



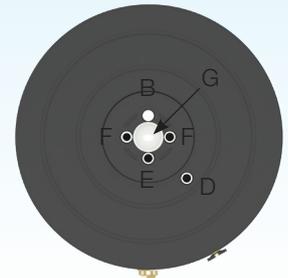
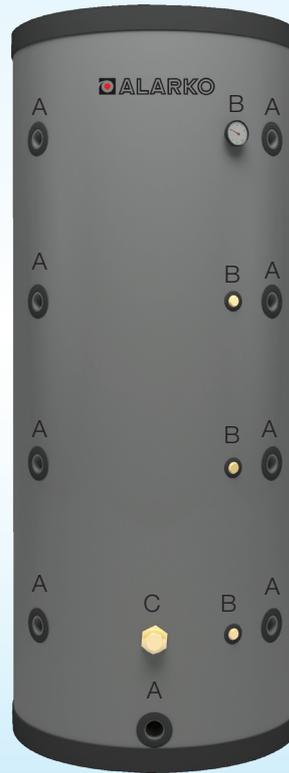
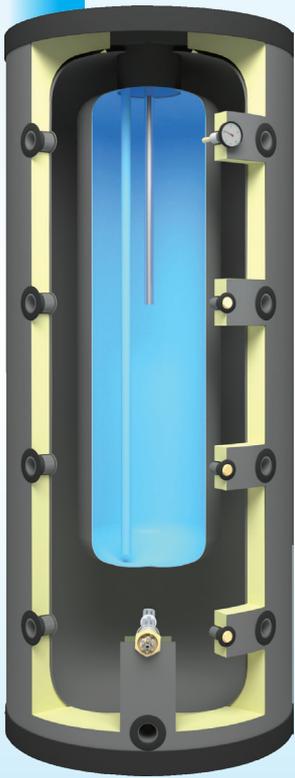
Combi Storage Tank Buffer Tank





COMBI TANK

Combi tank both stores hot water from a heating source such as a boiler or heat pump and obtains hot water to be supplied to showers and taps, combining these functions in a single device. Waters collected in inner and outer tanks do not mix but heat is transferred between them. Thus, they back up each other in terms of thermal energy.



Rigid polyurethane foam tank heat loss ~ 1°C/24 hours

Soft polyurethane foam tank heat loss ~ 4- 6°C/24 hours

		AKB	AKB	AKB	AKB	AKB	AKB	AKB	AKB	
		500/100	500/160	800/160	1000/160	1000/200	1500/200	1500/350	2000/200	2000/350
Outer tank volume	liters	500		800	1000		1500		2000	
Inner tank volume	liters	100	160	160	160	200	200	350	200	350
Total tank volume	liters	600	660	960	1160	1200	1700	1850	2200	2350
Outer tank diameter	mm	750	750	900	1000	1000	1120	1120	1260	1260
Height	mm	1850	1850	2140	2070	2110	2340	2340	2270	2270
Roll-over dimension	mm	2000	2000	2325	2300	2340	2600	2600	2600	2600
Energy inlet-outlet connections, A	inch	1 ¼"					1 ½"			
Thermometer and sensor connections, B	inch						½"			
Electric heater connection, C	inch						1 ½"			
Outer tank air intake connection, D	inch						½"			
Inner tank air intake connection, E	inch						½"			
Domestic water inlet-outlet connections, F	inch	¾"						1"		
Magnesium anode connection, G	inch	1 ¼"								
Gross weight	kg	246	261	386	392	407	570	590	645	665
Insulation type and thickness (1)		PU/50				SP/80				
Outer sheath coating (2)		PK				VD				

* Inner body design pressure is 8 bar and test pressure is 15 bar, outer body design pressure is 3 bar and test pressure is 4.5 bar.

* Maximum use temperature is 95°C.

* Surfaces in contact with domestic water are enameled according to DIN 4753-3 standard.

* Tank main body outer surface has corrosion protection. Inner surface is S235JR black steel sheet.

* For cathodic protection magnesium anode that complies with DIN 4753-3 standard is used.

* Insulation complies with EN 15332 energy efficiency standard.

