

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



DESCRIPTION

The Optitank Steel buffer tank range is specially designed for the storage of dead water energy in a solar system. You can order storage tanks with 1, 2 or no heat exchanger, depending on your needs.

Advantages :

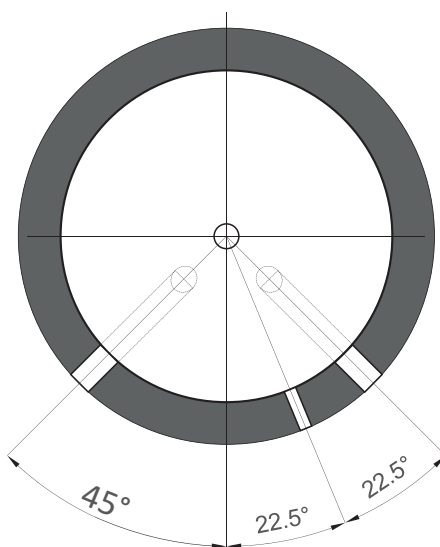
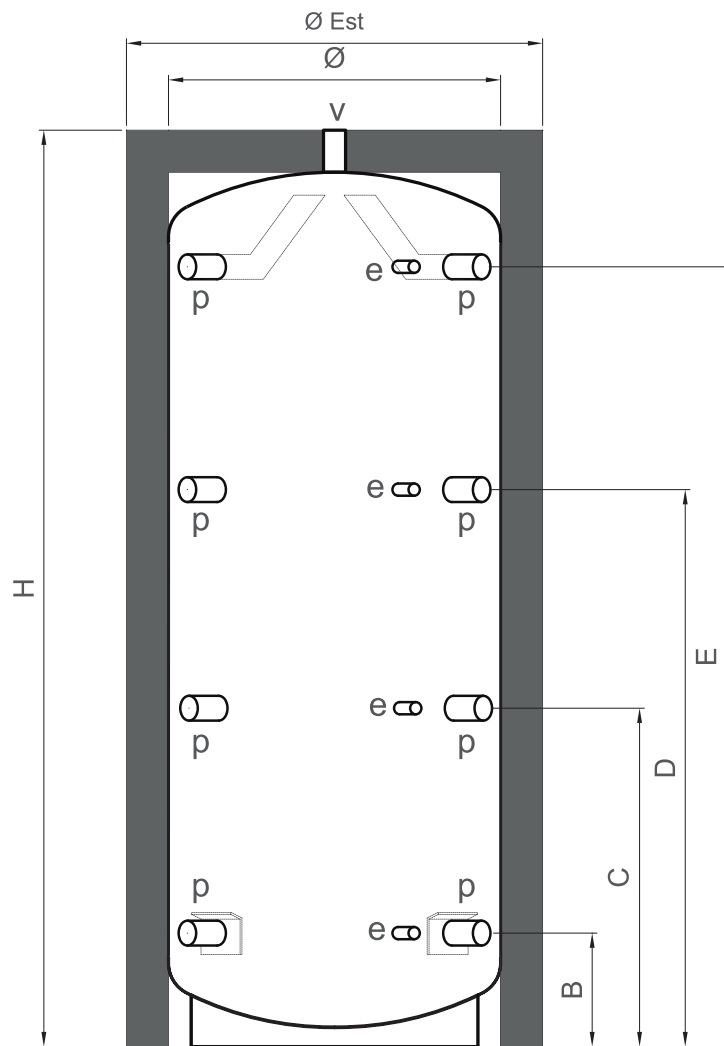
- Closed circuit energy storage to prevent the proliferation of legionella.
- CFC-free reinforced insulation (50 mm up to 800 l and 100 mm beyond).
- Optitank Steel can be ordered in three versions: 0, 1 or 2 exchangers.
- Maximum storage temperature of 95°C allows optimal use of the tank volume at high temperatures.
- Maximum operating pressure: 4 bar.
- Possibility to connect several tanks in parallel or in series.
- 8 connections distributed over the height of the tanks for optimal stratification.
- 4-level thermowells for direct temperature reading or data acquisition at different stratification levels.
- Removable grey cover (from 800l).



