

Storage tank

NIBE AHP S/ AHPS S/ AHPH S

The NIBE AHP S/ AHPS S/ AHPH S are easy-to-operate accumulator tanks with a modular design and numerous connection options.

Each module in the system is 60 cm wide and effectively insulated to ensure minimum energy loss.

The NIBE AHPS S/ AHPH S produce hot water through a domestic coil and are designed to handle high outputs – heat pumps of up to 24 kW, which means that these multifunction tanks have high hot water capacity.

Connection on several levels enables supply and use of energy in many combinations. They can be docked with a heat pump or other external heat source.

The required system volume can be achieved by pairing the NIBE AHPS S and NIBE AHPH S with the NIBE AHP S.

The NIBE AHPH S has an integrated domestic coil and is designed for heating domestic hot water.

The NIBE AHPS S has a solar coil and an integrated domestic coil for hot water production.

- Multifunction tank – accumulator tank for hot water production with several connection options.
- High output performance provides high hot water capacity.
- Easy-to-operate modular system for customised volume requirements.
- Designed to be combined with the S series.



This is how AHP S/ AHPS S/ AHPH S works

Principle

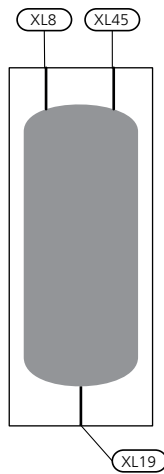
AHP S/ AHPS S/ AHPH S is an accumulator tank concept of the "technology tank" type. AHPS S has e.g. a solar coil and a combined pre-heating and post-heating coil for hot water production. The hot water is produced in the robust, stainless steel hot water coil as the hot water is consumed. The integrated solar coil made of copper pipe can utilise energy from up to 15 m² of solar panel, but in that case it must be combined with AHP S.

AHP S is a volume expansion vessel that is primarily used to increase the volume together with AHPS S / AHPH S. Several AHP S can be connected in parallel with AHPS S / AHPH S, which makes things easier when it is difficult to carry in a large tank.

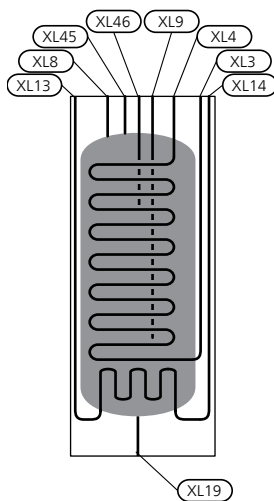
AHPH S is an accumulator tank with an integrated stainless steel hot water coil, where hot water is produced as the hot water is consumed. AHPH S can dock with an external heat source.

DESIGN

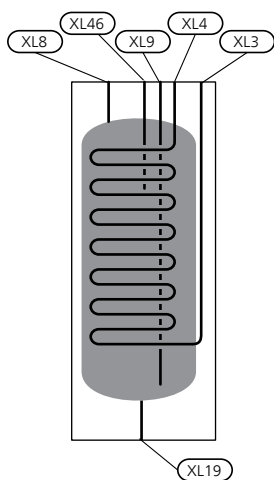
AHP S



AHPS S



AHPH S



AHP S

AHP S consists of a vessel with accumulated volume. AHP S is connected to AHPS S / AHPH S.

AHPS S

AHPS S consists of a vessel with a number of connections, which makes it possible to dock the accumulator tank to external units. By using the different levels in the tank, heat can be extracted and supplied to the tank in several different ways. For example, you can use the volume between the bottom and the middle level to extract solar heat to heat a pool. The heat between level 2 and the top of the tank is then intended to preheat the hot water for the heat pump.

AHPH S

AHPH S consists of an accumulator tank with integrated tap coil for hot water. AHPH S can be docked to an external heat source, for example heat pump.

