

SOLAREKS ELECTRIC WATER HEATER

We want every product which we manufacture
to be the best quality...I put my name on it
SOLAREKS ALPER UYSAL

SI UNIT CATALOGUE

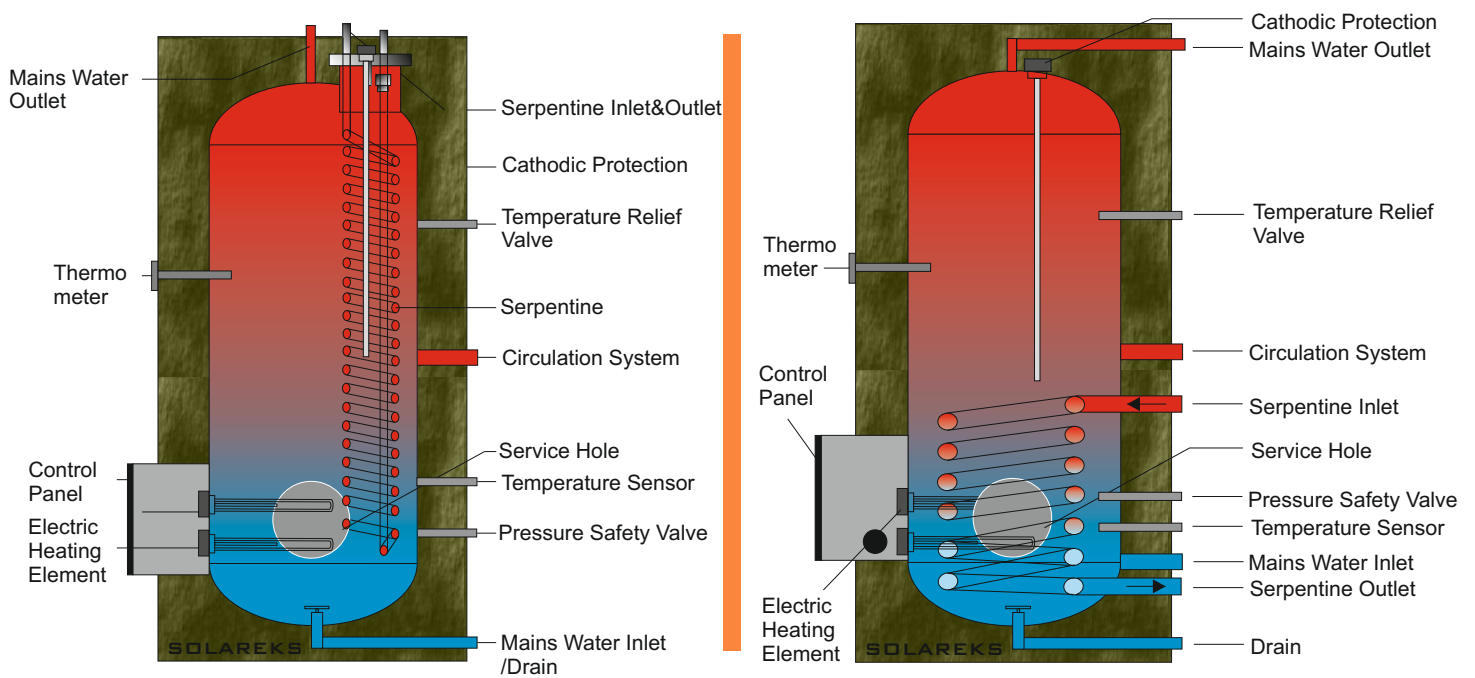
THREE-PHASE ELECTRIC BOILER FOR INDUSTRIAL USE



SOLAREKS - ELECTRIC WATER HEATER

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Electric boiler is designed to produce hot water in two ways: water can be heated by electric heaters and the serpentine. While the central heating system of the building is working water can be heated by the serpentine which lets the central heating fluid pass through itself and heat the water inside the tank. When the central heating system is not in use water can be heated by the electric heaters.



A- Hot Dip Galvanized Steel Model

Serpentine flange is at top of the boiler at 100-500 L capacities, at side of the tank at 600-5000 L capacities

B- Stainless Steel Model

Technical Details

1- Boiler and Electric Water Heater in One Product

Solareks Three-Phase Electric Boiler for Industrial Use is designed to be used for heavy duty. Electric Boiler for Industrial Use can work simultaneously or separately with two types of energy:

- 1-Electric energy
- 2-Energy of solid/fuel/gas central heating system, solar energy, heat pump energy, waste energy

2- Corrosion Protection and Hygiene

Electric Boiler's inner tank can be produced of two types of materials:

- A- Black carbon steel, tank is hot dip galvanized after welding process
- B- High quality stainless steel for a longer useful life(304L/316L).

Additional corrosion protection is obtained by magnesium anods. (Cathodic Protection)

3- Insulation

Boiler is insulated by three types of different materials against heat losses:

- A- Rigid polyurethane
- B- Glasswool
- C- Rockwool

4- Digitally Controlled Heaters

Electric Boilers' heaters are controlled by digital thermostat, easy to use and safe by its coding system.

5- Aesthetic

The outer coverage of the boiler is made of painted or brushed stainless steel which has an aesthetic view.

6- Long Useful Life

The boilers are produced by using hot dip galvanizing method or of stainless steel to have a useful long life. Boiler is protected against corrosion by cathodic protection.

7- Installation

Electric Boiler can be connected to ground by welding or bolts. Wall hanging equipments let a secure installation.

8- Material in a High Quality and Production

High quality stainless steel is used for production. Products are shipped after conducting pressure, electric and packing controls.

9- Safety

Product are equipped with a digital thermostat and additional analog thermostat. If digital thermostat is broken safety thermostat will switch off the electric heaters at 80 °C. Non-return valve is used not to let the electric heaters work without water. Pressure safety valve is used to protect the tank against high pressures.

