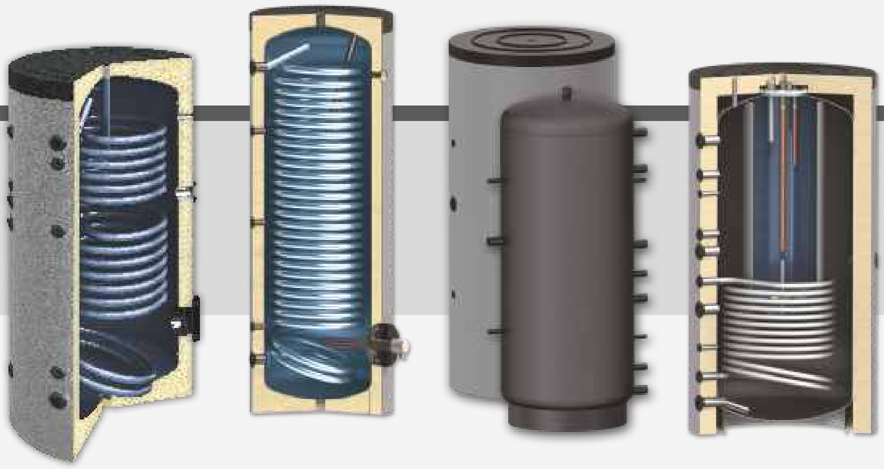
SUNSYSTEM

FLOOR STANDING WATER HEATERS

- SOLAR WATER HEATERS
- WATER HEATERS FOR HEAT PUMP SYSTEMS
- COMBI TANKS
- BUFFER TANKS FOR HEATING SYSTEMS
- COLD WATER STORAGE TANKS



2018
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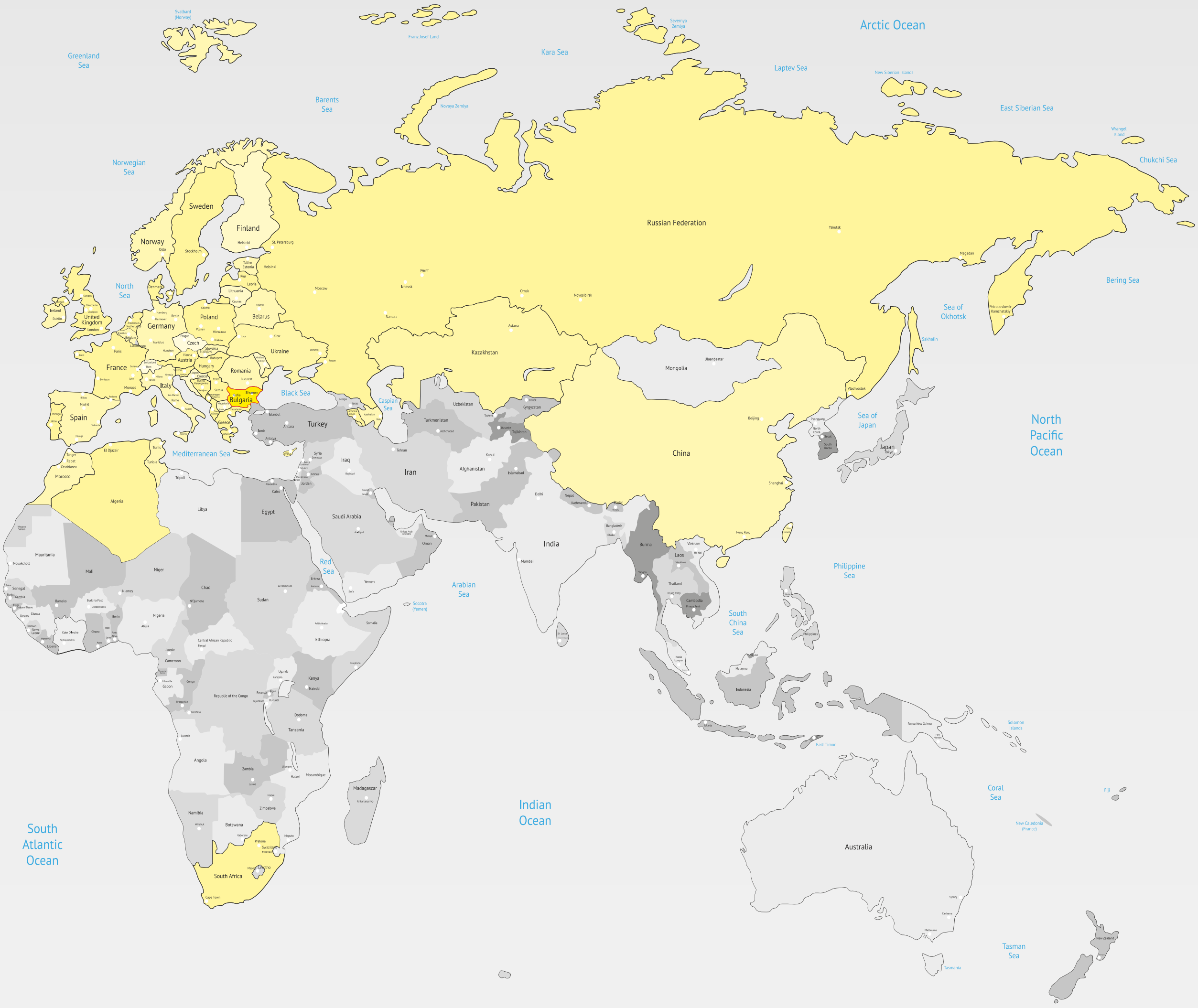
Our markets

Contacts

www.BURNiT.bg



NES Ltd.

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NES Ltd., Town of Shumen, Bulgaria

NES Ltd.

NES Ltd., Town of Sofia, Bulgaria

The Company

NES Ltd. is a manufacturer of appliances utilizing alternative energy sources.

The company was established in 2002 in town of Shumen, Bulgaria.

The company has its own manufacturing, warehousing and administrative facilities with an area of 30 000 sq. meters.

The staff amounts to 360 highly qualified specialists.

All company activities are governed by QMS ISO 9001:2008.

The production is marketed across Europe, Africa, North America, part of Asia and other marketplaces are in the scope of near-future activities.

Most products of NES Ltd. are designed to utilize alternative energy sources like solar thermal energy, biomass energy and aerothermal energy. These products contribute to sparing the energy reserves of the planet and minimizing the carbon emissions.

Our trademarks

SUNSYSTEM

BURNiT SUNSYSTEM

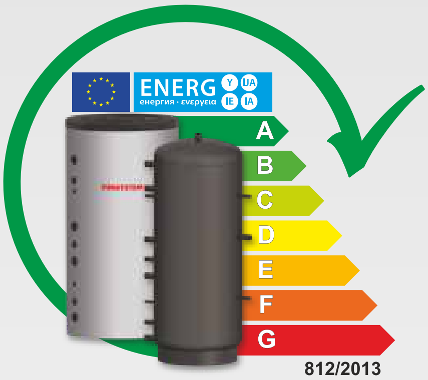
- **SOLAR THERMAL**
  Solar collectors
  Domestic/ Storage / Combi tanks
  Buffer tanks
  Heat pump heaters / Heat pumps
  Non-standart storage tanks

- **PHOTOVOLTAIC**
  Photovoltaic modules, accessories
  Engineering, Procurement and Construction of photovoltaic plants

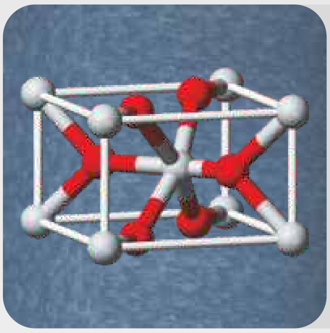
- **BIOMASS HEATING**
  Automated boilers
  Pellet stoves
  Pellet burners
  Solid Fuel Boilers
  Fuel Hoppers

- **BIOMASS HEATING INDUSTRIAL EQUIPMENT**
  Solid fuel boilers
  Combined boilers
  Pellet burners
  Set Pellet boilers

Contents



SUNSYSTEM technology



Titanium Enamel

Hot water is aggressive to steel. In order to protect a water tank from corrosion it needs to be isolated from the hot water in it.
All SUNSYSTEM water tanks are tightly covered with titanium enamel on the inside.
It is then baked to produce a smooth and uniform deposition-free glazing.
Thus the domestic hot water remains clean, and the water tank is protected against corrosion.

Insulation

The quality of the insulation of a water tanks is a key factor for its heat conservation capability and energy efficiency.
All SUNSYSTEM floor standing water tanks with capacity of up to 500 liters are furnished with rigid PU insulation with thickness of 50 mm.
All water tanks in greater volumes than 500 liters as well as all buffer tanks and combi tanks come with removable insulation of fleece, with thickness of 100 mm.

Materials

All SUNSYSTEM appliances are produced from select materials of ultimate grades to provide for best product performance and longevity.
We source our materials and components from qualified suppliers, with verified quality by reputable certification institutions.

Renewable Energy Enabled

Many of the SUNSYSTEM water tanks are renewable energy enabled.
They employ both indirect and direct heating and may be used with heat derived from renewable energy sources. Go for renewable energy to cut down on your monthly costs and do your part to help reduce carbon dioxide emissions.

Cathodic Protection

The sacrificial anode protectors built in the SUNSYSTEM water tanks provide secondary protection against corrosion of the water tank in all carbon-steel models.
The anode protector acts against corrosion in three different ways simultaneously:

- Decreases the electric potential by means of electro-galvanic polarization.
- Creates a protective film on the metal surface and thus protects it from contact with the water.

Electric heating kit

All SUNSYSTEM water tanks may be optionally equipped with an electric heating kit as a backup heat source.
The electric heating kit comprises of one or more electric heaters and a thermostat with thermal protection.
The thermostat may be adjusted by the user within the range 30°C ÷ 80°C, and the thermal protection would go off in case the water reaches 95°C.

Inspection opening

Large and convenient inspection opening located in the lower part of the tank gives access for maintenance and cleaning.
The opening is closed by an enameled flange cover which may have a sleeve for fitting electric heater if necessary.

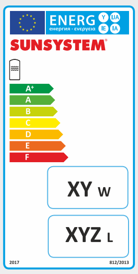
Heat Exchangers

The SUNSYSTEM brand water tanks are available in single- and double-coil executions that enable the appliance to utilize heat from external sources of energy such as solar system, biomass burning boiler, heat pump, etc.
All heat exchangers are engineered with large heat transfer surface to ensure ultimate efficiency.

SUNSYSTEM

Solar water tanks

For direct/indirect heating.
Suitable for solar or/and space-heating systems
Suitable to produce domestic hot water (DHW).



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
150 - 500	C
750 - 2000	C *
750 - 2000	D *
750 - 2000	E *

*The class depends of type of insulation.

Insulation	High efficiency insulation (DIN 4753-8): rigid PU, thickness 50 mm (up to 500 Liters) or removable insulation of fleece, with thickness of 100 mm (over 500 Liters). Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Complex corrosion protection realized by means of titanium enamel (DIN 4753-3) and anode protection (DIN 4753-6). Convenient inspection opening. Operating pressure: 10 bar Test pressure: 15 bar Maximum temperature: 95°C
Inlets/ Outlets	Connections for temperature sensor. All threads are internal.
One or two heat-exchanger coils (models SN/ SON / H-SN /H-SON)	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

Base equipment	Thermometer. Sensor bushing. Safety valve, 8 bar. Adjustable foot for models up to 500 L. (See p. 64).
Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

SEL
without coil

Vertical models.

L	Model	Code
150	SEL 150	09030106205001
200	SEL 200	09030106205002
300	SEL 300	09030106205004
400	SEL 400	09030106205005
500	SEL 500	09030106205006
750	SEL 750	09030106205007
1000	SEL 1000	09030106205008
1500	SEL 1500	09030106205009
2000	SEL 2000	09030106205010

H SEL
without coil

Horizontal models.

L	Model	Code
200	H SEL 200	01035106205002
300	H SEL 300	01035106205004
500	H SEL 500	01035106205006
1000	H SEL 1000	01035106205008
1500	H SEL 1500	01035106205009

SN
with one coil

Vertical models.

L	Model	Code
150	SN 150	09030106202001
200	SN 200	09030106202002
300	SN 300	09030106202004
400	SN 400	09030106202005
500	SN 500	09030106202006
750	SN 750	09030106202007
1000	SN 1000	09030106202008
1500	SN 1500	09030106202009
2000	SN 2000	09030106202010

H SN
with one coil

Horizontal models.

L	Model	Code
200	H SN 200	01035106202002
300	H SN 300	01035106202004
500	H SN 500	01035106202006
1000	H SN 1000	01035106202008
1500	H SN 1500	01035106202009

SON
with two coils

Vertical models.

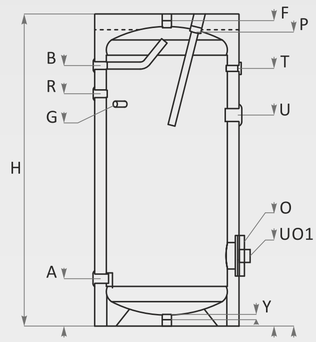
L	Model	Code
150	SON 150	09030106203001
200	SON 200	09030106203002
300	SON 300	01030106203004
400	SON 400	01030106203005
500	SON 500	01030106203006
750	SON 750	01030106203007
1000	SON 1000	01030106203008
1500	SON 1500	01030106203009
2000	SON 2000	09030106203010

H SON
with two coils

Horizontal models.

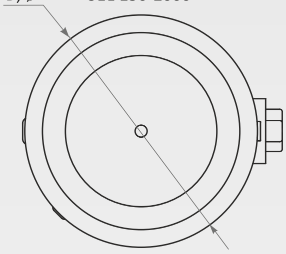
L	Model	Code
300	H SON 300	01035106203004
500	H SON 500	01035106203006
1000	H SON 1000	01035106203008
1500	H SON 1500	01035106203009

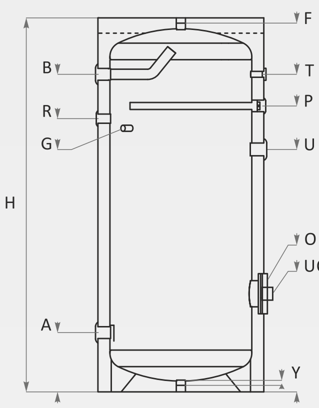
Technical characteristics.



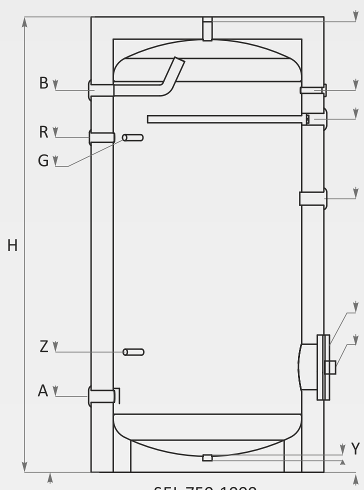
SEL 150-300

D, ø
SEL 150-2000

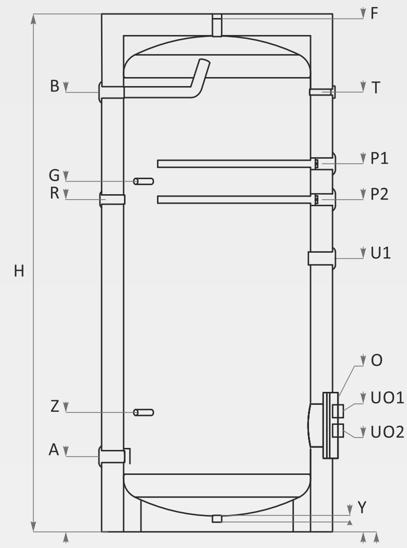




SEL 400-500

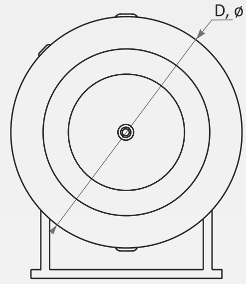


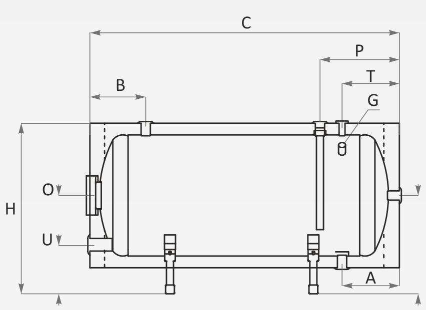
SEL 750-1000



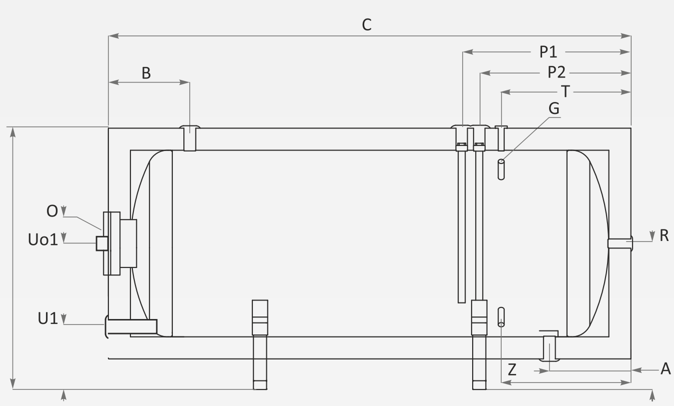
SEL 1500-2000

D, ø
H SEL 300-1500





H SEL 300



H SEL 1500

*Electric heating element mounting option: on inspection opening flange.

Vertical models SEL

General parameters

L	H mm	D mm ∅	kg
150	1070	ø560	50
200	1340	ø560	68
300	1420	ø660	86
400	1470	ø750	123
500	1720	ø750	140
750	2000	ø950	210
1000	2050	ø1050	245
1500	2310	ø1050	342
2000	2310	ø1350	645

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	F mm Rp1"	O mm	P mm Rp1¼”	R mm	T mm Rp½”	U /Uo mm Rp1½”	Y mm Rp1"	Z mm Rp½”
150	Rp1"/202	Rp1"/895	788	1070	ø110x180/309	1070	Rp¾"/788	895	780/309	20	
200	Rp1"/202	Rp1"/1112	900	1340	ø110x180/309	1340	Rp¾"/987	1138	850/309	20	
300	Rp1"/215	Rp1"/1182	1008	1410	ø110x180/320	1410	Rp¾"/1055	1170	950/320	20	
400	Rp1¼"/270	Rp1¼"/1204	950	1480	ø110x180/450	1079	Rp1"/1005	1204	900/450	20	
500	Rp1½"/270	Rp1½"/1453	1208	1710	ø110x180/450	1340	Rp1"/1250	1453	1130/450	20	
750	Rp1½"/300	Rp1½"/1630	1435	1950	ø200x280/450	1435	Rp1"/1405	1630	1040/450	20	535
1000	Rp1½"/320	Rp1½"/1700	1487	2020	ø200x280/460	1570	Rp1"/1487	1700	1155/460	40	520
1500	2xRp1½"/320	2xRp1½"/1975	1487	2320	ø200x280/460	2x 1570/1650	Rp1"/1487	1975	2x1220/460	40	520
2000	2xRp1½"/385	2xRp1½"/1885	1685	2311	ø400x560/484	2x 1625/1705	Rp1"/1635	1835	3x1340/484	30	745

Horizontal models H SEL

General parameters

L	H mm	C mm	D mm ∅	kg
200	695	1340	ø560	68
300	790	1410	ø660	86
500	890	1710	ø750	140
1000	1190	2080	ø1050	245
1500	1190	2380	ø1050	342

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	O mm	P mm Rp1¼”	R mm Rp1”	T mm Rp½”	U /Uo mm Rp1½”	Z mm Rp½”
200	Rp1"/220	Rp1"/220	220	ø110x180/420	320	420	220	195/420	
300	Rp1"/260	Rp1"/260	260	ø110x180/465	360	465	260	258/465	
500	Rp1½"/270	Rp1½"/270	270	ø110x180/515	370	515	270	245/515	
1000	Rp1½"/370	Rp1½"/320	370	ø200x280/665	470	665	370	2x280/665	370
1500	Rp1½"/360	Rp1½"/320	580	ø200x280/665	2x 680/770	665	580	2x280/665	580

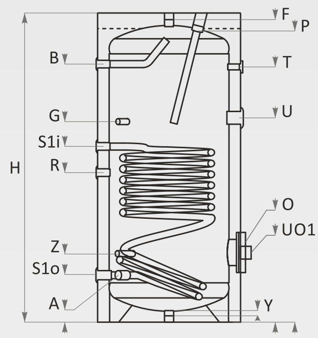
General parameters

L Capacity
H, mm Height
C, mm Length
øD, mm Diameter
kg Weight

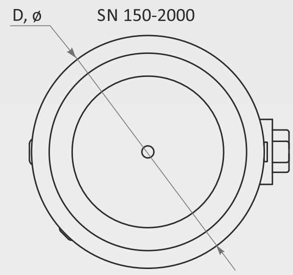
Inlets / Outlets

A, mm Cold water inlet
B, mm Hot water outlet
G, mm Sensor sleeve for thermostat
F, mm Air vent sleeve
O, mm Inspection opening / flange
P, mm Anode
R, mm Recirculation
T, mm Thermometer
U, mm Sleeve for Electric element on water tank body
Uo, mm Sleeve for Electric element on inspection opening flange
Y, mm Drain sleeve
Z, mm Additional sensor sleeve

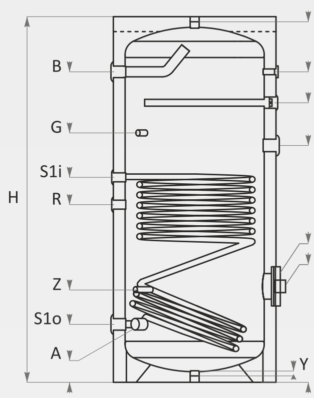
Technical characteristics.



