1	1	2	2	2	2	2	2	3
Plant side pump type	(6)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci
Resistenza elettrica		kW	2	3	3	6	3	6	6	6	9
Electrical power supply		V-Ph~Hz	230-1~50	230-1~50	230-1~50	230-1~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	27	30	45	45	48	64	64	75	111
Sound power	(7)	dB(A)	69	69	71	71	71	71	71	72	74
Sound pressure level	(8)	dB(A)	54	54	56	56	56	56	56	57	58
DIMENSION											
L		mm	900	900	900	900	900	900	900	1550	1550
H		mm	1240	1240	1240	1390	1240	1390	1390	1200	1700
P		mm	420	420	420	420	420	420	420	450	450
Operational weight		kg	145	150	155	170	155	170	180	250	335

Note

AWR MTD2 XE

(1) Water in-out 30/35°C (plant side), outdoor air temperature 7°C b.s./ 6°C b.u.
(2) Total input is obtained from compressor input and fan input.
(3) Water in-out 23/18°C (plant side), outdoor air temperature 35°C b.s.
(4) Water in-out 40/45°C (plant side), outdoor air temperature 7°C b.s./ 6°C b.u.
(5) Water in-out 12/7°C (plant side), outdoor air temperature 35°C b.s.
(6) Ci=Circulator; Ce=Centrifugal
(7) Sound power level according to ISO 9614 and Eurovent 8/1
(8) Average sound pressure level above one reflecting surface (Q=2) at 1 meter from the outside dimensions of the unit.

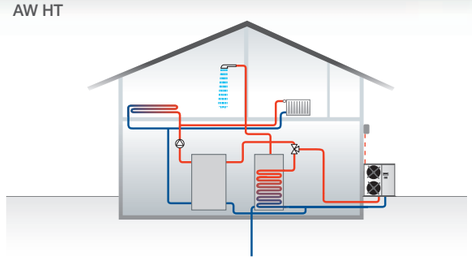


prana AW HT

HIGH EFFICIENCY HEAT PUMP, AIR SOURCE FOR OUTDOOR INSTALLATION, HIGH WATER TEMPERATURE 10,4 ÷ 26,6 KW

ENERGY CLASS A · SCROLL · AXIAL · PLATES · HFC R-407C

AW HT



VERSIONS

65° HEATING · HOT WATER

AW HT
Air/water only heating heat pump, for water heating up to 65°C and operating limits down to -20°C.

UNIT DESCRIPTION

AW HT is an ideal solution for systems with heating radiators, where the water high temperature is needed. The EVI technology compressor with additional steam injection in the compressing cycle assures a water temperature of 65°C and operating limits as low as -20°C. Neither probes nor connections pipes to wells are needed; the installation is simple, this is a suitable solution for all applications.

COMMANDS

Electronic control provides great application flexibility. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiently. The electronic board PRO EXTENDED allows you to manage:
- domestic hot water production by external three-way valve (accessory)
- circulator on system side
- a zone of direct heating
- outdoor temperature sensor for water plant side modular set point compensation
- electrical heating element for possible integration and anti-legionella cycle for cylinder
- integrated boiler with heat pump
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessories)

FEATURES

- Structure and base in hot-dip galvanised steel with epoxy powder coating finish.
- Circulating pump for all models
- High-efficiency plate exchangers in AISI 316 stainless steel with low pressure drops, fitted with heating element for frost protection.
- High efficiency cycle EVI Hermetic Scroll Compressor (with hot gas direct injection into the compressor) to reach 65° C, with the crankcase heater and thermal protection
- Finned coils made with copper pipes and aluminium fins with large exchange surface area (100% fully quality tested); sub cooling circuit to prevent the icing at the basement
- Axial electric fans, external rotor, 6-pole electric motor fitted with thermal protection, housed in aerodynamic conveyor profile with safety grill
- A condense collecting tray within water discharge
- Electrical resistance modulating antifreeze to the base located between wing and base exchanger to improve and facilitate the flow of water during the defrosting
- Coil protection grille
- Soft starter for 230V/1/50Hz units (ms)
- Phase sequence control relay for three phase models
- The water circuit comes complete with:
  - Expansion tank.
  - Safety valve.
  - Manual filling assembly.
  - Pressure gauge.
  - Air vent valve.

Main accessories

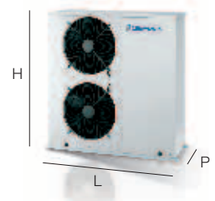
- Three-way valve for domestic hot water
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for use with kit DOMH2O
- 300,500 litres thermal store for domestic hot water with solar heat exchanger, for kit DOMH2O
- DOMH2O15 e DOMH2O24 kit for domestic hot water with external heat exchanger plate-to-plate and pump
- Control kit for heat pump with boiler
- 1,2,3 kw single-phase electric heater kit
- Radiant panels or radiator management kit Second zone
- Control kit for underfloor heating with hydronic components
- Removable metal mesh water filter kit
- Rubber anti-vibration mounting kit
- Wired room unit
- Room thermostat wired based