10- Heating Serpentine

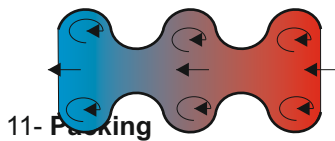
Heating serpentine specifications are listed below according to product types and capacities:

A- Hot Dip Galvanized Steel Electric Boiler

100 L - 5000 L: Removable 316 L quality stainless steel serpentine, Connection: Flange type. Due to special designed pipe where the heat transfer fluid passes it works like a turbulator, higher heat convection and heat convection coefficients are obtained to have a perfect heat transfer.

B- Stainless Steel Electric Boiler

100 L - 5000 L: 316 L quality stainless steel serpentine, Connection: Flange type. Due to special designed pipe where the heat transfer fluid passes it works like a turbulator, higher heat convection and heat convection coefficients are obtained to have a perfect heat transfer. Removable flanged type stainless steel serpentine is optional in stainless steel boilers.



11- Packing

Woodbox is used to pack the products



12- Warranty

Stainless Steel Tank Model: 5 years
Hot Dip Galvanized Steel Tank Model: 2 years
Electrical Equipment: 2 years

Note: Electric heating elements are not guaranteed when used water consists lime.

Technical Details

Capacity	100 L	160 L	200 L	250 L	300 L	400 L	450 L
Corrosion Protection	Hot dip galvanized steel / Stainless Steel + cathodic protection						
Outer Coverage	Hot dip galvanized steel painted into white colour and covered with polyethylene against scratching						
Insulation	Rigid polyurethane / Glasswool / Rockwool						
Dimensions (mm)	1100 x Ø 490	1225 x Ø 570	1450 x Ø 570	1540 x Ø 570	1600 x Ø 635	1600 x Ø 725	1760 x Ø 725
Weight (kg)	70/64	86/80	98/93	109/104	123/111	152/144	165/157
Working Pressure	6 bar						
Test Pressure	9 bar						
Three-Phase Electric Heating Element	2x4,5 kW 9 kW	2x4,5 kW 9 kW	2x6 kW 12 kW	2x6 kW 12 kW	3x4,5 kW 13,5 kW	2x10 kW 20 kW	3x7,5 kW 22,5 kW
Time of the heating by electric heater (min.) considering heating from 10°C up to 50°C	31	50	46	58	62	56	56
Serpentine Continous Working Capacity							
Heat Transfer Fluid Temperature	100 L	160 L	200 L	250 L	300 L	400 L	450 L
Heating Capacity (l/h) considering heating from 10°C up to 50°C	80°C	160 l/h	280 l/h	295 l/h	350 l/h	420 l/h	605 l/h
	70°C	128 l/h	220 l/h	230 l/h	280 l/h	330 l/h	480 l/h
	60°C	100 l/h	165 l/h	175 l/h	210 l/h	245 l/h	355 l/h

Technical Details

Capacity	500 L	600 L	750 L	1000 L	1250 L	1500 L	1750 L
Corrosion Protection	Hot dip galvanized steel / Stainless Steel + cathodic protection						
Outer Coverage	Hot dip galvanized steel painted into white colour and covered with polyethylene against scratching						
Insulation	Rigid polyurethane / Glasswool / Rockwool						
Dimensions (mm)	1890 x Ø 725	2160 x Ø 725	2210 x Ø 900	2210 x Ø 980	2210 x Ø 1055	2310 x Ø 1170	2310 x Ø 1240
Weight (kg)	176/165	201/181	294/220	390/311	486/350	560/440	603/501
Working Pressure	6 bar						
Test Pressure	9 bar						
Three-Phase Electric Heating Element	3x10 kW 30 kW	3x10 kW 30 kW	4x10 kW 40 kW	5x10 kW 50 kW	6x10 kW 60 kW	7x10 kW 70 kW	8x10 kW 80 kW
Time of the heating by electrical heater (min.) considering heating from 10°C up to 50°C	46	56	52	56	58	60	61
Serpentine Continous Working Capacity							
Heat Transfer Fluid Temperature	500 L	600 L	750 L	1000 L	1250 L	1500 L	1750 L
Heating Capacity (l/h) considering heating from 10°C up to 50°C	80°C	660 l/h	700 l/h	880 l/h	3540 l/h	4250 l/h	5850 l/h
	70°C	540 l/h	560 l/h	700 l/h	2800 l/h	3350 l/h	4650 l/h
	60°C	390 l/h	400 l/h	510 l/h	2100 l/h	2500 l/h	3400 l/h

*A- Hot Dip Galvanized Steel Electric Boiler Weight / B- Stainless Steel Electric Boiler Weight

** The time for heating water from 10 °C to 50 °C, minute

Technical Details

Capacity	2000 L	2500 L	3000 L	4000 L	5000 L	
Corrosion Protection	Hot dip galvanized steel / Stainless Steel + cathodic protection					
Outer Coverage	Hot dip galvanized steel painted into white colour and covered with polyethylene against scratching					
Insulation	Rigid polyurethane / Glasswool / Rockwool					
Dimensions (mm)	2310 x Ø 1300	2310 x Ø 1460	2310 x Ø 1575	2530 x Ø 1800	2530 x Ø 1975	
Weight (kg)	657/549	927/729	1043/827	1316/1040	1600/1435	
Working Pressure	6 bar					
Test Pressure	9 bar					
Three-Phase Electric Heating Element	9x10 kW 90 kW	10x10 kW 100 kW	12x10 kW 120 kW	16x10 kW 160 kW	20x10 kW 200 kW	
Time of the heating by electrical heater (min.) considering heating from 10°C up to 50°C	62	70	70	70	70	
Serpentine Continous Working Capacity						
Heat Transfer Fluid Temperature		2000 L	2500 L	3000 L	4000 L	5000 L
Heating Capacity (l/h) considering heating from 10°C up to 50°C	80°C	6780 l/h	8475 l/h	8070 l/h	10700 l/h	13100 l/h
	70°C	5400 l/h	6750 l/h	6380 l/h	8500 l/h	10850 l/h
	60°C	3950 l/h	4920 l/h	4730 l/h	6300 l/h	8070 l/h

