



## PURPLE HP

Nominal cooling capacity 22 ÷ 113 kW  
Nominal heating capacity 26 ÷ 132 kW

High efficiency air-water reversible heat pumps  
with axial fans and natural refrigerant gas R290



# PURPLE HP

High efficiency air-water reversible heat pumps  
with axial fans and natural refrigerant gas R290



Technical brochure  
PURPLE HP



LN VERSION



NATURAL  
REFRIGERANT



TWO  
CIRCUITS

**Standard version** in 13 sizes

Cooling capacity (A35;W7) 22 ÷ 113 kW

Heating capacity (A7;W45) 26 ÷ 132 kW

## STRONG POINTS

- > **R290 refrigerant**
- > **Wide operating limits and power range**
- > **Modularity and full accessibility**
- > **LN version - STANDARD**

## Technical data PURPLE HP

UNIT SIZE			8.1	10.1	12.1	15.1	20.1	22.1	25.1
<b>Heating (A7; W45) - EN14511</b>									
Nominal heating capacity	(1)(7)	kW	25,6	30,0	35,0	38,6	45,6	49,7	59,7
Total power input	(1)(2)(7)	kW	7,7	8,8	9,5	10,6	12,2	13,4	16,7
COP	(1)		3,31	3,41	3,67	3,64	3,73	3,70	3,57
<b>Energy Seasonal Index</b>									
SCOP	(8)		2,85	2,85	2,90	2,92	2,95	2,94	2,88
Seasonal Energy Efficiency $\eta_s$	(8)	%	110,7	110,7	112,7	113,6	114,7	114,5	112,0
Seasonal Energy Class	(8)		A +	A +	A +	A +	A +	A +	A +
<b>Cooling (A35; W7) - EN14511</b>									
Nominal cooling capacity	(3)(7)	kW	21,5	25,8	29,8	32,7	38,3	44,2	49,9
Total power input	(2)(3)(7)	kW	7,4	8,8	9,6	10,9	12,1	13,5	16,9
EER	(3)(7)		2,90	2,93	3,10	3,02	3,16	3,27	2,95
<b>Compressor</b>									
Type			Semihhermetic Reciprocating						
Quantity/Refrigerant circuits		n°/n°	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
Capacity steps		n°	2	2	2	2	2	2	2
Oil charge		n°	2,0	2,0	2,5	2,5	2,5	2,5	3,5
Refrigerant charge		kg	3,1	3,1	4,4	4,5	6,1	6,1	7,6
<b>Axial Fans</b>									
Quantity		n°	1	1	1	1	1	1	1
Air flow		m³/h	17.964	17.964	17.078	18.146	22.322	22.322	21.729
<b>User side exchanger</b>									
Type			Plates						
Water flow rate (A7/W45)	(1)	l/h	4.401	5.168	6.021	6.646	7.836	8.548	10.270
Pressure drop (A7/W45)	(1)	kPa	24	17	22	17	23	27	27
<b>Hydraulic module</b>									
Pump power input		kW	0,5	0,5	0,9	0,9	1,1	1,1	1,1
Available pressure (A7/W45)		kPa	194	173	185	181	166	160	154
<b>Hydraulic connection</b>									
Connection			1"1/4	1"1/4	1"1/4	1"1/4	1"1/2	1"1/2	2"
<b>Acoustic data (STD version)</b>									
Sound power level	(4)(6)	dBA	73	73	75	75	81	81	82
Noise pressure level	(4)(6)	dBA	56	56	58	58	64	64	65
<b>Dimension Data</b>									
Width		mm	1.940	1.940	1.940	1.940	1.885	1.885	1.885
Depth		mm	920	920	920	920	1.213	1.213	1.213
Height		mm	2.000	2.000	2.000	2.000	2.388	2.388	2.388
Delivery weight		kg	661	683	740	741	747	764	827
Operating weight		kg	626	648	705	706	712	729	792

(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 calculate in compliance with ISO 3744  
(5) Sound pressure level at 1m from the unit calculate 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 Climat Average(Strasbourg) User Application Medium temperature (55°C) Outlet temperature Variable  
This datasheet gives the characteristic data of the basic and standard versions of the series; for details refer to the specific documentation

