KAISAI

DHW BUFFER TANK

KAISAI ECO HOME is an innovative solution specially designed for heat pumps, combining in a single housing both a **domestic hot water tank and a buffer tank** that also acts as a hydraulic coupling in the central heating system.

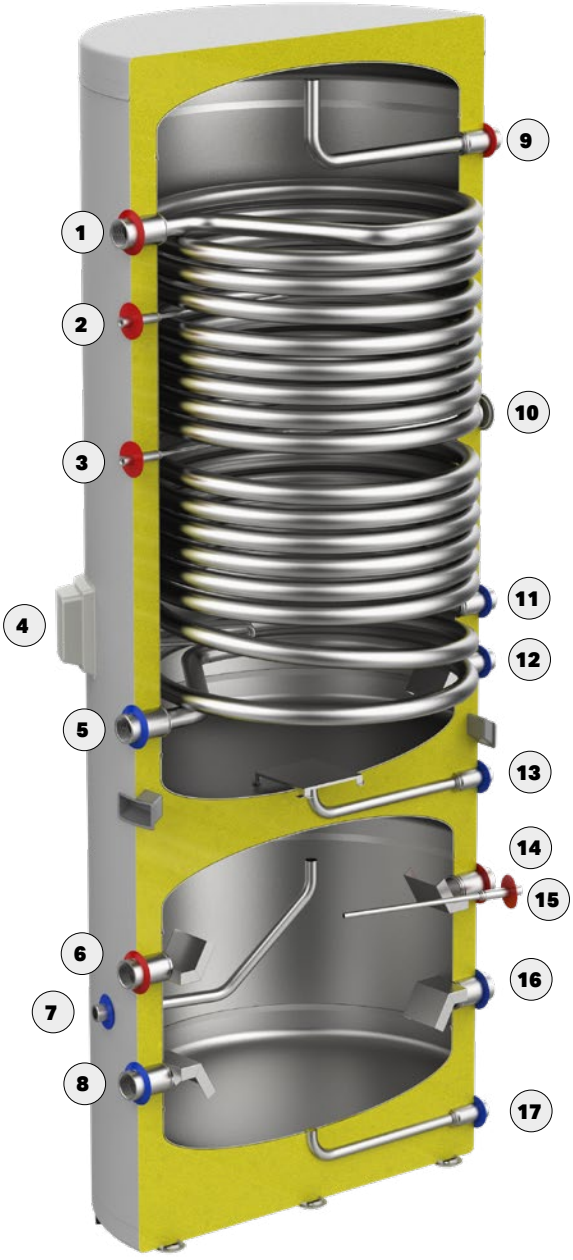
DHW / BUFFER TANK

The combination of tanks offers an optimal alternative to common solutions on the market. It saves space by using a compact design while maintaining functionality and essential performance. The Eco Home tank will blend in perfectly with any type of system, whether newly designed or retrofitted.

280 litres
Domestic hot water tank

2,9 m²
Coil surface

50 mm
Polyurethane insulation thickness



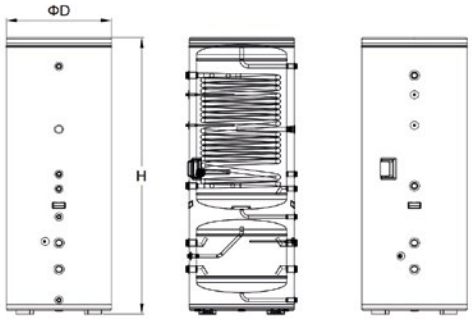
The new Eco Home tank is an exceptionally energy-efficient solution that guarantees reliability, easy installation and ergonomics by minimising the required technical room space.

The 135-liter buffer tank not only ensures minimum pressure in central heating systems, but also acts as a hydraulic coupling. The domestic hot water tank with a coil and the buffer tank are made of stainless steel SUS316, which ensures durability and many years of operation. The use of 50 mm thick polyurethane insulation minimizes heat loss and allows the tank to be located in any room of the building. The connection pipes for the installation and heat pump are located on both sides of the tank, which guarantees convenient and simple installation. An additional advantage of the domestic hot water tank is the 3 kW electric heater, which is included as standard equipment.