*A- Hot Dip Galvanized Steel Electric Boiler Weight / B- Stainless Steel Electric Boiler Weight

** The time for heating water from 10 °C to 50 °C, minute



A- Hot Dip Galvanized Steel Electric Boiler - Material Specifications

	Material	ASTM (USA)	EN (Europe)	UNS (USA)	BS (Great Britain)	JIS (Japan)	NF (France)	DIN (German)	GOST (Russia)
Inner Tank	Hot Dip Galvanized Steel	A283M-93a	S235JRG2	-	BS 4360 - 86	Ss330 (SS34)	E24-2E	Rst 37 -2	-
Electric Heater	Stainless Steel	304 L	1.4306 - X12 CrNi 19-11	S30403	304S11	SUS 304 L	Z 3 CN 18-10	X12 CrNi 19-11	03Ch18N11
Cathodic Protection	Magnesium	ASTM - B843AZ63(H-1)							
Insulation	Glasswool								
Outer Coverage	Painted Hot Dip Galvanized Steel	A283M-93a	S235JRG2	-	BS 4360 - 86	Ss330 (SS34)	E24-2E	Rst 37 -2	-
Mounting Parts	Hot Dip Galvanized Steel	A283M-93a	S235JRG2	-	BS 4360 - 86	Ss330 (SS34)	E24-2E	Rst 37 -2	-
Serpentine (100-5000 L)	Stainless Steel	316 L	1.4432 X5 CrNiMo 17-12-3	S31603	316S13	SUS 316 L	Z 3 CND 17-12-03	2353	03Ch17 N14M3



B- Stainless Steel Electric Boiler - Material Specifications

	Material	ASTM (USA)	EN (Europe)	UNS (USA)	BS (Great Britain)	JIS (Japan)	NF (France)	SIS (Sweden)	GOST (Russia)
Inner Tank	Stainless Steel	304 L	1.4306 - X12 CrNi 19-11	S30403	304S11	SUS 304 L	Z 3 CN 18-10	2352	03Ch18N11
Electrical Heater	Stainless Steel	316 L	1.4432 - X5 CrNiMo 17-12-3	S31603	316S13	SUS 316 L	Z 3 CND 17-12-03	2353	03Ch17N14M3
Cathodic Protection	Magnesium	ASTM - B843AZ63(H-1)							
Insulation	Rockwool	EN - 13162							
Outer Coverage	Stainless Steel	304 L	1.4306 - X12 CrNi 19- 11	S30403	304S11	SUS 304 L	Z 3 CN 18-10	2352	03Ch18N11
Mounting Parts	Stainless Steel	304 L	1.4306 - X12 CrNi 19- 11	S30403	304S11	SUS 304 L	Z 3 CN 18-10	2352	03Ch18N11
Serpentine	Stainless Steel	316 L	1.4432 - X5 CrNiMo 17-12-3	S31603	316S13	SUS 316 L	Z 3 CND 17-12-03	2353	03Ch17N14M3



Control Panel Specifications

Products are shipping with all needed equipment. Below are the main elements of control panel:

- Electric Heating Element: Due to usage of 316 quality stainless steel in production products have a long useful life in hard working conditions, heaters are designed for low energy output per square meter. Electric heaters can be operated separately. When one of the heaters is broken the others can be operated.
- Emergency Stop Button.
- Reset Button: If the system was stopped because of unsafety conditions it should be reset before operating.
- Digital Controller/Thermostat: Easy to adjust temperature. Because of its coding system limit values can be set only by authorized person.
- Safety Thermostat: Safety thermostat is used as an additional when the digital thermostat is out of order. It switches off the heating elements when the water temperature is 80 °C. It is used to prevent boiler producing steam and to prevent users from scalding.
- Residual-current circuit breaker device: When there is leakage current in system residual-current device switches off the system.
- Magnetic Contactors are heavy duty resistive load type rated for 100.000 cycles.
- Water proof control case is used.
- Easy&Secure to change electrical heaters: Control panel has two gates, second is a flat type gate (service gate) which is easy to open and change the electrical heaters. For additional safety to open gate cut off switch is used which turns off heaters when the service gate is open.
- 24 Volt AC Control Circuit Voltage.

