

1. DESCRIPTION
2. TECHNICAL FEATURES
3. SAFETY INSTRUCTIONS
4. MAINTENANCE



DESCRIPTION

The Optitank Email range of hot water tanks is specially designed for the preparation of DHW in a solar system. You can order tanks with 0, 1 or 2 exchangers, depending on your needs.

Advantages:

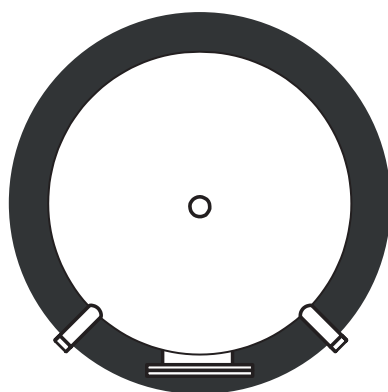
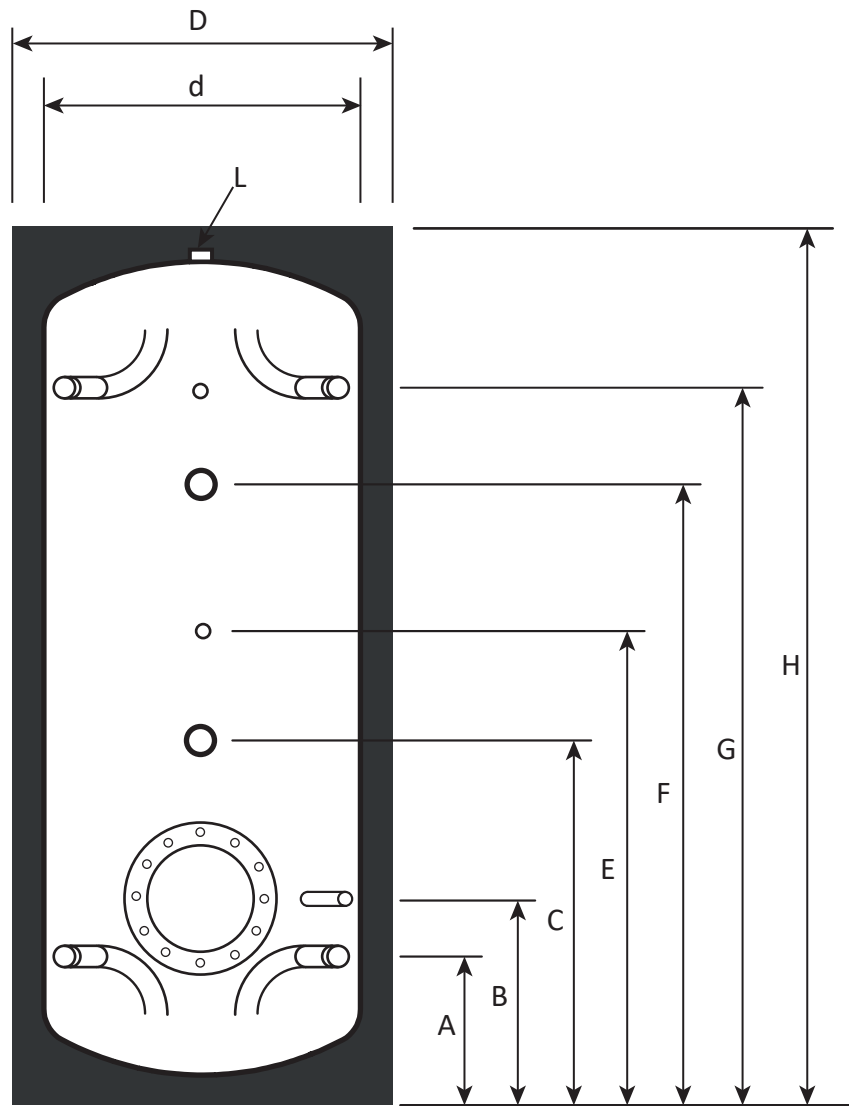
- Enamelled steel tank with corrosion protection by means of a magnesium anode.
- Reinforced CFC-free insulation (50mm for 200l, 300l, 400l and 500l and 100mm for more).
- Inspection hatch at the bottom for easy cleaning of the tank.
- Can be ordered with 0, 1 or 2 exchangers.
- Maximum storage temperature of 95°C allowing optimum use of the tank volume.
- Maximum operating pressure: 10 bar.



