

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

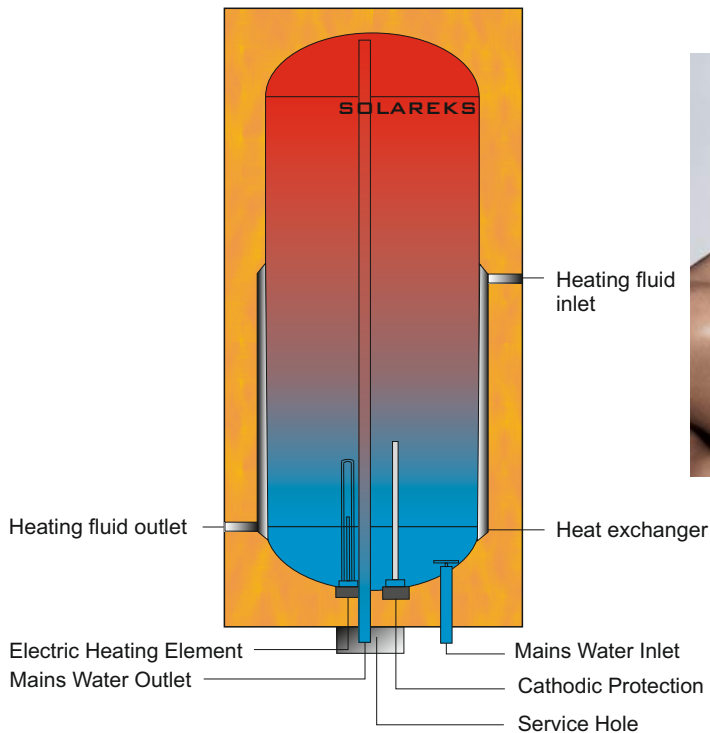
**WALL HUNG ELECTRIC BOILER FOR
RESIDENTIAL USE**



SOLAREKS - ELECTRIC WATER HEATER

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Solareks wall hung residential electric boilers can heat the water simultaneously or separately with two types of energy. Product can be connected to central heating system easily. In summer season when the central heating of the building is turned off water can be heated by electricity or solar energy. In winter time water can be heated by solid/fuel/gas central heating system, heat pump, waste energy. During winter season electricity consumption of the building will be decreased. Products are produced in range 20 L to 120 L capacities.



Technical Details

1- Professional Design - Electric and solid/fuel/gaseous energy in one product

Wall hung residential electric boiler can work simultaneously or separately with two types of energy:

- A- Electric energy (Single-phase electric power)
- B- Energy of solid/fuel/gas central heating system

Product is designed professionally to be used with various - 120/208/240/277 Volt 50-60 Hz - values of the electricity and every type of central heating system. Jacket type heat exchanger is used to have a perfect secondary circulation in fluid flow and higher heat transfer values. Product can be connected vertically and horizontally (Optional).

2- Corrosion Protection and Hygiene

Boilers' Inner tank is produced by two kinds of steel:

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

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

3- Insulation

Polyurethane: 40 mm

4- Analog Thermostat Controls Electric Heating Element

Boiler is equipped with analog thermostat. User can adjust the water temperature between 30 °C and 90 °C.

5- Aesthetic Design

The outer coverage of the boiler is made of painted in white colour or brushed stainless steel which has an aesthetic view. Boiler's outer coverage can be covered by any photo which is suitable to the style of the building. For that customer should send by e-mail photo in high resolution. Our company has no photo catalogue. Products are covered with photo according to customer needs.

6- Long Useful Life

Electric boiler is produced by hot dip galvanized steel or 304 L/316 L high quality stainless steel to have a long useful life. Product inner tank is protected against corrosion by high quality magnesium anode.

7- Installation

Electric boiler can be hunged on the wall by its steel aparats. 120 L product is produced with double connection aparats because of its weight. All products can be hanged horizontally (optional). Earthquake resistant hanging aparats are supplied optionally.