Safety Specifications

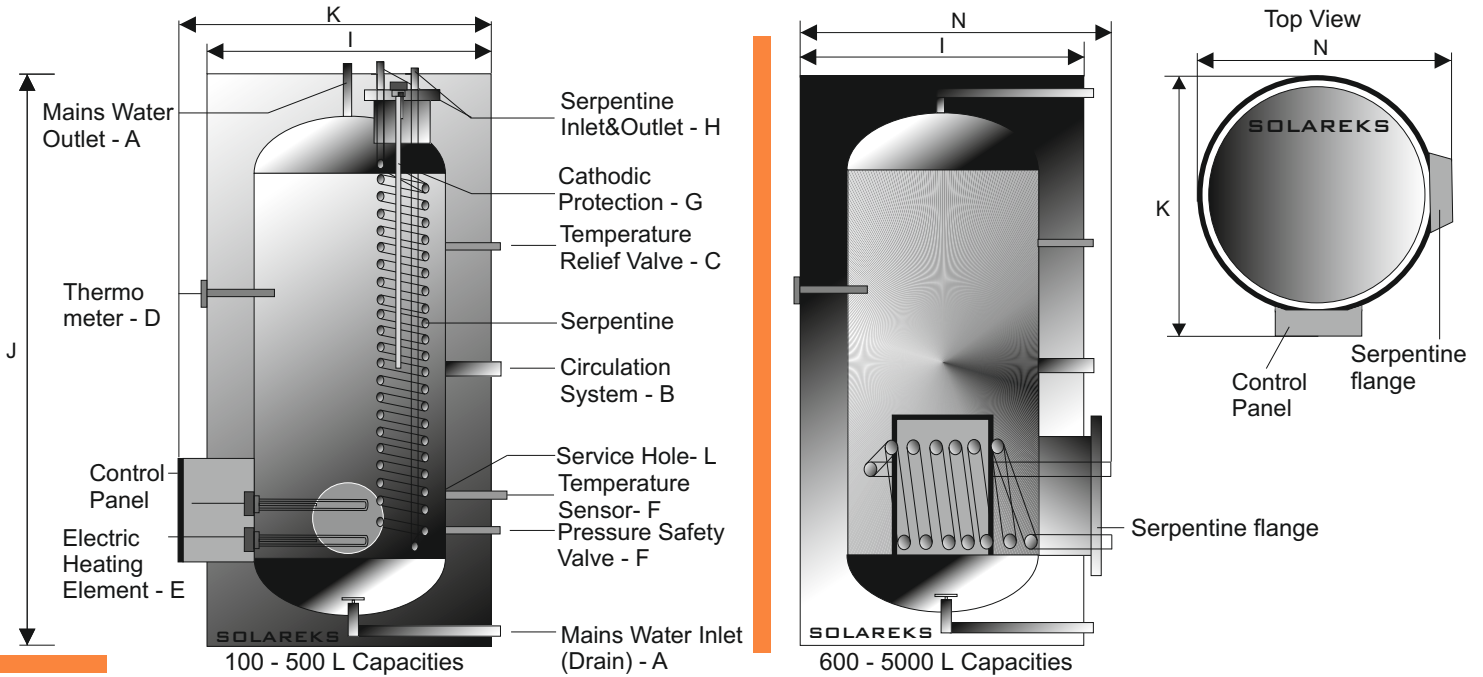
- Adjustable Safety Valve: Protects boiler against high water pressure. It can be adjusted between 3 - 12 bars.
- Non-Return Valve: Prevents electric water heaters against dry fire.
- Boiler is equipped with a digital thermostat and additional analog thermostat, If digital thermostat is broken safety thermostat will switch off the electric heaters at 80 °C.
- Temperature Relief Valve: Protects users against high temperature&scalding (additional).
- Thermostatic Mixing Valve: Mixes hot water with cold water to deliver tempered water at a controlled temperature (additional).
- Boiler Mounting Equipment: Special hanging apparatus are use against boiler's falling over.
- Emergency Lamp: Lamp is turning on when water temperature exceeds the adjusted value, or when leakage current occurs (additional).



- Low Water cutout device (water level controller) to prevent dry firing of electric heating elements (Additional).

P&T Valve: Pressure and temperature safety valve. Shipped standart with every product. 10 bar (150 Psi) and 95 °C (210 F) set value.

