

oventrop

Innovation + Quality

solar products



Solar Hot Water Systems

Heating your home's hot water is one of the most energy consuming demands in your home.

The cost of heating water in your home is likely to be **25 - 30%** of your total energy costs, but can be even higher if you have more than four people in your home. Almost half of your electric bill, or more than 40% of your gas or oil bill, may go towards your domestic hot water costs. Solar water heating is the easiest way to utilize the sun's energy to conserve fossil fuel and save money. A residential solar hot water system will reduce the energy you require to heat your hot water anywhere from **40 to 65%**.



Oventrop has a complete line of solar products!

- *Evacuated Tube Collectors*
- *Pumping and Control Stations*
- *Solar Hot Water Storage Tanks*

How Your System Works

In conventional water heating, cold water is fed from the city supply or your well into the gas or electric water heating where it is heated to a design temperature of 120 degrees Fahrenheit. With your solar hot water system, cold water is fed into the solar storage tank. The pump circulates a non-freeze fluid through the solar collectors where it is heated by the sun. The heated fluid is pumped into the heat exchanger in the storage tank where the heat is then transferred to the water. The Regusol EL130 continually monitors the temperature of the fluid in the collectors and the temperature in the tank. If the fluid in the collectors is warmer than the water in the tank, the pump circulates the fluid through the collectors. The Regusol EL130 switches off automatically when there is insufficient sunlight and the collectors are no longer able to raise the temperature in the storage tank. This happens when the sun is at a very low angle, when there is a thick cloud cover, and at night. The pump automatically starts again when enough sunlight is available. Temperatures in your solar storage tank can be as high as 120 °F in winter to 150 °F in the summer months. Solar-heated water requires very little or no heating to reach your desired temperatures. Your solar hot water system is used in conjunction with your existing water heating system to provide the additional heat required to bring your solar-heated water up to your desired temperature. The existing system also sustains hot water demand during winter and prolonged cloudy weather or when you have visitors in your home.

OV - 5 Evacuated Tube Collector

The primary component of the Oventrop Solar System is the evacuated glass tube collector.

Each evacuated tube contains a heat pipe for ease of installation at the manifold. The condenser at the top of the evacuated tube plugs right in to the manifold.

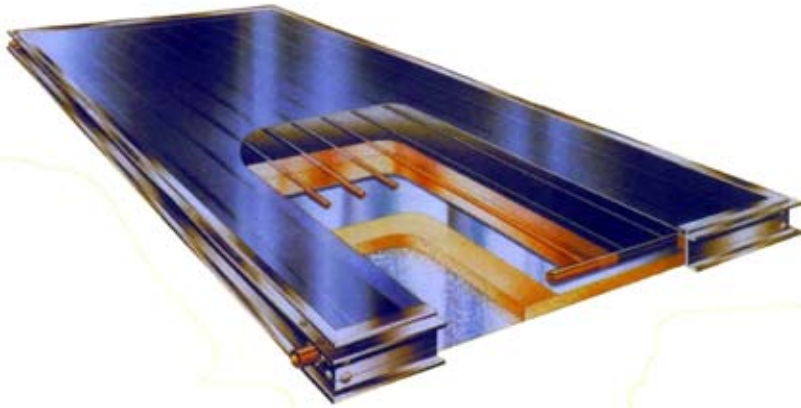
Aluminum nitride selective coated absorbers transfer more than 92% of the arriving radiation. Available in either 8- or 16-tube configurations, the collectors are manufactured with the highest quality assurance standards.



OV - 5 Technical Data	OV 5-8 (540 00 08)	OV 5-16 (540 00 16)
Number of Tubes	8	16
Design	Evacuated Tube with Heat Pipe	
Dimensions (LxWxH)	83 x 38 x 7 inches	83 x 76 x 7 inches
Tube Outside Diameter	4 inches	
Tube Length	78.74 inches	
Hailstone Resistant to	1.378 inches diameter	
Stagnation Temperature	374 Degrees Fahrenheit	

Oventrop Flat Plate Solar Collector

Quality engineering with superior materials makes the Oventrop flat plate collector an excellent choice for value and efficient solar collection.



Oventrop flat plate collectors are extremely versatile, can be used for closed loop or drainback applications, may be mounted horizontally or vertically, and come in three sizes.

Manufactured with an extruded aluminum anodized frame, the quick-lock mounting system is rated for wind loads of up to 180 MPH. With a long 30-year design life, the collector's copper tube and absorber fin are permanently bonded and forge welded. All models have a high efficiency selective coating for absorbtivity as high as 96%.