- XL3 Connection, cold water
- XL4 Connection, hot water
- XL8 Docking connection, supply line (from heat pump*)
- XL9 Docking connection, return line (to heat pump*)
- XL13 Solar heat connection, supply line (from solar heating system)
- XL14 Solar heat connection, return line (to solar heating system)
- XL19 Docking connection, return line (to heat source)
- XL45 Docking connection, top of the tank
- XL46 Docking connection, middle of the tank

* or another external heat source

Good to know about AHP S/ AHPS S/ AHPH S



AHP S/ AHPS S/ AHPH S is covered by a 3-year product guarantee.

For full terms and conditions, see nibe.se.

Equipment

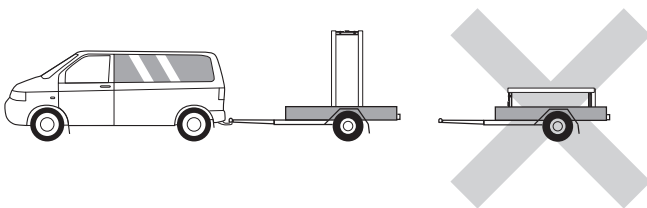
AHP S/ AHPS S/ AHPH S can be supplemented with up to two hot water sensors, one for display and one for control. Use the sensors provided with the external heat source. When no sensors have been provided, these must be ordered from the manufacturer of the heat source.

Installation and positioning

- The accumulator tank may only be installed vertically.
- The area where the AHP S/ AHPS S/ AHPH S is located must be frost-proof and equipped with a floor drain.
- Position AHP S/ AHPS S/ AHPH S on a firm base that can take the weight, preferably on a concrete floor or foundation. Use the accumulator tank's adjustable feet to obtain a horizontal and stable set-up.

Transport and storage

AHP S/ AHPS S/ AHPH S should be transported and stored vertically in a dry place. However, the AHP S/ AHPS S/ AHPH S may be carefully laid on its back when being moved into a building.

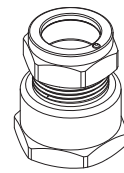


Supplied components

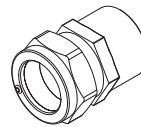
AHPS S



3 x Plug Ø 22



2 x Straight connection Ø 22xG1



1 x Straight connection Ø 22xG $\frac{3}{4}$

LOCATION

The kit of supplied items is placed on top of the product.

















Installation

Installation alternative

AHP S/ AHPS S/ AHPH S can be connected in several different ways, some of which are shown here.

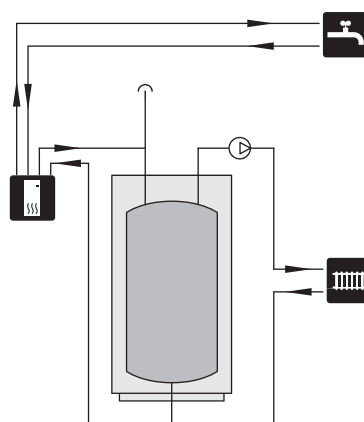
Further option information is available at nibe.eu and in the respective assembly instructions for the heat sources used.

SYMBOL KEY

Symbol	Meaning
	Venting valve
	Shut-off valve
	Mixing valve
	Circulation pump
	Expansion vessel
	Pressure gauge
	Level vessel
	Control valve
	Particle filter
	Safety valve
	Temperature sensor
	Thermometer
	Sun
	Heat pump
	Radiator system
	Domestic hot water

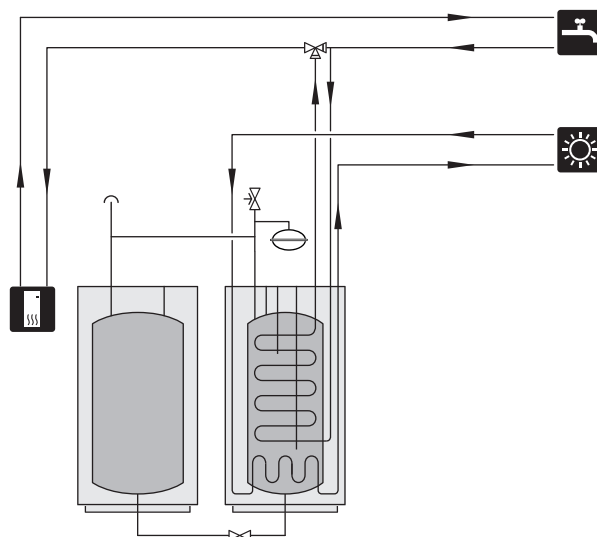
AS A BUFFER VESSEL FOR HEATING SYSTEM

AHP S can be docked as a buffer vessel for the heating system, when the system volume is not sufficient, or to reduce heat spikes.