AW HT			0031ms	0041ms	0041t	0061t	0071t	0041ts	0061ts	0071ts
Nominal Heating power	(1)	kW	10,4	14,9	14,1	19,7	26,6	14,1	19,7	26,6
Total absorbed power	(2)	kW	2,50	3,50	3,30	4,70	6,1	3,30	4,70	6,1
COP EN14511			4,10	4,12	4,14	4,12	4,26	4,14	4,12	4,26
Heating capacity	(3)	kW	10,4	14,3	14,3	19,7	27,1	14,3	19,7	27,1
Total absorbed power	(2)	kW	3	4	4	5,60	7,4	4	5,60	7,4
COP EN14511			3,30	4,48	3,48	3,45	3,58	3,48	3,45	3,58
Heating capacity	(4)	kW	9,10	12,5	12,5	17,5	23,5	12,5	17,5	23,5
Total absorbed power	(2)	kW	2,50	3,30	3,30	4,60	5,9	3,30	4,60	5,9
COP EN 14511			3,44	3,66	3,66	3,72	3,88	3,66	3,72	3,88
Heating capacity	(5)	kW	7,80	11,4	11,4	14,8	21,2	11,4	14,8	21,2
Total absorbed power	(2)	kW	3,80	5,40	5,40	7,60	10,4	5,40	7,60	10,4
COP EN 14511			1,97	2,06	2,06	1,91	1,99	2,06	1,91	1,99
Compressor type			SCROLL EVI							
No. Compressors		N.	1							
Refrigerant			R407C							
No. fans		N.	2	2	2	2	3	2	2	3
Plant side pump type	(6)		Ci							
Electrical power supply		V-Ph~Hz	230-1~50	230-1~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	44	45	64	101	99	35	55	54
Sound power	(7)	dB(A)	70	70	70	71	74	70	71	74
Sound pressure level	(8)	dB(A)	55	55	55	56	59	55	56	59
DIMENSION										
L		mm	900	900	900	900	1470	900	900	1470
H		mm	1240	1390	1390	1390	1700	1390	1390	1700
P		mm	420	420	420	420	570	420	420	570
Operational weight		kg	150	160	160	170	320	160	170	320

Note

AW-HT

(1) Water in-out 30/35°C (plant side), outdoor air temperature 7°C b.s./ 6°C b.u.
(2) Total input is obtained from compressor input and fan input.
(3) Water in-out 40/45°C (plant side), outdoor air temperature 7°C b.s./ 6°C b.u.
(4) Water in-out 30/35°C (plant side), outdoor air temperature 2°C b.s./ 1°C b.u.
(5) Water 65°C, outdoor air temperature -7°C b.s./ 1°C b.u.
(6) Ci=Circulator; Ce=Centrifugal
(7) Sound power level according to ISO 9614 and Eurovent 8/1
(8) Average sound pressure level above one reflecting surface (Q=2) at 1 meter from the outside dimensions of the unit.



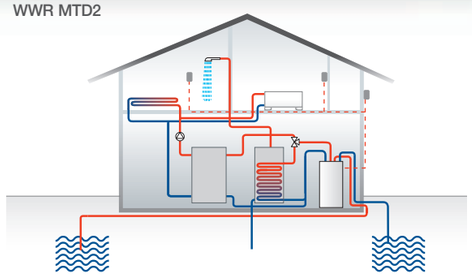
prana WWR MTD2

NEW!

REVERSIBLE HEAT PUMP, WATER SOURCE
7,2 ÷ 43,8 KW

EUROVENT CERTIFIED PERFORMANCE · SCROLL · PLATES · HFC R-410A

WWR MTD2



VERSIONS

HEATING · COOLING · HOT WATER

WWR MTD2
Reversible water/water heat pump for water heating up to 55°C and domestic hot water production.

UNIT DESCRIPTION

The MTD2 water-cooled heat pump are reversible units for heating, cooling and domestic hot water by external three-way valve (accessory). Both the MTD2 heat pumps are suitable for traditional heating systems and radiant panels. The latter, working with water at lower temperatures, ensure a higher yield and are particularly appreciated for new buildings with low energy consumption that point on using renewable energy resources. The installation is greatly simplified through the integration of the group simply by connecting the unit to the water plant and the electrical system so that it can be put into operation.

nadisystem

Remote key pad with temperature and humidity probe

COMMANDS

Electronic control Nadisystem provides great application flexibility. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiency. The electronic board allows you to manage:
- remote control wired, back-lit display complete with remote temperature and humidity probe.
- outdoor temperature sensor for water plant side modular set point compensation
- a zone of direct heating for radiator, floor heating or fan coil
- domestic hot water production by external three-way valve (accessory)
- electrical heating element for possible integration and anti-legionella cycle for cylinder
- boiler or electric heater in substitution or in addition
- the room controller can customise up to six time bands. The presence of the programmable timer allows the creation of an operating profile containing up to 6 time bands.
- up to 4 heat pump in cascade (with N-CM component)
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessorie), up to 5 zone.

FEATURES

- Structure and base in hot galvanised epoxy powder coated steel.
- High-efficiency plate exchangers in AISI 316 stainless steel with low pressure drops, fitted with heating element for frost protection.
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection
- Case panels are insulated within low noise material for further improvement of silence
- Rubber vibration damper.
- Soft starter for 230V/1/50Hz units (ms)
- Phase sequence control relay for three phase models
- The water circuit comes complete with:
  - Variable flow circulator for 0011÷0061 models and centrifugal variable flow pump for models 0071÷0121, plant side
  - Modulating valve to reduce water consumption (source side).
  - Safety valve.
  - Expansion tank.
  - Manual filling assembly
  - Pressure gauge.
  - Air vent valve.
  - Drain valve on both plant and source circuits.
  - Differential pressure switch on source side and system side.

