

pranaMT

Awr MT Air

Medium-temperature air-cooled reversible heat pumps for heating water up to 55C and operating with temperatures as low as -15C, from 4.5 to 18 kW



Hot and cold in a single unit

Total reliability and low maintenance

Energy efficiency

Operation down to -15 C



DeLonghi

pranaMT

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The Prana MT air-water heat pump meets the need for indoor comfort, in an environmentally conscious way, all year round since it is no longer tied to just heating or air-conditioning.

Most of the energy used to produce heat comes from the air, which is a renewable source.

The units' small size coupled with low noise levels are essential features for residential installations, where a low impact is required.

Unit description

AWR MT heat pumps are reversible units designed to operate in heating as well as cooling mode. Special focus has been placed on their operation in winter mode.

Special technological devices mean the heat pump can operate outside the normal operating range of traditional units.

Prana AWR MT air can be used in conjunction with traditional systems or radiant panels. The latter allow for high energy efficiency while the heat pump ensures that

water is kept at the required temperature.

The heat pump's installation is made simpler still by incorporating the plumbing assembly inside and employing Full Floating technology.

Basically, the unit simply has to be connected to the water system and electricity to put it into operation.

Lastly, the FULL FLOATING AWR MT can be immediately integrated in the IDRORELAX central hydronic system.

Available versions



AWR MT Reversible heat pump, operates in heating and cooling mode, air-cooled and features built-in plumbing assembly.

Benefits

Thanks to the use of Full Floating technology, Climaveneta's air-cooled PRANA MT heat pumps supplement existing benefits in terms of reliability, quality and the option of integrating units in a system - which are hallmarks of Climaveneta products - with complete efficiency and considerable size reduction.



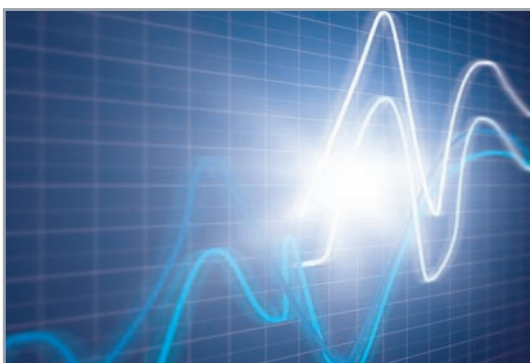
Hot and cold in a single unit

The Prana MT medium-temperature units are ideal for handling heating and cooling needs with a single unit since they have been designed with the option of reversing the cooling cycle's operation. Such situations can be encountered, for instance, in radiant panel systems. In these cases, due to the extensive exchange surface used to provide air-conditioning, only quite a low water temperature is needed, which brings considerable benefits in terms of increased energy efficiency.



Total reliability and low maintenance

The use of sealed, factory-tested refrigerant circuits mean heat pumps are low maintenance. Reliability is guaranteed by using extremely high-quality components and a certified industrial process at each stage of production.



High energy efficiency

AWR MT heat pumps have been designed to achieve high efficiency under any operating conditions, with heat pump mode receiving special attention.

The choice of high-efficiency components has earned the units a Eurovent Class A energy efficiency grade, which means a significant reduction in energy consumption.



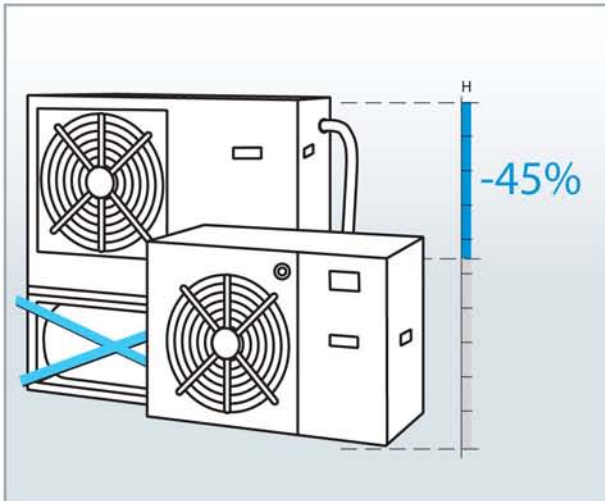
Operation down to -15 C

AWR MT heat pumps have been designed with special focus on their operation in winter mode. Special technological devices mean the heat pump can operate outside the normal operating range of traditional units.

High energy efficiency can be achieved by combining the heat pump with radiant panels, resulting in a considerable reduction in consumption.

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Small size

With its new Full Floating range, Climaveneta has managed to reduce unit size to as little as 45%. With all plumbing now incorporated inside the unit and the storage tank eliminated, there is greater flexibility in installation.