TECHNICAL FEATURES

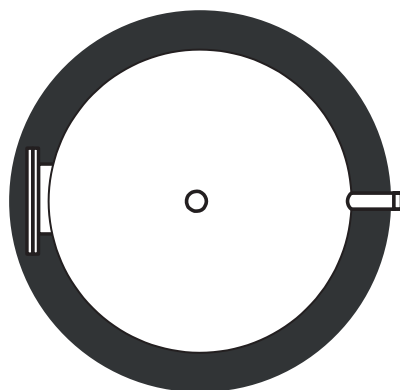
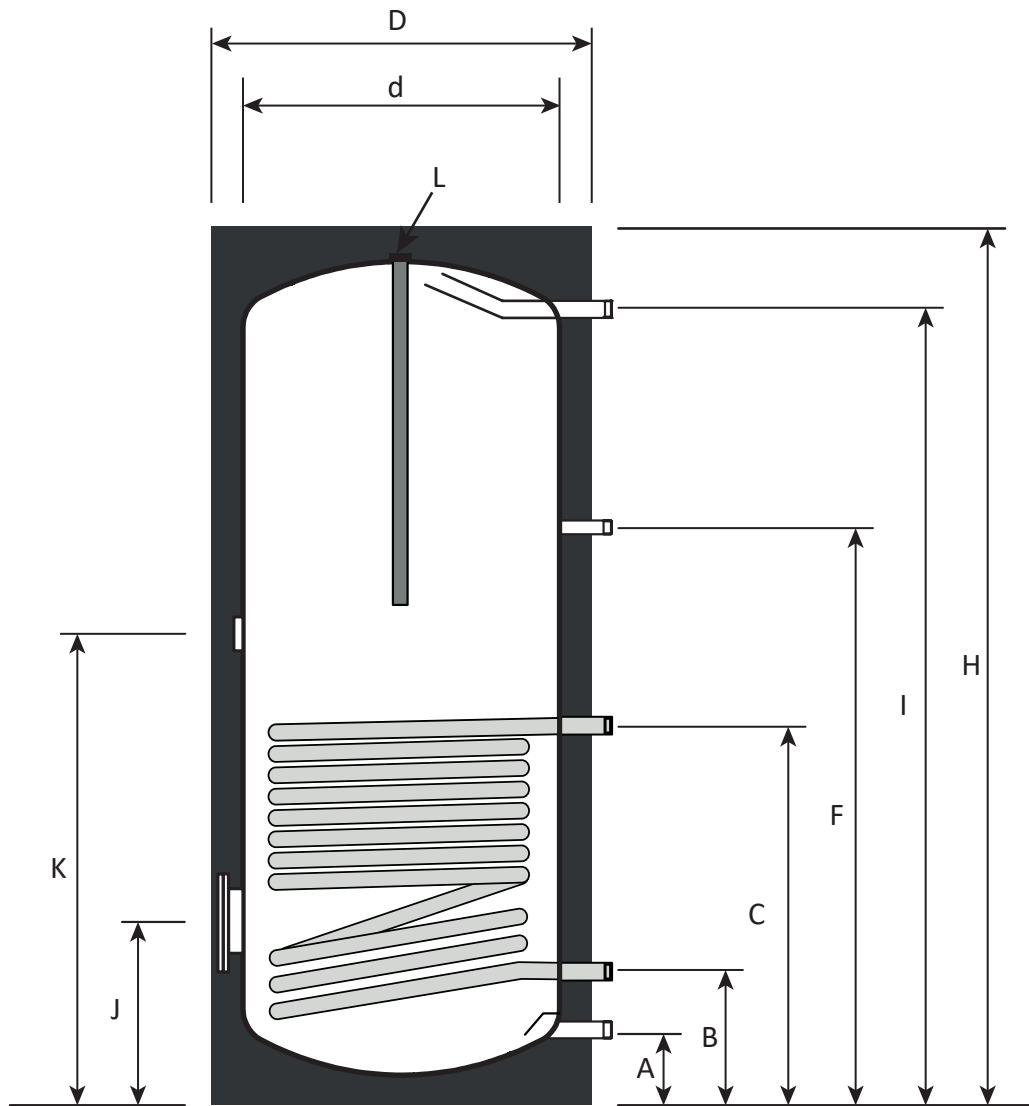
Optitank Email 0 exchanger

