

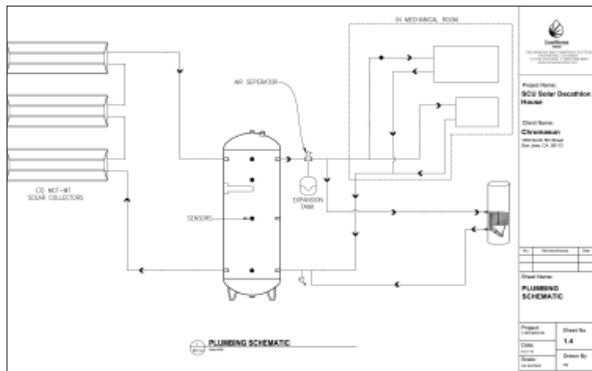


Solar Decathlon House (Santa Clara University)

Solar Thermal Case Study: Solar Cooling System

SUNWATER
SOLAR

System At A Glance	
Location	Santa Clara, Calif.
Building	Solar Decathlon House
Collectors	3 Chromasun MCT
Total Collector Area	134 square feet
Chiller	Yazaki 3-ton
Solar Pump Station	Custom built
Solar Storage Capacity	375 gallons
Therms Offset (1 Year)	336 therms (approx.)
Carbon Offset (1 Year)	3.9 barrels oil consumed
System Cost	US\$40,000



Solar cooling schematic (SunWater Solar design)

Project Overview

At Santa Clara University's (SCU) 2007 Solar Decathlon House, SunWater Solar installed three Chromasun Micro-Concentrator (MCT) collectors and linked them to the absorption chiller that produces cold water used in the air-conditioning process at the house.

Client Overview

Located on campus, the Solar Decathlon House is the result of a collaboration among students from the SCU School of Engineering. The house serves as a demonstration project for Bay Area students interested in alternative energy and learning about sustainability challenges and solutions.

Client Perspective

"This collaboration is a perfect example of how Santa Clara University continues to work with Silicon Valley companies to expose our students to their most cutting edge technologies. We can use this technology to demonstrate and explain to students newer ways to collect solar thermal energy, and collect and measure the data in real time."

- Professor Timothy Hight, SCU Mechanical Engineering Department Chair

Points of Interest

Chromasun chose SunWater Solar to remove the Solar Decathlon House's original solar thermal system, install new MCT collectors and related components, and link them to a Yazaki 3-ton chiller. SunWater Solar also installed 60 MCT collectors for a solar water-heating system at SCU's Benson Center.



SCU students at the Solar Decathlon House

About SunWater Solar

SunWater Solar is a solar thermal integrator that manages the design and installation of commercial solar thermal systems, which lower utility bills, reduce greenhouse gas emissions and help clients meet sustainability requirements. With extensive project management experience in domestic hot water heating, process heating and solar cooling, SunWater Solar staff are among the solar thermal industry's top professionals. Founded in 2007 and based in Richmond, California, SunWater Solar serves clients in a variety of industries and focuses exclusively on solar thermal technology.

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