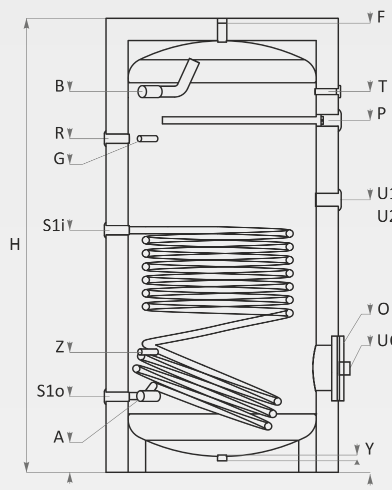
SN 150-300



SN 150-2000



SN 400-500



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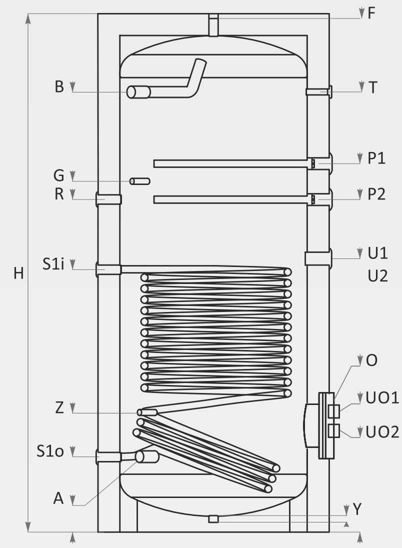
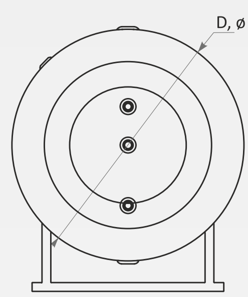
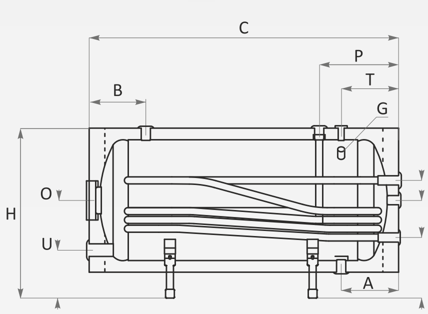


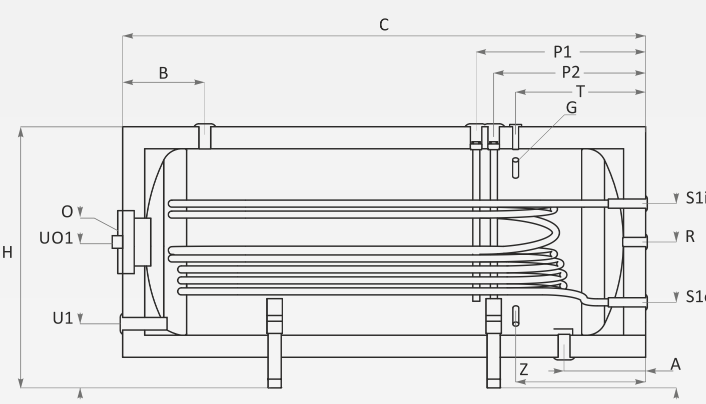
SN 1500-2000

H SN 300 - 1500





H SN 300



H SN 1500

*Electric heating element mounting option: on inspection opening flange.

Vertical models SN

General parameters

L	H mm	D mm ∅	kg
150	1070	ø560	59
200	1340	ø560	73
300	1420	ø660	104
400	1470	ø750	145
500	1720	ø750	167
750	2000	ø950	242
1000	2050	ø1050	286
1500	2310	ø1050	392
2000	2310	ø1350	712

Heat-exchanger coil

S1 m²	S1 L	S1 kW (m³/h)	S1 NL 60°C	S1 Δp, mbar	S1i/S1o mm Rp1"
0.74	4.56	25 (0.61)	2.5	65	592/202
0.9	5.55	29 (0.71)	4.5	75	692/202
1.2	7.40	53 (1.30)	11	120	805/215
1.5	9.25	62 (1.52)	13	180	850/270
1.8	11.10	72 (1.77)	18	210	960/270
2.1	12.95	80 (1.97)	32	210	970/300
2.7	16.65	105 (2.58)	42	260	1080/320
3	18.50	131 (3.22)	64	310	1180/320
4.1	25.28	180 (4.42)	80	420	1635/385

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	F mm Rp1"	O mm	P mm Rp1¼"	R mm	T mm Rp½"	U /Uo mm Rp1½"	Y mm Rp1"	Z mm Rp½"
150	Rp1"/202	Rp1"/868	822	1070	ø110x180/309	1070	Rp¾"/450	868	780/309	20	422
200	Rp1"/202	Rp1"/1340	892	1340	ø110x180/309	1340	Rp¾"/500	1138	850/309	20	392
300	Rp1"/215	Rp1"/1165	1897	1410	ø110x180/320	1410	Rp¾"/663	1170	950/320	20	407
400	Rp1¼"/270	Rp1¼"/1204	950	1480	ø110x180/450	1079	Rp1"/673	1204	900/450	20	450
500	Rp1½"/270	Rp1½"/1453	1168	1710	ø110x180/450	1340	Rp1"/831	1453	1130/450	20	568
750	Rp1½"/300	Rp1½"/1630	1435	1950	ø200x280/450	1435	Rp1"/1405	1630	1040/450	20	535
1000	Rp1½"/320	Rp1½"/1700	1487	2020	ø200x280/460	1570	Rp1"/1497	1700	2x1155/460	40	520
1500	2xRp1½"/320	2xRp1½"/1975	1487	2320	ø200x280/460	2x2090	Rp1"/1497	1975	2x1210/3x460	40	520
2000	2xRp1½"/385	2xRp1½"/1885	1685	2311	ø400x560/484	2x2003	Rp1"/1635	1835	2x1340/3x484	30	745

Horizontal models H SN

General parameters

L	H mm	C mm	D mm ∅	kg
200	695	1340	ø560	73
300	790	1410	ø660	104
500	890	1710	ø750	167
1000	1190	2080	ø1050	286
1500	1190	2380	ø1050	392

Heat-exchanger coil

S1 m²	S1 L	S1 kW (m³/h)	S1 NL 60°C	S1 Δp, mbar	S1i/S1o mm Rp1"
0.9	5.55	29 (0.71)	4.5	75	692/202
1.2	7.40	53 (1.30)	11	120	805/215
1.8	11.10	72 (1.77)	18	210	960/270
2.7	16.65	105 (2.58)	42	260	1080/320
3	18.50	131 (3.22)	64	310	1180/320

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	O mm	P mm Rp1¼"	R mm Rp1"	T mm Rp½"	U /Uo mm Rp1½"	Z mm Rp½"
200	Rp1"/220	Rp1"/220	220	ø110x180/420	320	420	220	240/420	
300	Rp1"/260	Rp1"/260	260	ø110x180/465	360	465	260	238/465	
500	Rp1½"/270	Rp1½"/270	270	ø110x180/515	370	515	270	245/515	
1000	Rp1½"/360	Rp1½"/340	360	ø200x280/665	460	665	360	280/665	360
1500	Rp1½"/360	Rp1½"/340	360	ø200x280/665	2x 690/770	665	580	2x280/665	580

General parameters

L	Capacity
H, mm	Height
C, mm	Length
øD, mm	Diameter
kg	Weight

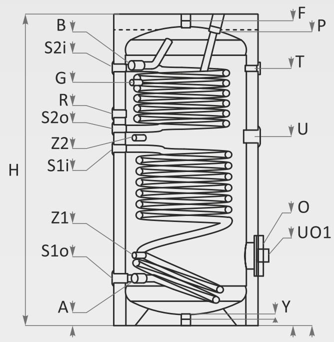
Inlets / Outlets

A, mm	Cold water inlet
B, mm	Hot water outlet
G, mm	Sensor sleeve for thermostat
F, mm	Air vent sleeve
O, mm	Inspection opening / flange
P, mm	Anode
R, mm	Recirculation
T, mm	Thermometer
U, mm	Sleeve for Electric element on water tank body
Uo, mm	Sleeve for Electric element on inspection opening flange
Y, mm	Drain sleeve
Z, mm	Additional sensor sleeve

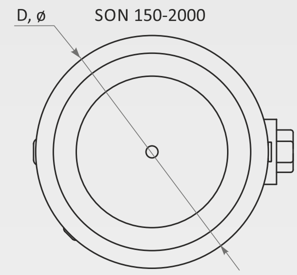
Heat-exchanger coil

S1	Lower coil
S1, m²	Heat exchange surface S1
S1, L	Coil capacity S1
S1, kW (m³/h)	Prolonged power acc. to DIN 4708; 80°C/60°C/45°C, S1
S1, NL 60°C	NL- power coefficient at 60°C, S1
S1, Δp, mbar	Pressure drop Δp, S1
S1i/S1o mm	Inlet/Outlet Lower coil S1

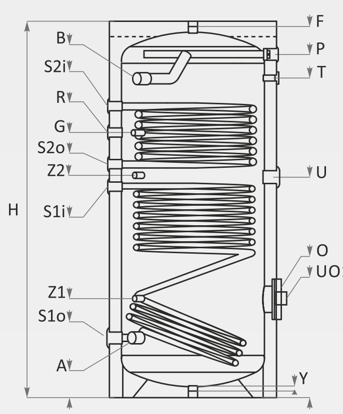
Technical characteristics.



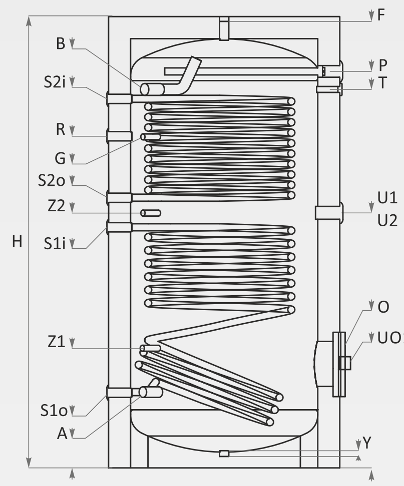
SON 150-300



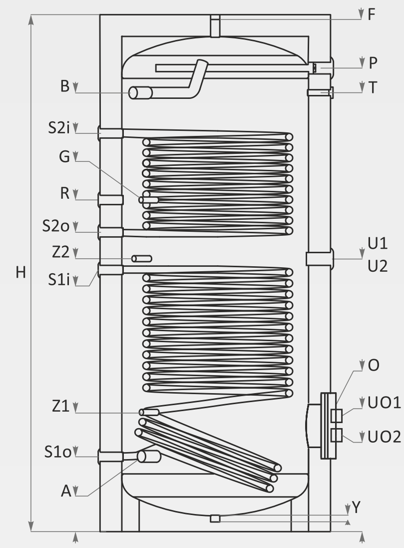
SON 150-2000



SON 400-500

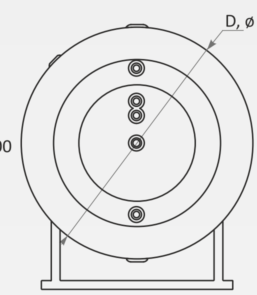


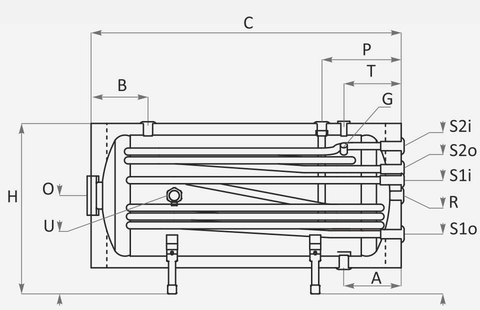
SON 750-1000



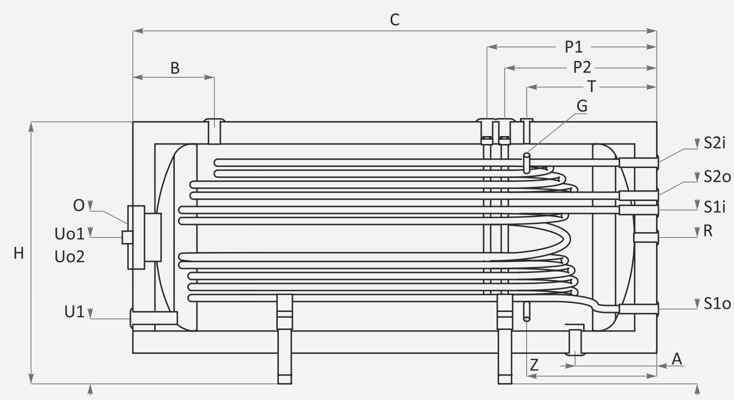
SON 1500-2000

H SON 300 - 1500





H SON 300



H SON 1500

*Electric heating element mounting option: on inspection opening flange.

Vertical models SON

General parameters

L	H mm	D mm ∅	kg
150	1070	ø560	65
200	1340	ø560	82
300	1420	ø660	118
400	1470	ø750	160
500	1720	ø750	185
750	2000	ø950	263
1000	2050	ø1050	315
1500	2310	ø1050	423
2000	2310	ø1350	761

Heat-exchanger coils

S1/S2 m²	S1/S2 L	S1/S2 kW (m³/h)	S1/S2 NL 60°C	S1/S2 Δp, mbar	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
0.74/0.4	4.56/2.47	25(0.61)/15(0.37)	2.5/1	65/48	592/202	874/674
0.9/0.6	5.55/3.70	29(0.71)/18(0.44)	4.5/1.5	75/55	692/202	1112/812
1.2/0.9	7.40/5.55	53(1.30)/21(0.52)	11/2	120/70	805/215	1170/894
1.5/1	9.25/6.17	62(1.52)/27(0.66)	13/2.2	180/80	850/270	1210/952
1.8/1.2	11.10/7.40	72(1.77)/34(0.84)	18/2.8	210/90	960/270	1350/1062
2.1/1.4	12.95/8.63	80(1.97)/50(1.23)	32/10	210/150	970/300	1560/1160
2.7/1.9	16.65/11.72	105(2.58)/62(1.52)	42/28	260/210	1080/320	1660/1220
3/2.5	18.50/15.42	131(3.22)/74(1.82)	64/34	310/260	1180/320	1790/1350
4.1/3	25.28/18.50	180(4.42)/110(2.70)	80/55	420/300	1635/385	1885/1420

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	F mm Rp1"	O mm	P mm Rp1¼"	R mm	T mm Rp½"	U /Uo mm Rp1½"	Y mm Rp1"	Z1/ Z2 mm Rp½"
150	Rp1"/202	Rp1"/1070	788	1070	ø110x180/309	1070	Rp¾"/788	892	752/309	30	352/631
200	Rp1"/202	Rp1"/1168	1037	1340	ø110x180/309	1340	Rp¾"/987	1138	645/309	30	302/752
300	Rp1"/215	Rp1"/1182	1104	1410	ø110x180/320	1410	Rp¾"/957	1170	852/320	30	320/852
400	Rp1¼"/270	Rp1¼"/1240	1054	1480	ø110x180/450	1337	Rp1"/1105	1152	901/450	30	450/901
500	Rp1½"/270	Rp1½"/1453	1206	1710	ø110x180/450	1568	Rp1"/1206	1453	1011/450	30	450/1011
750	Rp1½"/300	Rp1½"/1630	1435	1950	ø200x280/450	1728	Rp1"/1405	1630	1040/450	30	535/1040
1000	Rp1½"/320	Rp1½"/1700	1487	2020	ø200x280/460	1798	Rp1"/1487	1700	1140/460	30	520/1140
1500	2xRp1½"/320	2xRp1½"/1975	1487	2320	ø200x280/460	2x2090	Rp1"/1487	2089	2x1220/460	30	520/1220
2000	2xRp1½"/385	2xRp1½"/1885	1685	2311	ø400x560/484	2x2003	Rp1"/1265	1835	2x1340/2x484	30	745/1340

Horizontal models H SON

General parameters

L	H mm	C mm	D mm ∅	kg
300	790	1410	ø660	118
500	890	1710	ø750	185
1000	1190	2080	ø1050	315
1500	1190	2380	ø1050	423

Heat-exchanger coils

S1/S2 m²	S1/S2 L	S1/S2 kW (m³/h)	S1/S2 NL 60°C	S1/S2 Δp, mbar	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
1.2/0.9	7.40/5.55	53(1.30)/21(0.52)	11/2	120/70	535/290	697/610
1.8/1.2	11.10/7.40	72(1.77)/34(0.84)	18/2.8	210/90	585/325	785/655
2.7/1.9	16.65/11.72	105(2.58)/62(1.52)	42/28	260/210	790/340	1005/855
3/2.5	18.50/15.42	131(3.22)/74(1.82)	64/34	310/260	790/340	1005/855

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	O mm	P mm Rp1¼"	R mm Rp1"	T mm Rp½"	U /Uo mm Rp1½"	Z mm Rp½"
300	Rp1"/260	Rp1"/260	260	ø110x180/465	360	465	260	465	
500	Rp1½"/270	Rp1½"/270	270	ø110x180/515	370	515	270	515	
1000	Rp1½"/360	Rp1½"/320	360	ø200x280/665	460	665	360	2x665	360
1500	Rp1½"/360	Rp1½"/320	360	ø200x280/665	2x 690/770	665	580	1x280/2x665	580

General parameters

L	Capacity
H, mm	Height
C, mm	Length
øD, mm	Diameter
kg	Weight

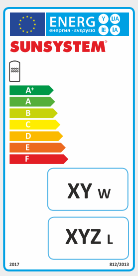
Inlets / Outlets

Cold water inlet
Hot water outlet
Sensor sleeve for thermostat
Air vent sleeve
Inspection opening / flange
Anode
Recirculation
Thermometer
Sleeve for Electric element on water tank body
Sleeve for Electric element on inspection opening flange
Drain sleeve
Additional sensor sleeve

Heat-exchanger coils

S1	Lower coil
S2	Upper coil
S1/S2 m²	Heat exchange surface S1/S2
S1/S2 L	Coil capacity S1/S2
S1/S2 kW (m³/h)	Prolonged power acc. to DIN 4708; 80°C/60°C/45°C, S1/S2
S1/S2 NL 60°C	NL- power coefficient at 60°C, S1/S2
S1/S2 Δp, mbar	Pressure drop Δp, S1/S2
S1i/S1o mm	Inlet/Outlet Lower coil S1
S2i/S2o mm	Inlet/Outlet Upper coil S2

High capacity water heater
Internal threaded terminals
Possibility of electricity supply
(electric heater) and with independent
heat sources
(solar collectors, boiler).



