



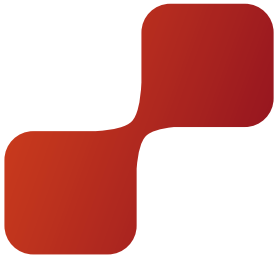
# polysun<sup>®</sup>

SOLARTHERMAL  
SIMULATION

Design and enhance your system with Polysun, the leading simulation software for solar thermal systems



vela solaris

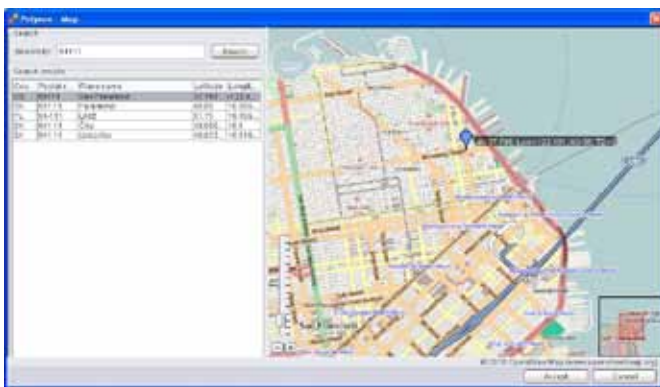


## Maximize your solar sales and services

- Time-saving design
- Descriptive reports satisfy customers
- Successful incentive applications
- Build customer confidence through competence

## Design solar thermal systems, make yield forecasts, reduce costs and enhance savings

Thanks to its design, yield and economic viability calculation tools Polysun provides unparalleled flexibility in the design of top-quality solar thermal systems, also in combination with photovoltaic systems, heat pumps and solar cooling systems.

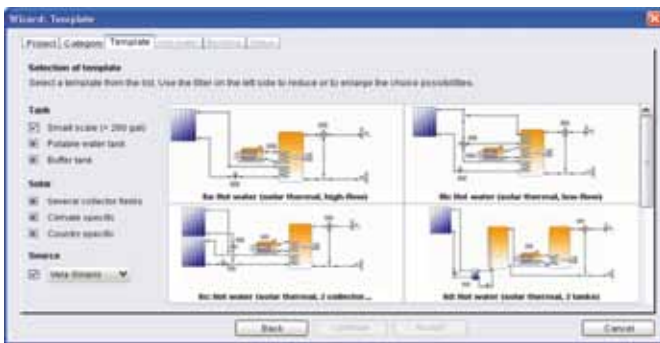


### Polysun: designing your ideal system in five easy steps

#### Step 1: Selecting worldwide weather data

- Reliable yield forecasts thanks to our global weather database including over 8000 weather stations worldwide
- Calculation of weather data for user-defined locations
- During the simulation the sun's position is updated each 4 minutes

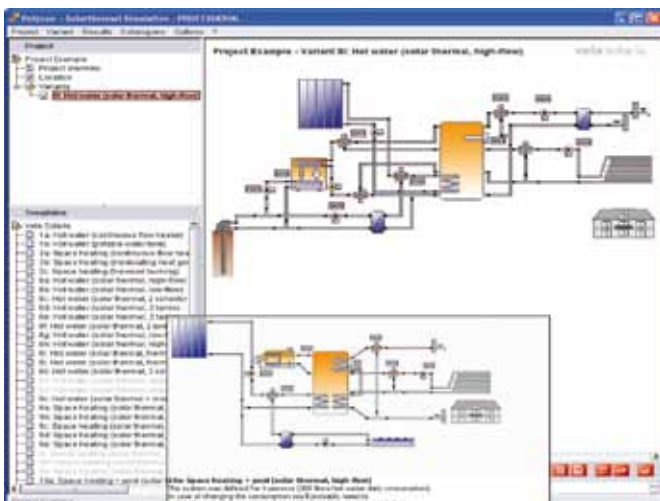
→ Accurate location selection helps build customer confidence

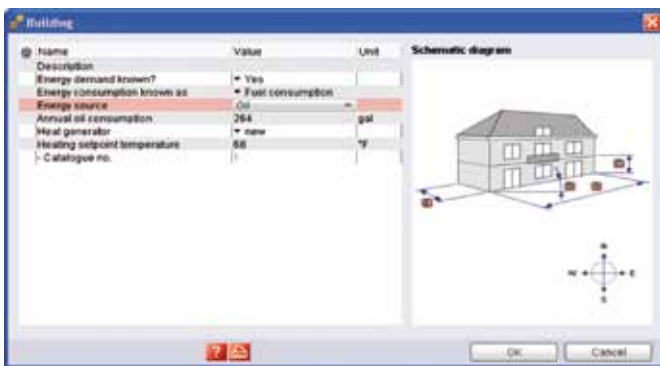


#### Step 2: defining your hydronic scheme

- Polysun provides users with the world's largest and most comprehensive template selection. Polysun offers countless ready-made templates for the following systems:
  - Domestic hot water
  - Space heating
  - Swimming pool
  - Process heat/district heating
- Create yourself your own hydronic template
- Have a template designed by your Polysun team