Main accessories

- Wired room terminal with backlit display and temperature and humidity probe
- Extension module for system configuration
- Three-way valve for domestic hot water
- Electric heater of integration for the heating system
- Electric heater for hot water cylinder, of integration and for anti-legionella
- Cascade management kit
- Serial card RS485 for ModBus
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for use with kit DOMH2O
- 300,500,1000 litres thermal store for domestic hot water with solar heat exchanger, for use with kit DOMH2O
- DOMH2O15 e DOMH2O24 kit for domestic hot water with external heat exchanger plate-to-plate and pump

WWR MTD2			0011ms	0025ms	0031ms	0041ms	0025t	0031t	0041t	0061t	0071t	0091t	0101t	0121t
Nominal Heating power	(1)	kW	7,20	9,70	12,1	15,3	9,80	12,1	15,9	21,1	26,2	30,5	35	43,8
Total absorbed power	(2)	kW	1,40	1,81	2,30	2,88	1,73	2,17	2,90	3,70	4,60	5,20	6	7,60
COP Eurovent			5,14	5,36	5,26	5,31	5,66	5,58	5,48	5,70	5,70	5,87	5,83	5,76
Cooling capacity	(3)	kW	7,10	9,80	12	15,1	9,50	12	15,7	21,3	26,9	30,7	34,8	44,8
Total absorbed power	(2)	kW	1,60	1,96	2,53	3,27	1,80	2,50	3,30	4,10	5,20	6	7	8,80
EER Eurovent			4,44	5	4,74	4,62	5,28	4,80	4,76	5,20	5,17	5,12	4,97	5,09
Heating capacity	(4)		6,80	9,20	11,6	14,6	9,20	11,4	15,3	20	24,8	28,8	33	41,7
Total absorbed power	(2)	kW	1,70	2,30	3	3,60	2,20	2,70	3,70	4,60	5,80	6,40	7,60	9,50
COP Eurovent			4	4	3,87	4,06	4,18	4,22	4,14	4,35	4,28	4,50	4,34	4,39
Cooling capacity	(5)	kW	5,20	7,20	8,80	11,3	7,30	8,90	11,8	15,7	19,8	22,9	26	33,4
Total absorbed power	(2)	kW	1,53	2	2,60	3,20	1,90	2,40	3,20	4	5,10	5,80	6,80	8,39
EER Eurovent			3,40	3,60	3,38	3,53	3,84	3,71	3,70	3,93	3,88	3,95	3,82	3,98
ESEER			4,03	4,26	3,95	3,90	4,54	4,33	4,08	4,51	4,40	4,61	4,33	4,37
Compressor type			SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
No. Compressors		N.	1	1	1	1	1	1	1	1	1	1	1	1
Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Plant side pump type	(6)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ce	Ce	Ce	Ce
Electrical power supply		V-Ph~Hz	230-1~50	230-1~50	230-1~50	230-1~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	26	37	44	59	35	48	64	75	95	111	118	140
Sound power	(7)	dB(A)	52	53	53	58	52	52	58	59	66	66	70	70
Sound pressure level	(8)	dB(A)	38	39	39	44	38	38	44	45	51	51	55	55
DIMENSION														
L		mm	680	680	680	680	680	680	680	680	680	680	680	680
H		mm	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105
P		mm	845	845	845	845	845	845	845	845	845	845	845	845
Operational weight		kg	188	190	195	210	190	195	210	225	240	245	250	270

Note

WWR-MTD

(1) Condenser water in-out 30/35°C (plant side), Evaporator water in 10°C (source side)
(2) Total input is obtained from compressor input and fan input.
(3) Evaporator water in-out 23/18°C (plant side), Condenser water in-out 30/35°C (source side)
(4) Condenser water in-out 40/45°C (plant side), water in 10°C (source side)
(5) Evaporator water in-out 12/7°C (plant side), Condenser water in-out 30/35°C (source side)
(6) Ci=Circulator; Ce=Centrifugal
(7) Sound power level according to ISO 9614 and Eurovent 8/1
(8) Average sound pressure level above one reflecting surface (Q=2) at 1 meter from the outside dimensions of the unit.

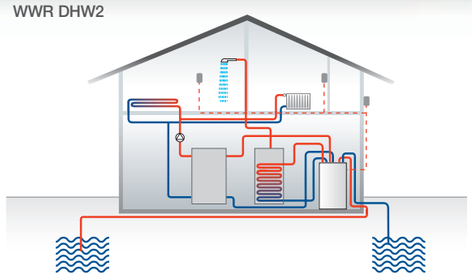
prana WWR DHW2

NEW!

REVERSIBLE HEAT PUMP, TOTAL HEAT RECOVERY, WATER SOURCE 6,0 ÷ 40,5 KW

SCROLL · PLATES · HFC R-407C

WWR DHW2



VERSIONS

WWR DHW2
Reversible water/water heat pump domestic hot water production.

UNIT DESCRIPTION

The PRANA DHW2 water-cooled heat pump are reversible units for all year round operation in any operating mode: single cycle (air conditioning, heating, domestic hot water) as well as combined cycle in total heat recovery (domestic hot water together with cooling). Energy efficiency is highest during the summer cycle, when, thanks to the full recovery of the heat, the production of hot water is free. During the combined use, the DHW exchanger uses the temperature of the discharge gases to gets inside the accumulation sanitary water as high as 65° C. The advanced electronic regulation developed by Climaveneta ensures the highest operational flexibility, fast working condition a significant increase in the overall COP, which go hand in hand with electricity and space reduction. Advantages, combined with the possibility of completely eliminating the traditional boiler, making heat pumps PRANA DHW2 the ideal solution for energy saving applications in residential, hotel and small sector.

nadisystem

Remote key pad with temperature and humidity probe

COMMANDS

Electronic control Nadisystem provides great application flexibility. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiency. The electronic board allows you to manage:
- wired remote control, back-lit display complete with remote temperature and humidity probe.
- outdoor temperature sensor for water plant side modular set point compensation
- a zone of direct heating for radiator, floor heating or fan coil
- a zone with mix valve for floor heating
- electrical heating element for possible integration and anti-legionella cycle for cylinder
- boiler or electric heater in substitution or in addition
- the room controller can customise up to six time bands. The presence of the programmable timer allows the creation of an operating profile containing up to 6 time bands.
- up to 4 heat pump in cascade (with N-CM component)
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessorie), up to 5 zone.

