Laboratories and Facilities

The Concentration Photovoltaic Systems Institute has fully equipped laboratories for the development and validation of equipment and designs related to Photovoltaic Technology, following the tests set by the IEC 61215, IEC 61646, IEC61730 standards, and, especially, to Concentration Photovoltaic Technology, such as the IEC 62108, IEC 62688, IEC 62817, and IEC 62670 standards. The laboratories have been adapted and expanded to carry out tests and validations on equipment and materials in diverse sectors like the automotive, construction, and electrical equipment sectors, among others.

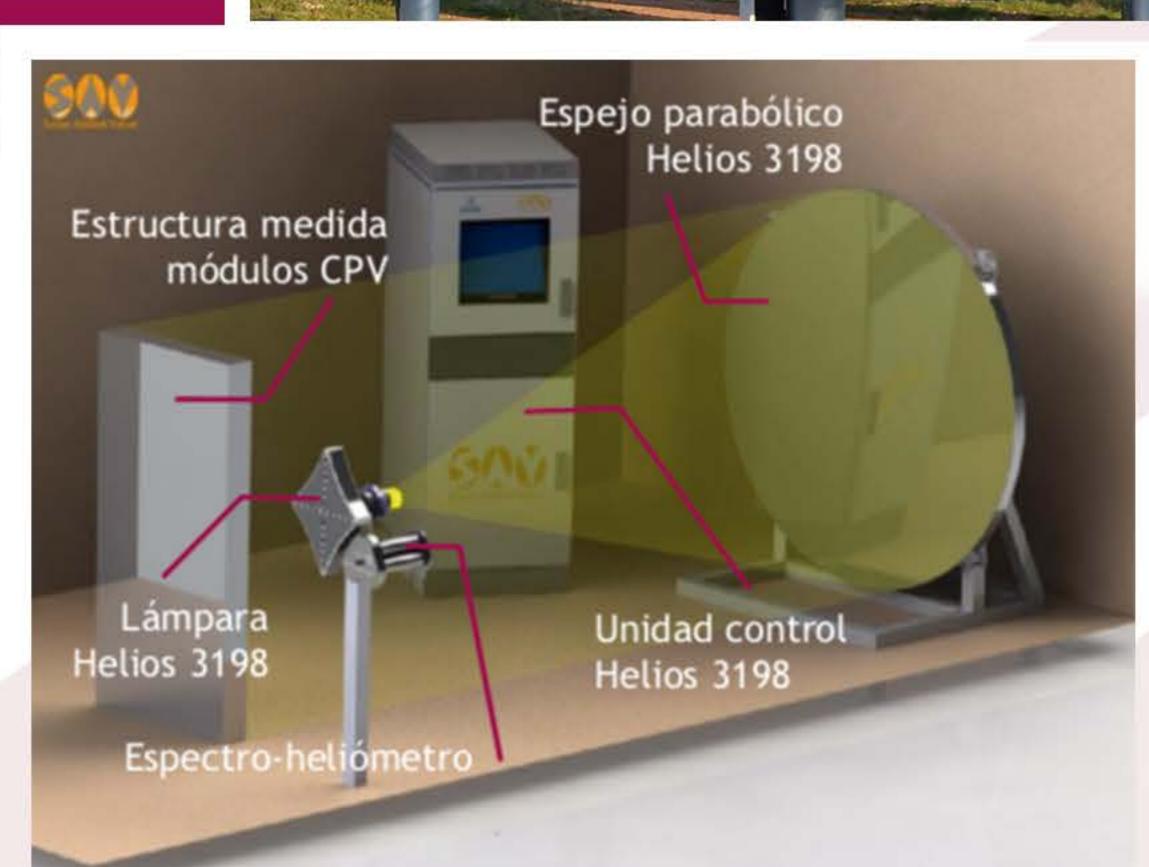
Solar Simulator

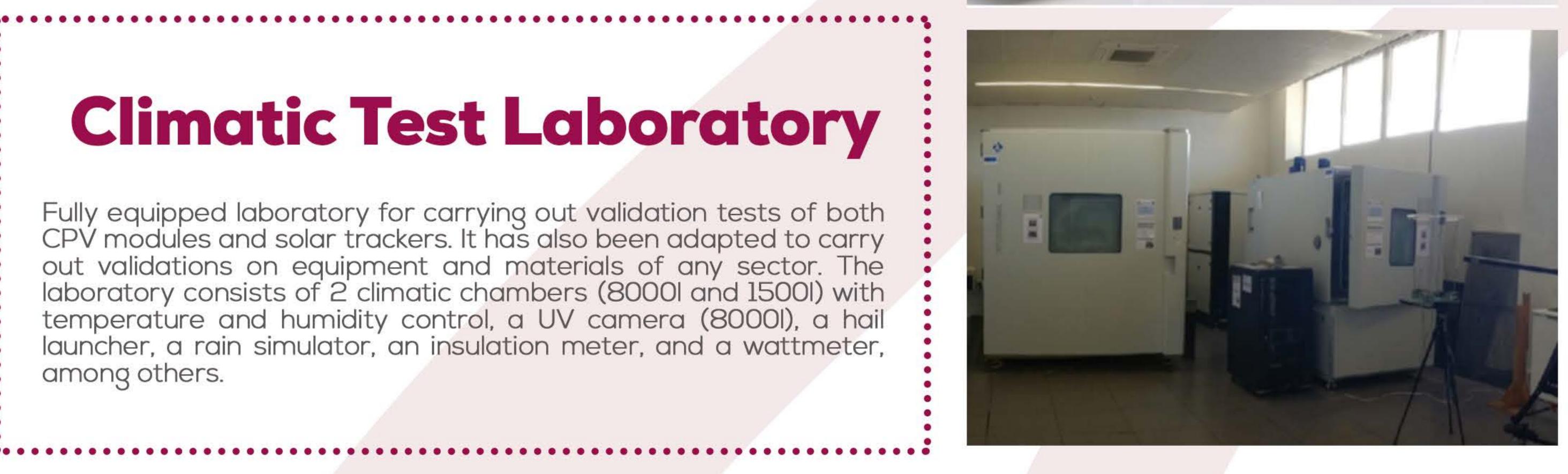
The Solar Simulator is used for the indoor characterization of concentration photovoltaic modules. The main laboratory and alignment structure adaptable to any technology, as well as a

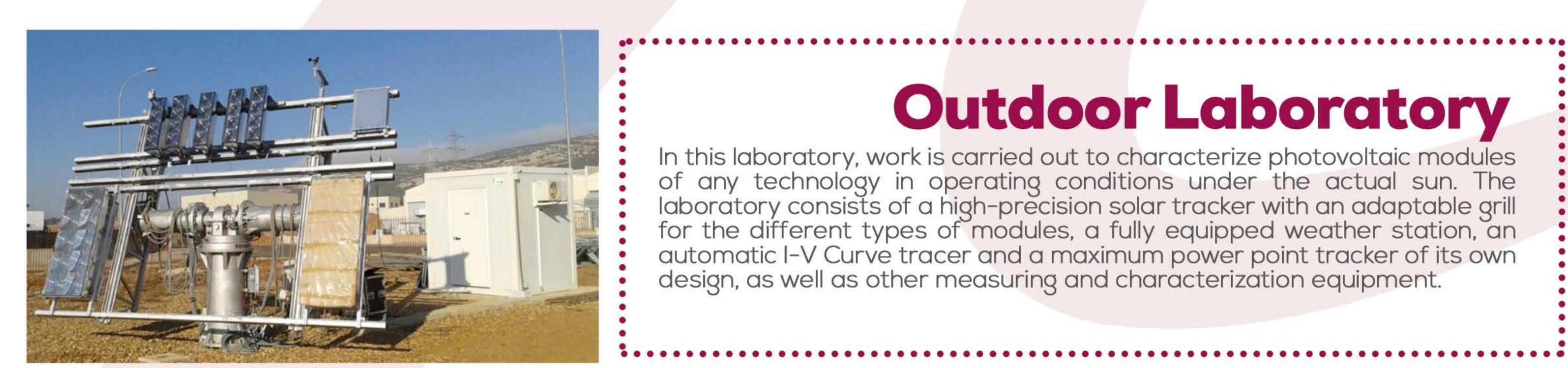


Fully equipped laboratory for carrying out validation tests of both CPV modules and solar trackers. It has also been adapted to carry out validations on equipment and materials of any sector. The laboratory consists of 2 climatic chambers (8000l and 1500l) with temperature and humidity control, a UV camera (8000l), a hail launcher, a rain simulator, an insulation meter, and a wattmeter, among others.









Outdoor Laboratory

In this laboratory, work is carried out to characterize photovoltaic modules of any technology in operating conditions under the actual sun. The laboratory consists of a high-precision solar tracker with an adaptable grill for the different types of modules, a fully equipped weather station, an automatic I-V Curve tracer and a maximum power point tracker of its own design, as well as other measuring and characterization equipment.



Stand-alone Systems, Storage, and Self-Consumption Laboratory

otovoltaic generation with a total nominal power of 58 kW, keeping the excess production 3 battery banks with a total storage capacity of 115 kWh. There is also an autonomous system with small accumulation (6.24 kW) powered by its own tracker designed by ISFOC (nominal power



: Mechatronics Laboratory

It is a laboratory specialized in the design and development of intelligent and autonomous systems composed of precision mechanical elements, electrical and electronic components, and computer systems of automatic control.