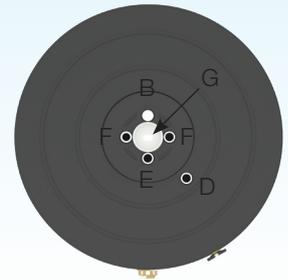
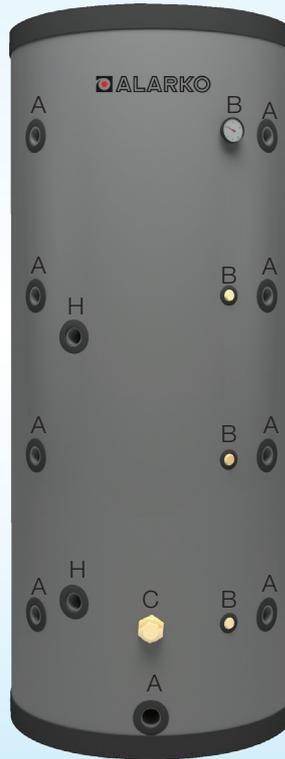
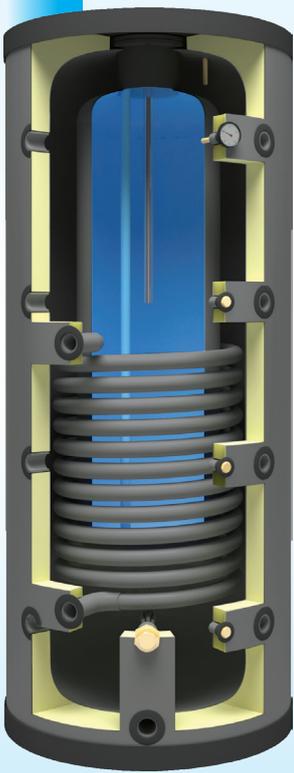
(1) PU/50: Soft PU foam with 42 kg/m³ density and 50 mm thickness, SP/80: Soft PU foam with 15 kg/m³ density and 80 mm thickness

(2) PK: Polyethylene coating, (2) VD: Vinlex leather



COILED COMBI TANK

It is the combi tank type with a coil inside. They ensure that solar energy also supports the combi tank. The connection is made to the coil. Thus, water circulating through the solar energy system and containing special additives is not mixed with waters of other heating sources.



Rigid polyurethane foam tank heat loss ~ 1°C/24 hours

Soft polyurethane foam tank heat loss ~ 4- 6°C/24 hours

		AKB-S	AKB-S	AKB-S	AKB-S	AKB-S	AKB-S	AKB-S	AKB-S		
		500/100	500/160	800/160	1000/160	1000/200	1500/200	1500/350	2000/200	2000/350	
Outer tank volume	liters	500		800	1000		1500		2000		
Inner tank volume	liters	100	160	160	160	200	200	350	200	350	
Total tank volume	liters	600	660	960	1160	1200	1700	1850	2200	2350	
Outer tank diameter	mm	750	750	900	1000	1000	1120	1120	1260	1260	
Height	mm	1850	1850	2140	2070	2110	2340	2340	2270	2270	
Roll-over dimension	mm	2000	2000	2325	2300	2340	2600	2600	2600	2600	
Energy inlet-outlet connections, A	inch	1 ¼"					1 ½"				
Thermometer and sensor connections, B	inch						½"				
Electric heater connection, C	inch						1 ½"				
Outer tank air intake connection, D	inch						½"				
Inner tank air intake connection, E	inch						½"				
Domestic water inlet-outlet connections, F	inch	¾"					1"				
Magnesium anode connection, G	inch						1 ¼"				
Coil inlet-outlet connections, H	inch						1 ¼"				
Gross weight	kg	246	261	386	392	407	570	590	645	665	
Insulation type and thickness (1)		PU/50				SP/80					
Outer sheath coating (2)		PK				VD					

* Design and test pressures are according to EN 12897. Inner body design and test pressure is 15 bar, outer body design pressure is 8 bar and test pressure is 15 bar, and coil design pressure is 18 bar and test pressure is 24 bar.

* Maximum use temperature is 95°C.

* Surfaces in contact with domestic water are enameled according to DIN 4753-3 standard.

* Tank main body outer surface has corrosion protection. Inner surface is S235JR black steel sheet.

* For cathodic protection magnesium anode that complies with DIN 4753-3 standard is used.

* Insulation complies with EN 15332 energy efficiency standard.

