

## Why Roth Solar Thermal Systems

- Roth's history of manufacturing environmentally friendly products include solar thermal systems as well as rainwater collection systems, radiant heating systems and heat pumps.
- Roth solar thermal products have been successfully sold and installed in Europe for more than 20 years.
- The Roth solar collector is unique in its construction and the materials used and will guarantee you a long lasting, very efficient product.
- Roth recognizes the importance of a quality installation process and has made it mandatory for the installer to be certified by Roth. Classes are taught by the Roth Technical Team so that the installer can confidently install and service Roth solar thermal systems.

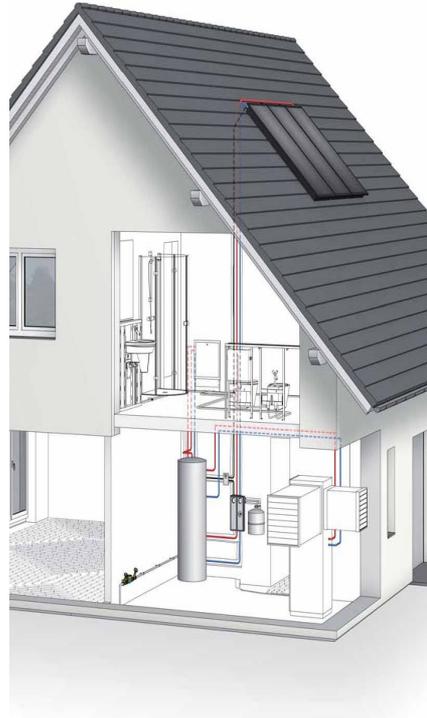
Contact your local Roth distributor for more information.



Roth Vacuum Tube Collector R1



Flat Panel Collector installation on roof



Distributed by:

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**ROTH SOLAR  
THERMAL SYSTEMS**



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...Your environment is our business

October 2010, 2390100084

## Thermal Solar-what it is?

A solar system uses the power of the sun and turns it into heat for solar hot water, solar space heating and solar pool heaters.

## How exactly does it work?

A solar collector, either flat panel or evacuated tube, is mounted on a roof, wall or the ground in an area exposed to the sun. The power of the sun heats up the fluid circulating through the collector. The fluid is then transported, through insulated pipes, to a heat exchanger coil inside a storage tank. The heat is absorbed into the water in the tank and the cooled fluid is transported back to the collector to begin the process over again. This cycle continues until the hot water need is satisfied or the collector is no longer able to heat the fluid sufficiently (nighttime).



## How is it integrated into the existing system?

The solar system can be easily integrated into the existing hot water heating system by either having a solar tank feed preheated water into the existing hot water tank or by using one dual-coil tank which heats the water by solar or the boiler.

## Do I need a back up source to heat my water?

Yes. An economical solar thermal system can provide up to 80% of your hot water needs. A back-up system is necessary to ensure an uninterrupted supply of hot water.

## How much can I save?

*“Solar water heating systems usually cost more to purchase and install than conventional water heating systems.*

*However, a solar water heater can usually save you money in the long run.”*

-Department of Energy



How much money you save depends on the following:

- The amount of hot water you use
- Your system's performance
- Your geographic location and solar resource
- The cost of conventional fuels (natural gas, oil, and electricity)
- The cost of the fuel you use for your backup water heating system, if you have one.
- Available incentives and financing options

On average, if you install a solar water heater, your water heating bills should drop **50%–80%**. Also, because the sun is free, you're protected from future fuel shortages and price hikes.

*“If you're building a new home or refinancing, the economics are even more attractive. Including the price of a solar water heater in a new 30-year mortgage usually amounts to between \$13 and \$20 per month.*

*In the US, the federal income tax deduction for mortgage interest attributable to the solar system reduces that by about \$3–\$5 per month. So if your fuel savings are more than \$15 per month, the solar investment is profitable immediately. On a monthly basis, you're saving more than you're paying.*

-Source: US Department of Energy

## What incentives are available?

Incentives for the homeowner are available on federal and, in most states or provinces, also on local levels.

As for the federal level in the US, there is a 30% tax credit for the purchase and installation of a solar system. In Canada, a grand amount of \$1250 CAD is available through NRcan for the purchase and installation of a solar system.

Please check with the Sales Representative for local incentive programs in your area since these credits can change without prior notice.

For more information visit following websites:

Database of State Incentives for Renewables & Efficiency: [www.dsireusa.org](http://www.dsireusa.org)

Energy Matters, LLC (Estimate size and calculate cost of operating a solar thermal system): [www.solar-estimate.org](http://www.solar-estimate.org)

Solar Energy Industries Association (General solar information): [www.seia.org](http://www.seia.org)

US Department of Energy: [www.eere.energy.gov/solar/](http://www.eere.energy.gov/solar/)

Energy Star program of DOE and EPA: [www.energystar.gov](http://www.energystar.gov)



ROTH HelioStar 252 and R1 collectors are performance tested by the Solar Ratings & Certification Corporation (SRCC)