Advantages

Reduced environmental impact and zero emissions

Climaveneta's PRANA Slim-series heat pumps run just on electricity. There is no combustion, no naked flames, no gas in the air, no particulate residues settling inside the rooms where you live. Moreover, there is no need to install a flue to carry away smoke.

Absolute reliability and simplified maintenance

The use of sealed refrigerant circuits and the fact that the temperatures involved are moderate compared to traditional heating systems mean heat pumps are low maintenance. What little maintenance there is is further simplified in Climaveneta units since the compressor enclosure, which is the heart of the system, can be removed from the unit.

Super low noise units

A special enclosure inside for the compressor, and the sound-absorbent material that lines the panels, guarantees low noise levels just like those of any other household appliance.

Unbeatable efficiency and operational stability all year

A high-efficiency Scroll compressor means Climaveneta heat pumps can produce hot water up to 60°C, hence making them suitable for heating rooms through normal radiators. Being water-cooled, the units are not affected by the outside temperature and continue to provide heating throughout the winter months without the need for additional heating systems.

Plug & Play approach

Climaveneta heat pumps come ready to install.
Simply connect the machine to the water system and electricity to put it into operation. The unit's particularly small size means it can be installed inside a normal modular kitchen. A 180-litre built-in tank ensures that hot water is available regardless of environmental conditions and season of the year. A 3-way valve diverts the flow of heat from the system to the tank whenever the water for domestic use needs topping up.

Climaveneta S.p.A.
Via Sarson 57/c
36061 Bassano del Grappa (VI)
Italy
Tel +39 0424 509 500
Fax +39 0424 509 509
info@climaveneta.com
www.climaveneta.com

Climaveneta Home System
Via Duca d'Aosta 121
31030 Mignagola (TV)
Italy
Tel. +39 0422 4131
Fax +39 0422 413659
info.cvhs@climaveneta.com
www.climaveneta.com

Climaveneta France
3, Village d'Entreprises
ZA de la Couronne des Prés
Avenue de la Mauldre
78680 EPONE
France
Tél +01 30 95 19 19 6
Fax +01 30 95 18 18
info@climaveneta.fr
www.climaveneta.fr

Climaveneta Deutschland
Rhenus Platz 2
59439 Holzwickede
Germany
Tel +49 2301 91222-0
Fax +49 2301 91222-99
info@climaveneta.de
www.climaveneta.de

Climaveneta España - Top Clima
Londres 67, 1º 4ª
08036 Barcelona
Spain
Tel. +34 963 195 600
Fax +34 963 615 167
topclima@topclima.com
www.climaveneta.com

Climaveneta Chat Union Refrig. Equipment Co Ltd
88 Bai Yun Rd, Pudong Xinghuo
New dev. zone 201419 Shanghai
China
Tel. 008 621 575 055 66
Fax 008 621 575 057 97

DeLonghi Professional

prana Slim

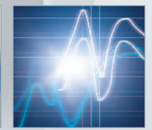
Ww - Wwr Z1M5-Z1T17 HT Slim
Bw - Bwr Z1M5-Z1T17 HT Slim

High temperature heat pumps for heating water to 60°C water cooled or geothermal system and reversible for cooling, from 6kW to 23 kW.

Heating, cooling and hot water from the same unit

Absolute reliability and simple maintenance

High energy efficiency



Slim & compact design

DeLonghi Professional

prana Slim

High temperature heat pumps for heating water to 60°C with water cooled or geothermal system, also reversible for cooling, from 6 to 23 kW.

Available Versions

Ww HT Slim: water cooled heat pump complete with integrated 180 litre boiler for domestic water.

Wwr HT Slim: reversible water cooled heat pump complete with integrated 180 litre boiler for domestic water.

Bw HT Slim heat pump complete with integrated 180 litre boiler for domestic water, for geothermal system.

Bwr HT Slim reversible heat pump complete with integrated 180 litre boiler for domestic water for geothermal system.

