



€ R290

PURPLE HP INVERTER

NATURAL SOLUTIONS



enerblue

INSPIRED BY NATURE

PURPLE HP INVERTER

NATURAL
REFRIGERANT

GWP=3

ODP=0

R290



62° | 
Max WATER
temperature

-20° | 
Min. ext. AIR
temperature

Air to water heat pumps with natural refrigerant gas R290. Extended working conditions and very high performances. Equipped with semihermetic reciprocating compressors, axial fan with phase-cut speed control, plates heat exchanger and Al/Cu minitubes coils. Compressors feature inverter technology. In case of two compressor units, one compressor is inverter driven and one compressor is on/off. The unit can be equipped with hydronic kit and buffer tank (except sizes 20.1-30.1). Low noise configuration is standard for all the series.

RANGE

Heating capacity (A7;W45) 26 ÷ 220 kW

Cooling capacity (A35;W7) 22 ÷ 176 kW



Reversible



Semi-hermetic
reciprocating compressors



Axial fans

Highlights of our products



1



GAS LEAK DETECTOR

In case of refrigerant leak inside the compressor box:

- the power supply is disconnected
- the extraction fan (ATEX certified) is switched on to clean the compressor box.

2



ATEX

The ATEX certified extraction fan runs at nominal speed to clean the compressor box.

3



All the components inside the compressor box are ATEX certified: compressors, solenoid valves, EEV. The box is always insulated as standard.