FEATURES

- Structure and base in hot galvanised epoxy powder coated steel
- Case panels are insulated within low noise material for further improvement of silence
- Rubber vibration damper
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection
- Stainless steel (AISI 316) plate to plate exchanger (at the domestic hot water side) ensures with high efficiency and low pressure drop. It is positioned next after the compressor and it ensures the domestic hot water production. This can work either in full or in partial recovery, with the constant optimisation of efficiency through the advanced logic of the controller
- Plant side exchanger with stainless steel AISI 316 plates that ensure high efficiency and low pressure drop. It meets the supply of both hot or cold water, regardless of the domestic hot water
- Source side exchanger with stainless steel (AISI 316) plates. It ensures high efficiency and low pressure drop
- Soft starter for 230V/1/50Hz units (ms)
- Phase sequence control relay for three phase models
- The water circuit comes complete with:
  - Circulator for the 0011÷0061 models and centrifugal for the 0071÷0121 models, plant side.
  - Circulator for the 0011÷0091 models and centrifugal pump for the 0101÷0121 models, hot water side.
  - Modulating valve to reduce water consumption (source side).
  - Safety valve.
  - Expansion tank.
  - Manual filling assembly.
  - Drain valve on both plant and source circuits.
  - Pressure gauge.
  - Air vent valve.
  - Differential pressure switch on source side and system side.

Main accessories

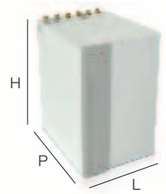
- Wired room terminal with backlit display and of temperature and humidity probe
- Extension module for system configuration
- Electric heater of integration for the heating system
- Electric heater for hot water cylinder, of integration and for anti-legionella
- Cascade management kit
- Serial card RS485 for ModBus
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for use with DOMH2O kit
- 300,500,1000 litres thermal store for domestic hot water, with solar heat exchanger, for use with the DOMH2O kit
- DOMH2015 e DOMH2024 kit for domestic hot water, with external heat exchanger plate-to-plate and pump

WWR DHW2			0011ms	0025ms	0031ms	0041ms	0025t	0031t	0041t	0061t	0071t	0091t	0101t	0121t
Nominal Heating power	(1)	kW	6	9	10,5	12,9	8,90	10,3	12,7	18,7	25,3	28,4	32,6	40,5
Total absorbed power	(2)	kW	1,30	2	2,40	2,90	2	2,30	2,80	3,90	5,30	5,90	6,90	8,80
COP			4,49	4,51	4,36	4,50	4,58	4,44	4,57	4,75	4,73	4,84	4,69	4,59
Cooling capacity	(3)	kW	7,30	11	12,5	15,3	10,9	12,4	15,4	22,5	30,2	34,4	38,9	49,7
Total absorbed power	(2)	kW	1,30	2	2,40	2,90	1,90	2,30	2,80	4,10	5,50	6,10	7,30	9,30
EER			5,62	5,50	5,21	5,28	5,74	5,39	5,50	5,49	5,49	5,64	5,33	5,34
Cooling capacity with total recovery	(4)	kW	6	9,20	10,3	12,9	9,10	10,3	13,1	18,9	25,5	29	32,7	41,1
Total absorbed power		kW	1,90	2,90	3,40	4,20	2,80	3,30	4	5,70	7,70	8,40	10,2	12,8
Recovery heating capacity	(4)	kW	7,90	11,9	13,5	16,8	11,7	13,4	16,9	24,2	32,7	36,9	42,4	53,1
Heating capacity	(5)		5,60	8,50	9,90	12,2	8,60	9,90	12,3	17,9	24	27,1	31,1	38,3
Total absorbed power	(2)	kW	1,70	2,60	3,10	3,60	2,50	3	3,50	4,90	6,80	7,30	8,70	11,1
COP			3,33	3,37	3,28	3,40	3,42	3,34	3,48	3,62	3,55	3,69	3,55	3,45
Cooling capacity	(6)	kW	5,10	7,70	8,90	11	7,70	8,80	10,9	16,1	21,7	24,6	28	34,8
Total absorbed power	(2)	kW	1,30	2	2,40	2,90	2	2,30	2,80	4	5,40	5,90	7	8,90
EER			3,92	3,85	3,71	3,79	3,85	3,83	3,89	4,03	4,02	4,17	4,00	3,91
Compressor type			SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
No. Compressors		N.	1	1	1	1	1	1	1	1	1	1	1	1
Refrigerant			R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C
Plant side pump type	(7)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ce	Ce	Ce	Ce
Recovery side pump type	(7)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci
Electrical power supply		V-Ph~Hz	230-1~50	230-1~50	230-1~50	230-1~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	21	34	45	51	40	46	50	74	95	111	118	140
Sound power	(8)	dB(A)	52	53	53	58	52	52	58	59	66	66	70	70
Sound pressure level	(9)	dB(A)	38	39	39	44	38	38	44	45	51	51	55	55
DIMENSION														
L		mm	680	680	680	680	680	680	680	680	680	680	680	680
H		mm	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105
P		mm	845	845	845	845	845	845	845	845	845	845	845	845
Operational weight		kg	205	210	215	230	210	215	230	245	270	280	290	315

Note

WWR DHW2

(1) Condenser water in-out 30/35°C (plant side), Evaporator water in 10°C (source side)
(2) According to Eurovent
(3) Evaporator water in-out 23/18°C (plant side), Condenser water in-out 30/35°C (source side)
(4) Water in-out 23/18°C (plant side), water in-out 45/50°C (total recovery side)
(5) Condenser water in-out 40/45°C (plant side), water in 10°C (source side)
(6) Evaporator water in-out 12/7°C (plant side), Condenser water in-out 30/35°C (source side)
(7) Ci=Circulator; Ce=Centrifugal
(8) Sound power level according to ISO 9614 and Eurovent 8/1
(9) Average sound pressure level above one reflecting surface (Q=2) at 1 meter from the outside dimensions of the unit.