General Description

The Prana Slim heat pump is designed for heating, cooling, in reversible versions, and domestic water.
It is an indoor unit with elegant design and thanks to a special sound insulation, the unit is suitable for a living comfort.

PRO EXTENDED Regulation

Electronic control provides great application flexibility, up to 24 system layouts, such as free-cooling or solar heating integration. The indoor and outdoor temperature sensors (accessories) allow dynamic control of delivery temperature water, optimizing comfort in the room and increasing the energy efficienty.

Units overview

- Housing and base are made from hot-galvanized epoxy powder coated sheet metal.
- 180-litre tank with built-in coil for domestic hot water, with fittings for connecting solar panels or high-temperature fixtures (e.g. fan coils).
- Heat exchangers on the system and source side are brazed plate models in AISI 316 stainless steel providing high efficiency and a low pressure drop, complete with vapour-barrier closed-cell heat insulation.
- High-efficiency single- and three-phase SCROLL compressor to allow water up to 60°C to be produced. Also suitable for traditional radiator systems.
- The compressor and plate heat exchangers are housed in a suitably insulated enclosure to limit vibrations and noise. This enclosure can be removed from the unit to make maintenance easier.
- Panelling is insulated with sound-absorbent material to improve silent running further.
- The water circuit comes complete with:
  - Circulator on system side.
  - 3-way valve diverting water to system or to the tank.
  - Differential pressure switch on source side and system side (for reversible models only).
  - 3 bar safety valve, drain valve, pressure gauge, manual air vent valve.
  - Expansion tank built into the heat pump's tank.

prana Slim

High temperature heat pumps for heating water to 60°C with water exchange or geothermal systems, reversible for cooling, from 6 to 23 kW.

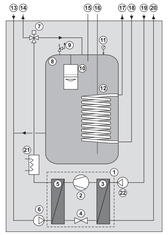
Main components

1. 80-litre domestic hot water tank
2. Safety valve
3. Pressure gauge
4. Domestic hot water tank sensor
5. Water drain valve
6. Electrical panel
7. Onboard keypad
8. Pull-out compressor enclosure
9. Heating element (accessory)
10. Source pump (accessory)
11. System pump
12. Diverter valve

Accessories

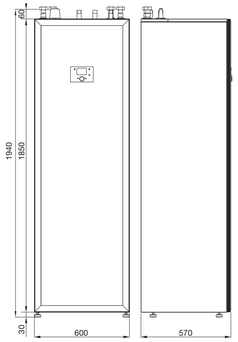
- Pro-extended onboard control keypad
- Hardwired remote keypad kit for Pro-extended and hardwired outside air sensor
- Wireless Pro-extended remote keypad kit and wireless outside air sensor
- Soft Starter for compressor
- Phase sequence control relay
- Heating elements complete with safety thermostat from 1kW to 9 kW
- 2-way motorized On-Off ball valve to cut off water flow on source side
- High-head pump on source side, inverter circulator, complete with Klimaform casing
- Additional 320-litre domestic water tank with outer shell
- Static freecooling kit
- Air/water heat recovery kit
- 40-litre system inertial storage
- Condensation control on source side with water bypass system (only for reversible units)

Working principles, accessories, connections



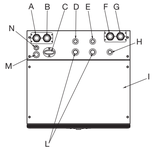
Hydraulic circuit

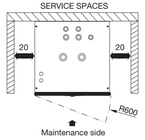
1. Pull-out compressor enclosure
2. Scroll compressor
3. Evaporator
4. Thermostatic valve
5. Condenser
6. Circulator on system side
7. 3-way diverter valve
8. 180-litre tank
9. Safety valve
10. Expansion tank
11. Pressure gauge
12. Domestic hot water heat exchanger
13. System water return
14. System water delivery
15. Solar collector or high-temperature water outlet
16. Solar collector or high-temperature water inlet
17. Domestic water delivery
18. Domestic water return
19. Geothermal probe or well water return
20. Geothermal probe or well water delivery
21. Additional heating element, accessory
22. Water pump on source side, accessory