TECHNICAL FEATURES

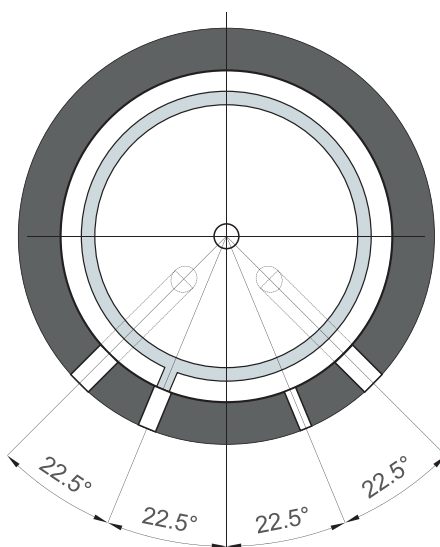
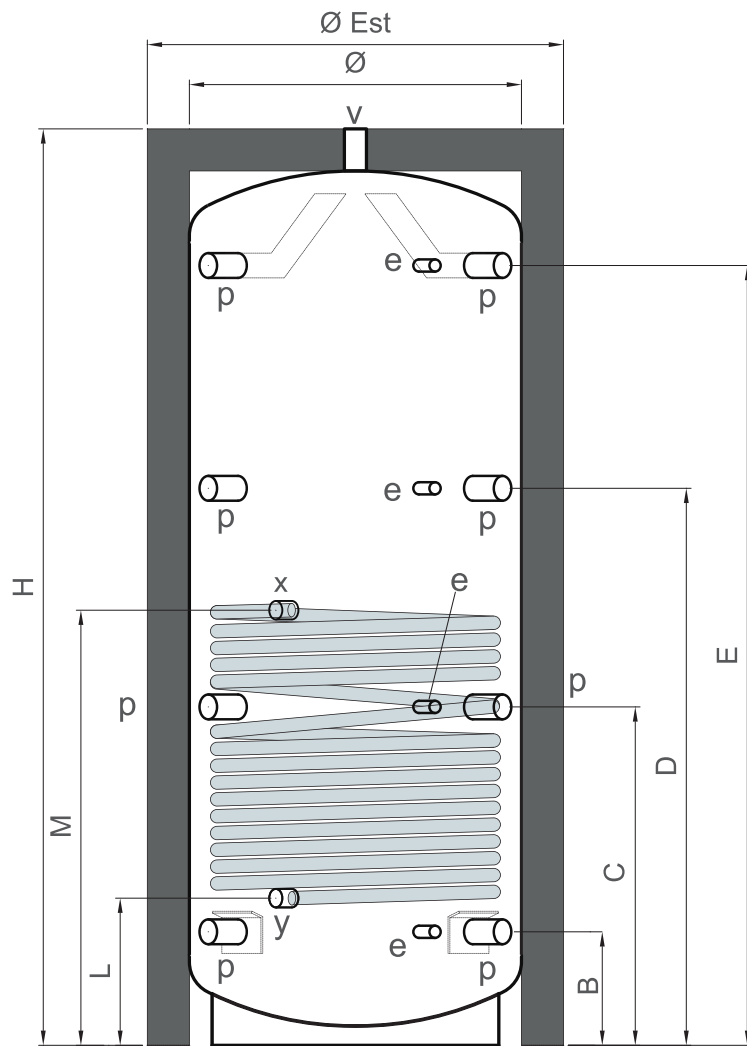
Optitank Steel 0 exchanger