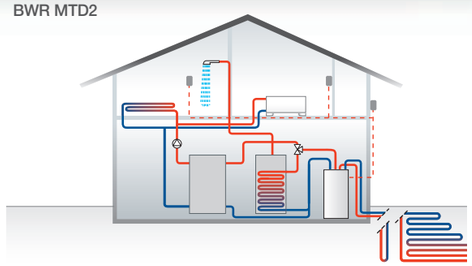
prana BWR MTD2

NEW!

REVERSIBLE HEAT PUMP, GEOTHERMAL SOURCE
5,4 ÷ 33,3 KW

EUROVENT CERTIFIED PERFORMANCE · SCROLL · PLATES · HFC R-410A

BWR MTD2



VERSIONS

HEATING · COOLING · HOT WATER

BWR MTD2
Reversible heat pump, geothermal source, for water heating up to 55°C and domestic hot water production.

UNIT DESCRIPTION

The MTD2 heat pump optimized for geothermal systems are reversible units for heating, cooling and domestic hot water by external three-way valve (accessory). Both heat pumps MTD2 are suitable for traditional heating systemsand radiant panels. The latter, working with water at lower temperatures, ensure a higher yield and are a particularly appreciated for new buildings with low energy consumption that point on using renewable energy resources. The installation is greatly simplified through the integration of the group simply by connecting the unit to water plant and electricity so that it can be put into operation.

nadisystem

Remote key pad with temperature and humidity probe

COMMANDS

Electronic control Nadisystem provides great application flexibility. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiency. The electronic board allows you to manage:
- wired remote control, back-lit display complete with remote temperature and humidity probe.
- outdoor temperature sensor for water plant side modular set point compensation
- a zone of direct heating for radiator, floor heating or fan coil
- domestic hot water production by external three-way valve (accessory)
- electrical heating element for possible integration and anti-legionella cycle for cylinder
- boiler or electric heater in substitution or in addition
- the room controller can customise up to six time bands. The presence of the programmable timer allows the creation of an operating profile containing up to 6 time bands.
- up to 4 heat pump in cascade (with N-CM component)
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessorie), up to 5 zone.

FEATURES

- Structure and base in hot galvanised epoxy powder coated steel.
- High-efficiency plate exchangers in AISI 316 stainless steel with low pressure drops, fitted with heating element for frost protection.
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection
- Case panels are insulated within low noise material for further improvement of silence
- Rubber vibration damper
- Soft starter for 230V/1/50Hz units (ms)
- Phase sequence control relay for three phase models
- The water circuit comes complete with:
  - Variable flow circulator for 0011÷0061 models and centrifugal variable flow pump for models 0071÷0121, plant side.
  - Variable flow circulator for 0011÷0031 models, centrifugal variable flow pump for models 0041÷0121 on source side (for geothermal systems, closed vertical or horizontal loops).
  - Safety valve.
  - Expansion tank.
  - Manual filling assembly
  - Pressure gauge.
  - Air vent valve.
  - Drain valve on both plant and source circuits.
  - Differential pressure switch on source side and system side.

Main accessories

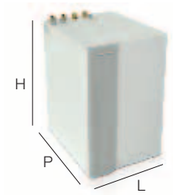
- Wired room terminal with backlit display and temperature and humidity probe
- Extension module for system configuration
- Three-way valve for domestic hot water
- Electric heater of integration for the heating system
- Electric heater for hot water cylinder, of integration and for anti-legionella
- Cascade management kit
- Serial card RS485 for ModBus
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for use with the DOMH2O kit
- 300,500,1000 litres thermal store for domestic hot water with solar heat exchanger, for use with the DOMH2O kit
- DOMH2O15 e DOMH2O24 kit for domestic hot water with external heat exchanger plate-to-plate and pump

BWR MTD2			0011ms	0025ms	0031ms	0041ms	0025t	0031t	0041t	0061t	0071t	0091t	0101t	0121t
Nominal Heating power	(1)	kW	5,40	7,30	9,20	11,7	7,50	9,10	12,2	16	19,8	23	26,5	33,3
Total absorbed power	(2)	kW	1,34	1,82	2,35	2,80	1,74	2,10	2,80	3,50	4,40	4,90	5,80	7,30
COP Eurovent			4,03	4	3,92	4,18	4,31	4,33	4,36	4,57	4,50	4,69	4,57	4,56
Cooling capacity	(3)	kW	7,10	9,80	12	15,1	9,50	12	15,7	21,3	26,9	30,7	34,8	44,8
Total absorbed power	(2)	kW	1,60	1,96	2,53	3,27	1,84	2,50	3,30	4,10	5,15	5,95	7	8,80
EER Eurovent			4,44	5	4,74	4,62	5,16	4,80	4,76	5,20	5,22	5,16	4,97	5,09
Heating capacity	(4)		5,20	7,10	9	11,3	7	8,70	11,8	15,2	18,8	21,8	25,1	31,9
Total absorbed power	(2)	kW	1,70	2,30	3	3,60	2,20	2,70	3,70	4,40	5,60	6,20	7,40	9
COP Eurovent			3,06	3,09	3	3,14	3,18	3,22	3,19	3,45	3,36	3,52	3,39	3,54
Cooling capacity	(5)	kW	5,20	7,20	8,80	11,3	7,30	8,90	11,8	15,7	19,8	22,9	26	33,4
Total absorbed power	(2)	kW	1,53	2	2,60	3,20	1,90	2,41	3,19	4	5,10	5,80	6,80	8,40
EER Eurovent			3,40	3,60	3,38	3,53	3,84	3,69	3,70	3,93	3,88	3,95	3,82	3,98
ESEER			4,03	4,26	3,95	3,90	4,54	4,33	4,08	4,51	4,40	4,61	4,33	4,37
Compressor type			SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
No. Compressors		N.	1	1	1	1	1	1	1	1	1	1	1	1
Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Plant side pump type	(6)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ce	Ce	Ce	Ce
Source side pump type	(6)		Ci	Ci	Ci	Ce	Ci	Ci	Ce	Ce	Ce	Ce	Ce	Ce
Electrical power supply		V-Ph-Hz	230-1~50	230-1~50	230-1~50	230-1~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	26	37	44	59	35	48	64	75	95	111	118	140
Sound power	(7)	dB(A)	52	53	53	58	52	52	58	59	66	66	70	70
Sound pressure level	(8)	dB(A)	38	39	39	44	38	38	44	45	51	51	55	55
DIMENSION														
L		mm	680	680	680	680	680	680	680	680	680	680	680	680
H		mm	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105
P		mm	845	845	845	845	845	845	845	845	845	845	845	845
Operational weight		kg	188	190	195	210	190	195	210	225	240	245	250	270

