
SPECIFICATION SHEET

Supply, installation and commissioning of an *Adhesive Curing and Storage System* for the ICFO, financed by FEDER Catalunya 2021 - 2027

FILE NUMBER: ICFO-2026-028

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CLAUSE 1. Object of the contract

The purpose of this contract is the supply, installation and commissioning of an **Adhesive Curing and Storage System** for the ICFO, financed by FEDER Catalunya 2021 - 2027.

The types of items supplied are linked to the CPV (Common Public Procurement Vocabulary) **38000000-5** Laboratory, optical and precision equipment (except glasses).

CLAUSE 2. Needs to satisfy

PhotonChip is a platform project that will help bring photonic technologies, in particular integrated photonics and photonic chips, from scientific feasibility to prototype stage to be applied in, for instance, communications as 6G transceivers, sensors, quantum computing and technology platforms.

Once operational, PhotonChip will cover the whole photonic chip value chain (design, packaging, testing) and train new experts thanks to dedicated programs.

As part of the Institute of Photonic Sciences (ICFO), PhotonChip will use advanced technologies as quantum technologies for cybersecurity, virtual and augmented reality, artificial intelligence, and machine learning.

In the development of the project, ICFO needs to acquire the supply of an **Adhesive Curing and Storage System**, to support the packaging pilot line. Certain adhesives used in packaging processes (e.g. bonding of optical components, encapsulation, adhesion of submounts or heat-spreaders, etc.) require controlled thermal curing. In addition, these adhesives must be stored under strict temperature and humidity-controlled conditions, to ensure proper stability and shelf-life.

The Adhesive Curing and Storage system shall include the following components:

1. Compact tabletop oven for adhesive curing.
2. Temperature-controlled freezer for the storage of the adhesives requiring low-temperature preservation.
3. Temperature-controlled refrigerator for the storage of adhesives requiring stable cool-temperature preservation, compliant with ATEX requirements.
4. Desiccator with inert gas input and hygrometer.

CLAUSE 3. Technical requirements

Technical proposal structure - minimum mandatory equipment characteristics

1. The Oven for adhesive curing shall meet at least the following technical requirements.
 - a. Temperature range: from room temperature up to 300°C (minimum)
 - b. Programmable thermal profiling: capability to define and store heating ramps, dwell/soak times, and multi-step temperature recipes.
 - c. Forced air circulation, with integrated air turbine system with adjustable airflow velocity.
 - d. Cable feedthrough: at least 4 lateral feedthroughs enabling introduction of cables or optical fibers assemblies while keeping connectors outside the chamber during operation.
 - e. Internal chamber dimensions: minimum 400 x 400 x 330m.
 - f. Adjustable over-temperature monitor and limiter.

2. The Temperature-controlled freezer shall meet at least the following technical requirements:
 - a. Operating temperature: able to maintain $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$
 - b. Temperature control: Adjustable temperature setpoint, with temperature display.
 - c. Capacity: minimum 100L
 - d. Vertical layout, front-opening unit. (top or chest opening not possible)
 - e. Dimensions: total height shall not exceed 1m

3. The Temperature-controlled refrigerator shall meet at least the following technical requirements:
 - a. Temperature range shall cover at least 2°C to 5°C .
 - b. Temperature control: Adjustable temperature setpoint, with temperature display.
 - c. Capacity: minimum 140L
 - d. Vertical layout, front-opening unit. (top or chest opening not possible)
 - e. Dimensions: total height shall not exceed 1m
 - f. Compliant with ATEX requirements.

4. The Desiccator shall meet at least the following technical requirements:
 - a. It shall include gas inlet and purge fittings, including valves and connection tubing.
 - b. Equipped with a hygrometer.
 - c. Adjustable shelves shall be provided for flexible internal configuration.
 - d. Capacity: minimum 55L (to satisfy required internal storage volume, more than one desiccator unit could be supplied)

Technical documentation or manuals to be delivered

A set of documentation shall be provided, covering the following topics:

- Comprehensive system user manual, including both hardware and software descriptions.

CLAUSE 4. Power distributions and safety

All three components forming the Adhesive Curing and Storage system (items 1, 2 and 3) of the system shall comply with the following requirements:

- Electrical Operation: 230V $\pm 10\%$, 50 Hz (per UNE-EN 61010-1, Spanish adoption of IEC 61010-1)
- CE-certification.

CLAUSE 5. System layout and services

The proposal shall include a set of “system layout and services documentation”, containing the following information:

- System layout, including overall footprint, weight, and detailed description of the different system components.
- Installation and start-up requirements, including required utilities, service connections, and any applicable environmental specification.

CLAUSE 6. Transportation, installation, start-up

- Contract includes the installation and start-up of the system, including system checking and the supply of all those elements necessary for its correct operation.
- The proposal will include transportation to ICFO's facilities including insurance and all export/import and customs duties.
- Any other customs or miscellaneous expenses, unexpected and not covered in the tender, which may arise until the equipment arrives at ICFO, must initially be borne by the Supplier and will be reimbursed by ICFO upon submission of supporting documentation proving the actual incurrence of such expenses.
- The machine will be placed in the designated location by ICFO. The contractor shall cover all costs, organization, and coordination related to the placement, including the provision of any required specialized equipment or vehicles, as well as any necessary component disassembly and reassembly for unloading and transportation inside the building, strictly following the route specified by ICFO.
- The contractor will be responsible for the removal and proper disposal of the packaging when the machine is delivered and unpacked, or its storage during the warranty period in case the original packaging needs to be kept.

Process qualification

Formal process qualification will not be required. Proper functionality of the equipment will be verified by ICFO technical team during installation and start-up at ICFO facilities.

CLAUSE 7. Warranty and Follow-on Support

- 1-year Full Warranty on all parts and components of the system irrespective of the manufacturer. The warranty will include the replacement of any faulty or damaged part(s) during normal use of the system, no matter the manufacturer of the component(s). It will cover any cost related with the disassembly, transportation, reparation and re-assembly of the damaged component(s), including all travelling and living costs of the required service engineer(s). An on-site repair, or a justified alternative to reduce the system down time to the minimum, will always be the first service option. A team of properly qualified and skilled service engineers will have to be available.
- System lifetime support.
- Spare parts will be available during, at least, 10 years after system supply.

CLAUSE 8. Training

- The contractor shall provide an on-site briefing at the time of the installation, covering equipment basic operation as well as essential maintenance and troubleshooting procedures.

CLAUSE 9. Delivery and Installation Time

The system should be delivered within **2 months starting from tender assignment**.

For the purpose of this tender, delivery time is defined as the period from the purchase order (PO) issuance until system delivery at ICFO facilities, including manufacturing, transportation, installation, and acceptance tests.

The purchase order will be issued upon contract formalization or within the immediately following days.

CLAUSE 10. Target price

- The target price for the system is 12.000 € (VAT excluded).
- Payment terms: Full payment will be made once the final receipt of supply, installation and commissioning is issued.

Castelldefels, on the date of its digital signature

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Optoelectronics