



राष्ट्रीय प्रौद्योगिकी संस्थान - आंध्रप्रदेश
NATIONAL INSTITUTE OF TECHNOLOGY ANDHRA PRADESH
Near National Highway No. 16, Kadakatla, Tadepalligudem – 534101
West Godavari District, Andhra Pradesh

Ref. No.: NITANP/SMMD/TENDER/2025-26/34

Date: 19-08-2025

TENDER ENQUIRY

Sub: Supply of Jacketed reaction reflux cum distillation assembly at NIT ANP - Quotation invited –Regd.

Please send your lowest quotation for the above item as per the details attached in **Annexure-1**. The quotation is to be sent in a sealed envelope to the following address:

**C/O TENDER BOX
MATERIAL MANAGEMENT & DISPOSAL SECTION,
SARDAR VALLABHBHAI PATEL ADMINISTRATIVE BUILDING
NATIONAL INSTITUTE OF TECHNOLOGY, ANDHRA PRADESH,
NEAR NATIONAL HIGHWAY NO. 16, KADAKATLA,
TADEPALLIGUDEM – 534101
WEST GODAVARI DISTRICT, ANDHRA PRADESH.**

The quotation has to be sent by Post (Ordinary / Register / Speed Post) or drop in Tender Box physically. (Any other mode will not be accepted)

The envelope must be superscribed as “**QUOTATION**” at the center of the envelope and the above **reference number at left top** along with the name of the tender on the envelope. Quotations without the above superscription **will not be accepted**.

The last date to receive the sealed quotation is 10.09.2025.

Annexure-1

Fabrication of reaction reflux reactor with distillation assembly

1. **Vessel volume:** 25 L
2. **Jacket volume:** 25 L
3. **Fluid to handle in jacket:** Hot and Cool
4. **Vessel and Jacket operating conditions:**
 - 4.1. Temp: -40°C to 220°C
 - 4.2. Pressure: 0.4 bar(g) to Full Vacuum
 - 4.3. Design Vacuum with Mechanical Seal Bearing: Glass-filled Teflon (GFT) and Ceramic plate
5. **Vessel design: (Glass)**
 - 5.1. Jacket ID: 350 mm
 - 5.2. Vessel OD: 325 mm
 - 5.3. Vessel height with Nozzle: 900 mm
 - 5.4. Glass thickness: $5\text{mm} \pm 1\text{mm}$
 - 5.5. Total structure Area: $1.3 \times 0.8 \times 3.5$ m height
6. **Vessel design material**
 - 6.1. Inner vessel is made of: Borosilicate Glass 3.3 Expansion Type
 - 6.2. Shell, head & blind flanges: Cast iron (CI)
 - 6.3. Couplings & plugs: Cast iron (CI)
 - 6.4. Gasket for hand hole, body flange & Nozzles: PTFE
 - 6.5. Jacket is made from: Borosilicate Glass
7. **Nozzle necks:**
 - 7.1. Nozzle schedule Center neck: 3"
 - 7.2. Side necks: 3" \times 45° (2 Nos), 1.5" \times (2 Nos)
 - 7.3. Bottom Drain Valve: 2" \times 1.5" Flush Bottom
 - 7.4. Baffle cum thermometer: Glass Thermometer Pocket
8. **Agitator & drive details:**
 - 8.1. Agitator type: MS PTFE Lined Stirrer with PTFE Blade Type
 - 8.2. RPM: Variable and Top speed should be equal or higher than 190 rpm
 - 8.3. Sweep diameter: 40mm \times 150mm
 - 8.4. Shaft diameter: 45 mm
 - 8.5. Shaft sealing: Mechanical Seal
 - 8.6. Agitator bottom height off the reactor bottom to facilitate even 2- 3 L reaction
 - 8.7. Motor mounting: Horizontal Mounting or vertical for easy access
9. **Accessories:**
 - 9.1. Manual flush bottom valve: Glass & PTFE
 - 9.2. **Motor Type:** Flame Proof 0.5 HP Motor with Gear Box
 - 9.3. Primary Condenser: 3" \times 0.35 m²
 - 9.4. Liquid Cooler: 1" \times 0.2 m²
 - 9.5. Collection Vessel: 2-L and 5-L
 - 9.6. **Manually Hydro System (Lift):** To detach the vessel for easy cleaning
 - 9.7. **Heating cum Circulation:**
 - 9.7.1. Minimum of 50 L Mild steel vessel with electric heating with controller
 - 9.7.2. Pump has to be provided for the circulation of hot fluid (Temp tolerant components)
10. **Structure:** Galvanized Iron Tubular Structure & Cast Iron Structure Part to hold all accessories
11. **Warranty:** 1-year standard warranty