Flat Plate Technical Data	3' x 7' (540 03 07)	4' x 8' (540 04 08)	4' x 10' (540 04 10)
Glazed Area	18.9 sqft.	29.5 sqft.	36.9 sqft.
Glazing Thickness	1/8 inch		5/32 inch
Dimensions (LxWxD) inches	86 x 36 x 3-1/8	98 x 48 x 3-1/8	122 x 48 x 3-1/8
Fluid Capacity (Gal.)	0.7	1.04	1.21
Weight	76 lbs.	116 lbs.	151 lbs.
Header Connections	1 inch diameter copper		

Regusol

Controller Integrated Pumping Stations

Regusol EL130

The solar pumping station Regusol EL130 consists of an integrated electronic controller with sensor monitoring and operation indicators, a circulator, isolating valves, integrated check valves, a flow meter, an air separator, a pressure relief valve, and a connection to the thermal expansion tank.

Use one Regusol EL130 for up to three 16-tube collectors.



Regusol X

The pre-assembled Regusol X solar pumping station offers all the benefits of the Regusol 130 EL plus an integrated heat exchanger. Regusol X is available in both 50,000 and 85,500 Btu per hour capacities.

Regusol Technical Data	Regusol 130 EL	Regusol 130	Regusol X 50	Regusol X 85
Electronic Controller	Yes	No	Yes	
Pump (solar transfer fluid)	Wilco Star 16		Wilco Star 16U-15	
Pump (water side)	N/A		Wilco Star 16U-15	
Dimensions (HxWxD) inches	14-3/4 x 12-7/8 x 7-3/4		33-7/8 x 22-1/2 x 10-5/8	
Heat Exchanger Transfer	N/A		50,000 Btu/Hr	85,000 Btu/Hr

Solar Indirect Storage Tanks

316 Stainless Steel

Quality Design and Construction

Tanks and coils are all stainless steel.

Large smooth coils, no finned tubing.

Includes over 2" of urethane insulation, R-12.

Thermoplastic jacket will not rust or corrode.

Easy Installation

All connections are on top.

Brass drain and relief valves are factory installed.

Two thermostat wells to control each coil independently.



Tank Capacity (Item number)	60 Gallon Tank (540 00 60)	80 Gallon Tank (540 00 80)	115 Gallon Tank (540 01 15)
Models	Dual Coil (DC)	Single Coil (SC) / Single Coil w/ Electric Backup (E) / Dual Coil (DC)	
Dimensions HxOD	60 x 22.5 inches	54 x 26.5 inches	72 x 26.5 inches
Pipe Connection	1 inch for all connection ports		
Maximum Working Pressure	150 PSI for all tank models		
Shipping Weight	150 lbs	165 lbs	198 lbs
Thermowells	1 Lower on (SC) and (E) / 1 Upper and 1 Lower on (DC)		

Solar Products



Solar Indirect Storage Tanks

316 Stainless Steel

60 Gallon (540 00 60) (DC) only

80 Gallon (540 00 80)

115 Gallon (540 01 15)

Single Coil (SC) / Dual Coil (DC) /

Electric Backup (E)



OV 5 Evacuated Tube Collector

OV 5-8 Tube (540 00 08)

OV 5-16 Tube (540 00 16)



Fill and Flush Valve

3/4 inch connections (136 30 51)



Stainless Steel Pre-insulated Flexible Supply and Return Line-set with Integrated Sensor Wire

3/4" 50 ft length (136 16 53)



Regusol X "Uno," "Duo"

3/4 inch connections

50,000 Btu/Hr model

85,500 Btu/Hr model



Regusol EL130

3/4 inch connections (169 80 65)

Regusol 130

without controller

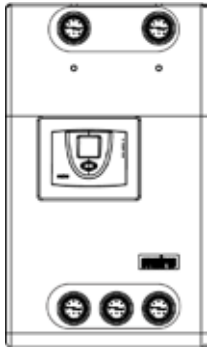
3/4 inch connections (169 70 65)

Solar Pumping Stations



Regusol EL-130
with differential controller

169 80 65



Regusol - X
with single load side return, "Uno"
50,000 BTUH
85,500 BTUH

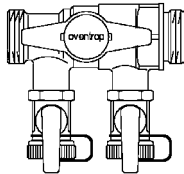
167 10 61

167 10 95

with two load side returns and mixing valve, "Duo"
50,000 BTUH
85,500 BTUH

167 10 51

167 10 45



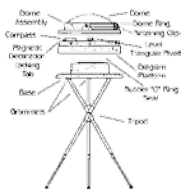
Solar Valves
Filling and Flushing Device