8- Material in a High Quality and Production

High quality black steel (for hot dip galvanized boilers only), stainless steel and raw material is used for production. Products are shipped after conducting pressure, electrical and packing controls.

9- Safety

Boiler is equipped with an analog thermostat and additional analog safety thermostat. If analog thermostat is broken down safety thermostat will switch off the electrical heaters at 90 °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. Heat exchanger is protected against high pressures by safety valve.

10- Packing

Products are covered with air bubble film. For the areas which has hard road conditions products are packed in woodboxes.

11- 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	20 L	30 L	45 L	60 L	75 L	90 L	120 L
Corrosion Protection	Hot Dip Galvanized Steel or Stainless Steel Inner Tank + Cathodic Protection						
Outer Coverage	Standard white colour coverage/photo covered design/brushed stainless steel (INOX)						
Insulation	Polyurethane						
Dimensions (mm)	430 x Ø 380	570 x Ø 380	580 x Ø 460	700 x Ø 460	620 x Ø 510	720 x Ø 510	870 x Ø 560
Weight (kg)	20/14	24/19	28/23	33/26	36/28	46/37	54/42
Working Pressure	6 bar						
Test Pressure	9 bar						
Electric Heating Element 220 V- 1 Phase - 60 Hz	1950 Watt	1950 Watt	1950 Watt	1950 Watt	1950 Watt	1950 Watt	2x1950 kW 3,9 kW
Time of the heating by electrical heater (min.)*	28	42	63	84	105	128	84

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

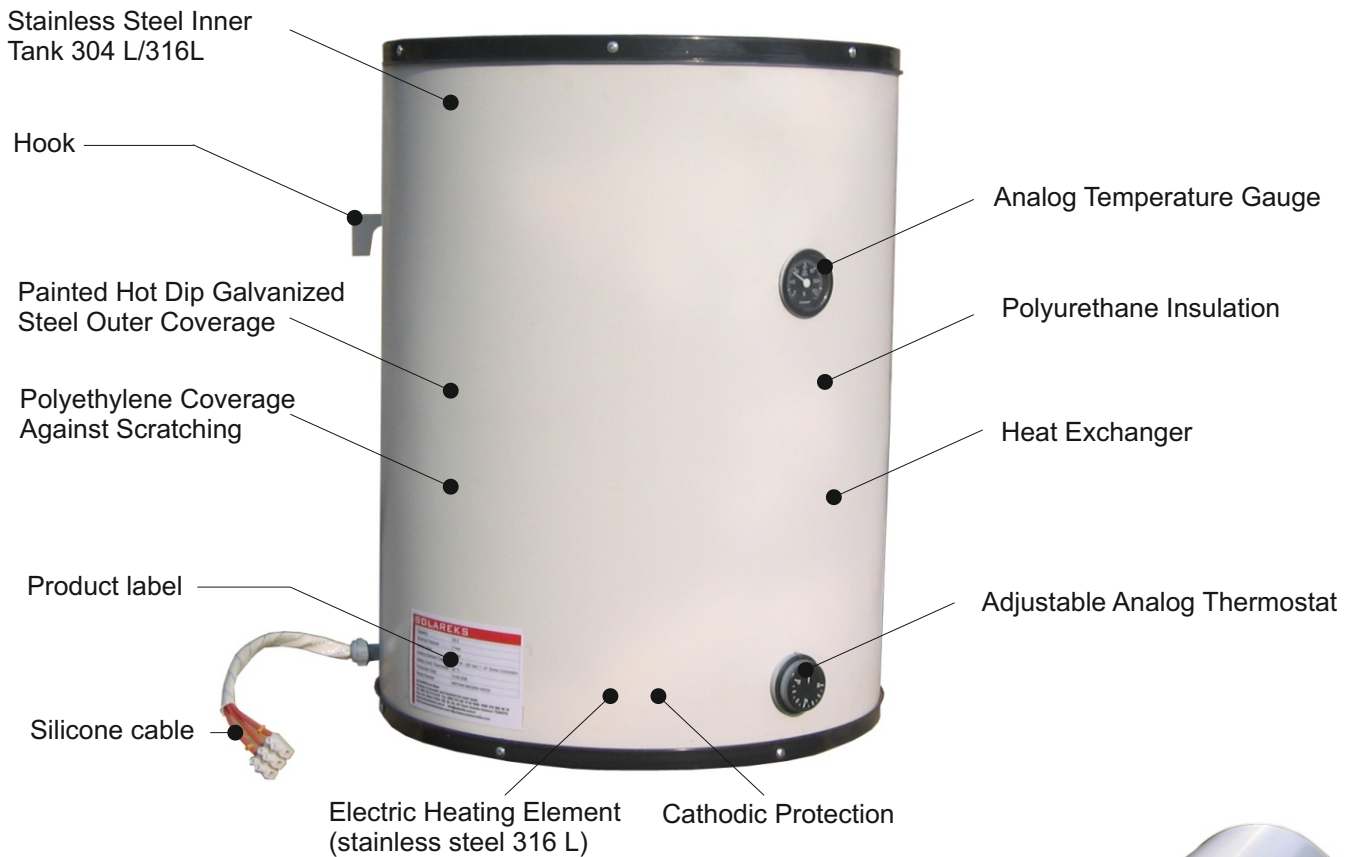
A- Hot Dip Galvanized Steel Electric Boiler - Material Specifications

