

# Case Study: Crow Canyon Medical Center

## Combination Solar Cooling & Heating System



# CHROMASUN



### SYSTEM AT A GLANCE

|                            |                         |
|----------------------------|-------------------------|
| Location                   | Danville, CA            |
| Building                   | Medical center          |
| Collectors                 | 75 Chromasun MCTs       |
| Total Collector Area       | 3,352 square feet       |
| Chiller                    | Thermax 50 ton          |
| Electricity Offset (1 Yr)  | 145,000 kWh (estimated) |
| Therms Offset (1 Yr)       | 1,100 (estimated)       |
| Total Carbon Offset (1 Yr) | 26 cars off the road    |

## Project Overview

The Crow Canyon Medical Center (CCMC) installation is the first solar thermal system to provide air cooling and heating, and domestic water-heating, for a U.S. medical facility. Notable for its large size (3,352 square feet of collector area), the system showcases the potential of solar thermal technology to offset both cooling (electricity) and water heating (natural gas) loads for medical facilities. By improving building environmental performance, CCMC expects to greatly reduce the facility's energy costs.

The CCMC system's 75 Chromasun MCT panels produce process heat at 400 degrees Fahrenheit. This heat enables the 50-ton Thermax chiller to produce chilled water for the cooling system, offsetting an estimated 145,000 kWh of electricity consumed annually to cool the building. The system will also offset approximately 1,100 therms of natural gas consumed annually to heat water for the facility's medical offices and bathrooms.

## Client Perspective

"A primary CCMC business goal is to operate one of the most energy-efficient and environmentally sustainable buildings in the U.S. hospital industry. By embracing Chromasun's solar thermal technology and initiating a wide array of other energy efficiency measures, CCMC has achieved that goal. We are very happy to see the system complete, and up and running."

- John Moore, General Partner of Crow Canyon Medical Center

## About Chromasun

Founded in 2008, Chromasun is a leading developer and manufacturer of rooftop friendly high performance solar solutions. Chromasun's unique MCT HT solar collector provides high grade thermal energy but in a familiar flat panel format with no external moving parts. The MCT HT is designed to drive high performance air-conditioning absorption chillers and other industrial process heat applications. It is the most space efficient solar technology available and can produce more energy per unit of roof area than any competing technology. As a leader in the space, the Chromasun team of engineers and professionals have decades of experience in utility scale solar, air-conditioning engineering, product development and manufacturing.



Lifting the Thermax absorption chiller to the CCMC roof



All 75 Chromasun MCTs were lifted and set in a single day