Optitank Steel 0 exchanger		500 l	800 l	1.000 l	1.250 l	1.500l	2.000 l	2.500 l	3.000 l	4.000 l	5.000 l
Item code		104.000	104.001	104.002	104.003	104.004	104.005	104.006	104.007	104.008	104.009
Height (mm)	H	1.650	1.730	2.080	2.095	2.135	2.350	2.495	2.710	2.820	2.850
Tilting measure (mm)		1.820	1.790	2.120	2.160	2.210	2.420	2.580	2.800	2.920	2.970
Diameter without insulation (mm)	Ø Est	650	790	790	950	1.000	1.100	1.200	1.250	1.400	1.600
Diameter with insulation (mm)	Ø	750	990	990	1.150	1.200	1.300	1.400	1.450	1.600	1.800
Removable insulation		No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. operating pressure (bar)		4	4	4	4	4	4	4	4	4	4
Soft PU foam insulation (mm)		50	100	100	100	100	100	100	100	100	100
Max. operating temperature (°C)		95	95	95	95	95	95	95	95	95	95
Tare weight (kg)		143	186	231	265	288	386	420	475	653	757
Tapping - size	v	1"1/4	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	2"	2"	2"	2"
Tapping - size	p	1"1/4	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	2"	2"	2"	2"
Height (mm)	B	260	270	270	340	360	365	400	410	470	475
Height (mm)	C	640	650	810	800	785	925	945	1.020	1.085	1.085
Height (mm)	D	1.015	1.025	1.325	1.265	1.285	1.495	1.490	1.635	1.695	1.700
Height (mm)	E	1.395	1.405	1.855	1.725	1.745	2.050	2.035	2.245	2.310	2.310
Tapping for sensor- size	e	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Height (mm)	B	260	270	270	340	360	365	400	410	470	475
Height (mm)	C	640	650	810	800	785	925	945	1.020	1.085	1.085
Height (mm)	D	1.015	1.025	1.325	1.265	1.285	1.495	1.490	1.635	1.695	1.700
Height (mm)	E	1.395	1.405	1.855	1.725	1.745	2.050	2.035	2.245	2.310	2.310



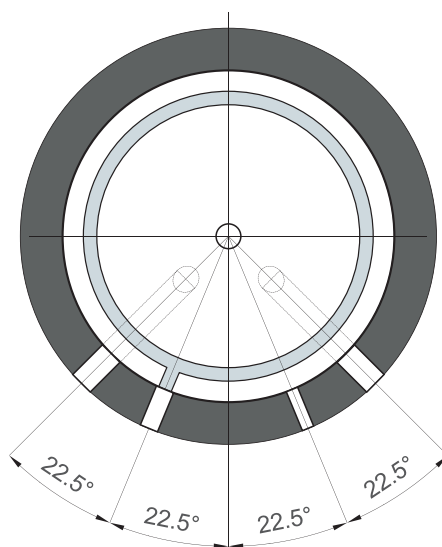
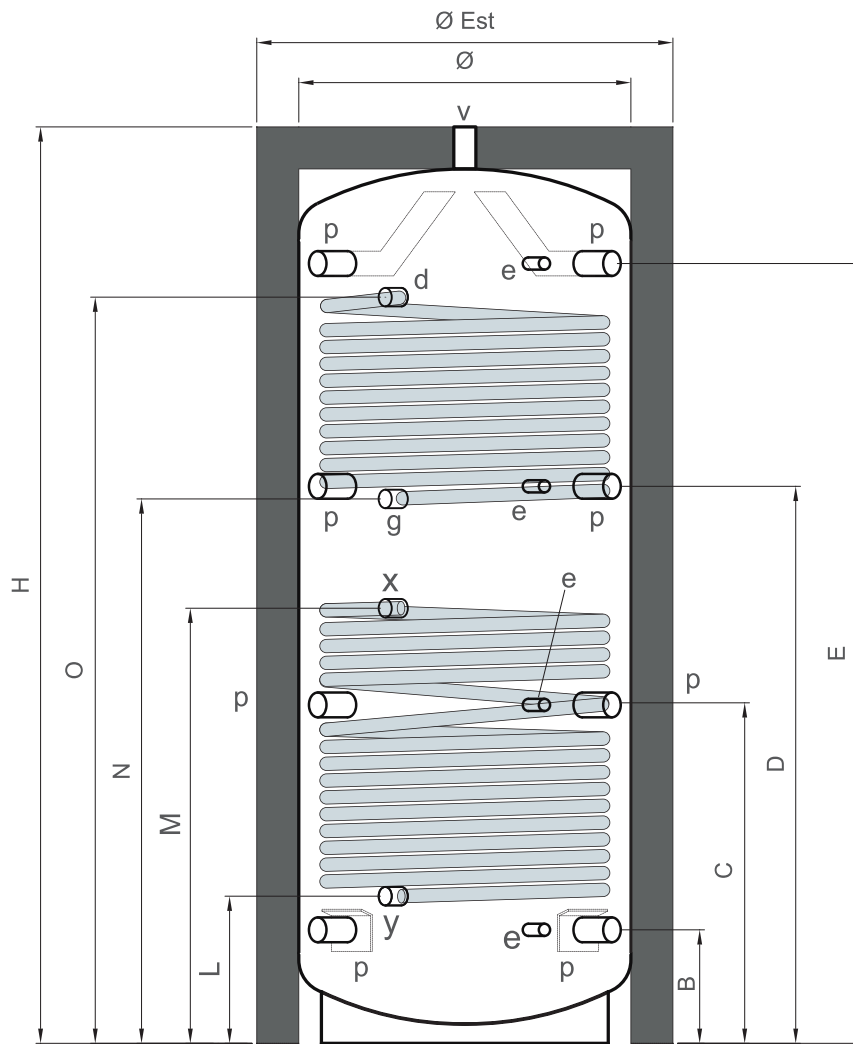
Optitank Steel 1 exchanger