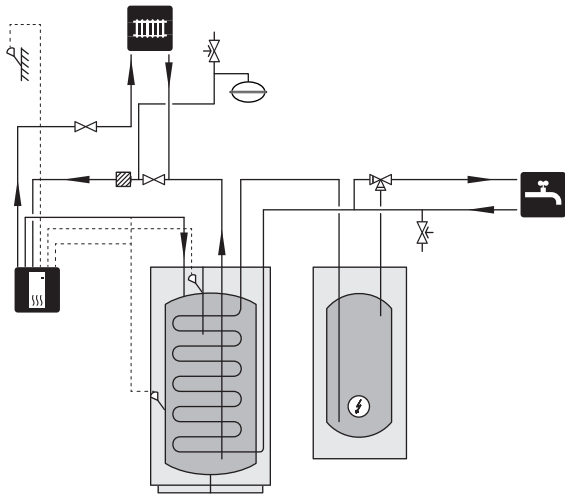
TO SOLAR HEATING

AHPS S can be docked to solar heating system.



TO GROUND SOURCE HEAT PUMP/EXTERNAL HEAT SOURCE

AHPH S can be docked with another heat source, for example NIBE F1145/1155.



Pipe installation

GENERAL

Pipe installation must be carried out in accordance with current norms and directives.

Ensure that incoming water is clean. When using a private well, it may be necessary to supplement with an extra water filter.

If uncertain, contact a plumber alternatively see applicable standards.

Maximum boiler and radiator volumes

For installation in pressurised systems, the system must be equipped with a pressure expansion vessel pre-pressurised to 0.5 bar .

Internal volume in AHP S/ AHPS S/ AHPH S for calculating expansion vessel is 270 l. The expansion vessel's volume must be at least 10% of the system's total volume.

Example table:

<i>Total volume (l) (accumulator tank and radiator system)</i>	<i>Volume (l) expansion vessel</i>
500	50
700	70
1000	100

Expansion vessel is not supplied with the product.

The pre-pressure of the pressure expansion vessel must be dimensioned according to the maximum height (H) between the vessel and the highest positioned radiator. A pre-pressure of 0.5 bar means a maximum permitted height difference of 5 m.

If the pre-pressure is not high enough, it can be increased by adding air via the valve in the expansion vessel. Any change in the pre-pressure affects the ability of the expansion vessel to handle the expansion of the water.

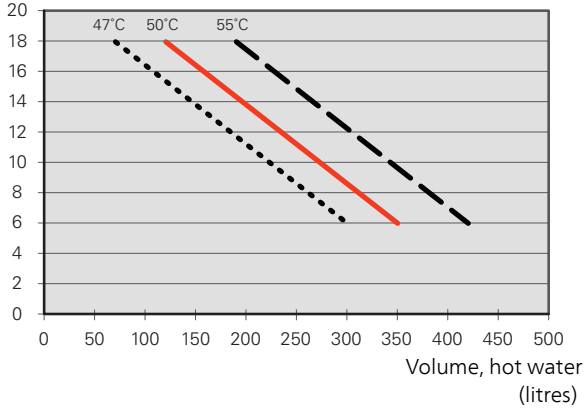
Technical data

Diagram

HOT WATER CAPACITY

AHPS S / AHPH S

Tap flow
(litres/minute)