Dimensions and Hydraulic connections

A. System water inlet G1" 1/4
B. System water outlet G1" 1/4
C. Antenna for wireless connection (optional extra)
D. Solar collector or high- temperature water inlet G 1/2 B
E. Solar collector or high-temperature water outlet G 1/2 B
F. Source fluid inlet G1 1/4
G. Source fluid outlet G1 1/4
H. Tank filler G 1/2 B
I. Tank inspection panel
L. Domestic hot water inlet/outlet G 3/4 B
M. Wiring entry
N. Safety valve discharge





Ww-HT / Bw-HT

HEATING · COOLING · HOT WATER · HEATING + HOT WATER · COOLING + HOT WATER

Ww - HT			Z1M5	Z1M6	Z1M7	Z1M9	Z1M11	Z1T6	Z1T7	Z1T9	Z1T11	Z1T13	Z1T15	Z1T17
Heating capacity	(1)	kW	6,61	8,56	10,14	11,96	14,53	8,43	10,01	11,76	14,38	17,64	20,73	23,32
Compressor power input		kW	1,25	1,60	1,89	2,22	2,68	1,56	1,83	2,14	2,61	3,28	3,8	4,3
COP	*		5,29	5,35	5,35	5,39	5,41	5,40	5,46	5,49	5,52	5,38	5,45	5,43
Condenser water flow		l/h	1150	1480	1760	2070	2520	1460	1740	2040	2490	3050	3590	4040
Evaporator water flow		l/h	920	1190	1400	1670	2030	1180	1400	1650	2020	2450	2900	3270
Bw - HT														
Heating capacity	(2)	kW	4,95	6,40	7,57	8,92	10,94	6,22	7,39	8,68	10,76	12,93	15,58	17,43
Compressor power input		kW	1,24	1,60	1,90	2,22	2,68	1,55	1,82	2,13	2,60	3,17	3,70	4,14
COP	*		3,99	4,00	3,99	4,02	4,09	4,02	4,06	4,08	4,14	4,08	4,21	4,22
Condenser water flow		l/h	860	1110	1310	1540	1890	1080	1280	1500	1860	2240	2690	3020
Evaporator water flow		l/h	1128	1460	1725	2038	2512	1420	1694	1992	2482	2969	3613	4042
Pump power input heating		W	115	150	120	122	128	150	120	122	128	125	140	140
Residual head heating pump at max flow		kPa	44	48	41	39	33	49	41	39	34	24	41	35
Pump pawer input ground water/brine (option)	W	140	140	140	140	140	140	140	140	140	140	140	140	
Residual head ground pump water/brine pump at max flow)		kPa	53	57	57	58	56	58	58	59	57	48	37	31
Water vessel volume		lt	180	180	180	180	180	180	180	180	180	180	180	180
Maximun working pressure		bar	3	3	3	3	3	3	3	3	3	3	3	3
Continuous delivery domestic hot water to the flow of 12 lt/min and temperature of 40 ° C		min.	12,5	13,5	14,0	15,5	16,0	13,5	14,0	15,0	15,5	16,0	16,0	17,0
Type of compressor			scroll											
n° of compressor		n°	1	1	1	1	1	1	1	1	1	1	1	1
n° of circuits		n°	1	1	1	1	1	1	1	1	1	1	1	1
Refrigerant			R407c											
Type of pump			circulator											
Power supply		V/Ph/Hz	230V~ 50Hz					400V-3N~ 50Hz						
Total power input		kW	1,5	1,9	2,2	2,5	3	1,8	2,1	2,4	2,9	3,6	4,1	4,6
Total current absorbited		A	8,16	9,48	10,78	12,37	15,27	4,98	5,65	6,17	7,42	8,64	9,54	11,22
Starting current		A	47	61	76	100	114	32	40	46	50	65,5	74	101
Starting current with soft-start (optional)		A	28	37	46	60	68	19	24	28	30	39	44	61
Sound power		dB(A)	41,7	41,7	42,2	41,9	45,8	41,7	42,2	41,9	45,8	46,8	47,7	49,5
Sound pressure	(3)	dB(A)	33,7	33,7	34,2	33,9	37,8	33,7	34,2	33,9	37,8	38,8	39,7	42,5
Height/Length/Width		mm	1880/600/570											
Net weight		kg	277	283	287	290	297	283	290	290	297	305	309	312