136 30 51

Solar Working Fluid

5 Gallon NT/40 Glycol - Pre mixed to 40%

540 00 90



Siting Tools

Solar Pathfinder with Case
Solar Pathfinder with Case and Tripod

540 04 00

540 04 00 TP

Pre-Insulated Flexible Stainless Steel Line Set

3/4" by 50' roll with integrated control wire

136 16 53



Solar Thermal Collectors

Evacuated Tube Solar Collectors

8 Evacuated Tube Collector* **540 00 08**
 16 Evacuated Tube Collector* **540 00 16**

Flat Plate Solar Thermal Collectors

OVF-21 - 3' x 7' Flat Plate Collector **540 03 07**
 OVF-32 - 4' x 8' Flat Plate Collector **540 04 08**
 OVF-40 - 4' x 10' Flat Plate Collector **540 04 10**

Solar Hot Water Kits

All kits include (1) 169 80 65, (1) 136 30 51, and the required mounting hardware

System Model	System Contents						Kit Item Number
	OVF-32	OV 5-16	OV 5-8	NT-40 propylene glycol	Glass-Lined Tank Capacity and Type		
					80 gallon	119 gallon	
OVSOL 5-16-SC	-	1	-	2	Single Coil	-	540 00 16K-SC
OVSOL 5-16-SCE	-	1	-	2	Single Coil Electric	-	540 00 16K-SCE
OVSOL 5-16-DC	-	1	-	2	Dual Coil	-	540 00 16K-DC
OVSOL 5-16-DCE	-	1	-	2	Dual Coil Electric	-	540 00 16K-DCE
OVSOL 5-24-SC	-	1	1	2	-	Single Coil	540 00 17K-SC
OVSOL 5-24-SCE	-	1	1	2	-	Single Coil Electric	540 00 17K-SCE
OVSOL 5-24-DC	-	1	1	2	-	Dual Coil	540 00 17K-DC
OVSOL 5-24-DCE	-	1	1	2	-	Dual Coil Electric	540 00 17K-DCE
OVSOL FP-2-SC	2	-	-	2	Single Coil	-	540 04 08K-SC
OVSOL FP-2-SCE	2	-	-	2	Single Coil Electric	-	540 04 08K-SCE
OVSOL FP-2-DC	2	-	-	2	Dual Coil	-	540 04 08K-DC
OVSOL FP-2-DCE	2	-	-	2	Dual Coil Electric	-	540 04 08K-DCE
OVSOL FP-3-SC	3	-	-	2	-	Single Coil	540 34 08K-SC
OVSOL FP-3-SCE	3	-	-	2	-	Single Coil Electric	540 34 08K-SCE
OVSOL FP-3-DC	3	-	-	2	-	Dual Coil	540 34 08K-DC
OVSOL FP-3-DCE	3	-	-	2	-	Dual Coil Electric	540 34 08K-DCE
Systems with Dual Coil stainless steel tank							
OVSOL 5-16-SS	-	1	-	2	Dual Coil	-	540 00 16K
OVSOL 5-24-SS	-	1	1	2	-	Dual Coil	540 00 17K
OVSOL FP-2-SS	2	-	-	2	Dual Coil	-	540 04 08K
OVSOL FP-3-SS	3	-	-	2	-	Dual Coil	540 34 08K

* Does not include connection hardware. Must be purchased separately

OV Solar Storage Tanks

Stainless steel construction

60 gallon dual coil tank	540 00 60 DC
80 gallon dual coil tank	540 00 80 DC
80 gallon single coil tank	540 00 80 SC
80 gallon single coil tank with electric backup	540 00 80 E
115 gallon dual coil tank	540 01 15 DC
115 gallon single coil tank	540 01 15 SC
115 gallon single coil tank with electric backup	540 01 15 E

Glass-lined construction 'G'

80 gallon dual coil tank	540 00 80 G
80 gallon dual coil tank with electric backup	540 00 80 DCEG
80 gallon single coil tank	540 00 80 SCG
80 gallon single coil tank with electric backup	540 00 80 SCEG
119 gallon dual coil tank	540 01 19 G
119 gallon dual coil tank with electric backup	540 01 19 DCEG
119 gallon single coil tank	540 01 19 SCG
119 gallon single coil tank with electric backup	540 01 19 SCEG

