

# Factsheet for Solar Heat Solutions in Industry

A solar thermal system for industrial processes is an innovative technology that converts solar energy into heat. It takes the form of hot water or steam, to support industrial processes and reduce fossil-based energy sources. It is also known as **Solar Heat for Industrial Processes** (SHIP), representing an incredibly promising market segment with significant growth in recent years. This growth is observed not only in the increasing number of applications but also in their scale, spanning various industrial sectors across Europe and beyond.

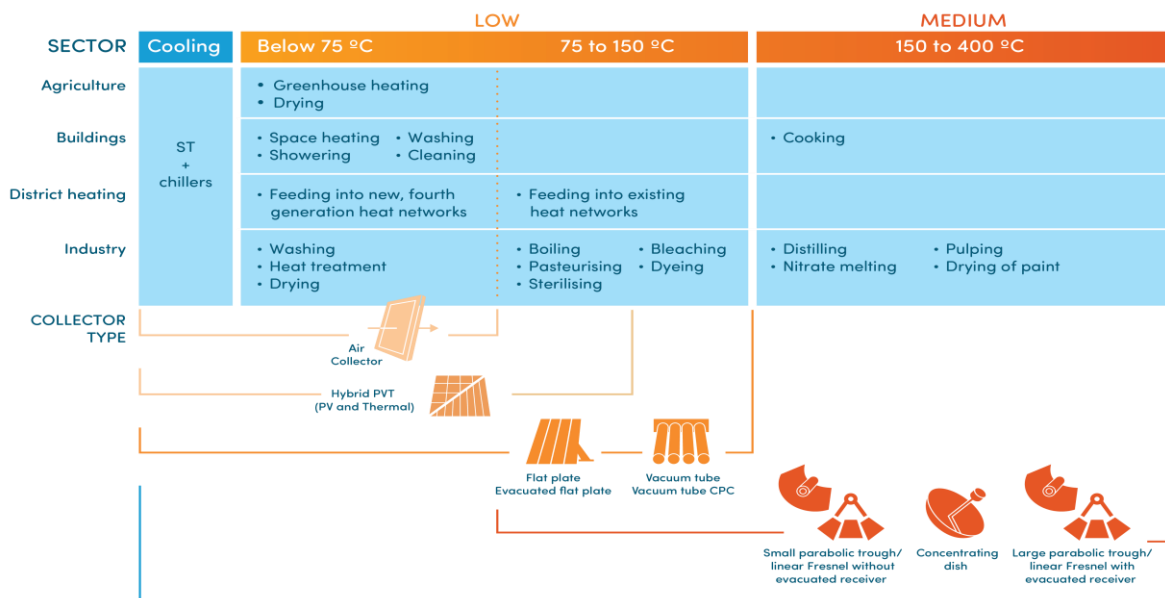
Depending on the collector type, solar thermal can provide **temperatures between 75-150° C** (air collector, flat plate, PVT collector, evacuated flat plate or vacuum tube CPC) and 150-400 °C (concentrated dishes, Fresnel collectors, and parabolic troughs). With its vast potential, this technology can play a key role in industrial decarbonisation efforts, contributing as such to net-zero targets. Depending on the location, a 1.4MWth (2000 m<sup>2</sup>) system could provide the equivalent of 1.1GWh/year and thereby saving around 2000 tonnes of CO<sub>2</sub>. Furthermore, solar thermal energy **reduces energy costs and ensures price stability** for at least 25 years.

For example, solar thermal heat is used in **Lecta Group's paper mill** in Condat-sur-Vézère, France. The 3 MWth solar thermal plant provides the company with heat. The whole solar field is located on an old paper sludge storage area of 4,212m<sup>2</sup>, contributing to the rehabilitation of this space in consultation with the environmental authority. Thanks to an annual production of 3,900 MWh, the industrial site will reduce its CO<sub>2</sub> emissions by 1,078 tonnes per year.

Another illustration of solar thermal heat use in industry is **Lactalis Group's milk powder facility** in France. This solar thermal plant, the largest of its kind in France, has a substantial environmental benefit. By annually delivering approximately 8,000 MWh of clean heat, it contributes significantly to reducing CO<sub>2</sub> emissions, preventing around 2,000 tonnes of CO<sub>2</sub> from entering the atmosphere each year.<sup>1</sup>

---

<sup>1</sup> Solar Heat Europe (n.d.).



Visual description: Types of solar thermal solutions for industrial applications