A- Hot Dip Galvanized Electric Boiler Dimensions

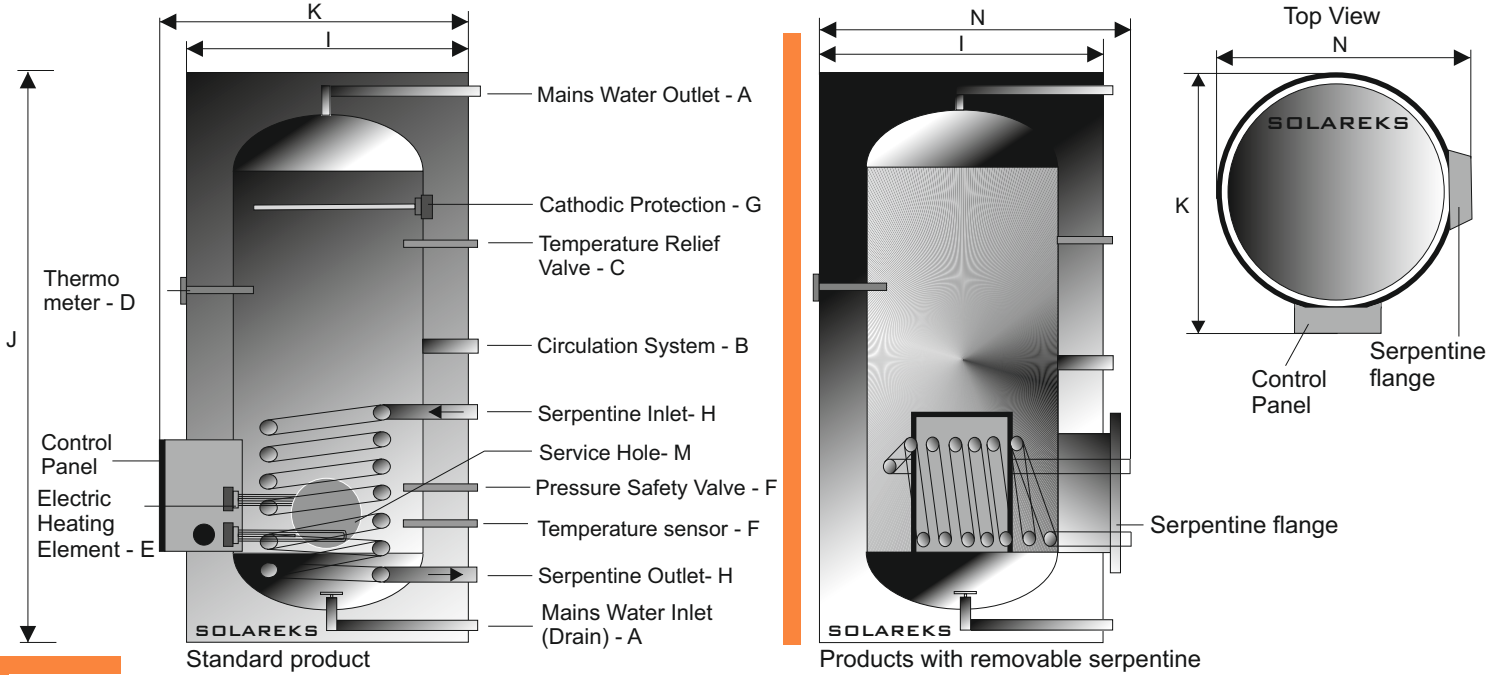


Capacity	100 L	160 L	200 L	250 L	300 L	400 L	450 L	500 L	600 L	750 L
A- Mains Water Inlet/Outlet	3/4"	3/4"	3/4"	1"	1"	1"	1"	1"	1"	1 1/4"
B- Circulation System	3/4"	3/4"	3/4"	1"	1"	1"	1"	1"	1"	1 1/4"
C- Temperature Sensor / Temperature Relief Valve	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
D- Thermometer	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
E- 3-ph. Electric Heating Element	2x4,5 kW	2x4,5 kW	2x6 kW	2x6 kW	3x4,5 kW	2x10 kW	3x7,5 kW	3x10 kW	3x10 kW	4x10 kW
F- Pressure Safety Valve	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"
G- Cathodic Protection-Ø 26 (mm)	700	700	700	700	700	700	700	700	700	1400
H- Serpentine Inlet/Outlet	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	1 1/2"
I- Diameter (mm)	490	570	570	570	635	725	725	725	725	900
J- Height (mm)	1100	1225	1450	1540	1600	1600	1760	1890	2160	2210
K/N- Width	710	790	790	790	855	945	945	945	945	1120
L- Service Hole (Inch)	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
M- Weight	70	86	98	109	123	152	165	176	201	294

Capacity	1000 L	1250 L	1500 L	1750 L	2000 L	2500 L	3000 L	4000 L	5000 L
A- Mains Water Inlet/Outlet	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
B- Circulation System	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
C- Temperature Sensor/ Temperature Relief Valve	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
D- Thermometer	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
E- 3-ph. Electric Heating Element	5x10 kW	6x10 kW	7x10 kW	8x10 kW	9x10 kW	10x10 kW	12x10 kW	16x10 kW	20x10 kW
F- Pressure Safety Valve	3/4"	3/4"	1"	1"	1"	1"	1 1/4"	1 1/4"	1 1/4"
G- Cathodic Protection-Ø 26 (mm)	1400	1400	1400	2100	2100	2100	2100	2100	2100
H- Serpentine Inlet/Outlet	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
I- Diameter (mm)	980	1055	1170	1240	1300	1460	1575	1800	1975
J- Height (mm)	2210	2210	2310	2310	2310	2310	2310	2530	2530
K/N- Width	1200	1275	1390	1460	1520	1680	1795	2020	2195
L- Service Hole (Inch)	4"	5"	5"	5"	5"	5"	5"	5"	5"
M- Weight	390	486	560	603	657	927	1043	1316	1600

Note: Product weights indicated in the table are for products with rigid polyurethane insulation. Products which are insulated with rockwool or glaswool are % 2-3 lighter.

B- Stainless Steel Electric Boiler Dimensions



Capacity	100 L	160 L	200 L	250 L	300 L	400 L	450 L	500 L	600 L	750 L
A- Mains Water Inlet/Outlet	3/4"	3/4"	3/4"	1"	1"	1"	1"	1"	1"	1 1/4"
B- Service Circulation	3/4"	3/4"	3/4"	1"	1"	1"	1"	1"	1"	1 1/4"
C- Temperature Relief Valve	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
D- Thermometer	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
E- 3-ph. Electric Heating Element	2x4,5 kW	2x4,5 kW	2x6 kW	2x6 kW	3x4,5 kW	2x10 kW	3x7,5 kW	3x10 kW	3x10 kW	4x10 kW
F- Pressure Safety Valve	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"
G- Cathodic Protection-Ø 26 (mm)	700	700	700	700	700	700	700	700	700	1400
H- Serpentine Inlet/Outlet	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
I- Diameter (mm)	490	570	570	570	635	725	725	725	725	900
J- Height (mm)	1100	1225	1450	1540	1600	1600	1760	1890	2160	2060
K/N- Width	710	790	790	790	855	945	945	945	945	1120
L- Service Hole (Inch)	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
M- Weight	64	80	93	104	111	144	157	165	181	220

Capacity	1000 L	1250 L	1500 L	1750 L	2000 L	2500 L	3000 L	4000 L	5000 L
A- Mains Water Inlet/Outlet	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
B- Service Circulation	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
C- Temperature Relief Valve	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
D- Thermometer	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
E- 3-ph. Electric Heating Element	5x10 kW	6x10 kW	7x10 kW	8x10 kW	9x10 kW	10x10 kW	12x10 kW	16x10 kW	20x10 kW
F- Pressure Safety Valve	3/4"	3/4"	1"	1"	1"	1"	1 1/4"	1 1/4"	1 1/4"
G- Cathodic Protection-Ø 26 (mm)	1400	1400	1400	2100	2100	2100	2100	2100	2100
H- Serpentine Inlet/Outlet	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
I- Diameter (mm)	980	1055	1170	1240	1300	1460	1575	1800	1975
J- Height (mm)	2060	2060	2160	2160	2160	2160	2160	2300	2300
K/N- Width	1200	1275	1390	1460	1520	1680	1795	2020	2195
L- Service Hole (Inch)	4"	5"	5"	5"	5"	5"	5"	5"	5"
M- Weight	311	350	440	501	549	729	827	1040	1435

Note: Product weights indicated in the table are for products with rigid polyurethane insulation. Products that are insulated with rockwool or glaswool are % 2-3 lighter. Products with removable serpentine are %5-7 more heavy at the capacities of 100 - 750 L and % 3 more heavy at the capacities of 1000 - 5000 L than standard products.

