Residential solutions with air/water heat pumps

B&T ΕΝΕΡΓΕΙΑ

Air/Water Heat Pumps
Single-unit ON/OFF
High temperature

AQUASET range

WATER | GAS R410A | T° ext. -16 °C | T° Max. Water outlet 65 °C

AQUASET-PHTJ

PHTJ 14/19

Applications

Refer to the circuit diagrams on pages 30 to 34

- **Heating**
- **To -16°C outdoors temperature**
- **Max T delivery water: 65°C**
- **Intermediate re-injection scroll compressor**

- **Refrigerant: R 407 C**
- **The best COP values on the market**
- **Silent operation**
- **Compact appliances: 1190x340x1235 mm**
- **Quality components:**

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

- **Integrated hydronic module:**

  3-speed circulation pump - air vent - manometer - hydraulic filter

- **Control system functions:**

  - 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:**
  - Easy 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 (PHTJ 14 mono)
  - water flow rate control
  - low pressure switch
  - high pressure switch
  - water filter (to be connected)
  - integrated hydronic module
  - defrosting heating element

BOILER BACK-UP SOLUTION
BOILER REPLACEMENT SOLUTION/HEATING WITH 1 RADIATOR ZONE

		AQUASET		
Model		PHTJ 14	PHTJ 14	PHTJ 19
Code	230/1/50	PHTJ 145 V	-	-
	400/3N/50	-	PHTJ 147 V	PHTJ 197 V
HEATING	Conditions: temperature of water at inlet/outlet 40/45°C and temperature of air at inlet 7/6°C (DB/WB); net values			
	Heating capacity (kW)	**14,3**	**14,1**	**20,7**
	Power consumption (kW)	4,54	4,34	6,97
	COP	3,15	3,25	2,97
	Conditions: temperature of water at inlet/outlet */55°C and temperature of air at inlet -7/-8°C (BS/BU); net values			
	Heating capacity (kW)	8,6	8,4	12,7
	Power consumption (kW)	5,04	4,75	7,47
	COP	1,71	1,82	1,70
	Conditions: temperature of water at inlet/outlet 47/55°C and temperature of air at inlet 7/6°C (BS/BU); net values			
	Heating capacity (kW)	13,65	13,8	20,4
	Power consumption (kW)	5,25	4,98	7,55
	COP	2,60	2,77	2,70
	Conditions: temperature of water at inlet/outlet 55/65°C and temperature of air at inlet 7/6°C (DB/WB); net values			
	Heating capacity (kW)	13	13,2	20,1
	Power consumption (kW)	6,30	5,86	9,00
	COP	2,06	2,25	2,2
	Conditions: temperature of water at inlet/outlet 30/35°C and temperature of air at inlet 7/6°C (DB/WB); net values			
	COP	**3,8**	**4,02**	**3,41**
	Water flow rate (m3/h) for generated water temp. of 47/55°C	1,55	1,55	2,30
	Available head for pump (kPa)	90	90	88
	Type of refrigerant	R 407 C	R 407 C	R 407 C
	No. of cooling circuits	1	1	1
	No. of compressors	1	1	1
	Expansion tank capacity (l)			
	Ø of male hydraulic connection	1"	1"	1"
	Sound power level/Sound pressure* (dBA)	71,5/43,5	71,5/43,5	73,5/45,5
	Minimum water volume (system) (l)	45	45	65
	Length (mm)	1 190	1 190	1 190
	Depth (mm)	340	340	340
	Height (mm)	1 235	1 235	1 235
	Weight (kg)	141	141	145

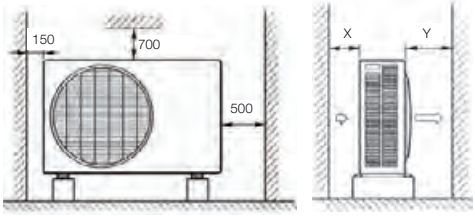
* Sound pressure: appliance installed outdoors (free sound field), on a reflective surface, at a distance of 10 m.

OPERATING LIMITS

HEATING	T outdoor air	- 16°C (DB) / + 43°C (DB)
		Max. T of water generated + 65°C
		Min. T of water generated + 30°C

Installation clearances

(Refer to the installation manual for full information)



minimum dimensions

	X	Y
PHTJ 14 - 19	250	1000