	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	-
Electrical 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	Polyurethane								
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	-
Heat exchanger	Hot Dip Galvanized Steel	A283M-93a	S235JRG2		BS 4360 - 86	Ss330 (SS34)	E24-2E	Rst 37 -2	-



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	Polyurethane								
Outer Coverage	Painted Hot Dip Galvanized steel	A283M-93a	S235JRG2	-	BS 4360-86	Ss330 (SS34)	E24-2E	-	-
Mounting Parts	Stainless Steel	304 L	1.4306 - X12 CrNi 19-11	S30403	304S11	SUS 304 L	Z 3 CN 18-10	2352	03Ch18N11
Heat exchanger	Stainless Steel	304 L	1.4306 - X12 CrNi 19-11	S30403	304S11	SUS 304 L	Z 3 CN 18-10	2352	03Ch18N11



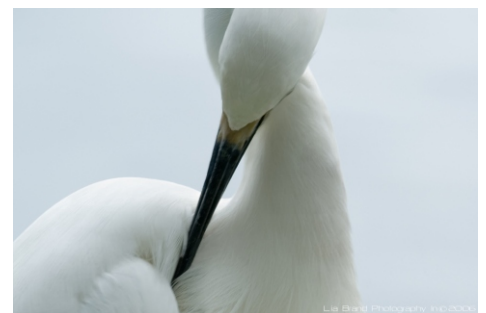
Note: Hot dip galvanized and stainless steel electric boiler outer view is same. Inner tank and electric heating element material are different.



120 liters model includes two electric heating elements, outer coverage is brushed stainless steel (INOX).

C- Photo Covered Electric Boiler

Electric boiler outer coverage can be covered with any photo which is suitable to the design of the building. Customer should send us the high resolution photo by e-mail. Our company has no any design catalogue. We produce the product according to customer needs. Below are some examples of photos.



Photos should be at least 300 DPI.

DPI= Dots per inch : For example; A 600x600 DPI photo has 600 dots in every vertical and horizontal Inch. (1 INCH = 25.4 mm)