Note

BWR MTD2

(1) Condenser water in-out 30/35°C (plant side), Evaporator water in-out 0/-3°C (source side)
(2) According to Eurovent
(3) Evaporator water in-out 23/18°C (plant side), Condenser water in-out 30/35°C (source side)
(4) Condenser water in-out 40/45°C (plant side), Evaporator water in-out 0/-3°C (source side)
(5) Evaporator water in-out 12/7°C (plant side), Condenser water in-out 30/35°C (source side)
(6) Ci=Circulator; Ce=Centrifugal
(7) Sound power level according to ISO 9614 and Eurovent 8/1
(8) Average sound pressure level above one reflecting surface (Q=2) at 1 meter from the outside dimensions of the unit.



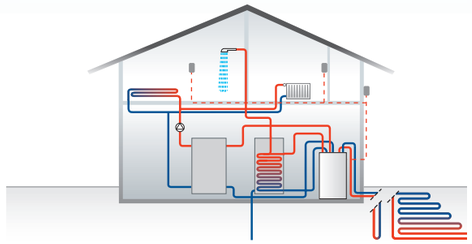
prana BWR DHW2

NEW!

REVERSIBLE HEAT PUMP, TOTAL HEAT RECOVERY, GEOTHERMAL SOURCE 4,5 ÷ 29,7 KW

SCROLL | PLATES | HFC R-407C

BWR DHW2



VERSIONS

BWR DHW2
Reversible heat pump, with domestic hot water production and total heat recovery.

UNIT DESCRIPTION

The PRANA DHW2 heat pump optimized for geothermal systems are reversible units for all year round operation in any operating mode: single cycle (air conditioning, heating, domestic hot water) as well as combined cycle in total heat recovery (domestic hot water together with cooling). Energy efficiency is highest during the summer cycle, when, thanks to the full recovery of the heat, the production of hot water is free. During the combined use, the DHW exchanger uses the temperature of the discharge gases to gets inside the accumulation sanitary water as high as 65° C. The advanced electronic regulation developed by Climaveneta ensures the highest operational flexibility, fast working condition a significant increase in the overall COP, which go hand in hand with electricity and space reduction. Advantages, combined with the possibility of completely eliminating the traditional boiler, making heat pumps PRANA DHW2 the ideal solution for energy saving applications in residential, hotel and small sector.

nadisystem

Remote key pad with temperature and humidity probe

COMMANDS

Electronic control Nadisystem provides great application flexibility. The remote keyboard kit wired indoor and outdoor temperature sensors allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficiency. The electronic board allows you to manage:

- wired remote control, back-lit display complete with remote temperature and humidity probe.
- outdoor temperature sensor for water plant side modular set point compensation
- a zone of direct heating for radiator, floor heating or fan coil
- a zone with mix valve for floor heating
- electrical heating element for possible integration and anti-legionella cycle for cylinder
- boiler or electric heater in substitution or in addition
- the room controller can customise up to six time bands. The presence of the programmable timer allows the creation of an operating profile containing up to 6 time bands.
- up to 4 heat pump in cascade (with N-CM component)
- several solutions through appropriate configurations of the controller and use of dedicated extension modules (accessorie), up to 5 zone.

FEATURES

- Structure and base in hot galvanised epoxy powder coated steel.
- Case panels are insulated within low noise material for further improvement of silence
- Rubber vibration damper.
- Hermetic scroll type compressors, equipped with the crankcase heater and thermal protection
- High efficiency stainless steel (AISI 316) plate to plate exchanger (at the domestic hot water side), with low pressure drop. It is positioned next after the compressor and it ensures domestic hot water production. That can work either in full recovery or in part, with the constant optimization of efficiency through logic advanced adjusting controller
- High-efficiency plates exchanger in AISI 316 stainless steel with low pressure drops. It meets the supply of both hot or cold water for the facility, regardless of the domestic hot water
- High efficiency stainless steel (AISI 316)plate exchanger (source side), with low pressure drop
- Soft starter for 230V/1/50Hz units (ms)
- Phase sequence control relay for three phase models
- The water circuit comes complete with:
  - Circulator for the 0011÷0061 models and centrifugal for the 0071÷0121 models, plant side
  - Circulator for the 0011÷0091 models and centrifugal pump for the 0101÷0121 models, hot water side
  - Circulator for 0011÷0031 models, centrifugal flow pump for models 0041÷0121, on source side (for vertical loops or horizontal loops)
  - Safety valve.
  - Expansion tank.
  - Manual filling assembly.
  - Drain valve on both plant and source circuits.
  - Pressure gauge.
  - Air vent valve.
  - Differential pressure switch on source side and system side.