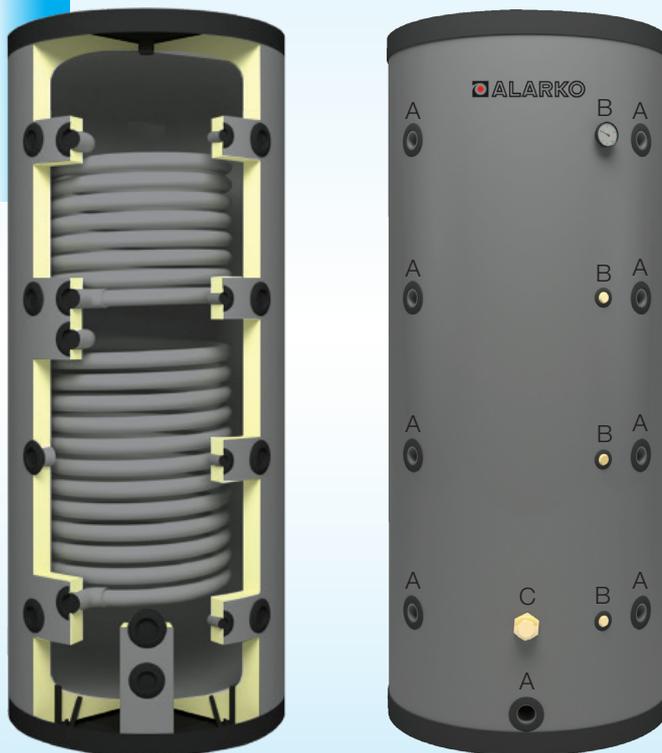
(1) PU/50: Soft PU foam with 42 kg/m³ density and 50 mm thickness, SP/80: Soft PU foam with 15 kg/m³ density and 80 mm thickness

(2) PK: Polyethylene coating, (2) VD: Vinlex leather



COILED BUFFER TANK

It is a pressure-resistant water tank with a high level of heat insulation. Many inlets and outlets on the tank help the user when designing their installation and during assembly.



Rigid polyurethane foam tank heat loss ~ 1°C/24 hours

Soft polyurethane foam tank heat loss ~ 4- 6°C/24 hours

- A solid fuel boiler or heat pump cannot respond to the instant heat demands of the heating installation. This need is met with hot water stored in a buffer tank.
- When more than one heat source is supplying the installation, it allows hot water to be collected in one volume without intermixing and distributed from here.

		SIDT	SIDT	SIDT	SIDT	SIDT	SIDT	SIDT	SIDT	SIDT	
		160	200	300	400	500	800	1000	1500	2000	
Volume	liters	160	200	300	400	500	800	1000	1500	2000	
Diameter	mm	590	590	700	750	750	900	1000	1120	1260	
Height	mm	1125	1320	1210	1450	1800	2100	2070	2300	2230	
Roll-over dimension	mm	1290	1466	1418	1652	1970	2305	2319	2578	2581	
Energy inlet-outlet connections, A	inch	1 ¼"					1 ½"				
Thermometer and sensor connections, B	inch	1 ½"									
Electric heater connection, C	inch	1 ½"					2"				
Gross weight	kg	95	112	132	170	223	290	318	417	640	
Insulation type and thickness (1)		PU/50					SP/80				
Outer sheath coating (2)		PK					VD				

* Design pressure is 3 bar, and test pressure is 4.5 bar. Design pressure is according to EN 13445, and test pressure is according to EN 12897.

* Maximum use temperature is 95°C.

* Outer surface has corrosion protection. Inner surface is S235JR (TS EN 10025) black steel sheet.

* Insulation complies with EN 15332 energy efficiency standard.

(1) PU/50: Water-based rigid PU foam (without HCFC) with 42 kg/m³ density.

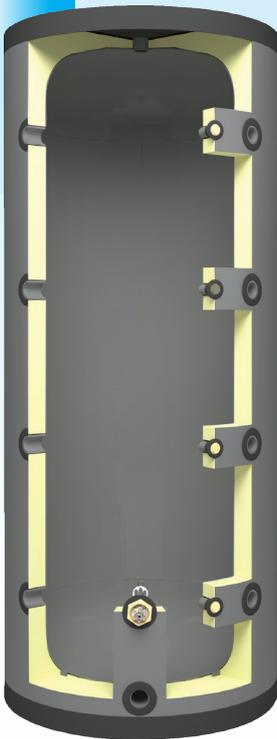
(1) SP/80: Soft PU foam with 15 kg/m³ density

(2) PK: Polyethylene coating

(2) VD: Vinlex leather

BUFFER TANK

It is a pressure-resistant water tank with a high level of heat insulation. Many inlets and outlets on the tank help the user when designing their installation and during assembly.