→ Predefined schemes make system design easier and save time

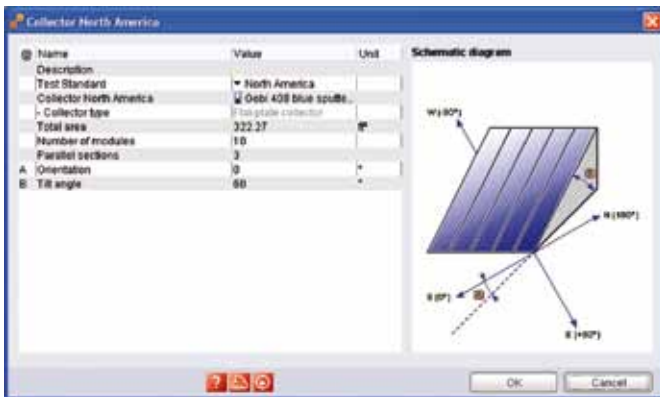




### Step 3: Defining your consumers

- Enter daily hot water consumption or yearly demand
- Select the building characteristics from an extensive catalogue or you can define the heating demand or the oil/gas consumption
- Freely configure your consumption values, e.g. with a load profile

→ Accurate simulations even when little detailed information is available.



### Step 4: Dimensioning your system

- Polysun provides you with a comprehensive database of commercially available products. Our database is constantly updated and promptly made available to all users.
  - Collectors, tanks, heat generators, pumps, heat exchangers, etc.
  - Catalogue integration with your own product range available
- Dimension and modify your system components, e.g. collector area and orientation.

→ Certified data guarantee the reliability of simulation and yield values generated.



### Step 5: Result evaluation

- Automatic display of simulation results
  - Clear and detailed evaluations with PDF-reports instill confidence and trust in customers and support any subsidy applications.
  - Displaying economic results (such as payback period, incentives, energy balance) is proof of your professionalism.
  - Monthly and hourly results for all components make it possible to monitor energy flows.
  - All results can be graphically displayed.

→ Customer-specific reports build customer confidence and increase your sales opportunities

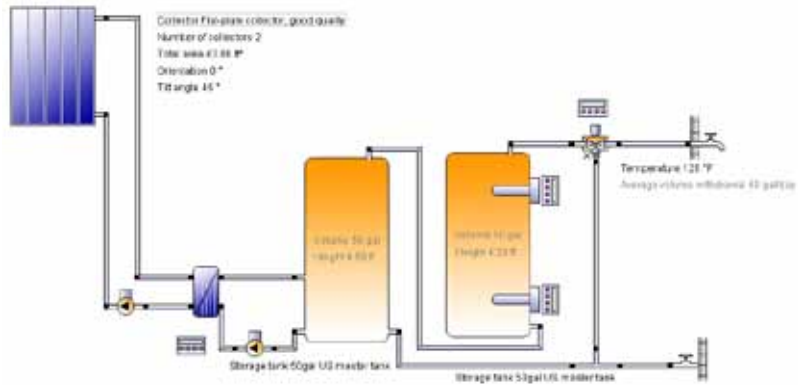


### Professional report

your logo

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#### 8ah: Drain back, Indirect Forced Circulation, 2 Water tanks



