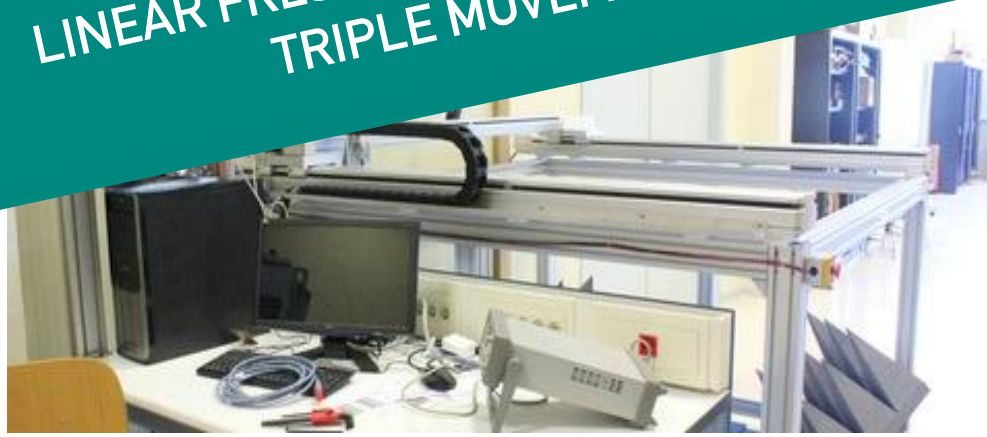
Universidad de Oviedo

CIFP

COMPACT SOLAR COLLECTOR WITH LINEAR FRESNEL CONCENTRATOR AND TRIPLE MOVEMENT

TECHNOLOGY OFFER



COMPETITIVE ADVANTAGES

✓Very **efficient** and **compact** equipment, unlike current options.

✓**No energy losses** at the tube ends, which is typical in Fresnel collectors.

✓ Aligned with the EU's encouragement of the use of **energy alternatives for buildings**.

✓Applicable not only in the **building sector**, where hot water, heating and/or cooling and electrical energy are simultaneously required. Due to its high efficiency, it is also applicable to **water purification and desalination**.

PATENTS

ES patent applied.

In time to seek international patent protection.

TYPE OF COLLABORATION

Licence agreement.

INNOVATIVE ASPECTS

✓ Maximization of the absorption of solar energy,

✓ Reduction of the surface required for its installation, due to its great efficency.

✓ Reduction of the separation between several concentrators when installed together and optimization of their application in heating or cooling, since it allows to obtain more energy in the months with higher demand.

✓ The invention provides solar tracking over time in an optimal way and concentration of solar radiation more efficiently thanks to the possibility of having a triple movement.

✓ No energy losses at the absorber tube ends.

ABSTRACT

The present invention relates a compact solar collector with a linear Fresnel concentrator and triple movement, comprising a fixed structural system, a mobile structural system that can roll in the North-South direction pivoting with respect to a primary axis in the East-West direction, a primary concentrator system composed of a number of rows of mirrors that can flip in the East-West direction pivoting with respect to a reflector axis in the North-South direction and a secondary concentrator system that can roll in the direction North-South pivoting with respect to a secondary axis in the East-West direction. The secondary concentrator comprises an absorber tube(s) through which a heat transfer fluid flows and collects the energy projected by the mirrors and transports it.

Principal Researcher	Department	E.mail	Phone
Manuel Arsenio Barbón	Electric Engineering	otri@uniovi.es	(+34) 985 10 27 69 (+34) 985 18 23 29