Electrical Specifications

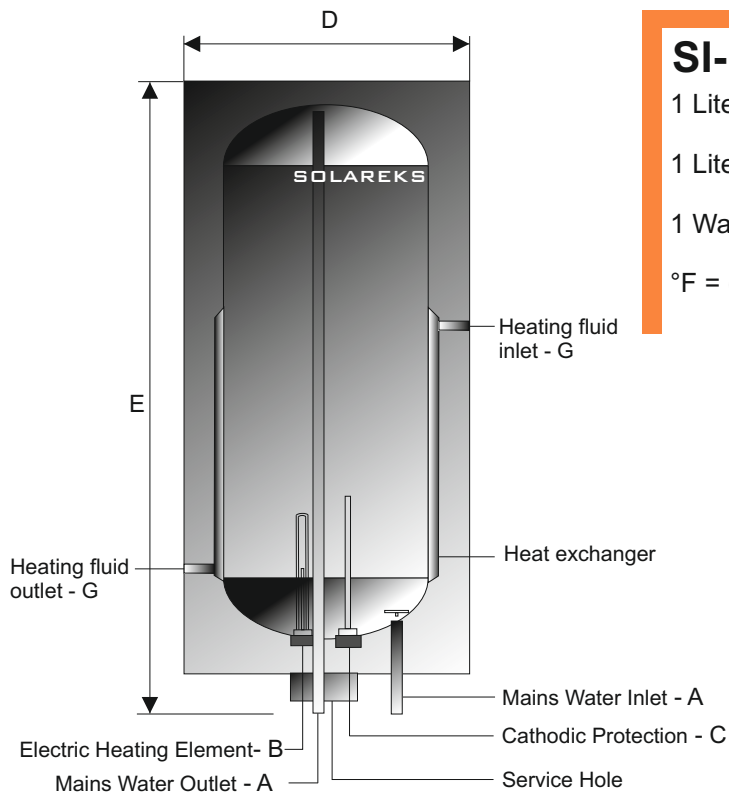
Electric boilers are shipping with all needed equipment. Below are the main elements:

- Electric Heating Element: Due to usage of 304L/316L 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.
- Safety Thermostat: Safety thermostat is used as an additional safety when the analog thermostat is out of order. It switches of the heating elements when the water temperature is 90 °C. It is used to prevent electric boiler from producing steam and to prevent users from scalding.

Safety Specifications

- Inner Tank Safety Valve: Protects thermo boiler inner tank against high mains water pressure. (8 bars adjusted).
- Heat Exchanger Safety Valve: Protects electric boiler heat exchanger against high mains water pressure.
- Safety Valve: Protects EWH against high mains water pressure.
- Safety Thermostat: Electric boiler is equipped with an analog thermostat and additional analog safety thermostat, If analog thermostat is broken down safety thermostat will switch off the electrical heaters at 90 °C.
- Water Pressure Regulator: Mains water pressure can be high in some areas where the water distribution piping is not excellent. Additional to that while water in the tank is heating, inner tank pressure increases 2-3 bars more. Then the safety valve discharges the water in the tank to protect the tank. To protect the tank and other machines inside the building water pressure regulator should be used to feed the building with appropriate water pressure (additional).
- Temperature Relief Valve: Protects users against high temperature&scalding (additional). It should be ordered while ordering electric boiler because it can not be connected to standard product.
- Thermostatic Mixing Valve: Mixes hot water with cold water to deliver water at a controlled temperature (additional).
- Earthquake resistant hanging accessories: Earthquake resistant hanging accessories attach electric boiler to the wall more secure than standard hanging accessories.

Product Dimensions



SI-METRIC Conversions

1 Liter = 0,264 US Gallon

1 Bar x 14,5 = psi

1 Liter = 0,22 Great Britain Gallon

1 kg = 2,2 Lbs

1 Watthour = 3,41214 BTU

1 m³ = 264,2 Gallon

°F = (°C x 1,8) + 32

1 m = 39,37 Inch

1 m = 3,28084 Foot

SI UNIT

Capacity	20 L	30 L	45 L	60 L	75 L	90 L	120 L
A- Mains Water Inlet/Outlet	½"	½"	½"	½"	½"	½"	½"
B- Electric heating element (Watt) 110 Volt/220Volt Monophase	1950	1950	1950	1950	1950	1950	3900
C- Cathodic Protection - Ø 26 (mm)	250	250	250	250	250	250	250
D- Diameter (mm)	380	380	460	460	510	510	560
E- Height (mm)	430	570	580	700	620	720	870
F- Weight (kg)*	20/14	24/19	28/23	33/26	36/28	46/37	54/42
G- Heating Fluid Inlet&Outlet	½"	½"	½"	½"	½"	½"	½"