Main accessories

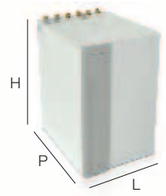
- Wired room terminal with backlit display, with temperature and humidity probe
- Extension module for system configuration
- Electric heater of integration for the heating system
- Electric heater for hot water cylinder, of integration and for anti-legionella
- Cascade management kit
- Serial card RS485 for ModBus
- Buffer tank 35,100,200 liters
- Hot water cylinder 300,500 liters
- 300 litres thermal store for domestic hot water, for use with DOMH2O kit
- 300,500,1000 litres thermal store for domestic hot water with solar heat exchanger, for use with kit DOMH2O
- DOMH2O15 e DOMH2O24 kit for domestic hot water with external heat exchanger plate-to-plate and pump

BWR DHW2			0011ms	0025ms	0031ms	0041ms	0025t	0031t	0041t	0061t	0071t	0091t	0101t	0121t
Nominal Heating power	(1)	kW	4,50	6,70	7,80	9,70	6,60	7,70	9,50	13,9	18,8	21,2	24,4	29,7
Total absorbed power	(2)	kW	1,30	1,90	2,30	2,80	1,90	2,20	2,70	3,70	5,10	5,60	6,60	8,30
COP			3,44	3,48	3,39	3,51	3,51	3,44	3,56	3,72	3,70	3,81	3,72	3,57
Cooling capacity	(3)	kW	7,30	11	12,5	15,3	10,9	12,4	15,4	22,5	30,2	34,4	38,9	49,7
Total absorbed power	(2)	kW	1,30	2	2,40	2,90	1,90	2,30	2,80	4,10	5,50	6,10	7,30	9,30
EER			5,62	5,50	5,21	5,28	5,74	5,39	5,50	5,49	5,49	5,64	5,33	5,34
Cooling capacity with total recovery	(4)	kW	6	9,20	10,3	12,9	9,10	10,3	13,1	18,9	25,5	29	32,7	41,1
Total absorbed power		kW	1,90	2,90	3,40	4,20	2,80	3,30	4	5,70	7,70	8,40	10,2	12,8
Recovery heating capacity	(4)	kW	7,90	11,9	13,5	16,8	11,7	13,4	16,9	24,2	32,7	36,9	42,4	53,1
Heating capacity	(5)		4,30	6,60	7,70	9,40	6,50	7,50	9,30	13,3	17,9	20,5	23,5	28,4
Total absorbed power	(2)	kW	1,70	2,50	3	3,50	2,40	2,90	3,40	4,70	6,50	7	8,30	10,5
COP			2,60	2,64	2,59	2,69	2,67	2,63	2,75	2,86	2,77	2,95	2,84	2,69
Cooling capacity	(6)	kW	5,10	7,70	8,90	11	7,70	8,80	10,9	16,1	21,7	24,6	28	34,8
Total absorbed power	(2)	kW	1,30	2	2,40	2,90	2	2,30	2,80	4	5,40	5,90	7	8,90
EER			3,92	3,85	3,71	3,79	3,85	3,83	3,89	4,03	4,02	4,17	4,00	3,91
Compressor type			SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
No. Compressors		N.	1	1	1	1	1	1	1	1	1	1	1	1
Refrigerant			R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C	R407C
Plant side pump type	(7)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ce	Ce	Ce	Ce
Recovery side pump type	(7)		Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci
Source side pump type	(7)		Ci	Ci	Ci	Ce	Ci	Ci	Ce	Ce	Ce	Ce	Ce	Ce
Electrical power supply		V-Ph-Hz	230-1~50	230-1~50	230-1~50	230-1~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50	400-3N~50
Start-up current		A	21	34	45	51	40	46	50	74	95	111	118	140
Sound power	(8)	dB(A)	52	53	53	58	52	52	58	59	66	66	70	70
Sound pressure level	(9)	dB(A)	38	39	39	44	38	38	44	45	51	51	55	55
DIMENSION														
L		mm	680	680	680	680	680	680	680	680	680	680	680	680
H		mm	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105
P		mm	845	845	845	845	845	845	845	845	845	845	845	845
Operational weight		kg	205	210	215	230	210	215	230	245	270	280	290	315

Note

BWR DHW2

(1) Condenser water in-out 30/35°C (plant side), Evaporator water in-out 0/-3°C (source side)
(2) According to Eurovent
(3) Evaporator water in-out 23/18°C (plant side), Condenser water in-out 30/35°C (source side)
(4) Water in-out 23/18°C (plant side), water in-out 45/50°C (total recovery side)
(5) Condenser water in-out 40/45°C (plant side), Evaporator water in-out 0/-3°C (source side)
(6) Evaporator water in-out 12/7°C (plant side), Condenser water in-out 30/35°C (source side)
(7) Ci=Circulator; Ce=Centrifugal
(8) Sound power level according to ISO 9614 and Eurovent 8/1
(9) Average sound pressure level above one reflecting surface (Q=2) at 1 meter from the outside dimensions of the unit.



NEW!

FRESH AIR UNIT WITH ACTIVE THERMODYNAMIC RECOVERY, INDOOR INSTALLATION 250 ÷ 600 m³/h

VAIR Variable Air Flow · TERMODYNAMIC · EC FAN · ROTATIVE · FREE COOLING · HEATING · COOLING · HFC R-410A

UNIT DESCRIPTION

The SHAOCA unit is a controlled mechanical ventilation system that guarantees air renewal and purification in buildings with an appropriate temperature, using an in-built refrigerant circuit. The heat pump technology enables to use the energy absorbed from vitiated air to heat or cool outdoor air, recovering energy that would be otherwise lost outside. The active thermodynamic recovery allows to reduce the air renewal load - with a high energy efficiency- providing part of the thermal requirements of the building whilst maintaining total comfort conditions all year round. In Summer the outdoor air cooling enables to reduce humidity, making the installation of a dehumidifier in radiant systems unnecessary. During middle seasons, the air intake is costless thanks to the Free Cooling system, keeping only the EC fan motor running . The SHAOCA unit reaches a higher energy-efficiency class, increasing the current and future value of the building. To complete the range of products for the controlled mechanical ventilation system, Climaveneta also offers electrostatic filters for a high efficiency filtration of noxious elements, together with a dehumidifier that ensures humidity control even in Winter.