Optitank Email 0 exchanger		750 l	1.000 l	1.500 l	2.000 l
Item code		104.093	104.094	104.095	104.096
Height (in mm)	H	1.970	2.010	2.250	2.410
Tilting measure (in mm)		1.945	2.090	2.260	2.440
Diameter with insulation (in mm)	d	750	850	1.000	1.100
Diameter without insulation (in mm)	D	950	1.050	1.200	1.300
Removable insulation		Yes	Yes	Yes	Yes
Max. operating pressure (in bar)		10	10	10	10
PU foam insulation (in mm)		100	100	100	100
R factor (in m ² .K/W)		2,44	2,44	2,44	2,44
Max. operating temperature (in °C)		95	95	95	95
Tare weight (in kg)		225	305	390	485
2 tappings - Ø	A	5/4"M	5/4"M	2"M	2"M
Height (mm)		265	285	340	365
Mg anode tapping - Ø	C	5/4"F	5/4"F	5/4"F	5/4"F
Height (mm)		620	640	654	670
Mg anode tapping - Ø	F	5/4"F	5/4"F	5/4"F	5/4"F
Height (mm)		1.500	1.470	1.760	1.905
2 tappings - Ø	G	5/4"M	5/4"M	2"M	2"M
Height (mm)		1.600	1.570	1.860	2.005
Access hatch - Ø	B	DN200	DN200	DN200	DN200
Drain tapping	L	3/4"F	3/4"F	3/4"F	3/4"F
3 tappings for T°C sensor - Ø		3/4"F	3/4"F	3/4"F	3/4"F
Height (mm)	B	370	390	445	470
Height (mm)	E	950	920	1.100	1.185
Height (mm)	G	1.600	1.570	1.860	2.005