*A-Hot dip galvanized steel product / B-Stainless steel product

METRIC UNIT

Capacity	5.28 Gal.	7.92 Gal.	11.89 Gal.	15.85 Gal.	19.81 Gal.	23.77 Gal.	31.70 Gal.
A- Mains Water Inlet/Outlet	½"	½"	½"	½"	½"	½"	½"
B- Electric heating element (BTU/HR) 110 Volt/220Volt Monophase	6653	6653	6653	6653	6653	6653	13307
C- Cathodic Protection - Ø 26 (mm)	9.8	9.8	9.8	9.8	9.8	9.8	9.8
D- Diameter (mm)	15	15	18.11	18.11	20	20	22
E- Height (mm)	16.93	22.44	22.83	27.56	24.40	28.35	34.25
F- Weight (kg)*	44/30.8	53/41.9	62/51	72.7/57.3	79.4/61.7	101/81.5	119/92.5
G- Heating Fluid Inlet&Outlet	½"	½"	½"	½"	½"	½"	½"
Working Pressure	90 Psi						
Test Pressure	130 Psi						
Time of heating by electric heating element (min.)*	28	42	63	84	105	128	84

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

SOLAREKS STANDARD SPECIFICATIONS

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

		A- Hot dip galvanized electric boiler			B- Stainless Steel electric boiler			
	Material	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	Magnesium	ASTM - B843AZ63(H-1)			Magnesium	ASTM - B843AZ63(H-1)		
Insulation	Polyurethane	-			Polyurethane	-		
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
Heat Exchanger	Hot Dip Galvanized Steel	A283M-93a	S235JRG2	-	Stainless Steel	304 L	1.4306 - X12 CrNi 19- 11	03Ch18N11

Standard Accessories

Pressure safety valve with non-return valve
Heat exchanger pressure safety valve

Electrical Heater Capacities 220 V - 50 Hz - 1 Phase

Capacity	Heater Capacity	Total Heater Capacity	Heating Time* (minute)
20 L	1 x 1950 W	1950 W	28
30 L	1 x 1950 W	1950 W	42
45 L	1 x 1950 W	1950 W	63
60 L	1 x 1950 W	1950 W	84
75 L	1 x 1950 W	1950 W	105
90 L	1 x 1950 W	1950 W	128
120 L	2 x 1950 W	3900 W	84

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

Material Options

	Optional Feature	Code	Explanation
Inner Tank	Stainless Steel	316 L	More durable in acidic water conditions than 304 L Stainless steel.
Electrical 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	Code	Explanation
Temperature Relief Valve	SEV	Protects users against high temperature 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	-
Additional Option	XX	Customized features, please consult factory.

SPEC CODES

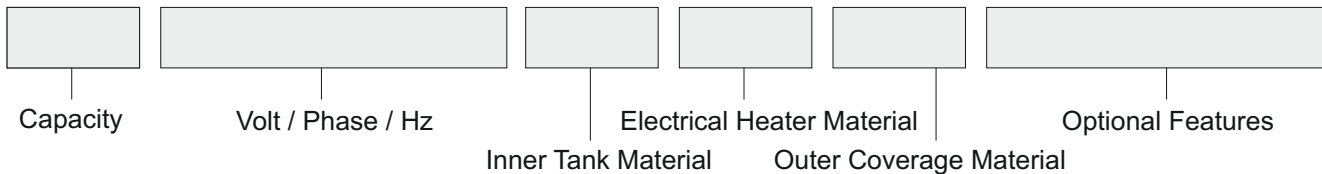
Explanation	Optional Code
Additional Anod	KK
Additional Electric Heating Element	T
Hot dip galvanized steel painted into white colour Outer Coverage	BS
Hot Dip Galvanized Inner Tank	GD
Hygienic debarked wood box, internat. standards	ISPM15
Mixing Valve	KV
Standard Wood Box	SA
Temperature Relief Valve	SEV
316 L Quality Stainless Steel Inner Tank	316 L
304 L Quality Stainless Steel Inner Tank	304 L
304 L Stainless Steel Electric Heating Element	R304 L
316 L Stainless Steel Electric Heating Element	R316 L
316 Ti Stainless Steel Electric Heating Element	R316 Ti
430 Quality Stainless Steel Outer Coverage	430
Additional Option	XX