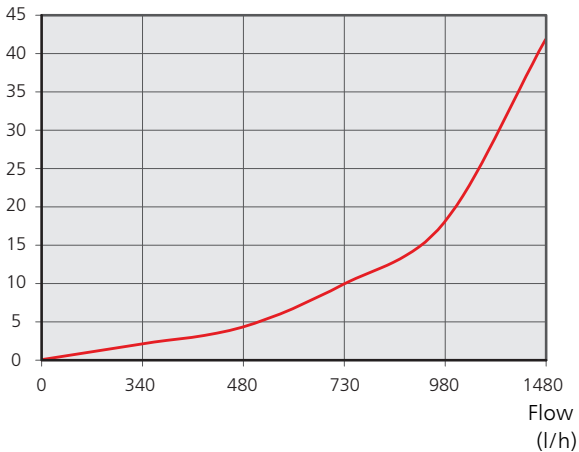


To achieve the stop temperatures in the diagram above, the "target temp" charge method must be selected in the heat pump's control system.

PRESSURE DROP, SOLAR COIL

AHPS S

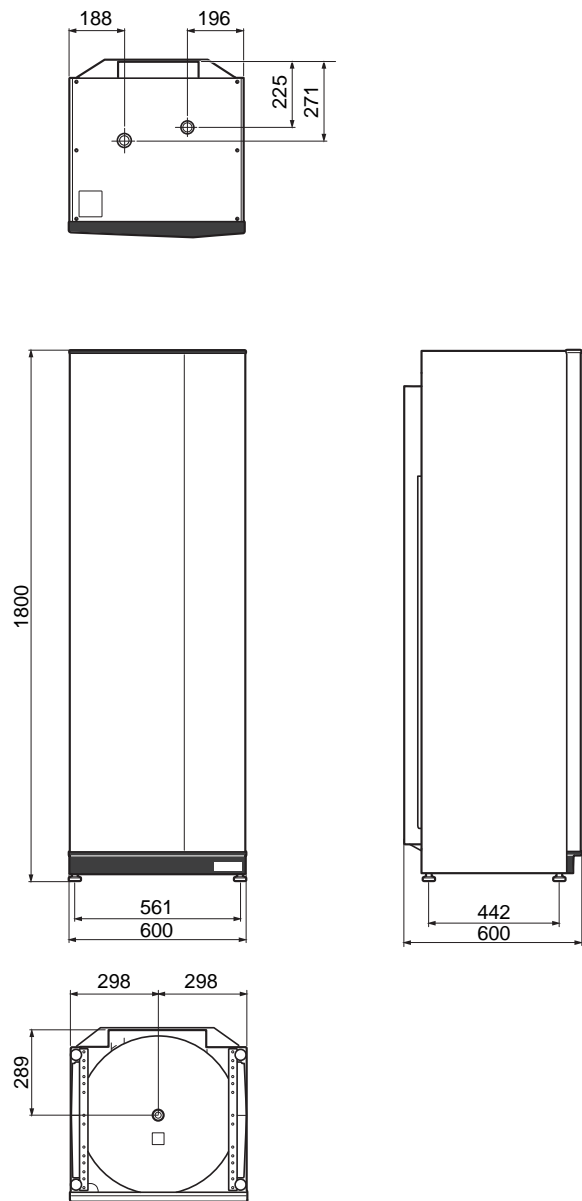
Pressure drop
(kPa)