## Technical data PURPLE HP

UNIT SIZE			30.1	15.2	20.2	22.2	25.2	30.2
<b>Heating (A7; W45) - EN14511</b>								
Nominal heating capacity	(1)(7)	kW	66,1	80,6	91,1	100,6	119,5	131,9
Total power input	(1)(2)(7)	kW	18,3	21,8	24,5	26,8	33,4	36,7
COP	(1)		3,60	3,70	3,72	3,75	3,57	3,59
<b>Energy Seasonal Index</b>								
SCOP	(8)		3,02	3,04	3,10	3,22	3,04	3,03
Seasonal Energy Efficiency $\eta_s$	(8)	%	117,70	118,60	120,90	125,60	118,60	118,20
Seasonal Energy Class	(8)		A +	A +	A +	A ++	A +	A +
<b>Cooling (A35; W7) - EN14511</b>								
Nominal cooling capacity	(3)(7)	kW	55,5	70,0	77,7	87,3	100,2	113,0
Total power input	(2)(3)(7)	kW	19,0	21,3	24,4	27,4	33,8	37,9
EER	(3)(7)		2,92	3,28	3,19	3,19	2,96	2,98
<b>Compressor</b>								
Type			Semihhermetic Reciprocating					
Quantity/Refrigerant circuits		n°/n°	1 / 1	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
Capacity steps		n°	2	4	4	4	4	4
Oil charge		n°	3,5	2,5 + 2,5	2,5 + 2,5	2,5 + 2,5	3,5 + 3,5	3,5 + 3,5
Refrigerant charge		kg	7,8	6 + 6	6 + 6	6,1 + 6,1	7,5 + 7,5	7,7 + 7,7
<b>Axial Fans</b>								
Quantity		n°	1	2	2	2	2	2
Air flow		m³/h	21.729	44.644	44.644	44.644	43.458	43.458
<b>User side exchanger</b>								
Type			Duble circuit Plate exchanger					
Water flow rate (A7/W45)	(1)	l/h	11.364	13.866	15.662	17.299	20.547	22.694
Pressure drop (A7/W45)	(1)	kPa	23	30	24	19	26	20
<b>Hydraulic module</b>								
Pump power input		kW	1,1	1,7	2,5	2,5	2,5	2,5
Available pressure (A7/W45)		kPa	154	183	189	189	168	163
<b>Hydraulic connection</b>								
Connection			2"	2"	2"1/2	2"1/2	2"1/2	2"1/2
<b>Acoustic data (STD version)</b>								
Sound power level	(4)(6)	dBA	82	85	86	86	88	88
Noise pressure level	(4)(6)	dBA	65	67	68	68	70	70
<b>Dimension Data</b>								
Width		mm	1.885	2.890	2.890	2.890	2.890	2.890
Depth		mm	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
Delivery weight		kg	846	1.266	1.277	1.288	1.434	1.456
Operating weight		kg	811	1.227	1.238	1.249	1.390	1.412

(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 calculate in compliance with ISO 3744  
(5) Sound pressure level at 1m from the unit calculate 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 Climat Average(Strasbourg) User Application Medium temperature (55°C) Outlet temperature Variable  
This datasheet gives the characteristic data of the basic and standard versions of the series; for details refer to the specific documentation