SOLAREKS STANDARD SPECIFICATIONS

Products are shipped at the specifications which are written below, if needed options will be noted down.

Material

Specifications

	Material	A- Hot Dip Galvanized Steel Electric Boiler			B- Stainless Steel Electric Boiler			
		ASTM (USA)	EN (Europe)	GOST (Russia)	Material	ASTM (USA)	EN (Europe)	GOST (Russia)
Inner Tank	Hot Dip Galvanized Steel	A283M-93a	S235JRG2	-	Stainless Steel	304 L	1.4306 - X12 CrNi 19-11	03Ch18N11
Electrical Heater	Stainless Steel	304 L	1.4306 - X12 CrNi 19-11	-	Stainless Steel	316 L	1.4432 - X5 CrNiMo 17-12-3	03Ch17N14M3
Cathodic Protection	Magnezyum	ASTM - B843AZ63(H-1)			Magnesium	ASTM - B843AZ63(H-1)		
Insulation	Glasswool				Rockwool			
Outer Coverage	Painted Hot Dip Galvanized Steel	A283M-93a	S235JRG2	-	Painted Hot Dip Galvanized Steel	304 L	1.4306 - X12 CrNi 19- 11	03Ch18N11
Mounting Parts	Hot Dip Galvanized Steel	A283M-93a	S235JRG2	-	Stainless Steel	304 L	1.4306 - X12 CrNi 19- 11	03Ch18N11
Serpentine (100-5000 L)	Stainless Steel	316 L	1.4432 X5 CrNiMo 17-12-3	03Ch17-N14M3	Stainless Steel	316 L	1.4432 - X5 CrNiMo 17-12-3	03Ch17N14M3

Control Panel Specs. Electrical Heater Capacities 380 V - 60 Hz - 3 Phase

Phase Indicator Lighths
Main Circuit Breaker
Emergency Stop Button
Heaters Can be Operated Seperately
Digital Controller/Thermostat (Coding System)
Safety Thermostat
Analog Temperature Gauge
Reset Button

Capacity	Heater Capacity	Total Heater Capacity	Heating Time* (minute)
100 L	2x4,5 kW	9 kW	31
160 L	2x4,5 kW	9 kW	50
200 L	2x6 kW	12 kW	46
250 L	2x6 kW	12 kW	58
300 L	3x4,5 kW	13,5 kW	62
400 L	2x10 kW	20 kW	56
450 L	3x7,5 kW	22,5 kW	56
500 L	3x10 kW	30 kW	46
600 L	3x10 kW	30 kW	56

Capacity	Heater Capacity	Total Heater Capacity	Heating Time* (minute)
750 L	4x10 kW	40 kW	52
1000 L	5x10 kW	50 kW	56
1250 L	6x10 kW	60 kW	58
1500 L	7x10 kW	70 kW	60
1750 L	8x10 kW	80 kW	61
2000 L	9x10 kW	90 kW	62
2500 L	10x10 kW	100 kW	70
3000 L	12x10 kW	120 kW	70
4000 L	16x10 kW	160 kW	70
5000 L	20x10 kW	200 kW	70

* Considering heating from 10°C up to 50°C

Standard Accessories

Adjustable Pressure Safety Valve
Non-Return Valve
Heater Wrench

Control Case Options

Optional Feature	Optional Code	Explanation
Cooling Fan	PF	Cools the electrical equipment in control panel.
Low Water Cutout Device	SS	Is used to prevent dry firing of heating elements.
Open gate cut off switch	AA	While changing the electric heater it switches off the electricity when the service gate is opened against getting an electric shock.
Warning light	SL	Three coloured lamp indicates that system is on/off or broken down.
Circulation Pump/Valve Automation	SP	Serpentine circuit pump or Automatic Valve can be controlled by control case.
Residual-current circuit breaker device		When there is leakage current in system Protection Relay switches off the system
Additional Option	XX	Customized features, please consult the factory.

Material Options

	Optional Feature	Optional Code	Explanation
Inner Tank	Stainless Steel	316 L	More durable in acidic water conditions than 304 L Stainless steel.
Inner Tank	Hot Dip Galvan. Steel	GD	Has cost advantage compared to stainless steel. 2 years guaranteed.
Electric Heater	Stainless Steel	316 Ti	Is more durable than 316 L quality stainless steel.
Outer Coverage	Stainless Steel	430	Corrosion durability is less than 304 Stainless Steel, has cost advantage.

Optional Accessories

Optional Feature	Optional Code	Explanation
Temperature Relief Valve	SEV	Protects users against high scalding.
Mixing Valve	KV	Mixes hot water with cold water to deliver tempered water at a controlled temperature.
Additional Anod	KK	Cathodic Protection Element which should be changed every two years.
Additional Heating Element	T	-
Flange Connections	F	Flanged inlet and outlet connections (Please specify size).
Additional Option	XX	Customized features, please consult factory.

