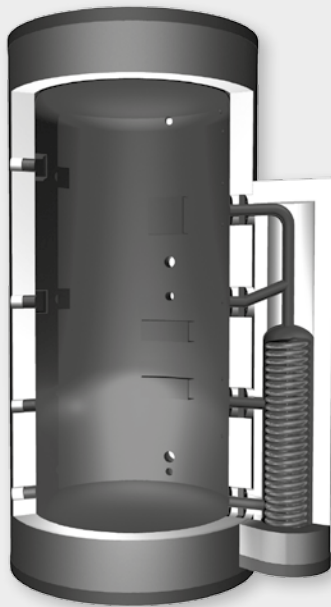


PRODUCT DESCRIPTION



Stratified tank Pro-Heat for heating systems

Multi-functional stratified tank system made of steel (S235JR) for heating applications and applications with freshwater stations for hygienic domestic hot water preparation. In combination with the spherical heat exchanger, with optimum stratified charging of the solar-energy without tank mixing, integrated inflow absorbers for optimum retention of the stratification and improvement of efficiency. Incl. 5 pre-mounted special immersion sleeves that can in each hold up to 3 sensors. From a volume of 1,500l with access flange DN 200, incl. blind flange plate. From a volume of 2,000l with larger heating connections. Can be expanded with backup tank PS. New model with feet and transport device for easier delivery, less thermal losses thanks to reduced sleeve lengths. ST-connection flanges are supplied with spherical exchangers. The spherical exchanger and the polyester fibre fleece insulation must be ordered separately (compare accessories).

Note: A fresh water station is required for optional service water treatment.

Area of use

For heating systems with a solar system for single-family and semi-detached houses or projects.

Product benefits

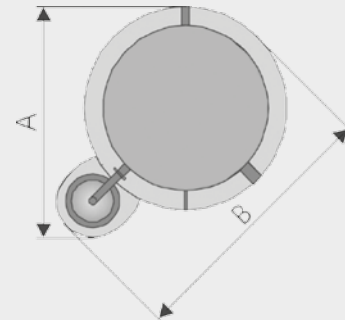
- Efficient use of solar energy using a natural principle for heating systems
- Simple functional concept without complicated technology or supplementary electrical energy (gravity circulation principle)
- Backup heating from all common systems possible
- Inflow absorbers prevent the layers in the tank from mixing – especially during heat pump operation
- 5 temperature measuring points (sensor pockets) for each of three temperature sensors on the tank
- Access flange DN 200 from 1500 litres
- Prepared for use with 2 electric screw-in heating elements (photovoltaic feed-in)

Standards, guidelines and regulations

- "Pressure Equipment Directive" 97/23/EC
- Sized according to guideline AD-2000
- Welding as per EN 287-1 and EN ISO 3834-2

SPECIFICATIONS

Max. operating temperature	110°C
Max. tank operating pressure:	3 bar
Boiler/heating connections	Rp 6/4" / Rp 2" (partially with inflow absorber)
Cylinder feed and drain cock connections	Rp 1/2"
Thermometer connection	Rp 1/2"



