# FORCED CIRCULATION SYSTEMS

### The Right Choice

## The Right Choice EVERY HOUR, EVERY DAY

Chromagen is a leading global company that develops, manufactures and sells advanced hot-water, energy-saving solutions which promote environmental sustainability.

Founded in 1962 in Israel, the company has invested the last years in bringing innovation, quality and cost-saving solutions to a diverse range of projects worldwide – including single homes, multi-story apartment buildings, hotels, hospitals, industrial plants, and other commercial projects.

Since its establishment, Chromagen has continuously expanded and established two subsidiaries in Australia and Spain, as well as a solid network of distributors who help serve customers in over 40 countries worldwide. Today, Chromagen is recognized as a pioneer of hot water energy saving solutions and is positioned as one of the top 10 largest flat plate collector manufacturers in the world.









## Forced Circulation Systems

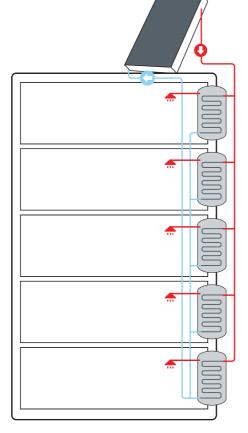
Forced circulation systems use electrical pumps, valves, and controllers to circulate water or other heat-transfer fluids through the collectors. This enables a high degree of flexibility in the positioning of the system components. For example, the tank can be installed in a basement. In addition, the system can operate with a series of collectors to supply heated water to severallarge tanks, making it suitable for hotels, swimming pools and other commercial applications.

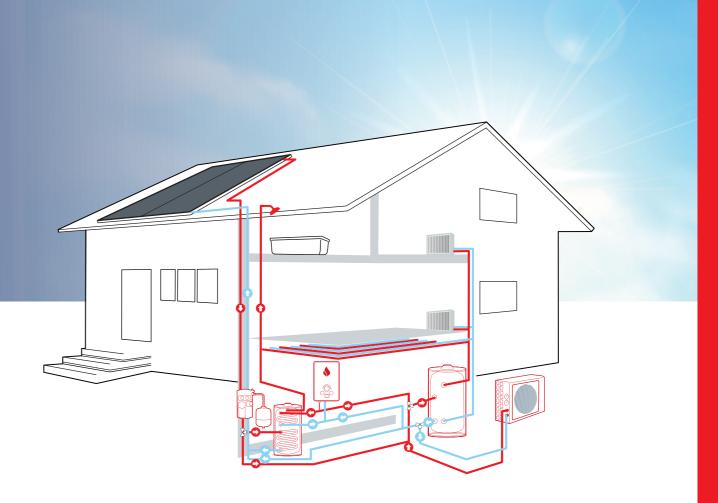
### Closed-Loop System

In a closed-loop system, heat transfer fluid circulates through the system tubes and doesn't mix with the potable water inside the water storage tank. Closed-loop systems are better-suited for colder climates, since the anti-freeze solution keeps the system from freezing. The system's life span is lengthened by preventing scale buildup inside the collector tubes.

Closed-loop systems can be operated in either Forced Circulation or Thermosiphon systems.





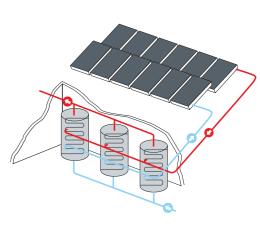


#### **Central Installations**

Chromagen's central installations for home and commercial use, provide heated water in very large quantities by using an array of collectors. The number and size vary according to the water heating requirements. These installations are the perfect solution for apartment buildings, hotels, hospitals and industrial plants. They are generally backed up by conventional energy sources. Central installations can be operated with large storage tanks of over 1000 liters or with small individual storage tanks for each consumption unit.







Chromagen has vast experience in the design and implementation of large solar installations. Installations of this type require site specific designs. Not only are these applications resourceful, they also contribute to a healthy environment by preventing air pollution and energy saving.