Sample Diagram

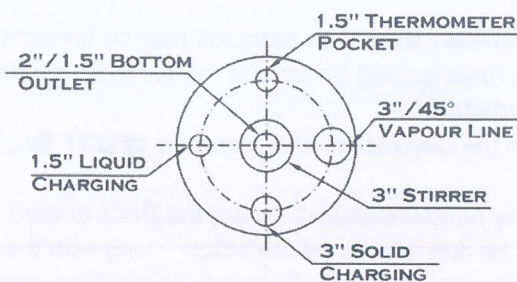


Fig. 1 Top View of reactor with required Nozzle structures

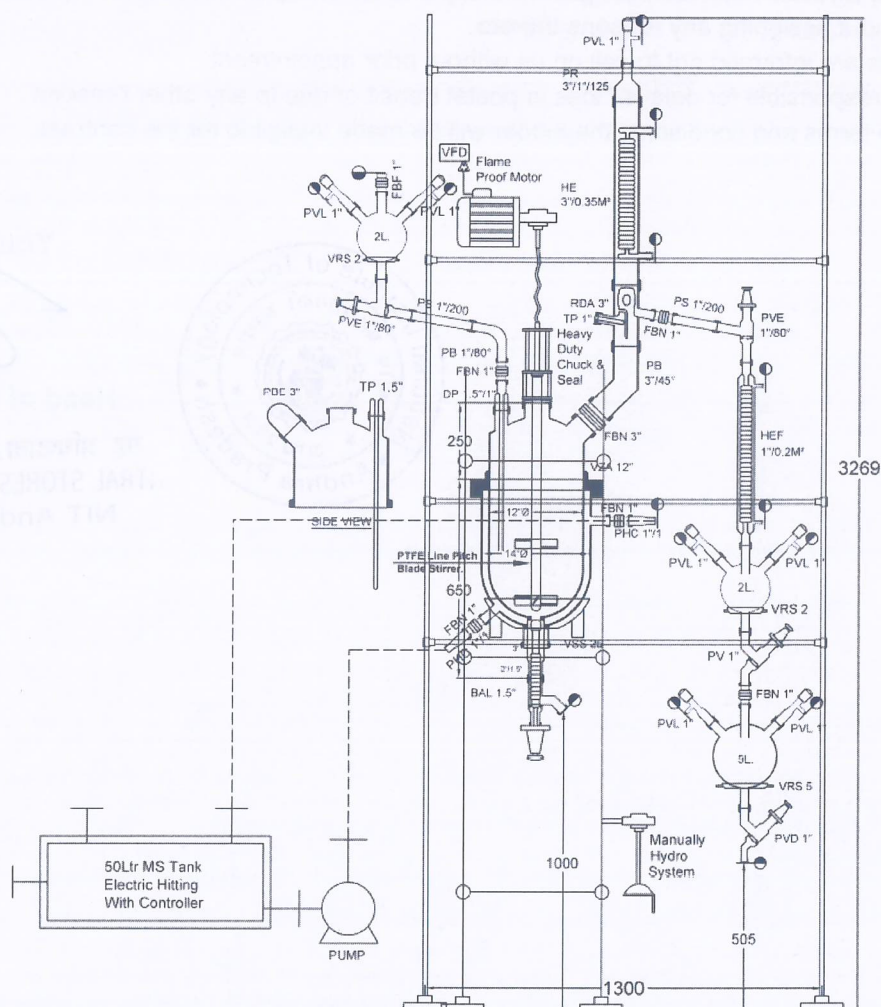


Fig. 2. Model reactor with distillation, heating and hydraulic system

While sending your lowest quotation – please specify the following:

1. Sales Tax : Inclusive
GST : Indicate prevailing tax on percentage basis.
2. Excise Duty :
3. Rates
a) F.O.R. Destination/
b) Estimated Packing, Forwarding and Freight Charges in case of Ex-works only, may be mentioned on percentage basis.
4. Insurance : Inclusive/ indicate on percentage basis, in case payable by the Institute.
5. Preferred terms of payment (institute rules permit to pay on Receipt of materials in good condition/completion of the work):
6. Recommended mode of transport :
7. Discount offered, if any :

8. Validity of the offer :
9. Firm schedule of completion of work :
10. Detailed drawings / catalogues / Leaflets / literature / samples may be furnished wherever feasible / required.
11. Please indicate clearly whether the rates quoted herein are the same as applicable to DGS & D / Government Department / Other Public Sector Undertakings.
12. The supplier shall invariably furnish the **Certificate of Clearance of GST Registration number along with the quotations.**
13. The quotation should not contain any handwritten text except the Price quoted.
14. All the Submitted documents must be duly signed by the bidder along with the firm's seal.
15. Please mention the Quotation number and name of the item/s (in brief) on your envelope when submitting your quotation to the Institute
16. Please note that the Director reserves the right to modify or alter the specifications and also to reject any or all the Quotations without assigning any reasons thereto.
17. The suppliers / firms are informed not to call on us without prior appointment.
18. The Institute is not responsible for delays / loss in postal transit or due to any other reasons.
19. Any Violation in the terms and conditions, the bidder will be made ineligible for the contract.



Yours faithfully,

Head of the Department

सह अधिष्ठाता / Associate Dean
CENTRAL STORES & PURCHASE SECTION
NIT Andhra Pradesh