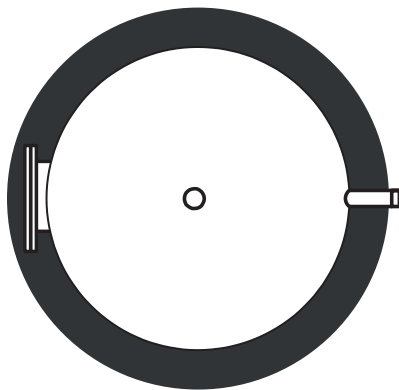
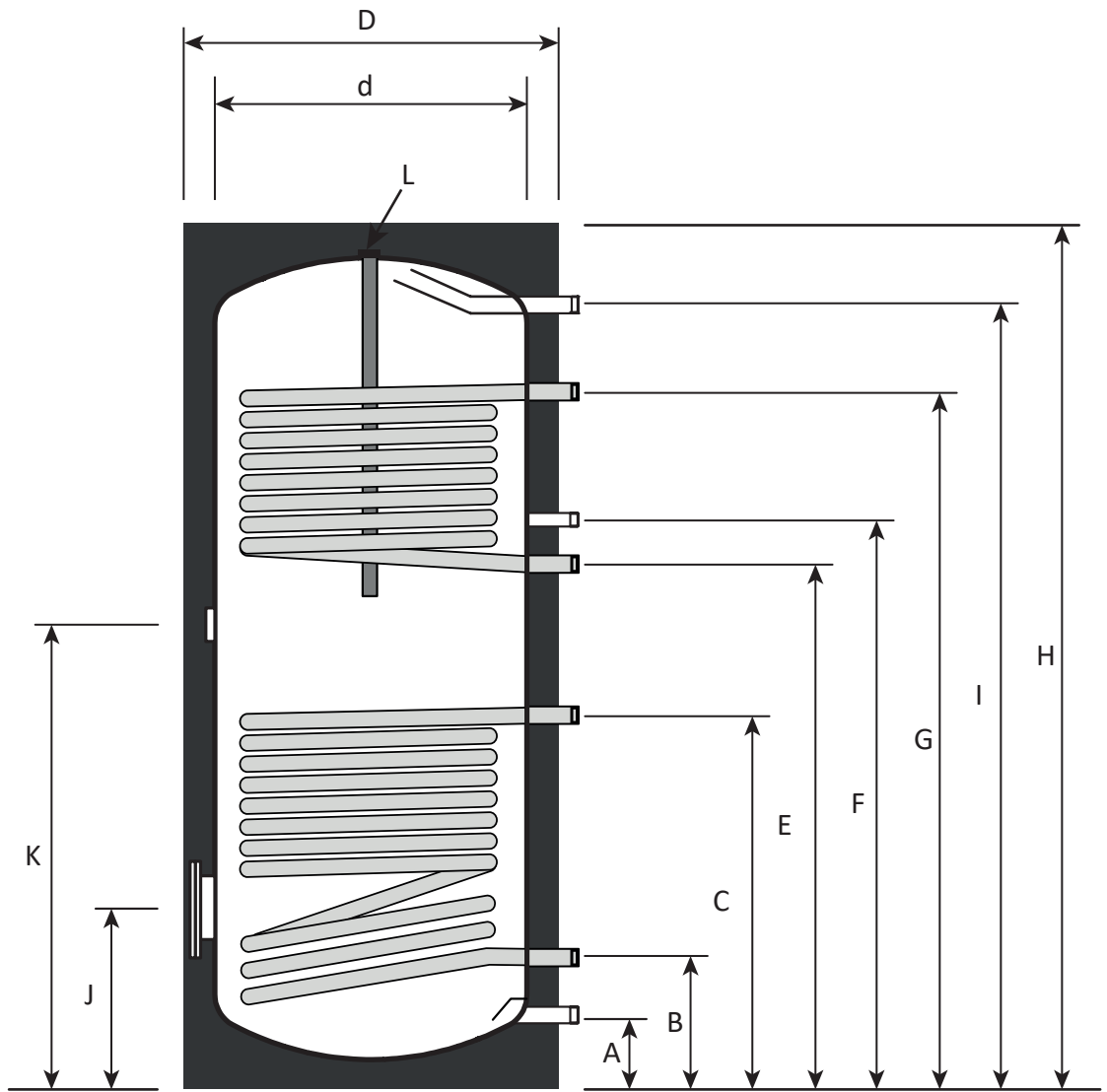
Optitank Email 1 exchanger