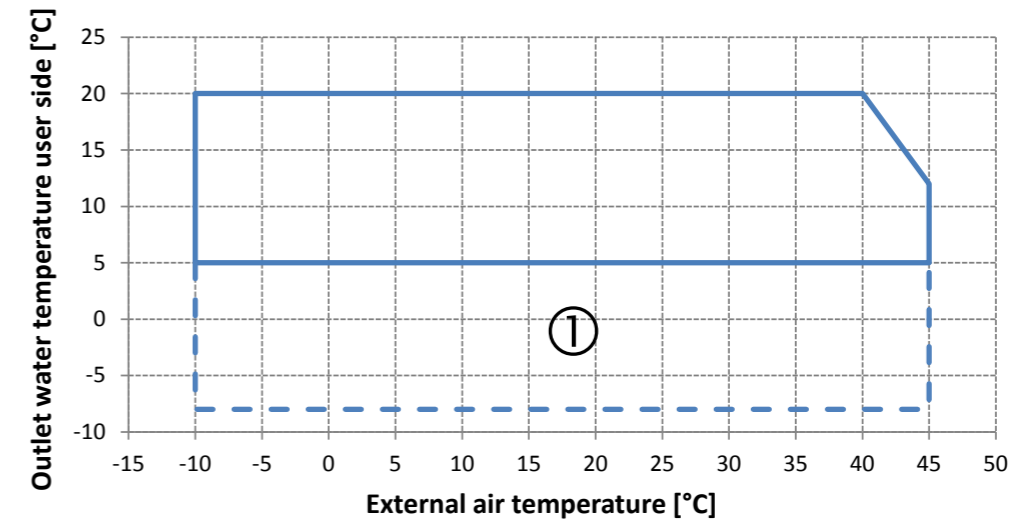
## Electrical data

UNIT SIZE			8.1	10.1	12.1	15.1	20.1	22.1	25.1
Maximum absorbed power	(1)	kW	9,8 (10,3)	12,2 (12,7)	12,2 (13,5)	13,6 (14,8)	15,4 (16,8)	17,0 (18,4)	20,8 (22,2)
Full load current			23,9 (27,4)	27,4 (30,9)	32,4 (34,8)	38,4 (40,8)	42,4 (44,9)	49,4 (51,9)	52,4 (54,9)
Maximum starting current			60,3 (63,8)	64,4 (67,9)	92,2 (94,5)	115,6 (117,9)	119,5 (121,9)	136,4 (138,8)	136,4 (138,8)
Fan nominal power			1 x 1,6	1 x 1,6	1 x 1,6	1 x 1,6	1 x 1,6	1 x 1,6	1 x 1,6
Fan nominal current			1 x 3,9	1 x 3,9	1 x 3,9	1 x 3,9	1 x 3,9	1 x 3,9	1 x 3,9
Pump nominal power			0,50	0,50	0,90	0,90	1,10	1,10	1,10
Pump nominal current		kW	3,46	3,46	2,61	2,61	2,70	2,39	2,39
Power supply		A	400/3N~/50 ±5%						
Auxiliary Power supply		kW	230/1~/50 ±5%						

UNIT SIZE			30.1	15.2	20.2	22.2	25.2	30.2	
Maximum absorbed power	(1)	kW	23,0 (24,4)	27,1 (28,6)	30,8 (33,3)	34,0 (36,5)	41,6 (44,1)	46,0 (48,5)	
Full load current			60,4 (62,9)	76,8 (83,4)	84,8 (89,4)	98,8 (103,4)	104,8 (109,4)	120,8 (125,4)	
Maximum starting current			163,7 (166,1)	154,0 (160,6)	161,9 (166,4)	185,8 (190,3)	188,8 (193,3)	224,1 (228,6)	
Fan nominal power			1 x 1,6	2 x 1,6	2 x 1,6	2 x 1,6	2 x 1,6	2 x 1,6	
Fan nominal current			1 x 3,9	2 x 3,9	2 x 3,9	2 x 3,9	2 x 3,9	2 x 3,9	
Pump nominal power			1,10	1,73	2,45	2,45	2,45	2,45	
Pump nominal current		kW	2,39	3,15	4,53	4,53	4,53	4,53	
Power supply		A	400/3N~/50 ±5%						
Auxiliary Power supply		kW	230/1~/50 ±5%						

## Operation limits PURPLE HP

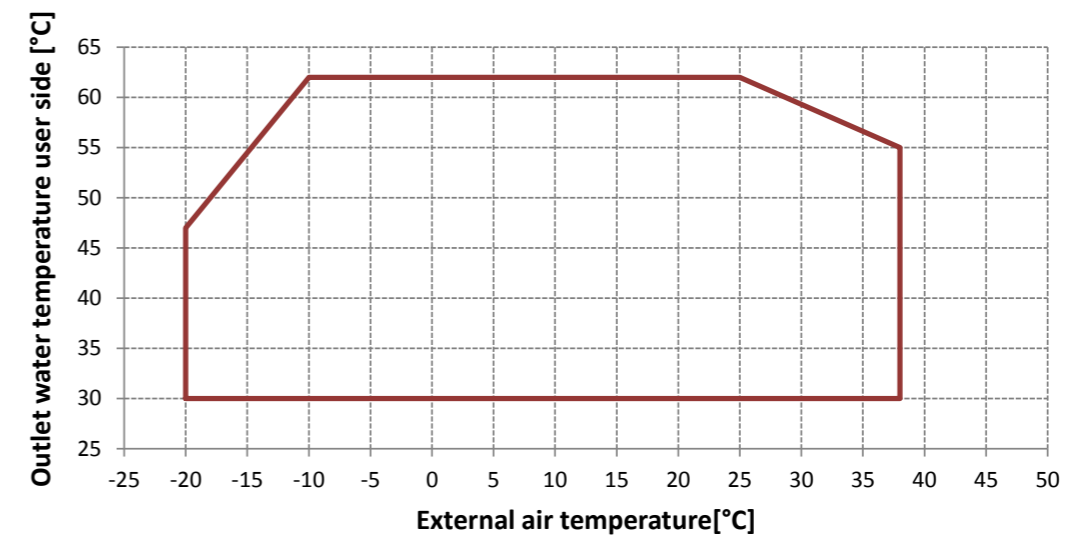
### COOLING



#### Notes

- > The thermal gradient to the utility side exchanger must be between 3°C and 6°C
- > ① The unit can only operate in this area with evaporator side glycol water

### HEATING



#### Notes

- > The thermal head to the utility side exchange must be between 3°C and 6°C
- > Operating outside the operating limits may cause the safety devices to intervene or serious malfunctions
- > The temperature of inlet water to utility side exchanger cannot be less than 25°C
- > ■ The unit can work within this field but NOT CONTINUOUSLY
- > Within the operating limits, the fan section may be subject to modulation
- > Within the operating limits, to limit the flow temperature, the unit may be subject to choking

(1) Mains power supply to allow unit operation

(2) Units with storage tank and pumps or units with exclusively pumps

(3) 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)

(4) Maximum starting current calculated considering the bigger size compressor starting current plus the maximum absorbed power of the other electrical devices (pumps, fans)