HEATING TIMES FOR DIFFERENT CAPACITIES OF HEATING ELEMENTS 380 V - 3 Phase - 50 Hz Electric Heater Capacities

Capacity	2 x 4,5 kW 9 kW	2 x 6kW 12 kW	3 x 4,5 kW 13,5 kW	2 x 7,5 kW 15 kW	2 x 10 kW 20 kW	3 x 10 kW 30 kW	4 x 10 kW 40 kW	5 x 10 kW 50 kW	6 x 10 kW 60 kW	7 x 10 kW 70 kW	8 x 10 kW 80 kW
100 L	31										
160 L	50	37									
200 L	62	46	41								
250 L	77	58	52	46							
300 L	93	70	62	56	42						
400 L	124	93	83	74	56	37					
450 L	139	105	93	84	63	42					
500 L	155	116	103	93	70	46	35				
600 L	186	139	124	111	84	56	42	33			
750 L	232	174	155	139	105	70	52	42	35		
1000 L		232	206	186	139	93	70	56	46	40	
1250 L			258	232	174	116	87	70	58	50	44
1500 L					209	139	105	84	70	60	52
1750 L					244	163	122	98	81	70	61
2000 L						186	139	111	93	80	70
2500 L						232	174	139	116	100	87
3000 L							209	167	139	119	105
4000 L								223	186	159	139
5000 L									232	199	174

Heating Time *(minute)

Electrical Heater Capacities

Capacity	9 x 10 kW 90 kW	10 x 10 kW 100 kW	12 x 10 kW 120 kW	14 x 10 kW 140 kW	16 x 10 kW 160 kW	18 x 10 kW 180 kW	20 x 10 kW 200 kW	22 x 10 kW 220 kW	24 x 10 kW 240 kW
1500 L	46								
1750 L	54	49							
2000 L	62	56	46	40					
2500 L	77	70	58	50					
3000 L	93	84	70	60	52	46			
4000 L	124	111	93	80	70	62	56	51	46
5000 L	155	139	116	100	80	70	70	63	58

Heating Time *(minute)

* Considering heating from 10°C up to 50°C

OPTIONAL FEATURES

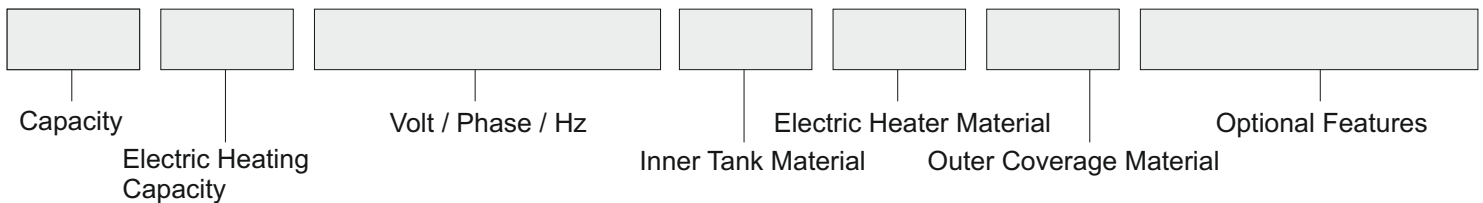
Optional Features	Optional Code
Temperature Relief Valve	SEV
Mixing Valve	KV
Additional Anod	KK
Additional Heating Element	T
Cooling Fan	PF
Low Water Cutout Device	SS
Open gate cut off switch	AA
Warning Light	SL
Circulation Pump/Valve Automation	SP
Flange Connections	F
Additional Option	XX
316 L Quality Stainless Steel Inner Tank	316 L
Hot Dip Galvanized Inner Tank	GD
316 Ti Quality Stainless Steel Electrical Heater	316 Ti
430 quality Stainless Steel Outer Coverage	430
Hot Dip Galvanized Painted Steel Outer Coverage	BS

Electric Heater (Volt - Phase - Hz)	Code	Electric Heater (Volt - Phase - Hz)	Code
190 - 3 - 60	190 - 3 - 60	400 - 3 - 50/60	400 - 3 - 50/60
200 - 3 - 60	200 - 3 - 60	415 - 3 - 50/60	415 - 3 - 60
208 - 3 - 60	208 - 3 - 60	433 - 3 - 60	433 - 3 - 60
216 - 3 - 60	216 - 3 - 60	440 - 3 - 60	440 - 3 - 60
220 - 3 - 60	220 - 3 - 60	460 - 3 - 60	460 - 3 - 60
230 - 3 - 60	230 - 3 - 60	480 - 3 - 60	480 - 3 - 60
240 - 3 - 60	240 - 3 - 60	575 - 3 - 60	575 - 3 - 60
380 - 3 - 50/60	380 - 3 - 50/60		

Standard Product Model Numbers

A- Hot Dip Galvanized Steel Product	Model Number	B- Stainless Steel Product	Model Number
100 L	TPEBIUG100	100 lt	TPEBIUS100
160 L	TPEBIUG160	160 lt	TPEBIUS160
↓	↓	↓	↓
3000 L	TPEBIUG3000	3000 lt	TPEBIUS3000
4000 L	TPEBIUG4000	4000 lt	TPEBIUS4000
5000 L	TPEBIUG5000	5000 lt	TPEBIUS5000

HOW to ORDER OUR PRODUCT



Example: 500 / 3 x 7,5 kW / 440 - 3 - 60 / 304 L / 316 L / 304 / T x 3 - SEV - KK

A 500 liters tank with three piece of 7,5 kW electric boiler is ordered. Inner tank material is 304 L quality stainless steel, electric heater material is 316 L quality stainless steel, outer coverage is 304 quality stainless steel. 3 piece of additional electrical heater, temperature relief valve, additional anod is ordered as option.

Note: If features of the boilers are not written it will be considered as Solareks standard production, as written in catalogue. If different electric heater capacity will be ordered the values in page 11 can be used to determine the heating capacities.