Optitank Email 1 exchanger		200 l	300 l	400 l	500 l	750 l	1.000 l	1.500 l	2.000 l
Item code		104.159	104.128	104.130	104.097	104.098	104.099	104.100	104.101
Height (in mm)	H	1.232	1.697	1.660	1.783	2.082	2.010	2.250	2.410
Tilting measure (in mm)		1.370	1.800	1.750	1.970	2.050	2.020	2.260	2.440
Diameter with insulation (in mm)	d	500	500	600	650	750	900	1.000	1.100
Diameter without insulation (in mm)	D	600	600	700	750	950	1.100	1.200	1.300
Removable insulation		Non	Non	Non	Non	Oui	Oui	Oui	Oui
Max. operating pressure (in bar)		10	10	10	10	10	10	10	10
PU foam insulation (in mm)		Rigid, non-removable 50 mm				Flexible, removable 100 mm			
R factor (in m ² .K/W)		NC				2,44			
Max. operating temperature (in °C)		95	95	95	95	95	95	95	95
Tare weight (in kg)		73	94	151	195	344	400	495	590
DHW tapping - Ø	I	On top of the tank 1" M				1"1/2 M	1"1/2 M	2" M	2" M
Height (mm)						1.855	1.760	1.860	2.005
Cold water tapping - Ø	A	1" M	1" M	1" M	1" M	1"1/2 M	1"1/2 M	2" M	2" M
Height (mm)		110	110	127	128	157	180	230	255
Sanitary loop tapping - Ø	F	3/4" M	3/4" M	3/4" M	3/4" M	3/4" M	3/4" M	1" M	1" M
Height (mm)		780	1.045	1.065	1.125	1.227	1.197	1.425	1.450
Access hatch - Ø	J	DN110	DN110	DN110	DN110	DN200	DN200	DN200	DN200
Immersion heater tapping - Ø	K	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F
Height (mm)		800	770	770	920	1.032	1.012	1.200	1.225
Solar exchanger									
Surface (in m ²)		0,9	1,2	1,5	1,8	2,7	2,9	4	4
Max. operating pressure (in bar)		25	25	25	25	25	25	25	25
Max. operating temperature (in °C)		160	160	160	160	160	160	160	160
Volume (liters)		5,7	7,5	9,4	11,3	22,8	24,5	34	34
Solar outflow - Ø	C	3/4" M	3/4" M	3/4" M	3/4" M	1"1/4 M	1"1/4 M	1"1/2 M	1"1/2 M
Height (mm)		630	580	635	685	967	947	1.125	1.150
Solar return - Ø	B	3/4" M	3/4" M	3/4" M	3/4" M	1"1/4 M	1"1/4 M	1"1/2 M	1"1/2 M
Height (mm)		180	180	205	205	280	320	375	400
Power according to DIN4708 (10°/80°/45°) (in KW)		28,9	39,48	48,02	56,98	101	109	122	122
Continuous filling according to DIN 4708 (10°-80°-60°) (l/h)		710	970	1.180	1.400	2.470	2.690	2.990	2.990