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

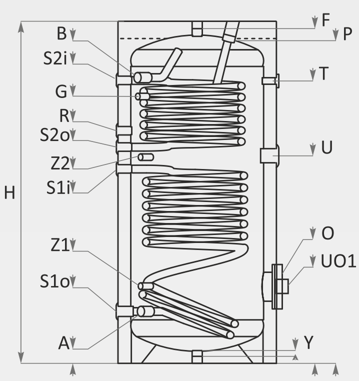
Capacity, Liters	Class
200 - 500	C

Insulation	High efficiency insulation (DIN 4753-8): rigid PU, thickness 75 mm. Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Complex corrosion protection realized by means of titanium enamel (DIN 4753-3) and anode protection (DIN 4753-6). Convenient inspection opening. Operating pressure: 10 bar Test pressure: 15 bar Maximum temperature: 95°C
Inlets / Outlets	Connections for temperature sensor. All threads are internal.
Two heat-exchanger coils	Coils with a large heat exchange surface. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

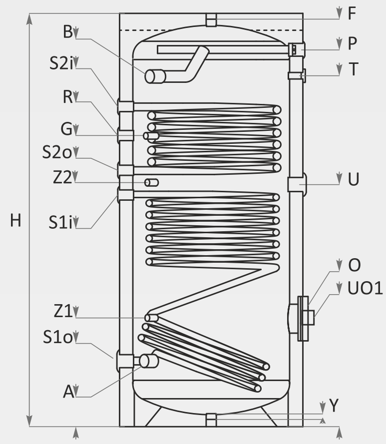
Base equipment	Thermometer. Sensor bushing. Safety valve, 8 bar. Adjustable foot for models up to 500 L. (See p. 64).
Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

Vertical models

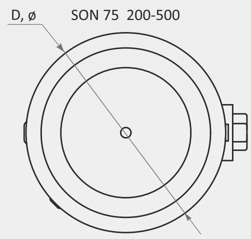
L	Model	Code
200	SON 75 200	09030106203742
300	SON 75 300	09030106203744
500	SON 75 500	01030106203746



SON 75 200-300



SON 75 500



Vertical models SON 75

General parameters

L	H mm	D mm ∅	kg
200	1258	ø600	65
300	1723	ø600	82
500	1805	ø760	118

Heat-exchanger coils

L	S1/S2 m²	S1/S2 L	S1/S2 kW (m³/h)	S1/S2 NL 60°C	S1/S2 Δp, mbar	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
200	0.9/0.6	5.55/3.7	29(0.71)/8(0.44)	4.5/1.5	75/55	637/207	982/732
300	1.2/0.9	7.40/5.55	53(1.3)/21(0.52)	11/2	120/70	817/207	1407/1007
500	1.8/1.2	11.1/7.4	72(1.77)/34(0.81)	18/2.8	210/90	939/249	1429/1084

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	F mm Rp1"	O mm	P mm Rp1¼"	R mm	T mm Rp½"	U /Uo mm Rp1½"	Y mm Rp1"	Z1/ Z2 mm Rp½"
200	Rp1"/207	Rp1"/1006	905	1258	ø110x180/314	1258	Rp¾"/857	1006	687/314	11	307/707
300	Rp1"/207	Rp1"/1471	1245	1723	ø110x180/314	1723	Rp¾"/1282	1471	887/314	11	327/877
500	Rp1½"/249	Rp1½"/1519	1285	1805	ø110x180/429	1639	Rp1"/1285	1519	990/420	7	429/990

General parameters

L Capacity
H, mm Height
øD, mm Diameter
kg Weight

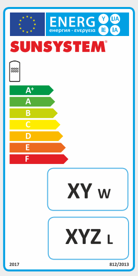
Inlets / Outlets

A, mm Cold water inlet
B, mm Hot water outlet
G, mm Sensor sleeve for thermostat
F, mm Air vent sleeve
O, mm Inspection opening / flange
P, mm Anode
R, mm Recirculation
T, mm Thermometer
U, mm Sleeve for Electric element:
on water tank body
Uo, mm on inspection opening flange
Y, mm Drain sleeve
Z, mm Additional sensor sleeve

Heat-exchanger coils

S1 Lower coil
S2 Upper coil
S1/S2 m² Heat exchange surface S1/S2
S1/S2 L Coil capacity S1/S2
S1/S2 kW (m³/h) Prolonged power acc. to DIN 4708;
80°C/60°C/45°C, S1/S2
S1/S2 NL 60°C NL- power coefficient at 60°C, S1/S2
S1/S2 Δp, mbar Pressure drop Δp, S1/S2
S1i/S1o mm Inlet/Outlet Lower coil S1
S2i/S2o mm Inlet/Outlet Upper coil S2

Solar boiler with two parallel coils
with a large heat exchange surface.
Internal threaded terminals.
Possibility of electricity supply
(electric heater) and with independent
heat sources (solar collectors, boiler).



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

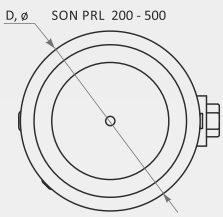
Capacity, Liters	Class
200 - 500	C

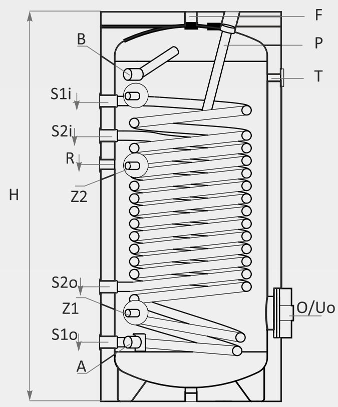
Insulation	High efficiency insulation (DIN 4753-8): rigid PU, thickness 50 mm. Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Complex corrosion protection realized by means of titanium enamel (DIN 4753-3) and anode protection (DIN 4753-6). Convenient inspection opening. Operating pressure: 10 bar Test pressure: 15 bar Maximum temperature: 95°C
Inlets / Outlets	Connections for temperature sensor. All threads are internal.
Two heat-exchanger coils	Parallel coils with a large heat exchange surface. Test pressure: 25 bar Maximum temperature: 110°C

Base equipment	Thermometer. Sensor bushing. Safety valve, 8 bar. Adjustable foot for models up to 500 L. (See p. 64).
Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

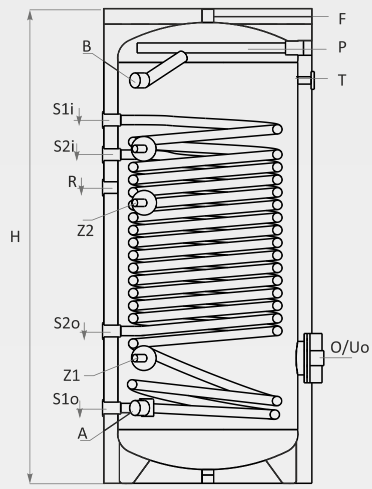
Vertical models

L	Model	Code
200	SON 200 PRL	01030106203842
300	SON 300 PRL	01030106203844
500	SON 500 PRL	01030106203846





SON PRL 200 - 300



SON PRL 500

General parameters

L	H mm	D mm ∅	kg
200	1340	ø560	90
300	1420	ø660	125
500	1720	ø750	196

Heat-exchanger coils

Vertical models SON PRL

L	S1/S2 m²	S1/S2 L	S1/S2 kW (m^3/h)	S1/S2 NL 60°C	S1/S2 Δp, mbar	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
200	0.9/0.5	6.14/3.5	29(0.71)/18(0.44)	4.5/1.3	75/55	982/202	857/402
300	1.35/0.8	8.9/5.36	58(1.42)/25(0.61)	10/1.8	150/65	1085/214	960/414
500	1.9/1.2	12.6/8.0	72(1.77)/34(0.84)	28/2.8	210/90	1312/272	1187/550

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	F mm Rp1"	O mm	P mm Rp1¼"	R mm	T mm Rp½"	Uo mm Rp1½"	Y mm Rp1"	Z1/ Z2 mm Rp½"
200	Rp1"/202	Rp1"/1138	1037	1340	ø110x180/309	1340	Rp¾"/757	1138	309	30	302/752
300	Rp1"/214	Rp1"/1181	1103	1420	ø110x180/319	1420	Rp¾"/856	1169	319	30	319/851
500	Rp1½"/272	Rp1½"/1455	1208	1720	ø110x180/452	1572	Rp1"/1187	1455	452	30	452/1013

General parameters

L Capacity
H, mm Height
øD, mm Diameter
kg Weight

Inlets / Outlets

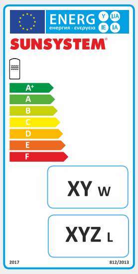
A, mm Cold water inlet
B, mm Hot water outlet
G, mm Sensor sleeve for thermostat
F, mm Air vent sleeve
O, mm Inspection opening / flange
P, mm Anode
R, mm Recirculation
T, mm Thermometer
U, mm Sleeve for Electric element: on water tank body
Uo, mm on inspection opening flange
Y, mm Drain sleeve
Z, mm Additional sensor sleeve

Heat-exchanger coils

S1 Lower coil
S2 Upper coil
S1/S2 m² Heat exchange surface S1/S2
S1/S2 L Coil capacity S1/S2
S1/S2 kW (m^3/h) Prolonged power acc. to DIN 4708; 80°C/60°C/45°C, S1/S2
S1/S2 NL 60°C NL- power coefficient at 60°C, S1/S2
S1/S2 Δp, mbar Pressure drop Δp, S1/S2
S1i/S1o mm Inlet/Outlet Lower coil S1
S2i/S2o mm Inlet/Outlet Upper coil S2

Base model SON ST:
Solar ready water heater with two coils and inlet /outlet for solar station.
Suitable to produce domestic hot water (DHW).

Optional equipment:
FC - integrated solar station and solar controller
FCA - integrated solar station, solar controller and expansion vessel



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
200 - 500	C

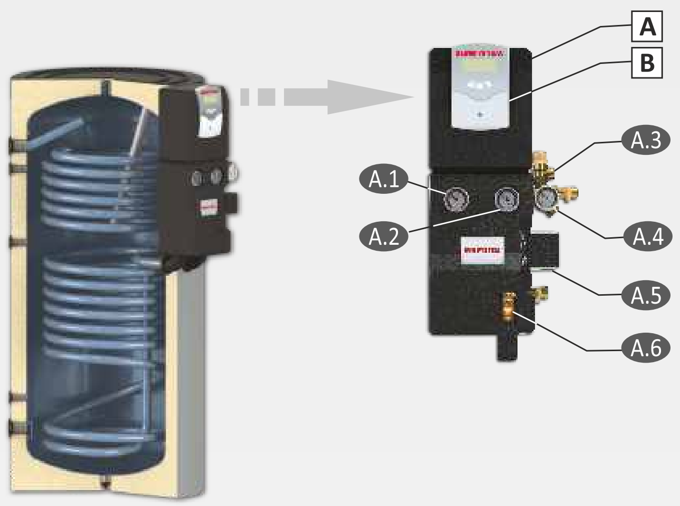
Insulation	High efficiency insulation (DIN 4753-8): rigid PU, thickness 50 mm. Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Complex corrosion protection realized by means of titanium enamel (DIN 4753-3) and anode protection (DIN 4753-6). Convenient inspection opening. Operating pressure: 10 bar Test pressure: 15 bar Maximum temperature: 95°C
Inlets / Outlets	Connections for temperature sensor. All threads are internal. Inlet/Outlet Lower coil are designed for solar station connection.
Two heat-exchanger coils	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

Base equipment	Thermometer. Sensor bushing. Safety valve, 8 bar. Adjustable foot for models up to 500 L. (See p. 64).
Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

SON ST series
with two coils
Floor standing

Vertical models

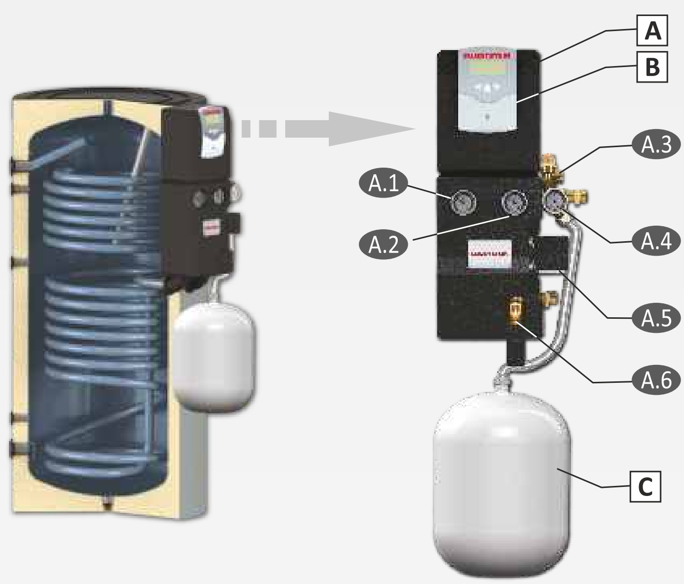
L	Model	Code
200	SON 200 ST	01030106203052
300	SON 300 ST	01030106203054
400	SON 400 ST	01030106203055
500	SON 500 ST	01030106203056



Optional equipment **FC**

A. Twin line solar station
- A.1. Return temperature indicator
- A.2. Flow temperature indicator
- A.3. Pressure relief valve
- A.4. Pressure gauge
- A.5. Solar circulation pump
- A.6. Flow meter

B. Solar controller



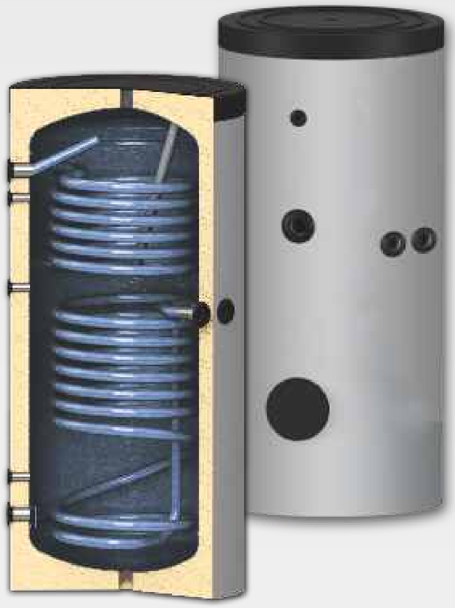
Optional equipment **FCA**

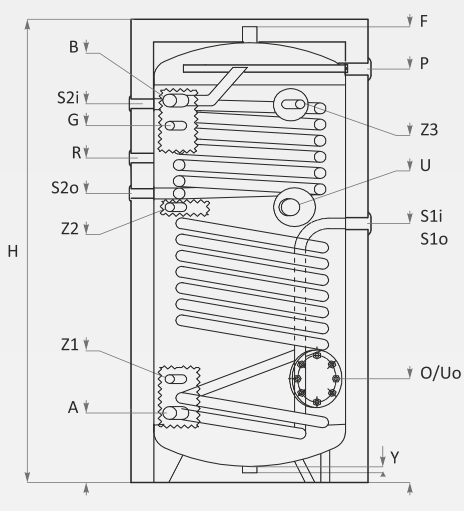
A. Twin line solar station
- A.1. Return temperature indicator
- A.2. Flow temperature indicator
- A.3. Pressure relief valve
- A.4. Pressure gauge
- A.5. Solar circulation pump
- A.6. Flow meter

B. Solar controller

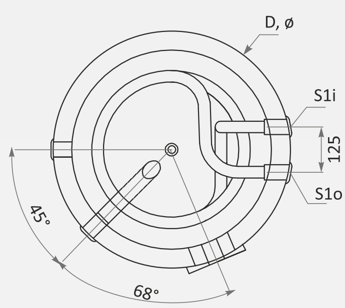
C. Expansion vessel

Technical characteristics.





SON ST 200 - 500



Vertical models SON ST

General parameters

L	H mm	D mm ∅	kg
200	1340	ø560	110
300	1420	ø660	132
400	1470	ø750	174
500	1720	ø750	199

Heat-exchanger coils

L	S1/S2 m²	S1/S2 L	S1/S2 kW (m^3/h)	S1/S2 NL 60°C	S1/S2 Δp, mbar	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
200	0.9/0.6	5.55/3.70	29(0.71)/18(0.44)	4.5/1.5	75/55	692/692	1112/812
300	1.2/0.9	7.40/5.55	53(1.30)/21(0.52)	11/2	120/70	805/805	1170/894
400	1.5/1	9.25/6.17	62(1.52)/27(0.66)	13/2.2	180/80	850/850	1210/952
500	1.8/1.2	11.10/7.40	72(1.77)/34(0.84)	18/2.8	210/90	960/960	1350/1062

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	F mm Rp1"	O mm	P mm Rp1¼"	R mm	T mm Rp½"	U/Uo mm Rp1½"	Y mm Rp1"	Z1/ Z2 / Z3 mm Rp½"
200	Rp1"/202	Rp1"/1168	1037	1340	ø110x180/309	1340	Rp¾"/987	1138	752/309	30	302/752/1138
300	Rp1"/215	Rp1"/1182	1104	1410	ø110x180/320	1410	Rp¾"/957	1170	852/320	30	320/852/1170
400	Rp1¼"/270	Rp1¼"/1240	1054	1480	ø110x180/450	1337	Rp1"/1105	1152	901/450	30	450/901/1452
500	Rp1½"/270	Rp1½"/1453	1206	1710	ø110x180/450	1568	Rp1"/1206	1453	1011/450	30	450/1011/1453

General parameters

L Capacity
H, mm Height
øD, mm Diameter
kg Weight

Inlets / Outlets

A, mm Cold water inlet
B, mm Hot water outlet
G, mm Sensor sleeve for thermostat
F, mm Air vent sleeve
O, mm Inspection opening / flange
P, mm Anode
R, mm Recirculation
T, mm Thermometer
U, mm Sleeve for Electric element: on water tank body
Uo, mm on inspection opening flange
Y, mm Drain sleeve
Z, mm Additional sensor sleeve

Heat-exchanger coils

S1 Lower coil
S2 Upper coil
S1/S2 m² Heat exchange surface S1/S2
S1/S2 L Coil capacity S1/S2
S1/S2 kW (m^3/h) Prolonged power acc. to DIN 4708; 80°C/60°C/45°C, S1/S2
S1/S2 NL 60°C NL- power coefficient at 60°C, S1/S2
S1/S2 Δp, mbar Pressure drop Δp, S1/S2
S1i/S1o mm Inlet/Outlet Lower coil S1
S2i/S2o mm Inlet/Outlet Upper coil S2

Optional equipment FC

L	Solar station	Solar controller
200	✓	✓
300	✓	✓
400	✓	✓
500	✓	✓

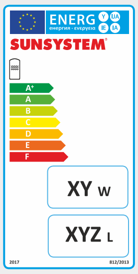
Optional equipment FCA

L	Solar station	Solar controller	Expansion vessel Capacity, L
200	✓	✓	12
300	✓	✓	18
400	✓	✓	24
500	✓	✓	24

SUNSYSTEM

Solar water tanks (external thread)

For direct/indirect heating.
Suitable for solar or/and space-heating systems
Suitable to produce domestic hot water (DHW).
Inlets/outlets with external thread.