SI-METRIC Conversions

Liters x 0,2641 = US Gallons

kg x 2,2 = Lbs

Liters x 0,219975 = Great Britain Gallons

m³ x 264,2 = Gallons

Watt x 3,41214 = BTU/hr

m x 39,37 = Inch

°F = (°C x 1,8) + 32

m x 3,28084 = Foot

Bar x 14,5 = psi

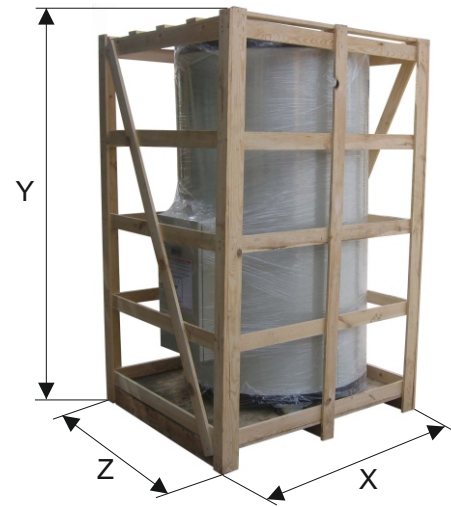
PACKING&SHIPPING DETAILS

A- Hot Dip Galvanized Electric Boiler Packing Details

Capacity	Packing
100 - 5000 L	Polyfilm + Wood Box

Packed Product Dimensions

Capacity	Volume (m ³)	Weight (kg)	X x Y x Z (mm)
100 L	0,70	75	870 x 1240 x 650
160 L	0,95	92	950 x 1365 x 730
200 L	1,10	104	950 x 1590 x 730
250 L	1,26	115	950 x 1680 x 795
300 L	1,40	130	1015 x 1740 x 795
400 L	1,70	162	1105 x 1740 x 885
450 L	1,85	175	1105 x 1900 x 885
500 L	1,98	186	1105 x 2030 x 885
600 L	2,27	213	1105 x 2300 x 885
750 L	2,49	311	1280 x 2300 x 1060
1000 L	3,56	413	1360 x 2300 x 1360
1250 L	4,01	515	1435 x 2300 x 1435
1500 L	5,05	593	1550 x 2450 x 1550
1750 L	5,56	640	1620 x 2450 x 1620
2000 L	6,0	696	1680 x 2450 x 1680
2500 L	7,30	982	1840 x 2450 x 1840
3000 L	8,30	1105	1955 x 2450 x 1955
4000 L	11,10	1395	2180 x 2600 x 2180
5000 L	12,76	1696	2300 x 2600 x 2300



Note: All products are designed according to Euro truck, 20 Feet, 40 Feet, 40 Feet high cube. Partial transportation is possible. Electric boilers are more suitable for air cargo.

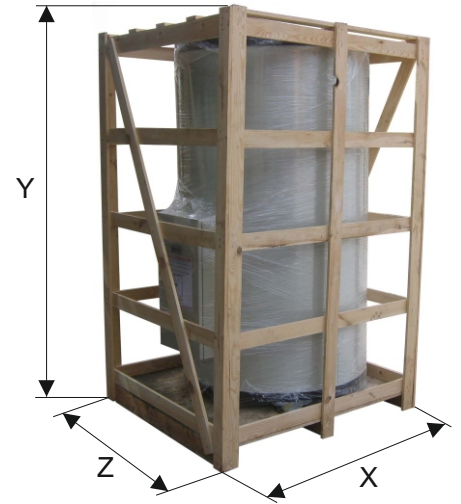
PACKING&SHIPPING DETAILS

B- Stainless Steel Electric Boiler Packing Details

Capacity	Packing
100 - 5000 L	Polyfilm + Wood Box

Packed Product Dimensions

Capacity	Volume (m ³)	Weight (kg)	Products with removable serpentine	
			Standard Product	X x Y x Z (mm)
100 L	0,70	69	870 x 1240 x 650	870 x 1240 x 650
160 L	0,95	86	950 x 1365 x 730	950 x 1365 x 730
200 L	1,10	99	950 x 1590 x 730	950 x 1590 x 730
250 L	1,26	110	950 x 1680 x 795	950 x 1680 x 795
300 L	1,40	118	1015 x 1740 x 795	1015 x 1740 x 795
400 L	1,70	154	1105 x 1740 x 885	1105 x 1740 x 885
450 L	1,85	167	1105 x 1900 x 885	1105 x 1900 x 885
500 L	1,98	175	1105 x 2030 x 885	1105 x 2030 x 885
600 L	2,27	193	1105 x 2300 x 885	1105 x 2300 x 885
750 L	2,91	237	1280 x 2150 x 1060	1280 x 2300 x 1060
1000 L	3,33	334	1360 x 2150 x 1140	1360 x 2300 x 1360
1250 L	3,75	379	1435 x 2150 x 1215	1435 x 2300 x 1435
1500 L	4,74	469	1550 x 2300 x 1330	1550 x 2450 x 1550
1750 L	5,21	538	1620 x 2300 x 1400	1620 x 2450 x 1620
2000 L	5,64	588	1680 x 2300 x 1460	1680 x 2450 x 1680
2500 L	7,34	784	1840 x 2300 x 1620	1840 x 2450 x 1840
3000 L	7,80	889	1955 x 2300 x 1735	1955 x 2450 x 1955
4000 L	9,95	1118	2180 x 2330 x 1960	2180 x 2600 x 2180
5000 L	11,44	1530	2300 x 2330 x 2135	2300 x 2600 x 2300



Container&Truck Dimensions

	Height x Width x Length	Volume (m ³)
20" Container	2335 x 2290 x 5890 mm	33,3
40" Container	2335 x 2260 x 12015 mm	66,9
40" High Cube Container	2580 x 2260 x 12015 mm	76
Truck (Euro Norm)	2500 x 2450 x 13400 mm	73

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