Specifications

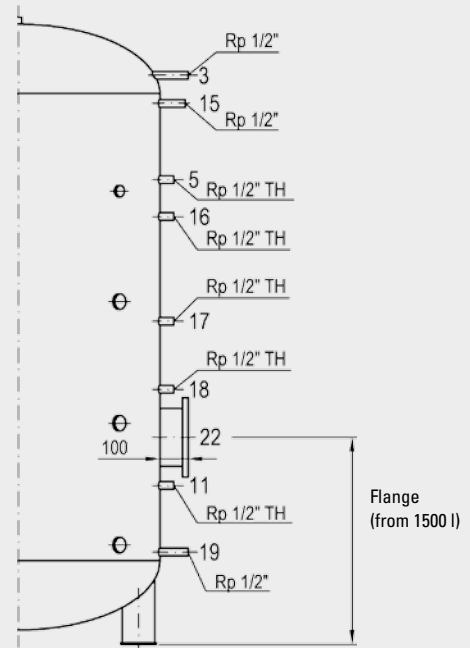
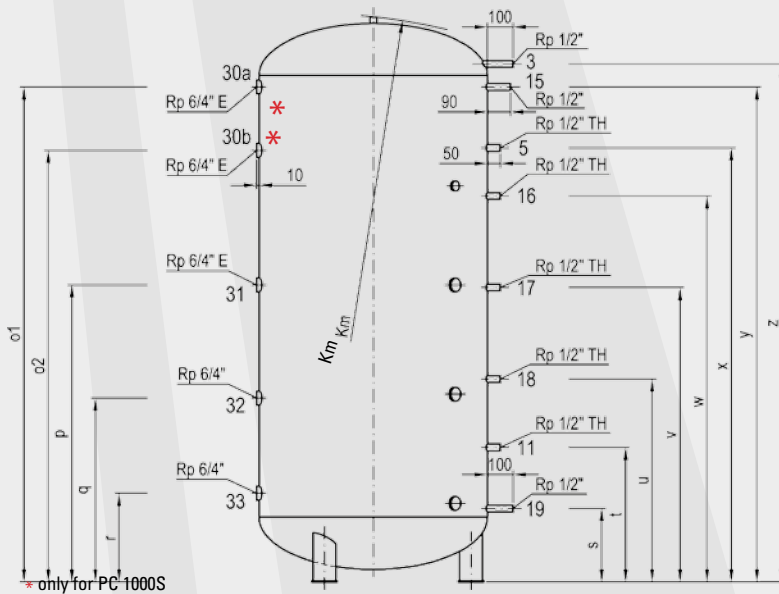
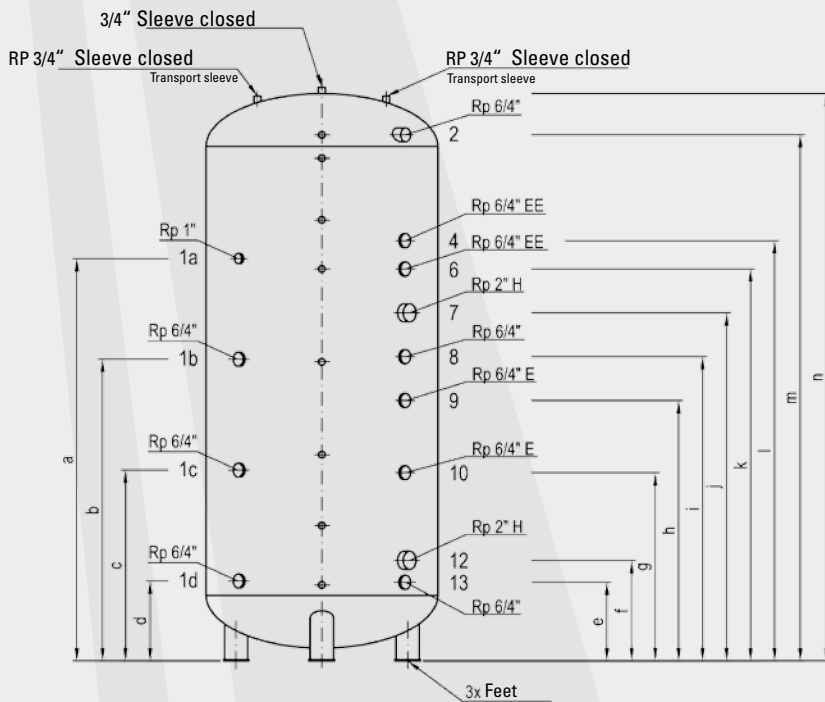
Type	PH 500	PH 800	PH 1000-B	PH 1000-S	PH 1250	PH 1500	PH 2000	PH 2500	PH 3000	PH 4000	PH 5000
Item no.	1611168	1611169	1611170	1611171	1611172	1611173	1611174	1611175	1611176	1611177	1611178
Nominal volume [l]	530	766	980	937	1260	1540	1930	2430	2910	3920	4950
Height without insulation [mm] ²	1760	1910	1950	2120	2200	2190	2280	2170	2645	2290	2800
Height with insulation [mm] ²	1860	2010	2050	2220	2300	2290	2380	2270	2770	2400	2910
Diameter without insulation [mm] ²	650	750	850	790	900	1000	1100	1300	1250	1600	1600
Diameter with insulation [mm] ²	850	950	1050	990	1100	1200	1300	1500	1470	1820	1820
Width A with insulation [mm] ²	1020	1105	1180	1140	1235	1320	1400	1600	1530	1830	1830
Width B with insulation [mm] ²	1175	1280	1380	1320	1440	1540	1640	1840	1790	2130	2130
Tilt height [mm] ²	1820	1950	1990	2160	2240	2235	2330	2335	2755	2555	3000
Weight [kg]	130	155	178	182	217	254	291	444	492	543	690