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
120 - 500	C

Insulation	High efficiency insulation (DIN 4753-8): rigid PU, thikness 50 mm (up to 500 Liters) Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Complex corrosion protection realized by means of titanium enamel (DIN 4753-3) and anode protection (DIN 4753-6). Convenient inspection opening (180x110 x LK 150). Operating pressure: 10 bar Test pressure: 15 bar Maximum temperature: 95°C
Inlets/ Outlets	Connection for temperature sensor. External thread for following inlets/outlets: cold water, hot water, coils, recirculation. Inlet/Outlet arrangement on 180 angle degrees.
One or two heat-exchanger coils (models SN-D / SON-D)	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 160°C

Base equipment	Thermometer. Sensor bushing. Safety valve, 8 bar. Adjustable foot for models up to 500 L. (See p. 64).
Optional equipment	Kit for electric heating (Electric heating element with integrated Thermostat) (See p. 66).

SN-D
with one coil

Vertical models.

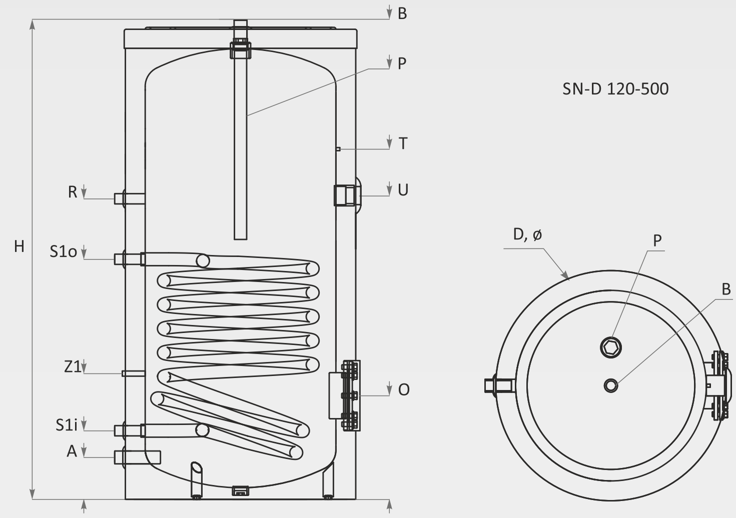
L	Model	Code
120	SN-D 120	01030106202720
150	SN-D 150	01030106202721
200	SN-D 200	01030106202722
300	SN-D 300	01030106202724
400	SN-D 400	01030106202725
500	SN-D 500	01030106202726

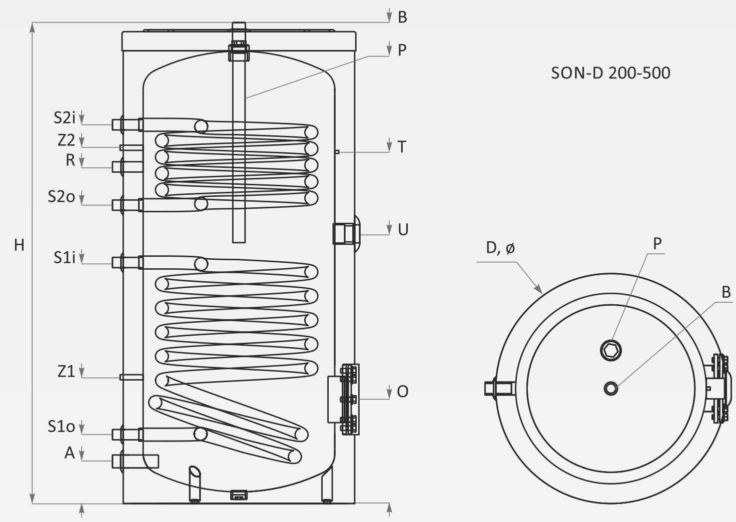
SON-D
with two coils

Vertical models.

L	Model	Code
200	SON-D 200	01030106203722
300	SON-D 300	01030106203724
400	SON-D 400	01030106203725
500	SON-D 500	01030106203726

Technical characteristics.





Vertical models SN-D

General parameters

L	H mm	D mm ∅	kg
120	814	ø600	59
150	969	ø600	66
200	1232	ø600	73
300	1697	ø600	94
400	1660	ø700	151
500	1783	ø750	195

Heat-exchanger coil

L	S1 m²	S1 L	S1 L/h	S1 NL 60°C	S1 Δp, mbar	S1i/S1o mm Rp¾"
120	0.6	3.8	460	1.7	30	450/180
150	0.7	4.4	580	2.1	50	520/180
200	0.9	5.7	710	3.6	70	630/180
300	1.2	7.5	970	8	90	580/180
400	1.5	9.4	1180	11	120	635/205
500	1.8	11.3	1400	14	250	685/205

Inlets / Outlets

L	A mm Rp1"	B mm Rp1"	O mm	P mm Rp1¼"	R mm Rp¾"	T mm M8	U mm Rp1½"	Y mm Rp1"	Z mm 9mm
120	110	814	DN 110 / 272	814	520	601	520	20	330
150	110	969	DN 110 / 272	969	660	756	600	20	330
200	110	1232	DN 110 / 272	1232	780	919	800	20	330
300	110	1697	DN 110 / 272	1697	1045	1384	770	20	380
400	127	1660	DN 110 / 278	1660	1065	1325	770	20	420
500	128	1783	DN 110 / 285	1783	1125	1441	920	20	445

Vertical models SON-D

General parameters

L	H mm	D mm ∅	kg
200	1232	ø600	85
300	1697	ø600	114
400	1660	ø700	166
500	1783	ø750	215

Heat-exchanger coils

L	S1/S2 m²	S1/S2 L	S1/S2 L/h	S1/S2 NL 60°C	S1/S2 Δp, mbar	S1i/S1o mm Rp¾"	S2i/S2o mm Rp¾"
200	0.9/0.6	5.7/3.8	710/410	3.6/1.23	70/30	630/180	950/780
300	1.2/0.8	7.5/5.0	970/605	8/1.8	90/35	580/180	1215/945
400	1.5/1.0	9.4/6.3	1180/720	11/2.1	120/45	635/205	1261/965
500	1.8/1.2	11.3/7.5	1400/830	14/2.5	250/55	685/205	1325/1020

Inlets / Outlets

L	A mm Rp1"	B mm Rp1"	O mm	P mm Rp1¼"	R mm Rp¾"	T mm M8	U mm Rp1½"	Y mm Rp1"	Z1 / Z2 mm 9mm
200	110	1232	DN 110 / 272	1232	780	919	705	20	330 / 930
300	110	1697	DN 110 / 272	1697	1045	1384	770	20	380 /1145
400	127	1660	DN 110 / 278	1660	1065	1325	770	20	420 / 1165
500	128	1783	DN 110 / 285	1783	1125	1441	920	20	445 / 1225

General parameters

L Capacity
H, mm Height
øD, mm Diameter
kg Weight

Inlets / Outlets

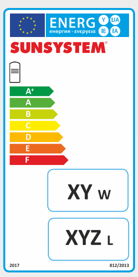
A, mm Cold water inlet
B, mm Hot water outlet
O, mm Inspection opening / flange
P, mm Anode
R, mm Recirculation
T, mm Thermometer
U, mm Sleeve for Electric element on water tank body
Y, mm Drain sleeve
Z, mm Additional sensor sleeve

Heat-exchanger coils

S1 Lower coil
S2 Upper coil
S1/S2, m² Heat exchange surface S1/S2
S1/S2, L Coil capacity S1/S2
S1/S2, L/h Prolonged power acc. to DIN 4708; 10°C/80°C/45°C, S1/S2
S1/S2, NL 60°C NL- power coefficient at 60°C, S1/S2
S1/S2, Δp, mbar Pressure drop Δp, S1/S2
S1i/S1o, mm Inlet/Outlet Lower coil S1
S2i/S2o, mm Inlet/Outlet Upper coil S2

Solar water tanks (external thread)

For direct/indirect heating.
Suitable for solar or/and space-heating systems
Suitable to produce domestic hot water (DHW).
Inlets/outlets with external thread.
With extra-sized heat exchanger surface.



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
120 - 1000	C

Insulation	High efficiency insulation (DIN 4753-8): removable insulation of fleece, with thickness of 100 mm Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Complex corrosion protection realized by means of titanium enamel (DIN 4753-3) and anode protection (DIN 4753-6). Convenient inspection opening (180x110 x LK 150). Operating pressure: 10 bar Test pressure: 15 bar Maximum temperature: 95°C
Inlets/ Outlets	Connection for temperature sensor. External thread, flat seals, for following inlets/outlets: cold water, hot water, coils, recirculation. Inlet/Outlet arrangement on 180 angle degrees.
One or two heat-exchanger coils (models SN-EXT / SON-EXT)	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 160°C

Base equipment	Thermometer. Sensor bushing. Safety valve, 8 bar. Adjustable foot for models up to 500 L. (See p. 64).
Optional equipment	Kit for electric heating (Electric heating element with integrated Thermostat) (See p. 66).

SN EXT
with one coil

Vertical models.

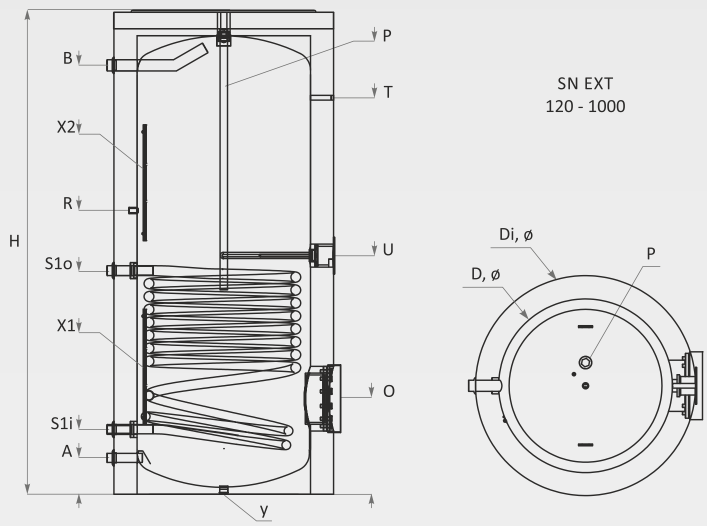
L	Model	Code
120	SN EXT 120	01030106202300
150	SN EXT 150	01030106202301
200	SN EXT 200	01030106202302
300	SN EXT 300	01030106202304
400	SN EXT 400	01030106202305
500	SN EXT 500	01030106202306
750	SN EXT 750	01030106202307
1000	SN EXT 1000	01030106202308

SON EXT
with two coils

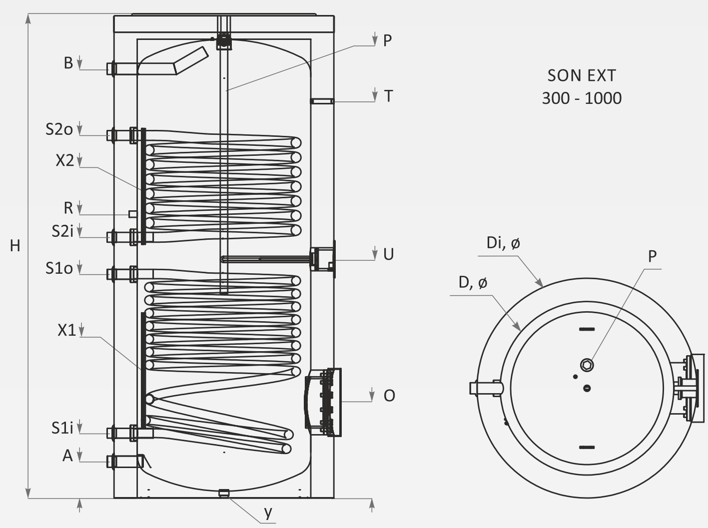
Vertical models.

L	Model	Code
300	SON EXT 300	01030106203314
400	SON EXT 400	01030106203315
500	SON EXT 500	01030106203316
750	SON EXT 750	01030106203317
1000	SON EXT 1000	01030106203318

Technical characteristics.



SN EXT
120 - 1000



SON EXT
300 - 1000

SN EXT witt one coil
SON EXT with two coils

Vertical models SN EXT

General parameters

L	H mm	D / Di mm ∅	kg
120	864	ø500/700	59
150	1022	ø500/700	74
200	1284	ø500/700	89
300	1645	ø550/750	136
400	1732	ø600/800	162
500	1835	ø650/850	189
750	2082	ø750/950	280
1000	2010	ø900/1100	373

Heat-exchanger coil

S1 m^2	S1 L	S1 L/h (kW)	S1 NL 60°C	S1 Δp, mbar	S1i/S1o mm
0.7	4.5	23.6 (0.57)	1.9	30	Rp1"/460/190
1.0	6.3	30.5 (0.75)	2.5	50	Rp1"/550/190
1.4	8.8	38.3 (0.94)	4.8	70	Rp1"/725/190
1.4	8.8	46.0 (1.13)	11	80	Rp1"/675/205
1.7	10.7	51.7 (1.27)	13	130	Rp1"/697/227
2.1	13.2	65.9 (1.62)	18	280	Rp1"/875/225
2.7	22.8	100.5 (2.47)	35	180	Rp1¼"/967/280
2.9	24.5	109.5 (2.69)	41	200	Rp1¼"/920/350

Inlets / Outlets

L	A mm	B mm	O mm	P Rp1¼"	R mm Rp¾"	T M8	U mm Rp1½"	X1/X2
120	Rp1"/110	Rp1"/681	ø 110/250	✓	570	✓	520	✓/✓
150	Rp1"/110	Rp1"/836	ø 110/250	✓	660	✓	600	✓/✓
200	Rp1"/110	Rp1"/1099	ø 110/250	✓	835	✓	800	✓/✓
300	Rp1"/110	Rp1"/1460	ø 110/280	✓	1050	✓	850	✓/✓
400	Rp1"/127	Rp1"/1535	ø 110/302	✓	1122	✓	922	✓/✓
500	Rp1"/130	Rp1"/1630	ø 110/301	✓	1120	✓	920	✓/✓
750	Rp1½"/157	Rp1½"/1855	ø 205/413	✓	1227	✓	1032	✓/✓
1000	Rp1½"/190	Rp1½"/1800	ø 205/415	✓	1240	✓	1016	✓/✓

Vertical models SON EXT

General parameters

L	H mm	D / Di mm ∅	kg
300	1645	ø550/750	156
400	1732	ø600/800	178
500	1835	ø650/850	234
750	2082	ø750/950	344
1000	2010	ø850/1050	400

Heat-exchanger coils

S1/S2 m^2	S1/S2 L	S1/S2 L/h (kW)	S1/S2 NL 60°C	S1/S2 Δp, mbar	S1i/S1o mm	S2i/S2o mm
1.4/1.0	8.8/6.3	46(1.13) / 26.9 (0.66)	11/2	80/40	Rp1"/675/205	Rp1"/1290/950
1.7/1.2	10.7/7.6	51.7 (1.27) / 32.2 (0.79)	13/2.2	130/50	Rp1"/697/227	Rp1"/1362/1022
2.1/1.5	13.2/9.4	65.9 (1.62) / 36.8 (0.91)	18/2.8	280/60	Rp1"/875/225	Rp1"/1490/1020
2.7/1.9	22.8/16.0	100.5 (2.47) / 49.7 (1.22)	35/13	180/40	Rp1¼"/967/280	Rp1¼"/1567/1127
2.9/1.9	24.5/16.0	109.5 (2.69) / 497 (1.22)	41/13	200/40	Rp1¼"/920/350	Rp1¼"/1525/1140

Inlets / Outlets

L	A mm	B mm	O mm	P Rp1¼"	R mm Rp¾"	T M8	U mm Rp1½"	X1/X2
300	Rp1"/110	Rp1"/1460	ø 110/280	✓	1050	✓	850	✓/✓
400	Rp1"/127	Rp1"/1535	ø 110/302	✓	1122	✓	922	✓/✓
500	Rp1"/130	Rp1"/1630	ø 110/300	✓	1120	✓	920	✓/✓
750	Rp1½"/157	Rp1½"/1855	ø 205/413	✓	1227	✓	1032	✓/✓
1000	Rp1½"/190	Rp1½"/1800	ø 205/415	✓	1240	✓	1016	✓/✓

General parameters

- **L** Capacity
- **H, mm** Height
- **øD / Di, mm** Diameter without insulation / with insulation
- **kg** Weight

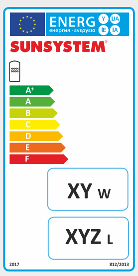
Inlets / Outlets

- **A, mm** Cold water inlet
- **B, mm** Hot water outlet
- **O, mm** Inspection opening / flange
- **P, mm** Anode
- **R, mm** Recirculation
- **T, mm** Thermometer
- **U, mm** Sleeve for Electric element on water tank body
- **X** Rail for sensor multi level mounting

Heat-exchanger coils

- **S1** Lower coil
- **S2** Upper coil
- **S1/S2, m^2** Heat exchange surface S1/S2
- **S1/S2, L** Coil capacity S1/S2
- **S1/S2, L/h (kW)** Prolonged power acc. to DIN 4708; 10°C/80°C/45°C, S1/S2
- **S1/S2, NL 60°C** NL- power coefficient at 60°C, S1/S2
- **S1/S2, Δp, mbar** Pressure drop Δp, S1/S2
- **S1i/S1o, mm** Inlet/Outlet Lower coil S1
- **S2i/S2o, mm** Inlet/Outlet Upper coil S2

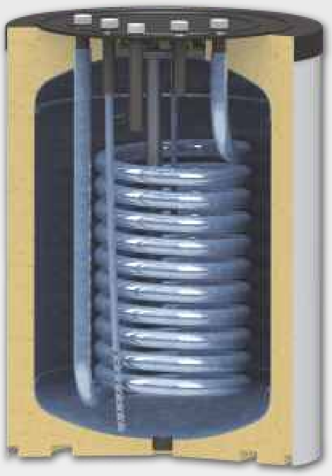
Compact water tank for domestic hot water.
Inlets/outlets with external thread.
The flange and all connections are located
on the top of water tank.
Suitable for solar or/and space-heating systems.