COMMANDS

The controller offers advanced functions and algorithms. The keypad is generously sized with full operating status display. The commands and detailed LCD display make access to the units settings easy and safe. These resources allow to consult and intervene on the unit by means of a multi-level menu. The diagnostics includes a complete alarm management, with alarm logging functions for enhanced analysis of the unit operation. Availability of an internal real time clock for operation scheduling (up to 3 time belts). The unit, under the control of the microprocessor, is able to function as renewal air with cooling and dehumidifier in summer, renewal air with heating in winter, fresh air with thermodynamic recovery in summer and winter, free cooling and recirculating fan only.

FEATURES

- The supporting structure and external panels are in hot-dip galvanised sheet steel. The air treatment zone is fully lined with polyethylene foam to guarantee both high thermal and acoustic insulation.
- A condense collecting tray within the water discharge
- Refrigerant circuit consisting in the standard version of a thermostat with external valve for internal pressure relief, 4-way valve, high/low pressure safety pressure switch, liquid sight glass and dehydrating filter.
- Hermetic rotary type compressors, equipped with the thermal protection
- Unit's coils guarantee high efficient thermal exchange with low pressure drop. Finned unit coils are made of copper tubes and high exchange surface area aluminium fins (100% fully quality tested).
- Modulating supply and exhaust fans with backward curved Fan, 'plug-fan' type, with a directly coupled EC motor that enables low energy consumption.
- Dampers are integrated in the unit for the recirculation and fresh air G4 efficiency air filters, intake and oulet, wihich may be easily removed from bottom and top side of the unit for periodic cleaning.
- Indoor unit brackets and rubber vibration damper included.

SHAOCA			25	40	60
Nominal air flow		m³/h	250	400	600
Nominal useful head		Pa	50	50	50
Nominal Heating power	(1)	kW	2,71	3,44	4,41
Total absorbed power	(1)	kW	0,75	0,95	1,25
EER	(1)		3,61	3,62	3,53
Cooling capacity	(2)	kW	2,60	3,32	4,57
Total absorbed power	(2)	kW	0,58	0,74	1,08
COP	(2)		4,47	4,49	4,23
Compressor type			Rotary	Rotary	Rotary
N° Compressors			1	1	1
Refrigerant			R410A	R410A	R410A
Electrical power supply		V-Ph~Hz	230-1~50	230-1~50	230-1~50
Sound power		dB(A)	53	56	56
DIMENSION					
L		mm	752	752	752
H		mm	349	349	349
P		mm	1200	1200	1200

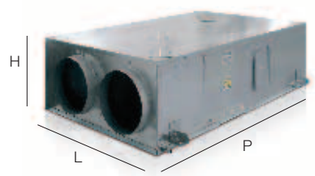
Main accessories

- ESP electrostatic air cleaner kit
- US300 ultrasounds humidifier kit
- EHD electric heater kit
- THW humidity probe, wall mounting

Note

SHAOCA

(1) Outdoor air temperature 7°C D.B./ 6°C W.B., indoor air temperature 20°C D.B./ 15°C W.B.
(2) Outdoor air temperature 35°C D.B./ 24°C W.B., Indoor air temperature 27°C D.B./ 19°C W.B.



CLIMAVENETA
SUSTAINABLE COMFORT

ENVIRONMENTAL RESPECT, SPECIFIC SOLUTIONS AND MAXIMUM RETURN ON INVESTMENT. IN TWO WORDS; SUSTAINABLE COMFORT.

Sustainable COMFORT

The highest comfort and the minimum environmental impact on the whole building; this is the mission of Climaveneta. Climaveneta is aware that technological systems are amongst the most crucial elements in modern buildings and urban design.

The usability, energy efficiency and environmental sustainability of our surroundings as well as the health and well-being of the people, who spend their time there, depend upon these systems. No matter whether it is an office space, residential building, shopping centre, hotel, hospital or leisure centre it is not just comfort that is the only requirement. It is a matter of flexibility and care, adapting the system to the requirements of each building, application and the user's needs. This is what Climaveneta considered as sustainable comfort. The best solution is to meet the stakeholder's expectations; ensuring comfort, maximum energy efficiency, optimized investments, highest standard of environmental respect and innovative air conditioning and heating solutions.

ENVIRONMENTAL RESPECT
Decreasing energy consumption, the systematic reduction of atmospheric emissions and the extensive use of renewable sources.

SPECIFIC SOLUTION FOR EACH PROJECT
Through a wide range of highly configurable products and systems, combined with customized solutions.

HIGHEST ROI
Thanks to innovative solutions that simplify the system and ensure high energy efficiency, low maintenance and longer life cycle of the product.

INNOVATION
Through the development of cutting-edge and efficient solutions with the contribution and close collaboration with suppliers and experts.

EXPERIENCE
40 years of leading experience in the development of efficient units for air conditioning and heating.

CLIMAVENETA AT A GLANCE

- 1st European for Central Air Conditioning
- 5th in the World in Central Air Conditioning
- 203 Millions € turnover 2010
- 1150 employees worldwide
- 7 hub factories
- 75.000 m² production facilities
- Complete range of products from 2 to 2400kW

SOMETIMES NUMBERS SAY MORE THAN A THOUSAND WORDS

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