



PHRT 12/16/18



PHRT 7/9



## Applications

Refer to the circuit diagrams on pages 30 to 34

- Heating and cooling
- To  $-16^{\circ}\text{C}$  outdoors temperature and  $+43^{\circ}\text{C}$  in cooling
- Max T delivery water:  $55^{\circ}\text{C}$

- Refrigerant: R 410 A
- The best COP values on the market
- The lowest sound levels on the market
- Limited size:

1 190 x 340 x 735 mm  
1 190 x 340 x 1 235 mm

- Quality components:

Scroll compressor with sound insulation - High efficiency air heat exchanger with copper pipes and inorganic hydrophilic aluminium fins - Helicoidal fan - Heat exchanger with AISI 316 stainless steel plates and heat insulation,...

- Integrated hydronic module:

3-speed circulation pump - expansion tank - safety valve - air vent - manometer - hydraulic filter

- Control system functions:

- Reduction of minimum volume of water in the system
- Regulation of condensation pressure
- Automatic control of circulation pump (anti-freeze function, anti-seize function)

- Defrosting regulation in accordance with the outdoor temperature
- Alarm management through event logging
- External communication via serial interface (Modbus protocol)

- Other advantages:

- Easier access to components
- Keypad / display on front panel
- Dividing panel between the fan and the machinery compartment
- Control panel can be removed for a wider opening
- Stringent manufacturing inspections: cooling circuit waterproofing test, electric/hydraulic test, etc...

- Standard equipment

- Single-phase start-up kit (PHRT 7/9/2 mono)
- water flow rate control
- proportional "four seasons" regulation
- LP switch and HP switch
- water filter (to be connected)
- integrated hydronic module

# AQUASET

Models		PHRT 7	PHRT 9	PHRT 12	PHRT 16	PHRT 18
Code	230/1/50 400/3N/50	PHRT 075 F -	PHRT 095 F PHRT 097 F	PHRT 125 F PHRT 127 F	- PHRT 167 F	- PHRT 187 F
			Mono/Tri	Mono/Tri		
Conditions: temperature of water at inlet/outlet 40/45°C and temperature of air at inlet 7/6°C (DB/WB); net values; NF PAC						
Heating capacity (kW)		<b>7,2</b>	<b>9,17 / 9,2</b>	<b>10,5 / 12,4</b>	<b>15</b>	<b>19,4</b>
Power consumption (kW)		2,65	3,19 / 3,19	3,62 / 4,06	4,92	6,42
COP		2,72	2,87 / 2,88	2,9 / 3,05	3,05	3,02
Conditions: temperature of water at inlet/outlet 45/45°C and temperature of air at inlet -7/-8°C (DB/WB); net values; NF PAC						
Heating capacity (kW)		<b>4,6</b>	<b>5 / 5,05</b>	<b>5,88 / 6,8</b>	<b>8,51</b>	<b>12</b>
Power consumption (kW)		2,87	3,23 / 3,23	3,77 / 4,25	5,38	6,6
COP		1,6	1,55 / 1,56	1,56 / 1,6	1,58	1,74
Conditions: temperature of water at inlet/outlet 55/55°C and temperature of air at inlet 7/6°C (DB/WB); net values; NF PAC						
Heating capacity (kW)		<b>6</b>	<b>8,25 / 8,3</b>	<b>9,38 / 11,7</b>	<b>13,6</b>	
Power consumption (kW)		3,04	3,75 / 3,75	4,04 / 4,73	5,96	
COP		1,97	2,17 / 2,21	2,32 / 2,47	2,28	
Conditions: temperature of water at inlet/outlet 40/45°C and temperature of air at inlet 7/6°C (DB/WB); gross values; Eurovent						
Heating capacity (kW)		<b>7,25</b>	<b>9,24 / 9,27</b>	<b>10,65 / 12,5</b>	<b>15,2</b>	<b>19,6</b>
Power consumption (kW)		2,56	3,12 / 3,1	3,48 / 4,1	4,83	6,32
COP		2,83	2,96 / 2,99	3,06 / 3,05	3,15	3,1
Conditions: temperature of water at inlet/outlet 30/35°C and temperature of air at inlet 7/6°C (DB/WB); net values						
COP		<b>3,33</b>	<b>3,41 / 3,44</b>	<b>3,66 / 3,84</b>	<b>3,94</b>	<b>3,7</b>
Water flow rate (m <sup>3</sup> /h)		1,19	1,58 / 1,55	1,87 / 2,16	2,7	3,38
Available head for pump (kPa)		57	47 / 47	66 / 53	68	59
Conditions: temperature of water at inlet/outlet 12/7°C and temperature of air at inlet 35°C (DB/WB); gross values; Eurovent						
Heating capacity (kW)		<b>5,90</b>	<b>7,10 / 7,10</b>	<b>8,56 / 9,00</b>	<b>11,40</b>	<b>15,9</b>
Power consumption (kW)		2,55	3,14 / 3,09	3,33 / 3,73	4,98	6,97
EER		2,31	2,26 / 2,30	2,57 / 2,41	2,29	2,28
Water flow rate (m <sup>3</sup> /h)		1,01	1,22 / 1,22	1,48 / 1,51	1,98	2,7
Available head for pump (kPa)		64	59 / 59	82 / 80	84	78
Type of refrigerant		R 410 A	R 410 A	R 410 A	R 410 A	R 410 A
No. of cooling circuits		1	1	1	1	1
No. of compressors		1	1	1	1	1
Expansion tank capacity (l)		2	2	2	2	2
Ø of male hydraulic connection		3/4"	3/4"	1"	1"	1"
Sound power level/Sound pressure* (dBA)		65/37	65/37	67/39	68/40	73/45
Min./max. system water volume (l)		30/60	40/90	50/90	60/90	60/90
Length (mm)		1 190	1 190	1 190	1 190	1 190
Depth (mm)		340	340	340	340	340
Height (mm)		735	735	1 235	1 235	1 235
Weight (kg)		98	98	128	133	138

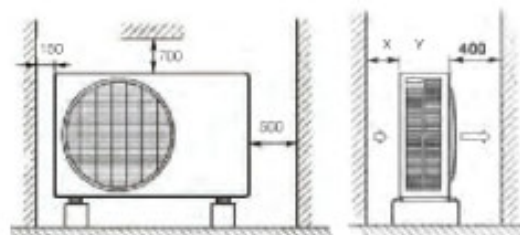
## OPERATING LIMITS

HEATING	T outdoor air PHRT 7-9-12-16	- 16°C (DB) / + 43°C (DB)	COOLING	T outdoor air	+ 10°C (DB) / + 43°C (DB)
	T outdoor air PHRT 18	- 10°C (DB) / + 20°C (DB)		Max. T of water generated PHRT 7-9-12-16	+ 20°C
	Max. T of water generated PHRT 7-9-12-16	+ 55°C		Max. T of water generated PHRT 18	+ 25°C
	Min. T of water generated PHRT 18	+ 50°C		Min. T of water generated	+ 5°C
	Min. T of water generated PHRT 18	+ 25°C			



## Installation clearances

(Refer to the installation manual for full information)



minimum dimensions

	X	Y
PHRT 7-9	150	1 000
PHRT 12 - 16 - 18	250	1 000