Note

Ww-HT / BW-HT

(1) W 10/W35 evaporator water in/out 10/5°C, condensator water in/out 30/35°C
(2) B0/W35 evaporator water in/out 0/-3°C, condensator water in/out 30/35°C

(3) Room size 80 m³, reverberation time, 0.5s, distance 3m and directionality factor 4.

* COP absorption circulator excluded

Wwr-HT / Bwr-HT

HEATING · COOLING · HOT WATER · HEATING + HOT WATER · COOLING + HOT WATER

Wwr - HT			Z1M5	Z1M6	Z1M7	Z1M9	Z1M11	Z1T6	Z1T7	Z1T9	Z1T11	Z1T13	Z1T15	Z1T17
Heating capacity	(1)	kW	6,42	8,31	9,84	11,61	14,11	8,18	9,72	11,42	13,96	17,13	20,13	22,64
Compressor power input		kW	1,25	1,60	1,89	2,22	2,68	1,56	1,83	2,14	2,61	3,28	3,8	4,3
COP	*		5,14	5,19	5,21	5,23	5,26	5,24	5,31	5,34	5,35	5,22	5,3	5,27
Condenser water flow		l/h	1104	1429	1692	1997	2427	1407	1672	1964	2401	2946	3462	3894
Evaporator water flow		l/h	889	1154	1367	1615	1966	1139	1357	1596	1952	2382	2809	3154
Cooling capacity	(2)	kW	7,89	10,22	12,12	14,27	16,84	9,91	11,75	13,79	16,97	20,81	24,25	27,03
Compressor power input		kW	0,93	1,17	1,4	1,65	2,18	1,18	1,39	1,65	1,98	3,12	3,43	4
EER	*		8,5	8,71	8,68	8,64	7,71	8,37	8,47	8,34	8,58	6,67	7,07	6,76
Condenser water flow		l/h	506	653	775	913	1091	636	753	885	1087	1372	1587	1779
Evaporator water flow		l/h	1358	1757	2085	2455	2896	1704	2020	2372	2920	3579	4170	4649
Cooling capacity	(3)	kW	5,71	7,38	8,76	10,31	12,38	7,22	8,57	10,05	12,36	15	17,71	19,7
Compressor power input		kW	0,99	1,28	1,61	1,79	2,22	1,23	1,46	1,72	2,11	2,78	3,22	3,66
EER	*		5,77	5,79	5,8	5,77	5,57	5,85	5,87	5,83	5,85	5,39	5,5	5,38
Condenser water flow		l/h	384	496	589	693	838	485	575	675	830	1020	1200	1339
Evaporator water flow		l/h	981	1269	1506	1772	2130	1241	1474	1729	2125	2581	3046	3389
Bwr - HT														
Heating capacity	(4)	kW	4,81	6,21	7,35	8,66	10,62	6,04	7,17	8,43	10,45	12,55	15,13	16,92
Compressor power input		kW	1,24	1,60	1,90	2,22	2,68	1,55	1,82	2,13	2,60	3,17	3,70	4,14
COP	*		3,88	3,88	3,87	3,9	3,96	3,9	3,94	3,96	4,02	3,96	4,09	4,09
Condenser water flow		l/h	878	1133	1341	1580	1938	1102	1308	1538	1907	2290	2761	3088
Evaporator water flow		l/h	1023	1322	1562	1846	2276	1287	1534	1806	2250	2689	3277	3664
Cooling capacity	(5)	kW	7,43	9,55	11,26	13,19	15,53	9,36	11,06	12,92	15,62	18,95	21,72	24,87
Compressor power input		kW	1,14	1,46	1,76	2,11	2,72	1,45	1,72	2,06	2,64	3,76	4,22	4,95
EER	*		6,5	6,55	6,38	6,24	5,7	6,46	6,42	6,27	5,91	5,03	5,14	5,03
Condenser water flow		l/h	1474	1833	2240	2631	3139	1859	2199	2577	3142	3906	4460	5128
Evaporator water flow		l/h	1277	1642	1937	2268	2670	1610	1902	2223	2687	3259	3734	4277