Optitank Steel 1 exchanger		500 l	800 l	1.000 l	1.250 l	1.500l	2.000 l	2.500 l	3.000 l	4.000 l	5.000 l
Item code		104.010	104.011	104.012	104.013	104.014	104.015	104.016	104.017	104.018	104.019
Height (mm)	H	1.650	1.730	2.080	2.095	2.135	2.350	2.495	2.710	2.820	2.850
Tilting measure (mm)		1.820	1.790	2.120	2.160	2.210	2.420	2.580	2.800	2.920	2.970
Diameter with insulation (mm)	Ø Est	750	990	990	1.150	1.200	1.300	1.400	1.450	1.600	1.800
Diameter without insulation (mm)	Ø	650	790	790	950	1.000	1.100	1.200	1.250	1.400	1.600
Removable insulation		No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. operating pressure (bar)		4	4	4	4	4	4	4	4	4	4
Soft PU foam insulation (mm)		50	100	100	100	100	100	100	100	100	100
Max. operating temperature (°C)		95	95	95	95	95	95	95	95	95	95
Tare weight (kg)		143	186	231	265	288	386	420	475	653	757
Tapping - size	v	1"1/4	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	2"	2"	2"	2"
Tapping - size	p	1"1/4	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	2"	2"	2"	2"
Height (mm)	B	260	270	270	340	360	365	400	410	410	475
Height (mm)	C	640	650	810	800	785	925	945	1.020	1.020	1.085
Height (mm)	D	1.015	1.025	1.325	1.265	1.285	1.495	1.490	1.635	1.635	1.700
Height (mm)	E	1.395	1.405	1.855	1.725	1.745	2.050	2.035	2.245	2.245	2.310
Tapping for sensor- size	e	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Height (mm)	B	260	270	270	340	360	365	400	410	470	475
Height (mm)	C	640	650	810	800	785	925	945	1.020	1.085	1.085
Height (mm)	D	1.015	1.025	1.325	1.265	1.285	1.495	1.490	1.635	1.695	1.700
Height (mm)	E	1.395	1.405	1.855	1.725	1.745	2.050	2.035	2.245	2.310	2.310
Solar exchanger											
Exchanger surface (in m²)		2	2,7	3,5	3,8	4,5	4,8	5	6	7	8
Max. operating pressure (in bar)		12	12	12	12	12	12	12	12	12	12
Solar outflow - size	x	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Height (mm)	M	860	870	1.035	1.020	1.100	1.085	1.080	1.210	1.270	1.275
Solar return - size	y	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Height (mm)	L	340	350	350	420	440	445	480	490	550	555