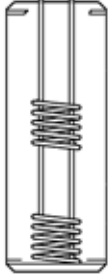
Double glass-lined construction 'DG'

with Top Coat

210 gallon storage tank	540 02 10 DGTC
435 gallon storage tank	540 04 35 DGTC

with Steel Jacket

210 gallon storage tank	540 02 10 DGSJ
435 gallon storage tank	540 04 35 DGSJ



Solar Collector Mounting Hardware

Adjustable Rack for Evacuated Tube Collectors

Adjustable Rack Mounting Kit for 8-Tube Collector Flat or Pitched Roof/Ground Mount	540 00 28-8	(4) aluminum channel feet, (2) pieces 66" galvanized strut, (1) piece 50" galvanized strut, (1) piece 32" galvanized strut, (4) 1/2" bolt/washer/nut sets, (4) type C hinge leafs, (2) type B hinge leafs, (2) type A hinge leafs, (22) 5/16" bolt/washer/nut sets, (8) 1" spacers, (2) compression T-fittings, (1) air vent, (1) Thermowell, (2) pipe adapters
Adjustable Rack Mounting Kit for 16-Tube Collector Flat or Pitched Roof/Ground Mount	540 00 28-16	(4) aluminum channel feet, (2) pieces 66" galvanized strut, (1) piece 50" galvanized strut, (1) piece 58" galvanized strut, (4) 1/2" bolt/washer/nut sets, (4) type C hinge leafs, (2) type B hinge leafs, (2) type A hinge leafs, (22) 5/16" bolt/washer/nut sets, (8) 1" spacers, (2) compression T-fittings, (1) air vent, (1) Thermowell, (2) pipe adapters

Flush Mounting for Evacuated Tube Collectors

Flush Mounting Kit - Shingle Roof 8- or 16- Tube Collector	540 00 28-FM	(2) compression T-fittings, (1) air vent, (1) Thermowell, (2) pipe adapters, (4) roof brackets & hardware
Flush Mounting Kit - Metal Seam 8- or 16- Tube Collector	540 00 28-MS	(4) standing metal seam roof clamps, (4) roof brackets & hardware, (4) 3/8" bolt/washer sets, (2) compression T-fittings, (1) air vent, (1) Thermowell, (2) pipe adapters
Flush Mounting Kit - Tile 8- or 16- Tube Collector	540 00 28-TK	(4) tile mounting brackets & hardware, (2) compression T-fittings, (1) air vent, (1) Thermowell, (2) pipe adapters