1	Inlet to DHW tank coil	10	Magnesium anode
2	Hot water temperature sensor port	11	Circulation / spare connection
3	Hot water temperature sensor port	12	Cold water inlet
4	Electric heater	13	Drain connection
5	Outlet from the DHW tank coil	14	Buffer tank outlet
6	Buffer tank inlet	15	Buffer tank temp. sensor port
7	Vent connection	16	Buffer tank inlet
8	Buffer tank outlet	17	Drain connection
9	Hot water outlet		

Technical specification

KTFD280XNA1



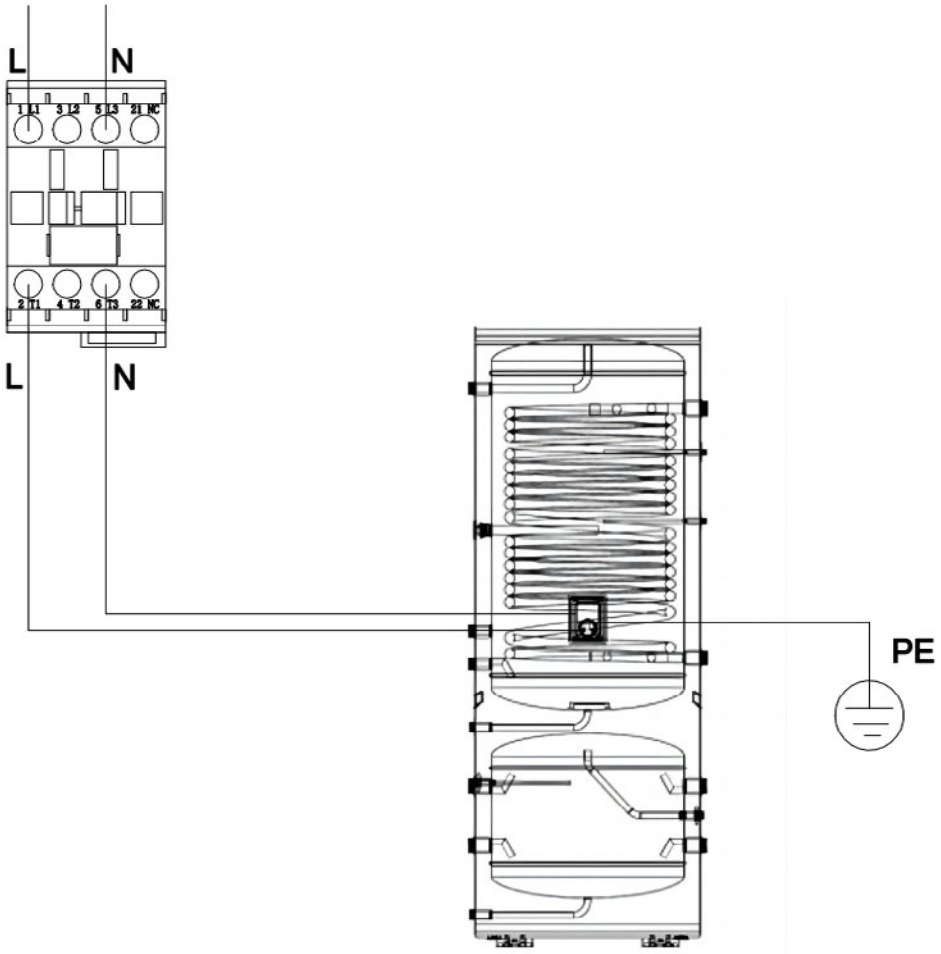
DHW TANK		
Model		KTFD280XNA1
Rated storage volume	L	280
Actual volume	L	274
Maximum design pressure of water	Bar	10
Maximum safety temperature on the water side	℃	95
Standing heat loss	kW/24h	2,3
Coil are od DHW pipe	m²	2,9
Maximum working pressure of the DHW tank coil	Bar	10
Maximum safety temeprature of the DHW tank coil	℃	95
Pressure drop od DHW coil / water flow	Bar/m³/h	0,25/3,0
Domestic hot / cold water pipe connections	cal	1
Dimension of the drainage socet	cal	5/4
Dimension of the temperature sensor	cal	3/4
Dimenson of the temeprature sensor		M12

ELECTRIC HEATER		
Electric heater rated power	kW	3
Electric heater voltage	V	230
Maximum running current	A	13,7

BUFFER TANK		
Rated volume	L	135
Actual volume	L	134
Maximum design pressure of water	Bar	10
Maximum safety temeperature on the water side	℃	95
Standing heat loss	kW/24h	1,1
Buffer tank pipe connections	cal	5/4
Dimension of the drainage socet	cal	3/4
Relief valve	cal	1/2
Dimension of the temperature sensor		M12