The units have a more compact case than the previous ones. Furthermore, eliminating the storage tank, with the aid of some smart electronics, has meant overall dimensions have been reduced considerably and costs lowered even further.



Complete factory-tested units

The units featuring Full Floating technology include the HYDRONIC KIT, i.e. they come complete with: pump, expansion tank, filler and drain, safety valves and pressure gauge.

Furthermore, they are tested at the actual factory once the production process is completed. This makes for reduced installation times and costs.



Plug & Play and Integration

The FULL FLOATING units come ready to install. This means the unit simply has to be connected to the water system and electricity to put it into operation.

Consequently, there is no need to bring in a refrigeration technician to perform installation: the work can be done easily by a plumber.

Lastly, the FULL FLOATING heat pumps can be immediately integrated in the IDRORELAX central hydronic system.

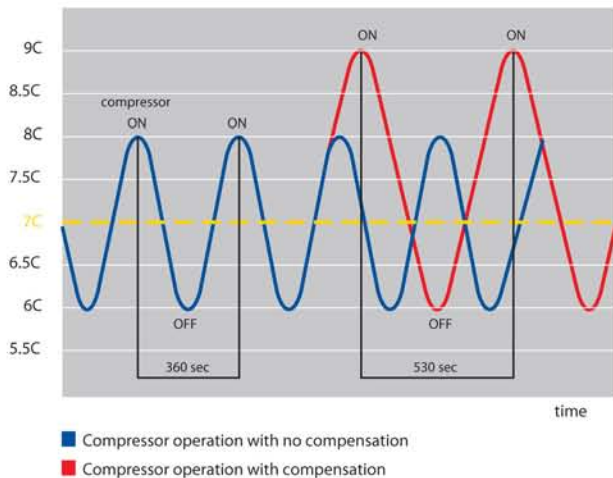
Full floating electronics



Floating Fan

Smart Full Floating electronics control and monitor the main components to improve performance and enable operation even under critical conditions. There is a pressure transducer located in the external exchanger to modulate the fans' supply voltage, which thus enables:

- n the heat pumps to operate even with external temperatures outside the seasonal range;
- n performance to be improved under both standard conditions and extreme conditions;
- n quieter running with partial load;
- n the compressor to run under optimal conditions.



Floating Set

An algorithm optimizes the water's setpoint automatically every 3 minutes based on compressor operating time and temperature of water in the system. Water storage is no longer essential as it is compensated by the Floating Set feature, thus resulting in reduced:

- n dimensions;
- n weight;
- n installation times;
- n time needed to bring the system up to steam.



Floating Flow

The pressure transducer constantly measures gas pressure in the external exchanger and, via an algorithm (which takes into account water temperatures and compressor operating time), modulates the pump's supply voltage and hence the water flow rate. This results in:

- n wider operating range;
- n easier system starting when outside air and water in the system are at either high or low temperatures;
- n reduced defrosting during startup;
- n shorter transitory defrosting phase;
- n less time needed to bring the system up to steam.

Components and Accessories

Standard unit components

- n Condensation tray for 0011 0061 models.
 - n Coil guard grille for 0011 0061 models.
 - n Housing and base are made from hot-galvanized epoxy powder coated sheet metal
 - n AISI 316 stainless steel plate-type exchangers on water side providing high efficiency and low pressure drop, with antifreeze heating elements and differential pressure switch.
 - n Hermetic scroll compressors complete with crankcase heater and thermal overload cutout
 - n Control panel accessible from outside equipped with anti-tampering device
 - n Finned coils with copper pipes and aluminium fins with large exchange surface, 100% tested against leaks with pressurized dried air
 - n Axial-flow motor-driven fans with external rotors and 6-pole electric motor, featuring built-in thermal overload cutout, set in aerodynamically designed housing and protected with mesh safety guard. Low outdoor air temperature operating device:
- continuous fan rotation speed control by means of pressure transducer.
 - n Antifreeze modulating heating element for base: positioned between finned exchanger and base to improve and encourage water drainage during defrosting.
 - n User interface on display.
 - n Inrush current limiter for all single-phase models
 - n The water circuit comes complete with:
 - Circulator for all models
 - Differential pressure switch on water side.
 - Expansion tank (2 litres)
 - Safety valve. (6 bar)
 - Manual filling assembly.
 - Pressure gauge.
 - Vent valve.
 - n ADDITIONAL HEATING ELEMENT (system side)
It is only switched on when strictly necessary and is controlled by outside air temperature and the temperature of water in the system.