Rigid polyurethane foam tank heat loss ~ 1°C/24 hours
Soft polyurethane foam boiler heat loss ~ 4-6°C/24 hours

- A solid fuel boiler or heat pump cannot respond to the instant heat demands of the heating installation. This need is met with hot water stored in a buffer tank.
- When more than one heat source is supplying the installation, it allows hot water to be collected in one volume and distributed from here.
- In condensing systems the efficiency increases as the return water temperature decreases. This is achieved by taking the return water from the coldest area of the temperature layers formed inside the buffer tank.

		AIDT	AIDT	AIDT	AIDT	AIDT	AIDT	AIDT	AIDT	AIDT		
		100	160	200	300	400	500	800	1000	1500	2000	
Volume	liters	100	160	200	300	400	500	800	1000	1500	2000	
Diameter	mm	490	590	590	700	750	750	900	1000	1120	1260	
Height	mm	1080	1125	1320	1210	1450	1800	2100	2070	2300	2230	
Roll-over dimension	mm	1206	1290	1466	1418	1652	1970	2305	2319	2578	2581	
Energy inlet-outlet connections, A	inch	1"	1 ¼"					1 ½"				
Thermometer and sensor connections, B	inch	½"										
Electric heater connection, C	inch	1 ¼"										
Gross weight	kg	55	72	79	97	130	153	223	235	330	470	
Insulation type and thickness (1)		PU/50						SP/80				
Outer sheath coating (2)		PK						VD				

* Design pressure is 3 bar, and test pressure is 4.5 bar. Design pressure is according to EN 13445, and test pressure is according to EN 12897.

* Maximum use temperature is 95°C.

* Outer surface has corrosion protection. Inner surface is S235JR (TS EN 10025) black steel sheet.

* Insulation complies with EN 15332 energy efficiency standard.

(1) PU/50: Water-based rigid PU foam (without HCFC) with 42 kg/m³ density and 50 mm thickness.

(1) SP/80: Soft PU foam with 15 kg/m³ density and 80 mm thickness

(2) PK: Polyethylene coating

(2) VD: Vinlex leather

Water chemical properties for tank warranty terms

1. WATER QUALITY:

Properties for the water used in the tank

It must comply with the regulation on water intended for human consumption of the Turkish Republic Ministry of Health. (Regulation of 07/03/2013-28580)

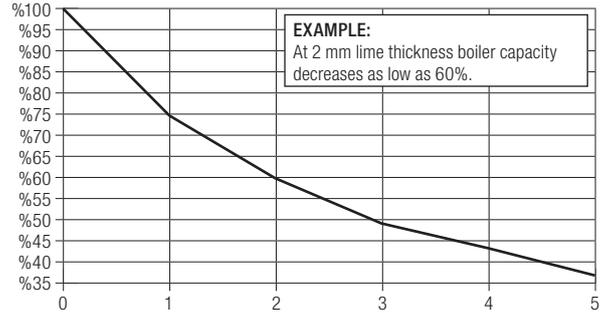
In summary, to minimize the corrosion damage, domestic water chemical properties should be within the limit values given in the adjacent table.

	Limit values
pH	6,5 - 9,5
Conductivity at 20°C	50 - 500 µS/cm
Total hardness	10 - 20 °Fr (*) (5,5 - 11 °dH, 100 - 200 ppm)
Chloride (Cl)	≤250 mg/l
Sulphate (SO ⁴²⁻)	≤250 mg/l
Hydrogen carbonate (HCO ³⁻)	70 - 300 mg/l
Free chlorine gas (Cl ²)	< 1 mg/l (in 5 hours)

* 1 French degree (°F) = 0,56 German degree (°dH) = 10 CaCO₃ (ppm)

