

## EcoHeat 406 Heat Pump



Main features	
Application	space heating and hot water heating
Description	the heat pump is equipped with a mixing valve (with an actuator) to ensure the supply of heating water at the required temperature, a circulating pump for connection to a well or ground loop, storage tank with integrated copper heat exchanger for hot water supply and control system for individual setting and function monitoring; a room temperature sensor is included in the standard delivery
Working fluid	R407C (refrigerant), antifreeze fluid (brine circuit), water (heating c.)
Code	<b>13441</b>

Technical data	
Output <sup>1</sup>	5,9 kW
Power input <sup>1</sup>	1,29 kW
COP <sup>1</sup>	4,57
Max. starting current	16,6 A
Max. compressor operating current	4,5 A
Power supply	3/N/PE ~ 400V 50Hz
IP rating	IPX1
Compressor	Scroll
Refrigerant	R407C
Refrigerant quantity	1,9 kg
CO2 equivalent <sup>2</sup>	3,37 tun
Refrigerant max. working pressure	31 bar
Brine system min./max. pressure	0,2 / 3,0 bar
Brine system min./max. temperature	-5 / 20 °C
Antifreeze fluid volume in HP	2,3 l
Brine system min. flow through HP ( $\Delta t = 5$ K)	792 l/h
Brine system max. flow through HP ( $\Delta t = 3$ K)	1332 l/h
Brine circuit connection	2 x Cu28
Max. heating water outlet temperature	65 °C
Max. storage tank temperature	110 °C
Max. storage tank working pressure	2,5 bar
Storage tank volume	223 l
Nominal heating water flow rate through HP	500 l/h
Min. heating water flow rate through heating circuit	unlimited
DHW heat exchanger water volume	5,7 l
DHW heat exchanger max. working pressure	10 bar
DHW heat exchanger max. working temperature	110 °C
DHW heat exchanger connections	2 x Cu22
Overall dimensions	1904 x 595 x 672 mm
Min. ceiling height	1930 mm
Weight	267 kg

<sup>1</sup>) at B0/W35 temperatures <sup>2</sup>) is not covered by the annual check for leaking refrigerant according to EU no. 517/2014

Bivalent source	
Max. output of backup source with circuit breaker size <sup>3</sup>	6,9 kW (16 A) 7,8 kW (20 A) 9,0 kW (25 A)

<sup>3</sup>) the backup source output can be adjusted between 0 and 9.0 kW in 0.3 kW steps

## EcoHeat 406 Heat Pump

### Parameters for distribution tariff change

Nominal power input (required input)	1,91 kW
Heat output <sup>4</sup>	5,9 kW
Steady current <sup>4</sup>	2,1 A
Starting current	16,6 A
Nominal voltage / number of phases	400V 3f

4) at B0/W35 temperatures

### Sound data

Sound power level LWA by EN 12 102	44,9 dB
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### Energy efficiency data

(for average climatic conditions, others see the Product Fiche)