4

Compliant with Ecodesign

TECHNICAL DATA

| UNIT SIZE | | | 8.1 | 10.1 | 12.1 | 15.1 | 20.1 | 22.1 | 25.1 | 30.1 | 32.1 | 35.1 |
|---|---------------|-------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Heating (EN 14511 values) (A7;W45) | | | | | | | | | | | | |
| Nominal heating capacity | (1), (7) | kW | 26,9 | 30,8 | 35,0 | 39,0 | 43,0 | 50,0 | 59,5 | 62,4 | 74,9 | 86,4 |
| Total power input | (1), (2), (7) | kW | 8,0 | 9,2 | 10,4 | 11,4 | 12,2 | 14,4 | 17,2 | 17,5 | 22,3 | 25,5 |
| COP | (1), (7) | | 3,33 | 3,34 | 3,55 | 3,59 | 3,66 | 3,63 | 3,64 | 3,67 | 3,36 | 3,39 |
| Energy Seasonal Index | | | | | | | | | | | | |
| SCOP | (8) | | 2,85 | 2,85 | 2,88 | 2,90 | 2,95 | 2,94 | 2,93 | 3,02 | 2,84 | 2,84 |
| Seasonal Energy Efficiency hs | (8) | % | 111,0 | 111,0 | 112,2 | 113,0 | 115,0 | 114,6 | 114,2 | 117,8 | 110,0 | 110,5 |
| Seasonal Efficiency class | (8) | | A+ | A+ | A+ | A+ | A+ | A+ | A+ | A+ | A+ | A+ |
| Cooling (EN 14511 values) (A35;W7) | | | | | | | | | | | | |
| Nominal cooling capacity | (3), (7) | kW | 21,5 | 25,8 | 28,7 | 32,3 | 34,7 | 42,0 | 47,1 | 49,9 | 63,2 | 73,5 |
| Total power input | (3), (2), (7) | kW | 7,6 | 9,2 | 10,1 | 11,3 | 11,7 | 14,0 | 17,2 | 17,9 | 21,5 | 25,4 |
| EER | (3), (7) | | 2,81 | 2,81 | 2,84 | 2,86 | 2,98 | 3,00 | 2,74 | 2,79 | 2,94 | 2,89 |
| Compressor | | | | | | | | | | | | |
| Type | | | Reciprocating | | | | | | | | | |
| Quantity/Refrigerant circuits | | n° / n° | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 | 1 / 1 |
| Capacity steps | | n° | 50/100 | 50/100 | 50/100 | 50/100 | 50/100 | 50/100 | 50/100 | 50/100 | 50/100 | 50/100 |
| Oil charge | | kg | 1,6 | 1,6 | 2,9 | 2,9 | 2,9 | 4,0 | 4,0 | 4,0 | 4 | 3,7 |
| Refrigerant charge per circuit | | kg | 2,4 | 2,5 | 2,7 | 2,8 | 3,6 | 3,6 | 3,8 | 4,0 | 6,0 | 6,1 |
| Axial Fans | | | | | | | | | | | | |
| Quantity | | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| Air flow | | m ³ /h | 17.676 | 17.628 | 16.982 | 18.025 | 21.745 | 21.763 | 21.388 | 21.365 | 43.041 | 43.344 |
| User Side exchanger | | | | | | | | | | | | |
| Type | | | Plate exchanger | | | | | | | | | |
| Water flow rate (A7/W45) | (1) | l/h | 4.659 | 5.337 | 6.058 | 6.754 | 7.450 | 8.653 | 10.310 | 10.810 | 12.980 | 14.980 |
| Pressure drop (A7/W45) | (1) | kPa | 26 | 17 | 23 | 34 | 28 | 27 | 27 | 21 | 24 | 15 |
| Hydraulic module | | | | | | | | | | | | |
| Pump model | | | P1 | P1 | P2 | P2 | P3 | P3 | P3 | P3 | P3 | P3 |
| Nominal Power input of pump | | kW | 0,5 | 0,5 | 0,9 | 0,9 | 1,1 | 1,1 | 1,1 | 1,1 | 1,4 | 1,4 |
| Available pump pressure (A7/W45) | (1) | kPa | 184,1 | 167,5 | 181,8 | 161,6 | 163,2 | 160,8 | 153,6 | 158,2 | 136,2 | 133,2 |
| Hydraulic connection | | | | | | | | | | | | |
| Connection | | | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/2 | 1"1/2 | 1"1/2 | 1"1/2 | 1"1/2 | 2" |
| Sound level STD version | | | | | | | | | | | | |
| Sound power value | (4), (6) | dB(A) | 73 | 73 | 75 | 75 | 82 | 82 | 83 | 83 | 85 | 85 |
| Sound pressure value | (5), (6) | dB(A) | 56 | 56 | 58 | 58 | 64 | 64 | 65 | 65 | 67 | 67 |
| Basic unit size and weights | | | | | | | | | | | | |
| Width | | mm | 1.940 | 1.940 | 1.940 | 1.940 | 1.885 | 1.885 | 1.885 | 1.885 | 2.880 | 2.880 |
| Depth | | mm | 920 | 920 | 920 | 920 | 1.213 | 1.213 | 1.213 | 1.213 | 1.213 | 1.213 |
| Height | | mm | 2.000 | 2.000 | 2.000 | 2.000 | 2.388 | 2.388 | 2.388 | 2.388 | 2.388 | 2.388 |
| Operating weight | | kg | 559 | 576 | 705 | 706 | 712 | 729 | 792 | 811 | 1.032 | 1.077 |

(1) External air temperature 7°C BS, 6°C BU, Inlet-outlet water 40-45 °C

(2) Total power input is sum of compressors and fans power input and pump, according with EN 14511

(3) External air temperature 35°C, Inlet-outlet water 12-7°C .

(4) Sound power level calculated in compliance with ISO 3744

(5) Sound pressure level at 1m from the unit calculated in compliance with ISO 3744

(6) External air temperature 35°C, Inlet-outlet water 12-7°C .

