
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-2026-062

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CLAUSE 1. Object of the contract

The object 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 items to be supplied are classified under the following 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 pursuant to Directive 2014/34/EU (or equivalent certification recognised under an applicable mutual recognition scheme), as transposed in Spain by Real Decreto 144/2016, de 8 de abril.
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 330 mm.
 - f. Adjustable over-temperature monitor and limiter.
 - g. Glass process observation window.
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 components forming the Adhesive Curing and Storage system (items 1, 2, 3 and 4 of Clause 2) shall comply with the following requirements:

- Electrical Operation: 230V $\pm 10\%$, 50 Hz, in compliance with UNE-EN 61010-1 (Spanish transposition of IEC 61010-1) or equivalent international/harmonised standard providing an equivalent level of electrical safety.
- CE-certification.

CLAUSE 5. System layout and services

The tenderer shall include in its technical proposal a complete "System Layout and Services Documentation" package, containing the following information:

- System layout, including overall footprint and height, weight, drawings and 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

- The contract includes the supply, transportation, installation and commissioning of the system at ICFO's facilities, as well as all components and consumables required for initial start-up, and any works or services necessary for its correct and full operation.
- The contractor shall deliver the system to ICFO's facilities. Accordingly, the contractor shall bear all costs and risks associated with transport, export and import licences, customs clearance and duties, import taxes, and any other charges arising until the system is made available at ICFO's premises. The contractor shall take out and maintain adequate transport insurance covering the full replacement value of the system until the moment of formal reception by ICFO.
- 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 system shall be placed at the location designated by ICFO. The contractor shall cover all costs, organisation and coordination related to placement, including the provision of any specialised equipment or vehicles, and any necessary disassembly and reassembly of components required for building access or internal transportation, strictly following the route and access conditions specified by ICFO.

Note: The designated location has level, step-free access. Delivery shall be performed using a vehicle equipped with a loading ramp or liftgate, together with appropriate wheeled handling equipment. Any deviation from the agreed access route requires prior written authorisation from ICFO.

- The contractor shall be responsible for the removal and proper disposal of all packaging materials upon delivery and unpacking of the system, in compliance with Ley 7/2022, de 8 de abril, de residuos y suelos contaminados para una economía circular, and any applicable waste management regulations. Where the contractor determines that original packaging must be retained during the warranty period for potential return or re-shipment purposes, it shall notify ICFO in writing at the time of delivery. In such cases, the contractor shall store the packaging at its own cost and risk, unless ICFO agrees in writing to provide on-site storage space.

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.

- Successful completion of the SAT shall trigger the formal act of reception (Acta de Recepció) pursuant to Article 210 LCSP. ICFO shall issue the Acta de Recepció within one (1) month of SAT completion. The 1-year Full Warranty period referred to in Clause 7 shall begin to run from the date of that same Acta de Recepció.

CLAUSE 7. Warranty and Follow-on Support

- 1-year Full Warranty covering all parts and components of the system irrespective of the original manufacturer of each component. The warranty period shall begin to run from the date of the formal acceptance record (Acta de Recepció) referred to in Clause 6. The warranty shall cover, at a minimum and at no additional cost to ICFO:
 - Replacement or repair of any part or component that fails or is found defective during normal operation, regardless of the component's manufacturer.
 - All costs of diagnosis, disassembly, repair or replacement, reassembly, and recommissioning, including consumables required for the repair.
 - Travel, accommodation and subsistence costs of all service engineers required for on-site intervention.
 - Shipping, insurance and handling costs for any component transported between ICFO and the contractor's facilities.
- System maintenance support available during, at least, 10 years, including access to technical assistance. The supplier shall provide feedback from a qualified technical specialist within 5 working days.
- Spare parts will be available during, at least, 10 years after system supply.

CLAUSE 8. Training

- The contractor shall provide a comprehensive training programme for ICFO personnel as an integral part of the contract, at no additional cost to ICFO.
- The training shall ensure proper and safe operation of the system and shall cover basic and advanced functionalities, including process development, programming and automation features.
- The training program shall also provide an overview of basic maintenance procedures, covering routine preventive tasks and essential troubleshooting guidelines.

CLAUSE 9. Delivery and Installation Time

- The maximum execution period of the contract shall be **TWO (2) MONTHS**, counted from the day following the date of its formalisation.
- Within this period, the supplier must complete the manufacturing, transportation, delivery, installation, integration, commissioning of the system, and the execution of the Site Acceptance Tests (SAT). The

delivery time shall therefore be understood as the full period required to complete all contractual obligations up to the successful acceptance of the equipment at ICFO facilities.

- Delivery of all items together in a single shipment is preferred.

CLAUSE 10. Tender budget

- The maximum tender budget (Presupuesto Base de Licitación) for the supply, installation and commissioning of the system is **12.000,00 €** (VAT excluded).
- Payment terms: full payment will be made in a single instalment, once the final reception certificate (Acta de Recepción) covering supply, installation and commissioning is issued, within thirty (30) days following said record.

Castelldefels, on the date of its digital signature

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