1) All size specifications have a tolerance range of +/- 3%

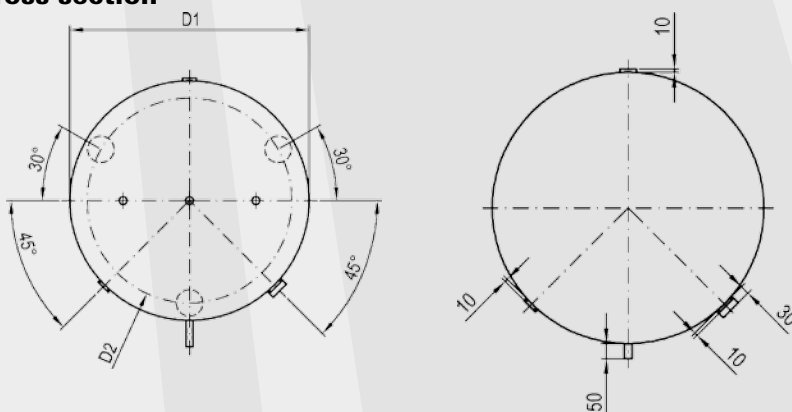
PH STRATIFIED TANK

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DIMENSIONS AND SLEEVE ASSIGNMENTS



Cross section



Volume at sleeve

Sleeve no.	Sleeve height (measured from the lid)	Content
4	H1	I1
6	H2	I2
7	H3	I3
8	H4	I4
9	H5	I5
10	H6	I6
12	H7	I7
13	H8	I8
Total volume		

PH STRATIFIED TANK

mastersolar

TABLE OF DIMENSIONS AS PER ILLUSTRATIONS

Position	Unit	PH 500	PH 800	PH 1000S	PH 1000B	PH 1250	PH 1500	PH 2000	PH 2500	PH 3000	PH 4000	PH 5000
a	mm	1540	1540	1540	1540	1560	1600	1610	1660	2120	2010	2010
b	mm	1150	1150	1150	1150	1170	1210	1220	1270	1560	1450	1450
c	mm	720	720	720	720	740	780	790	840	1030	920	920
d	mm	290	290	290	290	310	350	360	410	400	290	290
e	mm	260	280	295	280	305	340	355	410	395	465	465
f	mm	340	370	380	380	380	425	450	495	475	–	–
g	mm	640	660	720	710	730	720	790	800	930	840	1000
h	mm	830	920	950	1000	1010	980	1030	1010	1250	1100	1340
i	mm	940	1060	1090	1160	1180	1160	1210	1160	1450	1240	1520
j	mm	1050	1200	1230	1300	1350	1330	1400	1300	1640	1380	1710
k	mm	1160	1340	1340	1420	1520	1510	1520	1420	1820	1520	1930
l	mm	1270	1450	1450	1530	1630	1620	1630	1530	1930	1630	2040
m	mm	1650	1780	1990	1790	2040	2005	2080	1920	2415	1980	2490
n	mm	1760	1910	1950	2120	2200	2190	2280	2170	2645	2290	2800
o1	mm	1540	1680	1680	1900	1700	1890	1950	1790	2200	1700	2300
o2	mm	–	–	–	1680	–	–	–	–	–	–	–
p	mm	1150	1170	1170	1170	1170	1280	1370	1360	1460	1170	1600
q	mm	720	725	725	725	725	775	860	880	880	725	950
r	mm	270	350	350	350	350	350	360	420	415	350	350
s	mm	240	260	280	265	290	325	340	390	375	450	450
t	mm	480	500	530	500	530	560	580	630	710	600	600
Flange	mm	–	–	–	–	–	730	750	800	880	780	800
u	mm	710	730	790	780	800	900	920	970	1060	970	1130
v	mm	910	1040	1070	1140	1160	1140	1190	1140	1430	1210	1440
w	mm	1160	1320	1340	1420	1520	1510	1510	1420	1820	1500	1815
x	mm	1350	1450	1480	1610	1710	1640	1660	1550	2070	1700	2075
y	mm	1570	1690	1710	1900	1950	1910	1970	1815	2300	1890	2320
z	mm	1650	1780	1800	1990	2040	2010	2065	1905	2410	1980	2490
D1	mm	650	750	850	790	900	1000	1100	1300	1250	1600	1600
D2	mm	520	620	720	660	770	850	950	1200*	1150*	1300*	1300*
Km	mm	1820	1950	1990	2160	2240	2235	2330	2335	2755	2555	3000
H1	mm	490	460	500	590	570	570	650	640	730	660	760
H2	mm	600	570	610	700	680	680	760	750	840	770	900
H3	mm	710	710	720	820	850	860	880	870	1020	910	1090
H4	mm	820	850	860	960	1020	1030	1070	1010	1210	1050	1280
H5	mm	930	990	1000	1120	1190	1210	1250	1160	1410	1190	1460
H6	mm	1120	1250	1230	1410	1470	1470	1490	1370	1730	1450	1800
H7	mm	1420	1540	1570	1740	1820	1765	1830	1675	2185	1750	2190
H8	mm	1500	1630	1655	1840	1895	1850	1925	1760	2265	1825	2335
I1	lt	140	170	240	255	310	355	500	655	725	985	1185
I2	lt	175	220	300	305	380	440	605	800	860	1205	1470
I3	lt	210	285	360	365	490	580	710	960	1080	1490	1850
I4	lt	250	345	440	435	600	715	910	1145	1315	1780	2230
I5	lt	285	405	520	510	705	855	1085	1345	1560	2050	2595
I6	lt	350	520	650	655	885	1060	1310	1625	1955	2575	3280
I7	lt	450	650	845	815	1105	1295	1635	2030	2510	3175	4060
I8	lt	475	690	895	865	1155	1360	1725	2140	2610	3330	4355
I total	lt	530	766	980	937	1260	1540	1930	2430	2910	3920	4950