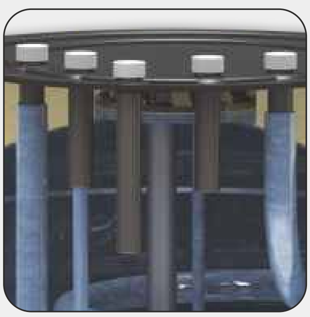


Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
120 - 200	C

Insulation	High efficiency insulation (DIN 4753-8): rigid PU, thickness 50 mm. Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Complex corrosion protection realized by means of titanium enamel (DIN 4753-3) and anode protection (DIN 4753-6). Convenient inspection opening. (210 x 150 x LK 180), located on the top of water tank. Operating pressure: 10 bar Test pressure: 15 bar Maximum temperature: 95°C
Inlets/ Outlets	All connections are located on the top of water tank. External thread, flat seals, for following inlets/outlets: cold water, hot water, coils, recirculation.
One heat-exchanger coil	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 160°C

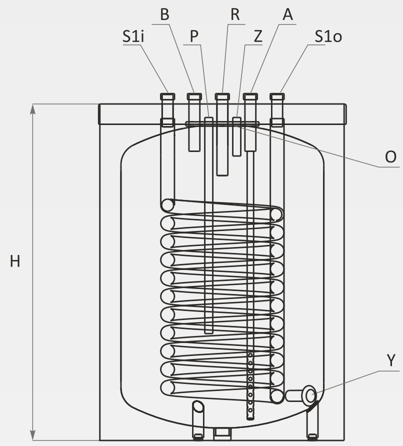


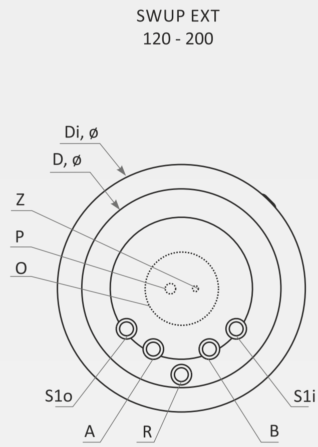


SWUP EXT
with one coil

Vertical models

L	Model	Code
120	SWUP EXT 120	01030107202020
150	SWUP EXT 150	01030107202021
200	SWUP EXT 200	01030107202022





General parameters

L	H mm	D / Di mm ∅	kg
120	853	ø500/600	88
150	1010	ø500/600	93
200	1300	ø500/600	104

Vertical models SWUP EXT

Heat-exchanger coil

L	S1 m²	S1 L	S1 L/h (kW)	S1 NL 60°C	S1 Δp, mbar	S1 m³/h	S1i/S1o mm
120	1.2	7.5	980 (39.9)	1.8	100	1.7	Rp¾"
150	1.3	8.2	1100 (44.8)	2.1	120	1.9	Rp¾"
200	1.32	8.7	1130 (45.7)	2.2	125	1.9	Rp¾"

Inlets / Outlets

L	A mm	B mm	O mm	P M8	R mm	Y mm	Z 9 mm
120	Rp¾"	Rp¾"	DN 100	✓	Rp¾"	Rp½"	✓
150	Rp¾"	Rp¾"	DN 140	✓	Rp¾"	Rp½"	✓
200	Rp¾"	Rp¾"	DN 140	✓	Rp¾"	Rp½"	✓

General parameters

L Capacity
H, mm Height
øD / Di, mm Diameter without insulation / with insulation
kg Weight

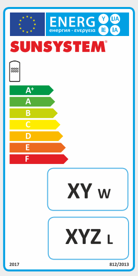
Inlets / Outlets

A, mm Cold water inlet
B, mm Hot water outlet
O, mm Inspection opening / flange
P, mm Anode
R, mm Recirculation
Y, mm Drain sleeve
Z, mm Pipe for sensor

Heat-exchanger coil

S1 Heat-exchanger coil
S1, m² Heat exchange surface S1
S1, L Coil capacity S1
S1/S2, L/h (kW) Prolonged power acc. to DIN 4708; 10°C/80°C/45°C, S1
S1/S2, NL 60°C NL- power coefficient at 60°C, S1
S1/S2, Δp, mbar Pressure drop Δp, S1
S1, m³/h Flow rate of coil
S1i/S1o, mm Inlet/Outlet of coil S1

With extra-sized heat exchanger surface.
Suitable for solar water heating, space-heating,
and heat pump systems with large number of consumers.



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
150 - 500	C

Insulation	High efficiency insulation (DIN 4753-8): rigid PU, thickness 50 mm. Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Complex corrosion protection realized by means of titanium enamel (DIN 4753-3) and anode protection (DIN 4753-6). Convenient inspection opening. Operating pressure: 10 bar Test pressure: 15 bar Maximum temperature: 95°C
Inlets / Outlets	Connections for temperature sensor. All threads are internal. Inlet/Outlet arrangement on 45 angle degrees.
One or two heat-exchanger coils (models SWPN / SWPN L/ SWP2N)	Enables the tank to utilize an external sources of renewable energy. The height of SWP NL model is compensated by its smaller diameter, heat exchanger coil with increased surface. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

Base equipment	Thermometer. Sensor bushing. Safety valve, 8 bar. Adjustable foot. (See p. 64).
Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

SWPN L
with one coil

Vertical models.

L	Model	Code
300	SWPN L 300	01030107202014
400	SWPN L 400	01030107202015
500	SWPN L 500	01030107202016

SWPN
with one coil

Vertical models.

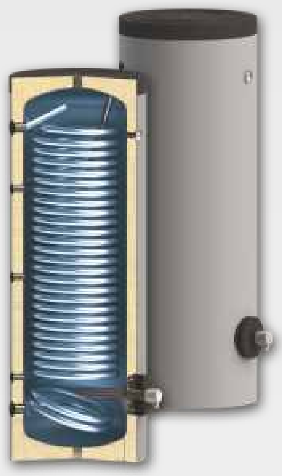
L	Model	Code
150	SWPN 150	01030107202001
200	SWPN 200	01030107202002
300	SWPN 300	01030107202004
400	SWPN 400	01030107202005
500	SWPN 500	01030107202006

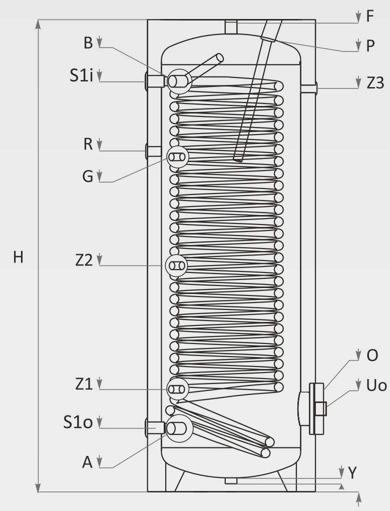
SWP2N
with two coils

Vertical models.

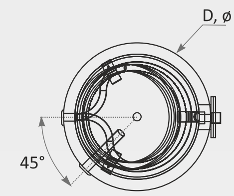
L	Model	Code
300	SWP2N 300	01030107203004
400	SWP2N 400	01030107203005
500	SWP2N 500	01030107203006

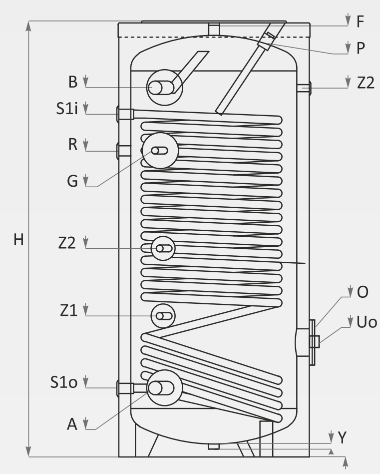
Technical characteristics.



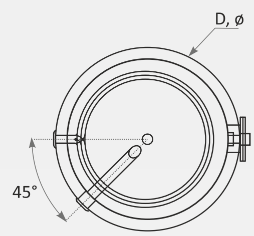


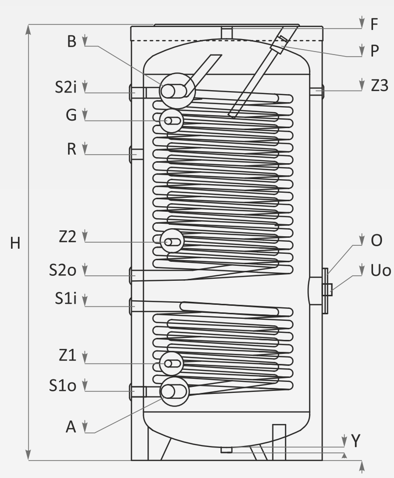
SWP NL 300-500



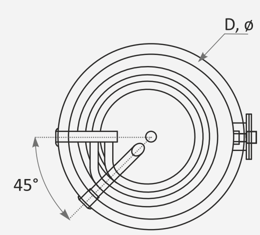


SWP N 150-500





SWP 2N 300 - 500



Vertical models SWPN L

General parameters

L	H mm	D mm ∅	kg
300	1695	ø610	131
400	1669	ø710	175
500	1895	ø750	196

Heat-exchanger coil

S1 m²	S1 L	S1 kW (m³/h)	S1 Δp, mbar	S1i/S1o mm Rp1"
3.3	20.4	90 (2.21)	230	1476/228
3.9	23.6	115 (2.70)	379	1390/260
4.6	28.3	130 (3.19)	569	1626/250

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	F mm Rp1"	O mm	P mm Rp1¼"	R mm	Uo mm Rp1½"	Y mm Rp1"	Z1/ Z2 / Z3 mm Rp½"
300	Rp1"/228	Rp1"/1476	1220	1695	ø110x180/298	1695	Rp¾"/1224	298	30	368/813/1204
400	Rp1¼"/260	Rp1¼"/1420	1176	1669	ø110x180/345	1524	Rp1"/1180	345	30	420/695/1100
500	Rp1½"/250	Rp1½"/1643	1298	1895	ø110x180/345	1750	Rp1"/1392	345	30	433/966/1372

Vertical models SWPN

General parameters

L	H mm	D mm ∅	kg
150	1070	ø 560	70
200	1340	ø 560	90
300	1420	ø 660	121
400	1470	ø 750	165
500	1720	ø 750	190

Heat-exchanger coil

S1 m²	S1 L	S1 kW (m³/h)	S1 NL 60°C	S1 Δp, mbar	S1i/S1o mm Rp1"
1.4	8.6	40.4 (0.99)	6	120	872/182
1.9	11.7	51 (1.25)	8	150	1122/182
2.3	14.8	62 (1.52)	20	400	1155/215
2.8	17.2	75 (1.84)	27	600	1210/270
3.3	20	84 (2.06)	34	710	1350/270

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	F mm Rp1"	O mm	P mm Rp1¼"	R mm	Uo mm Rp1½"	Y mm Rp1"	Z1/ Z2 /Z3 mm Rp½"
150	Rp1"/182	Rp1"/895	697	1070	ø110x180/309	1070	G¾"/652	309	30	410/ - /868
200	Rp1"/182	Rp1"/1160	967	1340	ø110x180/309	1340	G¾"/922	309	30	410/650/1138
300	Rp1"/215	Rp1"/1182	1054	1410	ø110x180/320	1410	G¾"/1007	320	30	430/700/1170
400	Rp1¼"/270	Rp1¼"/1240	1054	1460	ø110x180/450	1318	G1"/1105	450	30	565/720/1204
500	Rp1½"/270	Rp1½"/1453	1206	1710	ø110x180/450	1568	G1"/1206	450	30	560/800/1453

Vertical models SWP 2N

General parameters

L	H mm	D mm ∅	kg
300	1420	ø660	145
400	1470	ø750	198
500	1720	ø750	236

Heat-exchanger coils

S1/S2 m²	S1/S2 L	S1 kW (m³/h)	S1 NL 60°C	S1 Δp, mbar	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
1.2/2.7	6.5/16.1	53(1.30) / 75(1.84)	11/17	55/70	456/215	1155/578
1.5/3.2	10/18.9	62(1.52) / 82(2.01)	14/22	70/85	562/270	1210/678
1.8/4.36	11.8/26	72(1.77) / 94(2.31)	18/29	90/120	606/270	1446/726

Inlets / Outlets

L	A mm	B mm	G mm Rp½"	F mm Rp1"	O mm	P mm Rp1¼"	R mm	Uo mm Rp1½"	Y mm Rp1"	Z1/ Z2 / Z3 mm Rp½"
300	Rp1"/215	Rp1"/1182	1170	1410	ø110x180/516	1410	Rp¾"/1007	516	30	697/1070/325
400	Rp1¼"/270	Rp1¼"/1240	1152	1460	ø110x180/618	1318	Rp1"/1105	618	30	755/1130/380
500	Rp1½"/270	Rp1½"/1475	1453	1710	ø110x180/666	1568	Rp1"/1206	666	30	858/1336/380

General parameters

- **L** Capacity
- **H, mm** Height
- **øD, mm** Diameter
- **kg** Weight

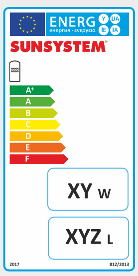
Inlets / Outlets

- **A, mm** Cold water inlet
- **B, mm** Hot water outlet
- **G, mm** Sensor sleeve for thermostat
- **F, mm** Air vent sleeve
- **O, mm** Inspection opening / flange
- **P, mm** Anode
- **R, mm** Recirculation
- **Uo, mm** Sleeve for Electric element on inspection opening flange
- **Y, mm** Drain sleeve
- **Z, mm** Additional sensor sleeve

Heat-exchanger coils

- **S1** Lower coil
- **S2** Upper coil
- **S1/S2 m²** Heat exchange surface S1/S2
- **S1/S2 L** Coil capacity S1/S2
- **S1/S2 kW (m³/h)** Prolonged power acc. to DIN 4708; 80°C/60°C/45°C, S1/S2
- **S1/S2 NL 60°C** NL- power coefficient at 60°C, S1/S2
- **S1/S2 Δp, mbar** Pressure drop Δp, S1/S2
- **S1i/S1o mm** Inlet/Outlet Lower coil S1
- **S2i/S2o mm** Inlet/Outlet Upper coil S2

Accumulates the heat generated by boiler.
Recommended for each space-heating system.
Ensures optimum operating mode of biomass boiler, permitting its functioning at nominal power output even when the heating system does not need all heat energy produced thereby. Produced heat is accumulated and stored inside the buffer tank and can be used even when the boiler itself has cooled down.



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
300 - 3000	C *
300 - 3000	D *
300 - 3000	E *

*The class depends of type of insulation.

Insulation	High efficiency insulation (DIN 4753-8): removable insulation of fleece, with thickness of 100 mm. Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Primer coated on the outside of the tank. Operating pressure: 3 bar Maximum temperature: 95°C
Inlets / Outlets	Connections for temperature sensor. All threads are internal. **Inlet/Outlet arrangement on 180 angle degrees.**
One or two heat-exchanger coils (models PR/ PR 2)	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

P
without coil

Vertical models.

L	Model	Code
300	P 300	09060015201003
500	P 500	09060015201004
800	P 800	09060015201005
1000	P 1000	09060015201006
1500	P 1500	09060015201007
2000	P 2000	09060015201048
2500	P 2500	09060015201049
3000	P 3000	09060015201010
5000	P 5000	09060015201012

PR
with one coil

Vertical models.

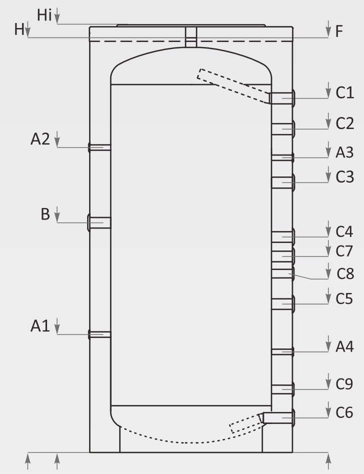
L	Model	Code
300	PR 300	09060015202003
500	PR 500	09060015202004
800	PR 800	09060015202005
1000	PR 1000	09060015202006
1500	PR 1500	09060015202007
2000	PR 2000	09060015202048
2500	PR 2500	09060015202049
3000	PR 3000	09060015202010

PR 2
with two coils

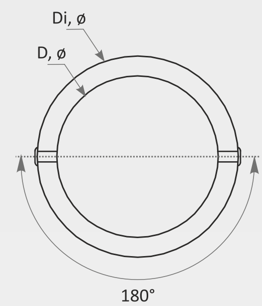
Vertical models.

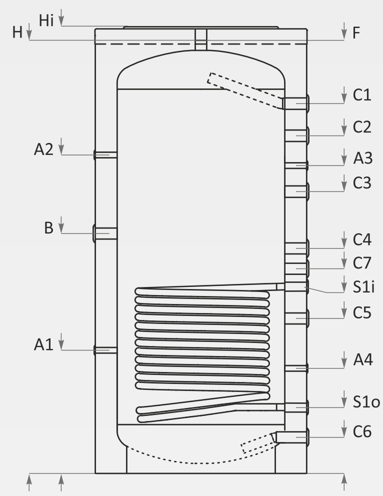
L	Model	Code
300	PR2 300	09060015203003
500	PR2 500	09060015203004
800	PR2 800	09060015203005
1000	PR2 1000	09060015203006
1500	PR2 1500	09060015203007
2000	PR2 2000	09060015203048
2500	PR2 2500	09060015203049
3000	PR2 3000	09060015203010

Technical characteristics.

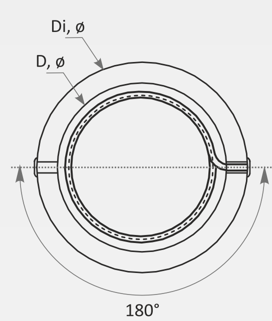


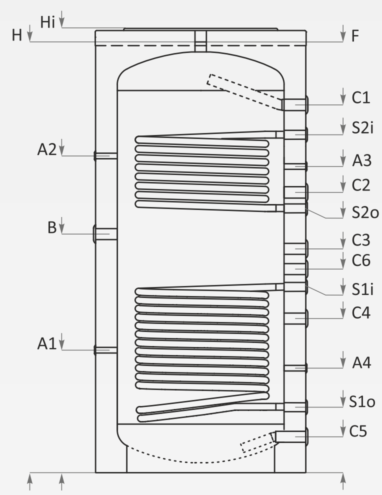
P 300 - 5000



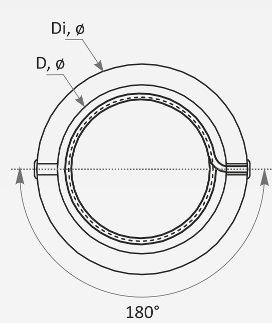


PR 300 - 3000





PR2 300 - 3000



General parameters

L	H/Hi mm	D/Di mm ∅	kW
300	1410/1460	ø550/750	6-10
500	1610/1660	ø650/850	10-17
800	1860/1910	ø790/990	15-27
1000	2040/2090	ø790/990	18-33
1500	2150/2220	ø1000/1200	27-50
2000	2132/2182	ø1200/1400	36-67
2500	2482/2532	ø1250/1450	46-84
3000	2246/2296	ø1400/1600	55-100
5000	2940/2990	ø1600/1800	91-167

Heat-exchanger coils

	S1/S2 m²	S1/S2 L	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
	1.0/0.5	6.2/3.1	660/260	1080/880
	1.7/1.0	10.5/6.2	770/250	1270/990
	2.9/1.8	17.9/11.1	820/310	1390/1072
	3.0/2.0	18.5/12.3	880/310	1520/1172
	3.4/2.4	21/14.8	895/375	1635/1225
	4.0/2.4	24.6/14.8	980/380	1645/1285
	4.0/2.4	24.6/14.8	980/380	1885/1525
	4.9/2.8	29.9/17.1	1082/477	1660/1310

P - without coil

Inlets / Outlets

L	kg	kg,i	A1 mm Rp½"	A2 mm Rp½"	A3 mm Rp½"	A4 mm Rp½"	B mm Rp1½"	C1 mm Rp1½"	C2 mm Rp1½"	C3 mm Rp1½"	C4 mm Rp1½"	C5 mm Rp1½"	C6 mm Rp1½"	C7 mm	C8 mm Rp1"	C9 mm Rp1"	F mm Rp1½"
300	60	9.5	410	1060	1010	420	760	1170		880	770	540	150		660	260	1410
500	90	12.3	410	1120	1120	460	790	1370		990	880	620	150		770	250	1610
800	118	16.4	570	1290	1290	465	920	1573	1390		980	670	170		820	310	1860
1000	133	18	580	1500	1450	495	1130	1742	1520		1060	730	170		880	310	2040
1500	206	23.2	875	1500	1525	520	1130	1808	1635	1305	1085	765	235	Rp½"/975	895	375	2150
2000	273	26.5	920	1645	1625	500	1170	1775		1420	1170	735	230		980	380	2132
2500	305	30	920	1645	1625	500	1170	2126			1420	735	230	Rp1½"/1170	980	380	2482
3000	402	35	910	1660	1590	610	1184	1797		1474	1184	864	344		1082	477	2246
5000	585	40	951	2001	2231	691	1505	2438		2115	1735	1155	385		1373	518	2938