(7) Values calculate in compliance with EN 14511

(8) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climate Average (Strasbourg), User Application: Medium temperature (55°C), Outlet temperature: Variable

(9) Not subject to Regulation EU No. 811/2013, rated heat output > 70 kW

This datasheet gives the characteristic data of the basic and standard versions of the series; for details refer to the specific documentation

| UNIT SIZE | | | 40.1 | 50.1 | 15.2 | 20.2 | 22.2 | 25.2 | 30.2 | 32.2 | 35.2 | 40.2 | 50.2 |
|---|---------------|---------|-----------------|--------|---------|---------|-------------------------------|---------|---------|---------|--------|---------|---------|
| Heating (EN 14511 values) (A7;W45) | | | | | | | | | | | | | |
| Nominal heating capacity | (1), (7) | kW | 95,5 | 109,7 | 84,6 | 91,8 | 99,8 | 117,7 | 136,8 | 144,2 | 163,3 | 184,8 | 220,6 |
| Total power input | (1), (2), (7) | kW | 27,4 | 32,6 | 24,2 | 25,8 | 28,1 | 33,4 | 38,2 | 40,1 | 45,6 | 52,4 | 64,4 |
| COP | (1), (7) | | 3,48 | 3,36 | 3,63 | 3,65 | 3,68 | 3,64 | 3,66 | 3,59 | 3,59 | 3,53 | 3,42 |
| Energy Seasonal Index | | | | | | | | | | | | | |
| SCOP | (8) | | 2,84 | 2,84 | 3,08 | 3,20 | 3,22 | 3,20 | 3,21 | 3,01 | 3,07 | 2,99 | 2,98 |
| Seasonal Energy Efficiency hs | (8) | % | 110,0 | 110,0 | 120,2 | 125,0 | 125,8 | 125,0 | 125,4 | 117,4 | 120,0 | 116,6 | 116,0 |
| Seasonal Efficiency class | (8) | | A+ | A+ | A+ | A++ | A++ | A++ (9) | A++ (9) | A+ (9) | A+ (9) | A+ (9) | A+ (9) |
| Cooling (EN 14511 values) (A35;W7) | | | | | | | | | | | | | |
| Nominal cooling capacity | (3), (7) | kW | 76,5 | 90,2 | 70,5 | 73,5 | 82,8 | 94,7 | 110,0 | 116,3 | 133,3 | 148,0 | 176,6 |
| Total Power input | (3), (2), (7) | kW | 28,2 | 35,1 | 22,6 | 24,4 | 28,1 | 33,4 | 39,9 | 42,2 | 49,6 | 59,4 | 75,8 |
| EER | (3), (7) | | 2,72 | 2,57 | 3,12 | 3,01 | 2,95 | 2,84 | 2,76 | 2,75 | 2,69 | 2,49 | 2,33 |
| Compressor | | | | | | | | | | | | | |
| Type | | | Reciprocating | | | | | | | | | | |
| Quantity/Refrigerant circuits | | n° / n° | 1 / 1 | 1 / 1 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 | 2 / 2 |