Electric Heating Element(Volt - Phase - Hz)	Code
120 - 1 - 60	120 - 1 - 60
208 - 1 - 60	208 - 1 - 60
240 - 1 - 60	240 - 1 - 60
277 - 1 - 60	277 - 1 - 60

Standard Product Model Numbers

A- Hot dip galvanized product	Model Number	B- Stainless steel model	Model Number
20 L	WHREBG20	20 L	WHREBS20
30 L	WHREBG30	30 L	WHREBS30
45 L	WHREBG45	45 L	WHREBS45
60 L	WHREBG60	60 L	WHREBS60
75 L	WHREBG75	75 L	WHREBS75
90 L	WHREBG90	90 L	WHREBS90
120 L	WHREBG120	120 L	WHREBS120

HOW to ORDER OUR PRODUCT



Example: 20 / 220 - 1 - 60 / 304 L / 304 L / BS / T x 1 - SEV - KK

20 liters electric boiler with one electric heating element 220 Volt - 1 Phase is ordered. Inner tank material is 304 L quality stainless steel, electric heating element material is 304 L quality stainless steel, outer coverage is standard white coloured steel. 1 piece of additional electric heating element, temperature relief valve, additional anod is ordered as option.

Note: If features of the EWHs are not indicated it will be considered as Solareks standard production, as written in catalogue.

PACKING & SHIPPING DETAILS

A- Single Product Packing Details

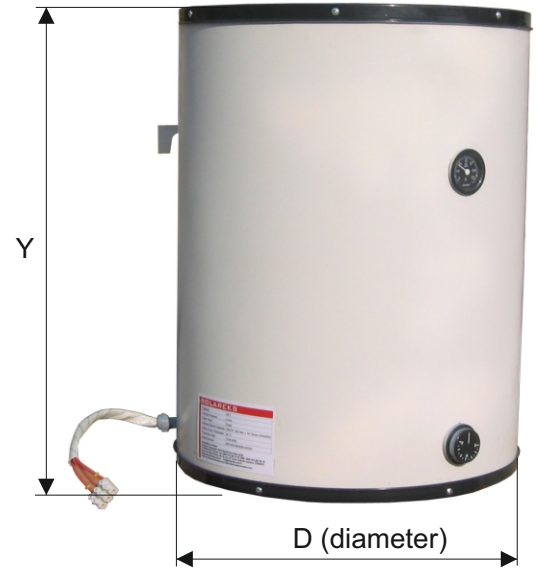
Packing Method

Capacity	Packing
20 - 120 L	Polyethylene film + Wood Box

Single Product Packed Dimensions

Capacity	Volume (m ³)	Weight (kg) A/B*	Y x D (mm)
20 L	0,049	20/14	430 x 380
30 L	0,064	24/19	570 x 380
45 L	0,096	28/23	580 x 460
60 L	0,116	33/26	700 x 460
75 L	0,127	36/28	620 x 510
90 L	0,147	46/37	720 x 510
120 L	0,214	54/42	870 x 560