Optitank Email 2 exchangers

Optitank Email 2 exchangers		200 l	300 l	400 l	500 l	750 l	1.000 l	1.500 l	2.000 l
Item code		104.160	104.129	104.131	104.102	104.103	104.104	104.105	104.106
Height (in mm)	H	1.232	1.697	1.660	1.783	2.082	2.010	2.250	2.410
Tilting measure (in mm)		1.370	1.800	1.750	1.970	2.050	2.020	2.260	2.440
Diameter with insulation (in mm)	d	500	500	600	650	750	900	1.000	1.100
Diameter without insulation (in mm)	D	600	600	700	750	950	1.100	1.200	1.300
Removable insulation		Non	Non	Non	Non	Oui	Oui	Oui	Oui
Max. operating pressure (in bar)		10	10	10	10	10	10	10	10
PU foam insulation (in mm)		Rigid, non-removable 50 mm				Flexible, removable 100 mm			
R factor (in m ² .K/W)		NC				2,44			
Max. operating temperature (in °C)		95	95	95	95	95	95	95	95
Tare weight (in kg)		85	94	151	195	344	400	495	590
DHW tapping - Ø	I	On top of the tank 1" M				1"1/2 M	1"1/2 M	2" M	2" M
Height (mm)						1.855	1.760	1.860	2.005
Cold water tapping - Ø	A	1" M	1" M	1" M	1" M	1"1/2 M	1"1/2 M	2" M	2" M
Height (mm)		110	110	127	128	157	180	230	255
Sanitary loop tapping - Ø	F	3/4" M	3/4" M	3/4" M	3/4" M	3/4" M	3/4" M	1" M	1" M
Height (mm)		880	1.045	1.065	1.125	1.227	1.197	1.425	1.450
Access hatch - Ø	J	DN110	DN110	DN110	DN110	DN200	DN200	DN200	DN200
Immersion heater tapping - Ø	K	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F	1"1/2 F
Height (mm)		705	770	770	920	1.032	1.012	1.200	1.225
Solar exchanger									
Surface (in m ²)		0,8	1,2	1,5	1,8	2,7	2,9	4	4
Max. operating pressure (in bar)		25	25	25	25	25	25	25	25
Max. operating temperature (in °C)		160	160	160	160	160	160	160	160
Volume (liters)		5	7,5	9,4	11,3	22,8	24,5	34	34
Solar outflow - Ø	C	3/4" M	3/4" M	3/4" M	3/4" M	1"1/4 M	1"1/4 M	1"1/2 M	1"1/2 M
Height (mm)		630	580	635	685	967	947	1.125	1.150
Solar return - Ø	B	3/4" M	3/4" M	3/4" M	3/4" M	1"1/4 M	1"1/4 M	1"1/2 M	1"1/2 M
Height (mm)		180	180	205	205	280	320	375	400
Power according to DIN4708 (10°/80°/45°) (in KW)		28,9	39,48	48,02	56,98	101	109	122	122
Continuous filling according to DIN 4708 (10°-80°-60°) (l/h)		710	970	1.180	1.400	2.470	2.690	2.990	2.990
Boiler exchanger									
Surface (in m ²)		0,6	0,8	1	1,2	1,9	1,9	2	2
Max. operating pressure (in bar)		25	25	25	25	25	25	25	25
Max. operating temperature (in °C)		160	160	160	160	160	160	160	160
Volume (liters)		3,8	5	6,3	7,5	16	16	17	17
Boiler outflow - Ø	E	3/4" M	3/4" M	3/4" M	3/4" M	1"1/4 M	1"1/4 M	1"1/2 M	1"1/2 M
Height (mm)		630	580	635	685	1.127	1.097	1.275	1.300
Boiler return - Ø	G	3/4" M	3/4" M	3/4" M	3/4" M	1"1/4 M	1"1/4 M	1"1/2 M	1"1/2 M
Height (mm)		990	1.215	1.261	1.325	1.567	1.482	1.650	1.675
Power according to DIN4708 (10°/80°/45°) (in KW)		16,7	25	29	34	50	50	52	52
Continuous filling according to DIN 4708 (10°-80°-60°) (l/h)		410	605	720	830	1.220	1.220	1.280	1.280



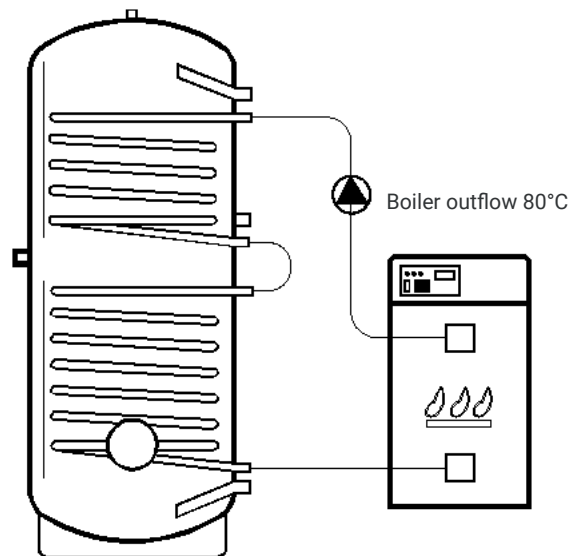
Filling flows

Filling flows

The following data was obtained according to EN DIN 4708. The boiler flow is considered at 80°C and the cold water from the network at 10°C. The boiler connection is made as shown in the diagram, using the two storage coils connected in series.