#### Location of the system

San Francisco  
Longitude: -122.451°  
Latitude: 37.762°  
Elevation: 456 ft

#### Map Section



#### This report has been created by:

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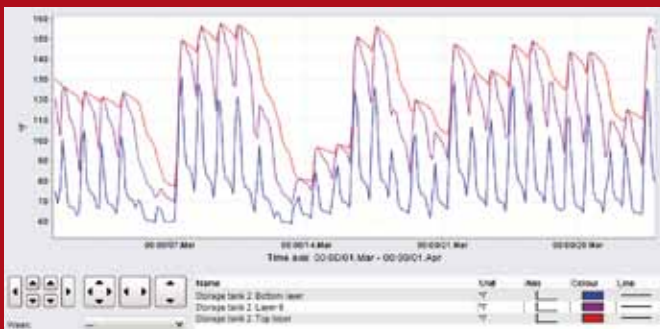
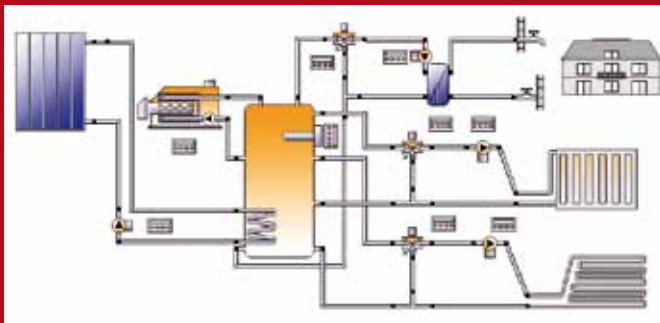
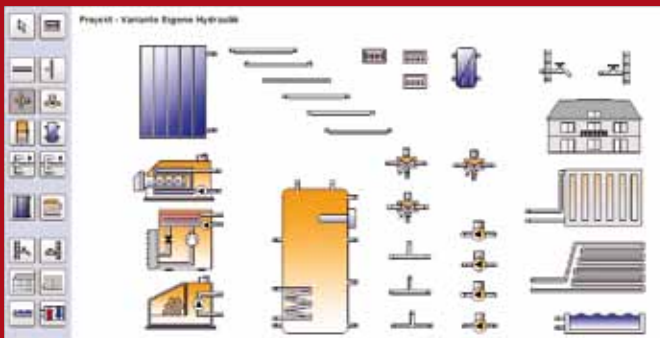
## What our customers say:

«Working with Polysun facilitates and speeds up our planning process tremendously,» says Ole Pilgaard «Polysun greatly simplifies the system design process and also serves as a sizing instrument. In addition, Polysun generates professional PDF-reports that are a great help in sales and marketing.»

Ole Pilgaard, CEO and President of Heliodyne Corp. USA

«The interaction of heat pump, auxiliary heating, solar collectors, buffer tank and control features can dramatically enhance the results provided by your heating system. Simulation calculations carried out with Polysun ensure for the customer that the calculated annual performance factor and power consumption figures are accurate and reliable.»

Dr. Wolfgang Guggenberger, Management Sonnenkraft GmbH



## Enjoy modularity and maximum flexibility with Polysun Designer

Polysun's modularity and flexibility enable you to design and modify your system in the blinking of an eye. Our software enables hydronic systems to be combined and simulated in any thinkable way. This will prove particularly helpful when it comes to complex systems.

Polysun is also an ideal solution for new buildings, redevelopment activities and large systems.

→ Accurate reproduction of systems helps build customer confidence

→ True-to-life reproductions and accurate simulations play a key role in the sale and financing of large-scale systems

### **Polysun guarantees an accurate and transparent simulation**

Polysun has been on the market since 1992. Originally created at the Institut für Solartechnik SPF (Institute for solar technology), part of the Hochschule für Technik (Technical University) in Rapperswil (Switzerland) our software has been since continuously setting new and higher industry standards. Solid scientific foundations and its user-friendliness have made Polysun the preferred software solution for thousands of experts and well-established companies worldwide. Vela Solaris closely cooperates with universities and manufacturers to push Polysun's development further everyday.

### **Polysun Solarthermal Simulation**

#### **is available in three different user levels**

Tailored solutions for all users to best meet everyone's needs.

#### **Polysun Light**

Intuitive operation with wizards and hydronic templates; quick and reliable

#### **Polysun Professional**

Super-easy to use; enter own components; high-quality sales support with a wide-range of result displays and countless templates

#### **Polysun Designer**

Leading, market-oriented software providing maximum flexibility in the design of large and complex systems; modularity in the creation of hydronics; modular system assembly

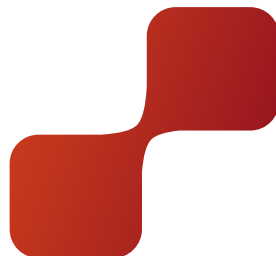
### **Combination of products from the Polysun range**

Upgrade your version of Polysun adding the following comprehensive modules:

- Photovoltaics - Polysun Photovoltaic Simulation
- Heat pumps - Polysun Heatpump Simulation
- Cooling - Polysun Cooling Simulation

### **Demo version**

A free-of-charge demo version is available on [www.polysunsoftware.com/demo](http://www.polysunsoftware.com/demo)



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