Cooling capacity	(6)	kW	5,17	6,67	7,88	9,24	11,12	6,58	7,79	9,12	11,08	13,41	15,53	17,51
Compressor power input		kW	1,18	1,53	1,83	2,17	2,67	1,49	1,76	2,09	2,59	3,38	3,89	4,58
EER	*		4,37	4,36	4,31	4,25	4,16	4,42	4,42	4,36	4,28	3,97	3,89	3,87
Condenser water flow		l/h	1092	1410	1669	1963	2373	1388	1644	1928	2351	2887	3358	3790
Evaporator water flow		l/h	889	1147	1355	1590	1913	1132	1341	1568	1906	2307	2672	3011
Pump power input heating		W	115	150	120	122	128	150	120	122	128	125	135	140
Heat pressure plant pump	(1)	kPa	46	48	42	40	35	50	43	41	36	26	44	38
Pumpa pawer input ground water/brine (option)		W	140	140	140	140	140	140	140	140	140	140	140	140
Head pressure well/brine pump (optional)	(4)	kPa	57	61	60	61	60	62	61	62	60	55	45	40
Water vessel volume		lt	180	180	180	180	180	180	180	180	180	180	180	180
Maximun working pressure		bar	3	3	3	3	3	3	3	3	3	3	3	3
Continuous delivery domestic hot water to the flow of 12 lt/min and temperature of 40 ° C		min.	12,5	13,5	14,0	15,5	16,0	13,5	14,0	15,0	15,5	16,0	16,0	17,0
Type of compressor			scroll											
n° of compressor		n°	1	1	1	1	1	1	1	1	1	1	1	1
n° of circuits		n°	1	1	1	1	1	1	1	1	1	1	1	1
Refrigerant			R407c											
Type of pump			circulator											
Power supply		V/Ph/Hz	230V~ 50Hz					400V-3N~ 50Hz						
Total power input		kW	1,5	1,9	2,2	2,5	3	1,8	2,1	2,4	2,9	3,6	4,1	4,6
Total current absorbited		A	8,16	9,48	10,78	12,37	15,27	4,98	5,65	6,17	7,42	8,64	9,54	11,22
Starting current		A	47	61	76	100	114	32	40	46	50	65,5	74	101
Starting current with soft-start (optional)		A	27	37	46	60	68	19	24	28	30	39	44	61
Sound power		dB(A)	41,7	41,7	42,2	41,9	45,8	41,7	42,2	41,9	45,8	46,8	47,7	50,5
Sound pressure	(7)	dB(A)	33,7	33,7	34,2	33,9	37,8	33,7	34,2	33,9	37,8	38,8	39,7	42,5
Height/Length/Width		mm	1880/600/570											
Net weight		kg	280	286	290	293	300	286	290	293	300	308	312	315

Note

Wwr-HT / Bwr-HT

(1) W10/W35 evaporator water in/out 10/5°C, condensator water in/out 30/35°C
(2) W18/W15 evaporator water in/out 23/18°C, condensator water in/out 15/30°C
(3) W7/W15 evaporator water in/out 12/7°C, condensator water in/out 15/30°C
(4) B0/W35 evaporator water in/out 0/-3°C, condensator water in/out 30/35°C

(5) B35/W18 evaporator water in/out 23/18°C, condensator water in/out 30/35°C
(6) B35/W7 evaporator water in/out 12/7°C, condensator water in/out 30/35°C
(7) Room size 80 m³, reverberation time, 0.5s, distance 3m and directionality factor 4.

* COP absorption circulator excluded