| Capacity steps | | n° | 50/100 | 50/100 | 25/100 | 25/100 | 25/100 | 25/100 | 25/100 | 25/100 | 25/100 | 25/100 | 25/100 |
| Oil charge | | kg | 7,2 | 7,2 | 2,9 | 2,9 | 4,0 | 4,0 | 4,0 | 4 | 3,7 | 7,2 | 7,2 |
| Refrigerant charge per circuit | | kg | 8,1 | 7,7 | 3,9/3,9 | 3,9/3,9 | 4,0/4,0 | 4,1/4,1 | 4,5/4,5 | 5,5/5,5 | 5/5 | 7,1/7,1 | 7,2/7,2 |
| Axial Fans | | | | | | | | | | | | | |
| Quantity | | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 4 |
| Air flow | | m3/h | 42.488 | 42.281 | 43.677 | 43.508 | 43.513 | 42.789 | 42.592 | 43.951 | 43.714 | 43.092 | 42.667 |
| User Side exchanger | | | | | | | | | | | | | |
| Type | | | Plate exchanger | | | | Duble circuit Plate exchanger | | | | | | |
| Water flow rate (A7/W45) | (1) | l/h | 16.560 | 19.030 | 14.650 | 15.910 | 17.310 | 20.410 | 23.720 | 25.000 | 28.300 | 32.030 | 38.240 |
| Pressure drop (A7/W45) | (1) | kPa | 17 | 18 | 32 | 23 | 18 | 25 | 21 | 21 | 26 | 26 | 32 |
| Hydraulic module | | | | | | | | | | | | | |
| Pump model | | | P3 | | P4 | P5 | P5 | P5 | P5 | P5 | P6 | P6 | P6 |
| Nominal Power input of pump | | kW | 45,4 | 51,0 | 34,6 | 38,0 | 40,6 | 45,1 | 55,4 | 56,3 | 68,6 | 73,5 | 93,2 |
| Available pump pressure (A7/W45) | (1) | kPa | 185,8 | 171,6 | 175,2 | 190,4 | 190,6 | 169,9 | 156,9 | 139,7 | 175,5 | 169,2 | 147,2 |
| Hydraulic connection | | | | | | | | | | | | | |
| Connection | | | 2" | 2" | 2" | 2"1/2 | 2"1/2 | 2"1/2 | 2"1/2 | 2"1/2 | 2"1/2 | 3" | 3" |
| Sound level STD version | | | | | | | | | | | | | |
| Sound power value | (4), (6) | dB(A) | 85 | 85 | 86 | 87 | 86 | 89 | 89 | 90 | 90 | 90 | 90 |
| Sound pressure value | (5), (6) | dB(A) | 67 | 67 | 67 | 68 | 68 | 70 | 70 | 70 | 70 | 70 | 70 |
| Basic unit size and weights | | | | | | | | | | | | | |
| Width | | mm | 2.880 | 2.880 | 3.330 | 3.330 | 2.890 | 3.330 | 3.330 | 5.320 | 5.320 | 5.320 | 5.320 |
| Depth | | mm | 1.213 | 1.213 | 1.213 | 1.213 | 1.213 | 1.213 | 1.213 | 1.213 | 1.213 | 1.213 | 1.213 |
| Height | | mm | 2.388 | 2.388 | 2.388 | 2.388 | 2.388 | 2.388 | 2.388 | 2.388 | 2.388 | 2.388 | 2.388 |
| Operating weight | | kg | 1.094 | 1.106 | 1.227 | 1.238 | 1.249 | 1.390 | 1.412 | 1.770 | 1.838 | 1.878 | 1.924 |