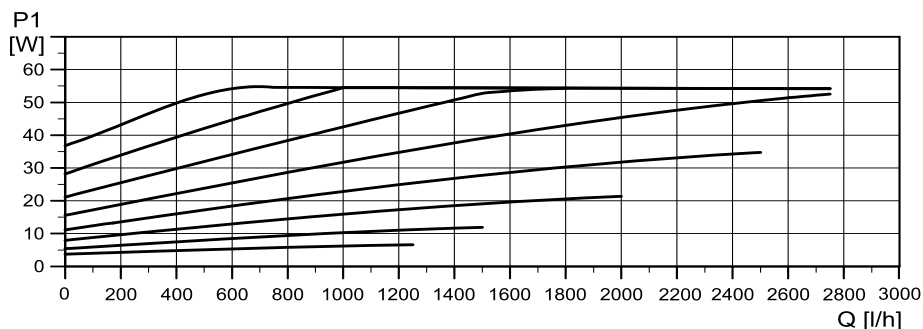
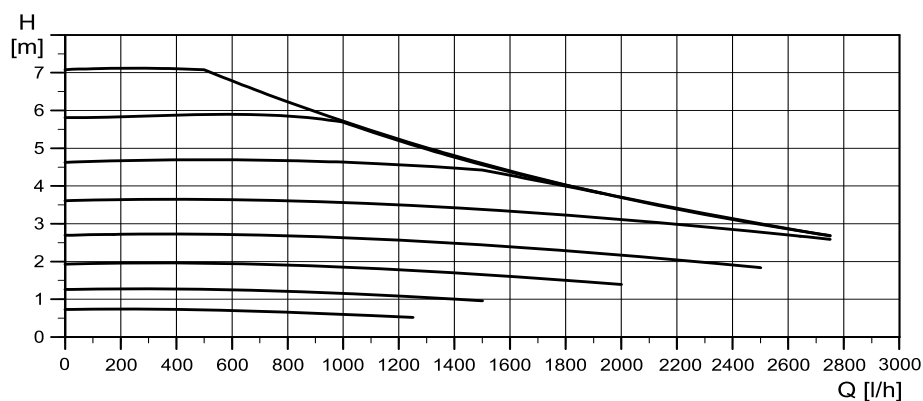
Energy Efficiency Class for space heating (W55)	A+
Energy Efficiency Class for hot water heating (W55)	A
Declared Load Profile	L

### Output parameters <sup>5</sup>

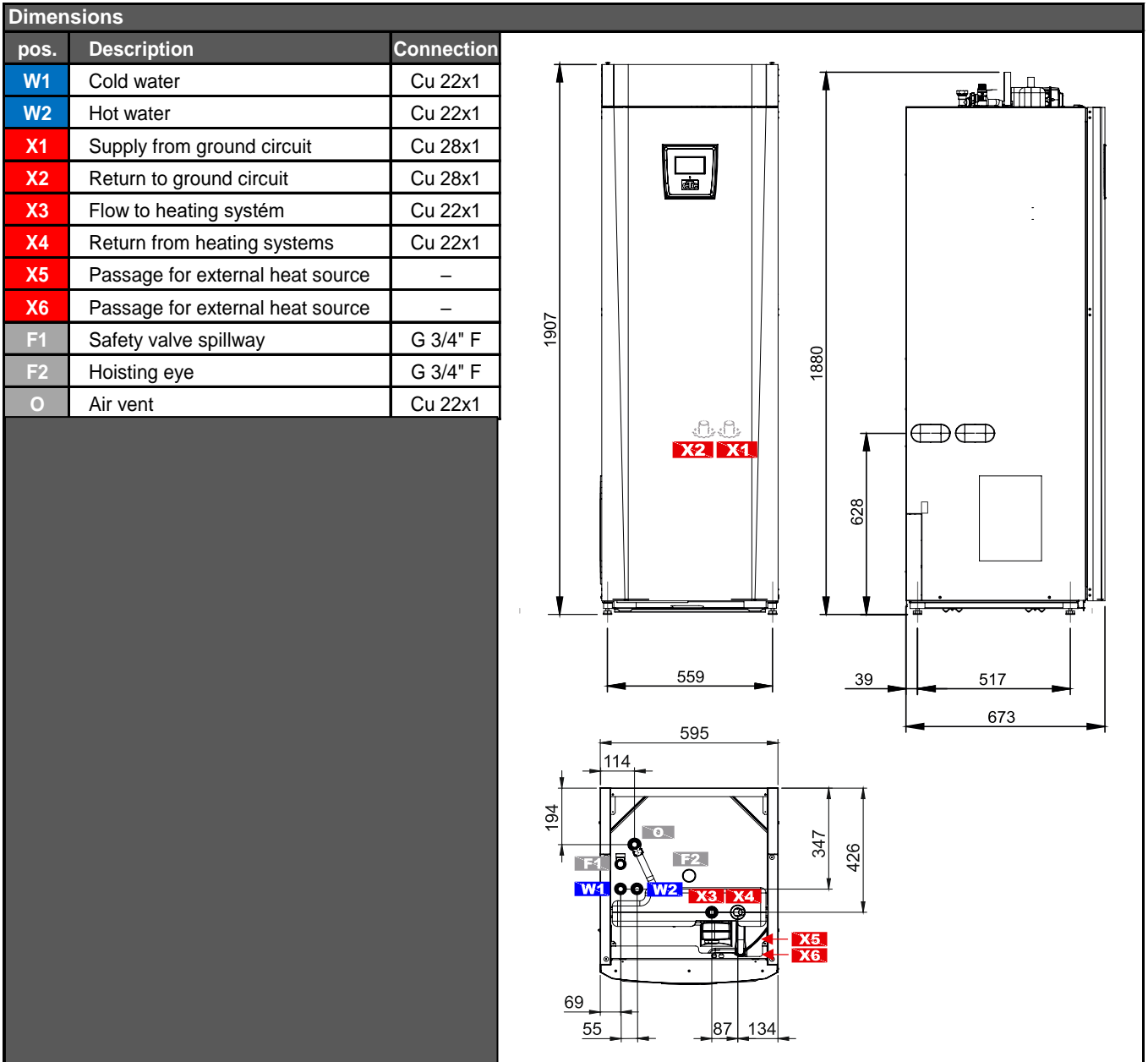
	[°C]	-5/25	-5/35	-5/45	-5/55
Output	[kW]	-	-	4,68	-
Power input	[kW]	-	-	1,52	-
COP	[-]	-	-	3,08	-
	[°C]	0/25	0/35	0/45	0/55
Output	[kW]	6,10	5,90	5,48	5,17
Power input	[kW]	1,20	1,29	1,55	1,87
COP	[-]	5,08	4,57	3,54	2,76
	[°C]	5/25	5/35	5/45	5/55
Output	[kW]	-	6,81	6,49	6,08
Power input	[kW]	-	1,30	1,56	1,91
COP	[-]	-	5,24	4,16	3,18