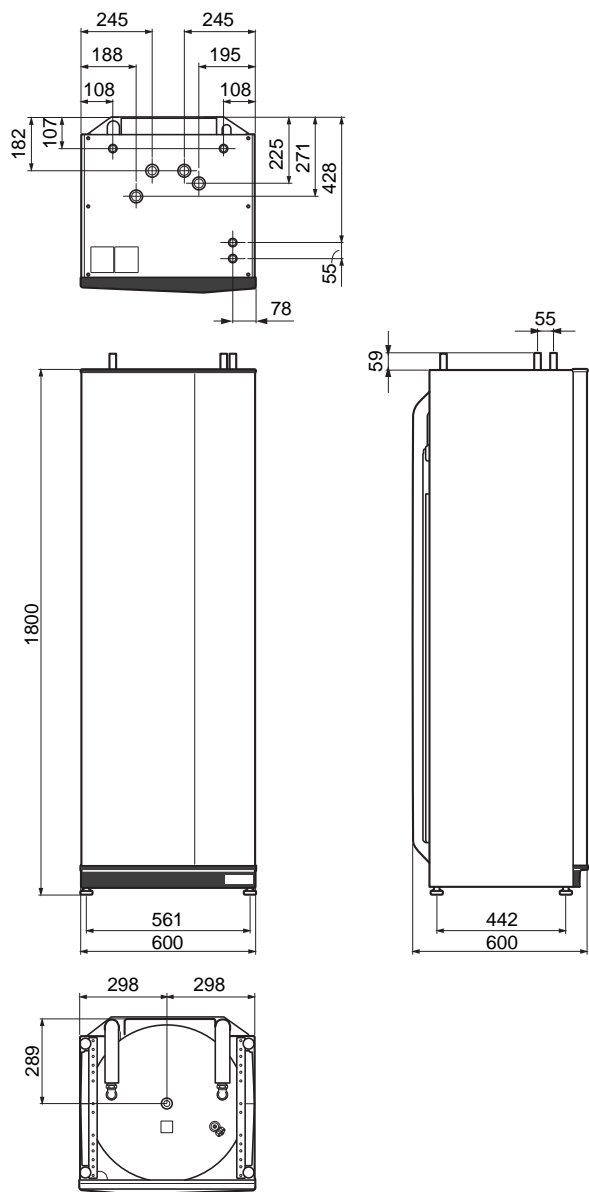
Connection, supply, solar heating system and connection, return line, solar heating system.