(1) External air temperature 7°C BS, 6°C BU, Inlet-outlet water 40-45 °C

(2) Total power input is sum of compressors and fans power input and pump, according with EN 14511

(3) External air temperature 35°C, Inlet-outlet water 12-7°C .

(4) Sound power level calculated in compliance with ISO 3744

(5) Sound pressure level at 1m from the unit calculated in compliance with ISO 3744

(6) External air temperature 35°C, Inlet-outlet water 12-7°C.

(7) Values calculate in compliance with EN 14511

(8) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climate Average (Strasbourg), User Application: Medium temperature (55°C), Outlet temperature: Variable

(9) Not subject to Regulation EU No. 811/2013, rated heat output > 70 kW

This datasheet gives the characteristic data of the basic and standard versions of the series; for details refer to the specific documentation

ELECTRICAL DATA

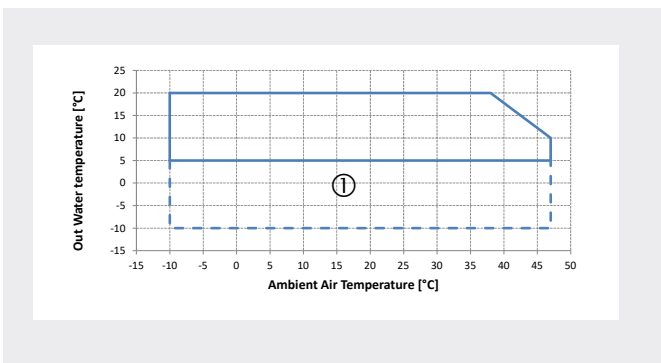
| UNIT SIZE | | | 8.1 | 10.1 | 12.1 | 15.1 | 20.1 | 22.1 | 25.1 | 30.1 | 32.1 | 35.1 |
|--------------------------|---------|---------|---------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| Maximum absorbed power | (1),(3) | kW | 10 | 12 | 14 | 14 | 16 | 20 | 21 | 22 | 29 | 36 |
| | | | (10,9) | (12,2) | (15,38) | (15,26) | (17,25) | (21,24) | (22,15) | (23,35) | (30,55) | (37,65) |
| Maximum current | (2),(3) | A | 18 | 21 | 25 | 25 | 27 | 37 | 43 | 40 | 52 | 62 |
| | | | (21,6) | (24,7) | (27,4) | (27,2) | (29,3) | (39,3) | (45,3) | (42,2) | (54,8) | (64,4) |
| Maximum starting current | (4) | A | 18 | 21 | 25 | 25 | 27 | 37 | 43 | 40 | 52 | 62 |
| | | | (21,6) | (24,7) | (27,4) | (27,2) | (29,3) | (39,3) | (45,3) | (42,2) | (54,8) | (64,4) |
| Power supply | | V/ph/Hz | 400/3~/50 ±5% | | | | | | | | | |
| Auxiliary Power supply | | V/ph/Hz | 230/1~/50 ±5% | | | | | | | | | |

| UNIT SIZE | | | 40.1 | 50.1 | 15.2 | 20.2 | 22.2 | 25.2 | 30.2 | 32.2 | 35.2 | 40.2 | 50.2 |
|--------------------------|---------|---------|---------------|---------|---------|---------|---------|--------|---------|---------|--------|--------|--------|
| Maximum absorbed power | (1),(3) | kW | 43 | 49 | 33 | 36 | 38 | 43 | 53 | 54 | 66 | 71 | 90 |
| | | | (45,35) | (50,95) | (34,59) | (38,03) | (40,61) | (45,1) | (55,35) | (56,25) | (68,6) | (73,5) | (93,2) |
| Maximum current | (2),(3) | A | 70 | 81 | 106 | 119 | 148 | 166 | 185 | 197 | 206 | 221 | 269 |
| | | | (74,4) | (85,2) | (109) | (123) | (152) | (170) | (189) | (201) | (213) | (227) | (276) |
| Maximum starting current | (4) | A | 70 | 81 | 54 | 67 | 71 | 84 | 96 | 95 | 116 | 123 | 155 |
| | | | (74,4) | (85,2) | (56,8) | (71,7) | (76) | (88,6) | (101) | (99,6) | (122) | (129) | (162) |
| Power supply | | V/ph/Hz | 400/3~/50 ±5% | | | | | | | | | | |
| Auxiliary Power supply | | V/ph/Hz | 230/1~/50 ±5% | | | | | | | | | | |

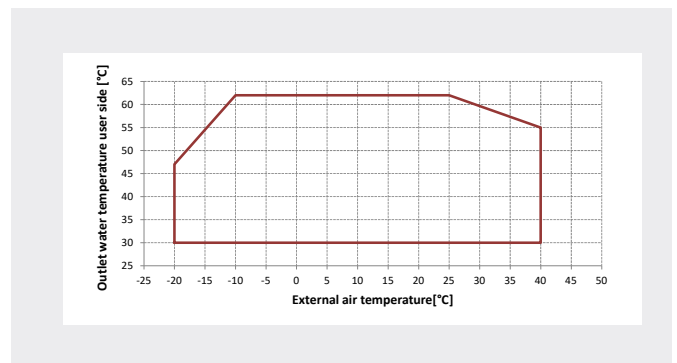
- (1) Mains power supply to allow unit operation
- (2) Maximum current before safety cut-outs stop the unit. This value is never exceeded and must be used to size the electrical supply cables and relevant safety devices (refer to electrical wiring diagram supplied with the unit).
- (3) Values in brackets refer to ST version units (units with storage tank and pumps or units with exclusively pumps)
- (4) Maximum starting current calculated considering the bigger size compressor starting current plus the maximum absorbed power of the other electrical devices (pumps, fans)