The following table shows the flow rates for an Optitank Email with 2 exchangers:

Optitank Email 2 exchanger		750 l	1.000 l	1.500 l	2.000 l
Peak flow at 40°C	[l/10']	788	1.051	1.576	2.102
Peak flow at 45°C	[l/10']	665	890	1.335	1.780
Peak flow at 60°C	[l/10']	402	545	817	1.090
Peak flow 1st hour at 40°C	[l/60']	2.540	2.775	3.598	3.876
Peak flow 1st hour at 45°C	[l/60']	2.095	2.295	2.992	3.235
Peak flow 1st hour at 60°C	[l/60']	1.207	1.330	1.740	1.898
Continuous flow at 40°C	[l/60']	2.139	2.232	2.790	2.790
Continuous flow at 45°C	[l/60']	1.734	1.810	2.265	2.265
Continuous flow at 60°C	[l/60']	972	1.015	1.268	1.268
NI number (according to DIN4708)	-	24	27	32	38



SAFETY INSTRUCTIONS

Transport and warehousing

- The tanks must remain on the pallet in their original position during transport. Any alteration of the packaging during transport will invalidate the guarantee on the tank.
- The tanks must be transported in a vehicle that provides optimum protection against the weather and impact.

Manipulation and storage:

- When receiving the products, please handle them with care.
- Avoid shocks when handling the tanks to prevent damage to the welded joints of the heat exchangers.
- The packaging must not be removed until the tank is finally installed. Before this step, please keep all products in their original packaging.
- When storing the products, choose a dry, dust-free room, protected from frost and weather.

Installer qualification

The installation and commissioning of an Optitank storage tank must be carried out by a qualified professional installer approved by Sunoptimo. Please note that the warranty is only valid if a qualified installer has carried out the installation and regular maintenance of the tank.

Local standards and guidelines

- The installation must comply with the European, national and local regulations in force at the time of commissioning.
- Please refer to the instructions of the manufacturer of the backup system for its connection to the storage tank.
- Please follow the guidelines of the local water supplier as well as the European guidelines for the prevention of legionella.

Please comply with the following standards:

- DIN 4753: Hot water tanks and hot water preparation systems
- DIN 1988: Technical regulations for drinking water systems
- DVGW 551/552: Technical guidelines for the prevention of legionella in the heating and transport of water
- EN 12977-3: Solar thermal systems and components. Performance test of the DHW storage tank for solar systems.

For France: Decrees of 23 June 1978 and 30 November 2005

concerning fixed installations for heating and domestic hot water supply in residential buildings, workplaces or premises open to the public.

Safety devices

- Sanitary tanks must be protected against the risk of damage caused by excess pressure in the drinking water supply system. Please ensure that a safety valve limiting the mains pressure to 7 bar at the storage tank is installed before commissioning.
- Please check the function of this valve regularly. The outlet of the valve must never be blocked or reduced.
- If necessary, install a particle filter in the cold water supply to the tank.
- If the water hardness is less than 12°f, a softener must be installed to protect the system against the risk of limescale deposits.
- To avoid any difficulties during commissioning and during the life of the installation, do not forget to install a drain valve at the high point at the outlet of the tank.
- When using a solar system, install a thermostatic mixing valve at the outlet of the tank to prevent the risk of burn. On a hot day, the tank may reach temperatures of over 90°C. It is therefore mandatory to install a mixing valve to limit the distribution temperature to between 40 and 55°C.

MAINTENANCE

We recommend regular maintenance of the solar system. Check the following once every two years:

1- **The safety valve** on the cold water inlet of the storage tank: activate the valve and check that the water flows properly.

2- **Scaling of the tank and the electric resistance:** isolate the tank, drain it (at least by half), loosen the inspection door and check the condition of the resistance and the inside of the tank.

The limescale deposited at the bottom of the tank must be removed. The electric resistance can be descaled with a solution of vinegar or other specific products.

To close the door, use a torque spanner according to the instructions on the sticker.



You can find this data sheet and all our other documents on our website www.sunoptimo.com