Dimensions

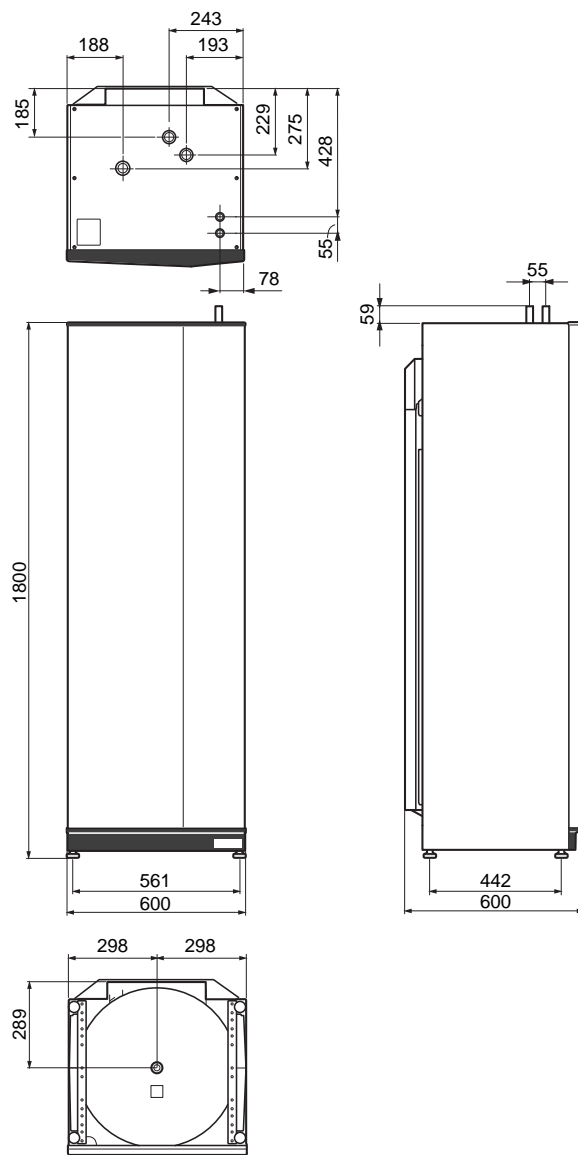
AHP S



AHPS S

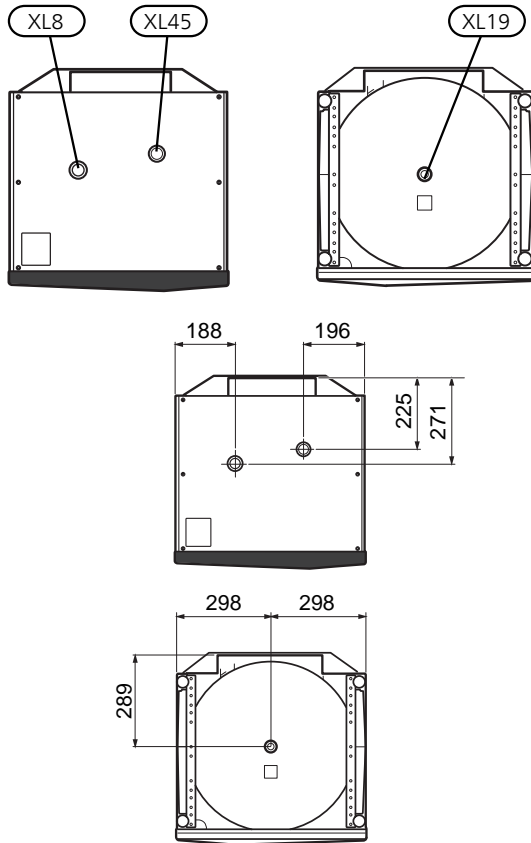


AHPH S



Pipe connections

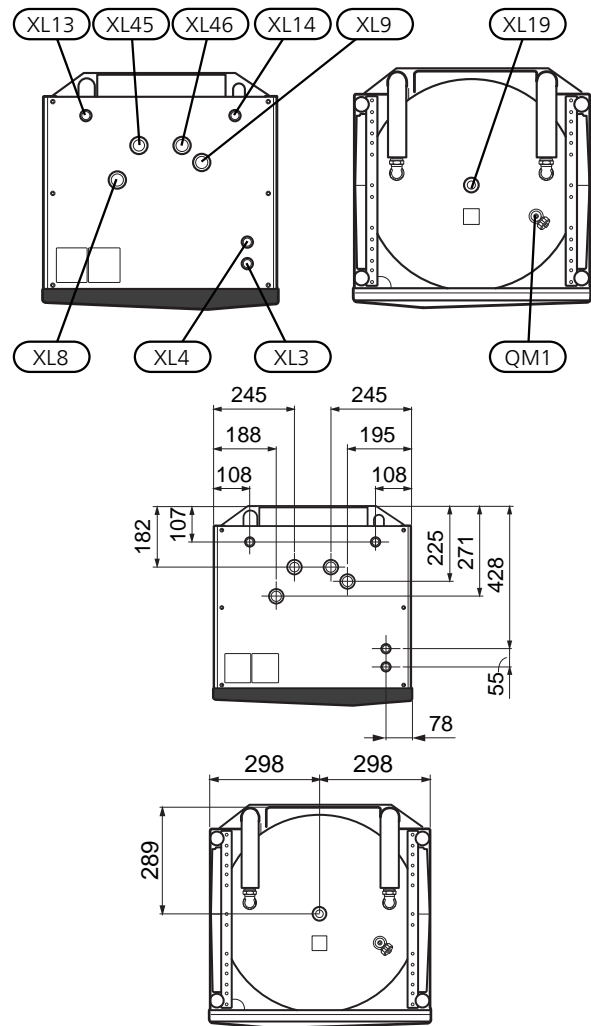
AHP S



Connection AHP S		
XL8 Docking connection, supply, supply (from heat pump*)	G25	ext.
XL19 Docking connection, return line high temperature	G25	ext.
XL45 Docking connection, level 1	G25	ext.