OPERATING LIMITS

COOLING



HEATING



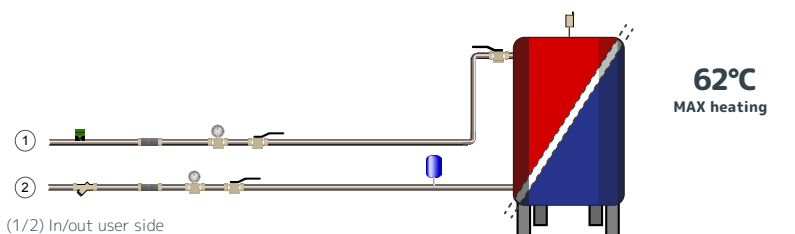
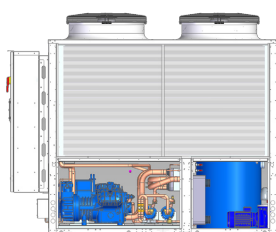
Notes

- The delta T to the user side exchanger must be between 3°C and 6°C
- ① The unit can only operate in this area with a water/glycol mixture
- Operating outside the operating limits may cause the safety devices to intervene or serious malfunctions
- The temperature of inlet water to user side exchanger cannot be less than 25°C
- Within the operating limits, the fan section may be subject to modulation
- Within the operating limits, to limit the outlet water temperature, the unit may be subject to partialization

AVAILABLE VERSIONS

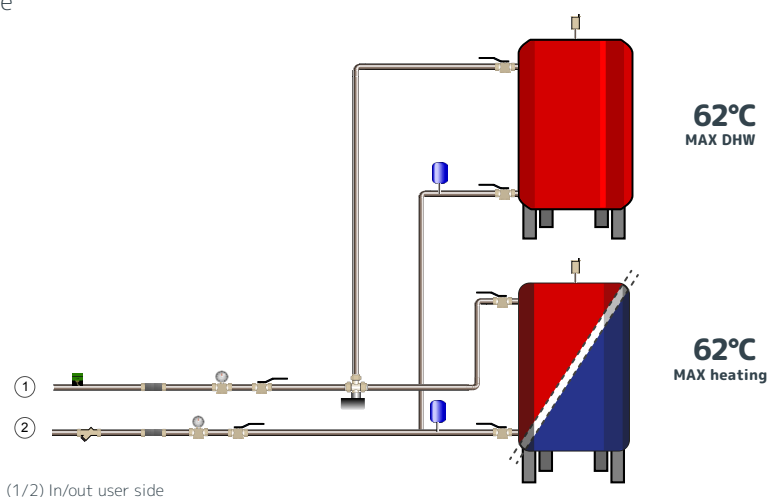
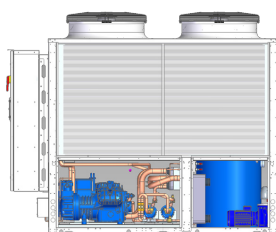
STANDARD

Reversible heat pump for 2-pipe-systems for cooling and heating up to 62°C.



AUTOMATIC MANAGEMENT OF DOMESTIC HOT WATER

Automatic management of DHW through 3 way valve managed directly by the controller.



*The buffer tank and pump showed on pictures are available as option.

CONFIGURATIONS

LN Low noise:

Standard



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INSPIRED
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