PR - with one coil

Inlets / Outlets

L	kg	kg,i	A1 mm Rp½"	A2 mm Rp½"	A3 mm Rp½"	A4 mm Rp½"	B mm Rp1½"	C1 mm Rp1½"	C2 mm Rp1½"	C3 mm Rp1½"	C4 mm Rp1½"	C5 mm Rp1½"	C6 mm Rp1½"	C7 mm	F mm Rp1½"
300	78	9.5	410	1060	1010	420	760	1170		880	770	540	150		1410
500	104	12.3	410	1120	1120	460	790	1370		990	880	620	150		1610
800	152	16.4	570	1290	1290	465	920	1573	1390		980	670	170		1860
1000	180	18	580	1500	1450	495	1130	1742	1520		1060	730	170		2040
1500	272	23.2	875	1500	1525	520	1130	1808	1635	1305	1085	765	235	Rp½"/975	2150
2000	330	26.5	920	1645	1625	500	1170	1775		1420	1170	735	230		2132
2500	362	30	920	1645	1625	500	1170	2126			1420	735	230	Rp1½"/1170	2482
3000	476	35	910	1660	1590	610	1184	1797		1474	1184	864	344		2246

PR2 - with two coils

Inlets / Outlets

L	kg	kg,i	A1 mm Rp½"	A2 mm Rp½"	A3 mm Rp½"	A4 mm Rp½"	B mm Rp1½"	C1 mm Rp1½"	C2 mm Rp1½"	C3 mm Rp1½"	C4 mm Rp1½"	C5 mm Rp1½"	C6 mm	F mm Rp1½"
300	83	9.5	410	1060	1010	420	760	1170	880	770	540	150		1410
500	118	12.3	410	1120	1120	460	790	1370	990	880	620	150		1610
800	189	16.4	570	1290	1290	465	920	1573		980	670	170		1860
1000	203	18	580	1500	1450	495	1130	1742		1060	730	170		2040
1500	306	23.2	875	1500	1525	520	1130	1808	1305	1085	765	235	Rp½"/975	2150
2000	366	26.5	920	1645	1625	500	1170	1775	1420	1170	735	230		2132
2500	400	30	920	1645	1625	500	1170	2126		1420	735	230	Rp1½"/1170	2482
3000	520	35	910	1660	1590	610	1184	1797	1474	1184	864	344		2246

General parameters

- **L** Capacity
- **H / Hi, mm** Height without insulation / with insulation
- **øD /Di, mm** Diameter without insulation / with insulation
- **kg / kg, i** Weight without insulation / with insulation
- **kW** Recommended boiler size, connected to buffer tank

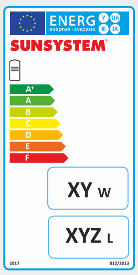
Inlets / Outlets

- **A, mm** Sensor sleeve
- **B, mm** Sleeve for Electric heating element
- **C, mm** Heat carrier
- **F, mm** Air vent sleeve

Heat-exchanger coils

- **S1** Lower coil
- **S2** Upper coil
- **S1/S2 m²** Heat exchange surface S1/S2
- **S1/S2 L** Coil capacity S1/S2
- **S1i/S1o mm** Inlet/Outlet Lower coil S1
- **S2i/S2o mm** Inlet/Outlet Upper coil S2

Buffer tank with compact size and volume.
Accumulates the heat generated by boiler.
Recommended for each space-heating system.
Ensures optimum operating mode of biomass boiler, permitting its functioning at nominal power output even when the heating system does not need all heat energy produced thereby. Produced heat is accumulated and stored inside the buffer tank and can be used even when the boiler itself has cooled down.



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
150 - 200	C

Insulation	High efficiency insulation (DIN 4753-8): rigid PU, thickness 50 mm. Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Operating pressure: 3 bar Maximum temperature: 95°C
Inlets / Outlets	Connections for temperature sensor. All threads are internal. **Inlet/Outlet arrangement on 100 angle degrees.**
One or two heat-exchanger coils (models PS1/ PS2)	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

PS
without coil

Vertical models.

L	Model	Code
150	PS 150	01060016201001
200	PS 200	01060016201002

PS1
with one coil

Vertical models.

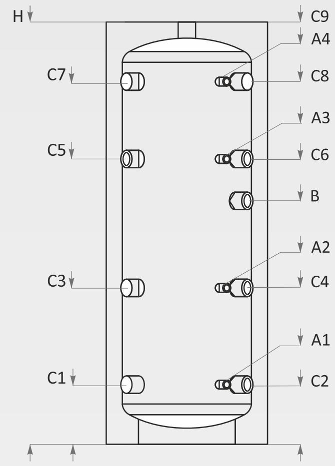
L	Model	Code
150	PS1 150	01060016202001
200	PS1 200	01060016202002

PS2
with two coils

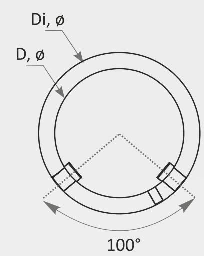
Vertical models.

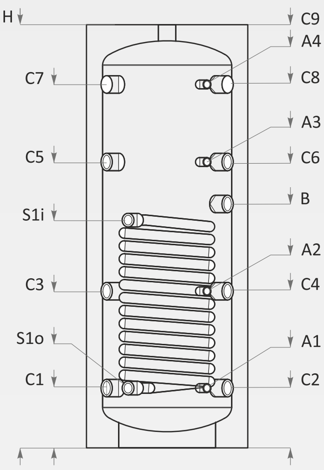
L	Model	Code
150	PS2 150	01060016203001
200	PS2 200	01060016203002

Technical characteristics.

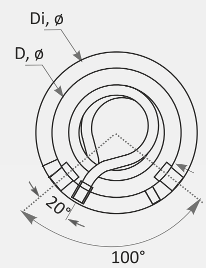


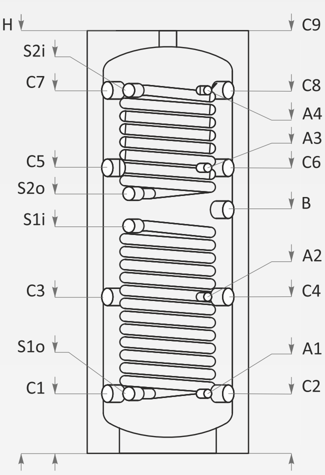
PS 150-200



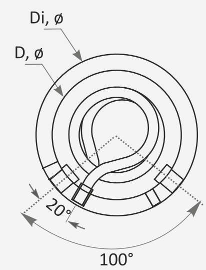


PS1 150-200





PS2 150-200



General parameters

L	H mm	D/Di mm ∅	kW
150	1310	ø400/500	6-10
200	1710	ø400/500	6-10

Heat-exchanger coils

S1/S2 m²	S1/S2 L	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
1.1/0.66	6.8/4.1	705/185	945/ 185
1.6/1.0	9.9/6.2	1125/805	1525/1045

PS - without coil

L	kg
150	38
200	47

Inlets / Outlets

A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1½”	C7 mm Rp1½”	C8 mm Rp1½”	C9 mm Rp1½”
185	485	885	1125	755	185	185	485	485	885	885	1125	1125	1310
185	725	1165	1525	995	185	185	725	725	1165	1165	1525	1525	1710

PS1 - with one coil

L	kg
150	56
200	74

Inlets / Outlets

A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1½”	C7 mm Rp1½”	C8 mm Rp1½”	C9 mm Rp1½”
185	485	885	1125	755	185	185	485	485	885	885	1125	1125	1310
185	725	1165	1525	995	185	185	725	725	1165	1165	1525	1525	1710

PS2 - with two coils

L	kg
150	69
200	91

Inlets / Outlets

A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1½”	C7 mm Rp1½”	C8 mm Rp1½”	C9 mm Rp1½”
185	485	885	1125	755	185	185	485	485	885	885	1125	1125	1310
185	725	1165	1525	995	185	185	725	725	1165	1165	1525	1525	1710

General parameters

L Capacity
H, mm Height
øD /Di, mm Diameter without insulation / with insulation
kg Weight
kW Recommended boiler size, connected to buffer tank

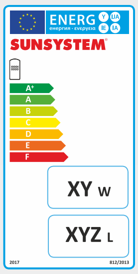
Inlets / Outlets

A, mm Sensor sleeve
B, mm Sleeve for Electric heating element
C, mm Heat carrier
F, mm Air vent sleeve

Heat-exchanger coils

S1 Lower coil
S2 Upper coil
S1/S2 m² Heat exchange surface S1/S2
S1/S2 L Coil capacity S1/S2
S1i/S1o mm Inlet/Outlet Lower coil S1
S2i/S2o mm Inlet/Outlet Upper coil S2

Accumulates the heat generated by boiler.
Recommended for each space-heating system.
Ensures optimum operating mode of biomass boiler, permitting its functioning at nominal power output even when the heating system does not need all heat energy produced thereby. Produced heat is accumulated and stored inside the buffer tank and can be used even when the boiler itself has cooled down.



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
300 - 5000	C *
300 - 5000	D *
300 - 5000	E *

*The class depends of type of insulation.

Insulation	High efficiency insulation (DIN 4753-8): removable insulation of fleece, with thickness of 100 mm. or removable insulation of rigid PU, with thickness of 100 mm. Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Primer coated on the outside of the tank. Operating pressure: 3 bar Maximum temperature: 95°C
Inlets / Outlets	Up to 5 pcs. Rp½" sensor sleeves. Up to 13 pcs. Rp1" or Rp1½" inlet/outlet sleeves -connections to heating boilers, indirect heating of domestic hot water (DHW) and solar system. All threads are internal. **Inlet/Outlet arrangement on 90 angle degrees for easy and convenient installation.** Possible installation in the corner of boiler room.
One or two heat-exchanger coils (models PBM R/H* PBM R2 /H*)	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

PBM
without coil

Vertical models. Insulation: fleece.

L	Model	Code
300	PBM 300 FL	09060015202723
500	PBM 500 FL	09060015202724
800	PBM 800 FL	09060015202725
1000	PBM 1000 FL	09060015202726
1500	PBM 1500 FL	09060015202727
2000	PBM 2000 FL	09060015202728
3000	PBM 3000 FL	09060015202730
4000	PBM 4000 FL	09060015202731
5000	PBM 5000 FL	09060015202732

PBM H
without coil

Vertical models. Insulation: rigid PU.

L	Model	Code
800	PBM 800 H	09060015201825
1000	PBM 1000 H	09060015201826

PBM R
with one coil

Vertical models. Insulation: fleece.

L	Model	Code
300	PBM-R 300 FL	09060015202723
500	PBM-R 500 FL	09060015202724
800	PBM-R 800 FL	09060015202725
1000	PBM-R 1000 FL	09060015202726
1500	PBM-R 1500 FL	09060015202727
2000	PBM-R 2000 FL	09060015202728
3000	PBM-R 3000 FL	09060015202730
4000	PBM-R 4000 FL	09060015202731
5000	PBM-R 5000 FL	09060015202732

PBM R H
with one coil

Vertical models. Insulation: rigid PU.

L	Model	Code
800	PBM-R 800 H	09060015202825
1000	PBM-R 1000 H	09060015202826

PBM R2
with two coils

Vertical models. Insulation: fleece.

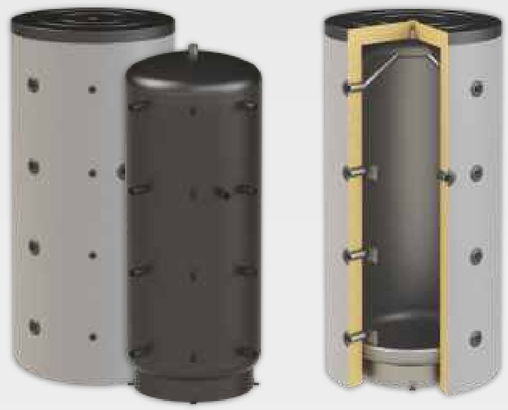
L	Model	Code
300	PBM-R2 300 FL	09060015203723
500	PBM-R2 500 FL	09060015203724
800	PBM-R2 800 FL	09060015203725
1000	PBM-R2 1000 FL	09060015203726
1500	PBM-R2 1500 FL	09060015203727
2000	PBM-R2 2000 FL	09060015203728
3000	PBM-R2 3000 FL	09060015203730
4000	PBM-R2 4000 FL	09060015203731
5000	PBM-R2 5000 FL	09060015203732

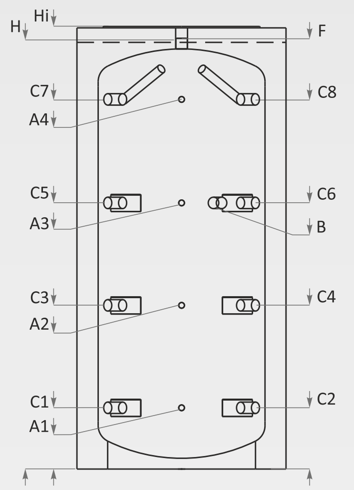
PBM R2 H
with two coils

Vertical models. Insulation: rigid PU.

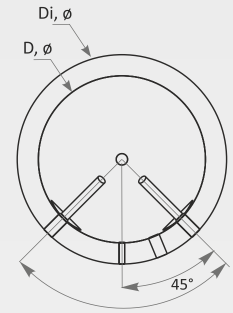
L	Model	Code
800	PBM-R2 800 H	09060015203835
1000	PBM-R2 1000 H	09060015203836

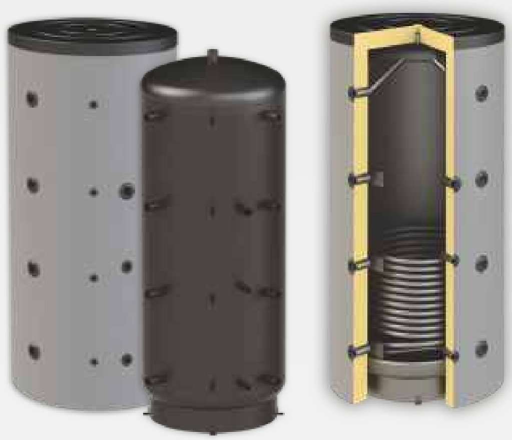
Technical characteristics.

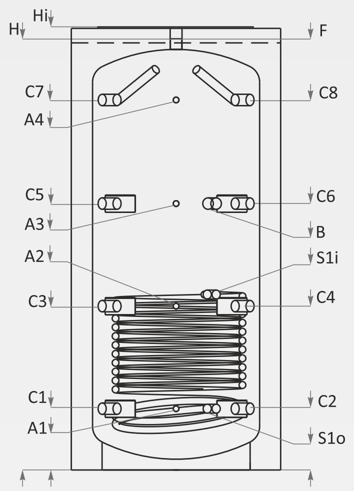




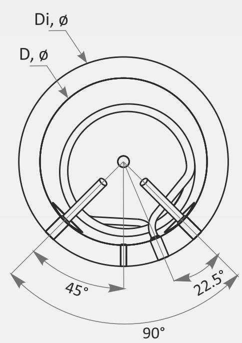
PBM /PBM H
300 - 5000

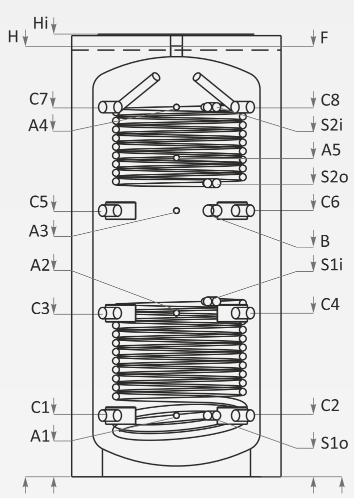




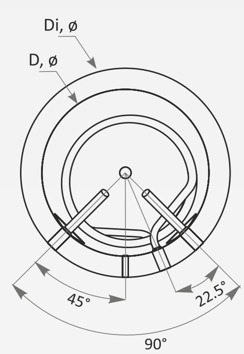


PBM R /PBM R H
300 - 5000





PBM R 2 /PBM R2 H
300 - 5000



General parameters

L	H/Hi mm	D/Di mm Ø	kW
300	1410/1460	ø550/750	6-10
500	1700/1750	ø650/850	10-17
800	1838/1888	ø790/990	15-27
1000	2039/2089	ø790/990	18-33
1500	2140/2290	ø1000/1200	27-50
2000	2131/2181	ø1200/1400	36-67
3000	2713/2763	ø1250/1450	46-84
4000	2746/2796	ø1400/1600	73-133
5000	2841/2891	ø1600/1800	82-151

Heat-exchanger coil

S1/S2 m²	S1/S2 L	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
0.9/0.4	5.6/2.6	640/240	1170/ 970
1.6/1.1	9.8/6.6	689/239	1451/1121
2.3/1.71	14/10.5	785/290	1550/1190
2.48/1.71	15.2/10.5	830/290	1750/1390
3.4/1.93	20.65/11.85	939/339	1821/1506
4.9/2.0	30/12.4	1158/388	1768/1503
4.6/3.05	27.95/18.7	1146/396	2178/1778
5.2/3.5	32/21.4	1118/438	2230/1790
6.1/4.2	37.2/25.6	1152/ 502	2304/1854

PBM / PBM H - without coil

Inlets / Outlets

L	kg	kg,i	A1 mm Rp½"	A2 mm Rp½"	A3 mm Rp½"	A4 mm Rp½"	B mm Rp1½"	C1 mm Rp1½"	C2 mm Rp1½"	C3 mm Rp1½"	C4 mm Rp1½"	C5 mm Rp1½"	C6 mm Rp1½"	C7 mm Rp1½"	C8 mm Rp1½"	F mm Rp1½"
300	60	10	240	550	860	1170	860	240	240	550	550	860	860	1170	1170	1410
500	81	12	239	643	997	1451	997	239	239	643	643	997	997	1451	1451	1700
800	108	17	290	710	1090	1750	1090	290	290	710	710	1090	1090	1750	1750	2039
1000	126	18	290	775	1260	1750	1260	290	290	775	775	1260	1260	1750	1750	2039
1500	205	23	339	833	1327	1821	1260	339	339	833	833	1327	1327	1821	1821	2140
2000	254	27	388	848	1308	1768	1308	388	388	848	848	1308	1308	1768	1768	2131
3000	337	35	396	1037	1678	2319	1678	396	396	1037	1037	1678	1678	2319	2319	2713
4000	474	40	438	1064	1690	2316	1690	438	438	1064	1064	1690	1690	2316	2316	2746
5000	571	42	502	1128	1754	2380	1754	502	502	1128	1128	1754	1754	2380	2380	2841

PBM R / PBM R H -with one coil

Inlets / Outlets

L	kg	kg,i	A1 mm Rp½"	A2 mm Rp½"	A3 mm Rp½"	A4 mm Rp½"	B mm Rp1½"	C1 mm Rp1½"	C2 mm Rp1½"	C3 mm Rp1½"	C4 mm Rp1½"	C5 mm Rp1½"	C6 mm Rp1½"	C7 mm Rp1½"	C8 mm Rp1½"	F mm Rp1½"
300	75	10	240	550	860	1170	860	240	240	550	550	860	860	1170	1170	1410
500	106	12	239	643	997	1451	997	239	239	643	643	997	997	1451	1451	1700
800	144	17	290	710	1090	1750	1090	290	290	710	710	1090	1090	1750	1750	2039
1000	164	18	290	775	1260	1750	1260	290	290	775	775	1260	1260	1750	1750	2039
1500	257	23	339	833	1327	1821	1260	339	339	833	833	1327	1327	1821	1821	2140
2000	329	27	388	848	1308	1768	1308	388	388	848	848	1308	1308	1768	1768	2131
3000	406	35	396	1037	1678	2319	1678	396	396	1037	1037	1678	1678	2319	2319	2713
4000	555	40	438	1064	1690	2316	1690	438	438	1064	1064	1690	1690	2316	2316	2746
5000	665	42	502	1128	1754	2380	1754	502	502	1128	1128	1754	1754	2380	2380	2841

PBM R 2 / PBM R 2 H - with two coils

Inlets / Outlets

L	kg	kg,i	A1 mm Rp½"	A2 mm Rp½"	A3 mm Rp½"	A4 mm Rp½"	A5 mm Rp½"	B mm Rp1½"	C1 mm Rp1½"	C2 mm Rp1½"	C3 mm Rp1½"	C4 mm Rp1½"	C5 mm Rp1½"	C6 mm Rp1½"	C7 mm Rp1½"	C8 mm Rp1½"	F mm Rp1½"
300	82	10	240	550	860	1170	1037	860	240	240	550	550	860	860	1170	1170	1410
500	124	12	239	643	997	1451	1231	997	239	239	643	643	997	997	1451	1451	1700
800	171	17	290	710	1090	1750	1310	1090	290	290	710	710	1090	1090	1750	1750	2039
1000	191	18	290	775	1260	1750	1510	1260	290	290	775	775	1260	1260	1750	1750	2039
1500	287	23	339	833	1327	1821	1611	1260	339	339	833	833	1327	1327	1821	1821	2140
2000	360	27	388	848	1308	1768	1591	1308	388	388	848	848	1308	1308	1768	1768	2131
3000	453	35	396	1037	1678	2319	1893	1678	396	396	1037	1037	1678	1678	2319	2319	2713
4000	609	40	438	1064	1690	2316	1939	1690	438	438	1064	1064	1690	1690	2316	2316	2746
5000	729	42	502	1128	1754	2380	2002	1754	502	502	1128	1128	1754	1754	2380	2380	2841

General parameters

- **L** Capacity
- **H / Hi, mm** Height without insulation / with insulation
- **øD /Di, mm** Diameter without insulation / with insulation
- **kg / kg, i** Weight without insulation / with insulation
- **kW** Recommended boiler size, connected to buffer tank

Inlets / Outlets

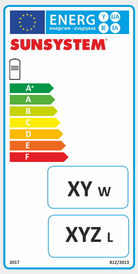
- **A, mm** Sensor sleeve
- **B, mm** Sleeve for Electric heating element
- **C, mm** Heat carrier
- **F, mm** Air vent sleeve

Heat-exchanger coils

- **S1** Lower coil
- **S2** Upper coil
- **S1/S2 m²** Heat exchange surface S1/S2
- **S1/S2 L** Coil capacity S1/S2
- **S1i/S1o mm** Inlet/Outlet Lower coil S1
- **S2i/S2o mm** Inlet/Outlet Upper coil S2

SUNSYSTEM

Accumulates the heat generated by boiler.
Recommended for each space-heating system.
Ensures optimum operating mode of biomass boiler, permitting its functioning at nominal power output even when the heating system does not need all heat energy produced thereby. Produced heat is accumulated and stored inside the buffer tank and can be used even when the boiler itself has cooled down.
Buffer tank design allows heat distribution of layers through integrated dividing plate and distribution plate (water stratification unit).