DHW TANK WITH A BUFFER		
Gross dimensions	m	0,775x0,775x2
Net dimensions	m	0,70x1,895
Gross weight	kg	122
Net weight without water	kg	103,5
Total weight with water	kg	530

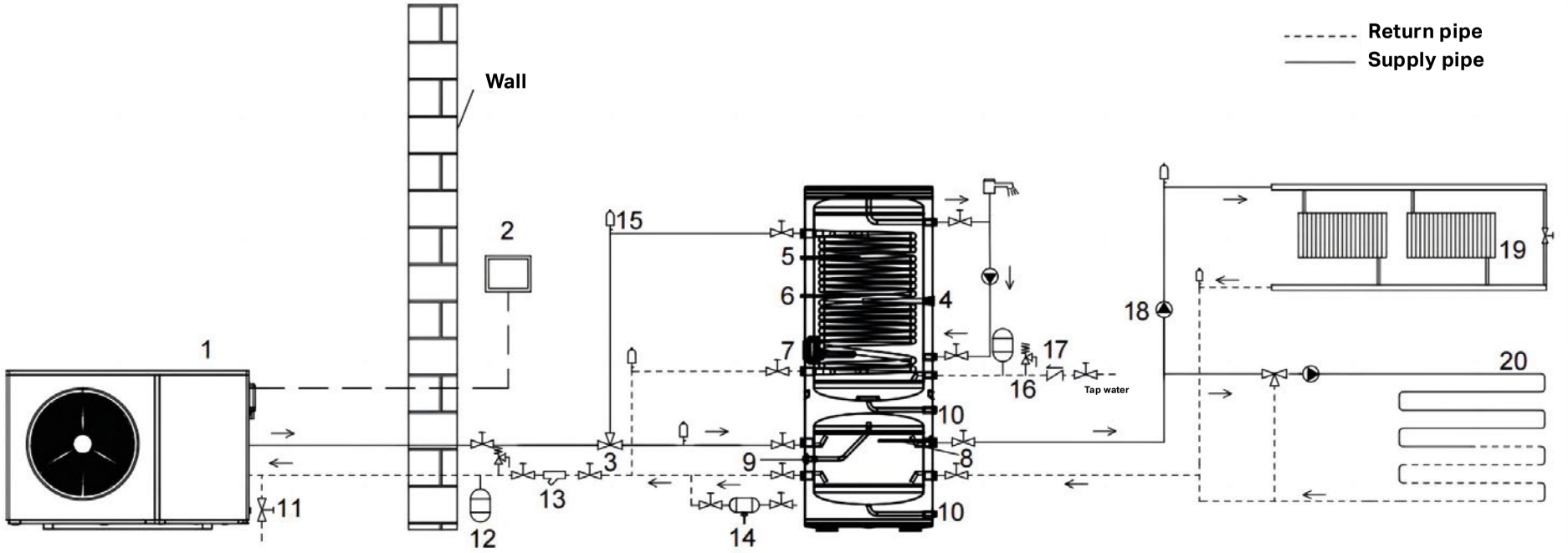
Guidelines for connecting an electric heater			
Model	KTFD280XNA1		
	Voltage range	Wire	Specification
KTFD280XNA1	220-240V / 50Hz	3x2,5mm^2	AWG12



Quality requirements for circulating water

Parameter	Restrictions for tap water
Temperature	Below 60°C
PH Value	7÷9
Alkalinity	60 mg/l < HCO_3 < 300 mg/l
Electrical Conductivity	< 500 µS/cm
Hardness	Od 3,5 do 8,4 °dH
Chloride Content	< 200 mg/l w 60°C
Sulfate Content	[SO_4^{2-}] < 100 mg/l i [HCO_3^-]/[SO_4^{2-}] > 1
Nitrate Content	NO_3 < 100 mg/l
Chlorine Content	< 0,5 mg/l
*Ethylene Glycol Content	< 30%

** Ethylene glycol is used as the working medium.*



Heating and cooling system diagram + hot water preparation

No.	Description	No.	Description	No.	Description	No.	Description	No.	Description
1	Heat pump	2	Control unit	3	3-way valve	4	Magnesium anode	5	Water temperature sensor 1
6	Water temperature sensor 2	7	Electric heater	8	Water temperature sensor 3	9	Excess pressure valve	10	Water drain
11	Manual ball valve	12	Expansion tank	13	Y-type filter	14	Water filling valve	15	Air vent valve
16	Safety valve	17	Shut-off valve	18	Water pump	19	Radiator	20	Underfloor heating loop

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