Computer and Software Development Laboratory

ISFOC has the latest computer equipment in relation to data storage and analysis. It also has high-capacity and high-speed servers to provide technical advice, design, development and maintenance of computer systems that allow both the control and monitoring of PV and CPV equipment (SCADAS) and the analysis and study of data (BigData and Business Intelligence), the maintenance and configuration of servers and databases, the development and implementation of distributed systems that facilitate data collection, and the remote control of equipment and/or sensors applicable to different industrial sectors such as energy efficiency, weather sensors, smart cities, micro-computing, etc.

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Electronics and 3D Printing

systems. This laboratory has a large 3D printer that allows the imilling machine and other electrical and electronic equipment.



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Technological Lines and Services

The experience and knowledge of the sector, as well as ISFOC's long track record in R&D&I, allow us to develop and provide added value with highly effective, innovative, and technological solutions according to the needs of the client. Among our strategic lines of development are the following:

Photovoltaic Technology

offer our customers photovoltaic energy generation solutions based on various technologies. In addition, we contribute to all photovoltaic modules, solar trackers, and other systems in the field of distributed energy generation, aimed at large photovoltaic plants and self-consumption. At the same time, ISFOC works on developing the architectural integration of photovoltaic systems.



future production in facilities

Industry 4.0 and Distributed Sensors



At ISFOC, we aim to promote the use of new technologies in raditional industrial sectors, variables, and soil and plant

parameters) that, when combined with other fields of technology and science (software development, electronics, collaborative robotics, cloud computing, and massive data analysis), allow us to modernize our clients' productive environments with custom developments, such as: vineyard monitoring systems and determination of the optimum harvest point, autonomous linear infrastructure surveillance system with drones, automatic maintenance systems in photovoltaic plants,

Developments and Products

ISFOC is a global benchmark of quality in the development of Photovoltaic Technology, Energy Efficiency and the integration of Renewable Energies in systems and applications, in monitoring and control systems through the use of distributed intelligent sensors, and in the so-called Internet of Things (IoT).

We develop technological solutions for clean, decentralized, and digitized energy throughout the entire value chain of the energy and industrial sectors, promoting sustainable development. To this end, we take advantage of the opportunities offered by renewable energies and aim to develop technological solutions for the use of solar energy and its applications in various sectors and industrial fields.

WEBENER

Webener is a control and monitoring software for management of a building, house, or facility. It entails energy savings without the need to invest in replacing equipment. Adapted to ISO 50001.



EnerBox is a measurement device designed for the monitoring and control of energy consumption and appraisals of energy performance.



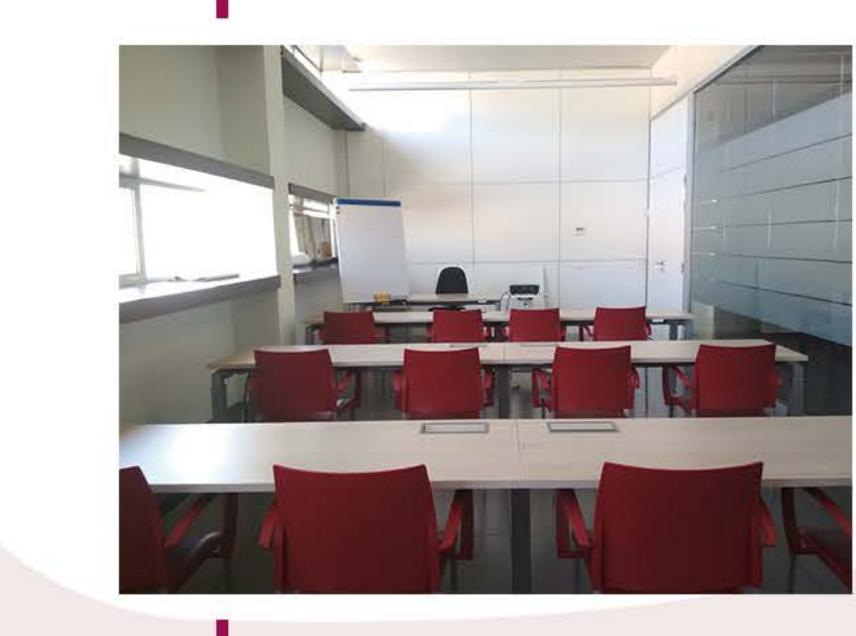
MetheoBox is a low-cost weather station, designed and developed by ISFOC.

Seguidor SURY/



It is a dual-axis solar tracker system designed by ISFOC to reduce operation and maintenance costs. Its installation is simple, without the need for foundations or wiring trenches, and adaptable to uneven terrain. It has a sufficiently valid precision for concentration

In addition, no machinery is required for its installation or subsequent maintenance.



Training

- Photovoltaic Plants
- Energy efficiency

Legal Consultancy

- Assistance and advice in Project Finance
- Advice on selection of technologies to participate in international
- EPC contracts
- Operation and Maintenance Contracts

Co-Working spaces



ISFOC offers open spaces component of technologica attractive prices.