Model	Power supply	Stage 1	Stage 2	Total
Awr 0011 MT	Single-phase 230V	1 kW	2 kW	3 kW
Awr 0025 MT	Single-phase 230V	2 kW	2 kW	4 kW
Awr 0031 MT	Single-phase 230V	2 kW	3 kW	5 kW
Awr 0041 MT	Single-phase 230V	3 kW	4 kW	7 kW
Awr 0031 MT	Three-phase 400V	3 kW	6 kW	9 kW
Awr 0041 MT	Three-phase 400V	3 kW	6 kW	9 kW
Awr 0051 MT	Three-phase 400V	3 kW	6 kW	9 kW
Awr 0061 MT	Three-phase 400V	3 kW	6 kW	9 kW

Accessories

Sizes

n Storage tank kit HPA 30A	0011
n Storage tank kit HPA 30B	0025 0061
n Standard pipe kit for connection to storage tank 30A	0011
n Standard pipe kit for connection to storage tank 30B	0025
n Standard pipe kit for connection to storage tank 30C	00310041
n Standard pipe kit for connection to storage tank 30D	00510061
n Standard rubber antivibration mounts kit for installation on the floor	00110061
n Removable metal mesh water filter kit 1"1/4	00110025
n Removable metal mesh water filter kit 1"1/2	00310061
n Remote keyboard kit HSW9	00110121

General technical data

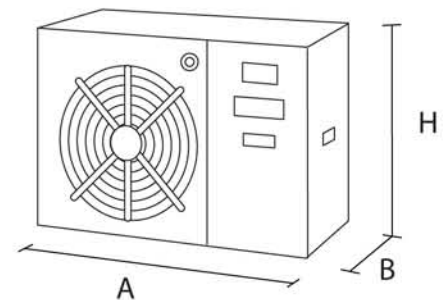
AWR MT			0011	0025	0031	0041	0031	0041	0051	0061
Heat capacity	(1)	kW	6.6	8.9	11.0	13.9	10.6	14.4	15.7	18.3
Power consumption	(1)	kW	1.5	2.1	2.6	3.3	2.4	3.4	3.7	4.3
COP			4.37	4.26	4.24	4.22	4.42	4.22	4.24	4.26
Heat capacity	(2)	kW	6.2	8.6	10.7	13.4	10.5	13.8	15.2	17.7
Power consumption	(2)	kW	1.9	2.5	3.1	3.9	3.0	4.0	4.4	5.0
COP			3.37	3.45	3.46	3.44	3.50	3.46	3.45	3.54
Nominal water flow	(1)	m ³ /h	1.13	1.54	1.90	2.40	1.82	2.47	2.70	3.15
Useful head	(1)	kPa	60	88	75	53	75	53	54	40
Cooling capacity	(3)	kW	6.4	8.6	11.1	14.3	11.3	15.2	16.9	19.7
Power consumption	(3)	kW	2.1	2.6	3.3	4.3	3.1	4.4	4.7	5.4
EER			3.05	3.31	3.37	3.32	3.66	3.46	3.60	3.66
Cooling capacity	(4)	kW	4.7	6.4	8.2	10.5	8.3	11.2	12.8	14.6
Power consumption	(4)	kW	2.1	2.7	3.2	4.1	3.0	4.2	4.6	5.2
EER			2.30	2.37	2.56	2.56	2.77	2.68	2.77	2.81
Nominal water flow	(3)	m ³ /h	1.10	1.48	1.91	2.46	1.95	2.62	2.91	3.40
Useful head	(3)	kPa	68	93	75	55	75	55	56	37
N fans		n	1	1	1	2	1	2	2	2
Type of compressor							SCROLL			
Number compressors		n	1	1	1	1	1	1	1	1
Number circuits		n	1	1	1	1	1	1	1	1
Refrigerant							R410A			
Type of pump							Circulator			
Number pumps			1	1	1	1	1	1	1	1
Weight while operating		kg	150	165	175	194	175	195	205	210
Plumbing fittings inches		inches	1"-3/4"	1"-1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"	1"1/4"
Sound pressure	(5)	dB(A)	55	58	58	58	58	58	58	58
Electricity supply		V/Ph/Hz	230V~50Hz				400V-3N~50Hz			
DIMENSIONS										
L		mm	900	900	900	900	900	900	900	900
H		mm	940	1240	1240	1240	1240	1240	1400	1400
D		mm	370	420	420	420	420	420	420	420

Notes:

- (1) Heat pump mode: External air temperature 7C DB- 6C WB, water in flow at 30C and out flow at 35C
- (2) Heat pump mode: External air temperature 7C DB- 6C WB, water in flow at 40C and out flow at 45C
- (3) Cooling mode: External air temperatures 35C DB, water in flow at 23C and out flow at 18C
- (4) Cooling mode: External air temperatures 35C DB, water in flow at 12C and out flow at 7C
- (5) Noise level measured in free field at a distance of 1 metre

Power consumption does not include the water circulation pump.

Preliminary data





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