Domestic water hardness values

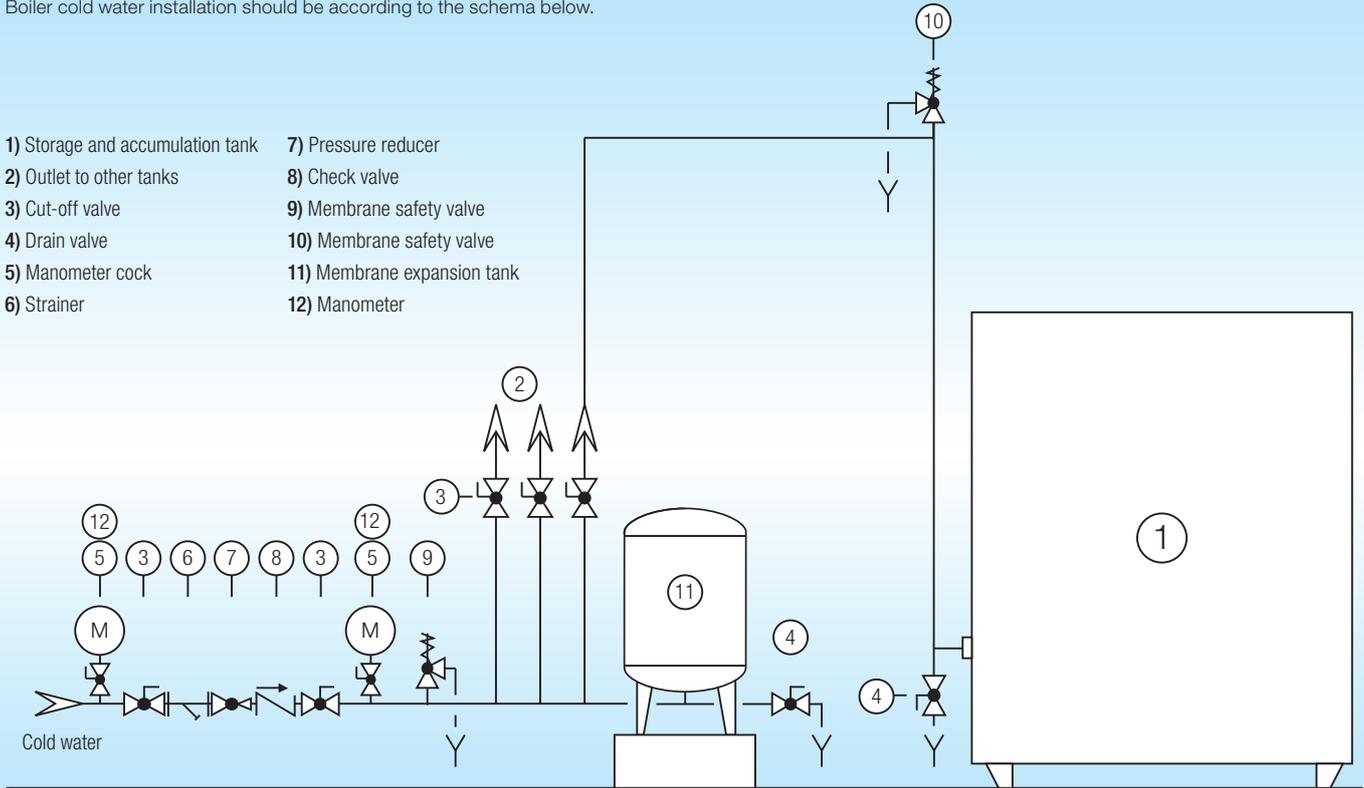
The maximum total hardness value allowed within the water is 10-20°F as given in the table above. On certain temperatures where the hot-cold balance of calcium (calcium carbonate CaCO₃), Magnesium (magnesium carbonate MgCO₃) minerals in water is disrupted, crystallization and therefore lime formation occurs. Lime formation on metal surfaces begins at a water temperature of about 25°C - 40°C depending on the Ca and Mg amount and increases at an equal rate as the temperature. In hot water applications, the negative effect of lime formation on heater surfaces on heat transfer and the capacity drop rates are given in the graph below.



2. ASSEMBLY:

Tank cold water supply system cold water installation schema and armatures (DIN1988)

Boiler cold water installation should be according to the schema below.



Manufacturer reserves the right to change any product specifications without notice.

ALARKO

Carrier

**ALARKO CARRIER
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