*A-Hot dip galvanized steel product / B-Stainless steel product



B- Three Product Packing Details

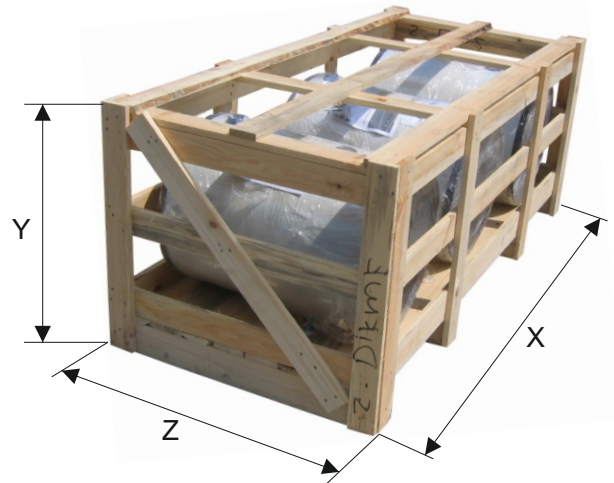
Packing Method

Capacity	Packing
20 - 120 L	Polyethylene film + Wood Box

Three Product Packed Dimensions

Capacity	Volume (m ³)	Weight (kg) A/B*	Y x Z x X (mm)
20 L	0,43	94/77	630 x 520 x 1340
30 L	0,536	106/92	770 x 520 x 1340
45 L	0,863	118/104	780 x 700 x 1580
60 L	0,116	134/112	900 x 820 x 1580
75 L	1,192	143/119	820 x 740 x 1730
90 L	1,34	196/115	920 x 840 x 1730
120 L	1,95	197/168	1070 x 970 x 1880

*A-Hot dip galvanized steel product / B-Stainless steel product



Note: Single product packings are done by air bubble film. Where the road to the destination is not well goods are packed in wood boxes. 3 piece and 6 pieces of electric water heater can be packed in wood boxes.

C- Six Product Packing Details

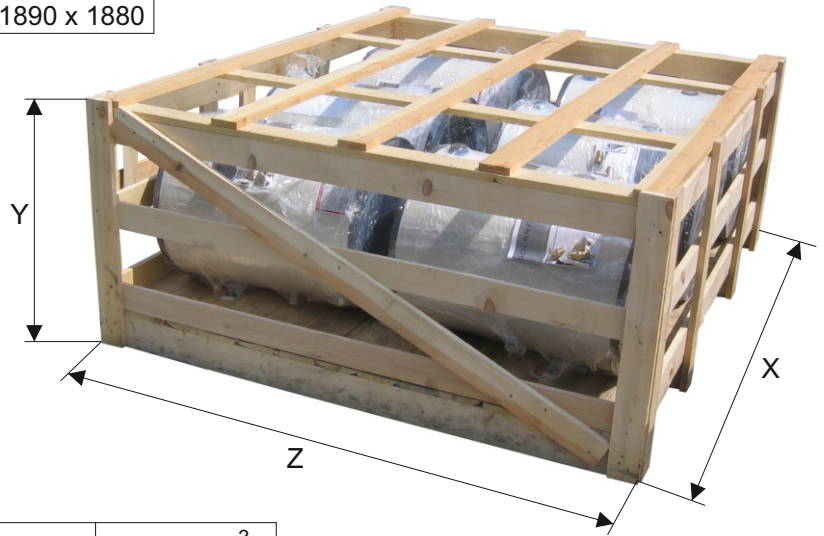
Packing Method

Capacity	Packing
20 - 120 L	Polyethylene film + Wood Box

Six Product Packed Dimensions

Capacity	Volume (m ³)	Weight (kg) A/B*	Y x Z x X (mm)
20 L	0,84	194/159	630 x 1000 x 1340
30 L	1,177	218/189	770 x 1140 x 1340
45 L	1,64	242/213	780 x 1330 x 1580
60 L	2,23	281/238	900 x 1570 x 1580
75 L	2,0	303/255	820 x 1410 x 1730
90 L	2,56	377/282	920 x 1610 x 1730
120 L	3,81	420/354	1070 x 1890 x 1880

*A-Hot dip galvanized steel product / B-Stainless steel product



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

SOLAREKS Contact Details

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