* model with foot rim

SLEEVE ASSIGNMENT

No.	Dimension	Use	Comment
1a	1"	Sleeve for ST flange 1"	If combined with a spherical exchanger
1b, c, d	1 1/2"	Sleeve for ST flange 1 1/2"	If combined with a spherical exchanger
2	1 1/2" (2")*	Feed heating circuit or FWS-HE	With riser
3	1/2"	Venting	Fill and drain valve required
4	1 1/2" (2")*	Forward flow secondary heat source	With influx damper
5	1/2"	Sensor sleeve for temperature sensor	Immersion pocket (3-fold) pre-mounted
6	1 1/2" (2")*	Forward flow heating circuits	With influx damper
7	2"	Sleeve for E-heating element	Extension sleeve necessary
8	1 1/2" (2")*	Return secondary heat source	
9	1 1/2" (2")*	High-temperature heating circuits return	With influx damper
10	1 1/2" (2")*	Low-temperature heating circuits return	with influx damper
11	1/2"	Sensor sleeve for temperature sensor	Immersion pocket (3-fold) pre-mounted
12	2"	Sleeve for E-heating element	Extension sleeve necessary
13	1 1/2" (2")*	Feed NT heating circuits or FWS-HE	With riser
15	1/2"	Sleeve for thermometer	Optional
16	1/2"	Sensor sleeve for temperature sensor	Immersion pocket (3-fold) pre-mounted
17	1/2"	Sensor sleeve for temperature sensor	Immersion pocket (3-fold) pre-mounted
18	1/2"	Sensor sleeve for temperature sensor	Immersion pocket (3-fold) pre-mounted
19	1/2"	Drainage	Fill and drain valve required
22	DN200	Inspection flange	Possibly for ribbed tube heat exchanger
30a	1 1/2" (2")*	Sleeve for volume expansion	Possibly with priority flap
30b	1 1/2" (2")*	Sleeve for volume expansion	Possibly with priority flap
31	1 1/2" (2")*	Sleeve for volume expansion	with influx damper
32	1 1/2" (2")*	Sleeve for volume expansion	with influx damper
33	1 1/2" (2")*	Sleeve for volume expansion	with influx damper

* upwards of a reservoir size of 2000 litres

MAX. WATER FLOW RATE WITH PRO-HEAT TANK WITHOUT MIXING THE LAYERS

Tank size [l]	Volumetric flow, [m³/h]
500	2.7
800	3.2
1000	3.4
1250	3.4
1500	4.0
2000	4.3
2500	4.4
3000	4.5
4000	4.9
5000	5.0

Note: The permissible total volumetric flow for each additional charged sleeve can be calculated as + 30% of the specified value per sleeve.