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
300 - 2000	C *
300 - 2000	D *
300 - 2000	E *

*The class depends of type of insulation.

Insulation	High efficiency insulation (DIN 4753-8): removable insulation of fleece, with thickness of 100 mm. or removable insulation of rigid PU, with thickness of 100 mm. Outer lining of PVC with RAL 9006 color.
Water tank	Water tank of low-carbon steel S235JR. Primer coated on the outside of the tank. Dividing plate (Separator). Distribution plate (water stratification unit). Operating pressure: 3 bar Maximum temperature: 95°C
Inlets / Outlets	Up to 5 pcs. Rp½" sensor sleeves. Up to 13 pcs. Rp1" or Rp1½" inlet/outlet sleeves -connections to heating boilers, indirect heating of domestic hot water (DHW) and solar system. All threads are internal. **Inlet/Outlet arrangement on 90 angle degrees for easy and convenient installation.** Possible installation in the corner of boiler room.
One or two heat-exchanger coils (models SPBM R/H* SPBM R2 /H*)	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

SPBM
without coil

Vertical models. Insulation: fleece.

L	Model	Code
300	SPBM 300 FL	09060015201733
500	SPBM 500 FL	09060015201734
800	SPBM 800 FL	09060015201735
1000	SPBM 1000 FL	09060015201736
1500	SPBM 1500 FL	09060015201737
2000	SPBM 2000 FL	09060015201738

SPBM H
without coil

Vertical models. Insulation: rigid PU.

L	Model	Code
800	SPBM 800 H	09060015201825
1000	SPBM 1000 H	09060015201826

SPBM R
with one coil

Vertical models. Insulation: fleece.

L	Model	Code
300	SPBM-R 300 FL	09060015202733
500	SPBM-R 500 FL	09060015202734
800	SPBM-R 800 FL	09060015202735
1000	SPBM-R 1000 FL	09060015202736
1500	SPBM-R 1500 FL	09060015202737
2000	SPBM-R 2000 FL	09060015202738

SPBM R H
with one coil

Vertical models. Insulation: rigid PU.

L	Model	Code
800	SPBM-R 800 H	09060015202835
1000	SPBM-R 1000 H	09060015202836

SPBM R2
with two coils

Vertical models. Insulation: fleece.

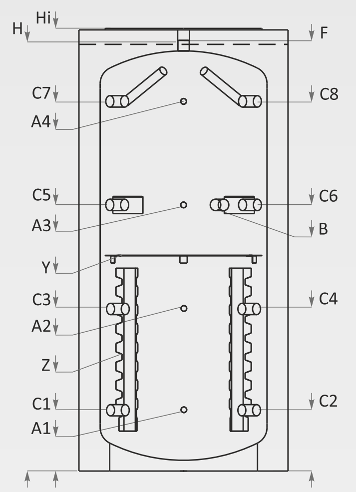
L	Model	Code
300	SPBM-R2 300 FL	09060015203733
500	SPBM-R2 500 FL	09060015203734
800	SPBM-R2 800 FL	09060015203735
1000	SPBM-R2 1000 FL	09060015203736
1500	SPBM-R2 1500 FL	09060015203737
2000	SPBM-R2 2000 FL	09060015203738

SPBM R2 H
with two coils

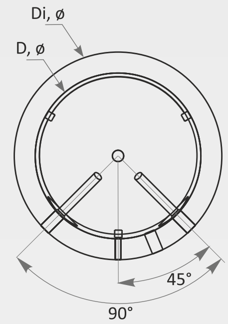
Vertical models. Insulation: rigid PU.

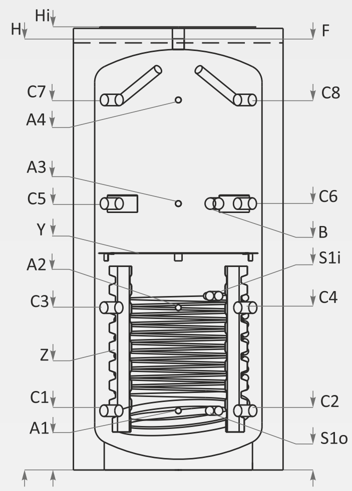
L	Model	Code
800	SPBM-R2 800 H	09060015203825
1000	SPBM-R2 1000 H	09060015203826

Technical characteristics.

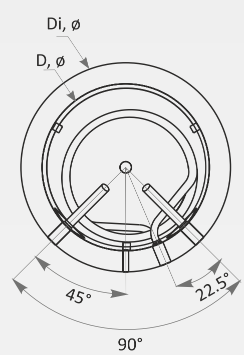


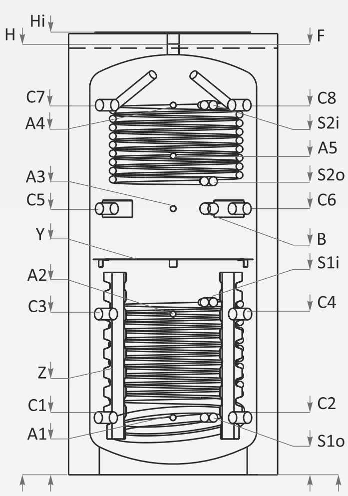
SPBM / SPBM H
300 - 2000



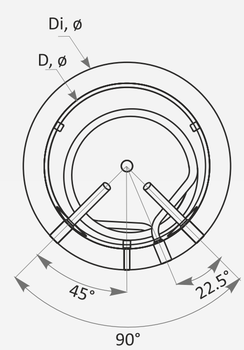


SPBM R / SPBM R H
300 - 2000





SPBM R 2 / SPBM R2 H
300 - 2000



General parameters

L	H/Hi mm	D/Di mm Ø	kW	Y	Z
300	1410/1460	ø550/750	6-10	✓	✓
500	1700/1750	ø650/850	10-17	✓	✓
800	1838/1888	ø790/990	15-27	✓	✓
1000	2039/2089	ø790/990	18-33	✓	✓
1500	2140/2290	ø1000/1200	27-50	✓	✓
2000	2131/2181	ø1200/1400	36-67	✓	✓

Heat-exchanger coil

S1/S2 m²	S1/S2 L	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
0.9/0.4	5.6/2.6	640/240	1170/ 970
1.6/1.1	9.8/6.6	689/239	1451/1121
2.3/1.71	14/10.5	785/290	1550/1190
2.48/1.71	15.2/10.5	830/290	1750/1390
3.4/1.93	20.65/11.85	939/339	1821/1506
4.9/2.0	30/12.4	1158/388	1768/1503

Inlets / Outlets

SPBM / SPBM H - without coil

L	kg	kg,i	A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1½”	C7 mm Rp1½”	C8 mm Rp1½”	F mm Rp1½”
300	60	10	240	550	860	1170	860	240	240	550	550	860	860	1170	1170	1410
500	81	12	239	643	997	1451	997	239	239	643	643	997	997	1451	1451	1700
800	108	17	290	710	1090	1750	1090	290	290	710	710	1090	1090	1750	1750	2039
1000	126	18	290	775	1260	1750	1260	290	290	775	775	1260	1260	1750	1750	2039
1500	205	23	339	833	1327	1821	1260	339	339	833	833	1327	1327	1821	1821	2140
2000	254	27	388	848	1308	1768	1308	388	388	848	848	1308	1308	1768	1768	2131

Inlets / Outlets

SPBM R / SPBM R H - with one coil

L	kg	kg,i	A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1½”	C7 mm Rp1½”	C8 mm Rp1½”	F mm Rp1½”
300	75	10	240	550	860	1170	860	240	240	550	550	860	860	1170	1170	1410
500	106	12	239	643	997	1451	997	239	239	643	643	997	997	1451	1451	1700
800	144	17	290	710	1090	1750	1090	290	290	710	710	1090	1090	1750	1750	2039
1000	164	18	290	775	1260	1750	1260	290	290	775	775	1260	1260	1750	1750	2039
1500	257	23	339	833	1327	1821	1260	339	339	833	833	1327	1327	1821	1821	2140
2000	329	27	388	848	1308	1768	1308	388	388	848	848	1308	1308	1768	1768	2131

Inlets / Outlets

SPBM R 2 / SPBM R 2 H - with two coils

L	kg	kg,i	A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	A5 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1½”	C7 mm Rp1½”	C8 mm Rp1½”	F mm Rp1½”
300	82	10	240	550	860	1170	1037	860	240	240	550	550	860	860	1170	1170	1410
500	124	12	239	643	997	1451	1231	997	239	239	643	643	997	997	1451	1451	1700
800	171	17	290	710	1090	1750	1310	1090	290	290	710	710	1090	1090	1750	1750	2039
1000	191	18	290	775	1260	1750	1510	1260	290	290	775	775	1260	1260	1750	1750	2039
1500	287	23	339	833	1327	1821	1611	1260	339	339	833	833	1327	1327	1821	1821	2140
2000	360	27	388	848	1308	1768	1591	1308	388	388	848	848	1308	1308	1768	1768	2131

General parameters

L Capacity
H / Hi, mm Height without insulation / with insulation
øD /Di, mm Diameter without insulation / with insulation
kg / kg, I Weight without insulation / with insulation
kW Recommended boiler size, connected to buffer tank
Y Dividing plate (Separator)
Z Distribution plate (water stratification unit)

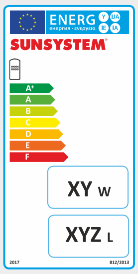
Inlets / Outlets

A, mm Sensor sleeve
B, mm Sleeve for Electric heating element
C, mm Heat carrier
F, mm Air vent sleeve

Heat-exchanger coils

S1 Lower coil
S2 Upper coil
S1/S2 m² Heat exchange surface S1/S2
S1/S2 L Coil capacity S1/S2
S1i/S1o mm Inlet/Outlet Lower coil S1
S2i/S2o mm Inlet/Outlet Upper coil S2

To produce and accumulate domestic hot water (DHW) and hot water for space-heating system.
Tank-in-Tank construction.
DHW tank protected with titanium enamel and anode and Buffer tank powering space-heating system.
Allows utilization of up to three external heat sources and an optional electric heating element.



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
600 - 1500	C *
600 - 1500	D *
600 - 1500	E *

*The class depends of type of insulation..

Insulation	High efficiency insulation (DIN 4753-8): removable insulation of fleece, with thickness of 100 mm. Outer lining of PVC with RAL 9006 color.
Water tank - buffer tank	Water tank of low-carbon steel S235JR. Primer coated on the outside of the tank. Operating pressure: 3 bar Maximum temperature: 95°C
Water tank - domestic hot water (DHW)	Water tank of low-carbon steel S235JR. Complex corrosion protection realized by means of titanium **enamel** (DIN 4753-3) and **two magnesium anodes** (DIN 4753-6). The flange ø280 and all connections are located on the top of water tank. Operating pressure: 10 bar Maximum temperature: 95°C
Inlets / Outlets	Connections for temperature sensor. All threads are internal. **Inlet/Outlet arrangement on 180 angle degrees.**
One or two heat-exchanger coils (models KSC1/ KSC2)	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

KSC
without coil

Vertical models.

	Model	Code
600	KSC 600/150	09040111201023
800	KSC 800/200	09040111201025
1000	KSC 1000/220	09040111201027
1500	KSC 1500/300	09040111201029

KSC1
with one coil

Vertical models.

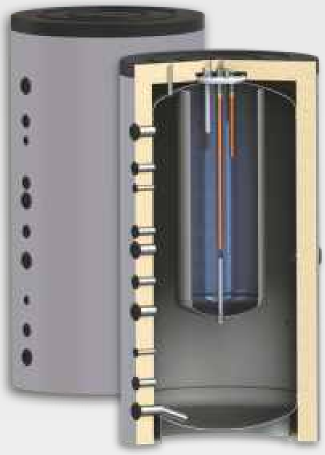
	Model	Code
600	KSC1 600/150	09040111202023
800	KSC1 800/200	09040111202025
1000	KSC1 1000/220	09040111202027
1500	KSC1 1500/300	09040111202029

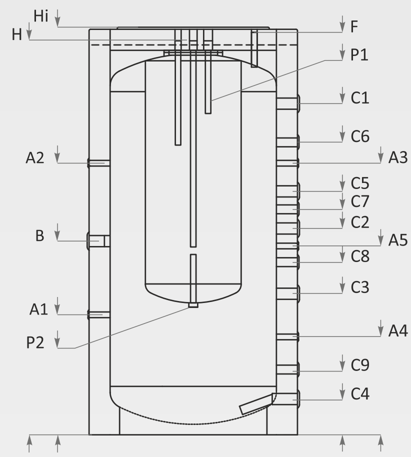
KSC2
with two coils

Vertical models.

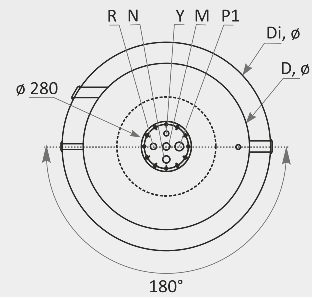
	Model	Code
600	KSC2 600/150	09040111203023
800	KSC2 800/200	09040111203025
1000	KSC2 1000/220	09040111203027
1500	KSC2 1500/300	09040111203029

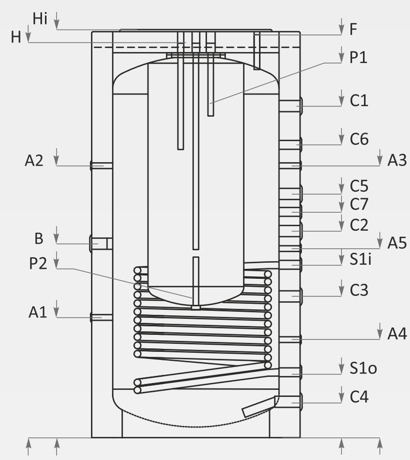
Technical characteristics.



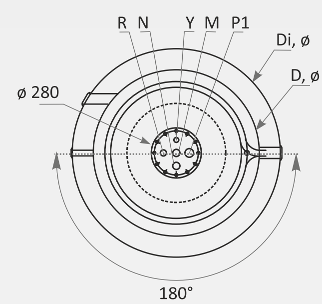


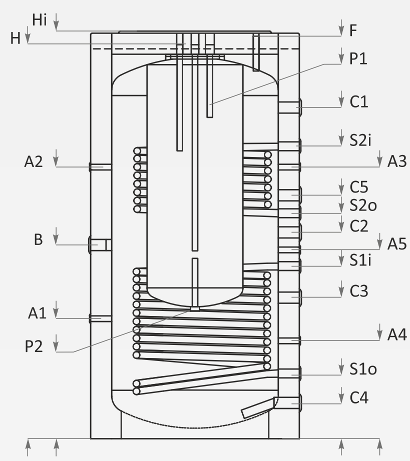
KSC 600 - 1500



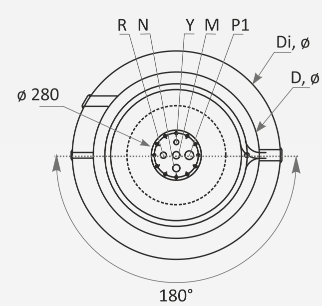


KSC1 600 - 1500





KSC2 600 - 1500



General parameters

L	L1 / L2	H/Hi mm	D/Di mm ∅	kW
600	150/450	1830/1880	ø650/850	10-17
800	200/600	1860/1910	ø790/990	15-27
1000	220/780	2040/2090	ø790/990	18-33
1500	300/1200	2170/2220	ø1000/1200	27-50

Inlets / Outlets of water tank DHW

L	M mm Rp1“	N mm Rp1“	P1/P2 mm Rp1¼“	R mm Rp¾“	Y mm Rp½“
600	1880	1880	1880/850	1880	1880
800	1910	1910	1910/607	1910	1910
1000	2090	2090	2090/647	2090	2090
1500	2220	2220	2220/881	2220	2220

Heat-exchanger coils

L	S1/S2 m²	S1/S2 L	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
600	1.7/1.0	10.5/6.2	800/280	1300/1020
800	2.9/1.8	17.9/11.1	820/310	1390/1072
1000	3.0/2.0	18.5/12.3	880/310	1520/1172
1500	3.4/2.4	21.0/14.8	895/375	1635/1225

Inlets / Outlets of buffer tank

KSC - without coil

L	kg	kg,i
600	154	12.3
800	178	16.4
1000	199	18
1500	386	23.2

L	A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	A5 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1"	C7 mm Rp1"	C8 mm Rp1"	C9 mm Rp1"	F mm Rp1½”
600	440	1440	1150	490		860	1550	910	650	150		1300	1020	800	280	1880
800	570	1290	1290	465		920	1573	980	670	170		1390	1072	820	310	1910
1000	580	1500	1450	495		1130	1742	1060	730	170		1520	1172	880	310	2090
1500	875	1700	1525	520	975	1130	1808	1130	765	235	1305	1635	1225	895	375	2220

Inlets / Outlets of buffer tank

KSC1 - with one coil

L	kg	kg,i
600	184	12.3
800	213	16.4
1000	241	18
1500	428	23.2

L	A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	A5 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1"	C7 mm Rp1"	F mm Rp1½”
600	440	1440	1150	490		860	1550	910	650	150		1300	1020	1880
800	570	1290	1290	465		920	1573	980	670	170		1390	1072	1910
1000	580	1500	1450	495		1130	1742	1060	730	170		1520	1172	2090
1500	875	1700	1525	520	975	1130	1808	1130	765	235	1305	1635	1225	2220

Inlets / Outlets of buffer tank

KSC2 - with two coils

L	kg	kg,i
600	195	12.3
800	237	16.4
1000	267	18
1500	460	23.2

L	A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	A5 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	F mm Rp1½”
600	440	1440	1150	490		860	1550	910	650	150		1880
800	570	1290	1290	465		920	1573	980	670	170		1910
1000	580	1500	1450	495		1130	1742	1060	730	170		2090
1500	875	1700	1525	520	975	1130	1808	1130	765	235	1305	2220

General parameters

L Capacity
L1 / L2 Capacity of water tank DHW / Buffer tank
H / Hi, mm Height without insulation / with insulation
øD /Di, mm Diameter without insulation / with insulation
kg / kg, i Weight without insulation / with insulation
kW Recommended boiler size, connected to buffer tank

Inlets / Outlets of buffer tank

A, mm Sensor sleeve
B, mm Sleeve for Electric heating element
C, mm Heat carrier
F, mm Air vent sleeve

Inlets / Outlets of water tank DHW

M, mm Cold water inlet
N, mm Hot water outlet
P, mm Anode
R, mm Recirculation
Y, mm Air vent sleeve

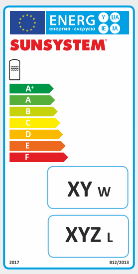
Heat-exchanger coils

S1 Lower coil
S2 Upper coil
S1/S2 m² Heat exchange surface S1/S2
S1/S2 L Coil capacity S1/S2
S1i/S1o mm Inlet/Outlet Lower coil S1
S2i/S2o mm Inlet/Outlet Upper coil S2

To produce and accumulate **s a n i t a r y** hot water and hot water for space-heating system.

