

# Technical and administrative specifications

File number: **22LIC.007**

## 1. Equipment description

**Jacketed glass polymerization reactor and Nutsche filter reactor**

## 2. Technical specifications

The equipment should meet the following specifications:

### - Jacketed glass reactor:

- Materials: Borosilicate 3.3, PTFE, PFA, PEEK
- Volume: 10 L
- Jacket volume: 6-9 L
- Port on lid: 6-8
- Equipped with a glass distillation overhead consisting of:
  - 1 liter feed vessel
  - Vapor duct with reflux splitter
  - Spiral reflux condenser
  - Phase separator
  - 4 liter receiver vessel
  - Distributor with pressure gauge and vacuum connection
  - Nitrogen connection
  - Self-draining glass piping
- Temperature working range: -90°C to 220 °C
- Stirring speed: 20 rpm to 600 rpm
- Stirrer drive, stirrers:
  - Ex proof stirrer drive
  - Dry running mechanical seal
  - Easy interchangeable stirrers :
  - Anchor stirrer, pitched blade turbine, retreat curve impeller
- Pressure: -1 bar to +0.1 bar

### - Nutsche filter reactor:

- Easily connected and easy product transfer from 10 L jacketed polymerization reactor.
- Jacketed glass borosilicate 3.3 reactor
- Inert material in contact with the product: Glass, PTFE and Hastelloy.
- Volume: 10 L

- Stirring: 0 to 500 rpm
- ETFE coated cover plate with ports for slurry feed, nitrogen, etc.
- PTFE bottom plate with filter cloth
- Mobile stainless steel frame with lifting device
- Highly corrosion resistant
- Filter cloth mesh size 8 to 200  $\mu\text{m}$ .
- Temperature range:  $-70^{\circ}\text{C}$  to  $200^{\circ}\text{C}$
- Pressure:  $-1$  bar to  $+0.2$  bar

#### - Vacuum pump

- Motor power 550 W
- Water flow 100 mL/min
- Max vacuum 0.098 MPa
- Anticorrosion material

#### - Dynamic temperature control system (chiller)

- Temperature range:  $-30^{\circ}\text{C}$  to  $300^{\circ}\text{C}$
- Overall power: 4.9 kW
- Temperature stability  $\pm 1^{\circ}\text{C}$
- Pump flow rate: 30 L/min
- Pump pressure 1 bar
- Anticorrosion materials

### 3. Other features

- 100-120 ° rotation of reactor to give a convenient experience
- Reactors easy to lift up and down
- Different type of stirrer depending on the material type and its features (e.g., viscosity)
- Insulation coat for the reactor
- Preferable material of the lid PTFE
- Availability of consumables and/or replacement parts for a minimum of 10 years
- Training courses/videos and/or technical seminars for specific applications will be valued
- Assistance coverage and speed of response from the technical service will be valued
- The possibility of making demonstrations or simulations to evaluate the performance of the equipment will be positively valued

### 4. Contracting authority

ITENE – Instituto Tecnológico del Embalaje, Transporte y Logística.



## 5. Awarding procedure

In this procedure, at least three quotations shall be requested, whenever possible.

Quotations must be submitted according to the Technical Specifications described above, together with the required supporting documents.

Commission of Purchases Evaluation of ITENE will evaluate the quotations following the criteria below, and the quotation with the highest score will be selected.

## 6. Procurement object

The procurement object is the supply indicated in section 1 of this document. At least the following items shall be included in the procurement:

- a) Identification of the parties.
- b) The definition and description of the procurement object according to the offered supply. The technical description of the offered supply will be according to the technical specifications issued by the Contracting Authority.
- c) The price.
- d) The duration of the contract or the estimated dates for its implementation: start and end date, as well as its extension or extensions, if foreseen.
- e) The conditions for receiving the supply, its delivery, installation or acceptance of benefits. The transport and delivery at the place of destination. (Facilities of ITENE in Parque Tecnológico, c/Albert Einstein, 1, 46980 Paterna, Valencia, Spain), as well as the necessary steps for its configuration and installation until its effective operationalization.
- f) Payment terms.
- g) The objective and temporary extension of the confidentiality clause, where relevant, imposed to the contractor.

## 7. The conclusion of the contract

The accreditation of the legal powers of the signatories to be able to enter into the contract, will be required in order to conclude the contract.

The contract will be concluded by sending the signed offer to the bidder, together with a purchase order number which will have to appear in the invoices that the bidder will issue, associated to the purchase of the supply.

## 8. Evaluation of quotations

The quotations will be evaluated according to free procedure by means of the following criteria:



The evaluation will be done by the Commission of Purchases Evaluation of ITENE.

The objective criteria that will be used as basis for the contract award are the following, with their corresponding weighting, or, in its absence, in decreasing order of importance.

Criteria	Percentage
Quotation	70
Technical Service and maintenance	10
Delivery date	10
Guarantee	5
Others	5

## 9. Solvency of the supplier

### Technical solvency

The bidder will provide the following information, when applicable:

- **Location, connection and installation requirements**
  - A scale detailed plan
  - Weight
  - Supplies (air, water, power, etc.)
  - Connection
- **Manufacturing materials**
  - Normalized type (certificates when applicable)
  - Special treatments
  - Special care
- **Manuals**
  - Installation, operating and service manual will be provided.
- **Technical service**
  - Geographical availability
  - Forms of contacts
  - Responsiveness
  - Costs
- **Maintenance services / Spare**
  - Operations carried out exclusively by the supplier / manufacturer
  - Cost and regularity
  - Spare stock advised, supplier, cost and delivery time (in case of exclusivity of the supplier or manufacturer)
- **Quotation conditions**
  - Payment method



- Guarantee
- Services / materials included: setting up
- Transport, packaging
- Insurance
- Spare stock
- Others

## 10. Delivery date and place

Quotations shall be sent by e-mail to: [licitaciones@itene.com](mailto:licitaciones@itene.com) in the term of **10 working days** from the receipt of the invitation to tender. The tender file number shall be indicated in the e-mail subject.