



A world of opportunities

Soltigua's linear Fresnel collector FLT is the ideal solution for solar process heat and air conditioning on ground and rooftop installations.



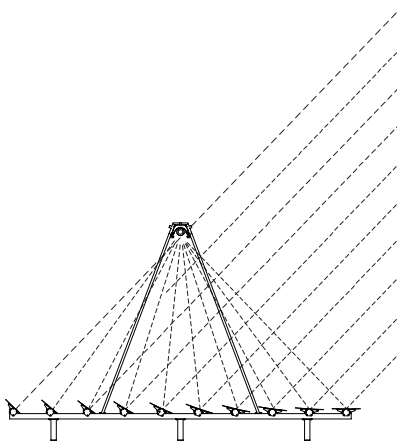


FLT: the ideal solution for cooling and process heat

Soltigua's Fresnel collector FLT is a linear concentrating system for generating heat in the range of 30 KW to several MW at temperatures up to 320°C. Developed and produced in Italy, FLT offers all the advantages of solar thermal concentration so far available only to large solar thermal power stations. FLT's light structure, distributed weight, low wind impact and compact dimensions make it an ideal rooftop solution for industrial process heat, solar cooling and polygeneration applications.

Industrial process heat

Many industrial thermal processes can integrate their traditional sources with the solar energy produced by FLT.



Industry	Process	Temperature (°C)
Food and beverages	cleaning	80-150
	pasteurisation	80-110
	sterilisation	130-150
	drying	130-240
	cooking	80-100
Plastic	extrusion and drying	150-180
Chemical	heat treatments	150-180
	boiling	95-110
	distillation	110-300
	drying	150-180
Paper	bleaching and drying	130-180
Textile	washing	80-100
	heat treatment	80-130
	bleaching	60-100
	dyeing	100-160
Industrial cleaning	steam washing	150

FLT can generate process heat by heating steam, thermal oil or water, both directly or indirectly depending on what is best for each industrial process. FLT's modular design makes it simple to integrate solar energy also into existing industrial systems.

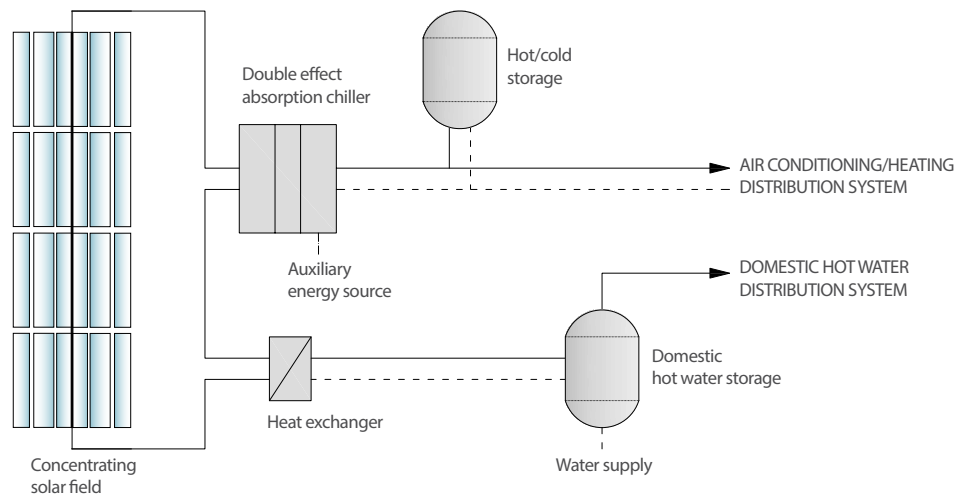


FLT concentrates:

- Italian design
- modularity at any size
- high energy savings

Solar cooling

Solar cooling is a fascinating application because it generates air conditioning from solar energy. This system takes advantage of summer high solar radiation and the need for air conditioning during the same period, thus reducing significantly energy consumption during peak hours. By feeding high temperature heat to a double effect water-lithium bromide absorption chiller, FLT permits the maximum exploitation of the solar potential with an energy efficiency which can not be reached by other solar technologies. FLT can be integrated into a complete HVAC system that contributes also to hot water production and winter heating.



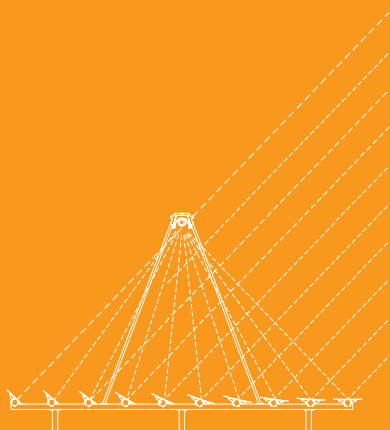
FLT can be also used in combination with ammonia-water absorption chillers, which are suitable for hot and arid climates thanks to their dry recooling and for cooling temperatures below 0°C. Furthermore, by using clean and renewable solar energy, concentrating collectors such as FLT represent the most appropriate technology for realising solar district heating and cooling systems.

Further applications

- FLT can also be applied in:
- localised power station plants;
 - industrial refrigeration at temperatures below 0°C;
 - seawater desalination plants.

Technical overview

FLT is available in 5 basic models that can be combined in order to realize customized solar fields ranging from few hundreds to several thousands square meters of collecting surface.



Model	FLT10v-24	FLT10v-36	FLT10v-48	FLT10v-60	FLT10v-72
Net collecting surface [m ²]	148,5	222,8	297,0	371,3	445,5
Width [m]	8,05				
Length [m]	25,02	37,35	49,68	62,01	74,34
Reference thermal capacity* [kWt]	83	124	166	207	249
Mirrors	Weather resistant highly reflective tempered glass				
Receiver	Evacuated and selectively coated receiver with secondary mirror				
Working temperature	Up to 320°C				
Heat transfer fluid	Hot water (up to 220°C) or thermal oil				
Pressure	Hot water (up to 20 bar) or thermal oil (up to 10 bar)				

*= corresponding to a specific power of 559 W/m² at the following operating conditions: $T_{\text{Outlet}} = 200^{\circ}\text{C}$; $T_{\text{Inlet}} = 180^{\circ}\text{C}$; $T_{\text{External}} = 30^{\circ}\text{C}$; DNI = 900 W/m²; Longitudinal Angle = 0° and Transversal Angle = 30°.

Further features of Soltigua's FLT collectors include:

- Highly accurate automatic sun tracking with multimirror drive
- Controlling PLC with sensors and web based remote monitoring
- Stowing procedure in case of bad weather
- Safety procedure against high wind, overheating and lack of flow
- Electric panel at 230 VAC



Soltigua's concentrating collectors can deliver solar energy to thermal processes up to 320°C. By offering both parabolic and Fresnel technology, Soltigua can supply the solar solution that best serves the specific needs of each given installation.

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