Coil-in-Tank construction.

Flexible stainless-steel coil (tube) for sanitary hot water and buffer tank powering space-heating system. Sanitary water heats up instantaneously as it flows through the large surface stainless coil. Thus water is delivered hot while still fresh and clean of depositions. Allows utilization of up to three external heat sources and an optional electric heating element.



Energy Efficiency.
Directive 2010/30/EU,
Regulation 812/2013:

Capacity, Liters	Class
500 - 1500	C *
500 - 1500	D *
500 - 1500	E *

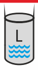
*The class depends of type of insulation..

Insulation	High efficiency insulation (DIN 4753-8): removable insulation of fleece, with thickness of 100 mm. Outer lining of PVC with RAL 9006 color.
Water tank - buffer tank	Water tank of low-carbon steel S235JR. Primer coated on the outside of the tank. Water stratification unit Operating pressure: 3 bar Maximum temperature: 95°C
DHW coil (tube) for sanitary domestic hot water	Made of sanitary grade stainless steel. Corrugated surface of DHW tube increases the heat transfer. Heats up instantaneously. Operating pressure: 6 bar Maximum temperature: 95°C
Inlets/ Outlets	Connections for temperature sensor. **Inlet/Outlet arrangement on 90 angle degrees for easy and convenient installation.** Possible installation in the corner of boiler room.
One or two heat-exchanger coils (models HYG BR/ HYG BR2)	Enables the tank to utilize an external sources of renewable energy. Operating pressure: 16 bar Test pressure: 25 bar Maximum temperature: 110°C

Optional equipment	Kit for electric heating (Electric heating element and Thermostat with integrated thermal protection) with an optional power (See p. 66).

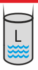
HYG B
without coil

Vertical models.

	Model	Code
500	HYG B 500	09040010201803
800	HYG B 800	09040010201804
1000	HYG B 1000	09040010201805
1500	HYG B 1500	09040010201806

HYG BR
with one coil

Vertical models.

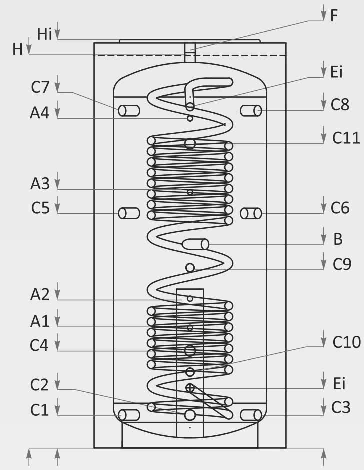
	Model	Code
500	HYG BR 500	09040010202803
800	HYG BR 800	09040010202804
1000	HYG BR 1000	09040010202805
1500	HYG BR 1500	09040010202806

HYG BR2
with two coils

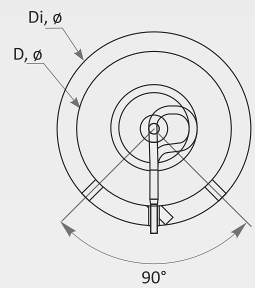
Vertical models.

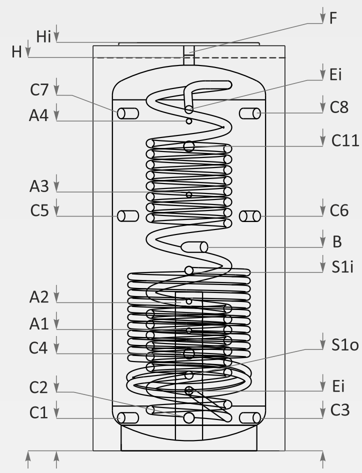
	Model	Code
500	HYG BR2 500	09040010203803
800	HYG BR2 800	09040010203804
1000	HYG BR2 1000	09040010203805
1500	HYG BR2 1500	09040010203806

Technical characteristics.

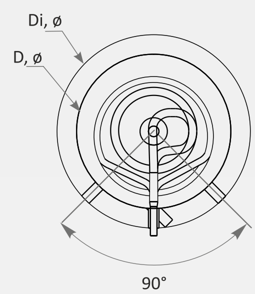


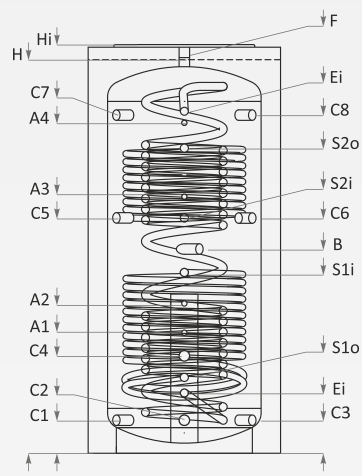
HYG B
500 - 1500



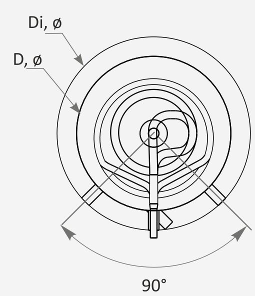


HYG BR
500 - 1500





HYG BR2
500 - 1500



General parameters

L	L1 / L2	H/Hi mm	D/Di mm ∅	kW
500	22/478	1700/1750	ø650/850	44
800	25/775	1840/1890	ø790/990	75
1000	25/975	2040/2090	ø790/990	75
1500	40/1460	2170/2220	ø1000/1200	114

Inlets / Outlets - DHW coil (tube)

L	E m^2	E 10/45°C L/h	E 10/38°C L/h	E 38°C L	E ΔT	Ei / Eo mm Rp1"
500	5.5	1080	1350	375	6/8/12	250/1480
800	6.11	1840	2300	580	3.5/5/8	270/1590
1000	6.11	1840	2300	790	3.5/5/8	310/1760
1500	9.9	2800	3500	1150	2/3/5	345/1850

Heat-exchanger coils

L	S1/S2 m^2	S1/S2 L	S1i/S1o mm Rp1"	S2i/S2o mm Rp1"
500	1.7/1.0	10.5/6.2	800/280	1300/1020
800	2.9/1.8	17.9/11.1	820/310	1390/1072
1000	3.0/2.0	18.5/12.3	880/310	1520/1172
1500	3.4/2.4	21.0/14.8	895/375	1635/1225

HYG B - without coil

Inlets / Outlets of buffer tank

L	kg	kg,i	A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1½”	C7 mm Rp1½”	C8 mm Rp1½”	C9 mm Rp1"	C10 mm Rp1"	C11 mm Rp1"	F mm Rp1½”
500	119	12.3	540	650	1140	1420	900	150	150	150	430	1030	1030	1450	1450	775	325	1360	1700
800	155	16.4	590	710	1160	1520	930	170	170	170	470	1050	1050	1550	1550	845	350	1410	1840
1000	164	18	620	770	1320	1700	1050	170	170	170	500	1210	1210	1740	1740	930	390	1570	2040
1500	266	23.2	800	920	1520	1790	1280	235	235	235	690	1405	1405	1820	1820	1045	445	1720	2170

HYG BR - with one coil

Inlets / Outlets of buffer tank

L	kg	kg,i	A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1½”	C7 mm Rp1½”	C8 mm Rp1½”	C9 mm Rp1"	F mm Rp1½”
500	142	12.3	540	650	1140	1420	900	150	150	150	430	1030	1030	1450	1450	1360	1700
800	188	16.4	590	710	1160	1520	930	170	170	170	470	1050	1050	1550	1550	1410	1840
1000	210	18	620	770	1320	1700	1050	170	170	170	500	1210	1210	1740	1740	1570	2040
1500	331	23.2	800	920	1520	1790	1280	235	235	235	690	1405	1405	1820	1820	1720	2170

HYG BR2 - with two coils

Inlets / Outlets of buffer tank

L	kg	kg,i	A1 mm Rp½“	A2 mm Rp½“	A3 mm Rp½“	A4 mm Rp½“	B mm Rp1½”	C1 mm Rp1½”	C2 mm Rp1½”	C3 mm Rp1½”	C4 mm Rp1½”	C5 mm Rp1½”	C6 mm Rp1½”	C7 mm Rp1½”	C8 mm Rp1½”	F mm Rp1½”
500	164	12.3	540	650	1140	1420	900	150	150	150	430	1030	1030	1450	1450	1700
800	213	16.4	590	710	1160	1520	930	170	170	170	470	1050	1050	1550	1550	1840
1000	230	18	620	770	1320	1700	1050	170	170	170	500	1210	1210	1740	1740	2040
1500	352	23.2	800	920	1520	1790	1280	235	235	235	690	1405	1405	1820	1820	2170

General parameters

L Capacity
L1 / L2 Capacity DHW coil / Buffer tank
H / Hi, mm Height without insulation / with insulation
øD /Di, mm Diameter without insulation / with insulation
kg / kg, I Weight without insulation / with insulation
kW Recommended boiler size, connected to buffer tank

Inlets / Outlets of buffer tank

A, mm Sensor sleeve
B, mm Sleeve for Electric heating element
C, mm Heat carrier
F, mm Air vent sleeve

Inlets / Outlets - DHW coil (tube)

E, m^2 Heat exchange surface
E, 10/45°C, L/h Continuous outflow 10/45°C, buffer tank is charged to 65°C
E, 10/38°C, L/h Continuous outflow 10/38 °C buffer tank is charged to 65°C.
E,38°C, L Single discharge capacity up to 38 °C of DHW (buffer is charged to 60°C)
E, ΔT ΔT -temperature difference between buffer tank and DHW at flow rate 30/40/50 liters/minute.
Ei / Eo, mm Inlet/outlet DHW coil (tube)

Heat-exchanger coils

S1 Lower coil
S2 Upper coil
S1/S2 m^2 Heat exchange surface S1/S2
S1/S2 L Coil capacity S1/S2
S1i/S1o mm Inlet/Outlet Lower coil S1
S2i/S2o mm Inlet/Outlet Upper coil S2

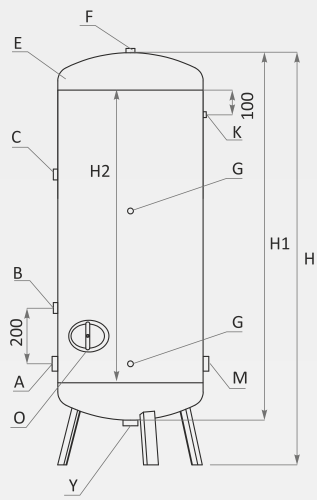
Both sides galvanized storage water tanks.
Designed to store the potable water from different sources as: water supply network, well, borehole and others.
Long service life of water tank.
Hot-dip galvanizing is the most widespread and reliable corrosion protection technology.

Water tank	High-quality workmanship. Water tank of low-carbon steel S235JR Manufactured in accordance with Directive 2014/68/EU, AD-2000 - DIN4810. The physicomechanical characteristics of the zinc coating conform to EN ISO 1461. Protective zinc coating by hot-dip galvanizing on both sides of the water tank. Convenient inspection opening 100x150. Operating pressure: 6 bar. Test pressure: 9 bar Maximum temperature: 50°C
Hot-dip galvanizing Technology	**Long service life -** Depending on environment and coating thickness, hot-dip galvanized products have a maintenance-free life of 20 to 80 years. Easy mainenance after this period. Hot-dip galvanizing is a total immersion process, meaning the steel is fully submerged into cleaning solutions and the molten zinc coating all interior and exterior surfaces. **Low operating costs.** Hot-dip galvanizing provides **uniform and strength coating** - zinc molecules interact with steel molecules in a way that stick together. The result is higher durability against mechanical damage during use, storage and transportation.

ZNC
without coil

Vertical models

L	Модел	Код
150	ZNC 150	01031100401011
300	ZNC 300	01031100401014
500	ZNC 500	01031100401016
750	ZNC 750	01031100401017



ZNC 150-750

General parameters

L	H mm	H1/H2 mm	D mm ∅	kg
150	1275	1055/790	ø450	42
300	1625	1405/1100	ø550	64
500	1875	1655/1310	ø650	100
750	1885	1655/1250	ø800	143

Inlets / Outlets

L	A	B	C	E	F	K	M	G	O	Y
500	Rp 2"	Rp 2"	Rp 1¼"	DIN 28011	Rp 1"	Rp ½"	Rp 2"	Rp ½"	100x150	Rp 2"
800	Rp 2"	Rp 2"	Rp 1¼"	DIN 28011	Rp 1"	Rp ½"	Rp 2"	Rp ½"	100x150	Rp 2"
1000	Rp 2"	Rp 2"	Rp 1¼"	DIN 28011	Rp 1"	Rp ½"	Rp 2"	Rp ½"	100x150	Rp 2"
1500	Rp 2"	Rp 2"	Rp 1¼"	DIN 28011	Rp 1"	Rp ½"	Rp 2"	Rp ½"	100x150	Rp 2"

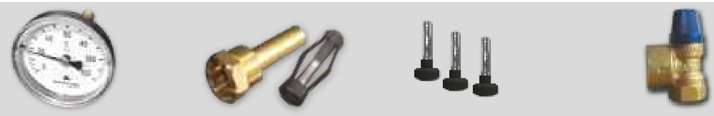
General parameters

L Capacity
H, mm Overall Height
H1/ H2, mm Height of water tank / Height of mantle
øD, mm Diameter
kg Weight

Inlets / Outlets

A Connection for building water installation or water supply
B Connection for air vent equipment
C Connection for air supply
E Base (upper /lower bottom), DIN 28011
F Backup connection
K Connection for pressure regulator
M Connection for pump
G Connection for sensor water level
O Inspection opening
Y Connection for drain (building water installation) or water supply

Item Name	Code
SK SET V ENAMELED	



Set Thermometer. Sensor bushing 2 pcs. Adjustable foot - 3 pcs. Safety valve 8 bar, ¾”.

Item Name	Code
SK SET VIII ENAMELED	00170006000008

Set Thermometer. Sensor bushing 2 pcs. Safety valve 8 bar, ¾”.

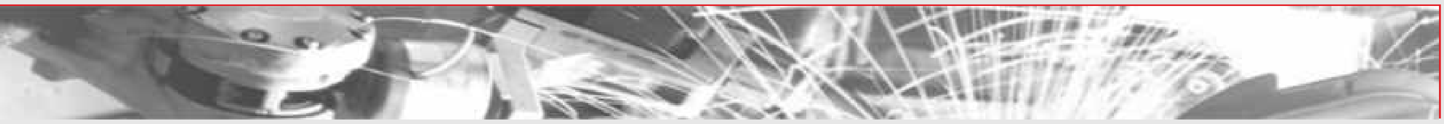
Item Name	Code
SK SET X ENAMELED	00170006000010

Set Thermometer. Sensor bushing 2 pcs. Safety valve 8 bar, 1”.

Item Name	Code
SK SET V-A ENAMELED	00170006000025

Set Thermometer. Sensor bushing 2 pcs. Adjustable foot - 3 pcs. Safety valve 10 bar, ¾”.

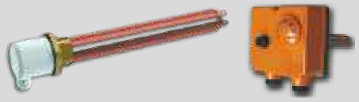
In order to ensure long term trouble free operation of your SUNSYSTEM appliance, please call an authorized SUNSYSTEM service partner to do the installation for you.



S	S 75	SON PRL	SON ST	S-D	S EXT	SWUP EXT	SWP	P	PS	PBM	SPBM	KSC	HYG-B
●	●	●	●				●						
●	●	●	●				●						
●	●	●	●				●						
				●	●								

For a Better Life.

Item Name	Code
3 kW - SL 3 SET Cu	00171406000003
4.5 kW - SL 4.5 SET Cu	00171406000004
6 kW - SL 6 SET Cu	00171406000005
7.5 kW- SL 7.5 SET Cu	00171406000006
2x7.5 kW - SL 2x7.5 SET Cu	00171406000007
3x7.5 kW - SL 3x7.5 SET Cu	00171406000008
4x7.5 kW - SL 4x7.5 SET Cu	00171406000009

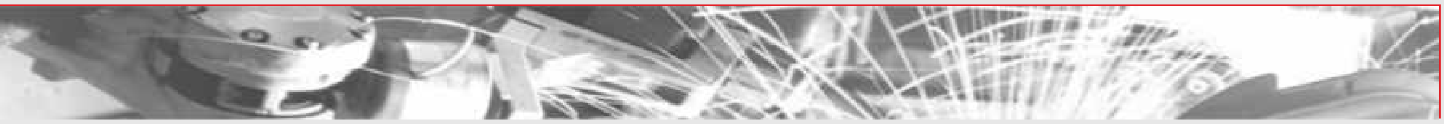


Electric heating element. Thermostat.

HEATER WITH THERMOSTAT 3KW	32590000000106
HEATER WITH THERMOSTAT 4KW	32590000000107
HEATER WITH THERMOSTAT 6KW	32590000000108

Electric heating element with built-up Thermostat.

In order to ensure long term trouble free operation of your SUNSYSTEM appliance, please call an authorized SUNSYSTEM service partner to do the installation for you.



S	S 75	SON PRL	SON ST	S-D	S EXT	SWUP EXT	SWP	P	PS	PBM	SPBM	KSC	HYG-B
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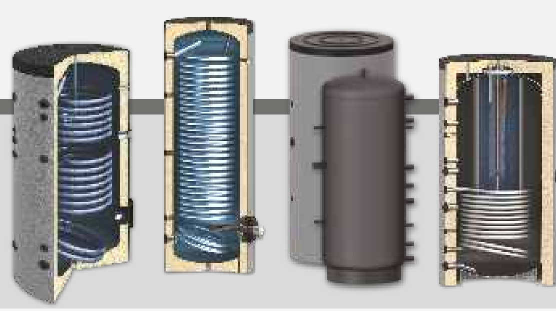

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