*or another external heat source

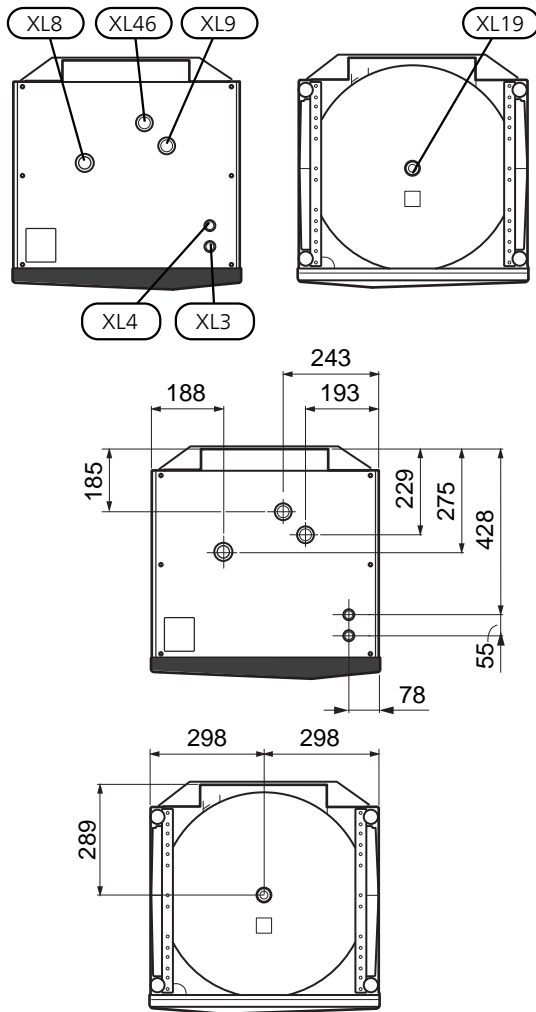
AHPS S



Connection AHPS S			
QM1 Draining valve	G20	ext.	
XL3 Cold water Ø	mm	22	
XL4 Hot water Ø	mm	22	
XL8 Docking connection, supply line (from heat pump*)	G25	ext.	
XL9 Docking connection, return line (to heat pump*)	G25	ext.	
XL13 Solar supply line Ø	mm	22	
XL14 Solar return line Ø	mm	22	
XL19 Docking connection, return line high temperature	G25	ext.	
XL45 Docking connection, level 1	mm	22	
XL46 Docking connection, level 2	mm	22	

*or another external heat source

AHPH S



Connection AHPH S		
XL3 Cold water Ø	mm	22
XL4 Hot water Ø	mm	22
XL8 Docking connection, supply line (from heat pump*)	G25	ext.
XL9 Docking connection, return line (to heat pump*)	G25	ext.
XL19 Docking connection, return line high temperature	G25	ext.
XL46 Docking connection, level 2	G25	ext.

*or another external heat source

Technical specifications

<i>Model</i>		<i>AHP S</i>	<i>AHPS S</i>	<i>AHPH S</i>
Efficiency class ¹		C	C	C
<i>Heating medium circuit</i>				
Max pressure in boiler section	MPa/bar	0.3/3		
Max temperature	°C	85		
Max heat pump size	kW	24		
<i>Other</i>				
Volume boiler section	litre	270	250	250
Volume hot water coil	litre	–	17	17
Volume, solar coil	litre	–	4.4	–
Max pressure in hot water coil	MPa/bar	–	1.0/10	
Corrosion protection, hot water coil		–	Stainless steel	
Corrosion protection, solar coil		–	Copper	–
<i>Capacity hot water heating according to EN 255-3</i>				
Tap volume 40 °C at Normal comfort (V_{max})	litre	–	See diagram	
<i>Dimensions and weight</i>				
Width	mm	600	600	600
Depth	mm	600	600	600
Height	mm	1800	1800	1800
Required ceiling height	mm	1950	1950	1950
Weight	kg	105	126	116
Part No.		080 134	080 136	080 137

¹Scale for the product's efficiency class A+ to F.
Tested according to standard EN 12897

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