5) values measured according to EN 14 511 at the manufacturer's test lab

### Performance curves for brine circuit pump



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The energy efficiency of the package of products provided for in fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

I	Water heating energy efficiency of combination heater	78	%
II	The value of the mathematical expression $(220 \cdot Q_{ref}) / Q_{nonsol}$	-	-
III	The value of the mathematical expression $(2,5 \cdot Q_{aux}) / (220 \cdot Q_{ref})$	-	-

Water heating energy efficiency of combination heater  $I =$  **1** **78** %

Declared load profile **L**

Solar contribution (from fiche of solar device)

Auxiliary electricity

$(1,1 \cdot I - 10\%) \cdot II - III - I =$  **2** **-** %

Water heating energy efficiency of package under average climate **3** **78** %

Water heating energy efficiency class of package under average climate

		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<b>G</b>	<b>F</b>	<b>E</b>	<b>D</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>A+</b>	<b>A++</b>	<b>A+++</b>
<input type="checkbox"/>	<b>M</b>	< 27 %	≥ 27 %	≥ 30 %	≥ 33 %	≥ 36 %	≥ 39 %	≥ 65 %	≥ 100 %	≥ 130 %	≥ 163 %
<input checked="" type="checkbox"/>	<b>L</b>	< 27 %	≥ 27 %	≥ 30 %	≥ 34 %	≥ 37 %	≥ 50 %	≥ 75 %	≥ 115 %	≥ 150 %	≥ 188 %
<input type="checkbox"/>	<b>XL</b>	< 27 %	≥ 27 %	≥ 30 %	≥ 35 %	≥ 38 %	≥ 55 %	≥ 80 %	≥ 123 %	≥ 160 %	≥ 200 %
<input type="checkbox"/>	<b>XXL</b>	< 28 %	≥ 28 %	≥ 32 %	≥ 36 %	≥ 40 %	≥ 60 %	≥ 85 %	≥ 131 %	≥ 170 %	≥ 213 %

Water heating energy efficiency of package under colder and warmer climate conditions

Colder: **3** **78** - 0,2 · **2** **-** = **78** %

Warmer: **3** **78** + 0,4 · **2** **-** = **78** %