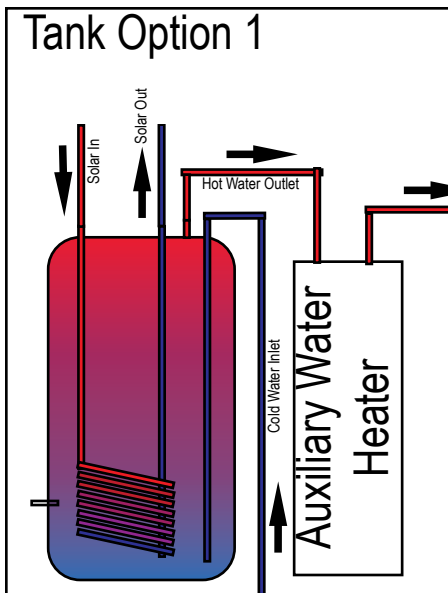
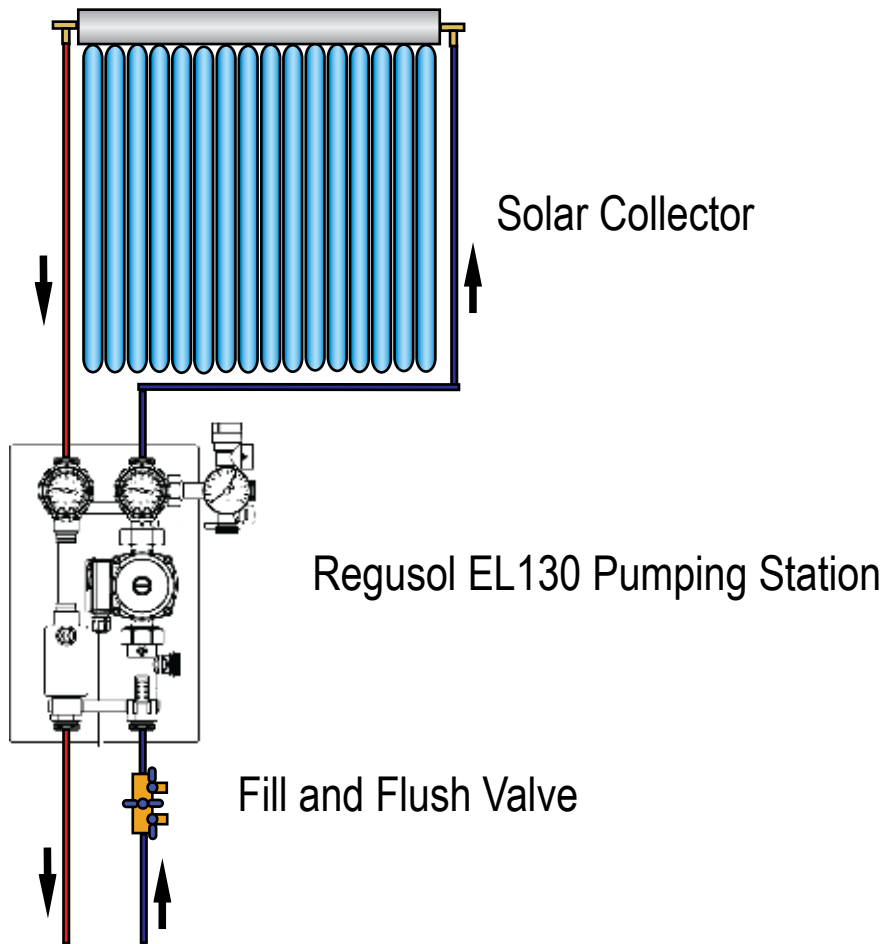
Evacuated Tube Collector Connection Kits

Collector Connection Kit 8- or 16- Tube Collector Connection Kit	540 00 21	(1) straight compression coupling, (1) aluminum manifold sleeve, (1) "L" profile bracket
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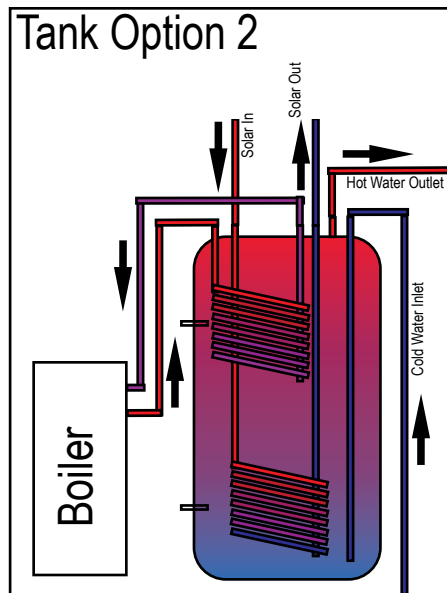
Flat Plate Collector Mounting Hardware

Adjustable Mount Kit for all Flat Plate Collectors	540 00 28-FP	(4) mounting feet, (2) bottom quick lock clamps with set screws, (4) top quick lock clamps, (4) 2-inch bolts, (2) 4-inch bolts, (6) 3/8-inch bolts, (2) 1-inch x 6 foot tube stock
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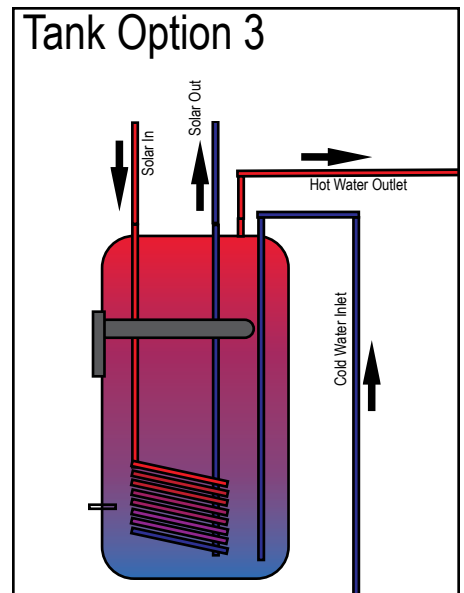
Residential Solar Thermal Systems



Single coil tank for use with conventional water heaters



Dual coil tank for use with boiler indirect water heater systems



Single coil tank with electric element for use as complete water heater replacement

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