Optitank Steel 2 exchangers

Optitank Steel 2 exchangers		500 l	800 l	1.000 l	1.250 l	1.500l	2.000 l	2.500 l	3.000 l	4.000 l	5.000 l
Item code		104.020	104.021	104.022	104.023	104.024	104.025	104.026	104.027	104.028	104.029
Height (mm)	H	1.650	1.730	2.080	2.095	2.135	2.350	2.495	2.710	2.820	2.850
Tilting measure (mm)		1.820	1.790	2.120	2.160	2.210	2.420	2.580	2.800	2.920	2.970
Diameter with insulation (mm)	Ø Est	750	990	990	1.150	1.200	1.300	1.400	1.450	1.600	1.800
Diameter without insulation (mm)	Ø	650	790	790	950	1.000	1.100	1.200	1.250	1.400	1.600
Removable insulation		No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Max. operating pressure (bar)		4	4	4	4	4	4	4	4	4	4
Soft PU foam insulation (mm)		50	100	100	100	100	100	100	100	100	100
Max. operating temperature (°C)		95	95	95	95	95	95	95	95	95	95
Tare weight (kg)		143	186	231	265	288	386	420	475	653	757
Tapping - size	v	1"1/4	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	2"	2"	2"	2"
Tapping - size	p	1"1/4	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	2"	2"	2"	2"
Height (mm)	B	260	270	270	340	360	365	400	410	410	475
Height (mm)	C	640	650	810	800	785	925	945	1.020	1.020	1.085
Height (mm)	D	1.015	1.025	1.325	1.265	1.285	1.495	1.490	1.635	1.635	1.700
Height (mm)	E	1.395	1.405	1.855	1.725	1.745	2.050	2.035	2.245	2.245	2.310
Tapping for sensor- size	e	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Height (mm)	B	260	270	270	340	360	365	400	410	470	475
Height (mm)	C	640	650	810	800	785	925	945	1.020	1.085	1.085
Height (mm)	D	1.015	1.025	1.325	1.265	1.285	1.495	1.490	1.635	1.695	1.700
Height (mm)	E	1.395	1.405	1.855	1.725	1.745	2.050	2.035	2.245	2.310	2.310
Solar exchanger											
Exchanger surface (in m²)		2,00	2,70	3,50	3,80	4,50	4,80	5,00	6,00	7,00	8,00
Max. operating pressure (in bar)		12	12	12	12	12	12	12	12	12	12
Solar outflow - size	x	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Height (mm)	M	860	870	1.035	1.020	1.100	1.085	1.080	1.210	1.270	1.275
Solar return - size	y	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Height (mm)	L	340	350	350	420	440	445	480	490	550	555
Secondary exchanger											
Exchanger surface (in m²)		1,80	2,10	2,50	3,00	3,20	4,00	4,00	4,20	5,00	5,00
Max. operating pressure (in bar)		12	12	12	12	12	12	12	12	12	12
Boiler room outflow - size	g	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Height (mm)	N	960	975	1.295	1.205	1.265	1.495	1.555	1.765	1.790	1.830
Boiler room return - size	d	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Height (mm)	O	1.320	1.325	1.775	1.645	1.665	1.975	1.955	2.165	2.230	2.230



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.

Handling 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 in all respects with the European, national and local regulations in force at the time of commissioning.
- Please refer to the manufacturer's instructions for the connection of the auxiliary system to the storage tank.

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

- The storage tanks must be protected against damages caused by overpressure during heating. Make sure that a safety valve limits the pressure in the tank to 3 bar.
- Regularly check that the safety valve is working properly. The outlet of the valve must never be blocked or reduced.
- Provide a heating expansion vessel to absorb the expansion of the water volume in the tank. This vessel complements the existing vessels. The rule which determines the volume of the appropriate vessel is: 10 litres of capacity per litre of expansion vessel. However, you can make the calculation again to refine the size of the vessel.
- It must never be possible to isolate the expansion vessel from the tank. Do not install an isolation valve between the vessel and the buffer tank.
- 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 of the tank outlet.

MAINTENANCE

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

1- **The safety valve** of the storage tank: activate the valve and check that the water is flowing properly.

2- **Condition of the expansion tank:** Check the pressure of the tank. Deflate the tank very slightly and check that no water is coming out.

3- **Drain:** Check that the drain valve mounted on the top of the tank is working properly. If necessary, add water to the tank. Adjust the pressure according to the current temperature of the tank.



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